FIVE EASY PIECES ON THE STRAIT OF GEORGIA – REFLECTIONS ON THE HISTORICAL GEOGRAPHY OF THE NORTH SALISH SEA

by

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Abstract

This study presents five parallel, interwoven histories of evolving relations between humans and the rest of nature around the Strait of Georgia or North Salish Sea between the 1850s and the 1980s. Together they comprise a complex but coherent portrait of Canada's most heavily populated coastal zone.

Home to about 10% of Canada's contemporary population, the region defined by this inland sea has been greatly influenced by its relations with the Strait, which is itself the focus of a number of escalating struggles between stakeholders. This study was motivated by a conviction that understanding this region and the sea at the centre of it, the struggles and their stakeholders, requires understanding of at least these five key elements of the Strait's modern history.

Drawing on a range of archival and secondary sources, the study depicts the Strait in relation to human movement, the Strait as a locus for colonial dispossession of indigenous people, the Strait as a multi-faceted resource mine, the Strait as a valuable waste dump and the Strait as a place for recreation / re-creation. Each of these five dimensions of the Strait's history was most prominent at a different point in the overall period considered and constantly changing relations among the five narratives are an important focus of the analysis. The evolving roles of governance, science, cultural representation and conservationism / environmentalism are considered throughout. The only common element linking the five narratives, apart from the Strait itself, is a pervasive, wellfounded fear of loss – fear of a dangerous sea or fear of losing access to the marine highway, fear of losing the Strait as indigenous patrimony or as a colonial entitlement, fear of losing its rich terrestrial and marine resources, fear of losing waste dumping privileges, fear of losing the Strait as recreational space.

The study concludes with a brief consideration of the five narratives in the 21st century, their contemporary interactions and their links with the histories considered in this study.

Preface

This dissertation is original, unpublished and independent work by the author, Howard Macdonald Stewart.

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Illustration 76 – "Vancouver, English Bay" 1947 (photo: BC Govt). Its recreation value would drive much of the local debate about marine sewage pollution over the next four decades. 336

Lists of Abbreviations and Acronyms

ALR	Agricultural Land Reserve
AOX	Absorbable organic halogen compounds (including PCBs, dioxins and furans)
BC	British Columbia
BCA	British Columbia Archives
BOD	Biological Oxygen Demand
BP	before present
СР	Canadian Pacific
CPR	Canadian Pacific Railway
CVA	City of Vancouver Archives
DFO	Department of Fisheries and Oceans (DFO)
DIA	Department of Indian Affairs (Government of Canada)
DMF	Department of Marine and Fisheries (Government of Canada)
E & N	Esquimalt and Nanaimo Railway
EAO	Environmental Assessment Office (Government of BC)
ELUC	Environment and Land Use Committee (inter-ministerial committee of the
	Government of BC)
EPA	Environmental Protection Agency (US Government)
FAO	Food and Agriculture Organisation of the United Nations
GDP	gross domestic product
GR	Government record
GVRD	Greater Vancouver Regional District
GVSDD	Greater Vancouver Sewage Disposal District
HBC	Hudson Bay Company
IA	Indian Affairs
IPSC	International Pacific Salmon Commission
IT	Islands Trust
kph	kilometers per hour
MB/CAMS	Melda Buchanan collection of the Comox Archives and Museum Society
MoT	Ministry of Transport (Government of Canada)
MP	Member of Parliament (Government of Canada)
MS	Manuscript
MV	motor vessel
NDP	New Democratic Party
NGO	non-government organisation
NHB	National Harbours Board
OCP	Official Community Plan
PCB	Pollution Control Board
PCBs	Polychlorinated Bi-phenols
PGE	Pacific Great Eastern Railway
PNWTA	Pacific North West Tourism Association
RCIA	Royal Commission for Indian Affairs in BC
RCMP	Royal Canadian Mounted Police
SEP	Salmon Enhancement Programme (Government of Canada)
SPEC	(Canadian) Scientific Pollution and Environmental Control Society of BC; after
	1981 this became Society for Promoting Environmental Conservation
SS	Steamship

TBC	The British Colonist newspaper; after 1887 it was named the Daily Colonist
TSS	Total suspended solids
UBC	University of British Columbia
UBCLSC	University of British Columbia Library Special Collections
UFAW	United Fishers and Allied Workers
US	United States
USC	United Steamship Company
WWI	The First World War (1914-1918)
WWII	The Second World War (1939-1945)

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1. Introduction

This collection of closely connected essays about the Strait of Georgia or North Salish Sea constitutes a complex portrait of a valued, contested, and vulnerable place. It is offered because I believe that an understanding of 'environmental historical geography' is essential for dealing with contemporary challenges. If we want to confront today's resource and environmental management challenges effectively, not just assign blame for them, then we need to understand them, and we can't begin to understand them unless we have some grasp of their complex historical geographies.

This study brings together sometimes familiar material in new ways to yield new insights and perspectives on a region not often considered as such. Taken as a whole, the five parallel stories in this study offer unique perspectives on the historical geography of the North Salish Sea, its islands and fringing coastlines. This is its contribution. Although much archival research lies behind this work, it examine few truly unturned stones; among the least used of the many record collections consulted are the SPEC fonds and the Haig-Brown papers. But most of the archives I examined had already been worked, some of them numerous times. Some of my richest material already underpins authoritative studies by Dianne Newell, Cole Harris, Richard Mackie, Arn Keeling and others, who assembled critical parts of the puzzle to meet their own particular and, from my perspective, partial goals.¹

This study tells a complex story about a highly distinctive, contested coastal area defined by the Strait of Georgia. What is distinctive about this region? It is a tremendously rich place, at the center of modern British Columbian history. The processes that took place here were not unique to this region, but they *were* exaggerated by the nature of the place. The indigenous people dispossessed around the Strait were among the densest concentrations of indigenous populations in North America. The primary resource wealth of the place – a concentration of rich mines, teeming fisheries and extraordinarily valuable forests – surpassed that of most other places on the continent and certainly in the territory that became Canada. The Strait's marine pollution was *not* out of the ordinary by the grimy standards of twentieth century North America, but the fisheries and recreational resources threatened by this pollution *were* exceptional.

E. H. Carr spoke of the amorphous masses of historical facts as swarms of fish wandering a vast and barely accessible sea.² The "fish" that I landed and squeezed into this study depended entirely on my choices about where to look, what to look for and how to look for them. In other words, as Linda Nash has described all historical understanding,³ my narratives of the Strait are contingent, partial and situated. The study begins at the start of formal colonization in the mid nineteenth century because I was interested in examining processes set in motion by settler colonization of erstwhile indigenous space. The Strait offered a sort of laboratory, an isolated corner of the world where processes of colonial dispossession, industrialisation and globalisation, often spread over four or five centuries elsewhere, unfolded much more quickly. The study ends in the 1980s for several reasons. It was ambitious in scope and had to end somewhere; the beginning of the rapid rise of neo-liberalism in the 1980s marked a convenient watershed, as remarkable on the Strait as elsewhere. Many relevant government archives began to grow thin as the 1980s progressed, while other kinds of relevant primary material virtually exploded -- both tendencies presented challenges I opted to avoid, except in the impressionistic discussion of contemporary challenges on the Strait that concludes the study.

My interest in the Strait's history stemmed in part from a desire to compare it with similar places where I have worked around the world. How 'degraded' really was this charming inland sea and how did it get to where it is today? I was susceptible to environmentalists' suggestions that the Strait may be rapidly degrading, perhaps close to some sort of 'collapse.' As Fernand Braudel loved the Mediterranean of which he wrote so compellingly, ⁴ so I have long been in love with this maritime place. But, unlike Braudel, I was actually born by the sea that I write about. I escaped back to it and have strong personal attachments to various corners of it; it remains an important presence in my life. So my study is perhaps more similar to Donald Meinig's depiction of the nineteenth century Columbia Plain, in that this is a study of a place I consider home. It is also a place that I and many others along the shore, in one way or another, fear losing. So, as Meinig did for his home place, I have tried to see how this little sea has been "evaluated, organised and developed" during its transition from traditional indigenous to industrialised settler space. I also hope, as Meinig did, that this historical geography might sharpen contemporary residents' "consciousness of their antecedents" and their "recognition of the dynamic character of so many regional patterns."⁵ That is to say that, for better or worse, I am deeply engaged in the subject

matter. I hope, as Michael Fellman suggested, that "truly engaged history" should, my story has found ways to be anarchic or at least irreverent, that it might challenge orthodoxy and assert freedom of thought against constraints of received wisdom.⁶

Colleagues suggested my return to academia in my dotage was a belated grab for status. They were right in a way, though surely there were easier approaches. In Halkomelem, a local Salish dialect, high-status people are ones who 'know their history' while people of low status are the ones who have become separated from theirs.⁷ This attempt to 'know my history' by examining the historical geography of the Strait of Georgia since the onset of colonisation has helped me better understand my decades of work in the remarkably neo-colonialist field of 'international development cooperation.' I'm afraid my years of working abroad have also left me with some of the traits of the idiot servant in Umberto Eco's *The Name of the Rose*. ⁸ To the endless irritation of my offspring, I often have trouble finishing a sentence in one language. I blurt out just the right word in some other language that I don't speak very well: "*claro*" or "*nsh'Allah*" or "*конечно*" just pop out when they feel like the *right* word. As with Eco's character, the result can be a scarcely intelligible babble. I fear I may do the same here, offering snippets of them.

I also focussed on this sea because, as is Donald Hughes' Mediterranean coast,⁹ the south coast of BC around the Strait is defined at least as much by its relationship with this sea as it is by its ties to the continent behind the mountains or the Pacific world; it is useful to study the evolving agency or role of the Strait in human affairs and vice versa. As Shawn Miller suggested in his work on Latin America, if we aim to comprehend the changing roles of nature in our present and future, then we need to situate natural actors (such as the Strait) more effectively in our 'official past.'¹⁰ This can be challenging in the face of an impression, pervasive among historians, of the sea as setting or backdrop for history rather than a player in it.¹¹ My study aims to dispel this impression, to demonstrate that the Strait itself, throughout the period examined, was a significant agent in local human affairs, affecting different stakeholders in very different and shifting ways. It has in turn been much affected by human affairs, in a complex dialectic that was never static.

I subscribed to this familiar dogma of environmental historians but after that my choices were more challenging. It is tempting to see the Strait and its shores as a 'resource mine,' (as I have done in one of the pieces that follow). Fish would be the obvious canary in this mine, if one were focused only on the bio-physical changes on the Strait. Fish have understandably been the object of much writing about BC's changing coastal environment, but I aimed to enhance understanding not just of the canary, but of the whole mine and the humans who exploited it. Perhaps the Strait should be depicted as an 'organic machine,' a hybrid of human and nonhuman nature similar to Richard White's Columbia River?¹² It is this kind of hybrid, and also something akin to a complex collection of gears and drive shafts and belts within a larger machine that all shift in shape, size and character over time. Or one could characterise the Strait as a misused natural empire, like Donald Worster's rivers of the imperial western US.¹³ There has certainly been much careless use of this sea and its resources during the short era of Eurasian resettlement. It might also be seen as a once feared marine space, tamed and made productive only to become toxic and dangerous again, as did the spaces Linda Nash depicts in California's Central Valley.¹⁴ And it is certainly a contested coastal zone defined, as is Connie Chaing's Monterrey Peninsula, by the clashing needs and world views of competing stakeholders.¹⁵ The problem is that the Strait of Georgia has clearly been all these things to some degree. To focus on just one or two dimensions of the complex, often confusing dance of humans and the rest of nature around the Strait seemed to distort the story too much. I felt I needed to tell a handful of the most important stories to represent the thing in a way that could do it justice.

The North Salish Sea has a complicated history: even before the rich and timely contributions of the post modernists and post structuralists, environmental analysts frequently noted that most ecosystems, and coastal ecosystems more than most, are remarkably complex, multi-dimensional and contested places. Many influences mingle and interact, and perceptions of local reality are almost infinitely varied. Diverse terrestrial phenomena such as logging, transportation infrastructure, waste disposal and parks - to cite only a few – affect coastal seas directly and via the fresh water that feeds them. Human effects on the sea are at their most intense on the coast, where marine resources are often at their richest and most accessible to humanity. All this, before we contemplate the complex human geographies of these universally contested places.

My work in evaluating various complex activities around the world made me reticent to engage with formal theoretical frameworks before I had gone through much empirical information and the analysis of others; I wanted to look for the patterns that suggested themselves to me rather than to impose my own a priori. I have seen too many evaluations virtually written before their data were collected, the information then gathered to confirm the writers' preconceived notions. Yet, acknowledged or not, one's theoretical frameworks do exist. At the most fundamental level, my study was guided by a belief shared with George Perkins Marsh that humans and (the rest of) nature are locked in a complex and perpetual relationship of mutual influences upon each other.¹⁶ This assertion seems self-evident, on the table for at least a century and a half. Most researchers and administrators concerned with this human-nature dialectic however, still devote very little time to understanding how it has evolved to where it is today.¹⁷ This study may redress this situation in some small measure, helping those interested in relations between humans and the rest of the Strait's nature to better understand how and in what directions these relations have evolved and why. By addressing a range of issues that haven't been considered together in BC histories, it will I hope enhance our understanding of the multi-dimensional historical agency of this water body that both ties together and keeps apart the majority of BC's population, that has been – and still is - the focus much of our work and play, our economy and culture, and our political struggle.

This study - like those of Donald Meinig mentioned above, Andrew Clark's below, and many others done before and after these - is essentially regional in approach. That is to say, it follows in a long and diverse tradition of regional historical geography. William Morris Davis, one of the founders of the Association of American Geographers, described regional studies in geography a century ago as "the purest goal," of the discipline. Their aim, he said, is to synthesise the results of others' work, of "all other modes of presentation," into a "vivid description of part of the earth's surface, so that all the geographical elements and activities there occurring, inorganic and organic, shall be appreciated in their true spatial relations."¹⁸ Davis would probably not have recognised my study as his kind of regional geography but it might have earned some grudging approval from Andrew Sayer decades later. My work is not quite the "theoretically informed" empirical research Sayer described as being part of the new radical regional geography emerging a quarter century ago, and struggling to distinguish itself from more traditional approaches. My history does, however, share some things with a study by Edward Soja that Sayer praised as a

promising example for critical regional geography and 'geohistory.'¹⁹ Like Soja's 1986 study of a Los Angeles massively involved in both militarism and popular entertainment, my work also focuses - among other things - on "ironies of juxtaposition" and "paradoxes which... clarify the human predicament, or at least a few facets of it."²⁰ Several years later Nigel Thrift confirmed that "...going back [to regional geography] can also point the way forward." Today, as twenty years ago, "most of the important problems that human geography faces..." can be found "grouped around the practice of doing regional geography." The "invocation of regional geography cannot solve these problems but it certainly brings them into focus and, in the act of focusing, it shows us how far we still have to go."²¹ This nicely encapsulates the goal of my study, which does not aim to solve complex problems by elucidating their historical roots but rather, by bringing them into focus, hopes to help us see how far we have to go if we aim to deal with them more effectively in the future.

Assuming that my goals for this regional study implied a burden to communicate with a broad audience, to make my 'five pieces' relatively easy to understand, and interesting, I have steered away from what Dan Flores calls "the semantically-challenged language of the social scientist."²² I had to decide where and how to impose the distortions that are always needed in order to tell clear and coherent stories. I narrowed my account down to a handful of the most important issues, ones that I believed would be of most interest to a range of geographers, historians and others looking at this sea. The "five easy pieces" in the title refers to a 1970 American film directed by Bob Rafaelson and filmed around the Strait (standing in for Puget Sound). As did the film's title, mine plays on the contradiction between the "easy pieces" and a tangled story of unresolved conflicts.

The study is broad in its thematic and temporal focus and, inevitably, reflects a contemporary world view even while trying to understand those of past worlds. I have tried to be transparent about my own positions while asking about those of my sources: What were the world views behind them and what stake did my sources have in the Strait? They had many different perspectives of course and one of the few things they had in common was a pervasive fear of loss, a theme revisited in different ways in each of the five stories.

The best single explanation for my approach is an early example from William Cronon's work demonstrating that if we want to understand the complex dialectic between humans and the rest of nature that is at the heart of environmental history, then we need to view it from as many different perspectives as possible.²³ This resonated for me after so many years working with highly motivated environmental advocates, and other passionate do-gooders, whose perspectives on complex problems (from my perspective) were often dangerously narrow. I felt a need to explore a range of the many economic, cultural and ecological factors that were so rapidly changing conditions in my study area, as did Andrew Isenberg in his remarkable history of the destruction of Great Plains bison. Despite the great differences between those plains and this sea, each place was in its own way "a maelstrom of cultural, economic and ecological change."²⁴ I aimed to explore as many narratives of this multi-dimensional inland sea as I could manage. Peter Boomgaard's collection of water histories in Southeast Asia²⁵ is an example of this approach, though I could hardly aspire to the breadth attained by that volume's many authors. To paraphrase Bruce Braun's study of BC's rainforests,²⁶ I have depicted the Strait as a place that is - like so many others - the object of numerous shifting and contradictory stories, so many dueling narratives that one might better speak of many Straits with many different meanings rather than suggest there might be any 'single unassailable truth' to tell about it. Yet as Cronon has also reminded us, more than once, if we believe our research is significant then we need to tell stories that can and hopefully will be accessible and interesting for readers across disciplines and beyond.²⁷ To achieve this required stitching together a patchwork of stories in ways accessible to this broader audience, stories that are lucid and focused, with connections between them clearly traced.

John McNeill has suggested that environmental history might be classed into three broad streams: material environmental history, cultural or intellectual environmental history and political environmental history.²⁸ My histories of the Strait draw on all three approaches to varying degrees to capture the essence of evolving, interwoven human-nature relations around the sea. There was also a fundamental challenge that historical geographers have faced for far longer: How, within a given space, to capture the complexities of historical and geographic change over time? How, in Kant's terms, to integrate historical stories of events happening one after the other (*nacheinander*), with geographic records of things occurring beside one another (*nebeneinander*)? An essentially geographic approach of static 'cross-sections' - of looking at the Strait for example in 1850 then

again in 1914 and 1980 - was disposed of early because it seemed unlikely to capture the dynamics of the changes occurring throughout the period, in each of the five stories.²⁹ Instead, I heeded Fernand Braudel's admonition to aim for a "real retrospective human geography," that paid more attention to time than most geographers usually do, and more attention to place than most historians.³⁰ I have accepted Andrew Clark's advice to follow the succession of changes in this place, and to interpret these changes in terms of the processes that affected them, to recognise that understanding a geographic region like the Strait requires recognising it as a place that is changing constantly,³¹ inhabited by diverse human actors who are likewise in more or less constant flux. ,I have aimed to identify and understand a series of broad socio-economic trends – as did Stephen Hornsby's historical regional geography of nineteenth century Cape Breton - and particularly their complex interrelations.³² Tom Griffiths' study of Australia's mountain ash forests is a more recent example of this kind of attempt at synthesis, also in a context of recent colonial resettlement where the new settlers often seem 'not to have lived long enough' in their new place, seem to lack the profound understanding of the place and its rhythms that are needed to fully understand the implications of their actions there.³³

Mark Cioc's 'eco-history of the Rhine River' was of particular interest for me.³⁴ Though focused on a socio-economic and cultural context much different from the Strait of Georgia, Cioc told a story similar to mine in its time frame and geographic scope. I have tried, as he did, to combine study of the component geographic features of this aquatic system and its shores with consideration of the diverse roles played in their transformation by a colourful and diverse cast of actors. There are also differences: Our local problems to date pale in comparison with the Rhine's downward spiral through much of the nineteenth and twentieth centuries. Rivers in general are more easily made invisible, or almost so, by modern transport networks and are more susceptible than seas to intense degradation. And people have been more inclined to notice a river's degradation and react to its perceived demise with efforts to 'bring it back' – as we have seen on the Rhine, the Thames or the Hudson in recent decades. But rivers and seas are also similar in that both are defined not just by the water that moves through them but also by their banks and shores, with which they are intimately linked. One cannot tell the story of a river or a sea without telling the story of the surrounding land that defines it. As Connie Chaing demonstrated with her work on the Monterrey Peninsula,³⁵ coastal areas offer valuable insights about the arbitrary, artificial and ultimately futile ways in which human societies seek to separate our spaces for labour and leisure. Similar lessons can be seen in competing claims from resource harvesters, waste dumpers and recreationists on the Strait of Georgia. The twists and turns of evolving relations among these competing users of the Strait have been subject to a shifting mix of outside influences and local circumstances, much as David Rossiter found in his work on resource exploitation in the nineteenth century Alberni Canal and Arn Keeling in his study of pollution on the lower Fraser a century later.³⁶

The "rationalisation of people's relationships to the natural world" described by Tina Loo, the convergence of urban and rural domains that caused strife and marginalised some rural people – especially indigenous people - while creating new opportunities for others,³⁷ could all be seen around the Strait. Like the game animals of Loo's book, the Strait's salmon made a transition from objects of more of less careful management by local communities of users, towards common resources (mis)managed through rules imposed by multiple levels of bureaucracies.

In its way, my study is also one of those local histories that Jean Barman wrote about,³⁸ and from which I have drawn quite heavily in this study. It describes relationships between local people and the space which they have claimed as their own, on which they have tried to leave their impression and which, in different ways, they often fear losing. It is a local history - micro history is perhaps more correct - about the most important Canadian water body west of the Great Lakes,³⁹ and the human communities that evolved around it.

Last but not least, these 'five easy pieces' attempt, as did Edvard Munch's four haunting studies on a Norwegian fiord known collectively as the *"The Scream of Nature,"* to capture the savage and troubled splendour of a place. As Donald Meinig did in his four weighty tomes about the gradual imperial conquest of North America,⁴⁰ I have sketched a detailed story that could also be summarised in a few pages (and is later in this introduction). Early in my return to academia, learned human geographers suggested I should be open to the possibility of representing the Strait's story through song, dance, and painting. With uncharacteristic modesty, I opted to stick with the written word but in the process I have had pretensions of painting a compelling portrait. Hopefully this emerges at least through the many striking photos generously offered by the provincial archives.

What is this Strait of Georgia?

What is this place that I will consider from five different angles? It is, as are many coastal zones, a relatively welcoming environment for humans. These fecund places where sea and land meet and exert so much influence over one another are among the earth's most productive places; this helps explain why they are also the focus of growing worries about the negative environmental effects of human activities.

In recognition of the indigenous culture that developed around these linked water bodies, the Strait of Georgia (Figure 1), the Strait of Juan de Fuca, and Puget Sound are now known collectively as the Salish Sea. The three are sometimes considered as a single ecological region. This study considers only the Strait of Georgia or 'North Salish Sea.' 300 kilometres long and 40 wide on average, the Strait is the focal point of a region that is home to two thirds of British Columbia's population, and the Strait's settler communities share much common history that differs in some ways from the other two lobes of the Salish Sea. The Strait of Juan de Fuca, is a wide sound opening onto the North Pacific, shared almost equally between Canada and the US. With the notable exception of Victoria, the Juan de Fuca shore is mostly straight and sparsely populated. Its surface waters remain perishing cold year round. Extending south from the Strait of Juan de Fuca, Puget Sound is an estuary of many small rivers, a labyrinth of narrow channels and low islands. The sound's shoreline is the heavily populated heartland of Washington State, the site of Seattle, Tacoma, Olympia and many smaller towns. The Strait of Georgia is delineated from the rest of the Salish Sea by a barrier of Canadian and American islands. The Strait is a relatively broad inland sea connected to outside waters by a series of narrow channels at its north and south ends. Dozens of islands line its periphery and the mouths of deep fiords along the northeast shore. This complex shoreline of peninsulas, promontories, estuaries and plains has been occupied by human communities for millennia. Imbert Orchard noted that "... the coastline of the Gulf of Georgia is ... complicated ... so many island and mountain peaks - to say nothing of bays, narrows, inlets, sounds and channels – it's not at all easy to grasp..."⁴¹

Peter Puget, sailing with Vancouver in the 1790s, also noted how dramatically the coast changed north of (what would be named) the Fraser Delta: "... High snowy mountains, unfathomable



Figure 1 - The Strait of Georgia or North Salish Sea

inlets... steep rocky shores ... The change in so small a distance is truly wonderful, even at the termination of these inlets high snowy mountains rise immediately at their back..." ⁴² The changes in altitude from shoreline mountain peaks to the adjacent seafloor on Desolation Sound are the greatest in North America.⁴³ Forbidding shorelines in many places are punctuated by cliffs, steep promontories, rocky islands and reefs. A coastal plain up to 25 kilometres wide has developed in other places. Underlain by granites often covered with glacial overburden, this feature is known as the Nanaimo Lowland on Vancouver Island and the Georgia Lowland on the mainland. The flood plain of the Fraser River is a triangular extension of the Georgia Lowland.⁴⁴

Geologically, the Strait and Puget Sound are part of a depression within a coastal trough extending from southeast Alaska to the Gulf of California.⁴⁵ The trough originated from a down folding of the earth's crust over 150 million years ago then subsided and accumulated deposits of marine, non-marine and volcanic material. Mountain building accompanied by folding and the intrusion of igneous massifs continued until a few million years ago. Today's Strait is bounded by sedimentary and igneous rock uplifted to form the Vancouver Island Range to the west and the Coast Range to the east. Volcanic activity was extensive in the Coast Mountains through the glacial period, though ice covered all but the highest peaks. Sediments eroded from these new mountains continue to accumulate in the trough. The depression assumed its present form over a million years ago, but is continually modified by down-warping, glacial scouring and the erosion of bedrock. Lobes of ice from the Cordilleran ice sheet have advanced and retreated at least four times in the last million years, leaving deep, U-shaped valleys, interrupted drainage patterns, and unconsolidated materials deposited by ice or glacial melt waters. Each ice passage rearranged the physiography of the Strait, with low lying rock surfaces scoured, shaped and stripped of weathered material while glacial moraines were deposited elsewhere in till and outwash plains -Savary, Harwood and James Islands are all remnants of this process. The main channel of the Strait was not as deeply scoured as some of its mainland fiords, and the relief of the sea floor in the central channel is less abrupt than in these coastal inlets. The Strait is 430 metres deep off the east coast of Gabriola Island but its average depth is 55 metres. As climate warmed and glaciers retreated, a rising sea flooded coastal lowlands. Depressed lands slowly rebounded until a state of rough equilibrium between land and sea was established around 11,000 years ago BP.⁴⁶

The Strait's climate –cool dry summers and mild wet winters with relatively long growing seasons – results from its mid-latitude location and warm Pacific currents. The region is protected from Pacific storms by the mountains of Vancouver Island and the Olympic Peninsula. Winds in the Strait normally range from 7 to 25 kph. Periodic cyclonic storms generate winds of in excess of 90 kph though wave heights rarely exceed 2 metres. Fog is a hazard especially in the northern Strait in winter and the southern islands in late summer.⁴⁷

Sea temperatures, salinity and clarity and intensity of tidal activity all vary greatly around the Strait. Temperatures range from 0 degrees Celsius in winter estuaries up to 24C in Pendrell Sound in summer.⁴⁸ Waters are clearest and saltiest at the northern and southern ends, but this fluctuates especially with the rise and fall of Fraser River runoff which contributes 80% of fresh water inflow and affects clarity, salinity and temperature north and south of the river mouth.⁴⁹

The Strait is swept by semi-diurnal tides of up to 6 metres that gently expose then flood beaches in some places while driving roaring tidal rapids through narrow channels in others. Currents run up to 17 kph in southern channels and those in the north reach 26 kph. Seeing a narrows change quickly from a millpond into a raging torrent is an experience not soon forgotten, particularly if it is witnessed from a small boat. Yet there is far less flushing of water through the Strait than the open Pacific because the islands at its northern and southern extremities restrict water movement and mixing. Currents generally run counter-clockwise round the Strait though this is modified in many places by runoff, tides and winds.⁵⁰

A great variety of marine and shoreline habitats support over two hundred fish species, three hundred invertebrate species, a hundred and thirty four species of marine birds, and sixteen types of marine mammal. Marine vegetation varies from plankton to giant kelp forests. A key element of the Strait's great biological productivity is the river estuaries, particularly the Fraser. These are nurseries for the young of a wide variety of species, collecting and producing nutrients fundamental for diverse food chains that link phytoplankton and zooplankton to salmon, seals, whales and sea birds through a wide range of intermediate feeders.⁵¹

Human influences are inextricably bound with those of other organisms in the Strait. Similar to Christine Keiner's Chesapeake Bay, the Strait is "both a work of nature that operates in accordance with physical laws and a human dominated landscape on which we inscribe cultural practices and meaning." ⁵² Natural and cultural systems within this space are influenced and transformed by one another; they combine to form landscapes that are neither 'natural' nor 'cultural' but a hybrid. The various values assigned to these hybrid landscapes (or seascapes) are mutable, socially constructed over time and firmly situated in their historical context. This study of the Strait considers a period of rapid change in the values ascribed to the Strait and land around it.

A short modern history of the Strait

The five "pieces" of this study offer different perspectives on the Strait as 1) a means of, and a barrier to human movement, 2) a site of rapid colonial dispossession and resettlement, 3) a locus and facilitator of resource extraction, 4) a valuable but problematic waste receptacle, and 5) a prized site for recreation / re-creation. They describe the Strait's shifting influences on human movement around the sea, colonial dispossession in a rich coastal zone, and so on, processes that occurred in variant form in many other parts of the world. Together they define much of this region's character. Each piece traces important processes of change that are best understood against the backdrop of the bigger picture into which they fit. The following brief account of the Strait between 1849 and the 1980s outlines this big picture of rapid colonisation, industrialisation and globalisation on the Strait: processes that extended over hundreds of years elsewhere, here compressed into a little over a century.

Carried back to the beginnings of the resettlement era, a late twentieth century observer might have found the Strait of Georgia an odd place: first a damp Victorian version of "*Star Wars*" where people from vastly different worlds met in and around the Hudson Bay forts. Then, by the early 1860s, a sinister blend of "*Little House on the Prairie*" and "*Heart of Darkness*," as Eurasian newcomers began to settle amongst the smallpox ravished ruins of indigenous society. First settled after the retreat of the Wisconsin ice sheets, about 10,000 BP, the region had once supported a large population that depended upon its copious and diverse marine life. Archaeologists cannot agree whether the first migrants had come by land or sea⁵³ but do agree that by 3000 BP a highly developed culture had evolved on the Strait, particularly around the rich salmon runs of the Fraser. Perhaps as many as 50,000 indigenous people lived around the Strait of Georgia in the mid eighteenth century. Following the arrival of smallpox from Mexico

and Alaska, and other disturbances, this population began a precipitous decline. Vancouver's crews witnessed the effects of devastation on the Strait in the 1790s. It would probably have looked grimmer still, following the passing of several more waves of smallpox and the establishment of endemic diseases such as measles and influenza, for which locals had no effective immunity or treatment. Salish speakers of the Strait may have been particularly hard hit, suffering the effects of disease combined with aggression from neighbouring tribes.⁵⁴

Starting early in the nineteenth century, a few outsiders with powerful tools and weapons moved into the area. The forts they established at Victoria, Nanaimo and on the Fraser were exciting, lucrative places to visit. Indigenous people may have heard stories of bad things happening beyond the mountains. But few could have foreseen that these ungainly forts and hairy men would eclipse their future on the Strait within two generations.

In 1850, the Strait was still a very long voyage from Europe or the eastern seaboard of North America. The men in forts knew that railways and steamships were transforming other places and that Anglo American expansion had just leapt across the continent to California. Two tiny steamships already plied the inland sea. It would not be long before steam locomotives reached the Pacific and when they did, they could burn Vancouver Island coal. Ocean-going steamships would also soon reach the north east Pacific and would also need coal. A symbiotic relationship soon emerged between the Royal Navy's need for coal and settlers' need for the Royal Navy's comforting guns. The Strait's tiny Eurasian population could foresee that the time and distances separating them from the Atlantic world were destined to shrink dramatically. Even before they did, there was much that could be shipped to the world: coal and the promise of other valuable minerals, masses of fish that swarmed the river mouths and beaches, timber that surpassed even the most spectacular eastern forests.

Indigenous people had thrived on food from the sea but European settlers needed European food. The culturally determined need to first deforest then plough the land provided a plausible rationale – at least to the new arrivals – for claiming virtually all this land around the sea in a few short decades. Once vested in the imperial crown, the crown's local representatives could pay their way by selling it to others who would legitimise the crown's claim by transforming this new British land into tidy British farms. That was the theory at least, and a hardy few would invest decades of almost unimaginably hard labour trying to make it come true. In the process many remarked that, even if much of the soil was poor, the timber was valuable, the climate gentle, the landscape beautiful, the fishing and hunting exceptional.

By the end of the nineteenth century, the Strait of Georgia was a significant new outpost of Eurasian settlement in the Americas. Markets in California and across the Pacific were complemented by new ones in eastern North America, now reached via an "all Canadian" transcontinental railway. The arrival of rail transportation transformed the Strait as it already had many other places. Imported technology imposed the order and predictability of the industrial age. A growing fleet of steamers plied the inland sea, guided by lighthouses, buoys, and publications predicting marine weather and tides.

Indigenous people became a minority in the 1890s but remained a critical component of the labour force well into the next century. Dispossessed and marginalised by WWI, indigenous people did not rise up en masse to protest their dispossession though they never stopped resisting it. The Strait's many arms helped keep indigenous communities apart, as did the Indian Reserve system. And indigenous people were kept busy working in mines, canneries, mills, and fields.

Commodification of the Strait's resources, a virtual resource rush around the sea, began in earnest in the decades before WWI. Coal mining developed fastest and grew steadily. Fishing, lumbering and metal mining were all established by the 1880s and experienced spectacular growth. All depended on the Strait to ensure easy and cheap movement of people and goods.

Great expansion in economic activity went hand in hand with rapid growth in settler population (**Table 1**) and gave rise to a network of new settlements around the Strait. Released from sanitary problems that plagued older towns, and determined to learn from the mistakes of these places, these new settlements counted on the Strait's tides and currents to carry off all waste.

The Strait's climate was more similar to that of southern England than places at this latitude east of the Rockies. At least the gentler western side of the Strait might be transformed into something resembling an Old World landscape. On all shores, people were coming to understand that a protected sea, mild climate and available land made for a very pleasant place to live. The bloom on the rose was wilting as the Strait's settlers began sending thousands of boys to the greatest of European wars. By then, settlers had gone from strength to strength for decades. The naval base near Victoria still guarded the entrance to the Strait but Vancouver had become its heart. On completion of the railway, the smoky mill town between Burrard Inlet and the Fraser River mouth grew very rapidly, as Victoria's city fathers feared it would. When the Panama Canal opened in 1914, Vancouver was drawing resources from all over the Strait and beyond, transforming them a little and shipping them out alongside Canadian grain and minerals from the rest of BC.

A railway building accident on the Fraser in 1913 had catastrophic effects on salmon runs that were already being overfished. A few criticised the profligate harvesting of coastal forests and their criticisms slowly appeared in government documents. A sharp economic downturn the same year, followed by the savage European war, then a global economic meltdown and another, truly global war all ensured there was little progress towards resource conservation or the righting of historic injustices on the Strait. Yet the rich resources of the inland sea continued to sustain many in the interwar years. It also continued to absorb all waste poured into it. Pulp and paper plants appeared on Howe Sound and Malaspina Strait, attracted by the softwood, copious fresh water supplies and absolute freedom to dump vast streams of organic and chemical waste into the sea. Growing towns increasingly depended on the Strait to absorb their sewage.

The pulp and paper plants and urban sewers were widely understood to be a panacea. Turning wood fibre into paper offered an efficient and profitable way to use otherwise useless hemlock trees and the vast waste of the forest industry, whose burning now contributed to dangerous fogs on the Strait. Municipal sewers drew dangerous human waste away from people and the streams they needed, consigning it to a sea with apparently infinite absorptive capacity.

Although the interwar years are not widely associated with play, the Strait matured as a place for recreation and re-creation during this period. Harried urbanites could find temporary relief on its shores, a short steamer ride from the city. Others from further afield also found solace and places to recreate and re-create themselves in creative ways. Broken men from both wars restored themselves on its quieter shores. Growing numbers of people shared the joys of sport fishing.

A new world order emerged after WWII, with Anglo America at the centre of the global economy. The Strait was an appendage of North American imperial power, as it had been of British. The thirty years after WWII were a period of unprecedented economic growth and prosperity. Cars and highways had begun transforming human relations with the Strait before WWII, but the process now accelerated dramatically. A growing network of roads and ferries offered car drivers access to peninsulas and islands previously accessible only by sea. Seaplanes able to reach remoter places also helped hasten the demise of coastal steamers in the 1950s.

Indigenous people neared the bottom of their abyss as jobs in fishing, farming and forestry gradually disappeared. Yet they also began to figure in new narratives. Led by anthropologists and archaeologists, writers and artists, more people in settler society were now inclined to reflect on the Strait's 'First Nations' experience.

Resource extraction on the Strait rode the post war boom and was seldom seriously affected by the conservationist impulse. Controlled mostly by a government committed to economic intervention in the name of free enterprise, and briefly by another committed to intervention in the name of social democracy, Victoria was seldom much interested in conservation or environmental protection. Challenges to unbridled resource exploitation came instead from a new 'environmentalism' inspired by writers such as Rachel Carson and local converts, including Roderick Haig-Brown. Growing numbers of town dwellers were fed up with pollution. Organisations such as the Society for Pollution and Environmental Control became influential, for a while, warning of threats posed to the inland sea by mill effluent, sewage, oil spills and 'super ports.' Leisure and recreation activities had also assumed larger roles in many people's lives and livelihoods. Beaches, seaside parks, summer cottages, and small boats were all more important than they had been earlier. One result was alarm at the many things – from pollution to real estate developers - now threatening enjoyment of these pleasures on the Strait.

The chapters that follow fill in the details of these developments on the Strait. Their stories parallel one another throughout the roughly 130 year period considered. The first story, of the Strait's relationship with human movement, is a constant presence, intimately related to each of the other themes. Colonial dispossession and resettlement were especially salient during the first

Table 1 - Demographic Change on the Settler's Strait - Local Populations, 1881-1981⁵⁵

1881 – Population of BC: 49,459 (~ 2/3 on or near the Strait) Victoria area: Victoria: 5,925; N & S Saanich: 488 VI, north of Victoria: Cowichan (and Saltspring Is.): 848; Nanaimo & "Noonas" (Nanoose) Bay: 2,803; Comox/Alberni: 271 Vancouver area: New Westminster: 1,500 **1901** - Population of BC: 178,657 (~ 60% on or near the Strait) Victoria area: Victoria: 20.919 VI, north of Victoria: Cowichan area: 3,613; Nanaimo area: 12,715; Comox area: 3,493 Vancouver area: Vancouver: 27,010; New Westminster: 6,499; Richmond: 4,802; Delta: 5,074 Islands (1891 figures): Gabriola: 125; Mayne: 197; Saltspring: 436 1921 - Population of BC: 524,528 (~ 2/3 on or near the Strait) Victoria area: Victoria: 38,727; Saanich: 14,693 VI, north of Victoria: Duncan area: 7,445; Ladysmith: 1,967; Nanaimo area: 9,068; Comox area: 14,018 Vancouver area: Vancouver: 117,217; New Westminster: 14,495; North Vancouver city & district: 10,602; West Vancouver: 2,434; Port Moody: 1,030 Mainland, north of Vancouver: Howe Sound: 3,844; Powell River area: 3,599 Islands: 'The Islands' (southern): 3,804 **1941 -** Population of BC: 817,861 (~ 2/3 on or near the Strait) Victoria area: Victoria: 44,068 VI, north of Victoria: Duncan area: 13,835; Ladysmith: 1,706; Nanaimo (city only): 6,635; Courtenay: 1,737; Cumberland: 885 Vancouver area: 'Greater Vancouver': 351,491, of which: New West: 21,967; North Vancouver city & district: 14,845; and West Vancouver: 8.362 Mainland, north of Vancouver: Powell River area: 7,624 **1961** - Population of BC: 1,629,082 (~ 2/3 on or near the Strait) Victoria area: Victoria: 54,941, Saanich and Central Saanich: 51,828, Sidney: 1,558 VI, north of Victoria: Duncan town: 3,726; Lake Cowichan: 2,149, Ladysmith: 2,173, Nanaimo: 14,135, Parksville: 1,183, Qualicum Beach: 759, Courtenay: 3,485, Cumberland: 1,303, Comox: 1,756, Campbell River: 3,737 Vancouver area: Vancouver metropolitan area: 790,165, of which: Richmond: 43,323, New West: 33,654, N Vancouver city & district: 64.627. White Rock: 6.453. Surrey, 70.838. W. Vancouver: 25.454. and Port Moody: 4.789 Mainland, north of Vancouver: Squamish: 1,557, Gibsons Landing: 1,091, Sechelt: 488, Powell River area: 13,368, **1981** - Population of BC: 2,744,467 (~ 2/3 on or near the Strait) Victoria area: Capital Regional District: 249,473 VI, north of Victoria: Cowichan Valley Regional District: 52,701; Nanaimo Regional District: 77,101, of which Nanaimo: 47,06; Parksville: 5,216; and Qualicum Beach: 2,844 Vancouver area: Vancouver 'Metropolitan Area': 1,268,183, of which: Vancouver: 414,281; Burnaby: 136,494; North Van city and district: 99,319; Delta: 74,692; West Van: 35,728; New Westminster: 38,550; White Rock: 13,550; and Port Moody: 14,917 Mainland, north of Vancouver: Squamish Regional District: 18,928; Sunshine Coast Regional District: 15,503, of which Gibsons: 2,594 and Sechelt: 1,096; and Powell River Regional District: 19,364,

Islands (mid 1970s): all "Island Trust" islands: ~ 10,000
Influences and actors on the Strait

The influences of governance, science, cultural representation and local conservationist and 'environmentalist' thinking thread through the chapters. It is useful to briefly introduce them here, to familiarise the reader with actors and ideas that appear and interact in different ways in the five stories, but are not the main focus of any of them; their influences are enmeshed with those of other actors and ideas in the cataract of unfolding events.

Governance of the Strait was affected by shifting narratives about the sea's various roles and settler governments initiated or guided much change on the Strait after 1849. A shift from indigenous family and community based control of the Strait and its resources to the settlers' radically different systems was a fundamental dimension of colonial dispossession. Authority over space and resources around the Strait was divided among newly established municipal, provincial and federal government actors.

Establishment of the colony of Vancouver Island in 1849 integrated the Strait of Georgia into a British imperial legal order. British naval vessels cruised the Strait and indigenous people never presented a sustained challenge to this new order as some groups had in other parts of North America. Yet there were many acts of resistance and these were sometimes suppressed with the well-honed brutality of the British Empire. Occasional demonstrations of the settler government's coercive power enabled newcomers to proceed with the often highly speculative acquisition of lands they deemed suitable for agriculture, forestry and commerce.

Diverse government agencies strove to tame the nature of the Strait with navigation buoys, lighthouses, port authorities, and piloting services. A growing body of new laws governed ever more aspects of human behaviour on the Strait as Ottawa assumed jurisdiction over the marine environment and Victoria controlled most land surrounding it. By the early 1970s, a complex network of players and legislation governed the Strait. Ottawa's Department of Transport controlled lighthouses, buoys and a search and rescue service. Transport shared responsibility for marine charts with the Hydrological Service. With the Department of Public Works, they oversaw the dredging of navigable channels, mostly estuaries. Public Works shared responsibility for wharf and channel construction with the National Harbours Board, which controlled all the Strait's major harbours. Environment Canada was the first agency to treat the

Strait as a coherent coastal zone with marine and terrestrial components, an approach often undermined by provincial governments in control of land based activities.⁵⁶ Victoria's Department of Health Services supervised water quality at public beaches to ensure swimmers' safety. They collaborated with the Pollution Control Board to enforce the province's new Pollution Control Act. A Ministry of Recreation and Conservation maintained parks and collaborated with a provincial Ministry of Lands, Forests and Water Resources to acquire natural history sites and ecological reserves, of which eight were established on the Strait by 1972. A provincial Wildlife Service cooperated with Environment Canada to protect coastland birdlife.

These government actors implemented a body of laws governing human activity on the Strait that had started with the British North America Act. This act ensured Ottawa's dominance in maritime matters after BC joined Confederation in 1871. The first piece of settler legislation directly concerned with the administration of the Strait was the federal Fisheries Act of 1868. By the early 1970s, this was among Canada's most often amended legislation. Mostly focused on regulating fishermen's equipment and activities, the act also prohibited the dumping of substances harmful to fish into the sea. So, federal fishery authorities were de facto protectors - often not enthusiastic ones - of the Strait's water quality. The Navigable Waters Protection Act of 1886 could also be applied to environmental protection though its principal focus was controlling physical obstructions to navigation. Other federal legislation included the Canada Shipping Act that controlled the movement of vessels; it included a Code of Navigation Practices and Procedures and regulated vessel registration and licensing, pilot services, safety inspections, navigational aids, harbours, and coastal trade. It provided for investigation of water pollution and collisions inside territorial waters. A Small Vessel Regulations Act passed in 1962 reflected the growing importance of recreational boating.

Lobbying by opponents of the pollution in coastal rivers and the Strait began yielding results in the 1960s. The province's Pollution Control Acts of 1960 and 1967 increased Victoria's influence on the Strait.⁵⁷ Victoria's environmental management capacities then grew through the 1970s with a provincial Ministry of Environment established in 1975. By the 1980s however, what Graeme Wynn described as a 'new dawn' of environmental enthusiasm had given way to a wave of neo-liberalism⁵⁸ that left its own deep imprint on the public debate and progressive reductions in government environmental management capacities.

Scientists on the Strait - often working closely with governments - exercised their own influence over human relations with the rest of nature on the Strait. Much as Matthew Evenden demonstrated in the Fraser basin,⁵⁹ science on the Strait helped shape and orient policy debate and public understanding and was in turn influenced by public discourse and policy dialogues. As with government actors, the work of scientists was oriented by prevailing narratives about the Strait, but also contributed to shaping these narratives.

The Strait's scientists faced the challenges confronting marine and coastal researchers generally – a vast and mostly inaccessible subject with huge gaps in information and understanding.⁶⁰ Most early science on the Strait was what Suzanne Zeller termed 'inventory science,'⁶¹ aimed at determining what was there and how it could best be exploited by humans. In ways similar to those of the fish scientists who sought to understand the effects of the Hell's Gate slide on migratory salmon,⁶² the Strait's early physical scientists measured quantities, distances and velocities and how these changed over time. In the process, they unlocked the secrets of the Strait's complex tides.

Marine science grew rapidly after 1950, mostly practical studies of commercially important fisheries. Gathering marine data remained challenging and the number of studies relatively modest compared with research being done in fresh water in eastern North America. Much marine science remained 'inventory', with a strong emphasis on understanding valuable marine food chains. Joseph Légaré detailed the critical role of the Fraser in assuring abundant plankton populations at the base of the Strait's food chain.⁶³ The productivity of this 'Fraser River plume' became the object of long term oceanographic studies that determined an area of roughly 1,200 square kilometres surrounding this plume was the Strait's most productive zone.⁶⁴ Fish studies concentrated on salmon, the most important commercial species, with relatively few studies of other species. As late as the early 1970s, little work was being done on ecological relations among marine plants and animals or the effects of human activities on marine ecosystems.⁶⁵

By the 1980s there was growing attention to the threats posed by complex organic pollutants from the Strait's pulp mills.⁶⁶ Studies of the effects of heavy metals associated with pulp and paper making were also carried out, though again, fewer than elsewhere. Some have suggested

these scientific inquiries were undermined by the familiar process of 'manufacturing uncertainty,' wherein targeted industries sowed doubt about their impacts to minimize threats to their operations.⁶⁷ Rising public concern nonetheless stirred the interest of the scientific community. Mary Barker noted that scientific opinion had converged in two areas by 1974: the need for better management of activities along the shores of the Strait and its estuaries and the need to reduce damage from effluent discharges into the Strait.⁶⁸ The flushing action of currents and tides was thought to reduce threats of pollution damage but the longer term effects of these discharges remained essentially unknown. Currents and tides would spread any oil spilled in the Strait, a cause of much public concern by the late 1960s. Currents also drove coastal erosion and deposition, another object of growing interest as scientists and engineers struggled to manage the effects of changing marine sediment movements associated with building new port facilities south of the Fraser.⁶⁹

Some scientists on the Strait challenged governments. Robin Harger, a UBC zoologist, became president of SPEC, the most high profile local environmental group in the 1970s and much concerned with marine pollution. Harger criticised governments' overly cautious pollution policies. When he was denied tenure at UBC in 1970, the *Georgia Straight* newspaper condemned the 'archaic attitudes' of the university's President Walter Gage. Harger's dismissal, they asserted, was part of a national crackdown on 'radicals' in the wake of the Quebec's 'October Crisis.'⁷⁰

Cultural representation of the Strait Local writers and artists offered many of the most compelling visions of the Strait in the twentieth century and stimulated change there, even as they too were influenced by it. They described the Strait's transition from the centre of a Salish speakers' world to a dangerous, beautiful, lucrative wilderness and collection of commodities at the far edge of insatiable global empires. Writers such as Jack Hodgins depicted a place that was alternatively a rough and quirky new resource and industrial landscape, an escape from the modern industrial world and an eco-utopia rich in religious, iconic and health giving properties.

Graeme Wynn suggested that until recently, most non- fiction writing about BC had expressed utilitarian views of the environment.⁷¹ Similar to 'inventory science,' such work talked about the Strait mostly as a setting for human endeavours and a resource storehouse there to satisfy human

needs. Many described the backbreaking labour of clearing homesteads. But there are also many lyrical passages from early pioneers who thought they'd died and gone to heaven despite the regular hard work. Nature writer Mack Laing on his Comox stump ranch often felt this way. Eric Duncan, a nineteenth century settler poet of the Comox Valley, swore that if a group of Shetland Islanders arrived suddenly in that valley, "they would have thought themselves in Paradise." The non-fiction writing of Roderick Haig-Brown - an outstanding conservationist, then environmentalist, voice on the Strait - was also a "prolonged celebration" of the coast.⁷²

Visual representations of the Strait have been as diverse as the different strands examined in this study. Ted Hughes' realist depictions of places such as Ladysmith Harbour celebrated a 'working Strait': a beautiful, rough-hewn but orderly place clearly under human domination. Tony Onley's dreamy watercolours portrayed a dreamy and idyllic Strait forever on summer holidays. More recently, Lawrence Paul Yuxweluptun's paintings of contested space full of angry spirits offer proof that the dispossession story has never been forgotten.

Allen Pritchard refuted the suggestion that Margaret Atwood's 'Survival' thesis might apply to BC literature;⁷³ it was particularly ill adapted to the Strait. Malcolm Lowry, probably the Strait's best known writer in residence, depicted his place on Burrard Inlet as paradise, most famously in *Under the Volcano*. Lowry expounded further on the Strait as threatened paradise, and his fear of losing his watery haven, in *October Ferry to Gabriola*.⁷⁴ Such fears are a recurrent theme in settler discourse, artistic and otherwise. In *Invention of the World*, Jack Hodgins worried that the 'perfect Eden' extolled by James Douglas was being replaced by the "Paradise Beer Parlour" and the Eden threatened by the "Eden Swindle."⁷⁵ Similar fears appeared in M. Wylie Blanchett's *The Curve of Time*,⁷⁶ where the threat is embodied in the "man from California." Earle Birney's early 1950s play *The Damnation of Vancouver* was written well before environmental concerns began appearing in poems and plays. He tells of the city on trial before by a cast of historical figures, condemned for the *"the fouled and profit clogged Fraser... the raped mountains, scarred with fire and finance"* and its citizens' moral corruption.⁷⁷

Nanaimo's Tim Landers assembled a book of poetry entitled *To An Inland Sea – Poems for the Gulf of Georgia* in 1992. He was inspired by

...the annual 'Save the Straits' Marathon, wherein people would swim, sail, kayak or row from Sechelt to Nanaimo to publicise the degradation of our inland sea, and the danger that what was once the richest fishing grounds in the world might become more like the Mediterranean or the North Sea – little more than a toxic dead ocean...⁷⁸ Landers maintained that people had done too little to nurture this sea that had nurtured them; it had now become so degraded that it could no longer support people as it used to.

Conservation and environmentalism on the Strait Philosophies of conservation and environmental protection on the Strait reflected broader continental and global trends, filtered through the lens of the Strait's settler culture and political discourse.⁷⁹ As Christer Nordlund and others have pointed out, the values assigned to landscapes (or seascapes) are social constructs.⁸⁰ Conservationists and environmentalists played a growing role in defining these constructs of the Strait as the twentieth century unfolded.

Some settlers brought with them the notion that a great water body might be transcendent, even sacred in character. The Thames had always been considered holy by some living on its banks, as had the Ganges, the Nile, and the Danube.⁸¹ Yet such respectful views had to contend with many others that saw great water bodies simply as resources, there to serve humanity. On the Strait as elsewhere, early conservationism was more utilitarian than worshipful, largely concerned about human welfare and how nature could ensure it. The 'environmentalism' emerging in the latter part of the twentieth century reflected a growing fear that human survival might be more linked than had earlier been recognised with the welfare of natural systems, now fearfully assaulted by a wide range of human activities. Melda Buchanan of Comox illustrates this transition. She launched her career from a corner of the Strait where old school conservationism was well established and she drew on the fortune of the distinctly unconservationist Comox Valley Logging Company.⁸² Buchanan was a 'pioneer' environmentalist in the Comox Valley where she fought to restore or preserve the Strait's nature throughout the final decades of the century, starting with Comox Harbour. Careless human use, she said, was turning a teeming marine cornucopia into a sterile and barren wasteland. Buchanan believed governments had to restrain humanity's baser instinct; environmentalists' role was to ensure governments did this properly. She left legacy funds to fifteen local environmental groups.⁸³

Other environmental activists and back-to-the-landers sought advice from old conservationists such as the scientist/teacher/artist/photographer/ornithologist/naturalist/hunter, Hamilton Mack Laing.⁸⁴ Many naturalists elsewhere in the Americas had been inclined to see nature as a masterpiece of divine creation, mostly benevolent towards humanity.⁸⁵ Laing was not of this school. Born 1883, raised on a Manitoba farm and schooled in art in Brooklyn, he had a front row seat on the Strait for sixty years. As did many people in those years, Mack Laing loved 'beneficial' animals or plants and hated others. He defended his favourites – especially most kinds of birds - as loyal friends. Others – including cats, cougars and bald eagles - he destroyed without a second thought, to defend his friends.⁸⁶

Roderick Haig-Brown was a generation younger and a more transitional figure who eventually bridged the gap between conservationism and environmentalism. Born in Sussex in 1908, Haig-Brown arrived on the Strait as a young man and began a half century career as a logger, trapper, guide, fisherman, magistrate and prolific writer. He moved to Campbell River to hunt cougars and write about it. "Just about every place you went was brand new" he said. "It was tremendously exciting for anyone from England... this practically untouched world of fish and wildlife."⁸⁷ Haig-Brown returned briefly to Depression era England but escaped back to the shores of the Strait as soon as he could afford the passage. He was a well-established nature writer by mid-century. Signs of Haig-Brown's move towards an environmentalist perspective appear in his 1950 book, *Measure of the Year*: humanity, he contended, needs to recognise not just its dependence on natural resources but its intimate, emotional ties with nature.⁸⁸ He recommended community level engagement to address environmental problems. Battles over Buttle Lake in nearby Strathcona Park then helped transform both Haig-Brown and BC's nascent environmentalism.⁸⁹ He became an eloquent spokesman for the need to preserve parks.

Haig-Brown displayed all the sensibilities of an environmentalist by the mid-1960s. He likened the situation on the Strait to deepening environmental crises further east: filthy reaches of the lower Hudson and Potomac rivers, he suggested, were indicative of where the lower Fraser might be headed. What spilled out of the Fraser, he reminded his readers, flowed counter clockwise all around the Strait, past Cape Mudge and back along the eastern shore of Vancouver Island.⁹⁰

By the late 1960s Haig-Brown was expressing the fear of losing his coastal paradise that now figured in many settler narratives around the sea. The Strait, he explained, was at the far end of a long, dishonourable road of overexploitation, waste and destruction stretching across North America over 150 years. The bills were coming due. Recreation values, fisheries, and aesthetics were all being rapidly degraded; the Strait was reaching its limits as a cess pool for industrial and domestic waste.⁹¹

Haig-Brown sounded more positive again by the early 1970s, praising "profound and exciting changes" he saw in public attitudes and a "sudden public awareness of ecological matters and environmental effects." This new consciousness was reaching into all forms of human endeavour, even government, and it captured the imaginations of young people in particular. He was confident nothing would reverse this, that the "ruthless and destructive concepts that were fostered to open up the continent" would be abandoned.⁹²

Environmental activism emerged as a force on many shores of the Strait in the 1970s. Grass root organisations mobilised behind many issues, from opposition to transmission line construction and careless real estate development on the Sunshine Coast⁹³ to a local community association on Lasqueti Island that insisted their citizens recognise "...that we are but temporary stewards of a delightful but small and fragile part of a much larger community..."94 The most prominent NGO was SPEC,⁹⁵ founded in Vancouver in 1968 by Gwen and Derrick Mallard, "a middle aged, middle class couple ... neither radical nor hippy." In its prime, SPEC rode the wave of rapidly rising public and media awareness of environmental problems that swept the Strait. It was among Canada's largest environmental groups by the early 1970s, with 43 branches and 35,000 members.⁹⁶ SPEC addressed many issues in the early 1970s; on the Strait they focused on the pulp and paper mill pollution. SPEC depicted forest industry giant, MacMillan Bloedel as Tyrannosaurus Rex, 'the king of polluters.' An abortive SPEC stink bomb attack on a Vancouver meeting of the Council of Forest Industries was headline news. Such direct action was controversial within SPEC, causing conflict between 'radicals' who supported it and 'moderates' who didn't.⁹⁷ Members in smaller communities dependent on the forest industry recoiled at these tactics and many quit.⁹⁸ SPEC was more sedate by the 1980s, evolved into a model advocacy and research NGO, with annual budgets of \$200,000 for research, policy advice and participation on committees. It was proud of its role in stopping oil port construction and reducing municipal

pollution of the lower Fraser. It lobbied for improved treatment of Vancouver's sewage before it was dumped into English Bay. This new, less incendiary style may have failed to capture imaginations, in any case SPEC was waning by the 1990s, with annual budgets a third of what they had been a decade earlier.⁹⁹

A new perception of the Strait as a precious, threatened place was shared by many, especially in Vancouver and Victoria and the islands between. One dramatic result was the Islands Trust, a unique experiment in combining preservation and local planning on a dozen major islands of the Strait. A Trust inventory of the Strait's biotic resources emphasised their recreational values. Whales and other marine mammals were valued not for oil or skins but as "excellent opportunities to observe."¹⁰⁰ The Trust vision was not universally shared. Many rural dwellers around the Strait, still dependent on resource extraction, felt increasingly threatened by these visions of 'environmentally conscious' urbanites anxious to preserve the Strait as sanctuary.

Pervasive fears of 'losing their Strait'

Fears of 'losing their Strait' were not confined to environmentalists, or their opponents. These fears constitute a pervasive leitmotif across the themes, narratives and actors considered in this study. Use of this precious space, so deftly wrested from its owners after 1849, was regularly contested by various stakeholders. Many feared losing 'their' Strait: losing recreational land and marine space to well-heeled Americans, losing salmon and other fish to a confusing matrix of causes, losing public recreation space to industry and private property owners, and so on. Such fears of loss are a recurrent theme in environmental histories. Richard White's pioneering study of islands in Puget Sound bemoaned profligate settlers' depletion of soils, fisheries and forests.¹⁰¹ He warned the islands' scenery – their only remaining significant resource - could similarly slip away. White blamed technologies changing faster than capacities to cope with their environmental effects, as did Richard Rajala.¹⁰² Fear of loss on the Strait was a more complex, multi-facetted affair, with many causes.

In *The Resurrection of Joseph Bourne* Jack Hodgins suggested local worries about loss could be traced back to stories of dispossessed indigenous people.¹⁰³ The settlers' arrival on the Strait unleashed a scenario familiar in the western hemisphere involving denial of indigenous rights, destruction of their cultures and appropriation of their resources, facilitated by introduced

diseases and consolidated by settlement. By 1850, Britain had successfully asserted its claim over this space in the face of challenges from Madrid, Moscow and Washington. The subsequent colonization of Vancouver Island was seen as a necessary step to avoid losing it in the face of rising American influence in western North America. The tiny settler community saw the British Navy as a critical counterpoint to a daunting threat. In 1859, with a rising flood of mostly American miners rushing toward the goldfields, the British Colonist newspaper feared the US was trying "...to wrench the keys to the Gulf of Georgia from our hands." Through the summer of 1859 the Colonist was full of stories of the disputed San Juan Islands and whether the border would follow Rosario Strait or Haro Strait.¹⁰⁴ A dozen years later, as the British colony was passed to Canada, the dispute flared up again, and again American claims were dangerous threats to settler control of the rich inland sea. A decade after that the Colonist asserted that the Washington Treaty ceding San Juan Island to the US, was "...a gigantic blunder" giving the Americans military control over access to "our ... ports on the Gulf of Georgia."¹⁰⁵ Amidst this paranoia about losing 'our sea' to 'foreign' incursion, the Royal Navy became a familiar presence on the Strait - loading coal, carrying out target practice and occasionally shelling unruly Indians. By the early twentieth century the question of the maritime boundary had been peacefully resolved, and the Esquimalt naval base in Victoria was now seen as the Strait's protector from more distant enemies.¹⁰⁶

As fears of geopolitical threats diminished, there were many other diverse kinds of loss to worry about. Early settlers feared being excluded by the machinations of land speculators. Mackie reported that "people in Comox of all political stripes ... in the late 1870s and early 1880s... were adamantly opposed to the E & N land grant."¹⁰⁷ Frederick Nunns in Campbell River complained in 1890 that "All the land around here is now in the hands of the speculators and coal companies."¹⁰⁸ Forty years after securing the Pacific railhead, Vancouver engineers extolled their port as a critical link in the British Empire's chain of control and commerce. They worried about the degradation of the city's precious port facilities, now threatened by "...inadequately financed improvements" and "... self-interested parties or corporate exploitation."¹⁰⁹ Others felt threatened by Japanese settlers and fishermen. Provincial politicians before WWI worried in private about the need to replace Japanese fishers with 'white' ones or risk losing elections over the issue. The BC Attorney General spoke in 1912 of the need to get white fishermen into salmon fishing and Japanese fishermen out. Industry replied there weren't enough white

fishermen available.¹¹⁰ In the late 1930s, with the threat of a global war looming and imperial Japan likely to be an enemy, Quadra Island's Francis Dickie and other local writers stoked local paranoia. The Japanese, Dickie reminded readers, had a strangle hold on fishing and would be a fifth column on the Strait, 30,000 strong.¹¹¹

An enduring fear concerned complicated threats to salmon residing in or passing through the Strait. Concerns about overfishing the Fraser Sockeye emerged before the devastating Hell's Gate slide of 1913. Stocks slowly recovered but by mid-century Roderick Haig-Brown was warning of rising threats to "…one of the world's great protein food resources" from irrigation, careless forest harvesting and pollution. He was worried about effects of proposed hydro dams on the Fraser and suggested the "gradual destruction of the Columbia" might foreshadow the future of the Fraser's salmon.¹¹²

Another abiding fear was embodied in 'the man from California' - that acquisitive, noisy, destructive outsider who threatened a place cherished by the Blanchett family in *The Curve of Time.*¹¹³ Indeed, a 'man from California' figure often threatened valued recreation space on the Strait, though he was often more local.¹¹⁴ Again, Haig-Brown sounded the alarm, pointing to a neglectful province opening park gates to miners and loggers.¹¹⁵ This fear emerged again in the 1960s, with widespread worry that the Strait's recreation space was being 'bought up by foreigners', especially Americans. The Vancouver *Sun* reported in 1963

...the years since the war have seen miles of waterfront and whole islands gobbled up by wealthy Americans and foreign investors. Islands and waterfront areas once open to the public are no longer available... The park idea came too late to save many of the best spots...¹¹⁶

Such worries were exaggerated by anti-American sentiments in the late 1960s and early '70s. They figured in the 1972 provincial election, when a twenty-year-old Social Credit government fell. Karen Sanford, the victorious NDP candidate in Comox, had played on widespread fears, claiming

Too much BC land is being sold to foreign investors. Too much BC land is controlled by foreign non-residents. Too many Canadians cannot afford to own land in BC. Pressure of foreign buyers has contributed to high land costs...¹¹⁷

The Islands Trust reported three years later that most of the Strait's smaller island were owned by 'non-Canadians.'¹¹⁸ The public and government managers also fretted over an invasion of American pleasure craft on the Strait. Victoria's Marine Resources Branch reported in 1971 that American craft far outnumbered Canadian craft in marine parks around the Strait. The visiting fleet of US registered boats was expected to reach between 15,000 and 25,000 each summer by the mid-1980s, taking up moorage in favourite bays and inlets and dumping sewage; American boats anchored for free in the parks, they said, and overstretched marine search and rescue capacities.¹¹⁹

On a number of the islands in the Strait, newcomers and old time residents engendered mutual fear. To long-time residents of places like Denman or Quadra islands, the back-to-the-landers who started appearing in the late 1960s mostly looked like unwashed and disrespectful 'hippies' who had rapidly become a serious threat to the established order. As old timers saw it, these *arrivistes* were undermining the rights of aging farmers, loggers and fishermen to do what they wanted on their islands. The newcomers found many old timers threatened a new found paradise they were determined to protect.¹²⁰ When Islands Trust froze large scale land developments and established a preservationist planning agenda, the newcomers' view prevailed on many islands.

Despite these pervasive 'fears of loss' among a diverse cast of actors around the Strait, this study is not a traditional tale of environmental decline but rather a story of the shifting multiplicity of ways that the Strait affected people living around it, and they it. It considers a number of duelling or parallel narratives, each of which involved stakeholders who quite correctly perceived various existential threats to 'their Strait' from others who saw it differently. In examining these different narratives and the complex relations among them, this study attempts to demonstrate the value of considering them together, to demonstrate that it is necessary to have some grasp of the diversity of relations between humans and the rest of nature on the Strait if one is to have a reasonably accurate understanding of the overall human / nature relationship there. Such an understanding in turn, I contend, is necessary if one wishes to participate wisely in this relationship.

¹ Newell, *Tangled Webs; --- Pacific salmon canning;* Harris, *Resettlement of BC; ---, Making Native Space;* Mackie, *Island Timber; ---, Trading Beyond the Mountains.* Keeling, "The Effluent Society."

² E. H. Carr, *What is History?* (Cambridge: Cambridge University Press, 1961).

³ Linda Nash, *Inescapable Ecologies: A History of Environment, Disease and Knowledge* (Berkeley: University of California Press, 2006), 15

⁴ Fernand Braudel, *La Méditerraanée et le monde méditerranéen à l'époque de Phillipe II* (Paris: Armand Collin, 1949), 296.

⁵ D. W. Meinig, *The Great Columbia Plain, A Historical Geography, 1805-1910* (Seattle and London: University of Washington Press, 1968), xi-xiii.

⁶ "Michael Fellman, 1943-2012. Historian of the nineteenth century, the Civil War and American Violence," posted 1 September 2012, accessed 2 June 2014, http://www.sfu.ca/history/news/fellmanmemoriam.html

⁷ K. T. Carlson (ed.), A Stó: lo Coast Salish Historical Atlas, (Vancouver: Douglas and McIntyre, 2001), 27.

⁸ Umberto Eco, The Name of the Rose (San Diego: Harcourt, 1983). That is 'idiot servant', not 'idiot savant.'

⁹ Donald Hughes, *The Mediterranean: An Environmental History*, (Santa Barbara, CA, Denver, and Oxford, England: ABC-CLIO, 2005).

¹⁰ Sean Miller, An Environmental History of Latin America (New York: Cambridge University Press, 2007), 5.

¹¹ Helen M. Rozwadowski, "Ocean's Depths," Environmental History 15 (2010), 520-525.

¹² Richard White, *The Organic Machine: The re-making of the Columbia River* (New York: Hill and Wang, 1995).

¹³ Donald Worster, *Rivers of Empire: Water, Aridity and the Growth of the American West* (New York: Pantheon Books, 1985).

¹⁴ Linda Nash, *Inescapable Ecologies: A History of Environment, Disease and Knowledge* (Berkeley: University of California Press, 2006).

¹⁵ Connie Chiang, *Shaping the Shoreline: Fisheries and Tourism on the Monterey Coast* (Seattle: University of Washington Press, 2008).

¹⁶ George Perkins Marsh, *Man and Nature; or, Physical Geography as Modified by Human Action* (New York: Charles Scribner, 1864).

¹⁷ As Jay Taylor said: "[historians'] mastery of contexts and contingencies provides a radical corrective to disciplines that influence public and policy discourse by side-stepping the niggling details." J. E. Taylor, "Boundary Terminology," *Environmental History* 13 (2008): 471.

¹⁸ W. M. Davis, "The Principles of Geographical Description," *Annals of the Association of American Geographers* 5 (1915): 63. This desire to bring in all those other 'modes of presentation' is another way of explaining all the snippets from Eco's idiot servant.

¹⁹Andrew Sayer, "The 'new' regional geography and problems of narrative" *Environment and Planning D: Society and Space* 7, 3 (1989): 253-276.

²⁰ Edward Soja, "Taking Los Angeles apart: some fragments of a critical human geography" *Environment and Planning D: Society and Space* 4 (1986), 255-275, 257, cited in Sayer, "*New Regional Geography*," 273.

²¹ Nigel Thrift, "Taking aim at the heart of the region", *Human Geography: Society, Space and Social Science*, eds. D. Gregory, R Martin, G Smith (London: Macmillan, 1994), 200-231, cited in G. MacLeod and M. Jones, "Devices The Course has a Device of Parises" For the Course has a Device of Parise and Parises (2001).

"Renewing The Geography of Regions," *Environment and Planning D*, 16, 9 (2001), 669.

²² Dan Flores, "Place: An Argument for Bioregional History," *Environmental History Review* 18 (1995): 13.
 ²³ As Cronon did in: *Changes in the Land: Indians, Colonists and the Ecology of New England* (New York: Hill and Wang, 1983).

²⁴A. C. Isenberg, *The Destruction of the Bison: An Environmental History*, 1750-1920 (Cambridge and New York: Cambridge University Press, 2000), 61.

²⁵ Peter Boomgaard (ed.), A World of Water: Rain, Rivers and Seas in Southeast Asian Histories (Leiden: KITLV Press, 2007).

²⁶ Bruce Braun, *The Intemperate Rainforest: Nature, Culture, and Power on Canada's West Coast* (Minneapolis: University of Minnesota Press, 2002).

²⁷ William Cronon, "A Place for Stories: Nature, History, and Narrative," *Journal of American History* 78.4 (1992): 1347-1376. Robert Wilson recently reminded environmental historical geographers of William Cronon's more recent warnings of the dangers of writing only to other scholars and of the need to seek instead to write things that might interest and intrigue a broader audience, in: Robert M. Wilson, "The past and future of environmental historical geographies," in: Graeme Wynn et al, "Reflections on the American environment," 163 *Journal of Historical Geography* 43 (2014) 152-168; William Cronon, Professional boredom, Perspectives on History, March 2012, http://www.historians.org/perspectives/issues/2012/1203/Professional-Boredom.cfm (accessed 10 July 2013). ²⁸ J. R. McNeill, "Observations on the Nature and Culture of Environmental History," *History and Theory* 42, 4 (2003): 6.

²⁹ These classic questions for historical geographers were summarised fifty years ago in: H. C. Derby, "Historical Geography," in: H. P. R. Finberg (ed.), *Approaches to History*, (London: Routledge, 1962), 127-156.

³⁰ Fernand Braudel, *La Méditerraanée et le monde méditerranéen à l'époque de Phillipe II* (Paris: Armand Collin, 1949), 296.

³¹ Andrew Clark, *Three Centuries and the Island, A Historical Geography of Settlement and Agriculture in Prince Edward Island, Canada* (Toronto: University of Toronto Press, 1959), 222.

³² Stephen J. Hornsby, *Nineteenth Century Cape Breton, A Historical Geography* (Montreal and Kingston: McGill and Queens University Press, 1992).

³⁶ David Rossiter, "Lessons in possession: colonial resource geographies in practice on Vancouver Island, 1859-1865," *Journal of Historical Geography* 33 (2007): 770-790; Arn Keeling, "Charting marine pollution science: Oceanography on Canada's Pacific coast, 1938-1970," *Journal of Historical Geography* 33 2 (2007): 403-428. ³⁷ Tina Loo, *States of Nature: Conserving Canada's Wildlife in the Twentieth Century* (Vancouver: UBC Press, 2006).

³⁸ Jean Barman, "Taking Local History Seriously," BC Studies 165 (2010): 101-6.

³⁹ From a socio-economic perspective, at least.

⁴⁰ Meinig, *The Shaping of America: A Geographical Perspective on Five Hundred Years of History*, Volumes 1-4 (New Haven and London: Yale University Press, 1986-2004).

⁴¹ BCA MS-0364 ORCHARD - BOX 4, File 1: Timberline.

⁴² Peter Puget, *A log of the proceedings of HMS Discovery, January 4, 1791 to January 14, 1793*, Public Records Office (London), Group: Admiralty: 61, cited in Doreen Armitage, *Around the Sound: a History of Howe Sound-Whistler* (Madeira Park, BC: Harbour Publishing, 1997), 30.

⁴³ Grant Lawrence, Adventures in Solitude: What Not to Wear to a Nude Potluck and Other Stories from Desolation Sound (Madeira Park, BC: Harbour, 2010), 19.

⁴⁴ Christopher D. Nelson, "Seaspace Use and Control: A Case in the Gulf of Georgia" (MA Thesis, Department of Geography, UBC, 1973), 30.

⁴⁵ J. H. Day, L. Farstad and D.G. Laird, *Soil Survey of Southeast Vancouver Island and Gulf Islands of BC*, Report No. 6 (Victoria: Department of Agriculture, 1959).

⁴⁶ Mary L. Barker, *Water Resources and Related Land Uses Strait of Georgia – Puget Sound Basin*, Geographical Paper No. 56. Lands Directorate, Department of Environment. (Ottawa: Information Canada, 1974), 3;

Nelson, "Seaspace," 15, 29-30; Stuart Holland, *Landforms of BC: A Physiographic Outline*. Bulletin No 48 (Victoria: BC Dept of Mines and Petroleum Resources, 1965), 113, cited in: Nelson, "Seaspace," 30. ⁴⁷ Barker, *Water Resources*, 8.

⁴⁸ G. L. Pichard and D. C. McLeod. 1953. Seasonal Variations of temperature and Salinity of Surface Waters of BC Coast. Journal of Fisheries Research board of Canada. Vol 10, June 1953, in: Nelson, "Seaspace," 31-32.

⁴⁹ J. P. Tulley and A. S. Dodimead, 1957. Properties of the Water in the Strait of Georgia, BC and Influencing Factors. Journal of the Fisheries Research Board of Canada. Vol 14, July 1957: 241, in: Nelson, "Seaspace," 32.
 ⁵⁰ Barker, *Water Resources*, 11.

⁵¹ Barker, *Water Resources*, 11-12.

⁵² Christine Keiner, *The Oyster Question: Scientists, Watermen, and the Maryland Chesapeake Bay since 1880* (Athens, GA: University of Georgia Press, 2009), 28

⁵³ D. M. Schaepe, "The Land and the People: Glaciation to Contact." In: *A Stó:lō-Coast Salish Historical Atlas*, edited by Keith Carlson et al (Vancouver : Stó:lō Heritage Trust / Douglas-McIntyre / University of Washington Press, 2001), 12-19.

⁵⁴ Cole Harris, *The Resettlement of BC: Essays on Colonialism and Geographical Change* (Vancouver: UBC Press, 1997), 23.

⁵⁵ Government of Canada, *Census of Canada, 1880-81* (Canada Census and Statistics Office, Volume 1. Ottawa: MacLean Rogers, 1882); Government of Canada, *Census of Canada, 1890-91* (Ottawa: S. E. Dawson, 1893); Government of Canada, *Fourth Census of Canada, 1901* (Ottawa: S.E. Dawson, 1902); Government of Canada, *Fifth Census of Canada, 1911* (Canada Census and Statistics Office, Volume 1. Ottawa: C.H. Parmelee, 1912); Government of Canada, *Sixth Census of Canada, 1921* (Ottawa: F. A. Ackland, 1924); Government of Canada, *Eighth Census of Canada, 1941* (Ottawa: Edmond Cloutier, 1950); Government of Canada, *1961 Census of Canada*. (Ottawa: Dominion Bureau of Statistics, 1962); Statistics Canada, *1981 Census of Canada* (Ottawa: Ministry of Supply and Services, 1982).

⁵⁶ Nelson, "Seaspace," 171-4.

⁵⁷ Arn Keeling, "The Effluent Society: Water Pollution and Environmental Politics in British Columbia, 1889-1980," (PhD Thesis, Department of Geography, UBC, 2004).

⁵⁸ Graeme Wynn, "Shall we linger along ambitionless? Environmental Perspectives on British Columbia," *BC Studies* No. 142-143 (2004): 5-68.

³³ Tom Griffiths, Forests of Ash, An Environmental History (Cambridge: Cambridge University Press, 2001).

³⁴ Mark Cioc, *The Rhine: An Eco-Biography, 1815-2000* (Seattle: University of Washington Press, 2002).

³⁵ Chiang, *Shaping the Shoreline*.

⁵⁹ Matthew Evenden, *Fish Versus Power: An Environmental History of the Fraser River* (New York: Cambridge University Press, 2004).

⁶⁰ Jeffrey Bolster, "Opportunities in Marine Environmental History." *Environmental History* 11 (2006): 567-597.
 ⁶¹ Suzanne Zeller, *Inventing Canada: Early Victorian Science and the Idea of a Transcontinental Nation* (Toronto: University of Toronto Press, 1987).

⁶² Their work is described in detail in J. F. Roos, *Restoring Fraser River salmon: a history of the International Pacific Salmon Fisheries Commission*, 1937-1985," Vancouver: Pacific Salmon Commission, 1991; and analysed more critically in Evenden, *Fish Versus Power*.

⁶³ Joseph, Légaré, "The Qualitative and Quantitative distribution of Plankton in the Strait of Georgia in Relation to Certain Oceanographic Factors." *Journal of the Fisheries Research Board of Canada* 14 (1957): 551-552.

⁶⁴ T. R. Parsons, "The Productivity of the Strait of Georgia" *Fisheries of Canada* 23: May-June 1971: 11; and R. J. Lebrasseur et al, "Production Studies in the Strait of Georgia: Part III, Observations of the Fraser River Plume," Journal of Experimental Marine Biology and ecology. Vol. 3 (1969): 51-61, Cited in: Nelson, "Seaspace," 37. ⁶⁵ Nelson, "Seaspace," 64.

⁶⁶ Some of the most notable examples were the work of Derek Ellis at the University of Victoria, Michael Waldichuk of the federal Department of Fisheries and Oceans (DFO) and studies for DFO by the consulting firm Hatfield and Associates in the waters off Powell River.

⁶⁷ Michael Egan at McMaster is looking at the science of mercury contamination in Sweden, Canada and US but not yet on the west coast of Canada, where he suggests there was probably similar foot dragging, obfuscation and cover up as in northwest Ontario.

⁶⁸ Barker, *Water Resources*, 50.

⁶⁹ Barker, Water Resources, 11.

⁷⁰ VCA MSS 1556 Box 729 A2 file 6: Brown, Stephen. 1970. "UBC fires SPEC's Harger for being too relevant." Georgia Straight. 21-28 Oct 1970.

⁷¹ Wynn, Shall We Linger, 35-36.

⁷² Allan Pritchard, "West of the Great Divide: A View of the Literature of British Columbia," *Canadian Literature* No. 94 (1982), 102.

⁷³ Pritchard, *West* (1982); Allan Pritchard, "West of the Great Divide: Man and Nature in the Literature of British Columbia." *Canadian Literature* No. 102 (1984), 36-53.

⁷⁴ Malcolm Lowry, Malcolm, *Under the Volcano* (New York: Reynal & Hitchcock, 1947); ---, *October Ferry to Gabriola* (Vancouver: Douglas and McIntyre, 1970).

⁷⁵ Jack Hodgins, *The Invention of the World* (Toronto: Macmillan, 1977).

⁷⁶ H. Wylie Blanchett, *The Curve of Time*, (Vancouver: Whitecap, 1961, 2002).

⁷⁷ In the end Vancouver is saved by testimony from Mrs Anyone, who represents human vitality, love, joy and hope, the better side of this city's inhabitants, in: Earle Birney, The Damnation of Vancouver (Toronto: McClelland and Stewart, 1957), cited in: Pritchard, West (1984).

⁷⁸ Tim Landers (ed.), *To an inland sea: poems for the Gulf of Georgia* (Nanaimo, BC: Nanaimo Publishers' Cooperative, 1992), Preface.

⁷⁹ As described in detail in: Keeling, "Effluent Society."

⁸⁰ Christer Nordlund, "How the Coast Became High: An Historical Introduction to the High Coast World Heritage Site in Sweden," *Environment and History* 11(2005): 113–38

⁸¹ Peter Ackroyd, *Thames: Sacred River* (London: Chatto and Windus, 2007).

⁸² Buchanan inherited from a son of the company's long time owner, Bob Filberg.

⁸³ Richard Mackie, pers. comm.

⁸⁴ For example, Thomas Lang, in charge of Greenpeace's Experimental Farm on Denman Island in the 1970s sought advice on organic nut farming from Mack Laing, see: BCA MS-1900 Hamilton Laing fonds -BOX 3, File 15: Letter of June 8, 1978 from Thomas S. Lang, Greenpeace experimental farm, RR 1 Denman Island, to Mack Laing ⁸⁵ As Shawn Miller has described in Latin America: Miller, *Latin America*, 66.

⁸⁶ Laing describes his attitudes in: BCA MS-1900 Hamilton Laing fonds - BOXES 17-18:1. I also witnessed them, to my youthful horror, on visits to his house, where a loaded rifle was never far away and Laing never missed a shot.
 ⁸⁷ BCA: T0834: 0001-0002 of Description Number AAAB0925: R. Haig-Brown interview 1969 (I. Orchard records)

⁸⁸ Roderick Haig-Brown, *Measure of the Year, Reflections on Home, Family and a Life Fully Lived* (Toronto: Collins, 1950).

⁸⁹ Yasmeen Qureshi, "Environmental Issues in British Columbia: An Historical Geographical Perspective" (MA Thesis, Department of Geography, UBC, 1991).

⁹⁰ He also reminded Imbert Orchard in their 1969 interview: BCA: T0834: 0001-0002 of Description Number AAAB0925: R. Haig-Brown interview 1969 (I. Orchard records).

⁹² Ibid: BN 146 – 5: R. Haig-Brown. 1972. Parks and the New Conscience. Pp3-4 in: Park News – The Journal of the National and Provincial Parks Association of Canada. Vol. 8 No. 1. January 1972.

⁹³ Both are discussed in: G. W. Thompson, *Texada Island* (Powell River: Powell River Heritage Research Association, 1997); and Howard White, *The Sunshine Coast: from Gibsons to Powell River* (Madeira Park: Harbour Publishing, 1996).

⁹⁴ William H. Wolferstan, *Pacific yachting's cruising guide to the Gulf Islands and Vancouver Island from Sooke to Courtenay* (Vancouver: Interpress Publications, 1976), 165.

⁹⁵ SPEC originally stood for (Canadian) Scientific Pollution and Environment Control Society of BC. In 1981 this was changed to the Society Promoting Environmental Conservation.

⁹⁶ CVA: MSS 1556 SPEC Fonds, Box 729 D6, file 4: Gallon, Gary. 1989. SPEC's Roots. 20th Anniversary edition of Spectrum. Winter 1989: 5-10.

⁹⁷ Ibid, 1 Box 729 A2 file 3: "Director foils SPEC revolt," The Province 19 April 1971 (page 23); and "Director apologises – 3 quit pollution group after hot annual meeting," Vancouver Sun, Mon April 19, 1971.
⁹⁸ Keeling, "Effluent Society": 313.

⁹⁹ CVA: MSS 1556 SPEC Fonds, Box 729 E 1 file 11: 3 page information sheet for SPEC Volunteer workshop 20 March 1985.

¹⁰⁰ BCA MS-1246 Islands Trust Fonds 1974-76: Box 1. Benn, D. R. et al. 1975. Natural Areas Inventory – Islands of the Strait of Georgia, Howe Sound and Haro Strait, Brit Col. Victoria (?), Nature Conservancy of Canada and Islands Trust. Unpublished report dated December 1975.

¹⁰¹ Richard White, *Land Use, Environment, and Social Change: The Shaping of Island County, Washington* (Seattle: University of Washington Press, 1980).

¹⁰² Richard Rajala, *Clearcutting the Pacific Rain Forest: Production, Science and Regulation* (Vancouver: UBC Press, 1998).

¹⁰³ Jack Hodgins, *The Resurrection of Joseph Bourne* (Toronto: Macmillan, 1979).

¹⁰⁴ TBC 10 Aug 1859: 2

¹⁰⁵ TBC 15 June 1881: 2

¹⁰⁶ TBC "BOUNDARY SURVEY" 8 May 1909: 5; TBC 3 October 1909 "Esquimalt guards the entrance to the Gulf of Georgia": 22.

¹⁰⁷ Richard S. Mackie, *The Wilderness Profound: Victorian Life on the Gulf of Georgia* (Victoria: Sono Nis Press, 1995), 166.

¹⁰⁸ BCA MS-0292: Frederick Lloyd Nunns fonds 1882-1912: 17 May 1890 journal entry.

¹⁰⁹ CVA file: PD 631.9: William D. Hudson, "Railway and Harbour Report, Vancouver BC." Report to Vancouver Town Planning Commission, Vancouver: Harland Bartholomew and Associates, September 1927, 1.

¹¹⁰ BCA GR-2908 Canada Department of Marine and Fisheries Central Registry, Reel B-11068: 29 October 1912, B C Attorney General to a deputation of Canners.

¹¹¹ In a letter from Dickie to B. K. Sandwell, Managing Editor of the Toronto Saturday Night, 2 August 1939, in: BCA MS-0006 Francis Joseph Dickie Papers 1932-52,

¹¹² UBCLSC. Roderick Haig-Brown papers. BN 54 – 1 "Pacific Salmon – the Miracle of Abundance." 1958. 29 pages.

¹¹³ Wylie Blanchett, Curve of Time.

¹¹⁴ Similar to the ubiquitous "man from Alberta" today, who is often a local gone east for work but returned to play, with lots of money for noisy toys.

¹¹⁵ For an example of his analysis of the provincial government's role see: UBCLSC. RHB papers. BN 146 – 5. Roderick Haig-Brown, "Parks and the New Conscience," Park News – *The Journal of the National and Provincial Parks Association of Canada.* 8, 1 (January 1972):3-4

¹¹⁶ BCA GR1614 Parks and Outdoor Recreation Division (re: recreation land) BOX 24 File 1.6.2.394: September 27, 1963. The SUN (no more reference in archive).

¹¹⁷ MB / CAMS: Karen Sanford advertisement in *Comox District Free Press*, no date.

¹¹⁸ BCA MS-1246 Islands Trust Fonds 1974-76 Box 1: D. R. Benn et al, "Natural Areas Inventory – Islands of the Strait of Georgia, Howe Sound and Haro Strait, British Columbia," Victoria: Nature Conservancy of Canada and Islands Trust. Unpublished report dated December 1975, 8.

⁹¹ UBCLSC – RHB papers, BN 55-6. 16 page handwritten manuscript of speech in Spokane to Pacific Northwest Tourism Association, 18.4.67. 1967:4

¹¹⁹ BCA GR-1118: BRITISH COLUMBIA. MARINE RESOURCES BRANCH - BOX 8 - File 8 Memorandum of August 20, 1971 from Lloyd Brooks, Acting Deputy Minister to the Hon. K Kiernan, Min of Recreation and Conservation, Parks Board, Victoria:

¹²⁰ Interviews with both sides were carried out by Sharon Weaver, "First Encounters: 1970s Back-to-the-land Cape Breton, NS and Denman, Hornby and Lasqueti Islands, BC," *Oral History Forum d'histoire orale* 30 (2010).

2. The Sea as Barrier, the Sea as Highway

Vast and turbulent expanses of open oceans clearly present more challenges to human movement than do protected little seas such as the Strait of Georgia. Yet whether any sea is a barrier or an opportunity for human movement has much to do with the skills, knowledge and technology of those contemplating it. The indigenous culture that evolved along the Strait's thousands of kilometers of coastline for millennia before 1849 had a complicated relationship with a ubiquitous sea that presented them a ready means of travel,¹ a near endless food supply and a means of purification, but also life threatening storms and tidal rapids. By the early nineteenth century indigenous people had adapted to life by the sea in a myriad of ways, moving people and material around it with relative ease in canoes wrought from giant cedars. Throughout the period considered in this study, relations between the inland sea and the movement of humans and their goods changed constantly. Shifting technologies tempered the agency of the sea, and narratives about that agency, but it always acted as both barrier and highway.

Cook's and Vancouver's late 1700s voyages on the ocean highways helped transform outsiders' understanding of the northeast Pacific shore and speeded its integration into trans-Pacific and global trading networks.² The Hudson Bay Company (HBC), moving west in the first half of the nineteenth century, incorporated the Strait of Georgia into a broader 'Columbia' region. They established sea links with Britain, Hawaii and California that underpinned the export based economy to emerge on the inland sea later in the century. In the process, the company initiated patterns of movement among their establishments on the lower Fraser River and in Victoria and Nanaimo that became familiar, moving goods and people and overcoming some of the Strait's navigational challenges with its first steam powered vessels.³

Colonisation by a seafaring people, 1849-1880s

British colonisers of the Strait were increasingly confident of their ability to seize the opportunities the global seas offered those with the knowledge and courage to master them. The British were enamoured with the seas, not just as highways to success but as key determinants of their national character. In the 1870s, Robert Louis Stevenson suggested Britons were possessive towards the sea, and the sea symbolised their nation even more than the imperial lion. It was

their "... bulwark ... the scene of ... [our] greatest triumphs and dangers, and ... [we] claim it as our own."⁴ A decade later an article on the 'origins of the English' described them as "folk of the sea, to whom the sea is a true home."⁵ A turn of the century children's history extolled the British boy's "racial love for the sea" and his "especial birthright to the blue waters."⁶

The British love affair with the sea was transcendent yet practical. Long before John Masefield became Britain's poet laureate, his poem *Sea Fever* exclaimed he had to "go down to the sea again," to respond to a "wild and clear call (that) ... could not be denied." This sea, woven into their character, they believed, stood for much that was admirable in that character: beauty, power, conquest, redemption, questing, life, healing and soothing. The British also recognised the practical value of this love match. Young Britons were taught their global dominance of commerce resulted from their command of the seas. These were people who could believe destiny had prepared them to control the distant Strait of Georgia.⁷ Britain was among the few imperial powers that – like the Spanish and Americans – was able to exercise power on a distant sea. The colonies of Vancouver Island and later British Columbia were among the most remote places of the mid-nineteenth century Europeans' 'known world.'⁸

Colonists on the Strait at mid-century virtually all came by sea. Getting there was considerably more challenging than sailing within it. Most oceanic travel to the Strait continued to be done in sailing ships until the end of the nineteenth century. A sea voyage to Victoria from Great Britain in 1849 could be almost unbelievably long by today's standards. Sea travel times between the east and west coasts of the US had already fallen considerably by the early 1850s, thanks to rapid improvements stimulated by the gold rush in California.⁹ But for many, the months of closely confined travel voyaging from Britain to Victoria had more in common with a sojourn in outer space than with most 21st century marine or terrestrial travel.

The trip around Cape Horn from London to Victoria, usually via the Hawaiian Islands to take advantage of winds and trade opportunities, took five or six months if all went well. When the British Colonial Office had considered the option of transporting emigrants via the Isthmus of Panama instead of around Cape Horn to reduce the journey by a few weeks, but eventually decided it wouldn't be worth Panama's heat, diseases and foreigners.¹⁰

William Lomas, later an Indian Agent in the Cowichan Valley, left behind an account of his passage from Liverpool via Cape Horn in 1862. If he felt any 'racial love of the sea' at the outset of his voyage, it was likely diminished by the time he reached Victoria. He travelled in relative comfort but it was a daunting voyage:

July 11: The feelings of an emigrant on leaving the shores of his native land must be felt to be understood... dear ones whom you have seen, perhaps for the last time, will flash across your mind and do not tend to make the day a happy one...

The endless days of seasickness:

July 13: ...You can have no idea of feeling sick for three or four days together without the slightest relief...

July 15: So sick...

Months of sharing close and uncomfortable quarters with unpleasant travelling companions:

July 22: ...My companions ... are anything but pleasant ... the most disgraceful fellows I have ever been amongst. Most ... cannot speak ten words without two or three oaths, and they are all a drunken lot... cabin is very close.

Bad food and services:

July 26: ... The "Silistria" has never taken passengers before and is... very imperfectly fitted out... the mustard and pepper have been sent <u>unground</u> and no <u>mill</u> to grind with. The cooks are disgusting fellows, very dirty, and scarcely ever sober since we started. The doctor... always drinking...

Uneasiness about the new country:

August 20: Saw some Columbian papers from April which gave very black accounts of the hardships of persons arriving without at least £100. Many of our passengers are wishing themselves back in England, but... by God's help, I must succeed...

Then, after a month and a half at sea, except for the terrifying prospect of sailing through the

mountainous waves, snowstorms and icebergs of Cape Horn, things begin to look up.:

August 25: ... If I were starting again I could pay my passage by taking out articles to sell on board ...onions sell at 3d each... 2/ is refused for cheese per lb. Wilson and I have bought two hams, nearly 50 lbs weight. We can sell for 1/6 but are waiting until it is 2/... October 28: Sold my champagne at 50% profit...

Otherwise, conditions did not improve as they approached Victoria:

November 4 "... Several rats are found, dead, in the water casks. This adds considerably to the flavour. The biscuits, too, are all alive and ... the maggots are of a very large breed. The *Silistria* didn't stop at Honolulu and arrived after only 128 days at sea, "...the shortest passage of any sailing vessel that has been here yet" ¹¹

The time needed get to the Strait from the world outside declined steadily as ocean going steam vessels increasingly replaced sailing ships and transcontinental railways reached the Pacific in California. A dozen years after Lomas, future trader and politician on the Strait, Michael Manson

spent barely thirty days crossing the Atlantic by steamship to New York, travelling by train to San Francisco and then by coastal steamer to Victoria.¹²

Steam was gradually replacing sail on the Strait itself yet sailboats continued to be widely used for moving people and goods into the twentieth century. Homeric accounts of trips around the inland sea in those years describe unpredictable adventures in the face of currents, winds, fogs, and uncharted reefs and rocks. Frederick Marsh recounted the story of a very old man on North Pender Island, about sailing to Nanaimo for the first time in the 1870s. The trip of about 80 kilometers took days through calms, fogs and rapids. On the way he met Natives boiling dogfish oil on the beach and Portuguese Joe Silvey and his Indian family in their beach home. He spent four days waiting out a fog. The *Colonist* described a similar odyssey by vacationers in 1881, sailing for days from Saanich to Cortes Island, through a gauntlet of riptides and gales.¹³

Nineteenth century sailing vessels equipped with a compass, a lead, a sextant and a chronometer were not well adapted to navigating the inland sea. The Strait was relatively calm much of the time, yet winter winds were fierce, currents poured in and out, endlessly changing among countless islands and reefs. Long narrow fiords on the northeast shore were especially challenging for navigators. The sea's north and south entrances were swept by tides that ran like a mountain river in spring.

The Strait was hazardous for navigators of any vessel in the 1850s and 60s. It was particularly dangerous for gold miners in the late 1850s. Eager to reach the Fraser River gold fields, they were ready to travel between Victoria and the river mouth in anything they could find. A colonial official at the time reported

... Numbers perished in these hazardous voyages; many ... the maze of archipelagos ... from Discovery Island to ... the Gulf of Georgia; and many more ... that stormy and dangerous gulf, dangerous even for strong and large steamers, from the peculiarity of its currents and from other causes.¹⁴

Judging from the many reports of wrecks and salvage operations published in the *Colonist*, the 1860s and '70s were good years to be a salvager on the Strait. After the gold rush abated, coal ships in and out of Nanaimo figured in many navigational mishaps. So did vessels going through Plumper Pass (now Active Pass) and Seymour Narrows. Some hazards were reported more than

others by Victoria journalists whose city had an interest in touting Esquimalt's harbour over upstart Burrard Inlet.

Ottawa assumed responsibility for marine space after BC's entry into Confederation in 1871 and soon began addressing the Strait's navigational challenges. The Department of Marine and Fisheries' local agent in their "distant colony" was named "Inspector of Lights" and "Inspector of Steamboats."¹⁵ Lighthouses (Illustration 1) and other navigational aids were early federal priorities on the Strait. From the colonial authority they inherited a single lightship at the Fraser mouth. A lighthouse was built at the entrance to Burrard Inlet in 1875 and on Nanaimo's Entrance Island in 1877. Buoys were installed or upgraded on Burrard Inlet, English Bay, Gabriola Reef and Trincomalee Channel.¹⁶

An informal and poorly organised pilot service helped tame the Strait's hazards though its pilots were often drunk. It didn't appear to be a popular job: an 1869 regulation stipulated "... Pilots taken to sea on any vessel against their will, shall be entitled to claim from the master or owner of such vessel the sum of five dollars per diem until the date of their arrival at the Port of Victoria..."¹⁷ After an 1873 report of a shipwreck on Plumper Pass called for investigation of the pilot service, Ottawa began to organise a more formal system.¹⁸

Ottawa was keen to invest in BC's ports, clearly destined to be important assets once the railway reached the coast. The Strait was to be a vital part of the chain linking the new Dominion's resource industries with Asian markets. Burrard Inlet was recognised early on as one of the best locations for the rail terminal. The inlet had no settlement on the scale of Nanaimo in the 1850s; its own transition began in the early 1860s. To facilitate navigation, the British Admiralty published marine charts using Captain George Richards's hydrographic survey carried out between 1860 and 1862. Sawmills on Burrard Inlet were soon exporting lumber across the Pacific. From the mid-1860s to the late 1870s, more than forty ocean-going ships a year loaded lumber on the inlet.¹⁹

Although Burrard Inlet's good entrance and protected anchorage were generally recognised, Victoria newspapers often enumerated the mainland port's drawbacks: The approach suffered from the treacherous weather of the Strait, and Plumper Pass was often dangerous. Burrard Inlet's first and second narrows were barely 270 metres wide and subject to tides running over 16 kph in full flood. Furthermore, American guns, if placed on the San Juan Islands, could close the Strait entirely. These hazards could be avoided by putting into Esquimalt, "the best port on the Pacific."²⁰



Illustration 1 – "Georgina Point Lighthouse, Mayne Island" ca. 1880 (photo: Richard Maynard). Ottawa's growing network of lights and buoys helped ships navigate the Strait's dangerous currents, reefs and rocks.

While the *Colonist* might stoke fears of losing ships on the Strait, steam towboats there helped reduce the hazards facing ocean going sailing vessels plying the inside waters. Two tiny HBC steamers, the *"Beaver"* (Illustration 2) and the *"Otter,"* had connected trading posts at Victoria and Langley and shipped salt fish, lumber and coal to San Francisco. They served as towboats by the late 1850s. The boats were gluttons for wood but independent of capricious winds. A growing fleet of tugs towed sailboats through the Strait's many narrows.²¹

The number of steam vessels on the Strait grew through the 1860s and early 1870s. Many early steamers were as unreliable as the pilots and few stayed in business long.²² Larger steamships

carried ever more passengers and freight, rendering the inland sea more predictable and familiar to settlers. The regularity and predictability of coastal steamers improved with time and began to transform life in shoreline communities. Settlers could receive goods, in some places even mail, and ship their produce to the world.



Illustration 2 - "Wreck of the *SS Beaver*, Prospect Point, Vancouver" ca. 1892 (photo: Maynard). After decades helping others navigate the Strait's hazards, the *Beaver* fell victim to them. An inebriated crew wrecked her on Prospect Point in 1888, the same year a lighthouse was erected nearby.

When the Vancouver Island and British Columbia colonies joined in 1866, the *Colonist* heralded the "bringing together of people from the two sides of the Gulf of Georgia"²³. Yet the restless waters were still a barrier separating 'Island' from 'Mainland.' Early reports had spoken glowingly of the abundance of good harbours around the Strait; however, by the 1860s it was clear there were two principal contenders for dominant port on the British Pacific coast: Victoria-Esquimalt and Burrard Inlet. Competition between them intensified as merchants and speculators on both sides vied for dominance. In the end, the outcome was decided by the location of the terminus for the 'all-Canadian' transcontinental railway.

The age of rail was well under way as Eurasian colonisation began on the Strait. The railway's arrival on the inland sea was the object of much anticipation and speculation. Victoria's merchants were determined that the railroad should extend to the southern tip of Vancouver Island. Concerted efforts by Victoria's Amor De Cosmos, and what Martin Robin called Victoria's "shopocracy,"²⁴ aimed to make their city the terminus. They suggested BC's entry into Confederation should depend on Victoria being named the terminus and seldom missed an opportunity to stress the dangers facing ships bound for Burrard Inlet. Victoria's boosters said it was "much closer to Europe and Asia"²⁵ (about 120 kilometers closer by sea) and their proposed Bute Inlet route (Figure 2) would be vastly easier than the treacherous Fraser Canyon.



Figure 2 - Alternative routes from the Strait to the interior considered by the CPR

The challenges of laying rail along Bute Inlet then across furious tidal rapids were not seriously considered as the Victoria lobby aimed to demonstrate that the Strait represented no insurmountable barrier to a transcontinental railway.

Proponents of the Victoria terminus used charts prepared by Vancouver in the 1790s to demonstrate that the northern Strait could be easily spanned. Their arguments were a variation of those in support of the Esquimalt port. A railway on Bute Inlet would avoid the impassable Fraser Canyon, and Burrard Inlet's treacherous currents. The Colonist also maintained

To suppose that the time will never come again that Great Britain will be at war with the United States is to believe that the Millennium is close at hand. Twice during the past fifteen years has a war been imminent...²⁶

The British Navy could readily secure the Bute Inlet route from American aggression; this would be impossible for a railroad on the lower Fraser. With short hops onto and off "Valdes" Island, the railway could follow the flat, sheltered coast of Vancouver Island to Victoria. The route had the added advantage of easing access to the Vancouver Island's rich resources. Backers in Victoria were devastated when the Burrard Inlet terminus (Illustration 3) was chosen in 1877. For the CPR, the challenges of the Fraser Canyon had looked less daunting than the Strait's marine barrier.

Fear of losing the Strait's rich resources to American expansionism was not unfounded, in part because railway building was more advanced south of the border. By the 1870's, most settlers on the Strait had reached the west coast on American railways. In the event of hostilities, American forces travelling by rail could move more easily than Canadians or British denied travel on American rails. Richard White noted that even an American engineer conducting a preliminary survey for the Northern Pacific Railway sought information on the Bute Inlet route, in case Vancouver Island became part of the US.²⁷

Victoria's railway proposal suffered from gaps in Vancouver's mapping. He had failed to mark the narrow channels that separate Quadra, Read, Maurelle and Sonora Islands. Considering the fierce tidal rapids running through some of these passages, one can understand why his crews neglected to investigate them. The four islands remained 'Valdes Island' until more detailed surveys in the 1860s and '70s revealed the complexity of the Strait's northern perimeter.²⁸ Courtesy of BC Archives collections - Call Number: A-01009 Web: www.bcarchives.gov.bc.ca Email: access@www.bcarchives.gov.bc.ca (C) - Provided for Research Purposes Only - Other Use Requires Permission



Illustration 3 - "Early Vancouver, known as Gastown at the time" 1884 (photo: undetermined): The quiet backwater became Vancouver with the arrival of the transcontinental railway in 1886.

The transcontinental never reached Victoria and Victoria never dominated the economy of the Strait as Vancouver would. Earlier victories must have bolstered Victoria's confidence. Victoria had prevailed over New Westminster to become the capital of the new colony when Vancouver Island and British Columbia were joined in 1866. And Victoria had won the first round between ports, being chosen over Burrard Inlet, Nanaimo and Alberni as the site for the British navy's main base on the northeast Pacific.²⁹

Victoria's bid for the railway terminus does not seem especially plausible – until today the Strait has not been bridged. But for the city's settler elite in the 1870s, Burrard Inlet's bid for the railhead was outrageous, akin to today's Surrey proposing to become the urban core of the Lower Mainland. Both sides understood that in the age of rail the terminus city would dominate the west coast of Canada. The success of Burrard Inlet's bid was never really in serious doubt, given the barrier the Strait of Georgia represented for late nineteenth century engineering. Its success helped ensure a rapidly growing economy focused on the Strait.

Other systems of communication and transportation were also transforming the inland sea. Mail service, telegraph, and passenger ferries on Burrard Inlet all began in this period.³⁰ Mail service was a priority for the Strait's infant settlements; they strove to open local post offices that could be visited by passing steamers.

Places on islands and peninsulas were not disadvantaged in this competition as most movement between settlements was by the marine highway. Most people travelled by water, often paddling or rowing, because roads were mostly bad or nonexistent. In the first decades of colonisation, the settler's Strait was a maritime community, like the 'Tobacco Coast' of seventeenth century Chesapeake Bay.³¹

Most existing roads between settlements, such as between Burrard Inlet and New Westminster, were rough trails and stayed that way for decades. The Vancouver Island shore was more manageable terrain but even the Nanaimo to Comox road was a never-ending project in those years, often close to completion but never quite finished. The Nanaimo to Victoria road was similar, then eclipsed by the E & N railway after 1885.

The Strait was a pervasive presence in settlers' lives, both a practical highway and a dangerous barrier; many related directly to it as they moved about in human powered boats. Some settlers bought dugout canoes and added outriggers to make them more stable.³² Others hired indigenous people to paddle for them. Mike Manson, later a prominent trader and politician on the northern Strait, hired an indigenous canoe and crew to take him and his new bride from Nanaimo to Victoria in 1878.³³ Most settlers preferred rowboats. Especially on the islands, they rowed miles to hunt and fish, fetch groceries or mail and find company. A few lost their lives on the Strait each year, from bad luck or ignorance, too much drink or other miscalculations. They might row up the Strait to visit neighbours but they could also row a mile or two to collect telegrams from the other side of the world, transmitted over the telegraph cables that linked towns on both sides of the inland sea with the world beyond by the early 1880s.³⁴

Accelerating technological change, 1880s – WWI

More technological changes swept through the Strait during the three decades before WWI, from telegraphs, telephones, wireless telegraphs, railways, universal time, and cinema to bicycles, automobiles and airplanes. Stephen Kern spoke of the effects of this cataract of innovation on perceptions of space and time.³⁵ Rapid change left an impression of a world grown smaller and more organised, more susceptible to human organisation and mastery. This was reflected in the industrial onslaught on the Strait's resources in these years. This world sped up and, with change now the norm, facilitated the Strait's resource rush. Yet it also helped launch the Strait's

reputation as a calm and secluded refuge where people might escape from the relentless pace of the industrial era.

Relations among the Strait's human communities, and between them and the Strait, evolved with the rapidly changing transportation and communication systems. New settlements linked by steamships sprang up on all shores of the sea. Steamers on the Terminal Steam Navigation Company's "Howe Sound Route" left their Vancouver dock every morning of the week in 1908, stopping at West Vancouver's Great Northern Cannery, Caulfield, Eagle Harbour Cannery, Bowen Island, Brunswick Beach (three days a week), Anvil Island, South Valley, Britannia, Potlatch (Thursdays), Glacier Bay and Squamish.³⁶

The Strait's offer of easy movement of people and goods made the inland sea the focal point of early development in British Columbia. Even as sailboats and rowboats, horses and oxen continued to be used, steam engines drove the trains and steamships now transforming the Strait at an accelerating rate. The railroad arrived in Seattle in 1883 and by 1885 the 'all Canadian' line had reached Port Moody. The Strait was a significant barrier for railroads, yet they brought great changes in relations between the inland sea and the outside world. Richard White has described this rail-induced transformation, from western Canada to northern Mexico, late in the nineteenth century when the region was suddenly integrated into continental and global markets. Railways completed changes begun on the Strait with the arrival of ocean going ships. Yet the railway's arrival was not as transformative as it was on the Canadian prairies. The Strait's communities would have continued to be rapidly integrated within global markets via marine transport even without the coming of railways. The railway simply accelerated this integration with distant continental markets and launched the Strait's role as a conduit for evacuating resources from hundreds of thousands of square kilometres of hinterland. Railways did enable mass immigration into the Strait, far more than the ships. The speed and scale of this influx of land hungry settlers and resource hungry investors contributed greatly to what White called a 'perpetual winter' for indigenous people.³⁷

Kern suggested that railroads, no longer a new technology by 1900, were now "tightening their hold" on multiple spheres - political, military, economic and private life - as rail networks thickened.³⁸ Railroads had been transforming the geography of colonial domains since mid-

century. New rail lines linked with modern port facilities were stimulating growth of 'primate cities' that quickly overshadowed surrounding communities, as happened on Burrard Inlet after 1886. The 'all Canadian' transcontinental railway seemed an 'act of folly' to many at the time but it consummated old British dreams of pan Pacific trade links from resource rich North America to the ocean's teeming western shore.³⁹

Victoria's efforts to secure the terminus took Amor de Cosmos to London but the Privy Council declared that Vancouver Island did not need the railway. Among other things, they said, the Island had "sheltered water communication" on the Strait and year round ports that were "quite adequate to the needs of the population of the Island..."40 As though Victoria sought to be a port only for Vancouver Island. But Vancouver Islanders would not be denied a railway. Despite bitter complaints from colonists, most of the southeast coast of the Island was out of reach for settlers for years after the province transferred a vast tract of 'railway reserve' to the dominion government. Almost a quarter of Vancouver Island became available to whoever could build a railway from Victoria to Seymour Narrows. The prize went to coal magnate Robert Dunsmuir, though he only laid 125 km of track between Victoria and Nanaimo. Once it was clear that no railroad would be built along Bute Inlet, Victoria's merchants had begun to stress the simplicity of ferrying trains across the Strait to Nanaimo. From there they could complete the transcontinental route into Victoria. Dunsmuir, with financial backing from American partners and \$750,000 in federal cash, completed the Equimalt and Nanaimo (E & N) Railway a year before the first transcontinental train pulled into Vancouver and John A. Macdonald drove the E & N's last spike.⁴¹

The E & N eventually transformed communities from Victoria to Comox and re-shaped human relations with the Strait, helping spread settlers along the western shore. The railway drew some away from the shore to places such as Duncan's Crossing, moving the centre of gravity of the settlers' economy away from steamer stops at Cowichan and Maple bays. Steamship services suffered from the competition and by 1905 had disappeared from Island ports south of Nanaimo.⁴² The E & N was purchased by the CPR in 1905 and at the peak of the resource rush in 1912 was carrying 300,000 passengers a year. A growing number were tourists. In 1907 they added two 'mountain observation cars', the first in western Canada. By 1914 the line had reached Qualicum and Courtenay with a spur out to Port Alberni.⁴³

Railways transformed the western shore in other ways as well. The E & N carried farm produce from the Cowichan, lumber from Chemainus and coal from Nanaimo. A spur line delivered Mount Sicker copper. An electric tram, unconnected to the E & N, opened new markets for Saanich farmers. Short logging railways ascending the eastern slopes of Vancouver Island and larger adjacent islands wrought some of the greatest changes. The *Colonist* newspaper explained:

Vancouver Island... [would]... be the last resort of lumbermen on this continent... Only the fringe ... forests have been touched... lumber interests ... are only awaiting railway communication before the hum of the sawmill will echo through the virgin woods and trainloads of lumber will roll down grade to salt water.⁴⁴

The transcontinental railway brought analogous change to the Strait's southeast shore, already the scene of a brisk sawmilling industry. The *Colonist* described busy mills, boat builders and local railway projects on the Lower Fraser in 1873. Granville, a collection of mills, bars and brothels grown up since the early 1860s, was "making very rapid strides in the way of improvement."⁴⁵ The Lower Mainland was then utterly transformed by the arrival of the transcontinental railroad. The new City of Vancouver was founded in 1886. Its combined role as rail terminus and deep sea port ensured its future dominance of the inland sea. Land speculation, woven indelibly into the fabric of the new city, was also rife from one end of the sea to the other. Campbell River settler Frederick Lloyd Nunns confided in 1912 that he hoped the CPR would approach his land then find coal nearby, elevating the market value of his pre-emption.⁴⁶ Tiny Savary Island was subdivided into thousands of fifty-foot lots the same year, in anticipation of demand for recreational property, buoyed by the Panama Canal and the new Powell River mill.

As on Vancouver Island, the railroad's arrival on Burrard Inlet (Illustration 4) stimulated further railway construction. Inter-urban railways connected Vancouver with New Westminster and Lulu Island by the mid-1890s. Other lines extended into the farmlands of the lower Fraser Valley. There would, however, be no equivalent of the E & N further north along the rugged eastern shore. The Howe Sound, Pemberton Valley and Northern Railway, incorporated in 1907 and started in 1912, extended south to Squamish. Taken over by the province and renamed the Pacific Great Eastern (PGE), it took another forty years to reach Burrard Inlet. The only other railways northwest of Howe Sound were for logging; short, steep grade lines began transforming mainland logging.⁴⁷ The speculative frenzies engendered by talk of railway building and the

evident power of railroads to seal the fate of towns and regions ensured that discussions about railways remained prominent in the public discourse until WWI.

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Illustration 4 – "Vancouver, CPR Station, view from the west" ca. 1888 (photo: R. Maynard). This was the beginning of the city's rapid ascendance to 'primate settlement' on the inland sea.

By the end of the century, the growing feasibility of moving rail cars by ferry kindled new hope of overcoming the Strait's barrier among Vancouver Island's business community. One option proposed was a line to English Bluff (in today's Tsawwassen) connected by ferry to a railway along the Saanich Peninsula into Victoria. Another was a rail ferry from Burrard Inlet to Gabriola Island then by bridge to Nanaimo and on to Victoria. Even the Bute Inlet route was briefly resurrected during discussions about new transcontinental routes, though its proponents eventually recognised that bridging the narrows dividing what they now called the "Valdes group of islands" was likely less feasible than a '(railway) car ferry.' ⁴⁸

Timetables began to structure people's movements and lives as the age of rail swept the Strait. By the late 1880s, people could board a train in Victoria at a precise hour and get off at any of ten scheduled stops *en route* to Nanaimo, now only four hours and forty minutes away. On the mainland shore, similarly precise schedules proposed travel anywhere between Vancouver and the east coast.⁴⁹ Trains didn't always stick to their schedules but were vastly more punctual than steamers.

Vancouver's ascendance on the Strait grew inexorably as other new towns around the sea struggled to improve their access to each other and the world. Much local politics involved efforts to secure government support to make better use of the marine highway by building or improving wharves, lighthouses, and post offices. Every town strived to be on a coastal steamer route (Illustration 5).



Illustration 5 – "Ferry steamer from mainland to Nanaimo, the SS Joan and SS City of Nanaimo" 1900 (photo: undetermined). Arrival times were flexible and they weren't always faster than sailing ships but they were more reliable, less constrained by winds and tides.

Steamships on the Strait, hitherto known for flexible timetables, were under pressure to mimic the railways and began publishing fixed departure times from major towns. The People's Steam Navigation Company advertised the Steamer *Amelia*'s runs between Victoria, Nanaimo and Comox, a couple of times a week in the summer of 1888, "stopping at all the way ports" including Denman Island, Nanaimo, Gabriola Island, Chemainus, Vesuvius and Burgoyne Bay

on Saltspring, and Saanich. A decade later the *SS Comox* sailed out of Vancouver every Tuesday at nine am, Thursdays and Saturdays at eleven am, headed for Texada, Lund, Shoal Bay and other places along the way. The *SS Coquitlam* left Burrard Inlet Tuesdays at nine for Port Neville and Fridays at three for Texada and Lasqueti Islands, "calling at all intermediate ports" each trip. The schedules announced what time a ship left Victoria or Vancouver then their departure time from their northernmost port on the return trip. Arrival times along the way remained notoriously flexible. ⁵⁰

There was a rapid transition in the 1880s away from many small independent, often unreliable shipping services towards a coastal system dominated by a few larger concerns with more rigorous service and scheduling. By 1900 Canadian National, Canadian Pacific (CP) and Union Steamships (USC), were the key players.⁵¹ The latter two serviced everywhere from Vancouver and Victoria to island and peninsular towns and a long, shifting list of logging and fishing camps, canneries, sawmills and mines throughout the Strait and beyond. The CP Navigation Company, running between ten and twenty distinctive black, white and yellow "Princess" ships around the inside coast, became the dominant player in coastal shipping into the middle of the next century.⁵²

Larger settlements such as Vananda, Comox or Nanaimo could count on service from more than one company. Smaller places had to be content with one. If they weren't a CP stop then they needed to attract the USC. Created from a Burrard Inlet ferry service in the late 1880s, the USC fleet eventually grew to sixty ships and sailed as far as the Queen Charlotte Islands (Haida Gwaii) and southeast Alaska. USC filled a niche left by Canadian Pacific, servicing a large number of smaller ports, especially out-of-the-way logging, fishing, canning and mining operations and isolated island communities on islands in the northern Strait and beyond.⁵³ Becoming a USC stop could be a life and death issue for marginal communities cut off from other links to the world.

Rapid growth of steam powered shipping stimulated ship building on the Strait, especially along Burrard Inlet and False Creek. Larger vessels were still brought from Britain – sometimes in pieces to be assembled on the Strait – but smaller ones were built locally. A number of ships – the *Princess Mary*, the *Comox*, the *Chelhosin* and others - achieved almost legendary status on

the Strait, evoking what Haig-Brown remembered as a universal "sense of friendliness and gratitude." Howard White compared the Sunshine Coast's steamships to the New Orleans *Mardi Gras.* ⁵⁴

Relations among competing lines and between them and coastal communities could be less congenial. A steamship link opened up new options for communities; suspension of steamship service had the opposite effect. Those dwelling on islands, peninsulas or fiords faced the prospect of going back to rowing or sailing themselves and their produce to larger towns on the mainland or Vancouver Island. It happened to Gabriola Islanders in the 1890s and to Lasqueti Islanders more than once in later decades. The steamships meanwhile competed for promising new markets on the Strait. The *Colonist* reported in 1902 that Vancouver interests were "putting on a steamer" to secure new business on the islands, in Ladysmith and Crofton.⁵⁵

Outside the largest towns, steamships were more transformative than railways. For many, the presence or absence of a steamship connection determined whether a place was habitable or not – something like a high speed inter-net connection today. A place could transcend the marine barrier if a steamship could be counted on to stop in there even once or twice a month. Places on steamer routes could be escaped at will. Looking for land early in the twentieth century, John Barrow rejected an otherwise attractive Pender Island property because it was too far off the regular steamer route.⁵⁶ Lone fishers, loggers or miners and their families on Read Island, Desolation Sound or Pender Harbour could find themselves back in the heart of urban civilisation in a matter of hours. They could escape back home with greater ease because departures from the largest towns were far more reliable. Coastal steamers enabled reliable shipment of whatever one needed to bring from the outside world or to send to it. New faces and mail from the world beyond could be expected with every arriving boat. Even if one had to row out to meet the steamer – many did in the smallest places - steamships were a lifeline.

The steamships also catered to a growing number of people seeking recreation on the Strait after the 1880s. CP boats on the Strait connected with the CPR's transcontinental trains by the early 1900s. The *Colonist* reported in 1907 that the CPR steamer *Princess Victoria*, "the most palatial craft in the coasting business," landed its transcontinental tourists in Victoria "in time for dinner"⁵⁷ Settlements like Bowen Island and Sechelt that started as logging sites became

destinations for steamships carrying urbanites to weekend retreats or longer holidays in seaside hotels and cottages.

Steamships contributed to the rapid consolidation of Vancouver's role as the Strait's dominant settlement as Burrard Inlet soon became the one place where a person could depart from to reach any corner of the Strait, as long as it was on a steamer route. It became the place people from all these other corners returned to more than any other, to relax, shop, drink, socialise, escape from work or look for it.

Steamers were slowly replacing sailing ships on ocean routes as the twentieth century began. Geoffrey Blainey⁵⁸ estimated that the ocean going steamship in 1914 was twice as fast as the average sailing ship of the 1850s, and considerably more reliable. Long distance shipping rates declined and with the opening of the Panama Canal in 1914, the Strait's mines, mills and canneries could competitively ship to virtually any port in the world.



Illustration 6 - "The Comox Wagon Road" 1911 (photo: undetermined). The E & N had not yet reached the valley, and travel by sea was still more comfortable and reliable. Note the old growth Douglas fir.
With the rail link established, Canadian Pacific launched trans-Pacific mail, passenger and freight services and CP's 'Empress' ships dominated the trans Pacific passenger trade until the mid-twentieth century. Many other transoceanic lines were also putting in to Vancouver by WWI - the Canadian-Australian Royal Mail Steamships, the Hamburg America Line, the East Asiatic and Royal Mail Steam Packet Company and others.⁵⁹ Ocean going steamers also put into the Strait's other ports in growing numbers to load the burgeoning output of its primary industries (Figure 3).

Growth in marine traffic stimulated demand for greater support to navigators,⁶⁰ including lighthouses, pilots, port authorities, navigation rules, charts of tides and currents. Sailing ships had lost ground but were still widely used and continued to run aground or sink regularly, particularly in winter. Stern wheel ships that had crossed the Strait for 25 years were banned from navigation on the sea in the mid-1880s, much to the consternation of local merchants who depended on them. The same *Colonist* newspaper that reported so many marine tragedies on the Strait and had earlier worked so hard to paint it as too dangerous for international shipping, wrote in early 1883, that "... [since 1858] the waters have been traversed at all seasons and by all description of craft... [and] not a single mishap has occurred."⁶¹ This was not the first or last time that depictions of risks on the Strait would be subject to considerable license, deliberately enhancing or minimising readers' fears of the marine barrier. The shifting hyperbole of local journalists notwithstanding, both steamers and sailboats continued to face considerable navigational hazards on the Strait. American coal boats were frequent visitors and victims. The coal ship *Thrasher* from San Francisco ran aground on rocks near Gabriola Reef, on a calm clear night in July 1880 while being towed by two tugs. Two years were spent trying to get the ship off the rocks before it finally sank, leading to legal wrangling that ended up at the Privy Council in London in 1884. Two years later, the American ship John Rosenfeld, with all her fittings and cargo of 3,900 tons of "Vancouver Coal" was sold at public auction as she lay wrecked off Saturna Island.⁶² A few pleasure boats were also falling victim to the Strait's hazards. The Colonist passed on a story from Seattle papers late in the summer of 1884, about "... the pleasure yacht Lotus..." cruising the Strait but not heard of again after leaving Port Moody two weeks



Figure 3 - Major ports on the Strait, 1914: critical for moving the Strait's resources onto the ocean highways

earlier.⁶³ Some notoriously dangerous places claimed growing lists of victims: Quadra Island, Gabriola Reef, the First and Second Narrows and the shifting bars at the Fraser mouth. Jeanette

Taylor recounted that Billy Assu and other young men from the reserve in Cape Mudge risked their lives often in those years to rescue shipwreck victims.⁶⁴

Most of the Strait's hundreds of kilometers of shoreline remained uncharted and most hazards unmarked through the 1880s. In the early 1890s the steamship *Quadra* under Captain John Walbran began systematically mapping and marking hazards throughout the Strait, concentrating on hazards that had already claimed victims and routes followed by ships exporting natural resources.⁶⁵

Fog was a worry, especially in autumn. It increased the risks of running aground and of collisions between vessels, and it demanded different technology from fixed hazards. Fog horns were erected at the entrance to Burrard Inlet in the late 1880s and the entrance to Nanaimo soon after. A decade later Ottawa's Department of Marine and Fisheries announced its intention to place a "fog signal" on the Ballenas Islands off Parksville that would sound every fifteen seconds. The fogs were getting heavier, at least partly due to increased burning of sawmill waste and logging slash in hills around the Strait.⁶⁶

Lighthouses transformed the Strait more than any other navigational instrument. Lighthouse construction accelerated early in the resource rush with new lights on the Strait's southern approaches, the southern islands, the entrance to Baynes Sound (Illustration 7) and the First Narrows. Miners pouring north to the Klondike in the late 1890s stimulated another flush of lighthouse construction, at Cape Mudge and on Sisters Island and Ballenas Island (Figure 4).⁶⁷ These lights, often 30 metres or more above sea level, occupied sites that had been of strategic importance for indigenous people long before the settlers' arrival. Projecting their beacons across the sea, they became important local landmarks and powerful symbols of the Strait's new industrial age. Some became important social institutions and their keepers, local celebrities.⁶⁸



Figure 4 - Lighthouses on the Strait and its entrances by 1908 (& dates of establishment): helping settlers transcend the marine barrier

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Illustration 7 – "Yellow Rock Light off Denman Island" (Chrome Island) 1898 (photo: undetermined). The south entrance to Baynes Sound was heavily travelled by ships loading coal at Union Bay. Ten died when the steamer *Alpha* wrecked here two years later.

New systems of governance were needed for these new technologies. The Department of Marine and Fisheries (DMF) regularly reported their achievements and related expenditures to Parliament, and local papers followed them carefully, stimulating a demand to further reduce the hazards. The safer the Strait became, the more inexperienced navigators ventured onto it, even in winter, and the more they help they needed. The flood of humanity streaming north to the Klondike at end of the century was reminiscent of the Cariboo gold rush years. The increase in vessel traffic through the Strait led to a surge of marine accidents and a long list of demands for Ottawa to make the sea safer.⁶⁹

Science and technology tamed the Strait in other ways. By1900 local papers published forecasts of its weather then began reporting on actual weather conditions around the sea throughout the day. The DMF oversaw 'tidal surveys' soon after 1900 then published reliable estimates of the timing and scale of daily tides, and the direction and scale of currents for different locations around the sea. The value of this new information for local trade and commerce, said the

Colonist, could "hardly be overestimated." They proudly declared the new Canadian tidal survey results so "absolutely dependable" that they could now be incorporated into the charts of the British Admiralty.⁷⁰ Settler governments' control over the sea, or most of it, was also confirmed with surveys identifying the *exact* location of the international boundary. Lucrative smuggling opportunities emerged on both sides of the border.⁷¹ This new man-made 'hazard' on the Strait provoked governments, mostly on the American side, to protect their prerogatives.⁷²

Ports were critical elements of the settlers' new economy (Illustration 8, Illustration 9, Illustration 10, and Illustration 11), the portals through which the fruits of the resource rush were sent to world markets. By 1890 Nanaimo harbour was shipping 400,000 tons of coal a year. A newer coal port at Union Bay also moved hundreds of thousands of tons annually by 1900. Burrard Inlet had rapidly become the inland sea's most important port. Lumber exports out of Hastings Mill and Moodyville had reached over 25 million board feet a year by the mid-1880s, then doubled over the next decade. Coastal and ocean going traffic continued to grow throughout the resource rush and wood remained Burrard Inlet's main export. Rapidly growing volumes of wood and tinned salmon were also being shipped from the mouth of the Fraser.⁷³

Communication technologies also helped overcome the Strait's barrier and bind communities into tighter networks. The Dominion government had introduced wireless communication technology to the inland sea in 1907, linking stations at Shotbolt Hill in Victoria and Point Grey outside Vancouver.⁷⁴ Telegraph remained the dominant form of modern communication but as early as 1890 Vancouver Island had a telephone link to the mainland as well.[.] The province as a whole had 20,000 telephones by 1911, most of them in Vancouver. By 1914 even a few smaller islands had telephones.⁷⁵

Burrard Inlet and the lower Fraser remained the Lower Mainland's principal ports, though other options were considered. The CPR briefly considered developing docks at Kitsilano Point in the 1880s. They revisited this option three decades later when plans were drawn up for massive piers, rail yards and warehouses. These plans were eventually shelved, at least partly on account of potential difficulties securing Kitsilano Indian Reserve land. A more grandiose scheme had emerged a couple of years earlier, for a new harbour facility between the north and south arms of Courtesy of BC Archives collections - Call Number: A-04577 ROYAL BC MUSEUM Web: www.bcarchives.gov.bc.ca Email: access@www.bcarchives.gov.bc.ca (C) - Provided for Research Purposes Only - Other Use Requires Permissic



Illustration 8 - "Coal docks at Union Bay" ca. 1900 (photo: undetermined).



Illustration 9 – "Comox. H. M. War Ships in Comox Harbour" 1910 (photo: undetermined). A sheltered harbour and proximity to Cumberland's mines ensured a steady stream of deep sea vessels, and sailors in Comox taverns

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Illustration 10 – "Vancouver. Ships loading at Hastings Mill" circa 1880s (photo: undetermined).Note the absence of steam powered vessels.

the Fraser. Also eventually shelved, it called for two and a half kilometers of piers, a new industrial zone and a railway through Point Grey to Burrard Inlet.⁷⁶

Bold optimism prevailed in the final years before WWI. Local dreams were animated by the prospect of increased ship traffic through the Lower Mainland with the opening of the Panama Canal. No major new port projects were actually undertaken in those years, but private interests and the federal government invested heavily in expanding and upgrading existing facilities. The Vancouver Harbour Commission was a powerful new instrument of maritime governance, protecting Ottawa's claim to the Strait as highway to global markets. Incorporated by the federal government in 1913, it began to play a central role in port development and management. A similar body was created for the north and middle arms of the Fraser. Federally appointed 'Harbour Commissioners' were empowered to establish rules governing harbour navigation, construction and maintenance, to administer waterfront property, to police the harbours and guide development of the ports.⁷⁷

The much anticipated growth in port activity was muted by a global economic downturn in 1913 and then the onset of WWI. Initially the only big increase was in grain exports after it was proven that grain would not spoil when passing through the tropical climate of Panama. Grain exports through Vancouver increased a hundred fold between 1910 and 1924⁷⁸.



Illustration 11 – "Salmon ships on the Fraser River" circa 1890s (photo: S. J. Thompson). Again, mostly sailing ships, the sort of vessels that needed help from steam tugs to navigate the Strait.

Steam powered tugs greatly increased in number on the Strait after 1890. Slow but powerful, these vessels drew little water and were highly manoeuvrable; they were well suited to the inland sea, and they were indispensable for moving ocean going sailing vessels through difficult stretches, and for moving raw materials across the Strait. The business of moving log booms from remote sites to sawmills around Vancouver grew rapidly after 1900, dominated by a handful of companies. Tugs also began pulling scows of aggregate from the Strait's beaches to Vancouver building sites.⁷⁹

Steam was most important motive force on land and sea but gasoline powered engines began to make their appearance, foreshadowing future changes. Reginald Pidcock, an early Indian Agent on the northern Strait, had always travelled by canoe through his large 'Agency.' When he died

in 1902 his successor was soon using a gas powered launch. The BC Provincial Police had already begun using their own gas launch to patrol the Strait.⁸⁰

Contemporary observers tried to banish fear of the Strait, claiming it was now tamed by modern technology. An article published in Nanaimo in 1910 reported that CPR steamers had now been crossing the Strait for twenty years in all weather and had never had an accident. The *Colonist* suggested the sea (and Puget Sound) had become "full of safe harbours" and there was no longer any "...rock or shoal that is a menace to navigation."⁸¹ Other stories suggested otherwise. Ten perished at the end of 1900 when the *Alpha*, carrying a cargo of tinned salmon for Japan, foundered off the Chrome Island lighthouse. A few months later the *Princess Louise*, with a full cargo and 25 passengers, ran aground off the Thormanby Islands. Later the same year, Steamer *Hattie*, carrying 175 passengers and a small fortune in gold from Skagway, ran aground between Lasqueti and Texada islands. A couple of years after that the *Vadso* was lost on a reef north of Comox Harbour. Then, in 1910, the *Iroquois* foundered off the north end of Saanich, drowning 25 passengers.⁸²

Yet travel by boat remained the most expedient way to get to and from many places on the sea and the Strait remained the essential highway linking settler communities. In this age of steam, a remarkable amount of movement around the Strait was still being done under human power or sail. Settlers still made extensive use of canoes and rowboats (Illustration 12), built in virtually every community. Indigenous people still made cedar dugouts for their own use and trade with settlers (Illustration 13). Dugouts could be huge: a Comox elder interviewed in the 1950s recalled her father and uncle launching a 21 metre canoe on the Comox estuary in the mid-1880s. The *Colonist* reported a 9 metre dugout canoe mysteriously abandoned on the southern Strait in 1896.⁸³ COYAL BC MUSEUM COYAL



Illustration 12 - "Alexander Street between Main and Columbia, Vancouver" 1899 (photo: Meikle). Note the seaworthy dingies that took oars and sail.



Illustration 13 – "Canoe in Vancouver Harbour" ca. 1890s (photo: undetermined). Well-crafted and sea worthy canoes would be widely used on the Strait, by indigenous people and settlers, for decades to come.

Geologist George Dawson's extensive geological survey of the Strait in the mid-1880s was carried out entirely under sail as was Michael Manson's lucrative business supplying Texada Island mines and various Indian Reserves in the northern Strait. As in earlier decades, sailing the Strait remained an adventure. An old Saltspring Island settler recounted his father's stories – possibly embellished over time - of moving their livestock across the Strait by schooner when he was a boy. One memorable trip, the aging captain called the boy to the tiller in a gale off Point Grey then promptly died, leaving the young man to run aground in False Creek where he discovered rats had eaten the skipper's nose as he lay on the deck.⁸⁴

Sailing, paddling or rowing could be treacherous but they offered fallbacks, especially where isolated settlers could not count on a steamer to pull in at the right time, if at all. Denman Island's farmers relied entirely on oars and sail to move their produce to markets as far as Nanaimo until they built a wharf and attracted a steamship in the 1880s. Even after steamers started calling in, some continued to row their produce to the big island.⁸⁵ Farmers on the southern islands and Howe Sound regularly braved winds and currents to row their goods to the Lower Mainland.⁸⁶ The Thulin brothers at Lund got their supplies delivered from Burrard Inlet every few weeks; but when they needed extra supplies they had to row almost 200 kilometers to Vancouver.⁸⁷

Rowing was laborious, risky if one didn't pay enough attention to weather or tides and it could be boring. But it was universally available on demand and cheap and many people remained dependent on their rowboats to stay in touch with neighbours and the outside world. Charles Groth, an early settler on Galiano Island, wrote frequently of pulling on his oars to get everywhere – especially across Active Pass to get mail and groceries on Mayne Island.⁸⁸ Groth pulled to overcome the intense isolation of his new life, as did many others.

Boats, trains and automobiles in the interwar years

Trends visible on the Strait before WWI became far more important in the interwar years. Automobiles became an important mode of transport, though the Strait's road network developed, as had that of the railways, more fully in some places than in others. Gasoline powered technology, particularly logging trucks (Illustration 14) and fishing boats, facilitated deconcentration of resource extraction even as processing of harvested wood and fish became more centralised. Before stagnating with the rest of the economy in the 1930s, port activity grew rapidly through the 1920s, particularly in Vancouver. Steamships did brisk business moving people to recreational sites around the sea. The 1920s witnessed a surge in passengers carried by steamers and smaller boats to a growing collection of pavilions, hotels, cottages and camps along the shore, and companies expanded their fleets in the 1920s to accommodate them. Yet the steamships that figured so prominently on the Strait in the first half of the century would barely survive the 1940s.

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Illustration 14 – "Rock Bay. Oshberg and Smith truck hauling logs" 1936 (photo: W. F. Montgomery). Gasoline powered truck replaced trains in the woods, allowing logging to extend further up slopes and do more damage to spawning streams.

More isolated places on the Strait, if they were big and prosperous like Powell River, could overcome the marine barrier with relative ease by attracting regular boat service. More marginal places such as Lasqueti or Read Island expanded and contracted with the ebb and flow of local logging and fishing and their steamship services came and went with them.⁸⁹ By WWII it was only these communities on islands or cut off by mainland fiords that remained fully dependent on steamships to link them with the rest of the Georgia Strait community and the world beyond.

This transition induced decline in many small, isolated communities and stimulated growth of larger ones. Indigenous people, now mostly marginalised in their own small reserves around the Strait, were encouraged by Ottawa to congregate into larger settlements, to ease government's burden in providing services to them.

The marine highway remained critically important for the Strait's resource industries. Vancouver Island mines still shipped coal to distant markets. Early in the interwar period, before the bottom fell out of coal markets, coal deposits on Texada Island and Malaspina Peninsula attracted investors' attention, largely because their coal could be moved cheaply by sea. Mainland mills depended on the sea to transport logs and to export their pulp and paper. Many loggers living around the sea depended on steamers, especially Union Steamships, to get them in and out of isolated logging operations, now often north of the Strait.⁹⁰ Powerful tugs, many diesel or gasoline powered by the 1920s, were now indispensable on the inland sea, particularly for moving log booms and chip barges. Booms were familiar features on the open Strait and in protected bays and inlets where they rode out the storms (Figure 5). Gathering logs escaped from booms became a new line of business.



Figure 5 - Routes for moving logs from Comox to Fraser Mills in the interwar years (from Mackie 2000)

The number of ocean going ships visiting the Strait grew rapidly after 1914. Deep sea vessels putting into the Port of Vancouver grew by 1,000%, from 130 ships in 1913 and 330 in 1919 to over 1,300 in 1928. Roughly 40% were of British registration, 25% American and 15% Japanese. Close to 25,000 smaller vessels working the coast put into Burrard Inlet annually by 1930. The tonnage of freight through Vancouver expanded from around 350,000 tons in 1913 to about five million tons in 1928. Exports were a mix of raw materials, grain the most important by volume and value. By far the most valuable import was Asian silk. Traffic declined in the Depression years, recovering only with the advent of WWII. This port activity was an important component of the local economy on Burrard Inlet. By 1929, Vancouver was exporting more grain than any other port on the Pacific coast of the Americas. More passengers were also moving through Vancouver's port (Illustration 15), increasing between 1924 and 1926 alone from 800,000 to over 1.2 million. The "Railway and Harbour Report" for 1927 confirmed to Vancouver's Town Planning Commission that such growth in passenger numbers was important not only for its revenue but also for its advertising value: "Few cities" they claimed "have so great an opportunity of securing a personal contact with citizens from every corner of the world."91

The same 1927 report detailed the transformation of Burrard Inlet's shoreline under the Port Authority. The southern shore was nearly ten kilometers between the First and Second Narrows. Almost a quarter was now occupied by CPR rail yards, the Harbour Commission and various other rail interests another quarter, various industries a further quarter, leaving the final quarter "undeveloped waterfront." The majority of the nine kilometers within the new "Port of Vancouver" along the north shore remained "undeveloped." But even there sawmills, creosoting plants, booming grounds, docks, boat builders and other industries now occupied thousands of metres of shoreline. The authors of the report worried about the limited amount of waterfront remaining available for future port activities. They underlined the need to "... [conserve] for strictly harbour purposes the entire water frontage of Burrard Inlet." This port, they reminded readers "... belongs to the Dominion more than to Vancouver. It is an essential national asset (Illustration 16) and should be recognised as such."⁹² As other stakeholders' claims for access to the shore grew, so did the Dominion government's fear of losing theirs.



Illustration 15 – "SS Empress of Canada in Vancouver Harbour" 1925 (photo: H. Brown). Burrard Inlet was Canada's Pacific portal, the port a valuable asset for the local and national economies.

Other ports and harbours around the Strait developed as well. The North Arm of the Fraser was an important booming ground, storing logs especially for the massive Fraser Mills complex. Across the Strait in 1924 an agreement divided jurisdiction for shoreline development beyond Nanaimo's old port between the federal and provincial governments. Smaller places struggled to build or maintain wharves with as much federal support as local MPs could cajole. ⁹³ Other exporters preferred to keep the federal government at arm's length. , Many on the sea prospered from moving alcohol into the US where it was a high value illicit substance through the 1920s and early 1930s,⁹⁴ as did cannabis exporters in later years.

Cates Steam Navigation, CP, USC and other shipping countries increased their business with excursion boats and shoreline recreational properties. USC built up a valuable excursion trade on the mainland shore in the 1920s, linked with their properties on Bowen Island and around Sechelt. CP developed a rival excursion boat destination on Nanaimo's Newcastle Island.⁹⁵

Francis Dickie on Quadra Island tried hard to convince USC to give him free passage on their ships in exchange for 'free advertising.' He sent autographed copies of his articles, claiming they were developing tourism on the BC coast:

...you will have particular interest in seeing this valuable tribute I have paid to the fishing attractions of one point on this coast served solely by the Union Steamers... In view of the large outlay the Union Steamship Company ... makes annually for advertising, ... (and) ... knowing as you so fully do the immense value of articles of this nature in attracting travellers; ... a few paragraphs in ... a magazine or newspaper or book outweigh in reader attention value thousands of dollars of paid advertising...⁹⁶

Dickie kept no record of the company's response.



Illustration 16 – "Vancouver Harbour from Marine Building" 1938 (photo: BC Govt). Now classed as an 'essential national asset,' the port was recovering from the effects of the Great Depression.

The railways played their own evolving role around the Strait. They were key investors in Vancouver's wharves and warehouses. ⁹⁷ E & N trains (Illustration 17) now carried tens of thousands of passengers annually between Victoria and Courtenay, despite construction of better roads and a fast growing automobile fleet. Passenger numbers fell dramatically during the Depression years but rose again in WWII, partly due to gasoline and rubber rationing. The railways were also carrying more recreational passengers around the Strait. The PGE now

connected North Vancouver to Whytecliffe and Horseshoe Bay. The West Vancouver government boasted in 1918 of the "natural grandeur... rippling waters... (and) fringe of enticing beach" at Horseshoe Bay. Ferry service between the Bay and Bowen Island began a couple of years later.⁹⁸ By 1926 the PGE and USC offered "Sea and Rail" excursions up Howe Sound by ship then to Alta Lake by rail.⁹⁹



Illustration 17 – "...Esquimalt & Nanaimo No. 460... Nanaimo" 1929 (photo: undetermined). Rail was now indispensable for transporting people and goods along the sea's western shore, displacing much sea borne transport; but highways had already begun to displace rail.

In his study of twentieth century North American 'auto mania,' McCarthy (2007) described how the ability to own and operate a car rapidly became a key determinant of self-respect and 'middle class decency.' He estimated automobiles on American roads multiplied by a hundred, from 200,000 to twenty million between 1908 and 1927. The fleet of registered motor vehicles in BC increased five times faster between 1906 and 1930, from 200 to 100,000.¹⁰⁰ The Strait was transformed by highways and cars (Illustration 18), as was the rest of North America. People moved around the sea more and more by road but most of their destinations were still beside the sea. The Pidcock family papers from Courtenay and Quadra Island reflect this shifting continuity. In earlier decades talk had turned around the weather, fishing and lumbering; their focus after WWI shifted to automobiles as the family opened a garage in Courtenay. Though still

mindful of the weather, they were often preoccupied with the state of various cars, road trips and beach picnics up and down the highway now stretching along the entire western shore of the Strait.¹⁰¹ Highways did not transform the shore north of Burrard Inlet as rapidly.¹⁰² Horseshoe Bay was accessible only by water or rail until the late 1920s. The seaside road that finally linked it with Burrard Inlet towns was considered an engineering marvel. On Howe Sound, unemployed men earned ten cents an hour in the 1930s, working on the road north to Squamish that would not be completed until the 1950s.¹⁰³ John Barrow described the "celebrated (new) road which joins Gibson's Landing and Pender Harbour" during the summer of 1939. He was impressed by the "rock work" and the highway's exorbitant cost but met only one car on the road during hours of walking. Two years later, he reported driving for the first time on the new highway that now extended from the wharf at Lund into Powell River a few miles further south in the direction of Jervis Inlet.¹⁰⁴



Illustration 18 – "Viewpoint on Malahat Drive" 1920 (photo: undetermined). Improved roads changed patterns of movement and offered new opportunities for tourism.

Some of the larger islands developed road networks. Denman Islanders declared theirs "the Island of Roads" in the 1940s and took great pride in their forty kilometers of "very good roads" and fleet of forty cars.¹⁰⁵ The arrival of cars on relatively big islands like Denman or Quadra helped enhance inhabitants' sense of community. Islanders previously connected only by boat or rough tracks had often found it more difficult to reach other parts of their island than to reach other shores. This growing sense of 'island consciousness' was strengthened by isolation from the expanding highway network linking Vancouver Island and mainland communities. Island communities that had worked hard to attract steamships now had to get car ferries. Discussions about ferries figure prominently in local histories of the interwar years. As with steamships, securing a car ferry service could open up new opportunities and losing the ferry greatly complicated peoples' lives.

Bigger, more populated islands were becoming more tightly woven into the grid of 'modern' BC. Regular ferry services across the Strait were now an alternative to steamships, allowing people to drive from Vancouver to most places on the Strait's Vancouver Island shore. Islands close to this shore, such as Saltspring and Denman had car ferries by the 1920s, as did the larger southern islands and Bowen, though the service was not always reliable.¹⁰⁶

Technology continued to break down the marine barrier, evolving and diversifying. The province's first dial telephones were installed in Powell River in 1921. Even Lasqueti Island had telephone service by the 1930s.¹⁰⁷ Airmail from the Strait's major towns to Britain took only four days by 1939 but service wasn't of the same quality everywhere: Francis Dickie complained mightily about his deteriorating mail service at Heriot Bay in 1939.¹⁰⁸ Steady improvements in navigation technology and infrastructure meant the Strait's navigators faced less daunting hazards, yet these remained significant. A new hazard appeared in Vancouver Harbour where a low bridge was built across the Second Narrows in 1925. Sixteen vessels collided with the new bridge during its first five years of operation and it was closed for most of the early 1930s.¹⁰⁹

The Strait in the era of the automobile, 1945 – 1980s

Modes of moving people and goods around the inland sea continued to change after 1945 but nothing matched the sudden break with the past embodied by the first European ships, the steam locomotives or the first cars, gas boats and airplanes. The federally administered Port of Vancouver continued its apparently inexorable rise. New roads and ferries overcame many of the topographic and water barriers that had earlier slowed the automobile's rise to dominance around the sea and provided unprecedented access to most places facing the open Strait (Illustration 19) by the 1960s. Steep sided mainland fiords and small or isolated islands were now the only places where car culture did not assert itself.



Illustration 19 – "Qualicum Beach" 1949 (photo: BC Govt). Growing car ownership, better highways and ferries, and rising incomes all stimulated demand for waterfront recreation

The role of steamships diminished rapidly though changes were not apparent everywhere in the first years after 1945 when many communities were still serviced by CP and USC. Steamships still carried goods and passengers more or less regularly to Williamsons Landing, Hopkins Landing, Gibsons Landing, Roberts Creek, Sechelt and so on up the mainland coast and on to many of the northern islands.¹¹⁰ On the largest southern islands "Boat day" was still an event, an

opportunity to meet friends and gossip at the dock while waiting for the *Princess Mary*. ¹¹¹ Many vessels were now fitted out to take a few trucks or cars on board. But they were not well suited to the task.¹¹² The decline of the steamships was not just a result of the automobile's rise. Many smaller communities had been shrinking for decades, with the centralisation of canning and sawmilling. Logging camps were moving further inland and north as accessible stands around the sea were cut; they often now used their own boats or flew their workers into camps. USC lost its federal government subsidy in 1958 and without it could not make a profit. They sold their last ships a year later. By the 1960s only small coastal freight boats serviced ports of call on the sea's northeast shore.¹¹³ The passing of steamships was significant for many small communities. Denman Islanders mourned their CP ship service, lost in 1954, but at least they had a car ferry. Hornby Island lost their steamer service around the same time and its resort owners went through difficult years before getting their own ferry.¹¹⁴ In the mid-1950s, after 30 years of lobbying, a ferry service across Jervis Inlet linked Powell River with the outside world by highway.¹¹⁵ Similar changes happened around the Strait, with new runs starting and established ones growing and by the late 1950s most of the Strait's larger islands had regular scheduled ferry services.¹¹⁶

Two car ferries a day linked Vancouver with Nanaimo most of the year by the 1940s, five a day in summer. By the mid-1950s twenty ferries a day plied this run, carrying over 350,000 vehicles and 1.25 million passengers a year.¹¹⁷ The arrival of Black Ball Lines in 1951 stimulated coastal ferry development. Based in Puget Sound, the firm traced its roots to early nineteenth century trans-Atlantic passenger service. Most of their competitors had left Atlantic ports when they were full, went where they had cargo to deliver and arrived when they arrived; Black Ball ships introduced regularly scheduled sailings between major ports. Their arrival on the Strait precipitated similar dramatic changes. Canadian Pacific had offered car ferry services to Victoria and Nanaimo on its comfortable but increasingly archaic "Princess" ships. Capable of ocean crossings, their procedures for ticketing, loading, feeding passengers and, especially loading and unloading vehicles, were slow and cumbersome. Black Ball ferries that could load and discharge vehicles at both ends, with ambitious timetables, shook up the industry. They also shook up beachside towns like Horseshoe Bay and Gibsons Landing, where they started ferry service in 1951. Two years later, over the protests of Horseshoe Bay's alarmed residents, Black Ball launched their Nanaimo service.¹¹⁸

Lasqueti Island, most islands in Howe Sound and all in Jervis Inlet, remained without ferries, but not for lack of trying. An enterprising Lasqueti resident corresponded with the provincial Attorney General Robert Bonner and the Sons of Freedom sect of Doukhobours in the late 1950s. Many Doukhobours were in provincial prisons in the Fraser Valley after violent altercations in their Kootenay communities. The Lasqueti businessman offered his island as an alternative residence. He worked to convince Victoria and the Sons of Freedom that Lasqueti's tranquil beauty, sunrises and sunsets over the water could calm this troubled people.¹¹⁹ The only thing needed to achieve this was a car ferry to Lasqueti. The Doukhobours returned to their Kootenays homes however and Lasqueti never did get a car ferry.¹²⁰

An official history of the new BC Ferries Corporation described the situation on the Strait at the end of the 1950s as an "... inevitable crisis." Black Ball, now the main ferry service to Vancouver Island and the only one servicing the Sechelt and Malaspina Peninsulas, was repeatedly shut down by strikes in the summer of 1958. The province announced the same year that it would establish its own ferry between Tsawwassen and the Saanich Peninsula. After unsuccessful attempts to improve the reliability of the Black Ball and CP services, the province greatly expanded its presence in the business. W. A. C. Bennett, the interventionist head of the province's 'free enterprise' government, declared his determination that ferry connections between Vancouver Island and the mainland "shall not be subject either to the whim of union policy nor to the indifference of federal agencies." They bought all Black Ball ferries and docks around the Strait for \$6.7 million in 1961.¹²¹ The new provincial ferry system would help ensure that Vancouver Island shared in the province's economic growth during those years. Ferry traffic was increasing at over 10% a year by the mid-1960s. The province's BC Ferry Corporation, Premier Bennett often boasted, now owned "The largest ferry fleet in the world."¹²² The fleet was growing in large part to accommodate tourist traffic. Close to 40% of vehicles carried in summer were from outside the province. Summer peak in demand was an abiding problem; recreational travel now accounted for close to three quarters of all vehicles in these peak months. Passenger and vehicle numbers more than doubled in the summer when long delays were common. Expansion of the fleet to remedy the situation led to excess carrying capacity in winter.123

Most car drivers wanted to minimise the time they spent on the water. People with time on their hands could still take the more leisurely CP boats from downtown Vancouver to downtown Nanaimo, but few did. Patrick McGeer, then leader of a small Liberal caucus in the provincial legislature, proposed a new time saving ferry route from Point Grey to Gabriola Island, then by bridge to Nanaimo. Many Gabriola Islanders vigorously opposed this 'improvement,' but McGeer's plan had many supporters elsewhere. It recognised the stubborn reality that Vancouver Island was being isolated again by the marine barrier in the automobile age. Rapid growth in ferry services (Illustration 20) pleased most people around the sea, at least initially. Improved service to Bowen Island stimulated a steep rise in real estate values as the island became more tightly bound to Vancouver. New land became available on the island when USC sold its recreational property at Snug Cove. Most buyers on Bowen by the 1960s were not cottagers but permanent residents, including commuters to Vancouver.¹²⁴ Not everyone wanted to see ever more, ever larger ferries however. The southern islands' location, between the province's two largest cities made them especially susceptible to rapid development after WWII and improved ferry service stimulated this development. Ambitious planners of the newly formed Islands Trust aimed to reduce private vehicle traffic in the mid-1970s, not just because of congested ferries but out of concern that growing automobile traffic was transforming the bucolic rural character of the islands that the Trust was mandated to protect. A ministerial brief in1975 stated "Trust policy states that ever increasing car ferry traffic is contributing to the destruction of the islands."¹²⁵ Bowen Island and Gibsons and similar places now seemed destined to become car ridden playgrounds or suburbs of the growing metropolis on Burrard Inlet. The Trust was determined to prevent the spread of this trend on 'their' islands. Horseshoe Bay (Illustration 21) was now chronically congested on land and sea, with growing evidence of the danger of recreational boats and ferries sharing the same small harbour. The Bay's value as recreational space was virtually eliminated within a few years of the construction of the ferry terminals. Elsewhere, the terminals' space requirements, especially for peak summer traffic, were consuming tidal flats and foreshore, destroying prime fish and seabird habitat in the process.¹²⁶

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Illustration 20 - "Loading the M. V Cy Peck for Saltspring Island at Swartz Bay" 1947 (photo: F. P. Boucher). Islands needed car ferries to ensure their economic survival. By 1970 some wondered if the ferries had succeeded too well.



Illustration 21 – "Horseshoe Bay" 1955 (photo: BC Govt). Horseshoe Bay was transformed from a quiet beach resort to the Strait's busiest ferry terminal. The 'Upper Levels Highway' opened in 1960, easing access from Vancouver.

Highway development around the sea was closely linked with the ferry network and followed a similar rhythm: a slow moving late 1940s followed by rapid acceleration through the 1950s and into the 1960s then the beginnings of push back in the 1970s. Many of the islands still had charming rural roads and trails after WWII, functional but not an efficient road network. Frederick Marsh noted that many southern islands had no road linking the whole island, just tracks starting in one place and ending in another. Each track he found on Galiano had its own character and moods, by turns "stimulating, subdued, warmly colourful, aloof and austere." 127 Change was on the way. The biggest, most populous islands had denser road networks. Saltspring had 200 kilometers of roads already by the late forties. Vigorous lobbying of the province by Texada Islanders led to improvements to their road system after 1945. A bridge restored the overland road link between North and South Pender that had been cut early in the century to dredge a steamship canal. Even Lasqueti's roads improved and its tiny vehicle fleet grew despite the absence of a car ferry. Highways were much more developed and busier on the heavily populated mainland and Vancouver Island shores. Once ferries linked them to the outside world in the 1950s, traffic increased tremendously along highways built earlier on the Sechelt and Malaspsina peninsulas. Howard White described the change in 1950s Sechelt, where traffic moving through town between the new ferry terminals began to overshadow the older axis of movement between the Strait and Sechelt Inlet.¹²⁸ The province finally opened the beautiful, treacherous highway up the east shore of Howe Sound in 1958. By the 1960s some had begun to question whether all the new highway spending was appropriate. A controversial proposal for a highway through Stanley Park to a new First Narrows in 1966 evoked a ferocious reaction from citizens and city officials determined to protect the splendour of their seaside park.¹²⁹ The Islands Trust a decade later tangled with the provincial Department of Highways, insisting it was "extremely important" for highway engineers to relax the "urban" standards that were leading to "excessive tree clearing and unsightly cuts and fills" on Trust islands' rustic roads.¹³⁰

Passenger rail on the sea was now as decisively eclipsed by highways as steamships had been by ferries. The E & N ran an average of twenty trains a day between Victoria and Courtenay in 1946 but by 1955 they were down to one train a day in each direction. In the late 1960s, CP Rail began applying for permission to discontinue their E & N passenger service, pleading it was "uneconomical." Recalling the 800,000 hectares of forest land from Saanich to Seymour Narrows originally granted the railway, the government repeatedly demurred. In the 1970s CP

Rail pleaded the line's trestles were unsafe but were again obliged to respect their original obligation to provide rail service despite tiny passenger numbers.¹³¹

Freight trains running to ports on the Strait were a far more robust business. Vancouver was firmly established as the major rail terminus for western Canada's rapidly expanding economy and the city was now one of the world's major ports (Illustration 22). It mostly moved goods, not people. As did the steamships, most overseas passenger liners ceased operating in the first few years after WWII.¹³²

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Illustration 22 - "Vancouver Harbour and rail yards" 1966 (photo: BC Govt). Ports remained key elements of the Strait's economy but conflicts with other stakeholders along the shore increased steadily.

By 1960 the Port of Vancouver consisted of seventeen deep sea ship berths and three for coastal vessels that handled twelve million tons of freight a year. Traffic grew rapidly and Vancouver was soon moving more tonnage than any other Canadian port, mostly bulk exports such as potash, coal, sulphur, copper concentrate, pulp and paper, lumber, grains and vegetable oil. Ports

on the Fraser also expanded and by the 1970s were handling the entire, rapidly growing flow of Canadian automobile imports from Japan.¹³³

The North Fraser Harbour Commissioners were proud of having converted their once hazardous waterway into "a modern well planned harbour serving the many requirements of navigation, industry and the public..." ¹³⁴ The Port's Manager discussed their major problems in a letter to the new provincial environment ministry in 1976. Port authorities were feeling increasingly constrained by the demands of other users of the river mouth. Their dredging operations, necessary to keep the river navigable, were now frequently questioned by federal fisheries officers. They worried about growing conflicts between commercial navigation and a massively expanded fleet of pleasure boats. These and other recreational users threatened to reduce the space available for log booms and other industrial users. They were troubled by rumours that the province might build a new ferry terminal at the mouth of the North Arm, greatly complicating harbour management. Overall they felt other government agencies and the public did not understand the gravity of the situation on the North Fraser, the conflicts between the port and other users or the threats to navigation that might ensue from poorly planned port development. The Commission proclaimed its determination to ensure the port could be shared between public and industrial users, but their bias was clearly in favour of the latter.¹³⁵

These conflicts among an increasingly diverse set of users of the shoreline underlined the fact that the Lower Mainland's ship traffic was rapidly surpassing the capacities of Burrard Inlet and the Fraser mouth to meet its needs. The solution, proposed by the Vancouver Port Authority, sanctioned by the federal government in 1966, was a massive port expansion south of the Fraser at Roberts Bank where a new 'super port' would be developed to ship coal to Japan. This 'bulk terminal' to handle very large volumes of raw material at an isolated site reflected changes in international maritime technologies that were separating port activities from traditional port cities.¹³⁶ The Port of Vancouver, which now extended far south of the Fraser, was shipping almost twenty seven million tons of freight by 1970, more than double that of a decade before. More than 80% of western Canada's exports were now moving through Lower Mainland ports. A study for the Port of Vancouver in the mid-seventies claimed that 10% of jobs in the area were now 'port related' and the port generated over \$600 million in wages and salaries annually, or 12% of the metropolitan area's total payroll.¹³⁷

Port authorities worked hard to promote their case in the court of public opinion. They were being criticised about their environmental effects in particular. Port activities were scrutinised by novel government actors including Environment Canada and the province's own fledgling environmental authority, as well as an emerging community of environmental NGOs. Local newspapers gave substantial coverage to NGO's criticisms through the 1970s.¹³⁸ An umbrella group known as the BC Environmental Council stated in a 1974 submission to Victoria that "...industry should not be allowed to sprawl along our waterfront..." They were outraged at a promotional bilingual English – Japanese film produced by the Fraser River Harbour Commission entitled "Freightway to the Pacific." In the film, foreign, and particularly Japanese, industry was encouraged to locate at low cost industrial sites near the Fraser mouth. Already, the Environmental Council claimed, a Japanese auto-maker was blacktopping acres of riverside for car storage, in "most wanton disregard for both waterfront and agricultural lands." The environmentalists concluded that industry, agriculture, fishing, waterfowl and recreation could co-exist on the shore, but only with "careful and coordinated planning by all levels of government." ¹³⁹ Such "integrated planning" had become a panacea for some, perceived as a universal solution for increasingly complex, intractable conflicts and challenges of resource and environmental management in those years.

The most intense criticisms were directed at bulk loading facilities expanding in the deltaic plains and tidal flats south of the Fraser. Productive marine habitat, they feared, would be disrupted in areas to be dredged and permanently lost in those to be filled. These changes would set in motion more difficult to predict changes in coastal erosion and deposition and to the marine habitat in general. Analysts still used the economists' language of 'cost benefit analysis,' but had also begun embracing the language of 'environmental impact assessment.' Their discussions pondered, for the first time on the sea, "significant impacts," "cumulative effects" and "indirect effects" of proposed port projects on "valued elements of the marine ecosystem" such as tidal flats, eel grass, plankton, herring, salmon and waterfowl.¹⁴⁰ At the end of the 1970s federal environmental authorities recommended that the National Harbours Board scale back its latest plans for expansion of the Roberts Bank bulk loading port and smaller facilities at nearby "Delta Port." Federal Minister of Environment, Len Marchand, supported recommendations from his "Environmental Assessment Panel" which concluded that the Fraser estuary, including

Roberts Bank, was "a unique ecological area of great importance (because) Fraser River salmon are dependent upon its preservation, as are many thousands of migratory birds." The full proposed expansion of the port, in the opinion of the federal environmental authority, would present "an unacceptable threat to the Roberts Bank ecosystem." They proposed a more limited expansion in an area judged to be of "minimal ecological value." ¹⁴¹

Other towns around the sea also engaged in lively export trade, on a more modest scale, shipping mostly lumber, pulp and paper. Campbell River exported almost three million tons in three hundred ships in 1971, Powell River a little over half a million tons in two hundred ships. Copper was still shipped from Britannia and Hatch Point, iron from Texada Island, and limestone from Texada and Bamberton. All the Strait's ports still exported almost entirely raw and semi-processed natural resources.¹⁴²

There was a pervasive sense of mounting pressure on the Strait by the 1970s. A cacophony of conflicting demands from diverse users, not surprisingly stimulated fears of impending loss among many people around the Strait. Some feared loss of opportunities to use the shore for port activities or industries that needed to be on the sea. Once this fear had been felt mostly around Vancouver but it was now spreading around the Strait. A confidential report prepared for the province's Ministry of Recreation and Conservation in 1977 identified eleven sites outside established ports that had good potential for industrial development on eastern Vancouver Island and where, the report suggested, "ecological loss in terms of community, habitat, and resource value will be minimal" (Figure 6). The authors stressed that these areas should be promptly reserved for industrial use to prevent "further intrusion" of residential or other non- industrial uses. Stretches of shore suitable for industry were increasingly rare around the sea and therefore valuable and should "not be squandered." They discounted the negative impacts such zoning could have on other users of these areas but suggested their report be confidential "to prevent the price of land in these areas going up." Four of the eleven recommended sites were partly or wholly on Indian Reserves where inflated land value was unlikely to be a problem. ¹⁴³



Figure 6 - Proposed industrial sites on Strait, places to access the marine highway with 'minimal ecological loss' (from 1977 report to BC Ministry of Recreation and Conservation)

Some older threats on the Strait were vigorously reduced. The Vancouver *Sun* described Ripple Rock's destruction at Seymour Narrows on April 5, 1958, as the "biggest non-nuclear peace time

detonation ever" (Illustration 23). The detonation of almost 1,400 tons of explosives sent a 2.4 metre wave onto the shores of Vancouver and Quadra Islands. Nurses and ambulances were posted in the streets of Campbell River, fifteen kilometers away, ready to help possible victims. In the event, nothing happened and they couldn't even hear the blast in Campbell River but it ended a threat that had claimed over twenty large ships and more than 100 lives since the 1870s.¹⁴⁴ The rock's destruction made Discovery Passage the preferred route for most coastal vessels headed north. It stimulated Campbell River and hastened the decline of small communities further east.¹⁴⁵

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Illustration 23 – "Blast at Ripple Rock" 1958 (photo: BC Govt). Seymour Narrows was no longer the Strait's greatest navigation hazard. It was bad for business east of Quadra as most ships could now pass through Discovery Passage.

Summer boaters faced fewer challenges than those on the Strait in winter but the sheer numbers of pleasure boaters and their lack of maritime navigation experience were leading to growing problems on the water. Ottawa amended the Canada Shipping Act in 1962 to improve their governance of small recreational vessels and ten years later initiated a small craft rescue service

on the sea with 5.5 metre launches based at English Bay, Active Pass and in Victoria.¹⁴⁶ People living in isolated corners of the Strait might be familiar with its dangers but most summer boaters had little experience with the sea's capricious power. Tidal rapids were a particular challenge for casual boaters. The Skookumchuck Rapids at the entrance to Sechelt Inlet drowned dozens of inattentive boaters and even a few experienced ones.¹⁴⁷

Air travel began affecting relations between people and the rest of nature on the Strait, increasing ease of access to its most isolated corners and to the sea from the rest of the world. Aviation was stimulated after WWII by the availability of many surplus military aircraft. Entrepreneurs, resource companies and residents of small communities around the sea found it increasingly convenient to fly where before they had travelled by ship. Frederick Marsh met a logger and resort developer in the southern islands in the late 1940s who told him he could "...fly to the mainland in a few minutes anytime we phone for a plane. Every other week we close the mill on Friday and hire a seven passenger plane for the boys to enjoy a change in the city." ¹⁴⁸ Isolated mines and forestry camps could now rely on fast and convenient, though not always safe, small aircraft to move their staff in and out of isolated operations. The Texada iron mine opened its own air strip in the early 1960s.¹⁴⁹ Rapidly growing Campbell River emerged as the hub for small aircraft serving isolated communities and resource extraction operations on the northern Strait and beyond. By the end of the 1960s Campbell River was Canada's largest seaplane base.¹⁵⁰ In common with other modes of transport around the sea, aviation began to face growing push back from other stakeholders. Vancouver's shoreline airport on Sea Island was redeveloped in the 1970s with relatively little problem but an earlier attempt to construct a runway at Spanish Banks was vigorously rebuffed, especially by the Vancouver Parks Board.¹⁵¹ Melda Buchanan in Comox led a successful struggle against plans to infill part of the Comox estuary for airport construction.¹⁵²

The inland sea as barrier and highway

A 'world exposition' on transportation and communication technologies drew over twenty million visitors to Vancouver in 1986. *Expo 86* was credited by its organisers, with some justification, for 'introducing Vancouver to the world.' Vancouver and other settler communities around the Strait had been shipping the Strait's resources out to that world for over a century. They had also been moving across and around the inland sea in ways that changed constantly as

the Strait's relationship with human movement was re-defined by each new technology. Settlers were initially almost as dependent on the marine highway as indigenous people had been. The sea linked their tiny communities with one another and with the outside world. The railroad that brought an unprecedented tide of immigrants to the shore of the Strait also began to reduce settlers' dependence on travel by sea. As highway and automobiles replaced steamships around the Strait, the sea became more of a barrier than it had ever been in historical times. For most people, car ferries became the critical technology for transcending this barrier; for a few, airplanes served the same function. But the era when most people and goods moved around the Strait by sea was over. The notable exception was goods moving over the Strait on their way to the outside world. Here, as they had since the moment BC joined Canada, Ottawa jealously defended its precious marine access to the Strait of Georgia. Increasingly they feared this access could be diminished in the face of growing demands from other stakeholders. Fear of navigational dangers and resulting loss of life on the Strait was becoming less important than fear of losing access to its shore.

¹ Paige Raibmon speaks of indigenous people's seasonal mobility on the water turning the entire coastline from Puget Sound to Alaska into a "maritime region," in: Paige Raibmon, "Meanings of Mobility on the Northwest Coast," in: New Histories for Old: Changing Perspectives on Canada's Past," ed. Ted Binnema and Susan Beylan (Vancouver: UBC Press, 2007), 176.

² Derek Hayes depicts this transformation of understanding through maps in: Hayes, *Historical Atlas of North Pacific Ocean* (Toronto: Douglas and McIntyre, 2001); also see: Frost, Alan, "Nootka Sound and the Beginnings of Britain's Imperialism of Free Trade," in: *From Maps to Metaphors: The Pacific World of George Vancouver*, eds. R. Fisher and H. Johnston (Vancouver: UBC Press, 1993), 104-126.

³ Richard S. Mackie, *Trading Beyond the Mountains: The British Fur Trade on the Pacific, 1793-1843* (Vancouver: UBC Press, 1996).

⁴ R. L. Stevenson, "*The English Admirals,*" *Cornhill* 38 (July 1878):36, cited in: Cynthia F. Behrman, *Victorian Myths of the Sea* (Athens, Ohio: Ohio University Press, 1977): 25-6.

⁵ E. A. Freeman, E. A. "Latest Theories on the Origin of the English," *Contemporary Review* 57 (January 1890): 45, cited in: Behrman, *Victorian Myths*, 27.

⁶ Herbert Hayens, *Ye Mariners of England: A Boy's Book of the Navy* (London: Nelson, 1901), 10, Cited in: Behrman, *Victorian Myths*, 27.

⁷ Behrman, *Victorian Myths*, 22; Herbert Hayens, *The Story of Europe* (London: Collins, 1907), 192, cited in: Behrman *Victorian Myths*, 35.

⁸ Barry M. Gough, Britain, Canada and the North Pacific: Maritime Enterprise and Dominion, 1778-1914 (Aldershot, UK: Ashgate, 2004), xiii.

⁹ So, according to a guide published in London during the gold rush, one could make it from London to Victoria, travelling via New York, Panama, San Francisco and Seattle, in about a month and a half by 1860, J. Despard Pemberton, *Facts and Figures Relating to Vancouver Island and British Columbia, Showing What to Expect and How to Get There* (London, 1860), 86-91, cited in: Cole Harris, *The Resettlement of BC: Essays on Colonialism and Geographical Change* (Vancouver: UBC Press, 1997), 164.

¹⁰ BCA GR-0328: Letter to Colonial Office from Adam Dundas, 30 May 1848.

¹¹ BCA MS-1236 William Henry Lomas fonds: "Log of Wm Lomas from Liverpool to Victoria" in 1862.

¹² BCA MS-0202 Michael Manson fonds: "Sketches from the life of Michael Manson"

¹³ BCA MS-1176 Frederick Marsh fonds: "Leisure Island Laughter" manuscript; TBC 13 July 1881: 2 "A holiday journey – along the east coast and the adjacent islands."

¹⁵ DMF, Sixth Annual Report of the Department of Marine and Fisheries, report for the year ended 30th June 1873 (Ottawa: Government of Canada, 1874).

¹⁶ DMF, Seventh Annual Report of the Department of Marine and Fisheries, report for the year ended 30th June 1874 (Ottawa: Government of Canada, 1875): TBC 25 June 1876 p 2 and 6 July 1876 p 4: "NOTICE TO

MARINERS; William McKee, Portholes and Pilings – A retrospective look at the development of Vancouver harbour up to 1933, CVA Occasional Paper No. 1 (Vancouver: City of Vancouver Archives, 1978), 37.

¹⁷ TBC 24 Oct 1869 p 3: "NEW PILOT REGULATIONS"

¹⁸ TBC 25 March 1873, p3: "Wreck of the bark Almatia!" McKee, *Portholes and Pilings*, 39.

¹⁹ TBC 17 August 1877 p2: Canadian Pacific Railway Routes; McKee, Portholes and Pilings, 4-5.

²⁰ TBC 10 May 1877 p2: "The Harbors of British Columbia"; TBC 11 May 1877 p2: "The British Columbia Harbors"; TBC 30 August 1877: P3 Letter to editor from W F Tolmie.

²¹J. S. Galbraith, *The Hudson's Bay Co. 1821-1869*, Vol. 1. Berkeley: University of California Press, cited in: Nelson, "Seaspace," 55.

²² Norman McLeod, "BC's Pioneer Navigators," Sea Lore 1 (1935) 55-57. cited in: Nelson,"Seaspace," 59.

²³ TBC: "The Ball at Government House" 13 December 1866 p3.

²⁴ Martin Robin, *The Rush for Spoils: The Company Province*, 1871-1933 (Toronto: McLelland and Stewart, 1972),
 57

²⁵ For example, see: TBC 15 Oct 1870 p 2: "The Great Highway"

²⁶ TBC 26 Sept 1877 p2 "THE WESTERN TERMINUS."

²⁷ Thomas Canfield, *Partial Report to the Board of Directors, Northern Pacific Railroad, May 1870*:55, Graff 573, Newberry Library, Chicago, cited in: Richard White, *Railroaded – The Transcontinentals and the Making of Modern America* (New York: W. W. Norton, 2011).

²⁸Jeanette Taylor, *Quadra story: a history of Quadra Island* (Madeira Park: Harbour Publishing, 2009), 21.

²⁹For an account, see: TBC 13 April 1902 p11 "A Little Bit of History"

³⁰ McKee, *Portholes and Pilings*, 49-50; Cole Harris described the arrival of telegraph in New Westminster in 1865 and telephone connections on the coast by the 1880s in: Harris, *Resettlement*, 165, 177.

³¹ Arthur P. Middleton, *Tobacco Coast: A Maritime History of Chesapeake Bay in the Colonial Era* (Baltimore: John Hopkins University Press, 1984).

³² For examples, see: Derek Reimer, "The Gulf Islanders," *Sound Heritage* 5, 4 (1976): 1-78, 7; BCA MS-0364 ORCHARD - BOX 4, File 1.

³³ Jeanette Taylor, *Tidal Passages: A History of the Discovery Islands* (Madeira Park: Harbour Publishing, 2008),78
 ³⁴ TBC 18 March 1880: 3; TBC 21 Nov 1880:2; TBC 23 Jan 1881:3

³⁵ Stephen Kern, *The Culture of Time and Space 1880-1918* (Cambridge, Mass: Harvard University Press, 1983).

³⁶ Margaret Fox and Angela McKeown, *Cha-Hai (Horseshoe Bay) – A Look at the Past!* (Gleneagles School Parent Teacher Association, undated), 11.

³⁷ White, *Railroaded*.

³⁸ Kern, *Time and Space*, 17

³⁹ Martin Lynch, *Mining in World History* (Reaktion: London, 2002): 186-7.

⁴⁰ TBC 4 March 1882 p 2: "THE MISSION TO ENGLAND."

⁴¹ The Vancouver Island railway reserve amounted to about 750,000 ha or 7,500 km2; TBC 28 July 28 1877 p3: CPR ROUTES – A letter to the editor from W. F. Tolmie; BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 9 File 18: E & N Railway – 1969-1979; TBC 23 Sept 1900 p 9: "UP THE LINE OF THE E & N RY"; Elizabeth Forbes, "Sir John A Put in Last Spike on E and N Road 79 Years Ago," Victoria Times. Aug. 16, 1965: 5; Martin Robins, *The Rush for Spoils: The Company Province, 1871-1933* (Toronto: McLelland and Stewart, 1972), 22.

⁴² BCA MS 2009 - Margaret Ormsby's records - BOX 7, File 7, p 25; Georgina Montgomery and Kevin Oke, *The Cowichan: Duncan, Chemainus, Ladysmith and region* (Madeira Park: Harbour, 2009), 27; Nelson, "Seaspace," 63.
⁴³ BCA GR 2940 - BC Heritage Conservation Branch 1960-1983: BOX 9 File 18: Undated (but apparently from 1976), unsourced (apparently a government brief), partial note in file entitled Historical Background (E & N Railway): 4-7; Brad Wylie, *Qualicum Beach: a history of Vancouver Island's best kept secrets* (Qualicum: Qualicum Beach Historical and Museum Society, 1992), 38; BCA MS-0436 Alexander Buckham - file 12 History of Courtenay 1958, Letter of 4 February 1958 from D.C Hartley, Superintendent, E and N Railway Company to A.

¹⁴ TBC 23 April 1859, p 1 "Extracts from Commissioner Nugent's Report."

⁴⁴ TBC 23 Sept 1900 p 9: UP THE LINE OF THE E & N RY; TBC 22 January 1901 p5: RAILWAY
 COMPLETED; TBC 29 May 1910 p1: "TRAMWAY TO OPEN SAANICH DISTRICT"; TBC 19 June 1910: 26
 ⁴⁵ TBC 27 July 1873: 3

⁴⁶ BCA MS 0292 - Frederick Lloyd Nunns fonds 1882-1912, Nunns' diary entry of December 1912.

⁴⁷ TBC 25 Mar 1890 p 1; TBC 1 July 1890 p8; TBC 9 Jan 1895 p7: "LAST SESSION'S CHARTERS; BCA MS-0364 BOX 4 File 2; Armitage, *Around the Sound*, *112-113*; White *The Sunshine Coast*, 20; Gabrielle Kahrer,

5004 BOX 4 File 2; Arimitage, Arouna the Sound, 112-115; while The Sunshine Coast, 20; Gabriele Kaller,

"Logging and Landscape Change on the North shore of Burrard Inlet, BC 1860s to 1930s," MA Thesis, Department of Geography, UBC, 1988.

⁴⁸ TBC 1 May 1909 p4: "HELPING OURSELVES; TBC 9 July 1883 p3; TBC 11 November 1898 p 5: The Car Ferry; TBC 9 Oct 1900 p6: Craigflower Once Again; TBC 26 May 1901 p4: "THE NEXT CONFLICT.; TBC 27 Sept 1901 p 4: FUTURE OF VICTORIA; TBC 19 October 1902 p 4: "AGAINST NATURE; TBC 18 April 1907: "VICTORIA AS A TERMINUS; TBC 12 March 1896, p6: "THE BRITISH PACIFIC RAILWAY; TBC 24 November 1906 p5: "COST OF BRIDGING SEYMOUR NARROWS.

⁴⁹ TBC 30 July 1888: 3.

⁵⁰ Most advertised in the *Colonist*, see examples of their posted schedules: TBC 30 July 1888 p 3; TBC 20 November 1898 p3: "UNION STEAMSHIP COMPANY

⁵¹ The expansion of the three company's coastal networks and the growing dominance of Vancouver in coastal shipping between 1890 and 1921 is described graphically in Harris, *Resettlement*, 176.

⁵² Norman Hacking, "Steamboat Days, 1870-1883." *BC Historical Quarterly* 2 (April 1947). cited in: Nelson "Seaspace,"110; UBCLSC Roderick Haig-Brown papers BN 58-1 typed, undated 44 page manuscript entitled "The Pacific Northwest – Doubleday," apparently early 1960s; George M. Schuthe, "Canadian Shipping in the BC Coasting Trade," MA Thesis, UBC: 21, cited in: Nelson, "Seaspace," 60-61.

⁵³ P. Chapman, "Navigating the Coast: A History of the Union Steamship Company." *Sound Heritage* 6, 2 (1977): 1,
4; Frank Bowen, *The History of the CP Line*, London, 1928, cited in: Nelson "Seaspace," 87; Heather Harbord,
"Desolation Sound – A history" (Madeira Park, BC: Harbour Publishing, 2007), 48; BCA MS 2009 Margaret
Ormsby's records - BOX 6, file 3 Bowen Island Park and Store Use Society 1979. The old Union Steamship
General Store building, Bowen Island, BC. Unpublished brief prepared for The Provincial Heritage Advisory Board
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⁵⁴ John Dunham, "The Developing Harbour," In: *Nanaimo Retrospective: The First Century, ed.* Blanche Norcross (Nanaimo: Nanaimo Historical Society, 1979), 68-74; Chapman, *Navigating the Coast*, 6; UBCLSC BN 58-1. Roderick Haig-Brown papers. The Pacific Northwest – Doubleday," undated, unpublished, 44 page typed manuscript, probably circa 1962, 21; White, *Sunshine Coast*, 25.

⁵⁵ TBC 7 Feb 1902 p 4: "TRADE COMPETITION"

⁵⁶ BCA MS1636 John Francis Barrow collection: Friday August 18 1903

⁵⁷ TBC, 16 June 1907: 17.

⁵⁸ Geoffrey Blainey, *The Tyranny of Distance: How Distance shaped Australia's History* (Melbourne: Sun Books, 1982), 285-7.

⁵⁹ McKee, *Portholes and Pilings*, 18.

⁶⁰ BCA MS 2009 - Margaret Ormsby's records - BOX 7, File 6: Thomas E. Appleton, *Usque ad Mare: A History of the Canadian Coast Guard and Marine Services*, (Ottawa: Department of Transport, 1968).

⁶¹ TBC 13 January 1883 p2: "THROUGH TO YALE;" 13 January 1883:3

⁶² TBC 11 March 1884 p.2: "THE THRASHER CASE;" TBC 26 Feb 1886:3.

⁶³ TBC 11 Sept 1884 p2: A MISSING YACHT.

⁶⁴ Taylor, *Quadra Story*: 65-66.

65 TBC 23 October 1885 p. 3: "THE COAL AREAS"

⁶⁶ TBC 5 Sept 1888 p. 4: BOARD OF TRADE; TBC 14 Sept 1893 p 2: "AN AID TO NAVIGATION; TBC 15 Sept 1894 p 6: "Marine Notes"; TBC 8 April 1908 p 10 : "WILL PLACE BEACONS IN SERVICE AGAIN"

⁶⁷ TBC 16 March 1886 p 2: "THE CANADIAN MARINE"; Reimer, "Gulf Islanders," 65; MS-0436 Alexander Buckham – Volume 106; TBC 19 Dec 1890 p 1;Taylor, *Quadra Story*: 84; TBC 16 December 1898 p2: "MARINE NOTES"; TBC 18 August 1899 p 3: "NEW LIGHTHOUSES; TBC 15 December 1900 p 3: "THE BALLENAS ISLAND LIGHT."

⁶⁸ Visits to the light keepers were a high point in Charles Groth difficult life on Galiano in the 1880s, see BCA MS-0243 GROTH, Charles, 1855-1938; Frederick Marsh and Derek Reimer also spoke of islanders' memories of early light house keepers in: MS-1176 - Frederick Marsh fonds: "Leisure Island Laughter" manuscript, and Reimer, "Gulf Islanders," 65. See a eulogy for a keeper in: TBC 8 January 1908 p3: "OBITUARY NOTICES."
⁶⁹ For examples of both see: TBC 20 November 1896 p 6 "VICTORIA'S VISITOR"; 23 December 1900 p 2: "ARRIVED FROM SKAGWAY"; TBC 24 May 1907 p 10: "MARKING THE CHANNEL"

⁷⁰ TBC 23 December 1900 p 8; TBC 8 October 1908 p 10 "MARINE INTELLIGENCE"; TBC 10 June 1909 p 2: "TIDAL SURVEY TO BENEFIT SHIPPING"; TBC 19 April 1900 p 8: THE TIDAL SURVEY"; TBC 29 April 1910 p1: "COLLECTING DATA FOR TIDE TABLES"

⁷¹ These are discussed in: TBC 8 May 1909 p5: "BOUNDARY SURVEY"; TBC 1 April 1902 p 8: "After Wool Smugglers"

⁷² For example, see: TBC 27 April 1910 p 14: "Arcata Makes Visit"

⁷³ McKee, *Portholes and Pilings*, 6.

⁷⁴ TBC 29 November 1907 p6: "Wireless Communication.

⁷⁵ As Cole Harris, pointed out though, long distance calls remained prohibitively expensive and most phone calls were local: Harris, *Resettlement*, 177; TBC 16 August 1890 p 5 "Connection with the Mainland by Telephone." For a discussion of early telephone service on the islands see: Taylor, *Tidal Passages*, 100.

⁷⁶ Ibid, 56; BCA MS-0364 ORCHARD - BOX 4 File 2 #16 Delta

⁷⁷ McKee. Portholes and Pilings, 44.

⁷⁸ Ibid, 30.

⁷⁹ Ibid; Nelson "Seaspace," 101-2; Harbord, *Desolation Sound*, 46; GR 2940. BC Heritage Conservation Branch 1960-1983. BOX 7 File 36: Hopkins – 1951: Lester Peterson, "Hopkins," *Vancouver Sun Magazine Supplement* August 11, 1951.

⁸⁰Taylor, *Quadra Story*, 96; TBC 21 May 1893: 1

⁸¹ *The Hub*, 1910, article cited in Dunham, "Developing Harbour," *68-74*; TBC 5 September 1909 p 5: "AN IMPERIAL FRONTIER."

⁸² TBC 20 December 1900 p 4: "WRECKS." A salvager from Denman Islander became the tenth fatality of the accident after finding a case of over proof rum from the *Alpha* and drinking himself to death; TBC 12 May 1901 p 1: "FAST ON A REEF"; TBC 19 January 1908, p 10: "SOUTHWEST WIND ENDANGERS VADSO"; Wolferstan *Pacific Yachting*:176, Spalding, *Enchanted Isles*: 61

⁸³ BCA MS 0364 - ORCHARD - BOX 4 File 1; BCA MS-0436 Alexander Buckham - Volume 98 Scrapbook "Comox Valley II" I, Stubbs, *Indian History Recounted by Matriach*, unpaginated clipping from Comox District Free Press, 30 October 1952; TBC10 July 1896 p2: "FOUND."

⁸⁴ TBC 20May 1886 p3: GEOLOGICAL SURVEY MS-0202 Michael Manson "Sketches from the life of Michael Manson": 7; Taylor, *Tidal Passages*: 79; MS-1176 - Frederick Marsh fonds, "Leisure Island Laughter" manuscript: 304-5

⁸⁵ Kirk, My Ain Folk, 42.

⁸⁶ BCA MS-1176 - Frederick Marsh fonds. "Leisure Island Laughter" manuscript p 505; Armitage, *Around the Sound*, 134.

⁸⁷ Harbord, *Desolation Sound*, 48.

⁸⁸ MS-0243 GROTH, Charles, 1855-1938.

⁸⁹ For the ups and downs of these island local economies and their steamship service, see: Elda C. Mason, *Lasqueti Island: history & memory* (Lantzville, BC: Byron Mason, 1991) and Taylor, *Tidal Passages*.

⁹⁰ BCA MS-0436 Alexander Buckham, BOX 3 file 3, Texada, Lasqueti and Lang Bay 1921-1946; BCA – Imbert Orhard fonds: T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969.

⁹¹ Delgado, *Waterfront, 30;* Ivan Alexis Lopatin, "Geography of Vancouver," (MA Thesis Department of Geography, UBC, 1929), 229; VCA file PD 631.9: William D. Hudson, "Railway and Harbour Report, Vancouver BC," Report to Vancouver Town Planning Commission (Vancouver: Harland Bartholomew and Associates, September 1927), 9.

⁹² Hudson, "Railway and Harbour Report," op. cit.: 16-18, 25.

⁹³ Delgado, Waterfront: 130; Dunham, "Developing Harbour, "68.

⁹⁴ BCA MS 1176 - Frederick Marsh fonds, "Leisure Island Laughter" manuscript. My mother's brothers worked for a prominent rum runner near the Fraser mouth; when the US repealed the Volstead Act they were suddenly

unemployed in a tough job market. Less lucrative contraband, mostly wool, continued between the southern islands. ⁹⁵ Chapman, *Navigating the Coast*, 5-6; Blanche Norcross, "Nanaimo's Playground – Newcastle Island," in:

Nanaimo Retrospective: The First Century, Blanche Norcross (ed.), 131-135. Nanaimo: Nanaimo Historical Society, 1979; Jack Little, "Vancouver's Playground: Leisure and Sociability on Bowen Island, 1902-1957," *BC Studies* 171 (2011): 37-68.

⁹⁶ BCA MS 0006 - Dickie, Francis Joseph. Papers 1932-52. Letter from Dickie to Harold Brown, Esq., General Manager, Union Steamship Co., Vancouver, BC. 21 June 1939.

¹⁰¹ BCA MS-0728 - Pidcock family fonds: see especially Box 5, Volumes 21 and 22.

¹⁰² There, because of the steep terrain and sea barriers, it remained similar to the road network in the province's interior, what Harris described as a "weak complement" to the existing transportation system, in this case, the steam ships: Harris, *Resettlement*, 173.

¹⁰³ Fox and McKeon, *Cha-Hai*, 38; Armitage, *Around the Sound*, 192.

¹⁰⁴ BCA MS 1636 John Francis Barrow collection, Toktie Logs: Sept 16 1939, Sept 4 1941.

¹⁰⁵ BCA MS 0436 Alexander Buckham - VOLUME 106. UNDATED. Update by the Women's Institute:8

¹⁰⁶ Spalding, Enchanted Isles; Kirk, My Ain Folk, 48; Armitage, Around the Sound, 127.

¹⁰⁷ Mason, Lasqueti Island, 116.

¹⁰⁸ BCA MS 0093: G.B. Brett fonds; BCA MS 0006 Dickie, Francis Joseph. Papers 1932-52: Oct. 22 1939 Letter to the District Superintendant of Postal Service, Vancouver.

¹⁰⁹ McKee, Portholes and Pilings, 51.

¹¹⁰ Thompson, *Texada Island*, 114.

¹¹¹ BCA MS 1176 - Frederick Marsh fonds, "Leisure Island Laughter" manuscript: 242.

¹¹² H. L. Cadieux and G. Griffiths, *Dogwood Fleet: The story of the British Columbia Ferry Authority from 1958*, (Nanaimo: Cadieux and Griffith, 1967), 6-7.

¹¹³ Harbord, Desolation Sound, 50; Chapman, Navigating the Coast, 9-12.

¹¹⁴ Kirk, My Ain Folk.

¹¹⁵ Neighbouring Texada got theirs in 1955, inheriting a tiny six car ferry from Gabriola, where they were upgrading, in: *CVA* file: F 5848 .P69 T39 1960: "Powell River's first 50 years," *Powell River News*, unpaginated manuscript, 1960.

¹¹⁶Dunham, "Developing Harbour," 74; BCA GR 2940 –BOX 6 File 27 Cowichan Valley: 20-22.

¹¹⁷Dunham, "Developing Harbour," 74.

¹¹⁸ This process of switching to more modern boats specially adapted as car carriers is discussed in: Cadieux and Griffiths, *Dogwood Fleet*; Armitage discusses their uneven welcome in the little resort of Horseshoe Bay, in: *Around the Sound*, 197-198.

¹¹⁹ It was understood that the sea barrier would also keep them isolated. It's not clear if the developer knew of Douhobours earlier experience with an island prison on the Strait.

¹²⁰ BCA GR 0073 Crown land to Doukhobours - File 29 – Lasqueti Island.

¹²¹ Cadieux and Griffiths, *Dogwood Fleet*, 10.

¹²² Cadieux and Griffiths, *Dogwood Fleet*, 107.

¹²³ BCA GR 1002 - BC Environment and Land Use Committee Secretariat. Originals 1972-1980. BOX 11 – BC Ferries Study, ELUC Secretariat, 1976: "BC ferries study," draft January 1976 report to the ELUC and the Minister of Transport and Communications.

¹²⁴ Armitage, Around the Sound, 212.

¹²⁵ BCA MS 1246 Islands Trust Fonds 1974-76: BOX 1: Briefing notes for the Minister, 22 December 1975.

¹²⁶ Nelson, "Seaspace"; Edward M. Gibson, *The Urbanisation of the Strait of Georgia Region: A Study of the Impact of Urbanisation on the Natural Resources*, Geographical Paper. Lands Directorate, Department of Environment. Ottawa: Information Canada, 1976, 55-6.

¹²⁷BCA MS 1176 - Frederick Marsh fonds, Leisure Island Laughter" manuscript: 31, 128.

¹²⁸ Howard White, Sunshine Coast, 45.

¹²⁹ Richard Steele, *The first 100 years: an illustrated celebration* (Vancouver: Vancouver Board of Parks and Recreation, 1988), 255.

¹³⁰ BCA MS 1246 Islands Trust Fonds 1974-76 BOX 1: ROADS Briefing notes for the Minister, 22 December 1975.

¹³¹ BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 9 File 18: Undated (but apparently from 1976), unsourced (but apparently a government briefing note), partial note in file entitled Historical Background (E & N Railway): 4-7; Leffler, *Parksville*, 53.

¹³² City of Vancouver Archives, Port Watch – A Retrospective Look at 100 Years of Ships and Shipping in Vancouver Harbour (Vancouver: Vancouver City Archives, 1986), 8; Delgado, Waterfront, 134.
¹³³ Delgado, Waterfront, 153.

⁹⁷ This role is discussed at length in: Hudson, "Railway and Harbour Report," op. cit.

⁹⁸ Armitage, Around the Sound: 139.

⁹⁹ G. A. Rushton, Whistle up the Inlet (West Vancouver: McMahon Pub, 1974), 102, cited in: Armitage Around the Sound, 155.

¹⁰⁰ Harris, *Resettlement*, 172.

¹³⁴ BCA GR 1002 BC ELUC Secretariat, Originals 1972-1980, BOX 8: Letter dated 30 July 1976 from Kenneth McEwan, Port Manager, North Fraser Harbour Commission to B. E. Marr, Deputy Min., Dept of Environment, Victoria. Re: Fraser River Estuary Study.

¹³⁶ Delgado, *Waterfront*: 144; Brian Hoyle, "Ports, Cities and Coastal Zones: Competition and Change in a Multimodal Environment," in *City ports, coastal zones and regional change – International perspectives on planning and management*, ed. Brian Hoyle (London: John Wiley and Sons, 1996), 1-6.

¹³⁷ BC Dept. of Finance, *BC Financial and Economic Review*, 31st Edition (Victoria: Dept. of Finance, 1971) 61; and, Economics and Statistics Branch. *Pacific Coast Ports of North America* (Victoria: Department of Industrial Development, Trade and Commerce) 4, both cited in: Nelson, "Seaspace," 1, 80-91 ; BCA GR 1002 BC ELUC Secretariat Originals 1972-1980, BOX 8: "One in every 10 city jobs relates to port business," *Vancouver SUN*, May 7, 1976: Business Section.

¹³⁸ For example: "SPEC lists 'Least of Port Evils'," *Vancouver SUN*, 10 May 1976: 10; "SPEC opposes relocation of two BC ferries terminals," *Vancouver SUN*, 10 July 1976: 8; "SPEC hits port report," *Vancouver SUN*, January 17, 1978 pp: C8; "Environmentalists all but sink slough marina plan," *Vancouver Province*. Aug 22, 1978: 32; "SPEC raps Marchand on Robert's Bank stand" *Vancouver SUN*, 19 March 1979: A11.

¹³⁹ BCA GR 1002 BC ELUC Secretariat, Originals 1972-1980, BOX 28 – Ports and Harbours - GVRD Lower Mainland Environmental Issues File, submission from BC Environmental Council,1974.

¹⁴⁰ Gibson Urbanisation, 56

¹⁴¹ BCA GR-1002, BC ELUC, Originals 1972-1980, BOX 28 – Ports and Harbours: Minister of Environment, Canada, Press Release, 16 March 1979.

¹⁴² Economics and Statistics Branch, *Pacific Coast Ports of North America*, op. cit., 87-90; BC Dept. of Finance, *BC Financial*, op. cit., 62.

¹⁴³ BCA GR 1002, BC ELUC Secretariat, Originals 1972-1980, BOX 28 – Ports and Harbours - Potential Port Industrial sites SE Vancouver Island file: Ted Burns and Rob Falls, *A Survey of Possible Coastal Industrial Sites on Southeast Vancouver Island From An Ecological Viewpoint*. Confidential and unpublished report prepared for The Fish and Wildlife Branch, Ministry of Recreation and Conservation, Province of BC, November 1977.

¹⁴⁴ VCA File 567 – E – 6 – 5: "Ripple Rock Area Probed by Ships-Mighty Blast Believed to Have Ended Menace," *Vancouver SUN*, Saturday 5 April 1958: 1-3; BCA GR1614 Parks and Outdoor Recreation Division, BOX 25, File 1.6.3.257.

¹⁴⁵ Harbord, *Desolation Sound*, 15.

¹⁴⁶ Nelson 1973"Seaspace," 167.

¹⁴⁷ White, *Sunshine Coast*, 9.

¹⁴⁸ BCA MS-1176 - Frederick Marsh fonds. "Leisure Island Laughter" manuscript: 439.

¹⁴⁹ Soon paved and extended, the Texada air strip closed in the 1970s when the mine shut down then re-opened in the early 1980s as a 'community airport' with provincial government support, in: Thompson, *Texada Island, 361*. ¹⁵⁰ BCA T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969 (Part of Imbert Orchard records).

¹⁵¹ Steele, First 100 Years, 250.

¹⁵² Christina Wiens, "Melda and her passions - Historian Richard Mackie presents his research on the Valley naturalist," *Comox Valley Echo*, 19 January 2010, accessed 2 June 2014,

http://www2.canada.com/comoxvalleyecho/story.html?id=1f9e74e1-8338-4fb9-ba12-62c5f879f280

¹³⁵ Ibid.

3. Empty Land or Stolen Land? The Colonial Strait

This chapter describes experiences of the Strait's indigenous people and the Eurasian settlers who took control of the region in the late nineteenth century. The colonial dispossession process on the Strait was broadly similar to that in the rest of the province and an important dimension of evolving relations between humans and the rest of nature on the inland sea. The dispossession process was mostly completed in the latter half of the nineteenth century but continued into the twentieth, as did various forms of indigenous resistance to it. This dispossession - and resistance to it – affected other narratives of the Strait, particularly those related to natural resources and recreation, and continues to do so into the 21^{st} century.

Collapse of indigenous populations, settlers' profound hunger for land and resources, various legal and technological instruments of colonisation, and evolving transportation technologies all contributed to the rapid dispossession of the Strait's indigenous people. Dispossession in turn contributed to profound changes in human relations with nature on the Strait, starting with a veritable 'resource rush' that began in the 1880s. Colonial dispossession, and its relations with things like primary resource extraction and creation of recreation space, has been considered in numerous studies. Most of these studies however have not focused on a critically important coastal zone such as the Strait of Georgia, nor have they considered the breadth of interwoven issues considered in this chapter.

The human population around the Strait before the advent of epidemics in the late eighteenth century may have numbered as many as 50,000 people. Sustained by food from the sea, it was a relatively dense population compared with much of pre-contact North America. Marine harvests were usually plentiful and sustained a culture with high levels of wealth, leisure time and artistic expression. Salmon spawning in streams around the Strait, and particularly immense Sockeye salmon spawns on the Fraser, were the basis for sophisticated traditional fishing technologies, giving rise to a culture and economy near the Fraser mouth virtually constructed around this fish.¹ Archaeological research on the northern Strait suggests herring may have been as fundamentally important for indigenous people there.²

Most indigenous communities around the inland sea were located on beaches at the mouths of streams. Their locations reflected the importance of marine food sources, considerations of ancestors and other social, political and defensive concerns.³ Many seasonal settlements – especially on islands - were at places good for harvesting shellfish and camas root, hunting marine mammals and birds and fishing. Autumn camps were at river mouths for the return of the salmon. In the coldest and wettest months, most people congregated in larger settlements often in sheltered coves and inlets beside beaches protected from winter storms and more easily defended against marauders, for whom the Strait's protected waters were also a convenient highway.

The Strait's pre-colonial society was tied together in various ways. Most people around the sea spoke dialects of the Coast Salish language group that extended south into Puget Sound (South Salish Sea) and west onto the shores of the Strait of Juan de Fuca (West Salish Sea).⁴ They were also linked by networks of marriage and elaborate systems of economic cooperation and ceremony. Much has been written recently about traditional knowledge in the Strait's communities. This included complex information about which families or clans controlled which marine resources. Virtually all resources of the sea and adjacent shore were controlled by a community, family or individual. Ties to natural resources were intimately bound with cultural property as were names, songs and roles in traditional ceremony.⁵ In a pre-literate society, such elaborate webs of ownership and culture had to be remembered and communicated; this applied to marine resources as well as harvesting technologies such as the shellfish gardens and tidal weirs now being re-discovered in places such as the Comox estuary, Cortes and Quadra islands. Society around the sea was hierarchical and knowledge based. Much traditional knowledge was not shared 'common property' as much as a form of what today is called 'intellectual property,' vested in individuals, families and kinships groups.⁶ High and low status people and slaves knew their social places and roles. High status people had detailed knowledge of their genealogical history, low status and slave people were deemed to have forgotten theirs.⁷ Recognising the importance of this orally transmitted information for organising the Strait's indigenous society is necessary for understanding the devastation wrought by epidemics that ravaged populations and diminished their capacities to pass on knowledge of themselves.

The seeds of change for the Strait's indigenous people, the onset of their catastrophic losses, preceded European colonisation. The sea was on the margins of eighteenth century geopolitical

struggles as other countries learned of Russia's lucrative trade in sea otter pelts with China. The British were unable to retain the lower Columbia basin in the face of American immigration before 1850, but did have the resources and administrative capacity to retain Vancouver Island and the adjacent mainland between the American and Russian empires.⁸ The Strait's indigenous people did not directly participate in the sea otter trade and the infrastructure of European commerce appeared only slowly on the inland sea in the first half of the nineteenth century. Outsiders arriving on the Strait before mid-century were almost all employees of the Hudson Bay Company (HBC) which had moved its bases north from the Columbia to the Lower Fraser and southern tip of Vancouver Island. The HBC was not anxious to encourage uncontrolled European settlement around the inland sea. They aimed instead to maximize profits trading with the Natives. When Britain began discussing settlement of Vancouver Island in the 1840s, the HBC occupied an ambiguous position. They had unique knowledge of the place and its indigenous people but the company's relations with the place and its people might not match the needs of a colonization project. Royal Navy Lieutenant Adam Dundas reported to the British Colonial Office that the HBC was only interested in promoting its own interests and did not need colonists; instead they needed to trade with the "Savages."9 The well-established company was somewhere in limbo between the indigenous old world and the settlers' new one. Their dominant role would not continue long in the settlement era but their efficient trading system was instrumental for ushering in coming changes on the Strait.

HBC had introduced new systems of control and exchange. They did not control the Strait before mid-century but had established discrete centres of power inside the walls of their forts. More importantly, they introduced their efficient trading system linking the Strait to distant markets hungry for its minerals, fish and wood.¹⁰ In the decades before colonisation, the HBC was almost wholly dependent on indigenous labour. A few hundred men of mixed race including Canadians, British, Hawaiians, Metis, and Chinese lived among tens of thousands of indigenous people on the inland sea between 1800 and 1850. Robin Fisher described how Coast Salish people worked to control access to HBC forts, excluding whoever they could and exercising their own form of control over these valuable power objects.¹¹ John Lutz described the Lekwungen people greeting the arrival of European traders at Victoria, seeing them as proof of their own spiritual power and enabling them to convert available resources into precious blanket currency.¹²

As settlers began replacing traders after mid-century, they encountered communities traumatized by the gauntlet of epidemics that had started decades earlier. Based on anomalies in the archaeological record, some researchers suspect that periodic scourges of exotic disease may have begun on the Strait as early as the 16thcentury.¹³ Whatever the date of arrival, by 1850 hitherto isolated populations with little inherited resistance had experienced a lethal mix of chronic and epidemic diseases, including tuberculosis, smallpox and measles. Similar epidemics had already transformed much of the western hemisphere. The early nineteenth century Strait of Georgia might be described as Shawn Miller depicted sixteenth century Latin America - a place where "disease conquered the human species." ¹⁴ The 'beginning of settlement' on the Strait was a period of depopulation that continued until the late nineteenth century as disease hollowed out its indigenous society. Cole Harris has suggested smallpox spread along trading routes from central Mexico, reaching the Strait in the 1780s.¹⁵ In the 1790s Vancouver found the shores lined with deserted villages and human skeletons. Boyd described a different pattern of disease diffusion but also recognised their devastating impact; he estimated they recurred on the northwest coast up to eight times between 1800 and the 1860s.¹⁶ Evidence of demographic collapse on the Strait is still being uncovered. Nancy Greene and David McGhee, working in Comox Estuary for the last ten years, have been documenting tens of thousands of Douglas fir stakes 15 cm in diameter, re-discovered early in the century and spread over several kilometers of tidal flats. The stakes outline a large number of sophisticated fish traps capable of catching huge quantities of groundfish, salmon and others species. Carbon dating suggests many large traps operated simultaneously, the oldest dating back almost 1,400 years, the most recent to the 1840s. Infrastructure of this scale would have fed - and required collaboration from – indigenous populations vastly larger than those in the area at the time of European resettlement.¹⁷

Harris estimated that populations on the Strait fell 90-95% in the century after the 1780s – similar to the decline McNeill has estimated for Mexico's indigenous population in the century after first contact with the Spanish.¹⁸ Without reliable statistics on death rates for specific epidemics in individual communities there is no consensus on the numbers and likely never will be. The plagues that devastated most of 14th century Europe killed between a quarter and a third of the population. Disease appears to have reduced the indigenous population on the inland sea on a far greater scale between the 1780s and 1880s. Unlike 14th century Europeans, the Strait's indigenous population had no opportunity to re-build their shattered society. By 1849,

indigenous culture on the Strait was already being swept up in a tide of change beyond its control. Travellers around the Strait after mid-century reported streams and shorelines bursting with fish; their stories helped make the place an attractive candidate for integration into global trade networks, and a destination for Victorian sportsmen. The bounty attracting them resulted in part from rapid reductions in human predation as indigenous populations collapsed.

Declining indigenous populations coincided with Britain's growing interest in colonisation and the Royal Navy's desire for a strategic foothold in the northeastern Pacific. London was responding not just to the American takeover of Oregon but to a global menu of alarming developments, from starvation in Ireland and rebellion in the Canadas, to ongoing Russian and American expansion. One rationale for their colonial project would be the need to impose the civilising rule of the British Empire, to protect settlers from Natives and Natives from each other. Archaeological evidence suggests the inland sea, like the Mediterranean and Baltic regions at different times, had been a place where relatively stable coastal communities engaged in endemic warfare at different scales. Most conflict was local, more often involving seizure of property than takeover of territory. Yet regional level enmities were also present, the Strait had already been contested space for a long time.¹⁹

Many signs of conflict and communities' defensive alignment appear in the archaeological record, on the Strait especially, where Salish speakers faced formidable enemies in the Kwakwaka'wakw and Haida language groups. Jeanette Taylor describes the elaborate defensive fortifications, escape tunnels and trenches developed by Comox people around the northern Strait.²⁰ Heather Harbord mentions similar fortifications at indigenous settlements at Lund and around Desolation Sound.²¹ Dana Lepofsky has noted that Salish speaking settlements on the northern mainland shore of the Strait were always aligned to defend themselves from attackers coming from the North, people they describe today as 'Haida.'²² Similar to changes that started a couple of centuries earlier in West Africa, inter-regional level conflict may have become more intense on the nineteenth century Strait as European contact tilted the balance of power away from Salish speakers on the inland sea. Salish speakers' military strength was clearly waning during the decades after first contact. Kwakwaka'wakw speakers north of the Strait may have been beyond the reach of the first epidemics sweeping around the Strait in the late eighteenth century.²³ These northern people also had advantages imparted by the sea otter trade and the

advanced weapons it financed. In the 1790s, the northern boundary of Salish speakers probably extended north of Kelsey Bay, well beyond the north end of today's Salish Sea.²⁴ By mid nineteenth century this boundary was much further south, with Kwakwaka'wakw speakers established on Quadra Island and mixing with dwindling Salish speaking communities as far south as Qualicum. Violent confrontations between the two language groups continued in the first century after European contact and helped justify British colonial rule.

Land hunger was a more important impetus for British colonialism than local peacemaking. This was an era when Europeans were rushing into 'unoccupied' lands in many parts of the world. As they had been doing elsewhere since the sixteenth century, settlers assessed the Strait's indigenous society according to European norms and standards and applied "colonial assumptions of progress, superiority and civilisation"²⁵ then imposed their own order, rules and laws. The process had evolved and increased in efficiency for over three centuries before finally reaching the northwest coast of North America. It was particularly robust in the latter decades of the nineteenth century, coinciding with the growth of laissez faire liberalism and European colonial expansion.²⁶ The Strait's indigenous communities had highly developed systems of control over space and, particularly, over marine resources. But individual ownership of land - a dominant preoccupation among arriving settlers – had no meaning for indigenous people. Even in the few cases when early settler governments reimbursed Natives for land around the Strait, indigenous people apparently assumed they were conveying right of usufruct, not imparting something like 'perpetual exclusive ownership.²⁷

Colonisation on the Strait focused on gaining control over land and resources and imposing rules for governing them. The process involved a change in perception of land and resources from things to be used by certain clans or groups into ones that could be permanently, legally owned by individuals. The concept of 'improvement' was a key element in this transformation.²⁸ Land 'improvement,' as a basis for establishing ownership, had deep roots in British common law. To 'improve' land was to take idle land - land whose productive potential was being 'wasted' - and render it fruitful. Improvement of 'idle' lands had been one rationale for seventeenth century English seizure of Irish lands. The process was then applied in other areas of European colonisation. Weaver characterised it as "converting frontiers into assets." ²⁹ Conversion from 'frontier wasteland' to 'real estate asset' was at the core of the Strait's dispossession process. As

in many other places, it was accompanied by dramatic changes in the ways land and resources were used.

An official declaration of sovereign control over all land and people inhabiting it was a prerequisite for subsequent application of settler property laws on the Strait. This claim of sovereign control was made by the British Empire then passed on to the government of BC as it joined Canada in 1871. Ottawa was assigned control over indigenous peoples, but for decades after confederation it continued to haggle with the province over what lands they should have. The process of establishing settler control on the Strait was broadly similar to colonisation elsewhere in the nineteenth century, from Algeria to Australia. Perhaps the most important common element was intense land hunger, across the territories being settled by white Europeans. This 'great land rush' as Weaver dubbed it, was characterised by an important transition. Initially relations between colonisers and colonised were relatively fluid and land acquired by formally negotiated purchase. This prevailed during the first decade of colonisation on the Strait. In the latter decades this shifted to what Weaver described as "firm, unilateral, overpowering, subordinating and anger provoking applications of sovereign power."³⁰

The Strait's transformation also involved ecological change. The broader experience of colonial expansion again offers useful insights. Rapid expansion of Spanish colonists' intensive pastoralism transformed the Mezquital Valley of central Mexico in the sixteenth century, replacing an indigenous system of irrigated agriculture that had supported dense populations. Colonial technology rendered the indigenous population marginal, unable to support themselves as they had in the past and with diminished options for the future.³¹ A similar fate was in store for the Straits' indigenous people, as their systems for intensive harvesting of marine resources were rapidly replaced by settlers' industrial fishery. Many have pointed out that early European travellers in the western hemisphere did not enter a 'New World' but a very old one. The 'New World' only emerged after Europeans' arrival, as complex relations evolved between them and the western hemisphere's established society. According to Miller the process of forging a 'New World' took about a century after European arrival in Latin America.³² It took about as long on the Strait of Georgia, with the first European arrival in the arrival of the railway in the late 1880s.

Establishing imperial control of the Strait, 1849 - 1880s

Once Britain's claim was established over a stretch of the northeast Pacific shore, settlers were needed to secure its control. James Fitzgerald, writing to the Colonial Office in 1849, was more optimistic than some about the prospects for settlement:

It seems difficult to overrate the rapidity with which trade might increase if an industrious and persevering race were to establish themselves on the Northern Shores of the Pacific Ocean. ³³

This settlement would be part of the second wave of European imperialism that gave rise, among many other things, to an energetic republican American empire and a less populous Canadian federation tied to Britain, with its own dreams of westward expansion.

Beginning to disappear A final smallpox epidemic swept indigenous communities in the early 1860s killing an estimated 15,000 people, a very large portion of the overall population of the colonies of Vancouver Island and British Columbia at the time. In 1871, the settler population, concentrated around New Westminster and Victoria,was still fewer than 11,000 or about a third of the new province's overall population. . Settler sawmills, mines and farms had taken control of considerable space and resources on the Strait while the HBC had receded into the background. By the early 1880s, when the transcontinental railway was a certainty, though not yet completed, the majority of the new province's population until the mid-1880s, were no longer the majority around the inland sea.³⁴ It was a rapid and dramatic transformation (Illustration 24, Illustration 25, Illustration 26, Illustration 27) but a relatively peaceful one.

The demographic decline of the Strait's indigenous people contributed greatly to their marginalisation. Surveyor George Drabble travelled widely around the northern Strait between the 1860s and 1880s, reporting many deserted indigenous houses and villages.³⁵ The Cowichan, who had numbered an estimated 5,000 in the early 1800s had fallen to 500 a century later.³⁶ This decline of local indigenous people did not arouse much sympathy among settlers. As settler communities grew and became more self-sufficient, the remains of indigenous people would mostly live on reserves, beyond the pale for most settlers. Reserves' occupants often evoked irritation or contempt; 'half breeds' born of settler and indigenous parents aroused strong disapproval. Settler society on the Strait was not destined to be a hybrid of the old and new

worlds. The Strait's settlers were more inclined to see themselves as building a new outpost of European society in an empty landscape. Underestimates of indigenous population may have guided colonial policy from the beginning. A report to the Colonial Office in 1849 suggested Vancouver Island contained 5,000 Natives, likely a serious underestimate.³⁷ Disease was helping such estimates become more accurate by the late 1860s. Repeated accounts speak of travelling through an almost empty Strait, with only the occasional Indian cooking fire, canoe or camp. New arrivals were hungry for land and the Strait's abundant and seemingly untouched resources. Traces of past occupation – abandoned houses, burial grounds and camas pastures – could be safely ignored if the people who left them were no longer visible.

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Illustration 24 - "Village, Nanaimo Bay, Vancouver's Island" 1858 (artist: J. M. Alden). Houses and canoes were made with cedar, life sustained by the sea. Compare with the photo, below, taken seven years later.

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Illustration 25 – "Nanaimo" ca. 1865 (photo: C. Gentile). One of the Strait's most important settler towns, shipping coal around the Pacific. The HBC's bastion, upper right, was already a relic.

In the same way that places around the Strait were given to new people as though no one had previous claim to them, new names were given to places as though they previously had none. British maps were sprinkled with English renditions of indigenous names – Sechelt, Comox, Qualicum, Nanaimo, Cowichan and so on – but many other places bearing ancient names tied to local stories were summarily re-named in honour of patrons, friends, or mistresses. The Spanish had called the Strait 'El Gran Canal de Nuestra Senora del Rosario la Marinera' and Vancouver re-christened it 'the Gulf of Georgia' in honour of his monarch. Other places around the Strait were re-named for more immediate symbols of imperial power and authority, British sailors and their ships. Imbert Orchard commented on the 'nobility' imparted to Jervis Inlet by new names: Prince of Wales Reach extended into Princess Royal Reach, below Mount Victoria and Mount Albert, in the vicinity of Mount Wellington, Mount Churchill and Marlborough Heights.³⁸



Illustration 26 - "Cowichan village at Quamichan" ca. 1865 (photo: undetermined). Compare with Amblecote farmhouse, below, built on Quamichan Lake in the 1880s. .

Pax britannica British military experts reported in 1849 that the people of Vancouver Island were "numerous, well armed, brave and warlike" and could pose a significant threat; they called for British troops and ships to protect prospective settlers.³⁹ Indigenous men around the sea continued to pose a significant threat of violence in the early years of settlement, but mostly to other indigenous people. By 1859 settlers in Victoria were often less worried about threats from indigenous people than from Americans, who officials feared could "…wrench the keys to the Gulf of Georgia from our hands." ⁴⁰ On the other hand, the record after 1850 abounds with settlers' stories of violence among Indians, most often between locals and northern intruders. An alliance of Salish speakers attacked northern raiders at Maple Bay around 1850, killing most of them. The survivors wrought havoc on Island Comox villages as they returned north.⁴¹ Two years later another murderous attack on northerner interlopers, by Sechelt warriors, was reported north of Nanaimo.⁴² Adam Horne witnessed "one of the most gruesome massacres in our Island's history" later in the 1850s at the mouth of the Qualicum: Haida flaunted the severed

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Illustration 27 – "Farmhouse at Amblecote, Duncan" ca. 1910 (photo: Trotter). Established near Quamichan village in the 1880s, Amblecote hosted guests attracted by the boating and fishing; they grew English holly and shipped it by rail across Canada at Christmas.

heads and scalps of slaughtered Qualicum men as they paddled onto the Strait with the women and children taken as slaves.⁴³ A handful of Bella Bellas was trapped and massacred by Cowichans in Ganges Harbour in 1860.⁴⁴ Other Bella Bellas, ordered out of Victoria by Governor Douglas in 1861, staged a surprise attack on the Penellakut people on their way north. Over 200 Penellakut were slaughtered; again it was called "...one of the worst massacres recorded."⁴⁵ The British Navy pursued the marauders to Discovery Passage and fired a few volleys into the Bella Bella camp but couldn't arrest their leaders. Such carnage witnessed more often heard or read about - by settlers, helped confirm notions about indigenous peoples' wild nature. Apparently chronic bloodletting between indigenous groups confirmed the need for the Strait's pacification. It seemed clear these uncivilised people needed British law to protect them from one another. A growing settler population would be a buffer ensuring Natives' safety from the other marauding Natives. Kennedy reported the Homalco people rarely left Bute Inlet before a growing settler population ensured them more security from raiding tribes.⁴⁶ Writing to the Minister of the Interior in 1876, Indian Commissioner G. M. Sproat agreed: The occupation of the country by the whites was attended by one great advantage to the Indians. It stopped the constant inter-tribal warfare, which every year caused the deaths of several hundred men in the prime of life...⁴⁷

Indigenous people on the Strait suffered from ongoing intertribal violence after mid-century but the substantial threat to settlers earlier predicted by the British military never really materialised, beyond a few violent incidents.⁴⁸ The *Colonist* suggested in 1861 that, while the capital could probably take care of itself during a Native uprising, colonists on the Strait would need protection.⁴⁹ Yet the 'Indian threat' to settlers on the sea was ambiguous at best and much diminished by disease. Even intertribal warfare declined steeply with the last great epidemic in the early 1860s.⁵⁰ While indigenous people could be difficult to live with, settlers couldn't really live without them. Rear Admiral Denman's gunboats were called more than once to protect Comox Valley settlers who felt threatened by Lekwiltoks from Quadra Island fishing on Comox estuary. Yet when Denman arrived to drive off the Natives in 1865, settlers prevailed upon him to leave them alone because their labour was sorely needed on settler farms. They also depended on them for fish and venison.⁵¹

Unrest was on the rise again among indigenous people by the mid-1870s, fanned largely by growing discontent over the new Province of British Columbia's intransigence towards their demands for land. Reports of indigenous violence toward each other reappeared in the 1870s. Sproat reported in 1876 that Natives from Barclay Sound had crossed the Island and massacred "20 or 30 Punt-lahtch" people at Comox.⁵² The Nanaimo Free Press reported in 1877 a rumour of "a canoe load of Queen Charlotte Indians … murdered near Plumper Pass about a week ago in revenge for a number of Cowichan … murdered by northern Indians some months ago."⁵³ These and earlier stories about indigenous warfare reverberated around the Strait for generations.

By the late 1870s, settlers' were mostly concerned about 'strange Indians' come in search of work, and minor irritations from local reserves. Not surprisingly, given the tradition of intertribal enmities, indigenous people from beyond the Strait were often not welcome in the new reserves, nor were they entitled to live there. Sproat suggested these 'strange Indians' were more given to prostitution and drunkenness and needed a place of their own where they could be controlled by police. He concluded a reserve for 'strange Indians' might be useful for Nanaimo, but that it was "a purely Municipal concern." Later, on his way through Chemainus, Sproat reminded his indigenous wards they must keep their dogs under control, avoid damaging settlers' livestock and not jump fences or cross settlers' fields when "good public roads" were open to them. ⁵⁴ The Strait was now firmly in settler hands and the erstwhile 'Indian threat' had been downgraded to something more akin to 'public nuisance.'

Land hunger Concerns about indigenous violence helped justify colonisation but land acquisition was the settlers' abiding preoccupation. In the midst of negotiations with the U.S. in 1871, the *Colonist* newspaper spoke of "... our magnificent water system northwest of where the boundary line intersects the Gulf of Georgia..."⁵⁵ Confident it now owned this space, the Crown could sell it and land sales became a vital source of government revenues.

Until the gold rush in the late 1850s, the HBC had controlled Vancouver Island and the adjacent mainland, "undisturbed by land seekers." ⁵⁶ Compared with their successors, the HBC had been generally attentive to indigenous peoples' needs. But then James Douglas' government faced a lucrative crisis with the sudden influx of mostly American miners headed for the mainland's goldfields. The unruly new arrivals precipitated a flurry of activity to secure the crown's claims to land and resources. Douglas's Land Proclamation of 1859 defined the Crown's right to all lands and minerals and the process whereby lands could be divided into different units then sold.⁵⁷ The new colonies, then the unified colony of British Columbia, needed money to establish control over their vast territories. Douglas requested money from London to cover the costs of his government, particularly for land surveying and communications. London refused and the result was a very liberal policy aimed at generating revenues from land and resource sales. As Cail described it, Victoria's chronically indebted government started selling farmland "wholesale" and granting resources to "anyone willing to pay a modest price." ⁵⁸ Only a few thousand acres had been surveyed in the vicinity of Victoria by 1858. Over the next two years 70,000 hectares were mapped and divided into forty hectare lots on southern Vancouver Island and another 16,400 hectares divided into 64 hectare blocks around the lower Fraser.⁵⁹ The Colonial Secretary in London, perhaps aware of Douglas's sympathies, warned him not to 'give land to Natives' in a way that might impede future settlement – Lord Carnarvon knew the colony would need all possible revenues from land sales and taxes.⁶⁰

As settlement began in earnest in the 1860s, settlers soon found Douglas too closely attuned to indigenous interests. Whereas he had tried, albeit incompletely, to respect British colonial policy recognising aboriginal land rights, the Legislative Council that replaced Douglas refused to recognise any such title. The settler government's position – at odds with British policy - was that indigenous populations did not really own the land and had no legal claim to compensation for it. Many others established their own claims however; Cail reported that over the next fifty years "there was scarcely a public figure in BC who did not acquire large holdings."⁶¹ They were leaders in the new settlements growing up around the Strait - in the Cowichan, Comox and Fraser valleys, Nanaimo and Oyster (Ladysmith) Harbours and Burrard Inlet. Many new places were built on middens metres deep, testimony to indigenous occupation now erased from the public record.

Settlers, or their surveyors, judged that indigenous people had been unwilling or unable to 'improve' the land that was therefore, by the settlers' rules, theirs for the taking – vacant, unused and waiting for the hand of civilised folk to bring it to fruition. Settlers' laws precluded preemption of 'inhabited' land. By the early 1860s, a great deal of indigenous territory may have looked 'empty' if one didn't look too closely. Yet there were often signs of indigenous ownership. German- American anthropologist Franz Boas, studying the Cowichan people in the 1880s, was unequivocal about indigenous ownership of terrestrial space, resources and critical marine areas⁶². George Drabble noted evidence of previous indigenous occupation as he surveyed pre-emptions for farms, mills, mines and canneries across the valleys, bays and islands of the northern Strait in the 1860s and 70s.⁶³ Drabble understood them as relics from a past age – as meaningless to settlers as Roman ruins in a British countryside. Few settlers were inclined to challenge this assumption: they needed land and the government needed money. First the crown was paid for a pre-emption then land taxes became payable.

Pre-emption was easy for white male British subjects, though land laws were frequently adjusted. Initially, settlers could obtain land with short letters and rough drawn maps showing where they staked their claim, citing coordinates (range x, section y) if they had them, and names of the new districts (Cowichan, Comox, etc.). A decade later there was a form to fill out – a *Certificate of Pre-emption record*. The form confirmed the pre-emptor had made 'permanent improvements' worth at least \$2.50 an acre, mostly forest clearing and fencing. A sketch map of

the land was added on the back of the form. By the 1880s, if you were in a district that had been surveyed, you could just submit map coordinates, without a map. Elegant procedures facilitated much pre-emption on the Strait in the 1860s and '70s. Saanich Peninsula and nearby islands, Cowichan and Comox valleys were deemed to have good agricultural potential. Pre-emptions around Burrard Inlet started in the early 1860s as well. Few saw much potential for farming there but good prospects for lumbering and new towns. When hardy individuals began claiming land around Howe Sound in the 1870s their pre-emption documents occasionally mentioned deserted villages, but most land was simply described as 'vacant' or 'unused.'⁶⁴

Stories of wondrous early land acquisitions abound on all shores of the Strait. Parksville settler John Hirst paddled ashore in 1870 to pre-empt at the mouth of the Englishman River⁶⁵, though it's hard to imagine the mouth of an important salmon river was "unused space." Michael Manson and his brothers made their claims on Cortes Island around the same time, by the landing that would bear their name.⁶⁶ The founder of Gibsons Landing sailed from Vancouver to pre-empt land at the mouth of the Fraser in 1886 but a gale blew him across to Howe Sound, so he pre-empted there instead.⁶⁷ Many local settler stories speak of 'the first land owner(s)' in this or that valley, or bay or island. 'First owners' often told of Native tools, utensils and weapons found on their new land. Many found deep clamshell middens. These did not undermine the logic of pre-emption; they were not equated with indigenous 'ownership' but simply added to the romance of the land. Found arrow and ax heads corroborated stories of Native violence, reconfirming the settlers' civilising mission.⁶⁸

Other colonial instruments The establishment of the Strait's Indian Reserves has been described by Cole Harris and Doug Harris.⁶⁹ The network of mostly tiny reserves around the inland sea, as in the rest of BC, was established differently from many other parts of North America. There was no mass movement of indigenous people away from their traditional places. Instead space was reserved for them at or near places they had lived, fished (Figure 7) and died for centuries.



Figure 7 - "Fishing reserves" established on Georgia Strait after 1850 (adapted from Harris, *Landing Native Fisheries*); what was left after the 'empty land' was taken.

Governor Douglas had kept a careful eye on the inter-racial violence in adjacent American territories and was determined to prevent it in his constituency. He largely succeeded, even during the challenging Gold Rush years. Douglas established the first reserve on Victoria

harbour in the early 1850s⁷⁰ and aimed to establish treaties with people around the Strait. A few treaties were signed on southern Vancouver Island. Douglas helped these communities protect their treaty lands and allowed them the same rights as settlers to acquire lands beyond the reserves. Both policies disappeared after Douglas left colonial government in 1864. Joseph Trutch became Commissioner of Lands and Works, promptly reduced the size of the 'Douglas treaty reserves' and prohibited Natives from owning land off reserves. Other indigenous people around the Strait began demanding payment for traditional territories being pre-empted by settlers.⁷¹

In the years following BC's entry into Confederation in 1871, discontent among indigenous people rose throughout the province, again raising the spectre of 'Indian war.' They grew angry as the extent of their losses became clear, as they began to understand how little land they were being allotted by settler governments. Victoria remained convinced they were getting too much land. A federal - provincial Indian Reserve Commission was established to find a solution. Neither government was under much pressure to favour indigenous people who had been disenfranchised in 1872. Yet the commission's intervention helped prevent the kind of bloody frontier warfare then raging in the US. This was largely due to Gilbert Malcolm Sproat, who urged settler governments to avoid using bellicose tactics with Natives on the sea and who, like Douglas, believed in the capacities and potential of indigenous people. In letters to the Minister of the Interior in Ottawa, Sproat reported he was

... much pleased with these Indians... They showed good sense and proper self-respect in all their dealings with us. They gave me the idea of a vigorous intelligent race, capable of considerable improvement if they are judiciously encouraged in the efforts which they seem willing to make to overcome their old habits. They already contribute largely to the revenue of Canada, and I see no reason why they should not, in a generation or two, become useful citizens... ⁷²

The Indian Reserve Commission was a prickly federal-provincial partnership that travelled the Strait and other parts of the province laying out new reserves. Initially composed of three commissioners, then reduced to just Sproat. He endeavoured to interpret his mandate as 'Indian Commissioner' in favour of his indigenous charges. His official mandate encouraged him to:

...as little as possible interfere with any existing tribal arrangements;... particularly... not to disturb the Indians in the possession of any villages, fishing stations, fur trading posts, settlement or clearings which they might occupy....⁷³

As their reserves began to be laid out, indigenous people around the Strait had another opportunity to register opposition to settlers' encroachments. Sproat recorded their frustration, protests and complaints along both shores of the Strait. He believed violence might easily break out. The Minister of the Interior later reported to parliament:

If there has not been an Indian war (on the coast), it is not because there has been no injustice to the Indians, but because the Indians have not been sufficiently united.⁷⁴

Doug Harris suggested ensuring indigenous people's access to traditional fisheries was the Indian Reserve Commission's principal criterion when choosing land to allot for reserves.⁷⁵ But there were certainly other considerations. The commission's work began at the mouth of the Fraser, where they visited existing reserves. They continued on to Burrard and Jervis inlets across to Comox, Nanaimo and the Cowichan to Victoria. They responded to indigenous requests for more land where they could. Sproat often accepted their arguments based on their various occupations, activities and attachments. His letters to the Ministry of the Interior described a beleaguered people coming to terms with the new settler society and their progressive confinement to reserves. Sproat worried about the Squamish men on Burrard Inlet and Howe Sound and the Sechelt on Jervis Inlet. Many had never been assigned their own reserve and now worked as itinerant loggers supplying Burrard Inlet sawmills. He worried many young indigenous men were so busy logging or working in mills that they were not interested in learning traditional skills from their elders, or in supporting them in negotiations over reserves. The young labourers seemed not to share their elders' concern about securing control over traditional lands because they were making so much money labouring. Noting indigenous people on Burrard Inlet had no chance of gaining more land on the North Shore, already filling up with sawmills and settlements, the commission awarded them large reserves totalling 6,400 hectares at the head of Howe Sound. Sproat wondered if it might be better to concentrate Indians on centralised reserves where they could receive better health care, education, and Christian ministries, or to leave them on smaller reserves to which they were attached through traditional activities.⁷⁶ They received some of each. Large reserves were no longer an option in more heavily settled places like Burrard Inlet. Squamish people in what became Vancouver's Stanley Park wanted a reserve there but were refused because they were deemed to have no 'old associations' with the spot.⁷⁷ The Comox were more successful in securing a small reserve at their traditional burying grounds on Goose Spit though they were told to avoid dispersing their

graves in the future.⁷⁸ In the Cowichan Valley, where Douglas reserves had already been cut down, indigenous people were told they must not interfere with the White settlers.

'Traditional association' with a place was necessary to establish indigenous claim to it, but far from sufficient. Coal mines could limit the extent of a reserve even in places of traditional association. Logging intruded into many reserves and settlers could squat in places of traditional association and then claim them. Traditional association was seldom deemed to apply to places of 'seasonal occupation,' though indigenous people had a tradition of seasonal movement between settlements. Many places on the shore occupied for hundreds of seasons for gathering clams and camas, or fishing, were mostly not considered places of 'traditional association.'

By the late 1870s Sproat was deeply concerned about the Native collapse and critical of settlers' response to it. He reported to his Minister that while some tribes on the mainland shore might be growing slightly, they were also devastated by alcohol, syphilis and prostitution. He worried that married Squamish and Musqueum couples now had only a little over one child each on average; at this rate their numbers would drop quickly. While they were benefiting from wage labour and missionary support, he said, Indians were facing a deepening crisis, and the government's response was unsatisfactory. As Sproat's criticisms became more strident, Indian Superintendant Israel Powell took him to task over his expense accounts. Sproat described the frustration of indigenous people hand-logging near traditional settlements on Malaspina Peninsula. Their requests for forest lands – which Sproat deemed reasonable - were ignored. By 1880, after reporting that conditions of the Strait's indigenous people were now the worst in the province, Sproat lost his job.⁷⁹ Friends of Superintendant Powell obtained rights to timber land shortly afterwards, beside the small reserves established on the Malaspina Peninsula near the Powell River.

Sproat's replacement, Peter O'Reilly, returned the system to what would be the norm: governance of indigenous people by the settlers, for the settlers. Settler governments ensured that demographic decline was accompanied by a contraction in the land available to survivors. By the late 1870s, the total area in the new 'Indian Reserves' on southeast side of Vancouver Island – 7,500 square kilometers - amounted to about 75 square kilometers, or about 1% of the land.⁸⁰

As indigenous people were confined to reserves, much responsibility for their pacification fell to clergy, a strategy with repercussions still being felt today. While government Indian Agents sought to help them understand and cope with their place in settler society, clergy had the more challenging task of helping indigenous people embrace their new life as part of a Christian god's scheme for them. After the last wave of smallpox devastated indigenous communities, healthy and well-fed missionaries may have had less trouble convincing survivors that their traditional spiritual advisors lacked power and there was something fundamentally wrong with their old systems of belief. Missionaries like Oblate Father Paul Durieu, working with the Sechelt and Sliammon people required their new flocks to abandon their traditional dancing and potlatching and avoid alcohol and gambling. Father Paul's 'Durieu System' was established by the early 1870s, based on the premise that Indians were 'big children.'⁸¹ Its rules were enforced with physical punishment and fines and its showplace was the town of Sechelt, where a number of Sechelt speaking bands agreed to congregate under Oblate supervision.

By 1880 virtually all corners of the Strait were occupied or claimed by settlers. New layers of government were rapidly replacing traditional authority. Generally speaking, the closer these new governments were located to indigenous populations, the less sympathetic they were to them. Ottawa took a few years to establish its governance of the Strait's indigenous peoples. Their task was complicated by the fact that the Dominion was responsible for indigenous *people* but Victoria still controlled their land. Disagreement between the two governments over how best to establish BC reserves continued for decades. The federal government was acutely aware of the potential dangers of unrest among indigenous people in its newly colonised territories and anxious that nothing upset their plans for an 'all Canadian' railway to the Pacific. Ottawa insisted BC was giving its Indians on the Strait far too little land.⁸² For Victoria, this was another example of Ottawa's failure to understand the Pacific province, where coastal Indians would not farm but instead continued to fish and hunt. They didn't require as much land as they did east of the mountains. Victoria's policy was to encourage 'their Indians' to 'mingle' within settler society and soon become part of it. The contradiction between this and other policies, such as denying indigenous people the vote and keeping their children out of settler schools, were not addressed. Victoria insisted Indians could pre-empt land if they could demonstrate their capacity to 'intelligently cultivate it.' But Indians around the sea would go far, Victoria insisted, supplying fish and lumber to settler merchants. This would be mutually beneficial, the Indians

supplying the merchants with export goods and the merchants relieving Indians of the need to find markets for their goods. Victoria suggested that Ottawa was sowing disharmony into their relationship by creating unrealistic expectations about how much land Indians should expect to receive.⁸³ Cail (1974) agreed the Dominion failed to comprehend BC's unique situation but suggested this was due to BC's unique legal strategy. Ottawa assumed BC had respected the Royal Proclamation of 1763 calling for recognition of aboriginal title and the need to have indigenous lands formally ceded to the crown in exchange for suitable compensation. Victoria's policies dated from the time of the first colonial government after Douglas, which had refused both measures.

A new British shore Some early settlers aimed to establish a 'new British shore' around the Strait, re-naming places and making farms to transform the wilderness into something resembling a British seaside. Unlike many colonised places, similarities between the Strait's climate and coastal Britain's meant one could imagine transforming parts of this new space into a surrogate 'old country.' All one had to do was remove the forest then add exotic plants, animals and architecture. Indigenous people would then look out of place, more akin to exotic animals than erstwhile proprietors. This idea of making a British place, where one could overcome the pain of emigration and recreate some semblance of home, appeared early in the colonial era. These ambitions might seem today like the fantasies of isolated people looking for something familiar in a strange land. But there were important parallels: the south coast of BC sits on the northeast Pacific shore in the same position as the south coast of Britain on the northeast Atlantic, and has a similar climate.⁸⁴ Colonists noted how certain places around the Strait seemed so much like home - South Pender Island a bit of England,⁸⁵ Denman Island the Orkneys and so on. The mainland shore was far more rugged than Britain's but could be construed as a surrogate Scottish highlands.⁸⁶ With the discovery of coal then iron on the Strait, some imagined it becoming a coastal version of Britain's industrial Midlands.⁸⁷

A key step in making their new land seem more like home was creating a landscape that was less panoramic wilderness and more pastoral agricultural landscape by the sea. Mostly this would need to be achieved through farms. Admittedly, the agricultural potential of much land surrounding the Strait was limited. Before real estate speculation gained the upper hand, doubts were expressed about how much of this land could really be farmed. But successive settler

governments insisted on the central role that agriculture should play on the Strait, even if mining, fishing and forestry were also going to be important. The alluvial soils at the Fraser mouth and much of the east coast of Vancouver Island from Seymour Narrows to Saanich were deemed especially suitable for agriculture. Farming began in earnest on the Saanich Peninsula and nearby Saltspring Island in the 1850s. As the Douglas government gained knowledge of the agricultural potential of the western shore, they focused agricultural settlement in the Cowichan and Comox valleys. Men from Victoria - mostly disillusioned miners from the Cariboo - began to claim their pre-emptions in the valleys in the early 1860s. Many farms were then pre-empted on the islands, especially in the southern Strait and on Denman Island. Clearing this land was tremendously hard work and settler farmers depended heavily on indigenous labour. The Strait's indigenous people had earlier used fire to keep stretches of land along the shore free of forests in order to encourage the camas lily whose roots they harvested in early summer; settlers later preempted most of these 'natural meadows.' When BC entered the Confederation in 1871, a little over 5,200 hectares were being cultivated, almost entirely in the districts of New Westminster and Victoria.⁸⁸ This amounted to roughly 0.4 hectares per non-indigenous inhabitant, hardly an agricultural settler movement.

A new indigenous proletariat Sproat reported that many of the Indians he met in the 1870s were broken people. They had lost confidence in their traditional ways and were not able to embrace the culture sweeping them aside; they had trouble seeing a place for themselves in the new society. Spiritual ties with animals and the Strait's landscape features and the traditional trade relations that had sustained their ancestors were rapidly being replaced by new relationships in a settler economy extracting and exporting resources at ever faster rates. The most obvious role for indigenous people in this new arrangement was as labourers. Even before settlement began, indigenous labour had enabled the HBC to diversify exports. By the 1850s indigenous labour was enabling rapid growth in cedar shingles exports and providing thousands of logs for the HBC's Nanaimo sawmill. They were the core of the work force in the town's early coal mines and continued to work there even after British miners arrived.⁸⁹ An 1859 survey of the Nanaimo and Cowichan districts, the Great Britain Emigration Commission noted the quality of indigenous labour:

The Indians, though numerous, are perfectly peaceful and are made use of by the whites as ploughmen, servants, voyagers, in fact, labourers of all kinds of work. Their pay and

rations amount to little, and, if kindly treated and properly superintended, the results of their labour are profitable... 90

Indigenous labour remained a critical element of the work force in the major new export industries on the Strait for many decades. Sproat commented on the mutually advantageous relationship between Indian labour and settlers. A new Qualicum reserve, he suggested, would be "useful to white settlers and to employers of labour generally" because it would mean "...Indians within reach... somewhere outside of the settlements."⁹¹ By the late 1870s and early 80s opportunities for indigenous workers had expanded further with canneries and farms absorbing virtually all available labour. Lutz observed that "...if any Aboriginal Peoples in the country were interested in working for the settlers, it was the Straits Salish, and if any had access to employment, it was them."⁹² Full-time or seasonal work in canneries, farms and mills became central to indigenous survival strategies in a system otherwise increasingly closed to them by the end of the first few decades of resettlement. This abundance of labouring opportunities for the Strait's indigenous people helps explain the remarkably peaceful character of the colonial transition around the inland sea.⁹³

Consolidating colonial dispossession, 1880s - 1914

Disoriented by dramatic changes prior to the 1880s, the Strait's indigenous people saw their losses mount and their world turned upside down over the next thirty years as their access to traditional lands and resources largely disappeared. Settler domination of the Strait was consolidated with the arrival of the trans-continental railway. Settlers now rapidly diminished the remaining barriers posed by the inland sea, improving their use of it as a highway to ship its resources to the world. Indigenous people able to read the work of Lewis Carroll might have recognised their new life down the Rabbit Hole. They had watched as land where their families had fished, hunted, harvested camas or buried their dead for many generations was 'legally' preempted by settlers. Indigenous people were consigned to tiny shoreline reserves where no one could own land, only 'improvements' on it.

Disappearance and collapse By 1891, the indigenous population of the province as a whole had fallen to 23,620, barely a quarter of the province's overall population. As indigenous numbers declined, the settler population mushroomed and the province's overall population approached 400,000 by 1911. In the final years before WWI, settler numbers increased more

rapidly still. By 1914, indigenous people comprised barely 5% of BC's population, and less than that around the Strait.⁹⁴ On reserves, tuberculosis was endemic and venereal disease was reducing fertility. Some said Indians had been 'going away to take up other occupations' and mixing with the settler population.⁹⁵ Alcohol was also taking its toll. This is the era when one begins to see widespread reference to problems of 'drunken Indians' in government files and newspaper articles. Government and missionary efforts to concentrate indigenous populations, combined with their propensity to congregate in fewer settlements as numbers declined, meant they were disappearing from stretches of the Strait's shoreline. 'Indians,' no matter what their status within their own hierarchies, were seldom welcome in 'respectable' settler society. As younger settlers replaced older ones, ignorance of indigenous culture and the gap between settlers and indigenous people grew. By 1900 few whites other than missionaries, and anthropologists such as Boas, had any acquaintance with indigenous languages. A coastal lingua franca known as Chinook, though lingering longer on the western shore, gradually fell into disuse on most parts of the Strait. Harris has suggested the settler's new BC had essentially no past, just a present and a future 96 – and both belonged to the newcomers. It was reminiscent of Orwell's 1984: "He who controls the past controls the future. He who controls the present controls the past." ⁹⁷ Settlers' control of the Strait's present and future derived from their ability to erase its indigenous past. Along with myriad place names, the indigenous past and its stories, so deeply rooted in local places (Illustration 28), had been written out of the new settler narrative.

The idea that the Strait's indigenous people might be disappearing was widespread, a reflection of growing Social Darwinism. And, if indigenous people were disappearing, then taking their land and resources before someone else did seemed a prudent move to many in these times of freewheeling speculation. Part of the settlers' perception problem stemmed from indigenous peoples' mobility and social ties that linked them to family groups more than to single places. As indigenous populations declined many people had moved to other settlements to be closer to surviving relatives. Individuals who moved frequently, as indigenous people often did, might elude the records of 'Indian Agents,' and lose their claim to membership in any recognised band or land on a fixed reserve, another way of 'disappearing.' Yet the Strait's indigenous people would not fully disappear. By 1900, smallpox still appeared but there was now widespread inoculation and growing resistance. Encouraged by progressive new leaders like Billy Assu at

Cape Mudge and mission schools, more indigenous children were learning to read and write English.⁹⁸ Authorities gave them 'Christian names' more readily pronounced by settlers.



Illustration 28 - "Indian Graveyard, Comox" ca. 1890s (photo: undetermined). The indigenous past was rapidly disappearing from the settlers' Strait, pre-empted by the settlers' present and future.

Reserves, agents, federal-provincial disputes & potlatches The Strait's indigenous population was subject to a growing web of government controls. The federal Indian Act of 1876 aimed, among other things, to suppress their cultures. An 1885 amendment to the Act outlawed their traditional spiritual ceremonies and dances. Another before WWI required all "status Indians" to obtain permission before appearing in traditional costumes in any dance, exhibition or pageant.⁹⁹ While colonial power was mostly applied peacefully, threats of violent sanction remained potent tools of persuasion. Michael Manson, a settler trader and provincial politician on the northern Strait, told of exercising authority over Cape Mudge people in the late nineteenth century. Manson had met resistance while visiting the reserve in his capacity as the local 'Justice of the Peace' to investigate a suspicious drowning. He told community leaders

... if they did not obey me in everything very dire punishment would be dealt out to them, the war vessels would be sent to blow up and burn their villages, the leaders of the tribe

would be hanged and the Chief and all his family would be forever barred from being elected or holding the position of Chief of the tribe...¹⁰⁰ Unsurprisingly, Manson's threat worked.

Full of contradictions from an indigenous perspective, their new system of governance was also complicated. Victoria controlled their land, while Ottawa was responsible for their bodies and churches watched over their souls. Victoria ruled the forests while Ottawa claimed authority over the Strait's sea life. The federal Department of Indian Affairs was learning to take care of its new charges as the resource rush gathered steam. They worried that Indians' decline might be the result of too much federal largesse. With the hope that a new 'tough love' policy might restore morale, they decided to "do away with the custom of giving presents to the Indians."¹⁰¹ Others suggested the department draw inspiration from the new South African government, developing effective new systems for keeping Native records.¹⁰² Indian Agents were responsible for keeping records of indigenous people, though some felt the province ought to record resident Indians' births, deaths and marriages as they did for settlers.¹⁰³ Under settler law, Indians had become "irresponsible children" (Illustration 29).¹⁰⁴ The province was adamant the kids remain wards of the 'federal crown.' Federally administered Indian reserves contributed to growing separation between the Strait's indigenous and settler populations and seemed linked with indigenous peoples' poverty. A Royal Commission on Indian Affairs launched in 1913 recognised the Strait's tiny reserves might be contributing to the ongoing decline of Indian populations.¹⁰⁵



Illustration 29 - "Peter Sitholatza, a Kuper Island Indian; of the Penalakut tribe" ca. 1910s (photo: undetermined) One of the Strait's disenfranchised indigenous people, now classed by Ottawa as "irresponsible children."

Peter O'Reilly was the Indian Reserve Commissioner who laid out the greatest number of reserves. He was not as preoccupied with indigenous peoples' concerns as Sproat or Douglas had been. The boundaries of the reserves O'Reilly laid out in the 1880s and '90s were often similar to those being drawn across Africa at the time – straight lines reflecting little understanding of the societies they affected. Fisher suggested O'Reilly may have been appointed *because* of his lack of concern for indigenous people.¹⁰⁶ Often travelling the Strait on a Department of Marine and Fisheries steamer,¹⁰⁷ he was usually impervious to indigenous peoples' complaints about his decisions. During O'Reilly's early years as commissioner, settlers around the Strait were excited by the prospect of the railway's arrival; it would boost land prices in many places. Settlers' land hunger in turn increased the fear of loss among indigenous people, who frequently sought clarification about their rights to traditional territories. Settlers could usually count on O'Reilly's sympathetic ear while he often found indigenous people failing to effectively 'use' or 'occupy' land sought by settlers.¹⁰⁸

Most aspects of reserve life were governed by Indian Agents who played a host of roles hitherto carried out by traditional indigenous authorities. Agents dispensed justice, settled disputes and controlled public nuisances. They cooperated with clergy to suppress potlatches, alcohol abuse and prostitution, and kept track of indigenous labourers, making sure they showed up when needed.¹⁰⁹ Indian Agents were also expected to help indigenous people better manage their farming and fishing. Agents helped their charges decide how to informally subdivide their reserves among themselves. Formal surveys were avoided as they would entail 'unnecessary' cost. Agents were also to counsel their charges to avoid "...intruding or trespassing upon the lands, fisheries, etc. of other people or Indians [note the distinction] ..." The threat of a 'Native uprising' was over but there was still a need to ensure 'law and order' and agents dealt with troublesome or drunken Indians by keeping them 'on the reserve.¹¹⁰

The 'potlatch' was a thorny issue. Churches longed to claim indigenous souls and the biggest barrier, they reasoned, was Natives' traditional belief system. This system was most clearly manifested in elaborate potlatch ceremonies proliferating around the sea in these decades, despite their prohibition. Missionaries, and some Christianised indigenous people,¹¹¹ were determined that settler law should eliminate this "...heathenish custom in vogue among the Indians," The potlatch, they said, made it impossible for Natives to "acquire property or become industrious with any good results." Men were forcing "daughters and wives to go into prostitution to earn the money for it." ¹¹² Like earlier violence between indigenous groups, the excesses of the potlatch seemed to confirm the need for the corrective intervention of settler society. What many could not see - though the more observant missionaries certainly could - was that the potlatch was also central to indigenous peoples' erstwhile 'prestige economy' (Illustration 30). Government efforts to suppress it mounted after the 1880s but it was not easily eradicated.¹¹³

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Illustration 30 – "Sechelt band" ca. 1890s (photo: undetermined). Learning to forget potlatches and find more respectable ways to be happy in settler society, under the guidance of Catholic clergy.

Land hunger, provincial & local governments The 1880s have been described as the time when the globe was overlaid with a 'geometry of assurance' and surveyors' rectangles, squares and triangles bolstered confidence in budding real estate markets.¹¹⁴ A similar geometry was spreading around the shores of the Strait. Pre-emptions continued, stimulated by the railroad's arrival, distant markets for the Strait's resources and growing local markets for produce. Settlers claimed land where it was still available early in the resource rush, mostly on the less hospitable mainland shore. Small farms and orchards appeared on the shores and islands of Howe Sound. A decommissioned Royal Engineer pre-empted over 100 hectares at Sechelt in 1869 and many followed him, claiming land from Howe Sound to Desolation Sound in the late 1880s and early 1890s.¹¹⁵

While Victoria was generally unsympathetic to indigenous concerns, local governments could be openly hostile. Indigenous people and their reserves were usually a nuisance to rapidly growing settlements, to be gotten rid of or at least hidden away; reserve land was unsightly, untaxable, unavailable, and increasingly in the way of urban development. A growing list of towns and cities expressed their frustration with Indians occupying valuable land nearby, thwarting their settlement's right to grow and prosper. The new Corporation of Surrey was incensed by plans to establish a reserve at Semiahmoo Bay in the late 1880s. Even Peter O'Reilly – usually the settlers' ally - pointed out that Indians had been occupying this place for a long time. Surrey countered that it was "...about the best place in BC for a sea side summer resort" and these weren't even "BC Indians" but a crowd of "American Indians" who went there for "...drunken orgies." If granted this reserve the Indians would be "...a source of danger and moral blight in our midst." Indian Affairs cited a number of 'expert witnesses', including Bishop Durieu, who confirmed that these really were "BC Indians." Captain Christian Mayers confirmed seeing them at this site since 1858. But Surrey was not prepared to lose this valuable waterfront without a fight. Even if these weren't American Indians, they argued, they only came to this shore for a few weeks a year to fish. Presumably settlers would stay longer at their beachside cottages. Besides, the Indians had only cultivated 8 hectares of the 125 hectares they were claiming. Once the reserve looked inevitable, Surrey tried to have it reduced to 16 to 20 hectares. This was necessary, they said, to reduce harm to Surrey, which already had 117 applications to purchase two acre (0.8 ha) lots for summer residences on the bay.¹¹⁶

Other reserve land in or near towns was also becoming the object of vigorous efforts to wrest it from indigenous owners. Comox, Qualicum, Ladysmith and Duncan all launched their own campaigns to remove or diminish local reserves with very similar arguments: Indians were failing to 'develop' land that had been 'given' to them and so did not deserve it. According to Barman, most settlers agreed "...Indians who did not use land set aside for them in ways consistent with newcomers' assumptions had no right to retain it."¹¹⁷ Many towns' now felt that their development was being handicapped by their inability to develop this valuable land. This was especially true for reserve land along the shore, which much of it was.¹¹⁸ Ottawa gave in to growing national pressures early in the new century, amending the Indian Act to make it legal for towns with at least 8,000 inhabitants to seize adjacent reserve lands where this was deemed 'in the interest' of the public and the Indians, even if the latter didn't consent. Municipalities and

firms could also expropriate portions of reserves, without permission from its inhabitants, where these were needed for the construction of roads, railways or other infrastructure. By 1913 the Strait's towns were in a feeding frenzy, goaded on by a heady real estate boom and inspired by Victoria, which had managed to displace indigenous people from the Songhees Reserve originally granted them on the inner harbour. Barman described the process of 'unsettling' Squamish people from their reserve at Kitsilano Point or Snauq,¹¹⁹ a place where people had been fishing nearby sandbars (later Granville Island) for many generations. For the new City of Vancouver it was an eyesore near the increasingly popular English Bay beach. There were many more economically valuable things that could be done with land at the entrance to what was becoming an important industrial area on False Creek. In its haste to consummate the 'unsettling' of Snauq, the province overstepped its legal mandate and bypassed federal authorities. The ensuing legal quagmire lasted for decades as the Squamish retained control of much of the land they had been persuaded to vacate. A Victoria paper described Vicoria's actions in 1913 as "... the greatest scandal in the history of the Provincial government of BC.... liable to a term in the penitentiary (if undertaken by) ... an individual in the community." ¹²⁰

Other instruments of colonial control The Strait's marine life was now under settler control, theirs to exploit on as large a scale as they could manage. Indigenous peoples' intimate ties to food from the sea led to inevitable conflicts with federal authorities supporting development of the industrial fishery. Fish had quickly become a key export of the settler economy. Yet salmon, herring and clams also remained indispensable resources for indigenous people. Ottawa's Department of Marine and Fisheries became another important influence in indigenous peoples' lives, generally more powerful than Indian Agents, who found it challenging to protect the fishing rights of 'their Indians.' Marine and Fisheries continued on the water what the Indian Reserve Commission had begun on land, progressively stripping indigenous people of control over resources that had sustained them for centuries. Even waters theoretically reserved for indigenous people were often fished by the canneries' fishermen. The Royal Commission on Indian Affairs reported in 1916 that

With respect to small reserves described and constituted as 'fishing stations' and covering streams from which the Indians from earliest days have been accustomed to obtain their fish food supply, it has been in numerous instances declared in evidence by the interested Indians that the purpose and utility to them of these reserves has been wholly or in large measure destroyed by the subsequent allowance of cannery seining licences by which such 'fishing stations' have been blanketed and rendered of no use to the Indians... $^{121}\,$

Sproat and O'Reilly had assumed Native people would maintain control of the salmon fishery. Marine and Fisheries on the other hand never intended to see this valuable resource denied to settler industry. The industrial fishery needed indigenous labour but did not want indigenous competition. Lobbying to curtail traditional indigenous fishing activities began almost from the outset of the commercial fishery and intensified with the arrival of the railway, when there were already over 6,000 commercial fishers on the Fraser, many new canneries and the first evidence of overfishing. A poor Sockeye run that year was blamed on Indian 'food fishing' and two years later, Fisheries and Marine brought in the first regulation governing indigenous fishing for food.¹²²

The new fishing rules were at least as hard on indigenous people as the new land laws. Settler fishers could now set their nets at the mouths of salmon streams while indigenous people could be arrested or fined for fishing in the wrong place or time or using the wrong gear.¹²³ They were required to obtain permission to sell salmon. Conservation concerns were cited with growing frequency as the reason for limiting indigenous rights to catch or sell fish. It was common by 1914 to depict Indian fishers as the main cause of declining stocks. In many places, as concerns about fisheries depletion began to appear in the public record, so did accusations that Indians were important contributors to the problem. The Royal Commission on Indian Affairs launched in 1913 heard repeated settler warnings about the Natives 'wasteful' use of salmon especially. An Indian Agent complained it was difficult to teach conservation to their Indian wards in light of the "huge waste of salmon by the Fraser River canners."¹²⁴

Indigenous people increasingly worried about their access to food fish (Newell 1993:89). When not fishing for canneries, they could now *only* fish for their families' own food and they had to ask permission for this 'privilege.' Traditional practices were becoming more unacceptable to settler governments. The Cowichan struggled with Ottawa for years over their right to use traditional weirs on the Cowichan River (Illustration 31). Authorities now deemed this technology "a distinct violation of the law." A deal was eventually struck limiting the Cowichan to three weirs. Then they were limited to using only dip nets, a technology not used much in the past. ¹²⁵ Settler sport fishermen, enamoured with the Strait's Chinook and Coho salmon and
Steelhead trout in particular, were growing alarmed by the 'depredations' of Native fishers. Controversy over the Cowichan weirs had been stimulated partly by sport fishers protecting 'their favourite angling stream.'¹²⁶ Indigenous people also raised conservation concerns, particularly about the growing Japanese export fishery of the Chum salmon that spawned on many of the Strait's short rivers. Chum were largely being ignored by other industrial fishers but had found a market in Japan and remained an important source of food for indigenous people. Federal officials dismissed indigenous concerns about Chum depletion out of hand, but recognised their complaints as a good sign that local Indians were becoming "somewhat more progressive," less like "helpless children" and better able to "accept conditions as they exist today."¹²⁷



Illustration 31 – "Cowichan salmon weir" ca. 1900 (photo: undetermined).¹²⁸ Technology developed by trial and error over centuries, now contested by federal authorities. By 1900, the Cowichan was home to the Strait's largest concentration of 'remittance men,' many attracted by its good fishing and hunting.

By 1914 indigenous people on the southern Strait needed permits to hunt deer. These were issued by the provincial Game Wardens but only on the recommendation of an Indian Agent and after consideration of an applicant's age and family size. Even duly licensed, Indian hunters could take no more than four deer and three of any single species, unless they obtained special permission from the Game Warden. The northern Strait was still classed as 'unorganised districts' where Indian hunters could kill more than four deer in a season but only to feed their

families. They were now prohibited from selling the meat. Indian duck hunters were likewise circumscribed by new laws, though in 1914 the Provincial Game Warden advised his agents to 'be lenient' in enforcing the rules – except near the Strait's largest towns - when it came to those duck species which "... are not esteemed edible by white people." ¹²⁹

New transportation infrastructure often removed land and resources from indigenous hands. A federal government report summarised the 'Indian land' around the sea that had been leased for other uses between 1871 and 1911. It was a long list of strips for moving logs, railway or highway rights of way, land for urban and port infrastructure, marine space for log booms and on and on.¹³⁰ Indigenous communities were vulnerable to these demands because so many were located on shorelines (Illustration 32) where ports, railways and roads critical for the growth of the settler economy converged. The Dunsmuirs' E & N Railway cut a thirty metre swath across the Esquimalt reserve, removing all the timber and Indian houses along the way. The company claimed the right to expropriate the whole Songhees reserve for their Victoria terminal under the terms of "...the Railway Act of 1879 and its later amendments" and they got part of it.¹³¹ Many other roads and logging railways also cut across the Strait's new reserves. Sometimes their residents received compensation; often they didn't. Douglas Harris and Jean Barman have described the impact of transportation infrastructure on reserves around Vancouver.¹³² A 200 acre Squamish reserve at the mouth of Capilano River was reduced first by 1.4 hectares for a road right of way in 1912 then by another 7.5 hectares for a railway in 1913. In 1917 the Harbour Commission acquired rights to the reserve's foreshore.¹³³ A smaller Squamish reserve at Kitsilano Point, was reduced by 4 hectares in 1886 and 1902, first for a CPR bridge across False Creek then a railway that was to pass through the reserve (but was never built). The new Harbours Board also insisted on their right to some of the reserve, trying unsuccessfully to expropriate land for new harbour and rail facilities. 3.2 more hectares were taken to build the Burrard Street Bridge in 1930.¹³⁴

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Illustration 32 – "Indian village at Coal Harbour" 1886 (photo: E. G. Deville). Soon to make way for the new port of Vancouver. Compare with the pictures of the Harbour in 1888 (Illustration 4).

Settler demands for recreational space also removed indigenous people from traditional territories. The case of Surrey's Semiahmo Bay was discussed above. By 1900, Vancouver's new Parks Board had removed all indigenous homes except one from a former village site on Burrard Inlet.¹³⁵ Elsewhere around the sea, reserves began leasing beaches where settlers could build summer cottages, perhaps calculating it was better to offer this land on long term leases than risk losing it because it was 'not being used.'

The success of reserves was now often judged by how well they were farming. The Royal Commission heard testimony praising indigenous people in Saanich who "...display evidence of considerable intelligent cultivation." At Nanoose and Comox they were criticised for leaving so much uncultivated, suggesting perhaps they had more land than they needed.¹³⁶ Failure to farm more land or properly manage lands they did farm was widely seen as an indictment of a dissolute lifestyle. There was a familiar Kafkaesque dimension to the problem facing indigenous farmers. Without an agricultural tradition to draw on, and with limited lands of uneven quality,

they required much technical advice to become 'good farmers.' Yet, as Indians, they weren't able to get the technical support that Ottawa and Victoria gave settler farmers (Illustration 33). Indigenous peoples' only source of technical advice was their Indian Agent, who had many other duties. Despite difficulties adapting to farming, Indigenous people on some reserves before WWI began to claim the right to 64 hectares each. An Indian Agent in the Cowichan Agency explained to the Royal Commission that this demand was 'purely political,'' they had been coached by 'dangerous radicals.' They were "only asking this because white men are allowed to pre-empt a hundred and sixty acres of land.''¹³⁷ Based on their dismal farming performance, it seemed obvious to authorities that Indians could never make good use of such large tracts, even if they had still been available.

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Illustration 33 - "Group of men at Warburton Pike's home on Saturna Island" 1887 (photo: undetermined). Come from Britain to be farmers, sport fishers and hunters on newly acquired land in the Strait.

From Riel and railways to the McKenna-McBride Commission Indigenous people were not the only ones dissatisfied with colonial dispossession on the sea by WWI. Many settlers, backed by their provincial and municipal governments, felt Indians still had too much land. The Royal Commission on Indian Reserves, or McKenna-McBride Commission, launched in 1913 was one

of those processes common around the world at the time, where colonial governments announced they would 'settle the land question once and for all.' Here, as in most other colonial territories, it was another opportunity to break earlier promises to indigenous people.¹³⁸ Premier James Dunsmuir (Robert's son) had approached Ottawa as early as 1901calling for "better terms" for BC. Many BC reserves, he said, needed to be reduced because valuable agricultural lands were held by too few Indians. Indian Affairs, having spent many years negotiating these reserves, was slow to respond. When a more forceful claim was pressed by Premier McBride in 1912, the federal government acquiesced and launched a joint federal-provincial commission' the next year.¹³⁹ The "McKenna-McBride Commission" was tasked with 'equitably adjusting' reserve boundaries 'one last time.' Full and unfettered authority for reserves would then to be handed to the federal government.¹⁴⁰

The Royal Commission allowed settlers and Indians to plead their cases (Illustration 34). Complaints from the Strait's rapidly growing towns have been described earlier. The commissioners also received eloquent testimony from indigenous participants, though they seldom responded positively to them. Chief Julian on Cortes Island told them "If we do not kill deer out of season we have nothing to eat..."¹⁴¹ In the Cowichan, Chief Que-Och-Qult complained "... the cost of living ... has greatly increased while at the same time the Indian's facilities for earning his living had been greatly handicapped by the fishing and game laws of the whites and the reduction of the Indians' natural food by the demands of the white market." Indian Dick reported that "...Everything has been taken from us and we have nothing. They have taken our grub and we have nothing at all. God gave us fish and animals so that we might live on the country and they have taken all these things away from us." Chief Joe Eukahalt: "... The white men are making laws that are getting our people into trouble... They cannot get their grub anywhere without being guilty of violating some law."¹⁴²



Illustration 34 – "Headman of the Malahat Indians" (top) and "Musqueum chief and subchief" (bottom) 1913 (photos: undetermined). Learning of the settlers' need for more land during McKenna-McBride Commission hearings.

Stagnation, not disappearance, during the interwar years

Indigenous people remained a valuable industrial proletariat on the inland sea in the interwar years but otherwise lived mostly outside settler society. The settlers' Strait was now well integrated into global socio-economic networks but its people were three times wounded in these decades: by a savage war in Europe, a long and very deep economic downturn then a truly global conflagration. Not surprisingly, this turbulent period did not see much opening of settler minds' towards the long suffering indigenous minority in their midst. It did however see an end to more than a century of declining indigenous populations.

Barely visible By 1921 indigenous people accounted for only 4% of the BC population¹⁴³ and probably about the same around the Strait, which remained the province's centre of gravity. Indigenous people had not disappeared, as a succession of provincial and municipal governments hoped they might. While the indigenous population finally stopped shrinking in the 1920s, physical traces of their culture (Illustration 35, Illustration 36) were still vanishing from the landscape. Howard White remembered the Pender Harbour settlement of his childhood where "...only a few traces remained of the teeming, robust Salish city." At nearby Sakinaw Bay, only vague traces remained of the Sechelt's intricate fish traps. Early in the twentieth century these structures had been described as "... a masterpiece of stone age engineering." By mid-century they had virtually disappeared, obliterated by loggers.¹⁴⁴ Huge forest fires on Malaspina Peninsula in 1918 and another twenty years later between Comox and Campbell River destroyed many traces of the indigenous presence. In Stanley Park, now an iconic symbol of natural splendour tucked at the doorstep of the Strait's dominant city, the final "Indian squatters" were evicted and their houses razed in the early 1940s. In 1943 the Vancouver Parks Board briefly considered constructing an "Indian Museum" at the site of an indigenous settlement on Burrard Inlet. Instead a memorial was erected to the lumber industry.¹⁴⁵



Illustration 35 – "House Post at Cowichan" 1936 (photo: undetermined) a relic of a fading cultural legacy

John Francis Barrow and Frederick Marsh both noted a growing scarcity of Indian artefacts.¹⁴⁶ Barrow was in the habit of searching indigenous middens he found while looking for pictographs around the northern Strait and beyond. By the late1930s, he complained regularly of promising middens already emptied of artefacts. Marsh reported a few years later that "Indian relics... common once (on the southern islands)... flint spearheads, chisels, pestles and stuff like that, all over" were now hard to find.¹⁴⁷ Many of the clam shell middens where artefacts could most easily be found, were disappearing under houses and streets. Courtesy of BC Archives collections - Call Number: B-09426
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Illustration 36 – "War canoe races at the Cowichan Bay Regatta" 1922 (photo: undetermined). Other traces of the indigenous past were fast disappearing but people could still make canoes.

Attempts to eradicate indigenous culture paralleled the disappearance of its physical remains. Prevention of the potlatch escalated in the new century. The Cape Mudge people had to hand over their potlatching regalia in the 1920s. Masks and costumes (Illustration 37), deemed sinful vestiges of a pagan past, were surrendered to federal authorities, to be destroyed. Instead they were transferred to the National Museum in Ottawa.¹⁴⁸ Despite the ban and missionaries' pressure to enforce it, potlatch ceremonies continued around the Strait in the interwar years. Settlers who witnessed them were awed by the powerful rituals. Lawrence recounted the story of a settler on Okeover Inlet, off Desolation Sound in the interwar years. Alice Bloom,

... recalled with great fondness that on certain nights each winter, she and her family would secretly watch the Natives dance around a raging bonfire on the shores of Kahkaykay during their then illegal potlatch celebrations, their singing filling the night... ¹⁴⁹

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Illustration 37 - "Assu, Chief Bill and family, Cape Mudge" 1920s (photo: undetermined). Assu recruited indigenous labour for the fishing industry. Ottawa confiscated his people's potlatching regalia.

Marsh recounted a similar story from a Mrs. Forbes about a potlatch she witnessed in the same

period, at Penelakut village

Around a fire built, Indian style, in the centre of a long community lodge with a hole in the roof to let out the smoke, thirty performers danced with increasing frenzy before several hundred Indian spectators. A handful of privileged whites... looked on from a high gallery... The rhythmic beating of tom-toms caused dancers and spectators to sway in unison. The atmosphere, blue with smoke and ruddy in the flickering firelight, seemed to pulse with highly charged emotion... Their men... danced almost to exhaustion...¹⁵⁰

Indigenous people were expected to 'assimilate' rather than pursue these traditional cultural practices (Illustration 38), let alone pursue what Victoria and Ottawa now considered pointless claims to traditional lands. Duncan Campbell Scott, the head of Indian Affairs through much of this period, described it as "the sentiment for the extinguishment of the Legal Indian," expressing his own goal of "getting rid of the Indian problem" by ensuring all Indians people were fully "absorbed into the body politic." ¹⁵¹ Concerned that indigenous people were not shedding their traditional culture fast enough, successive governments began forcing their children into residential schools. Legislation passed in 1920 obliged Indian parents, under threat of imprisonment, to send their children between five and fifteen years of age to residential schools

where they would learn 'practical skills' and be forbidden from speaking their parents' languages. Many communities around the sea harboured traumatic memories of children rounded up by Indian Agents and RCMP officers and sent to schools in Sechelt, Mission and Kamloops.

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Illustration 38 – "Sechelt Indian School opening" 1922 (photo: Clayton). Indigenous students were brought in from many communities around the sea; they were expected to be good Catholics now.

Land hunger continues The intense land hunger that had consumed so much indigenous traditional territory abated somewhat in the interwar period; it was now mostly towns, railways and industries rather than farmers who needed Indian land. The Squamish and Musqueum reserves, from the mouth of the Fraser to the head of Howe Sound, were frequent targets. At the dawn of WWI the City of North Vancouver had joined forces with adjoining North and West Vancouver district governments in an unsuccessful effort to acquire 300 hectares of Squamish land adjacent to their settlements.¹⁵² In the early 1920s, inspired perhaps by the PGE's expropriation of a portion of the Squamish reserve at north end of Howe Sound and anxious to expand industrial activities adjacent to their own new PGE terminal, the City of North Vancouver returned to its pursuit of Squamish band land. North Vancouver suggested their Indian neighbours should be removed to the other Squamish lands at the head of Howe Sound. The Squamish leadership successfully resisted: "What would we do up Howe Sound?' they asked. They were no long fishers and not farmers but mostly working at Burrard Inlet's docks and mills.¹⁵³ Railways could still expropriate with impunity but indigenous people were better at

resisting municipal encroachments. The Squamish, by the mid-1920s were organised and eloquent in defence of their interests, though the many resolutions they passed still had to be "subject to the approval of the Department of Indian Affairs." By the end of WWII they were major owners of industrial land in North Vancouver.¹⁵⁴

Governance The Royal Commission on Indian Reserves continued through the early years of WWI with the goal of reaching final agreement on land allocation for Indian Reserves throughout BC. The commissioners' recommendations were contested by the provincial government, who still found the reserves too large, and by indigenous groups who continued to find them too small. Wrangling continued most of the interwar period. Victoria and Ottawa finally agreed on reserve boundaries, and on the official transfer of reserve land to the federal government, in 1938. Province wide, they added about twice as much land (350 square km) to reserves as they removed (190 square km). The average value of the land they removed from reserves however was roughly six times greater than that of the land added.¹⁵⁵ Around the Strait, the result was slight reductions in already small reserves. Along the western shore, total reserve land was reduced from 10.01 to 9.99 acres per capita; on the mainland shore, from 16.45 to 16.30 acres per capita. Money generated from sale of Indian lands was shared between Ottawa and Victoria, with the federal share going, as usual, into Indian Affairs trust funds.¹⁵⁶ Both governments expected this was the final word on Indian land allocation. After hearing a presentation on land claims from the Allied Tribes of BC, the federal government again amended the Indian Act in 1927. From then until 1952 it was illegal for indigenous people to raise funds to pursue their land claims, except in the unlikely event they obtained permission from the Indian Affairs.157

Indigenous people did relatively well in the industrial fishery in the interwar years. The canneries had secured exclusive control over most commercial salmon fishing by the 1920s and fisheries regulations now enhanced indigenous peoples' opportunities to work in the industry.¹⁵⁸ Boats owned by Salish and Kwakwaka'wakw speakers became a substantial component of the commercial fleet on the Strait while indigenous women remained an important part of the canneries' labour force.¹⁵⁹ Their right to fish for food on the other hand, came under further assault. By the 1920s, the federal fisheries department was, in Dianne Newell's words, 'the resource management arm of the fishing industry.' At the end of the 1920s beleaguered Fraser

River sockeye runs, though much reduced by the Fraser Canyon slide of 1913, were showing modest signs of recovery. As in earlier years, indigenous people were singled out as a threat to fishery conservation efforts. The chief federal fisheries inspector for BC declared in 1929 that Indians no longer needed a food fishery.¹⁶⁰ Early in the 1930s canners tried, in vain, to demonstrate that the food fishery was superfluous by supplying reserves with crates of canned pilchard and Chum salmon.¹⁶¹

The threat of indigenous fisheries damaging sport fishing was a growing concern. Saanich Inlet had become an important sport fishing site, with a growing collection of summer cottages on its shores. Indigenous people on the inlet, earlier guaranteed the right to fish there under their 'Douglas treaties', were first prohibited from using nets there then banned from fishing on the inlet altogether¹⁶². A similar proscription of Native food fishing in favour of the sport fishery eliminated their right to take fish on North Vancouver's Capilano River with anything other than an angler's hook and line.¹⁶³

Indigenous communities around the Strait also struggled to retain access to traditional clam beds. The Comox began complex negotiations over clam beds on the northern shores of Baynes Sound that would extend into the 21st century. They lost control over rich clam beds surrounding Tree Island, a tiny archipelago at the head of Baynes Sound. An important traditional source of food for the Comox, the islands had been early pre-empted by a settler then sold to the British Lords of the Admiralty at the end of the nineteenth century. They were later transferred to the Canadian navy, who used them for target practice in the 1930s. Denman Island settlers had begun digging clams there¹⁶⁴ while the fish canning conglomerate BC Packers also claimed the beds, though they had stopped working them by the late 1930s. The Comox tried to broker a complex bargain wherein they guaranteed the Navy access to nearby Goose Spit in perpetuity in exchange for renewed indigenous control over Tree Island's shellfish-rich foreshore. Negotiations ensued between Ottawa and Victoria. While Indian Affairs was able to secure the barren islets, they could not convince the province to surrender the foreshore around the islands, which was all the Comox people really wanted.¹⁶⁵

As they had with their claims to land - until such action became illegal - indigenous people also protested the erosion of their fishing rights. Associations of indigenous fishers became surrogate

political organisations in this period, resistance now otherwise muffled by the repressive Indian Act. The Native Brotherhood of BC, founded in the early 1930s, became the principal voice for indigenous fishermen on the coast. Indigenous people's efforts to secure control over fishing grounds adjacent to their reserves, as had been envisioned when these reserves were originally demarcated, were unsuccessful. Late in the 1930s the Secretary of the Progressive Native Tribes of BC, Andrew Paull, wrote to the Superintendant General of Indian Affairs in Ottawa to ask for exclusive use of the waters off Cape Mudge for the people of that reserve:

... Waters in front of the Cape Mudge reserve are the spawning grounds of the Codfish but it will soon be depleted as Japanese fish in front of this reserve for ten months of the year...The opposite waters in this channel is reserved for sporting fishermen and the Indians cannot fish there commercially. On their side of the channel in front of their reserve, it is overrun with Japs fishing for Codfish, and during the salmon fishing season... gradually and by degrees the native Indian is squeezed out of the only means he has in these parts of earning a livelihood... ¹⁶⁶

The Minister of Fisheries refused Paull's request, citing his need to protect the "public right to fisheries" even off of reserves, declaring "... the granting of fishing rights or privileges to one class of fishermen that would not be available to others would not be feasible..."¹⁶⁷It was a bold argument in light of the long list of other rights and privileges denied indigenous people at the time.

Andrew Paull's story of Japanese fishermen's depredations at Cape Mudge was a familiar refrain by the 1930s. Decades earlier, such complaints had figured prominently in testimony to the McKenna-McBride Commission.¹⁶⁸ Marginalised Japanese immigrant fishermen may have been an easier target for indigenous discontent than the white dominated industrial fishery. Indigenous people's perception of the 'Japanese threat' to the Strait's natural bounty was also widely shared in the white fishing community. The sudden removal of Japanese Canadians from the industry in 1942 (Illustration 39) helped make WWII a period of "unprecedented gains" for indigenous commercial fishers.¹⁶⁹ Many boats were suddenly available, the war effort needed food and it needed labour in the boats and canneries.



Illustration 39 - Japanese Canadian fishing boats seized at Annieville dike on the Fraser River" 1942 (photo: undetermined). The removal of Japanese-Canadians and wartime demand for fish meant new opportunities for indigenous fishers.

Impacts of farming, forestry & transportation The idea that the shores of the Strait might be converted into a British seaside had receded by the interwar years. In most places where deforestation had occurred around the sea, it was ephemeral. Once the nineteenth century wave of agricultural pre-emptions was over, much farmland had returned to forest, much less to urban land, within a generation or two. By the 1920s, BC was the least agricultural province in the dominion.¹⁷⁰ Writing in Maclean's Magazine from Comox in the mid-1930s, Mack Laing noted the dwindling popularity of "stump ranching" around the sea.¹⁷¹ He predicted that most of the land settlers had worked so hard to clear was destined to become golf courses and drive-in movies within a generation. Agriculture began to stagnate on the southern islands, due to their growing isolation from an increasingly highway-based economy on the mainland and Vancouver Island.¹⁷² The thriving market gardens of Japanese immigrants on these southern islands were an important exception but did not survive WWII. The myth of the yeoman farmer by the sea had helped ensure the rapid dispossession of the Strait's indigenous people. Yet much pre-empted land had never been farmed at all, only logged then abandoned. This implied a different definition of 'improvement' from the one earlier envisioned. The story survived at Indian Affairs however. Their forestry directives stipulated

Lumbering operations on a Reserve must, as far as possible, be co-ordinated with the clearing and preparation of the land for cultivation, and the principal aim to bear in mind should be to restrict such lumbering to certain prescribed areas, so that the cutting of timber under permit shall constitute the initial step toward agricultural improvement...¹⁷³

They clearly had little understanding of either farming or lumbering on the Strait. Yet, as the directive suggests, logging by indigenous people on their reserves was now carefully governed by Ottawa. All timber was deemed common property and any sale interests off the reserve had to be approved by a majority of adult male members of the 'band.' Any band member who wanted to cut timber had to first obtain a recommendation from the band's governing council then permission from the Department of Indian Affairs. Indians could then cut and sell reserve timber under the local Indian Agent's supervision, but "in no instance should timber be removed from a reserve before the dues have been collected..."¹⁷⁴ Finally, Indian Agents were to warn their wards

 \dots of the fallacy of regarding their timber as a perpetural source of income. It is far easier to exercise a judicious conservation of timber resources *today* than to face the expensive alternative of re-forestation in the *future*. ¹⁷⁵

Once again, these well-meaning federal pronouncements were remarkably out of touch with the realities of the settlers' Strait.

A number of reserves, perhaps making virtue of necessity, began earning significant income from leasing their foreshore to industrial users, especially for log booms. Considerable confusion ensued about jurisdiction over the foreshore and who should pay whom for what. Foreshore in front of reserves had often been contested in the past, with Natives repeatedly claiming control over the beaches in front of their allotted land. Their authority was increasingly questioned during the interwar years by users such as boat houses and log booms. The province eventually prevailed with its claim to control beaches in front of reserves except in cases where such rights had been explicitly mentioned at the time the Reserve was established, which it seldom had.¹⁷⁶ In some cases Indian Affairs was required to repay the province for rents previously charged forest companies for storing their booms off reserves.¹⁷⁷ Reserves also lost foreshore rights in harbours under Ottawa's control. The newly constituted 'public harbour' on Burrard Inlet asserted its own control over the foreshore and considerable stretches of shoreline previously controlled by the Squamish.¹⁷⁸

A rapidly developing highway system around the Strait after WWI further diminished a number of reserves. Provincial engineers were confident of their rights and eager to get on with their projects. The residents of the Malahat Reserve were given no advance warning before pile drivers and carpenters showed up to construct a ferry terminal on their Mill Bay reserve in the mid-1920s. The provincial engineer had sent a letter to the Department of Indian Affairs a few days prior, stating simply they were

... about to erect a landing for the Mill Bay terminus of a Ferry which will operate across ... Saanich Inlet (Illustration 40). The site chosen lies within the confines of the Indian Reserve... It is necessary that construction commence immediately which does not allow time for formal notification but proper plans and descriptions will be filed in due course...¹⁷⁹



Illustration 40 - "Brentwood-Mill Bay ferry at Mill Bay" 1967 (photo: BC Govt). Built over an indigenous cemetery in the 1920s; a rapid construction schedule prevented consultation with the community before work began.

It turned out people on the Malahat Reserve were "bitterly opposed" to the ferry terminus. Indian Affairs had no choice but to acquiesce however. Except in a few federally controlled harbours, the province was now deemed to 'possess the foreshore.' Indigenous people's only rights there were to "access and ingress," to come and go across the beach in front of their reserve. Indian

Affairs officials pointed out that it was, nonetheless, unfortunate the ferry slip had been located over a Native cemetery, from which remains should be exhumed and re-interred elsewhere at the expense of the province. Unfortunate as well, that the new road leading to the ferry dock had been built "... through practically the only good piece of land on the reserve where the Indian village is situated and will disturb a considerable amount of Indian improvements..." It also threatened to foul their water supply.¹⁸⁰

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Illustration 41 – "Cowichan Indians performing Whale Dance" 1945 (photo: BC Govt). Now without their traditional masks.

The same, but different The interwar period saw ongoing settler assaults on indigenous peoples' claims to space and resources around the Strait but the ability of indigenous communities to resist these assaults was growing and they salvaged vestiges of their cultural heritage (Illustration 41). The people at Cape Mudge had been able to assert themselves in negotiations with local cannery owners and loggers in these years. Chief Billy Assu had ensured his people received more equitable working conditions. He encouraged them *not* to assimilate but instead to adapt in order to benefit from the settlers' ways without losing their identity.¹⁸¹ At Cape Mudge and elsewhere around the sea, indigenous leaders were learning the intricacies of

settler laws and governance and how to operate within them. They discovered that their dispossession had contravened the settlers' own laws.¹⁸²

The beginnings of decolonization after WWII

The post war decades were a period of global de-colonisation. WWII had demonstrated some of the possible outcomes of theories of racial superiority. The horrors of the war, then independence movements across Asia and Africa, stimulated greater consciousness of settler societies' unjust treatment of indigenous people. Many indigenous communities around the Strait were deeply dysfunctional after more than a century of disease, dispossession, marginalisation, racism, and attempted cultural genocide. Yet they were also remarkably resilient; they had refused to meet settler society's expectation of their disappearance and instead remained determined to reclaim their patrimony.

Re-appearing W. A. C. Bennett, the provincial leader through the 1950s and 60s, reflected prevailing attitudes in 1958 when he celebrated BC's history as

...the story of development, of the building of a ... *homogeneous* [emphasis added] province; of a God fearing pioneer people dedicated to progress, strengthened by their contest with a great land at first reluctant to yield its full resources.¹⁸³

Before the era of federally financed multiculturalism, there was no obvious place for indigenous people in Bennett's vision of a settler society hewing resources from a reluctant land. Even naturalists on the sea, such as Haig-Brown or Mack Laing, with perspectives trenchantly at odds with Bennett's, and some appreciation of indigenous heritage, tended to celebrate the resplendent nature of the place and not spend much time contemplating indigenous peoples' ties to it. Early in the post war era many around the inland sea were more likely to associate indigenous people with beer parlours than with nature. The province and municipalities were now celebrating their rich plastic arts, with elaborate totem poles beautifying public parks, but indigenous people themselves remained largely ghettoised in reserves and subject to *de facto* segregation in public space.

While indigenous people were still often disregarded, particularly by the provincial government and industry, a growing number of writers, scientists and academics were stimulating greater public awareness of indigenous culture and concerns. James Matthews at the Vancouver Museum interviewed Squamish people through the 1930s and in 1948 the museum issued the result - a quirky collection of hand typed pages and original photographs listing and discussing indigenous place names on Burrard Inlet and Howe Sound that had been 'certified correct' by the Squamish Indian Council.¹⁸⁴ It was a remarkable act of recognition in a city that had mostly erased traces of indigenous occupation. Matthews' work with the Squamish revealed deeper human bonds with places now overlain with recently acquired settler names. Point Grey, filling with settler homes and seaside parks, had been called Ulksen. The 'Lumberman's Arch' on the Burrard Inlet shore of Stanley Park had been erected on the site of a large village called Whoi-Whoi. Caulfield in West Vancouver had been Stuck-Ale, a name describing the foul smell of gas that rises naturally to the surface there. Horseshoe Bay had been called Cha-Hay, a name evoking the sound made by millions of herring moving across the water as they spawned on the bay. Homer Barnett, Wayne Suttles and other anthropologists devoted their careers to studying Coast Salish speaking people. Their work began to seep into the public discourse and inspired a new generation of researchers. Like Matthews' work and a growing body of archaeological evidence, these studies raised awareness among the settler population of complex, long standing human relationships with the rest of the natural world on the Strait.

Writers and journalists such as Roderick Haig-Brown and Imbert Orchard presented the public with positive images of indigenous people. Haig-Brown was effusive in his praise for the Cape Mudge people's "very great chief" Billy Assu.¹⁸⁵ Orchard, in his extensive oral history of the Strait explained to CBC listeners in the early 1960s

Often the Indian child in a residential school was forbidden to use his native language or sing his own songs. As a result, a culture was destroyed, and an alien culture superimposed, without any regard to the psychological effects...

This story of indigenous people's trauma had seldom been heard in settler society by this time.¹⁸⁶

The threats that local writers and artists now depicted around the sea were more likely to be loggers, developers or rampant cities and suburbs. Past indigenous cultures on the sea were often depicted by people like Earle Birney and Haig-Brown as 'ecological Indians,'¹⁸⁷ achieving a harmony between man and nature whose secret was now lost to industrial society. Alan Pritchard suggested that desire of Haig-Brown and others to establish a tie with indigenous people was born of their desire for a more legitimate claim to belong in their adopted land.¹⁸⁸ This urge to establish their claim also highlighted the reality of indigenous people's dispossession, a theme visited in books such as Jack Hodgins' *Resurrection of Joseph Bourne*.¹⁸⁹

By the 1970s, official interpretation of 'local heritage' that needed preserving around the sea was a schizophrenic hodgepodge of familiar 'settler' vestiges - early post offices, churches, stores and cemeteries – mixed with mysterious petroglyphs from the Strait's indigenous world.¹⁹⁰ A brochure celebrating the Diamond Jubilee of Saanich District in 1965 declared South Saanich had been purchased on February 6th, 1852 through an agreement signed by local Indians and North Saanich was purchased five days later.¹⁹¹ But few settler communities on the sea could hark back to such agreements with indigenous people and many would begin to regret it. Indigenous people re-appeared in more official representations of the sea's past by the late 1970s. The province's roadside information panels described things like "Indian wood working tools of the Northwest Coast" and "Food and cooking of the Northwest Coast Indians."¹⁹² They inventoried 'archaeological resources.' Reporting the results of his inventory on many of the islands in the Strait, the Provincial Archaeologist expressed concern about their degradation. Less than 10% of 800 archaeological sites on the islands were still intact and many had been disturbed during the century of resettlement. "The worst offender" he said, had been "construction of permanent and summer residences... marine facilities such as ferry landings, wharves, marinas and the like have also taken a great toll..." ¹⁹³

Indigenous people themselves were increasingly involved in efforts to salvage their cultural heritage. The Cape Mudge people lobbied Ottawa for decades to return the potlatching regalia confiscated in the 1920s. Ottawa, now anxious to improve relations with indigenous people, agreed. In1979 Cape Mudge opened its own museum to house these precious vestiges of their past.¹⁹⁴ Other bands emphasised their maritime heritage, carving magnificent replicas of traditional dugout canoes and staging high profile canoeing events. Some re-imagined a past more harmonious than it may have been. In 1986, the Sechelt and Sliammon people welcomed a traditional Haida canoe; they had rarely been as welcome in earlier centuries.

Indigenous land hunger Settler society's absorption of indigenous people's traditional territories on the Strait continued for a while even after WWII. The Powell River Company dammed the Theodosia River in the early 1950s to generate hydroelectricity for their ten paper machines, destroying another salmon stream that local people had fished for countless generations.¹⁹⁵ Nanaimo's new Duke Point industrial park and ferry terminal were built over

indigenous settlements and burial sites two decades later.¹⁹⁶ By the 1980s however, the most visible land hunger was among indigenous people themselves, pursuing claims to traditional territories with renewed vigour. Ottawa's virtual outlawing of Native claims in the 1920s had curtailed their pursuit for half a century. When the federal government formally considered indigenous land claims again in the 1970s, the door was opened to the possible existence of 'unextinguished aboriginal rights' in Canada. A torrent of litigation ensued, supported by the growing body of literature on indigenous history, culture and so on, discussed earlier.

Rights and fisheries A ponderous federal administration remained in place as Victoria and Ottawa began returning to indigenous people some of the fundamental rights and patrimony that had been taken from them. The right to vote in provincial elections, withdrawn in 1872, was restored in 1949. The federal government did the same in 1960. The right to carry out potlatches was restored in 1951, although confiscated regalia remained mostly in museums and private collections. Amendments to the Indian Act the same year called for Indian Agents to be replaced by band chiefs and bands to begin taking control of local administration. The residential school system was progressively shut down in the 1960s and '70s.

Devolution of control to indigenous governments contributed to considerable development on many reserves, including new schools and infrastructure as well as land development projects that mostly involved leasing land to non-Indians. New initiatives were launched, with mixed results. Ambitious plans by the Cowichan to develop hundreds of residential lots on Kuper (today Penelakut) Island in the mid-1970s did not get off the ground.¹⁹⁷ But ten years later Cape Mudge successfully opened a tourist hotel and restaurant.¹⁹⁸ The Sliammon describe the 1970s as the time of "the most development activity" in their history, when they built fifty new homes, a fire hall, a band office, a kindergarten, a sewage treatment plan, a health clinic, a soccer field and a community centre.¹⁹⁹ They also invested in an oyster farm and salmon hatchery. The following decade the Sechelt became the first indigenous community in Canada to be granted "self-government" status. The most significant change in indigenous governance, with impacts on the future of all people in the Strait's broader community, was Canada's Constitution Act of 1982. By clearly recognising and affirming 'aboriginal title' it opened the door to a long and still ongoing series of negotiations over indigenous claims to land and resources.

Federal fisheries management continued to favour the commercial fishery over Native fishers. Many indigenous people still lived near traditional food gathering sites by the mouths of the Fraser, Cowichan, Qualicum, Courtenay, Squamish, Capilano and other rivers. But for many, their connection with the once sustaining fishery had become tenuous. The fishing fleet that had grown dramatically in the interwar years was in decline again by the 1960s in many indigenous communities. Fewer indigenous people were working in the canneries and their communities were having increasing difficulties securing enough salmon for food.²⁰⁰ The indigenous commercial fishing fleet shrank further in the 1970s as the federal government used licensing restrictions to force 'less efficient' boats out of the fleet. Many were Indian owned, and one immediate result of Ottawa's move to 'improve the economic performance' of the modern fishing sector was to half the number of indigenous people employed in it.²⁰¹ Within a few years the federal government was heralding its efforts to 'make the fisheries work' for indigenous people, through their ambitious 'Salmon Enhancement Programme' (SEP). A 'Native Programme' within the SEP announced it was going to contribute to Native peoples' well being through training and job creation, an enhanced food fishery and community development. ²⁰² A SEP report detailed just how little there was left of the indigenous commercial salmon fishery on the Strait by the 1970s. Ten bands living on the shores of the Strait were now completely removed from the commercial fishery while another thirteen remained involved – but mostly with "minimal participation." The total 'Native' fishing fleet around the sea amounted to less than forty boats - five seiners, twenty gillnetters and thirteen trollers. It was, they noted, a mere "... remnant of a much larger fleet once active in Georgia Strait." Per capita return from fisheries in those communities was estimated at \$125, lower than in any other region on the BC coast. Fishing now played a significant economic role only in indigenous communities at Comox, Qualicum and Sechelt. The situation was similar at the mouth of the Fraser. Barriers to entry into the fisheries were increasingly prohibitive in most indigenous communities on the Strait and lower Fraser. The report explained that even if there might be a "... widespread desire to return to commercial fishing" among reserve residents, it wasn't possible in most cases.²⁰³ Few young people had fishing experience and the commercial fishery was no longer important on many reserves. Of the estimated 1,500 indigenous commercial fishermen on the entire BC coast in the mid-1970s, only 71 lived on the Strait and another 75 on the lower Fraser. Indigenous people on the inland sea, they reported, were losing the fishing tradition; fathers were not fishing and were not passing on fishing skills to their offspring. Young people in bands without members active in

the commercial fishery found entry into the fishery virtually impossible. The increasingly competitive, capital and technology intensive nature of the fishery was blocking indigenous entry.²⁰⁴

The issue of indigenous access to a 'food fishery' remained contentious, linked in various ways to the evolving commercial fishery and still marked by conflict between indigenous people and federal authorities. The conflict escalated in the late 1960s, especially on the Fraser. As Dianne Newell explained, "Indians were no longer content simply to pay a fine or go to jail silently." ²⁰⁵ A federally consecrated 'food fishery' took place mostly near the mouths of the Strait's major salmon rivers. It represented barely two percent of the total salmon caught by the commercial fleets in the 1970s but was a far more significant component of the planned 'escapement', the portion of the salmon runs expected to enter spawning rivers after eluding the commercial fleet and sport fishers at sea. Similar to their claims to land, indigenous peoples' claims to salmon for food were becoming an increasingly sensitive political issue, arousing strong feelings on both sides. By 1978 federal policy was to give the food fishery "priority over all other salmon fisheries." Only the requirements of "escapement" were to be given a higher priority than the food fishery. Theoretically at least, the food fishery would proceed even if commercial or sport fisheries had to be closed. This policy assumed levels of knowledge, understanding and political will that seldom existed in reality. Indigenous people harboured an understandable concern that, whatever their rhetoric about the 'food fishery,' federal authorities would be tempted to further undermine access to salmon which indigenous people looked upon as their natural entitlement. It was maddeningly difficult for government fisheries officers to gain reliable information about the food fishery. They did know, however, that indigenous people's demand for subsistence salmon around the sea remained very significant and that this food fishery would likely continue to grow. Its estimated catch had surpassed a half million fish by 1974. They also knew that in some cases, such as on the Cowichan and lower Fraser, some indigenous communities were unable to meet their needs due to fishing restrictions and were being supplied with food fish by other bands. But they couldn't gauge the scale of this problem. Fisheries agents harboured lingering and sometimes justified suspicions that indigenous people were occasionally selling their 'food fish' to non-Natives. Federal authorities, not surprisingly, had few reliable figures about this illicit trade. It was a problem they expected would continue, particularly near the Fraser mouth with its large urban markets nearby. Some indigenous people even began claiming

their right to legally sell their 'food fish.' Over the border in Washington, indigenous fishers had secured the right to take up to half the state's allowable catch of salmon by the mid-1970s. Ottawa maintained their refusal to recognise any unique indigenous rights to anything other than a 'food fishery.'²⁰⁶

The Pearse Commission in the early 1980s made eloquent recommendations for change in federal policy. The latest in a series of more than twenty such commissions of enquiry into the state of the country's Pacific fisheries, the Pearse Commission paid far more attention than its predecessors to the indigenous fishery. Led by economist Peter Pearse, the commission blamed the sorry state of indigenous fisheries on a century of ill-conceived federal and provincial policy. He recommended the federal government recognise aboriginal claim to the salmon catch and called for sweeping changes that would give indigenous communities a far more active role in managing both their food fishery and the commercial fishery. It would take the federal government almost ten years to begin responding to these suggestions.²⁰⁷

New indigenous people in the Strait's new world

The Strait's rich resources and protected shorelines that had supported a large indigenous population also attracted settlers. Relatively sophisticated European navigational technology facilitated the dispossession of indigenous people that in turn enabled the resource rush on the Strait by freeing land and resources and enhancing the labour force available for new resource industries. Dispossession would also facilitate the Strait's use as a waste dump and recreational space. Settlers aimed to make the Strait their space and its resources, their resources. But the colonial dispossession process never fully succeeded and resistance to it never completely stopped. Colonial resettlement and a voracious industrial fishery on the Strait, acting together with epidemic diseases, did however essentially end a millennial culture that had been intimately tied to this sea. Notwithstanding rhetorical flourishes from First Nations spokespersons and supporters, it was clear by the 1980s that this culture was unlikely to re-emerge in anything like its original form. Rather than 'ecological Indians' - an idealised bulwark against the depredations of logging companies and developers, the indigenous people slowly emerging from a long twilight of marginalisation and colonial injustice were just as likely to *be* those loggers, industrial fishers and developers.

Indigenous people's hybrid modern culture in the post war era combined its ties to the past (Illustration 42) with growing skill in navigating the present and re-imagining their future. Emerging from a long period of turmoil, indigenous people were once again becoming important players on at least some stretches of the Strait. They had internalised settler ways of interacting with the inland sea and its resources but were increasingly reluctant to submit to settler governments. In many places, they had strong legal claims to far more of the Strait's shoreline and resources than parsimonious settler governments had left them in the past. Eventually, it would be settlers worried about losing access to shorelines and resources.

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Illustration 42 – "Petroglyphs in Petroglyph Park near Nanaimo" 1967 (photo: BC Govt). Indigenous culture was becoming more widely recognised as an important dimension of local culture on the Strait.

¹ D. L. Boxberger, "The Not So Common," in: *Be of Good Mind: Essays on the Coast Salish*, ed. B. G. Miller (Vancouver: UBC Press, 2007), 57-58.

² Dana Lepofsky, pers. comm.

³ K. T. Carlson, K. T. (ed.), A Stó: lō Coast Salish Historical Atlas (Vancouver: Douglas and McIntyre, 2001), 36.

⁴ Wayne Suttles, "Central coast Salish," *Handbook of North American Indians, Volume* 7 (Washington: Smithsonian Institute, 1990), 42, 292, 462-8.

⁵ Philip Wagner, "The Persistence of Native Settlement in Coastal BC," in: *Peoples of the Living Land: The Geography of Cultural Diversity in BC*, edited by J. V. Minghi, Geography Series No. 27 (Vancouver. Tantalus, 1972), 13-27.

⁶ Boxberger, Not So Common, 57.

⁷ Carlson, *Coast Salish*, 27.

⁸ Alan Frost, "Nootka Sound and the Beginnings of Britain's Imperialism of Free Trade," In: *From Maps to Metaphors: The Pacific World of George Vancouver, edited by* Fisher, R. and H. Johnston, 104-126 (Vancouver: UBC Press, 1993), 122

⁹ BCA GR-0328 Great Britain, Colonial Office Correspondence: Letter to Colonial Office from Dundas, Adam.
 ¹⁰ Richard S. Mackie, *Trading Beyond the Mountains: The British Fur Trade on the Pacific, 1793-1843* (Vancouver: UBC Press, 1996); Daniel Clayton, *Islands of Truth: The Imperial Fashioning of Vancouver Island* (Vancouver: UBC Press, 2000).

¹¹ Robin Fisher, *Contact and Conflict: Indian-European Relations in British Columbia, 1774-1890* (Vancouver: UBC Press, 1992), 30-31.

¹² John Lutz, Mak'uk: A New History of Aboriginal White Relations (Vancouver: UBC Press, 2008), 71.

¹³ Dana Lepofsky, pers. comm.

¹⁴ Sean Miller, An Environmental History, 112

¹⁵ Harris, *Resettlement of BC*, 17.

¹⁶ Boyd, Robert, *The Coming of the Spirit Of Pestilence: Introduced Infectious Diseases and Population Decline among Northwest Cost Indians, 1774-1874* (Seattle: University of Washington Press, 1999).

¹⁷ Wild, *Comox Valley*, 26; N. Greene and D. McGhee, personal communication: several publications on their research are pending.

¹⁸ Harris, Resettlement of BC; 30; W.H McNeill, Plagues and People (New York: Anchor, 1976).

¹⁹ D. M. Schaepe, "The Land and the People: Glaciation to Contact." In: *A Stó:lō-Coast Salish Historical Atlas*, ed. Keith Carlson et al (Vancouver: Stó:lō Heritage Trust / Douglas-McIntyre / University of Washington Press, 2001), 12-19.

²⁰ Taylor, *Tidal Passages*, 61-63.

²¹ Harbord, *Desolation Sound*, 23.

²² Dana Lepofsky, pers. comm.

²³ Cole Harris, pers. comm.

²⁴ Taylor, *Quadra Island*, 29-35.

²⁵ Harris, *Landing Native Fisheries*, 9.

²⁶ Michael Adas, *Machines as the Measure of Men: Science, Technology and Ideologies of Western Dominance* (Ithaca, NY: Cornell UP, 1989); Martin Lynch, *Mining in World History* (London: Reaktion, 2002); John Weaver, *The Great Land Rush and the Making of the Modern World* (Montreal: McGill University Press, 2003).

²⁷ Fisher, *Contact and Conflict*; Robert Cail, *Land*, *Man*, *and the Law – The Disposal of Crown Lands in BC*, 1871-1913 (Vancouver: UBC Press, 1974); Harris, *Landing Native Fisheries*.

²⁸ John Comaroff, "Colonialism, Culture and the Law: An Introduction," *Law and Social Enquiry* 26 (2001): 309; Weaver, *Great Land Rush*; Harris, *Landing Native Fisheries*.

²⁹ Weaver, *Great Land Rush*, 87.

³⁰ Ibid, 176.

³¹ Elinor Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge: Cambridge University Press, 1994).

³² Miller, *Environmental History*, 49.

³³ BCA GR-0328 GREAT BRITAIN. COLONIAL OFFICE Correspondence: Page 20-41 Letter from James Ed. Fitzgerald (NOT on behalf of HBC) 9 June 1849 to Colonial Office, 22.

³⁴ Taylor, *Quadra Island, 36;* UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-3 RG 10 - T3967 – Volume 11028 – File SRR-3: Report of the Government of BC on the subject of Indian Reserves, Signed by Geo. A.

Walkem, Attorney General, Victoria, 17th August 1875, 63; Harris, *Resettlement*, 156; Lutz, *Makuk*, 230.

³⁵ Richard S. Mackie, *The Wilderness Profound: Victorian Life on the Gulf of Georgia* (Victoria: Sono Nis Press, 1995), 52.

³⁶ Montgomery and Oke, *Cowichan*, 25.

³⁷ BCA GR 0328 GREAT BRITAIN. COLONIAL OFFICE Correspondence: Letter from James Ed. Fitzgerald 9 June 1849 to CO: 20-41.

³⁸ BCA MS 0364 ORCHARD - BOX 4 File 1.

³⁹ BCA GR 0328 Great Britain Colonial Office Correspondence: Letter from Rear Admiral P. Hornby, dated 29 August 1849, Valparaiso

⁴¹ Dorothy Kennedy, *Sliammon life, Sliammon lands* (Vancouver: Talonbooks, 1983), 90.

⁴² Blanche Norcross, Nanaimo Retrospective: The First Century (Nanaimo: Nanaimo Historical Society, 1979), 11.

⁴³ W. Barraclough, "Selected Items on the Life of Adam Grant Horne (1829-1901)," 18-21 in B. Norcrosse (ed.)

Nanaimo Retrospective, 19.

⁴⁴ Wolferstan, *Pacific Yachting*, 43.

⁴⁵ Norcrosse, *Nanaimo Retrospective*, 19.

⁴⁶ Kennedy, *Sliammon Life*, 14.

⁴⁷ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1: Sproat's letters to The Minister of the Interior, Ottawa In Camp, Skwawmish River, Howe Sound, BC, 17 Nov 1876, 6.

⁴⁸ For example, the murder of Frederick Marks and his daughter by the Cowichan, described in: TBC 10 April 1863:

3

⁴⁹ TBC 15 June 1861: 2.

⁵⁰ Taylor, Quadra Island, 36.

⁵¹ BCA MS-0436 Alexander Buckham VOLUME 102; Taylor, *Quadra Island*, 37.

⁵² UBCLSC: RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letter to The Minister of the Interior, 12 Dec 1876, Comox, Vancouver Island.

⁵³ TBC 26 July 1877 p 3: "RUMOURED BUTCHERY"

⁵⁴ UBCLSC: RG 10 - T3967 – Volume 11028 – File SRR-1 Nanaimo, VI. Sproat's letters to The Minister of the Interior, Ottawa. 20 Dec 1876:26, 7 January 1877:4.

⁵⁵ TBC 2 July 1871, p3: "The Navigation Question.

⁵⁶ Cail, Land, Man, Law, 71.

⁵⁷ Ibid, 9-10.

⁵⁸ Ibid, 246.

⁵⁹ BC Dept of Lands and Works, Report of the Chief Commissioner of Lands and Works, 1873, BC Legislature Sessional Papers. 1873, cited in: Cail *Land, Man, Law,* 60.

⁶⁰ Cail, Land, Man, Law, 177.

⁶¹ Ibid, 14, 182-3.

⁶² Brian Thom, "Coast Salish Senses of Place: Dwelling, Meaning, Power, Property and Territory in the Coast Salish World" (PhD Dissertation, McGill University, 2005) 342-3.

⁶³ Mackie, Wilderness Profound, 52.

⁶⁴ Armitage, *Around the Sound*, 45; BCA GR-0766: BRITISH COLUMBIA. Department of Lands and Works, Originals, 1861-1886, 1.56 m Pre-emption records relating largely to Vancouver Island and the Gulf Islands. Boxes 2, 5-7, 10-13

⁶⁵ Leffler, Parksville, 1

66 BCA MS-0364 ORCHARD - BOX 4 File 1: 3

⁶⁷ Armitage, Around the Sound, 63.

⁶⁸ BCA MS-1176 - Frederick Marsh fonds, "Leisure Island Laughter" manuscript: Frederick Marsh's manuscript of his travels through the Gulf Island in the late 1940s is particularly full of such settler stories of their new land and what they found there.

⁶⁹ Cole Harris, Resettlement; --- Making Native Space; Doug Harris; Landing Native Fisheries.

⁷⁰ Harris, *Making Native Space*, xviii.

⁷¹ Kennedy, Sliammon life, 125; Cail, Land, Man, Law; Robert Brown, Robert Brown and the Vancouver Island

Exploring Expedition, edited by John Hayman (Vancouver: UBC Press), cited in: Taylor, Quadra Island, 124.

⁷² UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letters to The Minister of the Interior, In Camp, Skwawmish River, Howe Sound, BC, 17 Nov 1876: 34-35.

⁷³ Ibid. File SRR-3 RG 10 - T3967 – Volume 11028 – File SRR-3:Report of the Government of BC on the subject of Indian Reserves, Signed by Geo. A. Walkem, Attorney General, Victoria, 17th August 1875.

⁷⁴ Ibid. Memo of the Dept. of the Interior, signed by David Laird, Minister of the Interior, Ottawa, Nov 2nd 1874:47
 ⁷⁵ Harris, *Landing Native Fisheries*, 15.

⁷⁶ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letters to The Minister of the Interior, File SRR-1, In Camp, Skwawmish River, Howe Sound, BC, 17 Nov 1876; Canada, Sessional Papers. 3rd parliament, 5th Session, 1878, no 10, special addendix D: 1. cited in: Cail, *Land, Man, Law*, 208.

⁴⁰ TBC 10 Aug 1859: 2

⁷⁷ Jean Barman, *Stanley Park's Secret: The forgotten families of Whoi whoi, Kanaka Ranch and Brockton Point.* Madeira Park: Harbour Publishing, 2005, 253.

⁷⁸ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letters to The Minister of the Interior, File SRR-1, Comox, V.I.. 12 Dec 1876: 8.

⁷⁹ Ibid, In Camp, Skwawmish River, Howe Sound, BC, 17 Nov 1876; Ibid, Letter to Powell: File SRR-2 BCIRC Schooner "Thornton," Aleora Bay 11th Nov 1879: (unpaginated)

⁸⁰ UBCLSC RG 10 – C13914 - Volume 1329 - IA Cowichan Agency, Incoming Correspondence, 1876-77, 1881-82): Ministry of the Interior correspondence provides a census of Indians in the Cowichan Agency, by tribe (1876-7) and the size of reserves, from Sooke to Cape Mudge, included reserves on Pender, Saltspring, Saturna, Mayne, (Chatham, Discovery – classed with Victoria), Valdez, Kuper, Gabriola Islands. Total areas in acres of 378 for Comox, 197 for Qualicum, 209 for Nanoose,637 ½ for Nanaimo, 2332 for Penalakut, 1840 for Valdez Island, 427 for Halalt, 3084 for Chemainus, 6,188 for Cowichan, 3318 for Saanich or a total of around 18,600 acres or 30 square miles.

⁸¹ White, Sunshine Coast: 48.

⁸² UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-3. Memo of the Department of the Interior, signed by David Laird, Minister of the Interior, Ottawa, Nov 2nd 1874.

⁸³ Ibid. Report of the Government of BC on the subject of Indian Reserves, signed by Geo. A. Walkem, Attorney General, Victoria, 17th August 1875.

⁸⁴ For example in James Fitzgerald's letters to the Colonial Office in: BCA GR-0328 GREAT BRITAIN.
 COLONIAL OFFICE Correspondence: Page 20-41 Letter from James Ed. Fitzgerald, 9 June 1849 to CO.
 ⁸⁵ MS-0364 ORCHARD - BOX 4 File 2: 5.

⁸⁶ TBC 5 Oct 1863:2: The British *Colonist* noted that "The Highlands of Scotland are bold and mountainous, with a deeply indented coast not unlike our own on the Pacific and the east coast of the Gulf of Georgia."

⁸⁷ See: TBC 10 May 1877:2 "The Harbors of British Columbia."

⁸⁸ Cail, Land, Man, Law, 20.

⁸⁹ Richard S. Mackie, "Colonial Land, Indian Labour and Company Capital: The Economy of Vancouver Island, 1849-1858" (MA thesis, University of Victoria, 1985), 162.

⁹⁰ Great Britain Emigration Commission, *Vancouver's Island: Survey of the districts of Nanaimo and Cowichan Valley*. Reports by B. W. Pearse and Oliver Wells to accompany their surveys made under J. D. Pemberton, Colonial Surveyor (London: H M Stationary Office, 1859), 6-7, 14.

⁹¹ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letters to The Minister of the Interior, Nanaimo, VI twentieth Dec 1876: 1-6

⁹² Lutz, *Makuk*, 25.

⁹³ Lutz, *Makuk*, 8.

⁹⁴ Annual Report of the Dept. of Indian Affairs. Canada. Sessional Papers. 7th Parliament, 1st session. 1891. No 18. Page xl, cited in Cail, *Land, Man, Law*: 226-7; Johnston, *The Pacific Province*, 183; BC Stats, Ministry of Labour, Citizens' Services and Open Government, "Census population of BC and Canada, 1871-2001," accessed 24 Sept. 2014, http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2011Census/PopulationHousing/BCCanada.aspx ⁹⁵ UBCLSC RG 10 - T3962 – Volume 11024 – File AH3A RC for IA in BC - Cowichan Agency – Precis of evidence from the hearings 1913.

⁹⁶ Harris, Resettlement, 192.

⁹⁷ George Orwell, Nineteen Eighty-Four (London: Seeker and Warburg, 1949): Ch.3.

⁹⁸ Taylor Quadra Island, 63.

⁹⁹ Thomas King, *The Inconvenient Indian – A Curious Account of Native People in North America* (Toronto: Doubleday, 2012), 70-71.

¹⁰⁰ BCA MS 0202 - Michael Manson "Sketches from the life of Michael Manson," 11.

¹⁰¹ UBCLSC RG 10 - T3956 – Volume 11020 - File 514: 18: Note in file of May 1910, re: Duties of Agents, from Secretary, Ottawa.

¹⁰² Ibid. Correspondence re: disposition of reserves in Cowichan Agency 1910-1916. Remarkable letter, 11
 November 1914 from the H. E. Young, Provincial Secretary to the Assistant Deputy and Secretary, Dept. of Indian Affairs, Ottawa about the registration of Indian births, deaths, marriages.
 ¹⁰³ Ibid.

¹⁰⁴ UBCLSC RG 10 - T3956 – Volume 11020 - File 517 - 16 page report on a conference with Royal Commissioners by reps of the Dominion and Provincial Fisheries Departments and DIA.

¹⁰⁵ UBCLSC RG 10 - T3962 – Volume 11024 – File AH3A; RC for IA in BC - Cowichan Agency – Precis of evidence, 1913.

¹⁰⁶ Fisher, Contact and Conflict: 199.

¹⁰⁷ There are frequent references to O'Reilly using the Marine and Fisheries steamer *Sir James Douglas* in: UBCLSC RG 10 - T3949 - Volume 11009.

¹⁰⁸ UBCLSC RG 10 T3949 - Volume 11007: Copy of letter of 26 March 1885 to I. W. Powell, Supt of Indian Affairs, Victoria from Indian Agent in New Westminster; Copy of letter of 24 June 1885 from W. H. Lomas, Indian Agent in Cowichan Agency, Quamichan; Correspondence between O'Reilly, Indian Reserve Commissioner in Victoria, the office of the Superintendent General of Indian Affairs in Ottawa and MP J.A.K Homer; Ibid, Volume 11009: "Copy of a Report of a Committee of the Honorable the Executive Council approved by His Honour the Lieutenant Governor on the 6th day of April 1888; Ibid, Volume 11008, Letter of 25 August 1887 from Lawyers on behalf of McCallum on Cowichan Lake.

¹⁰⁹ See examples in: UBCLSC RG 10 – C13914 - Volume 1330 - IA Cowichan Agency, Incoming Correspondence, 1882-84.

¹¹⁰ These duties are discussed in: UBCLSC RG 10 - T3956 – Volume 11020 - File 514 18 May 1910, Ottawa – Duties of Agents; RG 10 - T3956 – Volume 11020 - File 514; RG 10 – C13914 - Volume 1330 - IA Cowichan Agency, Incoming Correspondence, 1882-84.

¹¹¹ Leslie Robertson et al reported that at least three aboriginal petitions in favour of the potlatch ban were submitted to Ottawa between 1879 and 1883, in: Leslie Robertson et al, *Standing Up With Ga'axsta'las: Jane Constance Cook and the Politics of Memory, Church, and Custom,* (Vancouver: UBC Press, 2012).

¹¹² UBCLSC RG 10 – C13914 - Volume 1330 - IA Cowichan Agency, Incoming Correspondence, 1882-84: Certified Copy of a Report of a Committee of the Honourable the Privy Council approved by his Excellency the Governor General in Council on 7th July 1883: 216.

¹¹³ These unsuccessful efforts are discussed in Fisher, Contact and Conflict, and Lutz, Makuk.

¹¹⁴ Weaver, Great Land Rush, 237.

¹¹⁵ White, Sunshine Coast, 10.

¹¹⁶ UBCLSC RG 10 T3949 - Volume 11008, including a letter to IA of 16 August 1888 from the Municipal Council of the Corporation of the District of Surrey.

¹¹⁷ Jean Barman, "Erasing Indigeneity in Vancouver: the unsettling of Kitsilano and Stanley Park," in: *Home Truths,* eds. Richard Mackie and Graeme Wynn, (Vancouver: UBC Press, 2012), 174.

¹¹⁸ UBCLSC RG 10 - T3962 – Volume 11024 – File AH3A RC for IA in BC - Cowichan Agency – Precis of evidence from the hearings 1913.

¹¹⁹ Barman, "Erasing Indigeneity."

¹²⁰ Editorial in Victoria Daily Times 19 April 1913, cited in Barman, "Erasing Indigeneity," 186.

¹²¹ UBCLSC RG 10 - T3957 – Volume 11020 - File 517: 12 Jan 1916 Secretary of Royal Commission on Indian Affairs in BC to Duncan Scott, Dept. of the Superintendent. General Of I.A.: 4

¹²² Harris, *Resettlement*, 306; Dianne Newell, *The development of the Pacific salmon canning industry: a grown man's game* (Montreal: McGill-Queens University Press, 1989), 47-65.

¹²³ For example, see: UBCLSC RG 10 - T3964 – Volume 11026 – File FR1 Report re material on record with the RC concerning Fisheries rights, privileges and problems of Indians in Brit Col 1913-1915 B Chief Julius, Sechelt Tribe 17 Feb 1915.

¹²⁴ UBCLSC RG 10 - T3957 – Volume 11020 - File 517 - 16 page report on a conference with the Royal Commissioners by reps of the Dominion and Provincial Fisheries Department and DIA: 15

¹²⁵ Ibid: Letter of 19 August 1913 to E. L. Witmore, Chairman of the RC on IA for BC, Victoria, from Assistant Deputy Secretary, IA, Ottawa; RG 10 - T3957 – Volume 11020 - File 517; Newell, *Pacific Salmon Canning*, 89.

¹²⁶ UBCLSC RG 10 - T3957 – Volume 11020 - File 517; Geoff Meggs, Salmon: The Decline of the British

Columbia Fishery (Vancouver and Toronto: Douglas and MacIntyre, 1991), 59.

¹²⁷ UBCLSC RG 10 - T3957 – Volume 11020 - File 517. Correspondence the Chief Inspector: Letter of June 21 1913 from Chief Inspector, Dominion Fisheries, BC, DMF, New West to McGregor Young.

¹²⁸ Thanks to Dr. Matthew Evenden for pointing out that BC Archives have apparently mislabelled this photo, which was actually taken around 1868 by Frederick Dally. The image is discussed in J. M. Schwartz, "The Photograph as Historical Record, Early British Columbia," *Journal of American Culture* 4, 1 (1981): 65-92.

¹²⁹ UBCLSC RG 10 - T3956 – Volume 11020 - File 516: Letter to the Attorney General of BC from Secretary of the RC on IA, February 16, 1914 and attached "Memorandum for the Commission re: hunting and game laws and relaxation of same for benefit of Indians."

¹³⁰ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-3: "Statement of Current Leases of Land in Province of Brit Col, issued since 1871," (undated, unpaginated).

 131 This is described in a series of correspondence from the 1880s, in: RG 10 - T3968 – Volume 11028 – File SRR-3.

¹³² Harris, *Making Native Space;* Barman, "Erasing Indigeneity."

¹³³ Canada Order in Council 1917 – 2544, cited in Harris, *Landing Native Fisheries*, 126.

¹³⁴ UBCLSC RG 10 - T3958 – Volume 11021 - File 520-2 – re: expropriation of Kitsilano Reserve for Harbour purposes 1913-1915; Matthews, *Squamish Indian Names*, 33; Reasons for judgement from the First Phase of the Trial" in *Squamish Indian Band v. Canada*, court file t-1636-41, 5 October 2000, 20-2, 46, cited in Barman, "Erasing indigeneity, "181.

¹³⁵ Steele, *First 100 Years*, 212; Barman, "Erasing Indigeneity."

¹³⁶ UBCLSC RG 10 - T3962 – Volume 11024 – File AH3A. RC for IA in BC - Cowichan Agency – Precis of evidence from the hearings 1913: 38-9, 89

¹³⁷ Ibid, 100-104.

¹³⁸ Weaver, The Great Land Rush, 177.

¹³⁹ Cail, Land, Man, Law, 230-1

¹⁴⁰ UBCLSC RG 10 - T3962 – Volume 11024 – File AH3A. C for IA in BC - Cowichan Agency – Precis of evidence from the hearings 191. Commissioner E. L. Wetmore, explains to the Cowichans the goals of the Commission:10-12

¹⁴¹ Taylor, *Tidal Passages*, 115.

¹⁴² UBCLSC RG 10 - T3956 – Volume 11020 - File 516: Letter to the Attorney General of BC from Secretary of the RC on IA, February 16, 1914 and attached "Memorandum for the Commission re: hunting and game laws and relaxation of same for benefit of Indians."

¹⁴³ Harris, *Resettlement*, 252.

¹⁴⁴ White, *Sunshine Coast*, 70.

¹⁴⁵ Sean Kheraj, *Inventing Stanley Park, An Environmental History* (Vancouver: UBC Press, 2012); Steele, *First* 100 Years, 234.

¹⁴⁶ In fact, they were at the end of what Douglas Cole described as a half century long "scramble for artefacts" across the northwest coast of the continent, in: Douglas Cole, *Captured Heritage: The Scramble for Northwest Coast Artifacts* (Vancouver/Seattle: Douglas and McIntyre/U of Washington Press, 1995).

¹⁴⁷ BCA MS-1176 - Frederick Marsh fonds, "Leisure Island Laughter," 543; BCA MS-1636 John Francis Barrow collection.

¹⁴⁸ MS-0364 ORCHARD - BOX 4, File 2 #20 Indians of the Gulf.

¹⁴⁹ Lawrence, Adventures in Solitude, 59.

¹⁵⁰ BCA MS 1176 Frederick Marsh fonds, "Leisure Island Laughter" manuscript, 38a

¹⁵¹ King, Inconvenient Indian, 72.

¹⁵² This is described in: UBCLSC RG 10 - T 3954 – File 987/31-7 Correspondence 1914-1943 re: Re: foreshore (riparian) rights and uses at various reserves, including Musqueam, Squamish, Sechelt, Klahoose bands and re: Municipality of N. Vancouver's attempt to take over Mission IR No 1 and remove Indians (1921).
¹⁵³ Ibid.

¹⁵⁴ The range of their industrial land holdings is evident in the correspondence in: UBCLSC RG 10 - T 3954 – File 987/33-14 Correspondence 1925-46 re: Seymour Creek IR No. 2, of Squamish Band.

¹⁵⁵ Harris, *Making Native Space*, 244; White Sunshine Coast, 71.

¹⁵⁶ Cail, Land, Man, Law, 277, 305.

¹⁵⁷ Indian Act, R.S.C. 1927, c98, s 141, cited in: Harris, *Landing Native Fisheries*: 185.

¹⁵⁸ For example, see: Taylor, *Quadra Island*, 190.

¹⁵⁹ Newell, *Pacific Salmon Canning*, 8, 54.

¹⁶⁰ Vancouver Province, 22 September 1929, cited in Newell, Pacific Salmon Canning:120

¹⁶¹ Newell, *Pacific Salmon Canning*, 120.

¹⁶² Newell, *Pacific Salmon Canning*, 118.

¹⁶³ Douglas Harris, *Fish, Law and Colonialism: The Legal Capture of Salmon in British Columbia* (Toronto: University of Toronto Press: 2001).

¹⁶⁴ J. P. Kirk, *My Ain Folk Revisited* (Courtenay: ABC Printing, 2004).

¹⁶⁵ The complicated dialogue between federal and provincial authorities is in: UBCLSC RG 10 - T 3953 – File 978/ 31-2 Part C

¹⁶⁶ UBCLSC RG 10 - T 3953 – File 978/ 31-2: Letter from Andrew Paull, Secretary, The Progressive Native Tribes of BC, 27 January 1937 to T. A. Crerar, MP, Supt General of Indian Affairs, Ottawa.

¹⁶⁷ Ibid: Letter from J. E. Michaud, Minister of Fisheries, 21 May 1937 to CD Howe, Acting Minister, Dept. of Mines and Resources.

¹⁶⁸ For example, see: UBCLSC RG 10 - T3957 – Volume 11020 - File 517: The statements of Alex Johnnie et al re: fishing station at Gabriola; Letter of June 14, 1913 from Tsasulp (??) Reservation, South West Saanich
 ¹⁶⁹ Newell, *Pacific Salmon Canning*, 115.

¹⁷⁰ Martin Robins, *The Rush for Spoils: The Company Province, 1871-1933* (Toronto: McLelland and Stewart, 1972), 37.

¹⁷¹ Laing, *Stump Ranching*, 14, 30-31.

¹⁷² BCA MS 1246 Islands Trust Fonds 1974-76: Box 1. Benn, D. R. et al. 1975. Natural Areas Inventory – Islands of the Strait of Georgia, Howe Sound and Haro Strait, BC. Nature Conservancy of Canada and Islands Trust. Unpublished report, December 1975; BCA GR 0073 Crown land to Doukhobours - File 29 – Lasqueti Island

¹⁷³ UBCLSC RG 10 - T 3954 – File 987/33-14 Supplementary to section 74-84, General Instructions to Indian Agents, Duncan C. Scott, Deputy Superintendent General, IA, DIA, Ottawa, Jan 26th, 1916.

¹⁷⁴ Ibid. ¹⁷⁵ Ibid.

¹⁷⁶ UBCLSC RG 10: T 3953 – File 978/ 31-2 Part E. Letter from Secretary Indian Affairs Branch, Ottawa, 18 Sept 1940 to Major D M MacKay, IC, Vancouver re: Foreshore, Kitasoo Indian Reserve; T 3954 – File 987/31-7 Correspondence within IA, and with Prov. Min of Lands, Fed Dept. of Mines and Resources, in 1942-43, regarding foreshore rights in front of Squamish IR 25 at Port Mellon.

 177 As was the case in the early 1940s when, regarding the Squamish Reserve 25 at Port Mellon, it was revealed to have no rights to the foreshore, in UBCLSC RG 10 - T 3954 – File 987/31-7.

¹⁷⁸ UBCLSC RG 10 - T 3954 – File 987/31-7 Correspondence 1914-1943: In correspondence starting in 1926, IA worries about the Harbour's Board plans to take over a chunk of Capilano Reserve No. 5 but are reassured by the Board that they do not intend to take over any reserve land, only the foreshore, begging the question of how the band could then gain access to the sea.

¹⁷⁹ UBCLSC RG 10 - T3952 – File 974/31 – 4 -14 -11, Correspondence about road through Malalat IR 11 of Saanich Indians and Mill Bay ferry terminus within the Malahat IR, 1924-1929: Letter of 23 July 1924 from Public Works Engineer Philip to Indian Commissioner Ditchburn.

¹⁸⁰ Ibid: Letter from Indian Agent Lomas 1 August 1924 to Public Works Engineer 28 May 1929 letter from Indian Commissioner Ditchburn to P. Philip, Deputy Min and Public Works Engineer, Victoria.

¹⁸¹ BCA T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969 (Part of Imbert Orchard records).

¹⁸² UBCLSC RG 10 - T3961 – Volume 11024 - File 662: Example of a carefully crafted letter, 20 May 1913, from Andrew Paull of North Vancouver and C M Tate, Vancouver, Indian Rights Association re: RC on IA in BC; RG 10 - T3961 – Volume 11024 - File 662: A letter of 4 Nov 1912 from P D McTavish, Vancouver, Chairman, from the Conference of Friends of the Indians of BC to the Governor General of Canada: RG 10 - T3961 – Volume 11024 -File 662.

¹⁸³ BC's Centennial Committee. 1958. BC Official Centennial Record: 1858-1958: A century of progress. Vancouver: Evergreen Press. Cited in: Arn Keeling, "The Effluent Society: Water Pollution and Environmental Politics in British Columbia, 1889-1980" (PhD Thesis, Department of Geography, UBC, 2004), 288.

¹⁸⁴ James S. Matthews, *Squamish Indian Names* (Vancouver: City of Vancouver Archives, 1948).

¹⁸⁵ BCA Imbert Orchard records T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969.

¹⁸⁶ BCA MS-0364 ORCHARD - BOX 4 File 2 #20 Indians of the Gulf, 3.

¹⁸⁷ To use the expression coined by Shepherd Kretch in *The Ecological Indian: Myth and History* (New York: W. W. Norton, 2000).

¹⁸⁸ Pritchard, West of the Great Divide (1982); --- West of the Great Divide (1984).

¹⁸⁹ Jack Hodgins, *The Resurrection of Joseph Bourne* (Toronto: Macmillan, 1979).

¹⁹⁰ These can be seen in the records of historian Margaret Ormsby, who was tasked with reviewing proposed 'provincial heritage sites' in: BCA GR 2940 – BC Heritage Conservation Branch 1960-1983 – Boxes 6, 7, 9; MS-2009 Margaret Ormsby's records - Box 1, File 3, 5; Box 3, File 3.

¹⁹¹ BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 9 File 30: *Saanich Corporation of the District of Saanich. 1965, Diamond Jubilee.* Saanich: The Review. (unpaginated brochure).

¹⁹² BCA MS-2009 Margaret Ormsby's records - BOX 3, File 7, File 3-2-15-11-4 Historic Markers: 1. Roadside panels were produced for the Department of Highways by the Archaeological Sites Advisory Board of BC. Letter of

May 23, 1978 from Bob Broadland, Chief, Heritage Administration Division, HCB to J. Hendrickson, Victoria re: Ministry of Highways, Spectralite Signs.

¹⁹³ BCA MS 1246 Islands Trust Fonds 1974-76: Box 1. Memorandum dated March 8/1976 from Provincial Archaeologist, Dept. Of Provincial Secretary, Archaeological Sites Advisory Board of Brit Columbia to Hilary Brown, Islands Trust, Ministry of Municipal Affairs.

¹⁹⁴ BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 9, File 9 – Quadra Island – 1977.

Correspondence between Joy Inglis, Quathiaska Cove, Quadra Island, on behalf of Nuyumbalees Society and R. Broadland, Historic Parks and Sites Division, Victoria.

¹⁹⁵ Sliammon Treaty Society, *Historical Timeline*.

¹⁹⁶ BCA MS 2009 - Margaret Ormsby's records - Box 1 File 2. Permit No l. 1978-17.

¹⁹⁷ Wolferstan, Pacific Yachting, 38.

¹⁹⁸ Taylor, Quadra Island: 234.

¹⁹⁹ Sliammon Treaty Society, *Historical Timeline*.

²⁰⁰ Newell, *Pacific Salmon Canning*, 123.

²⁰¹ Meggs Salmon; Newell Pacific Salmon Canning, 148.

²⁰² BCA GR-1002 BC ELUC Secretariat Originals 1972-1980, BOX 37 File: SEP Native Program. Memo dated 7 Sept 1977 from J R MacLeod, Director, SEP, Environment Canada to Steering Group members, subject: Objectives of the Native Programme.

²⁰³ Ibid: Christine Cummins et al, *Impact of the Salmonid Enhancement Program on Native People* (Vancouver: Environment Canada, Fisheries and Marine 1978), 27.

²⁰⁴ Ibid: 53-54

²⁰⁵ Newell, Pacific Salmon Canning, 147.

²⁰⁶ Newell, Pacific Salmon Canning, 149.

²⁰⁷ Newell, Pacific Salmon Canning.

4. Resource Mining by the Sea - Mining and Forestry

The resource mine, 1849-1980s

The Strait's most important resource extraction industries – mining, forestry and fishing – are discussed in the next two chapters.¹ These chapters situate a mostly familiar story about a spectacularly rich 'resource mine' in the broader context of a place where the sea was sometimes a highway and sometimes a barrier, where coastal space might be stolen or empty – depending on one's perspective, where the sea was a waste dump and where the sea and its littoral were increasingly valued recreation space.

As in other parts of North America, indigenous people had found value in more elements of the Strait's environment than did settlers after 1850. Newcomers were primarily interested in a few raw materials with rapidly growing global markets. The HBC's ocean going ships and global trade networks had allowed them to access markets for the Strait's resources. They then lost control of the export driven economy they had helped initiate, as liberal economic policy and declining ocean shipping rates spurred growth in commodity exports in the 1860s and '70s.² This phase, when growing volumes of Nanaimo coal, Burrard Inlet timber and Fraser River sockeye were already being shipped around the Pacific, might be termed the 'pre-railway commodity export economy.' Advances in transportation and rapid dispossession of the Strait's indigenous people helped set the scene for the frenetic 'resource rush' that ensued around the inland sea between the mid-1880s and WWI. It was a time of triumph for British imperialism and industrial capitalism, a rising tide of resource based prosperity.

Edward Gibson suggested that, unlike eastern Canada where colonisers were more influenced by family, churches and the military, colonisation of the Strait was dominated by institutions emphasising materialism and resource use with short-term goals.³ Gibson surmised that a lack of conservationist tradition, the settlers' apparent lack of fear at the prospect of squandering the Strait's rich resources, could be explained in part by a collective obsession with 'getting ahead.' For many people, 'getting ahead' meant working in a logging camp, in a mine, on a fish boat, in a cannery or sawmill. Men from across Europe and Asia mostly worked for industrial capitalists themselves animated by the immense promise of the Strait's resources. Capital was needed to

extract these resources but settler politicians held keys to open the doors to them. It was seldom an orderly process; Martin Robin characterised it as a "rush for spoils."⁴ By 1912, the doors were open wide and the Strait the epicentre of the greatest boom in the province's short history, built mostly on mining, lumbering and fishing and the hard labour of indigenous people and European, North American, and Asian immigrants.

The pre WWI resource boom ended several ways. A global downturn in 1913 depressed markets for all the Strait's export commodities. A slide at Hell's Gate on the Fraser caused by a construction crew blasting the path for a second transcontinental railway in 1913 devastated Sockeye runs. Haig-Brown called it "probably the greatest single disaster to a self-reproducing resource in Canadian history." ⁵ Coal was eclipsed by oil on the American west coast. And the carnage of WWI extinguished many settlers' optimism. Yet mining, and especially forestry and fishing, remained fundamentally important to the Strait's settler economy in the difficult interwar years. The Strait's natural resource wealth contributed to another boom after WWII, but was noticeably frayed at the edges by the 1980s. Mines at Britannia and Texada Island closed in the 1970s. Forestry was still the dominant resource industry but mired in crisis by the early1980s. Debate continued over the complex problems of the salmon fishery but did not stem the decline of most stocks on the inland sea. The shores of the Strait were more politically polarised than most other parts of Canada but both sides derived power from resource industries and clung to a myth of 'unlimited resources.'

Settlers' lack of long term attachments to the Strait may have contributed to their failure to respond effectively to resource depletion. While many people, as Richard White would say, knew nature through their work, this did not result in effective efforts to halt the decline of their resource industries. When an environmental movement emerged in the late 1960s, it focussed not on the systematic depletion of forest resources that had been the object of past conservationists' warnings, but instead on pulp mill pollution then on iconic remnants of 'old growth forests.'

In summary, the industries considered in these two chapters went from being fundamentally important to the nineteenth century settler economy to much less important in the final decades of the twentieth century. By then, each had gone through a period of dominance - first mining,

then fishing, then, for most of the twentieth century, the forest industry. Throughout this period, each had been closely attuned to global markets and had reflected global trends in technology and management systems. Commercial fishing and forestry on the Strait had sometimes tried to harvest more 'sustainably' but much of the time acted more like miners on a rich vein than careful stewards of sustainable resources. As resources diminished and human populations grew around the Strait, each industry experienced growing tensions with other stakeholders increasingly fearful of the impacts of the Strait's resource industries: foresters destroyed spawning streams, commercial fishers caught salmon coveted by sport fishers, and miners poisoned coastal waters with acid drainage. Other kinds of resource industry pollution and the impacts of these industries on recreation evolved from marginal issues to critical ones.

Early mining by the shore

Mining, mostly of coal and copper, was the Strait's biggest industry in the first decades of colonisation and played a decisive role in the early settler economy. These mines, and the many quarries that opened in the coming decades, were successful in large part because the water highway made them economically viable. These mines and quarries depending on easy access to the Strait's marine highway for export to both nearby and distant markets. Nanaimo's coal was first mined with indigenous labour and was being shipped to Honolulu and San Francisco Bay by the early 1850s. Discovery of more extensive coal beds stimulated rapid growth in production and Nanaimo was soon one of the Strait's largest towns. The town centre was built on tidal lagoons and flats filled with mining waste. Coal wharves dominated the waterfront and Nanaimo was shipping 25,000 tons of coal a year by the late 1850s. The HBC mines at Nanaimo was loading almost 33,000 tons a year for California alone by the mid-1860s. Completion of the Central Pacific Railway in 1868 further boosted the market for Nanaimo's high quality bituminous coal. Production grew to 80,000 tons a year by the 1870s, when Nanaimo's settler population reached a thousand.⁶

Mining of precious and base metals also began in the early years of colonisation. A short gold rush occurred on the lower Squamish River valley in 1858. A little copper was mined there as well, and on Saltspring and Lasqueti islands. Other sites on the Strait were believed to be rich in copper but prices were low, transport costly and Chilean mines closer to Atlantic markets.⁷ Iron
discovered on Texada Island generated a scandal. Victoria's Amor de Cosmos was BC's second premier in the early 1870s and his political opponents accused him of using his position to gain access to rich iron claims on Texada then launching the company's stock on London's Stock Exchange while there on provincial business. The affair brought down his government but iron mining began on Texada and continued off and on for a century.⁸

By the late nineteenth century the Dunsmuir family's success on Vancouver Island and the prospect of greater access to expanding global markets stimulated a mining boom. More coal was mined north and south of Nanaimo, at Cumberland and Ladysmith. New metal mines opened, from Mount Sicker to Vananda on Texada then Britannia on Howe Sound, with many smaller operations along the shore. Many mines had long lasting impacts on the Strait that went unnoticed for decades; toxic mine drainage flowed into the Strait long after most mines had closed. Later generations have pondered the environmental damage wrought by the Strait's mines but they were an unalloyed blessing during the resource rush. South-eastern Vancouver Island participated in the spectacular growth in global coal production, which increased a hundred fold between 1800 and 1900.⁹ Coal had become a strategic resource, in much the same way that oil did in the twentieth century. The British Navy's ability to dominate the oceans depended on its access to coal supplies and its ships patrolling the North Pacific needed the Strait's coaling stations.¹⁰

Coal dominated Vancouver Island's settler economy. Nanaimo's population neared 5,000 in the mid-1880s as coal production soared. The Dunsmuirs lived at the head of Departure Bay where they could oversee the loading of their coal. They were shipping 550,000 tons a year by 1893 to California, Oregon, Alaska, China and the Russian Far East (Illustration 43, Illustration 44). By 1900, Nanaimo's population had reached 10,000, about half the size of Vancouver.¹¹ Coal mining had also begun at Union (later called Cumberland), near Baynes Sound in the late 1860s. The operation struggled until Robert Dunsmuir acquired the mine in 1884, the same year he received the vast E & N railway land grant. By the late 1880s the Dunsmuirs' 'Union Mine' was linked by a new railway to a deep sea port on Baynes Sound. The instant town of Union Bay grew up around the wharves. The mine transformed the local economy and Cumberland became the economic centre of the Comox Valley. A geological survey led by Dr. G. M. Dawson combed the BC coast in the 1880s, searching for new coal deposits around the Strait especially.

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Illustration 43 - "Departure Bay coaling facilities" 1880s (photo: undetermined). Nanaimo coal fueled western US trains. Dunsmuir's home overlooked the bay; BC Ferries later occupied the same site.



Illustration 44 – "Nanaimo. Western Fuel Corporation Mine" ca. 1900 (photo: undetermined). Note the timber for shoring mineshafts

Dawson didn't find any exciting new prospects but others were not deterred. Over the next 25 years, miners searched for coal at many places around the Strait, from Tumbo and Saturna islands to Campbell River and Quadra Island and many places between. Gabriola Island was the scene of much excitement over prospective coal mines in the late 1880s and '90s. Local papers regularly announced promising deposits, regularly followed by disclaimers.¹² Coal output on the western shore of the Strait meanwhile continued to climb through the first decade of the twentieth century. The Dunsmuirs developed another new port town to export coal from new mines south of Nanaimo and named it Ladysmith, in honour of a rare British victory in the South African war.¹³ By 1908 \$66 million worth of coal had been extracted from the Island and remaining reserves were judged "inexhaustible." Yet barely two years later, perhaps sensing coming changes, the Dunsmuirs sold their coal mines along with vast tracts of the railway lands.¹⁴

Coal was good for the economy but metals seemed to offer the best prospects for getting rich quickly. Texada's iron deposits were mined off and on before WWI and even attracted the interest of the Rockefellers, for a while. Iron was also mined, very briefly, on Redonda Island in the early 1890s.¹⁵ It was soon clear however, that copper was the most interesting metal on the Strait (Figure 8). New opportunities emerged for copper producers by the 1880s as Montana's vast Anaconda copper mine began shipping ore to Puget Sound on the new Northern Pacific Railway. Anaconda challenged Chilean dominance of global markets and demonstrated the viability of western North America's copper producers. Technological developments, particularly the Bessemer conversion process and electrolytic refining, stimulated copper demand. Growth in electricity generation and distribution, and growing numbers of electric motors, all required the pure copper wire these new processes produced.¹⁶

Low grade copper extracted near the shore could be cheaply transported by sea. A mine was opened at Mount Sicker in the 1890s and almost 250,000 tons of ore were extracted by 1908. Smelters were built to render its ore, first at Crofton then Ladysmith (Illustration 45).¹⁷ More exciting copper finds were made further north. High grade copper mixed with gold was found near Vananda (Illustration 46), on the other side of Texada from the iron mine. By 1900 Texada had been dubbed 'Canada's most precious rock' and its north east corner along Malaspina Strait, "the richest twenty five square miles in BC," Vananda was the focal point of a heady wave of



Figure 8 - Sites of major mining and smelting activities on the Strait, 1914

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Illustration 45 - "Ladysmith; Tyee Copper Smelter" ca. 1900 (photo: undetermined).

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Illustration 46 – "Smelter at Vananda Mine, Texada Island" 1899 (photo: undetermined). Vananda's mines responded to soaring world demand for copper.

mining based excess that generated an exuberant social life. At the peak of its short boom, seven mines operated around the town which boasted a small but memorable opera house.¹⁸ Howe Sound was also transformed by copper. Two prospects on Bowen Island aroused much interest in the late 1880s and early 90s, leading to predictions the island would become the province's next big mining centre. A mine operated there for one morning but closed for good by noon and Bowen's copper boom was over.¹⁹ Copper was mined far longer at Britannia. Discovered in 1888, the Britannia property sold at the turn of the century for \$2 million. The mine was soon shipping 200 tons of rock a day to the Crofton smelter and went on to extract immense volumes of low-grade ore for seven more decades.²⁰ Prospectors staked claims to many more copper and gold deposits around the Strait in these boom decades, from Capilano River to Quadra Island. Claims were usually said to contain "copper mixed with gold', a formulation certain to boost their market value, but few mines actually opened. The few that did open - notably on Lasqueti and Quadra islands early in the twentieth century - didn't stay open long.²¹

Mining on the Strait after 1914

Mining mostly declined around the inland sea after WWI. Coal production went into steep decline after peaking in the early 1920s. By 1924 analysts predicted the Vancouver Island coal industry was doomed to extinction, unable to face competition from California's oil fields. Long the most important market, California had stopped importing Vancouver Island coal (Illustration 47) by the mid-1920s.²² Copper mining was stimulated by growth in demand during WWI but was essentially finished at Mount Sicker and Texada by the 1920s. Production expanded at the isolated Britannia mine enclave on the steep shore of Howe Sound however. Accessible only by boat, the Britannia settlement was almost wiped out by an avalanche in 1915 and a flood killed nearly a hundred more people at the new townsite in 1921. But production climbed and by the 1930s Britannia was the largest copper mine in the British Empire.

Despite rapid growth in mining globally after WWII, mining continued to diminish on most parts of the Strait. There were exceptions, such as Gillies Bay on Texada where a popular summer resort and retirement community had developed in the interwar years only to see its rustic charm evaporate overnight when a new iron mine began operating there in 1952. After exporting almost a million and a half tons of ore over the 1950s and 60s, mostly to Japan, the mine closed in the 1970s leaving behind a ghost town once again contemplating becoming a resort and retirement

destination.²³ The Britannia Mine, still western Canada's largest copper producer after WWII, experienced growing difficulties as the ore ran out and the mine closed for good in 1974. By then the mine had produced an estimated forty million metric tons of tailings, much of them either dumped directly into Howe Sound or used as fill around Britannia Beach. The property's new owners began to explore opportunities for shoreline real estate development while they worked with Victoria and Ottawa to remediate the mine's toxic legacy. By 1980 it was recognized as one of the continent's largest sources of heavy metal pollution, leaching toxic copper and zinc into Britannia Creek and Howe Sound.²⁴ The province meanwhile had opened a Museum of Mining in Britannia in 1975, depicting the industry in a very favourable light.²⁵



Illustration 47 - "Union Bay Coal Washer" 1920s (photo: undetermined). Nearing the end of Vancouver Island's coal boom; the waste rock still contaminates Baynes Sound in the 21st century

In an overview of coastal BC he prepared in the early 1960s, Haig-Brown suggested it was "by no means unlikely that another major producer (like Britannia) remains to be found somewhere in the unexplored immensity of the Coast Range." ²⁶ He may not have suspected the next major copper deposit would be discovered a couple of kilometers away on Gambier Island. A mining company with rights to rich copper and molybdenum deposits underlying much of Gambier announced in the late 1970s that they planned to extract 250 million tons of ore from their island property. The Gambier proposal was not welcomed by locals, mostly cottagers from Vancouver. A local history described it instead as "the gravest threat in the island's history." The project would cover two thirds of the island, with an open pit mine 300 meters deep and several dams

and tailing ponds. Blasting of 90 thousand tons of rock a day would generate vast storage piles. Ore storage and transport facilities and a bulk loading port would be built and their operation would create a cloud of fine dust over the island. The mine, said its proponents, would be floodlit at night so it could operate around the clock. The proposal was in line with BC's Mineral Act, which permitted this sort of development on Crown Land. It was drastically at odds however with the island's own land use plan. It clashed as well with the recently created Islands Trust, which now included Gambier Island. After a bitter five year struggle, the company eventually abandoned the proposal.²⁷ In this instance at least, the Strait's role as recreation space prevailed over the narrative of the resource mine.

Mining the forests of the Strait

Britain was a key player in global timber markets by the late eighteenth century. Lumber, especially for ship construction, had become an indispensable commodity, moved by sea across ever greater distances in the early nineteenth century as demand and local deforestation increased in many locations.²⁸ Boat builders' demand for wood declined later in the century as other uses – especially for house construction and railway ties – ensured demand continued to grow. By the latter half of nineteenth century, the Strait's wood had become a commodity in this rapidly growing global market. The forests of the inland sea remained the heart of the BC's forest industry well into the twentieth century, partly because of the great value of its temperate coastal forests, partly because of the ease with which this timber could be moved to shoreline mills and lumber and paper exported from them, and partly because of the Strait's ability to absorb vast volumes of untreated waste with little apparent ill effect.

The HBC built sawmills at Victoria in 1848 and a few years later in Nanaimo. The mills were small, employed indigenous workers and made few inroads on the Island's forests.²⁹ Their dispatches alerted the British Colonial Office to the immense untapped forest resources. According to Douglas, it was a land of "…inexhaustible forests of the finest fir timber in the world… which (together with its valuable fisheries) will become a source of boundless wealth to its inhabitants at some future time."³⁰ A decade later, colonial planners in London noted "The principle timber… grow to a gigantic size."³¹ For early settlers intent on farming, these trees were often more a nuisance than an asset and commercial logging remained very small scale. In 1865 the Crown began to grant timber leases.³² Prior to this, timber could legally be cut only on the

logger's own land but now commercial lumbering on leased land could spread quickly around the Strait. Cail suggested the only thing preventing vast tracts of coastal timber from "falling into private hands" in these early years was lack of interest among US buyers.³³ Burrard Inlet mills were shipping "several hundred thousand feet per month" to the Bay area by the early 1860s. Coastal forests were virtually given to lumbermen in the 1860s. The Moody Sawmill paid 2 ¹/₂ cents per hectare for more than forty square kilometers of timber lands on Burrard Inlet. According to Cail, the province was glad to grant leases at these prices, to ensure local lumber needs were met. The inlet had an early advantage because of its sheltered deep water port with heavily timbered slopes behind. By 1863, the Moodyville mill was sawing 40,000 'board feet' of lumber a day. A mill soon opened at Hastings Mill on the south side of the inlet, and by 1868 the two produced close to ten million board feet of lumber a year, as well as a million shingles and two thousand spars for sailing ships.³⁴ The *Colonist* was often critical of Victoria's mainland competition but in 1868 it crowed that Burrard Inlet lumber was "already so highly esteemed at San Francisco as to bring \$2.50 more per thousand feet than Puget Sound lumber."³⁵ Until the 1880s, most of the Strait's timber exports came from the inlet. Yet Burrard Inlet mills were already drawing timber from other places along the eastern shore as early as the 1870s. The Moodyville mill leased timber land on the lower Squamish River in 1870.³⁶ Others began logging in Howe Sound, where all nine settlers on the 1875 voters list were 'lumbermen.' By the time others arrived to settle at Gibson's Landing in the mid-1880s, loggers had already cleared the trees. ³⁷ Indigenous communities at Sechelt, Sliammon and Cortes Island were all logging and assembling booms for towing to mills in the southern Strait by the mid-1870s. Small logging operations appeared on the steep shores of Jervis Inlet and Desolation Sound as well. By the early 1880s Burrard Inlet and New Westminster sawmills were transforming timber from almost every shore of the Strait, and shipping it around the Pacific.³⁸

Settlers clearing land for farming on the Vancouver Island shore were soon able to sell timber to local sawmills. Mills opened at Chemainus in 1862 and near Comox in 1877. By the mid-1880s, many small sawmills on the east coast of the Island were supplying local demand and sending logs to more distant mills further south on the Island; logging was now a major part of the Island's economy. In the same way the historical record is full of 'pre-emption stories', it abounds with stories of early loggers who came ashore and made their fortune.³⁹

In these early decades of lumbering on the Strait, the only practical way to move giant logs any distance was by water. The region lacked the broad flat rivers that eased log extraction in eastern North America. The Strait itself played this role instead. Yet even with copious amounts of dogfish oil applied to skid roads and a team of stout oxen (Illustration 48), it was not easy to pull immense, rough barked logs to the sea and logging was usually restricted to the first few hundred metres from the shore. Harvesting these trees with axes or large hand saws then hauling timber to the shoreline was laborious and dangerous. At tidewater they were bucked into smaller logs and stored until there were enough to make a boom that could be towed to a sawmill.

Already expanding when the CPR reached Burrard Inlet, the Strait forest industry grew rapidly in the three decades that followed. Between 1871 and 1911, the number of sawmills in the province increased almost tenfold, from 27 to 224; the work force in forestry grew from under 400 to over 15,000. Most of these were around the inland sea and Burrard Inlet had the greatest concentration, with nine large mills operating by 1890. The mills at Moodyville and Hastings Mills alone were producing over forty million board feet a year, a third of the overall production of the province.⁴⁰

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Illustration 48 – "Logging at Jericho near Vancouver" undated (photo: undetermined). The area later became one of Vancouver's most popular beach parks

Most forests around the inland sea had still not been touched by industrial forestry in 1880. Contemporary observers still regretted that the Strait's agricultural potential was so limited by these very large trees. The situation changed dramatically when the province introduced a new timber licensing system and the forest industry began increasing its harvest by investing in new technologies.⁴¹ Under the licensing system introduced in 1884, "the majestic timber stands of Vancouver Island and the coast of the mainland were ... disposed of in large tracts on easy terms to all comers for over thirty years..."42 As logging gathered momentum around the Strait and provincial regulations loosened, an increasing number of places were occupied ephemerally by loggers with no pretence of aiming to farm them. Announcements of timber licenses in the "Colonist" revealed much about the scale and nature of the settlers' use for Strait's forests. In 1889, John Glover gave notice of intent to apply for licences on about forty square kilometers of land "for timbering purposes" on Sechelt's North West Bay, Thormanby Island, the shore of Malaspina Strait by the Sliammon Reserve, by Squirrel Cove Reserve and other parts of Cortes Island and on Valdes (i.e., Quadra) Island near the Cape Mudge and Drew Harbour Reserves.⁴³ The locations of Glover's claims suggest he may have aimed to use a lot of indigenous labour. Perhaps such large tracts of timber had become available beside new reserves after resolution of earlier uncertainties about reserve boundaries.

Timber licensing continued as harvesting technologies evolved. A dozen years later a Mr. Emerson leased around thirty-five square kilometers of timber on the waterfront of Nelson and Hardy Islands at the mouth of Jervis Inlet along Howe Sound and elsewhere along the Strait. Emerson announced his intention to start logging immediately with over a hundred men and four big donkey engines.⁴⁴ The rapid dispossession of the Strait's indigenous people was based on the premise they were not 'using the land', not making it bear fruit the way European settlers could. Now the settlers were building much of their economy on logging that was difficult to construe as 'adding value' to land, unless this land was going to be farmed or built upon after it was logged, which it seldom was. Instead, most forests were essentially being mined - logged and abandoned - leaving behind mostly infertile forest land that was usually worthless for decades to come. Early in the 1900s, with distant investors buying up many timber licences, Victoria took greater notice of the value of its timber. A provincial Royal Commission on Timber and Forestry in 1907 - by which time 3.6 million hectares of forest land had been leased - spoke warily of the "insatiable nature of the continental demand for standing timber." In 1912, the province established what Cail praised forty years later as "the best method yet devised": timber sales by public auction with control of the land retained by the provincial government.⁴⁵ Richard Rajala has described the transformation in the forest sectors of coastal BC, Washington and Oregon in those years as an 'industrial revolution.'⁴⁶ This revolution comprised, among other things, much larger scale logging and milling as well as the greater integration of the regional industry into continental networks. Interest in west coast forests grew as eastern North America's timber supply diminished. Between 1890 and 1910 American lumbermen cruised virtually every accessible forest around the Strait, and elsewhere in the province.⁴⁷ Eastern industrialists' surging interest in west coast forests was accompanied by capital investments, which soared from barely \$2 million at the turn of the century to a \$150 million by 1913; well over half of this from American investors.⁴⁸ This investment financed the technological dimension of Rajala's 'industrial revolution.'

The province promoted the development of lumber exports, rebating royalties for lumber shipped outside BC. Exports to the rest of North America grew rapidly after the arrival of the railway. New North American markets led to qualitative changes in exports. Cedar shingles, mostly from the shores of the Strait, were an important export to eastern markets. BC was supplying half of Canada's shingles by 1908; eighty percent by 1921. Exports outside North America were relatively less important than before the railway but remained significant. The *Colonist* reported in 1898 that mills around the southern Strait were still exporting to South Africa, Australia, East Asia and Europe.⁴⁹ The CPR greatly improved the access of the Strait's mills to distant markets. Their growing dependence on North American markets in turn resulted in greater instability. Eastern markets rose and fell with the continental economy, resulting in chronic, cyclical problems of 'excess capacity' in the Strait's forest industry. Victoria faced periodic pressure from loggers who cut more logs than they could sell to local mills and sought permission to export their surplus to American sawyers across the border. The province refused, sternly enforcing its prohibition of raw log exports and launching patrol boats on the Strait in search of miscreants.⁵⁰

The widespread adoption of steam powered winches or 'donkey engines' then steam railways contributed significantly to the industry's cyclical overproduction problems. In the 1880s almost all logging was still being done close to shore with oxen or horses hauling logs over 'skid roads.' Such logging was necessarily selective, with only the most valuable trees, though many others were damaged in the process. Larger operations on the Strait had begun using donkey engines to extract logs by 1900 though many smaller operators still logged with animals. Donkey engines greatly boosted productivity and transformed operations by allowing them to move further inland. The revolution in the forest then proceeded rapidly. Logging railways were introduced shortly afterwards and consolidated the move to larger scale harvesting on both sides of the Strait. The larger companies built many railways, using them to move timber down to the shore well into the twentieth century. By facilitating harvest of higher altitude stands as wood supplies along the shore were exhausted, these technologies helped ensure the forest industry remained concentrated on the Strait longer than it would have otherwise.⁵¹

Although small sawmills proliferated, overall milling capacity became concentrated at a few sites on the southern Strait. The large mill at Chemainus was cutting a half million board feet a day by 1890. The owner, John Humbird, was a lumberman from the American Great Lakes region. As did other entrepreneurs moving into the rich forests of the Strait's western shore, Humbird made a deal with the Dunsmuirs. He bought 400 square kilometres of their forest land close to Chemainus and in the Comox Valley, agreeing to build a sawmill for the export market at Chemainus (Illustration 49 and Illustration 50).⁵² Other distant capitalists bought Dunsmuir forests; John Rockefeller and Andrew Carnegie both eventually visited Chemainus to sell their own forest lands to the Humbird mill.⁵³ Around the turn of the century, with Cowichan forests depleted, Chemainus became more dependent on Comox Valley timber. Humbird owned 200 square kilometers of forests there and began building railways to extract it. Small operations were already cutting timber along the seashore and up the river banks around Comox. Logging expanded greatly when larger companies began to play a more dominant role in the early 1900s, towing most of the harvest to southern mills. By WWI the Canadian Western Lumber Company was the largest lumber company in the province. They had assembled an impressive collection of forest resources, railways, tugboats and sawmills and controlled a vast expanse of high quality even-aged Douglas fir stands stretching along the coastal plain between Comox and Campbell

River. Their wood supplied their Fraser Mills plant in New Westminster, now the second largest sawmill in the world.⁵⁴ Their logging was increasingly capital intensive, with railways following the receding timber up the hillsides.⁵⁵



Illustration 49 - "Chemainus Sawmill. Loading lumber on a ship" 1890s (photo: undetermined).



Illustration 50 – "Chemainus Sawmill" 1895 (photo: undetermined). John Rockefeller and Andrew Carnegie eventually sold their Vancouver Island timber land to the Chemainus sawmillers.

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The Burrard Inlet mills, as well as those at Chemainus and New Westminster, now had to scour the coast in search of wood. As early as 1888, the *Colonist* was reporting logging had ceased on Burrard Inlet. All large mills, they said, were now bringing their timber from between eighty and two hundred kilometers away.⁵⁶ Logging spread quickly along the mainland shore north of Burrard Inlet starting in the 1880s. Unlike places on Vancouver Island where settler farmers turned to lumbering to increase their income, many settler places on the mainland coast and northern islands were first inhabited, albeit briefly, by loggers.⁵⁷ Many loggers in those years lived transient, uncomfortable lives and did extremely dangerous work felling and pulling massive trees off steep slopes. Others were able to combine logging with relatively sedentary lifestyles. Many settlers around the Strait came to depend on logging for their well-being and many turned from farming to more lucrative careers in logging or mills.⁵⁸

Pulp and paper mills began appearing on the Strait in the final years before WWI, another dimension of the 'industrial revolution' in forestry. The technology was anticipated long before it began operations. Leases for cutting hemlock – judged unsuitable for lumber - were first granted in 1891. In 1900 the province announced plans to encourage pulp manufacturing through legislation and regulations governing their hydro power generation. The following year 21 year leases became available for cutting pulp wood, at five cents per hectare and fifteen cents per cord (3.62 cubic meters). Four leases were then let, covering 140,000 hectares.⁵⁹ The Strait's biggest pulp and paper mill was built at the mouth of the short, steep Powell River. Dawson's geological survey of the Strait later that decade noted the presence of several large lakes with a short river spilling from the lake into the nearby sea.⁶⁰ The place was ideal for a pulp and paper mill copious water, enough head to generate electricity and hundreds of square kilometres of forest near the shore. For a decade after the introduction of pulp wood leases, the Powell River area remained like other parts of the coast – a place where loggers, hunters, fishermen, tourists and 'stump ranchers' coexisted. This changed with the construction of an 'instant town.' Like Macondo in Garcia Marquez's Hundred Years of Solitude, Powell River appeared suddenly beside the water, a new place where 'nobody had died', the indigenous presence only a phantom. The indigenous village on the river now named for Israel Powell had been replaced by employees' houses, roads, a power plant, wharves and four paper making machines, all in less than two years. The Powell River Company had shipped its first 17,000 tons of newsprint by the end of 1912. Their machines could take advantage of widespread stands of hemlock on the

Strait's wetter slopes that made excellent paper.⁶¹ By 1913, more than a thousand loggers worked in the woods around Powell River. The mill worked day and night, seven days a week, giving this stretch of shore a different feel from the rest. This industrial complex was welcomed by many neighbours. It was a good market for farmers' produce and loggers' timber and offered urban amenities 170 kilometers closer than Vancouver. The pungent odour of sulphite pulp making was only very noticeable if one was downwind. Smaller sulphite mills built on Howe Sound in the same period had similar mixed effects on their neighbours.⁶²

The Strait's early forest industry generated a great deal of waste. Until donkey engines began facilitating log extraction, many millions of board feet of good timber were left in the woods, burned in vast pyres that easily spread out of control. Diaries and newspaper reports at the end of the nineteenth century are full of reports of fires raging out of control and smoke cloaking the Strait throughout the summer.⁶³ Destructive and wasteful logging practices began to attract criticism. *Woodsmen of the West*, a novel of the period, described logging around the sea variously as "mining" and "butchery."⁶⁴ Its author, Martin Grainger, went on to act as secretary of the province's first Royal Commission of Inquiry into Timber and Forestry. Their report gave rise to a provincial Forest Act in 1912 and a Forestry Service was created to enforce it. The act mostly focused on fire control and improving methods for log scaling. Little was done about the industry's assault on the forests that had so upset Grainger. Damage to spawning streams used for skidding logs or buried under slash, and the erosion of deforested soils by torrential winter rains, continued unabated.⁶⁵

The Strait's forest industry expanded most rapidly in the decade after 1900. Revenues from the forests and mills bolstered Victoria's finances⁶⁶ while sawmills or logging were the economic backbone of many settler communities, including Vancouver. The province's new Chief Forester, H. R. MacMillan, declared in 1914 that the industry was now the province's key sector. He confirmed the future was bright because half the province was still covered in high value first growth forest. About 8% of that forest had been logged, most of it around the Strait.⁶⁷

Sustained by forestry in the interwar years

Forests remained the Strait's most valuable resource after WWI and the process of liquidating old growth forests around the inland sea developed its own mythology. John Barrow and others

fed the myths with documentary films depicting logging on its shores. The Strait was alive with log booms being towed to mills and ships loading lumber and paper. The Panama Canal had made coastal lumber more competitive in eastern US markets.⁶⁸ Many communities were now heavily dependent on the forest for their survival, nowhere more than Powell River, now one of the Strait's major centers of railway logging with more than 20 locomotives pulling 300 cars over 160 kilometers of track. The town's population grew from around two thousand in 1921 to eight thousand in 1941. Local timber supplies were approaching exhaustion by the 1940s.⁶⁹ The Comox Valley was almost as dependent on forestry in the interwar years. According to Mackie, the valley was still "...the Garden of Eden for loggers... almost solid fir, flat terrain, dense stands, five foot fir on the stump." The main actor in the local industry was still Canadian Western. Along with other large operations around the Strait, Canadian Western was "hell bent on harvesting the low lying accessible old growth." Its subsidiary, Comox Logging and Railway, did the logging and their towboat company moved their logs across the Strait to be milled at their vast Fraser Mills operation.⁷⁰

Rapid expansion of forest harvesting stimulated growing concern about forest depletion. The Royal Commission on Forestry before WWI had focused mostly on the forests around the inland sea, where the industry was concentrated, and recommended the province look upon its timber royalties not just as revenue but also as capital depletion in the forests. The commissioners suggested public money earned from forestry should not pass into general revenues until sufficient funds were reinvested to ensure future forest productivity. They called for firm government control over harvesting methods. Looking back thirty years later, Haig-Brown reported "…these findings have been utterly disregarded."⁷¹ Though a Forest Act was passed in 1912, forest management had remained a low priority for subsequent provincial governments. The first tree nurseries were developed in the 1920s and some reforestation began in the 1930s.⁷² Yet Haig-Brown painted an alarming picture of the state of the forests in the early 1940s:

In the depression years the average man in British Columbia had time to think about his province... [and] good cause to think hard and searchingly ... of what the future of that province held for him... he looked first of all and hardest at the lumber industry. There was nothing in what he saw to give him satisfaction. He saw a giant industry, using most powerful methods that were obviously wasteful not only of present but of future timbers stocks... thousands upon thousands of acres ... that had borne heavy timber ... now unproductive ... in the tremendous Douglas fir and cedar and hemlock stands of Vancouver Island and the Lower Mainland, there was no sure future.⁷³

Haig-Brown reported that the public began expressing widespread concern about degraded forests in the 1930s, "through boards of trade, in the press, at community meetings ... [and] social organizations." The province ignored these signs until the late 1930s when the Department of Lands published an account of its forest resources.⁷⁴ The report, said Haig-Brown, presented a "terrifyingly full confirmation of the worst nightmares of public opinion." He chastised the Ministry of Lands for their disappointing response to this report. But the province's Chief Forester, E. C. Manning, was mobilized by it. Manning, said Haig-Brown, was

... that very rare individual, an inspired civil servant... [he] saw that an industry so vast, wreaking such tremendous physical changes on the face of the land, must inevitably affect adversely other industries such as fishing, agriculture, the tourist trade and anything that depended upon a natural resource, whether that resource was soil, water, fish, game, fur or scenery.⁷⁵

Rather than "firm control" of logging, Manning perceived that there was little or no government control, estimating that something like 60% of the forests logged by the late 1930s would remain barren or under stocked far into the future. Virtually all forests were being cut far beyond their "sustained yield capacity." Douglas fir stands around the inland sea were by far the province's most valuable resources (Illustration 51) and they were going to be seriously depleted by the 1950s. Despite initial opposition from the forest industry, Manning succeeded in introducing a



Illustration 51 – "Logging operations at the Bluebird Mill; Qualicum"1918 (photo: undetermined). Part of the transition to more capital intensive forest harvesting. Such old growth Douglas fir logs were the province's best timber.

number of forest management improvements, particularly in the Douglas fir stands on the Vancouver Island shore of the Strait. Manning aimed to improve fire protection and logging methods, and enhance regeneration after logging.⁷⁶ The industry soon came around to supporting this approach. Haig-Brown described it as "…inadequate even in the (limited) areas to which it (was) applied… but still the greatest step towards forest conservation in the history of the province." ⁷⁷

Then WWII broke out and forest harvesting increased. Cut levels already judged far in excess of regeneration rates increased significantly in the early 1940s, to support the war effort. For Haig-Brown, despite a modicum of new regulation, logging methods remained "…haphazard and extravagant and ill conceived."⁷⁸ E. C. Manning was killed in a plane crash in 1941. Two years later another Royal Commission on forestry – known as the Sloan Commission - was appointed to address growing fears of timber shortages and large forestry companies' demands for improved security of tenure. The Sloan Commission recommended "sustained yield" forest management,

wherein an "annual allowable cut" of timber would be established based on the estimated growth rate of the forest.⁷⁹ Unlike many commissions, the Sloan Commission was highly influential, though implementation of their recommendations still did not result in a 'sustained yield.'

Forest harvesting technologies had advanced much faster than forest management practices. Overhead logging and logging railways had produced vast clear cuts in valley bottoms. Immense expanses were denuded and left without contiguous sources of seed. This resulted in extensive areas, particularly in the Strait's Douglas fir forests, where natural forest regeneration was failing by the 1920s. Then, in the late 1920s, bulldozers and logging trucks moved logging further up hillsides onto steeper, previously inaccessible slopes. The result was increased damage to streams and steep, unstable upper watersheds.⁸⁰ Improved tree harvesting technologies also created greater volumes of 'waste wood' left behind in the forest. Paper mills on the mainland shore could now use some of this waste but none were built on the Vancouver Island side of the Strait until after WWII. The waste that most worried contemporary observers was fuelling the fires raging through the summer around the sea. Some fires – on Malaspina Peninsula in 1918 and in Comox Valley in 1922 and 1938 – were huge and became the stuff of local legend. But smaller fires, often set by loggers and fuelled by their waste, burned out of control every year. People complained of the smoke summer after summer. A fire raged out of control for weeks between Campbell River and Courtenay in 1938, threatening both towns, burned over 300 square kilometers of forest and destroyed millions of board feet of timber⁸¹ while more than 2.000 firefighters struggled to keep it under control. On his summer cruise on the Strait, Francis Barrow complained the smoke was ruining his photography. Ash spread as far as Victoria and 'fog' all the way to Portland. Haig-Brown, more inclined than the forest industry to worry about other stakeholders, called for reforestation of the worst affected areas, claiming that "taxes on tourist revenues of the future would far more than cover the costs of replanting."⁸²

To many, pulp and paper production was the ideal solution to the forest industry's profligate waste. The Powell River mill expanded rapidly in the 1920s. Canada had become the world's largest newsprint producer by 1939 and by 1944, with war raging, accounted for half of global newsprint production. Powell River's had become the largest pulp and paper mill in the world, loading 200,000 tons of product every year onto the freighters now arriving at their wharf at a rate of one every two days. Powell River's wood supply now came from far beyond the Strait.⁸³

Forestry boom and bust after 1945

Many places on the Strait remained heavily dependent on logging after 1945. Places such as Lasqueti Island that hadn't been much logged earlier due to inferior timber, were now harvested more intensively as their wood became more marketable.⁸⁴ Previously inaccessible stands were easier to exploit with truck logging technology. The forests on rugged Texada Island supported almost thirty truck logging operations in the late 1940s; only half remained by the mid-1950s, but were still shipping out fifteen million board feet a year.⁸⁵ Frederick Marsh noted the central role of logging on some southern islands in the late 1940s where newly arrived loggers occupied cabins built earlier by farmers and descendents of settlers fell back on logging as other sources of income dried up. Some island loggers, tired of being condemned by their neighbours for "ruining the beautiful islands," began planning subdivisions instead.⁸⁶

On the mainland and Vancouver Island, the forest industry was increasingly dominated by large integrated firms. They expanded their control of wood supplies and invested heavily in new pulp and paper technology that could absorb everything from sawdust to trees. BC's large mills remained concentrated around the inland sea into the 1960s (Figure 9), even as local wood supplies diminished. Raw wood and fibre could easily be shipped into these mills from forests further north, and their lumber, pulp and paper products easily shipped out. The Powell River mill was taken over by forestry giant MacMillan Bloedel in the 1950s and remained the Strait's largest industrial complex. By then their ten paper making machines were producing over 250,000 tons of newsprint a year and the mill employed close to 2,000 workers. The town's population rose from around 8,000 in the late 1940s to a peak of 20,000 in 1980.⁸⁷ Pulp and paper plants now transformed the economic geography and atmospheric conditions of the Cowichan Valley, Nanaimo and Campbell River as well. Haig-Brown, offended by the pollution from the new Campbell River mill, wondered how much its emissions were affecting the health of local citizens and forests.⁸⁸ These new mills had again been located at sites where they could take in vast quantities of fresh water then dispose of similar volumes of liquid waste in the sea. Producing a single ton of pulp required up to 250,000 litres of fresh water, mostly for debarking logs or cooling. A mill producing 500 tons of pulp a day might consume over ninety million litres of fresh water in the process. Not surprisingly the mills were responsible for considerable local marine pollution.⁸⁹



Figure 9 – Pulp and paper mills on the Strait in 1960, using waste wood and producing much liquid waste

The growing importance of these large mills was part of a broader trend towards corporate concentration in the Strait's forest industry. Smaller logging and milling operations were being

excluded from the industry by the 1950s. Larger, integrated firms could better build and operate large mills and manage the large 'Tree Farm Licences' now being offered by the province.⁹⁰ This reflected BC's evolution as a 'client state of industrial capitalism' described by Rajala.⁹¹ With Victoria highly dependent on revenue from the profits of these large firms, the government often equated the interests of these industry leaders with the public interest.⁹² This helps explain Victoria's habitually timid responses to growing evidence of forest depletion and the mills' pollution of marine environments and logging damage to salmon streams.

Technological change paralleled the structural transitions of the industry. Roads and trucks had replaced logging railways, which rapidly became part of the Strait's 'logging heritage.' Repainted old logging locomotives now graced seaside parks from Vancouver to Courtenay. Large plants that transformed wood into plywood and various types of pulp and paper were more economically viable than simple sawmills. 'Waste wood' and sawdust previously burned on site or sold as domestic fuel were more likely to be turned into paper. Most loggers had previously worked out of bunkhouses but by the 1950s many commuted by road from nearby towns and moved highly mobile equipment rapidly from one logging site to the next.⁹³

Improved artificial regeneration of tree seedlings allowed the industry to neglect their need to improve logging practices, They were convinced that any logged area could now be easily replanted.⁹⁴ This growing emphasis on re-planted forests is one way that industrial forestry's evolution was remarkably similar to that of the fishery. They shared a search for 'efficient production,' often despite scientific misgivings about the real, longer term efficiency of these approaches. Where the fishery couldn't resist the allure of the fish culture panacea, forestry embraced planted forests. In both cases, fears of losing a valuable resource through systematic over harvesting were assuaged by assurances of a virtually infinite capacity for artificial regeneration. In the woods, this new vision called for transforming "static and wasting wilderness" (i.e., old growth forests) into "ordered ranks of flourishing young trees... a succession of cultivated forest crops more abundant and gainful than Nature could ever produce."⁹⁵ Such a vision of orderly, productive, re-planted forests provided a fig leaf for logging that continued to be profligate and destructive around the Strait through these decades.

Technologies used on the Strait from the 1940s to 1980s did little to mitigate the forest industry's impacts on other stakeholders or halt the depletion of forest resources. Worries about forest depletion in the 1930s had been swamped by the war effort of the early 1940s. After 1945 these concerns were largely swept aside again, this time by the enthusiastic post war boom. Haig-Brown reported in the 1960s that the "best of the sawmill timber" had been "stripped away" from the Strait, leaving the industry to earn revenues from plywood and fiber produced from second rate timber. With the province's annual timber cut up to over 27 million cubic meters and having already "borne the burden of heavy cutting for over half a century," the more accessible forests around the inland sea were under "excessive strain." The sea's Douglas fir stands that had been the great wealth of the industry, were now "a thing of the past" though there were still impressive stands of cedar, hemlock and 'balsam' fir on some mainland shores and, especially, beyond the northern limits of the Strait. Deforestation was particularly thorough on the Vancouver Island shore, partly due to the 'railway lands' that had been owned outright by the forest companies and less constrained by provincial regulation. By the 1970s they were the site of some of the world's largest clear cuts.⁹⁶

The depletion of the Strait's forests continued more or less unabated through these years, with harvesting rates diminished not by conservation but by occasional market downturns. A short lived interlude of social democratic government in the 1970s did little to interrupt the industry's prerogatives. Despite another bout of rhetoric about sustained yields, the province's overall forest harvest increased from 150,000 hectares in the late 1970s to 225,000 ten years later.⁹⁷ Forests around the Strait contributed a steadily declining portion of this 'cut' as the industry shifted its focus to poorer interior stands. This headlong rush to consume a rich renewable resource as fast as possible has been widely commented on. The title of Patricia Marchak's Green Gold alluded to its resemblance to a mining operation.⁹⁸ It was also similar to a South American phenomenon in those decades. In Brazil they called it "imediatismo." The opposite of "senso comun" or common sense, imediatismo described a tendency to seek immediate satisfaction of all needs and desires with no thought for the future. In Brazil it was largely driven by runaway inflation. You may as well spend whatever you have today because it will be worth less tomorrow and virtually nothing next week. Latin American style runaway inflation was not a problem on the Strait. Yet there was a pervasive lack of faith in the future; some may have feared the forest resources so suddenly 'inherited' by settlers might be lost as summarily as they

were bestowed. Few seemed concerned about the kind of forests that future generations would inherit. Victoria's resource economists could justify this exhaustion of what had seemed an inexhaustible resource by suggesting this was normal. The capital embodied in the forest, they said, could be converted into different kinds of capital that would be used to build the future post-resource economy. The formula proved imperfect for many forestry dependent communities around the Strait where well paid jobs disappeared in the final decades of the century, replaced by lower paying service sector jobs or unemployment.

Roger Hayter and Trevor Barnes characterised the Strait's post war 'mill towns' – places like Crofton, Chemainus, Nanaimo, Powell River and Campbell River - as communities grown complacent due to a 'Fordist wage bargain' struck between well paid unionised workers and the forest industry.⁹⁹ The deal was largely built on the affluence assured by a rich supply of timber and fibre from coastal forests. Global market and technological conditions were changing rapidly as this supply faltered in the 1970s.The deep economic downturn of the early 1980s hit the coastal forest industry particularly hard, ending its 'Fordist' era.

Despite steady depletion of the Strait's forests, the government's policy throughout this period had been "sustained yield forestry." This had been paired with a forest tenure system that ceded control over public forests to long term licence holders expected to raise the capital necessary to carry out their "sustained yield logging." C. D. Orchard had envisioned this approach would lead to a merger of public and private interests. Rajala suggested this vision was fanciful and 'sustained yield' mostly a rhetorical flourish overlaying profitable and unsustainable harvesting practices while the province lacked the staff needed to control the pace or quality of logging.¹⁰⁰ Sustained yield forestry worked in theory - as did many well-meaning conservation policies but seldom lived up to its aspirations in practice. There was confusion from the outset about how it would be implemented, how to calculate the volumes of mature timber used to set the 'annual allowable cut', or how to accommodate the variable economic values of forests. Wilson suggested an atmosphere of complacency prevailing in the post war decades allowed provincial officials much latitude in their interpretation of this policy when faced with political pressure to maximize cuts.¹⁰¹ Collaboration between the Forest Minister in BC's first Social Credit government, Charles Sommers, and a private sector forester, C.D. Schultz has been described by Rajala, ¹⁰² who cited their approach to 'sustained yield forestry' in the Cowichan Valley as an

example of the remarkable 'flexibility' of the new system. He stopped there but could have used the same two actors to illustrate the corruption of BC's forest management in this brave new world of 'public sustained yield units.' Sommers' Social Credit party had come to power promising to eliminate the corruption of the province's 1940s coalition governments. Yet he would be the first cabinet minister in the British Empire to go to prison, convicted of accepting bribes in exchange for forest licenses issued to Schultz's firm.¹⁰³

Non-government critics of the province's forestry policy focused increasingly on the 'preservation of wilderness' after Haig-Brown's death in 1976. By 'wilderness' they meant old growth forest, and this put them on a collision course with Victoria's 'sustained yield forestry' policy, essentially a strategy for progressive harvesting of all old growth stands. There were very few old growth stands around the Strait by the 1980s when Victoria and NGOs became locked in a 'war in the woods.' This struggle unfolded mostly around isolated old growth forests beyond the inland sea, particularly on the west side of Vancouver Island. Debate over how to manage forests around the Strait had a lower public profile but could still be highly contentious. A key issue was growing demand to convert forest land into building lots for cottages and retirement homes. Forestry companies owned large blocks of island forest that could turn huge profits if rezoned into residential land. Weldwood owned much of Gabriola and Denman islands and MacMillan Bloedel, much of Galiano, where 70% of the land was now under forest company control. These large holdings helped explain the Islands Trust's cautious embrace of forestry. Created in the 1974s to preserve the 'unique character' of many islands in the Strait, the Trust aimed to make it as difficult as possible for the companies to convert their land to subdivisions that might threaten this character.¹⁰⁴

While they contemplated cashing in on a recreational land boom on the southern Strait, the forest companies clashed with recreational activities further north. It was not a 'war in the woods' but a low intensity 'war on the water' that focused mostly on log booms (Illustration 52). One battle was fought at Quadra Island's Gowlland Harbour in the mid-1960s. Local residents complained

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Illustration 52 – "New Westminster sawmill. Canadian White Pine Company" 1947 (photo: BC Govt). The vast complex of sawmills around New West depended on logs towed in from around the Strait and beyond.

bitterly that the nearby pulp mill was taking more and more of their waterfront for log storage. A letter from a local citizen to the province's Superintendent of Lands summarised their concerns:

(booms are)... gradually making an incursion not only at the expense of the residents, but... operators of yachts and fishing vessels who use the Gowlland Harbour anchorage... the only harbour in Discovery Passage secure for small as well as large craft in any wind... 225 children receive swimming, boating and water skiing instruction in this area every summer... any further concessions for log storage... will destroy this recreational value... The roar of the high speed engines in the small tugs day and night, the destruction of the boat anchorage and booms of logs moored to the shore and in the channel will definitely reduce the value of waterfront property in the area...¹⁰⁵

The mill's response reflected the self-assurance of the forest industry in those years. They pointed out the population of Campbell River had increased from 2,500 to 7,500 since the mill opened. Close to 1,100 people, or about half the town's working population, worked at the mill. Log storage areas needed to be close to the mill, protected from wind and tide and the mill needed more log storage space. So, naturally, it needed to use more of Gowlland Harbour.¹⁰⁶ The

Superintendant of Lands declined to allow the company most of the new area they sought around Gowlland Bay but allowed them to keep the substantial area they were already using for booming.¹⁰⁷ The province had begun to pay close attention to these conflicts because they were now interested in the possibility of establishing small marine parks on the same protected stretches of coastline. These conflicts were exacerbated by the fact that both parties needed this marine space mostly in the summer.

From center stage to senescence

The forest industry was the dominant economic sector on the Strait in 1945 but was in steep decline four decades later, its production forests much diminished on all shores. Conservationists' warnings had been ignored and their long standing fear of squandering one of the world's richest forest resources had been realised. The industry's looming senescence was signalled by its emergence as a sort of aging cultural icon in the 1970s, more venerable and less intimidating than in earlier times. A new literary journal, *The Raincoast Chronicles*, began documenting the rich social history of a century of settler logging (and other activities) on the Strait and beyond. In nearby Gibson's Landing the Canadian Broadcasting Corporation launched a television series in 1972 about log salvagers on Howe Sound. *The Beachcombers* played for twenty years to an appreciative global audience. Vancouver, after waxing rich on the profits of the Strait's forest industry, now made it clear that it aimed to transcend its historic dependence on forests and become a 'world class city.' The Strait had played a critical role in the development of the forest industry but was now more likely to be valued by the growing urban populations around its shore as a recreational asset than as a highway for logs or a waste dump for pulp mills.

¹ This discussion of this piece of the story is split into two to avoid one overlong chapter.

² Seager, *Resource Economy*, 205.

³ Gibson, Urbanisation, 9.

⁴ Robins, *Rush for Spoils*.

⁵ Roderick Haig-Brown, "Moran Dam – Dinosaur in Our Midst," BC Outdoors 28 2 (1972):24.

⁶ George M. Schuthe, "Canadian Shipping in the BC Coasting Trade" (MA Thesis, UBC, 1950), cited in: Nelson, "Seaspace," 6; coal rich Newcastle Island was early described as "one of the most valuable pieces of land in Canada" in: Blanche Norcross, "Nanaimo's Playground – Newcastle Island" in: *Nanaimo Retrospective: The First Century*, ed. Blanche Norcross, 131 (Nanaimo : Nanaimo Historical Society, 1979); Gibson *Urbanisation*, 9; BCA MS-0436 Alexander Buckham BOX 3 file 7 Problems of the Vancouver Island Coal Industry Graham, Chas. 1924. Bull. C. I. M. M. No. 147, July 1924: 467-488.

⁷ Robin Rush for Spoils, 15; Armitage, Around the Sound, 199; Lynch, Mining.

⁸ BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 10 File 26 – Texada Island – 1974 Memo dated Feb. 7 1974 of Parks Branch, of Dept. of Recreation and Conservation re: Mining Industry: Texada Island; TBC 8 Feb 1874, p2: "The Taxhada Island Ore Grab – Local Government Deeply Involved…"

⁹ J. R. McNeill, *Something New under the Sun: An Environmental History of the Twentieth-Century World* (New York: W.W. Norton, 2000):13.

¹⁰C.C.P. Fitzgerald, "The Balance of Power in Europe: Its Naval Aspect," *Blackwoods* 143 (Feb. 1888), cited in: Behrman, *Victorian Myths:* 197: 285-6.

¹¹ TBC 12 Sept 1882 p3: "DEPARTURE BAY"; Dunham, "Developing Harbour," 68-74.

¹²TBC 20May 1886 p3: GEOLOGICAL SURVEY; MS-0436 Alexander Buckham BOX 65 file 14 Gulf Islands coal report; TBC 12 Jan 1888 p 4 "Boring for coal (on Gabriola Island); TBC 6 April 1893 p 2: "Nanaimo"; TBC 6 May 1893 p 5; TBC 9 May 1893 p 5; TBC 20 March 1894 p2; TBC 21 Nov 1895 p 2: "Nanaimo"; TBC 4 Dec 1895 p 2: "Nanaimo"; TBC 11 July 1896 p 2 "Nanaimo"; TBC 14 July 1896 p 2; TBC 5 August 1896 p2

¹³ BCA MS-2009 Margaret Ormsby's records - BOX 7, File 4: David Suttill, Jumbo's Cabin, A Brief Assessment of its Historical Importance. Unpublished report of Research and Planning Division, Heritage Conservation Branch, Ministry of Provincial Secretary and Government Services, Victoria. March 1979 "Early History of Cumberland Mines; TBC 13 December 1908 p 19 (online p 95): "The untold mineral wealth of Vancouver Island and British Columbia; BCA MS-0436 Alexander Buckham, BOX 3, file 7: Problems of the Vancouver Island Coal Industry Graham, Chas. 1924. Bull. C. I. M. M. No. 147, July 1924, pp 467-488; Wild, *Comox Valley*: 75, 198; Kirk, *My Ain Folk*: 8; TBC 21 December 1898 p 6: "OYSTER HARBOUR"; Wolferstan, *Pacific Yachting*; Montgomery and Oke, *Cowichan*, 123.

¹⁴ TBC 13 December 1908 p 19: "THE UNTOLD MINERAL WEALTH OF VANCOUVER ISLAND and BRITISH COLUMBIA"; MS-0436 Alexander Buckham, BOX 32 file 3: Letter of 15 January 1910 from James Dunsmuir to William Mackenzie, President of Canadian Northern Railway Company.

¹⁵TBC 15 Feb 1903 p 9: "Vancouver Island and its Resources – Lecture by W. J. Sutton -... text of a remarkable lecture given by an 'expert' on VI's minerals: half description of geologic history and current mineral deposits and half promotional pitch, complete with the audience's laughter and cheering noted in the margins; BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 10 File 26 – Texada Island – 1974 Memo dated Feb. 7 1974 of Parks Branch Dept. of Recreation and Conservation re: Mining Industry: Texada Island; TBC 11 July 1899 p7: "Iron mines' prospects"; Harbord, *Desolation Sound*: 80

¹⁶ Lynch, *Mining*, 178, 210.

¹⁷ TBC 13 December 1908, 19: "THE UNTOLD MINERAL WEALTH OF VANCOUVER ISLAND and BRITISH COLUMBIA."

¹⁸ TBC 23 June 1897 p8: "THE ARGO DOING WELL"; Thompson, *Texada Island*; BCA GR 2940 – BC Heritage Conservation Branch 1960-1983: BOX 10 File 26 – Texada Island – 1974 Memo dated Feb. 7 1974 of Parks Branch, Dept. of Recreation and Conservation re: Mining Industry: Texada Island.

¹⁹ BCA MS-2009 Margaret Ormsby's records - BOX 6, file 3: Bowen Island Park and Store Use Society. 1979. The old Union Steamship General Store building, Bowen Island, BC. Unpublished brief prepared for The Provincial Heritage Advisory Board Heritage Conservation Branch of the Ministry of Recreation and Conservation by the Bowen Island Park and Store Use Society, April 1979; BCA MS-1246 Islands Trust Fonds 1974-76: Box 1. Benn, D. R. et al. 1975. Natural Areas Inventory – Islands of the Strait of Georgia, Howe Sound and Haro Strait, Brit Col. Victoria: Nature Conservancy of Canada and Islands Trust. Unpublished report dated December 1975. Appendix K: Keetley, K, A Brief History of the Islands Trust Area, 1975.

²⁰ TBC 2 Sept 1900 p 3 "BRITANNIA MINES SOLD" ... on Howe Sound ... \$2,000,000. (!!!); Bruce Ramsey, *Britannia: the story of a Mine.* Britannia Beach: Britannia Beach Community Club: 18-19, cited in: Armitage, *Around the Sound*, 59.

²¹ TBC 5 Jan 1897 p3 "NEWS of the PROVINCE"; TBC 17 October 1909 p1: "Lasqueti Island Mines"; TBC 20 May 1897 p.2: "NANAIMO"; Taylor, *Quadra Island*, 117; TBC 4 June 1897 p 5: "POWELL LAKE ORES."
 ²² BCA MS-0436 Alexander Buckham BOX 3 File 7: Problems of the Vancouver Island Coal Industry Graham, Chas. 1924. Bull. C. I. M. M. No. 147, July 1924, pp 467-488; Dunham, "Developing Harbour, "72.
 ²³ "Powell River's first 50 years"; Thompson, *Texada Island*, 153-4.

²⁴ B. G. Wernick et al, *Britannia Mine Remediation Project – Integrating ecological monitoring with reclamation activities*, prepared for the BC Ministry of Agriculture and Lands, 2007, accessed 29 January 2014.

https://circle.ubc.ca/bitstream/handle/2429/8304/05%20Wernick%20%20final.pdf?sequence=1; H. Ednie, *Britannia Mine Reclamation - Showing the World How It's Done* (Canadian Institute of Mining, Metallurgy and Petroleum, 2006), Accessed 2 June 2014 <u>https://magazine.cim.org/en/May-2006/features-</u> 2/Britannia-Mine-Reclamation.aspx#.UulAPsKY4vs.email

²⁵ BCA MS – 2009 Margaret Ormsby's records from the Heritage Advisory Board 1975-1981. Item 5(g) BC Museum of Mining, Britannia Beach: Letter of 14 December 1978 from Jack B. Greenwood, President of BC

Museum of Mining to G. L. Giles, Associate Deputy Minister, Department of Culture and Heritage, Ministry of Recreation and Conservation, Victoria.

²⁶ UBCLSC BN 58-1 RHB papers: R. Haig-Brown, undated (but circa early 1960s) unpublished 44 page typed manuscript (draft chapter?) entitled *The Pacific Northwest – Doubleday*, 26.

²⁸ Williams, Michael, *Deforesting the Earth – From Prehistory to Global Crisis, an Abridgement* (Chicago: U of Chicago Press, 2006), 106.

²⁹ Richard S. Mackie, "Colonial Land, Indian Labour and Company Capital: The Economy of Vancouver Island, 1849-1858," (MA thesis, University of Victoria, 1985).

³⁰ BCA GR-0328 GREAT BRITAIN. COLONIAL OFFICE Correspondence: Letter dated 28 May 1849 from James Douglas, Chief Factor, HBC at Fort Nisqually, Puget Sound. to Shepherd, J.:92-93

³¹ Great Britain Emigration Commission, Vancouver's Island, 7.

³² Heather Harbord (*Desolation Sound*, 44) says this began in 1865 although Robert Cail, whose research was done some fifty years before Harbord's, said leasing of forest lands began in 1870.

³³ Cail, Land, Man, Law, 91.

³⁴ Robert Macdonald, *Making Vancouver 1863-1913: Class, Status and Social Boundaries* (Vancouver: UBC Press, 1995):8; Alan Morley, *Vancouver: From Milltown to Metropolis,* (Vancouver: Mitchell Press, 1960), 25-26; Gabrielle Kahrer, "Logging and Landscape Change on the North shore of Burrard Inlet, BC 1860s to 1930s," (MA Thesis, Department of Geography, UBC, 1988), 8.

³⁵ TBC 27 Nov 1868: 2.

³⁶ Kahrer, "Logging and Landscape," 22.

³⁷ L. R. Peterson, *The Gibson's Landing Story* (Peter Martin Books, 1962), 26, cited in Armitage, *Around the Sound*, 45.

³⁸ BCA MS-0364 ORCHARD - BOX 3, file 4 "The Inland Sea"; Harbord, *Desolation Sound*: 45, Taylor, *Tidal Passages*: 81; Macdonald, *Making Vancouver*; Richard Mackie, *Island Timber: A Social History of the Comox Logging Company, Vancouver Island* (Victoria: Sono Nis Press, 2000).

³⁹ For examples, see: UBCLSC RHB papers BN 137-3 "Comox Valley town – Courtenay, BC," Undated 8 page type written manuscript; Mackie, *Island Timber*; Harbord, *Desolation Sound*; Montgomery and Oke, *Cowichan*.

⁴⁰ Patricia Marchak, *Green Gold: The Forest Industry in BC* (Vancouver: UBC Press, 1983): 25; Kahrer, *Logging and Landscape:* 33, 271.

⁴¹ TBC 22 APRIL 88 p 4: RETURN OF THE GOVERNMENT GUIDE; Ken Drushka, *Against Wind and Weather: The History of Towboating in British Columbia* (Vancouver: Douglas and MacIntyre, 1981); Qureshi,

"Environmental Issues," 256.

⁴² Cail, *Land*, *Man*, *Law*, 246-7.

⁴³ TBC 8 Jan 1889: 1.

⁴⁴ TBC 15 October 1902: 1

⁴⁵ Royal Commission on Timber and Forestry, 1907: D16, cited in: Cail, *Land, Man, Law*:103; Cail, *Land, Man, Law*: 92.

⁴⁶ Richard Rajala, *Clearcutting the Pacific Rain Forest: Production, Science and Regulation*. (Vancouver: UBC Press, 1998)

⁴⁷ Kahrer, "Logging and Landscape," 9.

⁴⁸ G. W. Taylor, *Timber: History of the Forest Industry in British Columbia* (Vancouver: J. J. Douglas Ltd, 1975):
98, cited in: Qureshi, "Environmental Issues," 26.

⁴⁹ TBC 16 Jan 1898, p27: OUR FOREST WEALTH; Cail, *Land, Man, Law*; A. W. Carrothers, *The forest resources of BC*, Vancouver, 1936, cited in Kahrer, "Logging and Landscape," 275; TBC 16 Jan 1898:27: OUR FOREST WEALTH.

⁵⁰ TBC 28 July 1903 p1: "Prohibition to Continue – Government Decide to Refuse Request of Loggers to Export Logs"; TBC 23 March 1910 p3: Provincial Government to Proceed Actively Against Those Exporting Logs from British Columbia.

⁵¹ Rajala, *Clearcutting*; Kirk, *My Ain Folk*: 36; Mackie, *Island Timber*; MS-0436 Alexander Buckham - VOLUME 106: 4; Wild, *Comox Valley*, 119; Taylor, *Quadra Island*, 106; White, *Sunshine Coast*, 72; A. L. Farley, *Atlas of BC* (Vancouver: UBC Press, 1979) cited in Kahrer, "Logging and Landscape," 19.

⁵² BCA GR 2940 –BOX 6 File 27: Cowichan Valley.

⁵³ Montgomery and Oke, *Cowichan:* 117.

⁵⁴ Mackie, *Island Timber*.

²⁷ Armitage, Around the Sound, 201.

⁵⁵ The *Colonist* noted in April 1905 that "As the good timber is fast receding from the beach... the day is not far distant when the saw log hauling of the coast will be entirely a railroading operation" cited in Mackie, Island Timber, 46.

⁵⁶ Harbord, Desolation Sound, Kahrer, "Logging and Landscape"; TBC 29 April 1888, 2: ESQUIMALT's **ADVANTAGES**

⁵⁷ This short lived settlement by loggers on northern, bays, inlets and islands is described in Taylor, *Tidal Passages*; Harbord, Desolation Sound: and Lawrence, Adventures in Solitude.

⁵⁸ For examples, see Mackie's, *Island Timber* and Harbord's, *Desolation Sound*.

⁵⁹ TBC 27 July 1900 p 7: Provincial Legislature...QUESTIONS ASKED; TBC 2 August 1900 p 6: THE ANSWERS TO OUESTIONS OF 27 JULY; Cail, Land, Man, Law, 99; Keeling, "Effluent Society," 206.

⁶⁰ TBC 20May 1886 page 3: GEOLOGICAL SURVEY.

⁶¹ BCA MS 0093 - G.B. Brett fonds; Keeling, "Effluent Society," 206; My family was partly awed, partly shocked by the 'chippers' in the Powell River mill complex that turned hemlock logs up to 90 cm in diameter into tiny chips for pulping.

⁶² BCA MS-0093: G.B. Brett fonds PR.

⁶³ Mackie, *Island Timber*, 233. My grandmother as an old woman on Comox harbour marvelled at how well she could see the mainland mountains in summer; she never could while growing up there before WWI. ⁶⁴ Martin Allerdale Grainger, Woodsmen of the West (London: Edward Arnold, 1908).

⁶⁵ Richard Rajala, "Streams Being Ruined from a Salmon Producing Standpoint: Clearcutting, Fish Habitat, and Forest Regulation in British Columbia, 1900-45" in BC Studies no. 176: 93-132; Qureshi, "Environmental Issues." ⁶⁶ Jeanette Taylor cites a timber cruiser named Moses Ireland on Quadra Island who told the "Colonist" in 1905 that during his career he had seen the value of standing timber go from a dollar to a hundred dollars an acre, in: Taylor, Quadra Island, 48.

⁶⁷ Kahrer, "Logging and Landscape," 19; Robins, Rush for Spoils: 93; Seager, Resource Economy, 220. ⁶⁸ J. D. Belshaw and D. J. Mitchell, "The Economy Since the Great War," in: *The Pacific Province: A History of* British Columbia, H. J. M. Johnston (ed.), 313-342 (Vancouver and Toronto: Douglas and MacIntyre, 1996), 315.

⁶⁹ White, Sunshine Coast, 102-103; "Powell River's first 50."

⁷⁰ Mackie Island Timber, 19; Mackie, pers. comm.

⁷¹ UBCLSC RHB papers BN 55-8: The last quarter century. Handwritten manuscript. 11p. undated (1942 or 1943). ⁷²D. MacKay, *Empire of Wood: The MacMillan Bloedel Story* (Vancouver: Douglas and McIntyre, 1982) cited in: Qureshi, "Environmental Issues," 34.

⁷³UBCLSC RHB papers BN 55-8: The last quarter century. Handwritten manuscript, 11p. undated (1942 or 1943). ⁷⁴ F. D. Mulholland, *The Forest Resources of British Columbia 1937* (Victoria: Department of Lands, British Columbia Forest Services, 1937).

⁷⁵ UBCLSC RHB papers BN 55-8: The last quarter century. Handwritten manuscript. 11p. undated (1942 or 1943). 76 Ibid.

⁷⁷Ibid.

78 Ibid.

⁷⁹ Oureshi, "Environmental Issues,"36, 39.

⁸⁰ Rajala, *Clearcutting*; UBCLSC BN 55-8 Roderick Haig-Brown papers. The last quarter century. Handwritten manuscript. 11p. undated (1942 or 1943?)

⁸¹ One billion board feet ≈ 2.36 million cubic meters

⁸² UBCLSC BN 55-8 Roderick Haig-Brown papers. The last quarter century. Handwritten manuscript. 11p. undated (1942 or 1943?); Wylie, Qualicum Beach: 158.

⁸³ BCA MS-0093: G.B. Brett fonds; White, Sunshine Coast, 103.

⁸⁴ Mason, Lasqueti Island, 192.

⁸⁵ Heather Harbord, Texada Tapestry: A History (Madeira Park: Harbour Publishing, 2011), 121; Thompson, Texada Island, 297.

⁸⁶ BCA MS-1176 - Frederick Marsh fonds, "Leisure Island Laughter," 440, 457, 462

⁸⁷ BCA MS-0093: G.B. Brett fonds Powell River : Brett's notes on the history of PR: "Powell River's first 50"; White, Sunshine Coast, 103.

⁸⁸ BCA Imbert Orchard records: T0834: 0002 Track 2 of Description Number AAAB0925: R. Haig-Brown interview, 1969.

⁸⁹ Barker, Water Resources, 23.

⁹⁰ BCA T0834: 0002 Track 2 of Description Number AAAB0925: Roderick Haig-Brown interview 1969 (Part of Imbert Orchard records); Marchak, Green Gold; see examples on northern islands in: Taylor 2008, 137.

⁹² Haig-Brown estimated in the early 1960s that "forty cents of every dollar earned in the province comes from the forests," in: UBCLSC Roderick Haig-Brown papers BN 58-1 typed, undated 44 page manuscript entitled "The Pacific Northwest – Doubleday," apparently early 1960s: 25.

⁹³ Rajala, *Clearcutting*.

94 Rajala, Clearcutting, 220.

⁹⁵ Extracted from the text of a 1967 MacMillan Bloedel brochure, cited in Rajala, *Clearcutting*, 221.

⁹⁶Rajala, *Clearcutting*; UBCLSC Roderick Haig-Brown papers BN 58-1, "The Pacific Northwest," op. cit., 44; MB
 / CAMS: Moira Farrow, "Fish, wildlife managers powerless in 'railway belt" *Vancouver SUN*, 11 April 1974: 33.
 ⁹⁷ J. Wilson, *Talk and Log: Wilderness Politics in British Columbia*, *1965-96* (Vancouver: UBC Press, 1998), 260, 329

98 Marchak, Green Gold.

⁹⁹Roger Hayter and Trevor Barnes, "The Restructuring of British Columbia's Forest Sector: Flexibility Perspectives," *BC Studies* 113 (Spring 1997): 7-37.

¹⁰⁰ Rajala, *Clearcutting*, 223.

¹⁰¹ Wilson, Talk and Log.

¹⁰² Rajala, *Clearcutting*, 200.

¹⁰³ They were literally burning the evidence at Schultz's office as the RCMP broke down the door but he continued to thrive. My first job as a geographer in Canada, a quarter century later, was with the 'environmental consulting' wing of his firm.

¹⁰⁴ BCA MS-0364 ORCHARD - BOX 11 File 6 Gulf Islands: Barry Broadfoot, "Rush to Gulf Islands sends land value soaring – sleepy hamlets give way to subdivisions," *The Vancouver SUN*, Saturday 4 December 1971: 37; BCA MS-1246 Islands Trust Fonds 1974-76 - BOX 2: Saltspring Island file: Doug Watters, "Are storm clouds clearing from Saltspring Island?" *Monday-Victoria's Magazine*. December 15-21, 1975, 10-11.

¹⁰⁵ BCA GR 1614 Parks and Outdoor Recreation Division, BOX 25, File 1.6.3.310: Letter to Superintendant of Lands, from a citizen in Heriot Bay, 8 August 1966.

¹⁰⁶ Ibid: Elk Falls Company Limited brief to the Public Hearing on their application for water lot leases in Gowlland Harbour.

¹⁰⁷ Ibid, BOX 25, File 1.6.3.310; Ibid: BOX 29, File 1.7.2.162: Statement of the Dept. of Lands, Forests and Water Resources, March 14, 1967, signed by D. Borthwick, Superintendent of Lands and Elk Falls Company Limited brief to the Public Hearing on their application for water lot leases in Gowlland Harbour. A similar conflict in the 1960s, with similarly inconclusive results, pitched recreational users and shoreline residents against towboats and log booms on Nelson Island (in: Ibid, Box 29, File 1.7.2.162).

⁹¹ Rajala, Clearcutting.

5. Mining the Strait's Fish

The Strait's seemingly inexhaustible marine life was at the heart of the 'Strait as resource mine' narrative. The first Europeans on the Strait reported waters teeming with life, from herring to whales. Again it was the HBC that got things started, shipping up to 2,000 barrels a year of salted Fraser River salmon to Hawaii, Tahiti and Australia in the 1840s. They were exporting salmon around the Pacific and exploring new markets for herring in the late 1850s, when they lost control over the trade.¹ There was little development of the Strait's commercial fishery through the 1860s though events in Britain may have influenced its future. A Royal Commission asked whether Britain's fish stocks were growing or diminishing, whether any modes of fishing were harming stocks and whether any fishing regulations were harmful. Without reliable statistics, the commission determined there was no proof of declining stocks. The most harm was being done to Britain's fisheries, they declared, by the rules that governed them. The resulting Sea Fisheries Act of 1868 was a striking example of nineteenth century liberalism, abolishing over fifty laws passed in previous centuries. The result for Britain was that

Fishing became possible whenever, wherever and with whatever methods fishers pleased..... (this) led to unbridled expansion of fisheries, and within a couple of decades it would have serious impacts on fish stocks and their habitats.²

Fifteen years later, amidst growing worries of overfishing among North Atlantic fishers, British biologist Thomas Huxley declared the seas could *never* be fished out. Huxley informed the 1883 International Fisheries Exhibition that overfishing was "scientifically impossible" and, most likely, "all the great sea fisheries are inexhaustible." ³ This was the broader imperial context for the emerging settlers' fishery on the Strait. Visitors surveying Canada's new Pacific province in 1873 were greatly impressed by the apparently 'inexhaustible' wealth of its seas. The *Colonist* exclaimed

...the real treasury of British Columbia is ... the untold and immeasurable wealth of its fisheries. The waters of the Gulf of Georgia are alive with fish...⁴

The annual report of Ottawa's new Department of Marine and Fisheries the same year included an essay describing these newly acquired "marine resources," It focussed on the Strait, where salmon were "common... to every stream," herring spawned "in prodigious numbers" in the many bays and inlets and oysters were "very abundant," especially around Comox. The same report suggested that "...It may be desirable before long to bestow ... closer attention" on these fisheries, especially as rapid developments in California fisheries were likely to stimulate others further north. They saw no immediate need to extend federal fishery laws to the province yet, though they recognised they needed to be better informed about their new Pacific fisheries. The federal diffidence is understandable in light of the immense time still needed to get from Ottawa to the BC coast in the 1870s.

The settler's early salmon fishery

The most prized fish for the settlers, as for indigenous people, were salmon. Prodigious numbers could be harvested, particularly at the mouth of the Fraser. Diversity among the different Pacific salmon species contributed to their value. Chum (*Oncorhynchus keta*) spawns in the autumn and was the most plentiful species, though canneries considered their lean flesh the cheapest grade. Sockeye (*O. nerka*) is smaller than Chum, travelling far up rivers to spawn in the summer. Its uniform size and huge populations spawning in the Fraser, made Sockeye the most important fish in the commercial fishery. Sockeye and smaller Pink (*O. gorbuscha*) had been the basis for a vast indigenous fishery in the Fraser basin and became the focus of the settlers' fishery at the river's mouth. Coho (*O. kisutch*) are larger than Pink, though less numerous, and spawn in the autumn. Chinook (*O. tschawytscha*) are the largest and least numerous and spawn from early spring into the autumn. Coho and Chinook would be prized sport fish on the Strait in the twentieth century.

The Great Britain Emigration Commission reported the Strait's "very rich and fat" salmon could easily be "speared or shot or caught in nets" as they converged to ascend rivers. ⁵ Experiments were made with salting, smoking and pickling salmon. But canning proved to be the best technology for transforming it into a global commodity. Modern fish canning processes originated in late eighteenth century France, spread to Scotland then to the lobster and salmon fisheries of North America's Atlantic coast in the early nineteenth century. Canning technology moved to California's Sacramento River salmon fishery in the 1860s. Experimental canning of Fraser Sockeye began in 1867 and commercial canneries began operating in 1871. Soon four canneries at the Fraser mouth produced almost a million 450 gram tins of Sockeye a year. By 1880 a dozen canneries lined the lower Fraser, shipping salmon to Britain where it helped meet growing demand from a hard-pressed urban working class.⁶

Federal law restricted the industrial salmon fishery to tidal areas. As had indigenous fishers before them, settlers established a network of seasonal fish processing camps at sheltered sites. The Sockeye fishery at the Fraser mouth was tremendously important to the entrepreneurs controlling it. Masses of spawning salmon in those years *did* suggest an infinite resource. The *Colonist* reported that the Fraser above Yale in 1873 was "literally blocked with salmon."⁷ G. M. Sproat described salmon that filled the Squamish river in 1876 so thick that he and his colleagues could have "killed by the scores" with their paddles alone.⁸ Yet there was already talk of overfishing within a decade of the first canneries opening on the Fraser. The Ministry of Marine and Fisheries introduced licensing for gill-netters and began contemplating salmon hatcheries to maintain stocks.⁹

Salmon fishing at the centre of the resource rush, 1880s - WWI

The salmon fishery had overtaken mining as the Strait's most important industry by the mid-1880s, when canned salmon became BC's most valuable export. Like the forest industry, this fishery responded to growing global markets and benefitted from rapid technological progress. Both were subject to very liberal governance, though Ottawa rather than Victoria governed the fishery. Both industries saw the first modest moves towards conservation in the final years before WWI. Canneries were built at tidewater, their fish, canning supplies and much of their labour arrived by sea and the canned salmon were shipped out by boat for transhipment to larger vessels or railways. Some canneries moved around by water, as did some sawmills.¹⁰ Like the sawmills and later pulp mills, canneries also depended on the adjacent Strait to carry off their waste.

Until 1900, gill-netters on the Strait were powered by oar or sail (Illustration 53). The new century saw growing use of purse seiners, motorised boats and gear, mechanised ice packing equipment and more sophisticated harvesting techniques. Fishers could now handle bigger nets more effectively, cover greater distances and fish for longer. Vast stationary fish traps were placed in the path of spawning salmon, mostly on the US side of the border.¹¹ Even men using lines or nets from small boats could catch prodigious numbers of salmon. Charles Groth, an early settler on Galiano Island, rowed over to fish at the Fraser mouth in 1883. He caught close to 7,000 salmon before falling sick in early August. Fishing with hand lines out of his dugout canoe off Quadra Island, one of the Pidcock brothers caught over 700 salmon in a single day in 1905.¹²

The canning industry grew rapidly and by the late 1880s the Strait's canned salmon was moving by ship around the world and by rail to eastern North America. Cold storage technology meant higher value fresh fish could also be shipped to eastern markets starting in the 1890s, but canned salmon remained the most important commodity. The number of canneries at the Fraser mouth increased from twelve in 1888 to over fifty by 1900.¹³ New canneries were built on the east coast of Vancouver Island as well, on Burrard Inlet and at more isolated outposts around the Strait (Figure 10).¹⁴ But Fraser River Sockeye (Illustration 54, Illustration 55) remained the heart of the industry. By the beginning of the twentieth century, the size of this run determined global salmon prices. Table 2 illustrates the industry's development in those years



Illustration 53 – "The Salmon fishing fleet on the lower Fraser River" ca. 1900 (photo: undetermined). Many hundreds of small boats fished at the river mouth, still powered only by sail and oar.

An exceptionally large cohort of Sockeye typically returns to the Fraser every four years. 1893, 1897, 1905 and 1913 were such 'big years.' In 1892 (a 'small year') the canneries' 'pack' of tinned salmon was ten times that of the mid-1870s. The next big year, the pack was 150% bigger. The packs in 1894 and 1895 look more modest than 1893 but actually represent a large


increase from 1892, the previous small year. The pack in 1896, *not* a big year, exceeded even the previous big year. That summer the Department of Marine and Oceans steamer *Quadra*

Figure 10 - Sites of one or more canneries on the Strait in 1914: transforming the Strait's seemingly inexhaustible fish populations into commodities.

described "an immense number of fishing boats on the Fraser River, the Gulf of Georgia being completely covered with them for miles..."¹⁵ Then came 1897, another big year, and the biggest pack yet recorded. The big years of 1905 and 1913 continued to show substantial increases. But by 1913, the last year before the effects of the Hell's Gate slide would show, the Fraser River Sockeye share in the overall pack had already diminished. By 1903, the small year catch was substantially below those of the mid-1890s.

By the early 1900s, the canneries faced increased competition from Russian, Japanese and US canners around the Pacific and prices fell. They responded with increased mechanisation, further increasing their production capacities.¹⁶ As in lumbering, such technological advance contributed to periodic 'overproduction.'

Year	Total BC salmon pack (48 pound cases)	Of which, cases from Fraser River canneries
1892	228,000	
1893	590,000	
1894	494,000	
1895	566,000	
1896	602,000	357,000
1897	1,024,000	877,000
1903	473,674	204,809*
1905	1,167,450	837,489*
1913	1,353,900	684,600*

				17
Fable 2 - Salmon	canning in coa	astal BC, selected	d years,	1892-1913 ¹⁷

*- Only Fraser River Sockeye

Federal fishery authorities established complex relations with the Strait's fishers and canners during the resource rush, and with the governments in Victoria, Washington state and Washington, DC. The intensity of intergovernmental struggle reflected the value of this fishery. After 1900, even as fishing was eclipsed by the Strait's rapidly growing forest industry, it also became the most valuable fishery in the Dominion.¹⁸ Ottawa led negotiations with the US and

Washington state over rights and responsibilities related to the Fraser Sockeye. Some estimated the majority of these fish were being taken by American fish-traps, leading to growing complaints that Americans were taking all "our salmon." When the Fraser Sockeye runs were big, hundreds of thousands of fish caught in these traps were simply thrown away. At the Fraser mouth, canners responded by launching hundreds more small boats to catch fish that had eluded the traps. In Victoria they responded with their own traps on the Strait of Juan de Fuca, to gather salmon before they reached US waters. ¹⁹ Both sides recognised the situation was unsustainable and continued to negotiate 'fish sharing.' But it took several more decades to reach a formal agreement over the Fraser River Sockeye. The great value of salmon also contributed to smaller scale conflict. There was ongoing intimidation and 'net theft' among competing fishers at the Fraser mouth, especially in 'small years' when fish were relatively scarce and prices higher. Ottawa, though concerned about the fish resource, insisted that policing the fishers was a provincial jurisdiction.²⁰



Illustration 54 – "Fraser River fish cannery" 1890s (photo: undetermined). The industry was heavily dependent on indigenous labour in the boats and canneries.

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Illustration 55 - "Richmond; BC Canneries; 35,000 Sockeye" 1913 (photo: F. D. Dundas). The year of the Hell's Gate slide; catches of Fraser Sockeye did not reach 1913 levels again in the twentieth century.

The late nineteenth century fishing industry on the Strait was remarkably unfettered by regulation -- and largely dominated by canneries. The federal Fisheries Act came into force in BC in 1878. Ten years later, fishing licenses were required. In the 1890s Canada's fisheries authorities increased regulations on fishermen's gear and the times and places they could fish. Ottawa had little capacity to enforce its regulations however. During the 1890s, Marine and Fisheries had just two 'fishery guardians' on the Strait, both at the Fraser mouth. Disputes with the American fishers through this period often focused on their relatively weak controls. Ottawa often loosened controls on their fishers and canners after 1900, in attempts to ensure they were not disadvantaged in their competition with Americans.²¹

Ottawa also struggled with Victoria over legal jurisdiction. The province and the local Board of Trade, complained Ottawa was earning far more from the west coast fishery that it invested in it. Shortly before WWI, after two royal commissions on the fishery, Victoria and Ottawa still had a number of unresolved disputes awaiting resolution by the Imperial Privy Council in London. They agreed both levels of government could require fishermen to purchase licences for gillnetting (\$5 each), salmon trap nets (\$75), purse seines (\$50), & drag seines (\$25). Canneries (Illustration 56) had to pay Ottawa \$50 and Victoria \$100 for their annual licences. The province also taxed the canneries' land and fishers for every fish caught in traps.²² Over the long run, probably the most damaging outcome of federal – provincial discord over fisheries was Victoria's consistent failure to control the damage done to the fishery by the forest industry. Haig-Brown suggested that logging damage to spawning beds and rivers had already contributed to large reductions in three of the four cycle-years of Fraser Sockeye between 1900 and 1912. The damage done by logging to many other watersheds around the sea and beyond which were intensively logged in the years before 1945, and federal fisheries authorities' prolonged inability to prevail upon the province to control it, has been described more recently by Richard Rajala.²³

As early as 1888 the *Colonist* reported the local Board of Trade's concern that salmon needed protection from overfishing.²⁴ When catches rose in the 'big years', canneries worked day and night, and prices fell, sometimes to a few cents per fish. The only way for fishers to maintain their income was to increase their catch. Sometimes canneries then stopped buying fish altogether, leading to appalling waste. During intervening 'small years', canneries slowed down but salmon prices rose and fishermen might get as much as thirty or forty cents per fish. This encouraged them to catch as many as possible. The inherently erratic nature of the resource combined with rapid growth in fishing pressure and signs of declining catches all led to growing demand for conservation measures.

A Royal Commission on the salmon fishery and ongoing negotiations with the Americans both became forums for debate and negotiations among industry stakeholders in the early years of the new century. All stakeholders were looking to protect their access to the precious salmon. Various conservation measures were proposed; some were adopted and some not. The voracious 'fish traps' were banned in most BC waters and later in US waters. A 'minority report' issued by dissident members of the 1908 Royal Commission²⁵ complained that the Commission's majority's report had ignored declining catches, especially on the Fraser. Yet more efficient equipment, bigger nets and fleets ranging over greater stretches of water, said the dissidents, all pointed to declining stocks. They called for complete closures at certain times during spawning and for more effort to 'seed the beds.' These ideas reflected thinking among federal 'fisheries managers' who had begun to consider establishing some maximum level of 'sustained yield.'²⁶

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Illustration 56 – "Deep Bay Cannery" 1910s (photo: undetermined). Now paying license fees to Ottawa and Victoria, it had been the site of an 1860s whaling operation. A dogfish rendering plant sickened neighbours in the 1940s; today a provincially funded shellfish industry research centre operates there.

Sustaining fisheries with hatcheries had become a powerful idea internationally by 1900.²⁷ Although early fisheries managers knew little about Pacific salmon's life cycles, Marine and Fisheries were already operating hatcheries on the Great Lakes and in the St. Lawrence by the 1870s²⁸. Their first salmon hatchery on the Fraser was built in 1884; seven more followed over the next fifty years. A few others were built by canners, mostly in the final years before WWI.²⁹ As Taylor pointed out, hatcheries were popular in the Columbia basin in these years because they appeared to guarantee an endless fish supply, ensuring economic progress while easing conflicts over the resource.³⁰ They held similar allure for Canadian fisheries managers, also well aware it was easier to manage hatcheries than to control the fishing industry. The BC Board of Trade believed in the virtues of hatcheries, attributing an historic 1897 catch on the Fraser to a hatchery established in 1884 and demanding Ottawa spend more of its revenues from fisheries on more hatcheries on the Fraser and other rivers.³¹

Changing geography of salmon fishing in the interwar years

Commercial salmon fishing on the Strait in the interwar years continued to have much in common with forestry. Salmon harvesting was increasingly decentralized but processing became more concentrated in a smaller number of establishments. The dispersion of fishing stemmed

partly from resource depletion in areas – particularly the Fraser mouth - where harvesting had previously been concentrated. Evolving technologies permitted fishers to move more easily into hitherto untapped areas. The salmon fishery moved increasingly beyond the Strait in these years, as its resources were depleted. Centralization at larger processing facilities resulted from larger firms seeking economies of scale. Government efforts to manage the fisheries were outpaced by technological improvements. Rapid expansion in the 1920s was followed by a slump in the 1930s. The final parallel with forestry was government progress towards effective resource conservation in this period that would be undermined by the demands of WWII.³²

The Strait's indigenous fishers were the only ones with a longstanding tradition of fishing there and their fishing traditions had been virtually regulated out of existence by the 1920s. Yet a distinctive fishing culture had emerged in the settler fishery, a combination of intense individuality and solidarity among people facing the dangers of their work. Marsh mused about the Strait's fishermen

...like loggers, live their lives wrestling with natural forces... [but were] often even more individualistic because their work is more lonely... The sea and the wind, in all their variable moods, must be fought... They impress men's souls, not with any easy optimism, but with a sense of underlying mystery and even terror... ³³

Francis Barrow's 1930s summer wanderings took him among thousands of these small commercial fishers (Illustration 57). As with the Strait's forest industry, Barrow documented the fishermen and canneries in action. 'Solidarity' among fishermen mostly meant watching out for others in their own ethnic groups, each of which were associated with different fishing methods, types of fish, fishing grounds and the organizations representing them. Indigenous and Japanese fishers gillnetted for the canneries around the Strait, mostly Sockeye, Pink and Chum. The Japanese dominated this niche at the Fraser mouth. White fishers trolled for Spring and Coho around the Strait. Whites and indigenous fishers resented competition from Japanese Canadian boats, whose entry into the salmon (and herring) fisheries was increasingly restricted in response to political agitation. Competition from Japan's national fishery in international markets also contributed to growing resentment of the coast's Japanese Canadian fishermen. The bad blood culminated in their removal and the forced sale of their boats during WWII. Both Japanese-Canadian fishermen and indigenous people who fished for food made particularly convenient targets when fishing was bad.³⁴

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Illustration 57 – "Fish boats at Galiano Island" 1930s (photo: undetermined). Thousands of diesel or gas powered boats plied the Strait in the 1930s, supplying the canneries, the fresh fish market and their families.

Salmon fishing and canning remained the lucrative heart of the Strait's commercial fishery. Salmon canners were thriving again by the mid-1920s, largely recovered from the shock of the Hells Gate Slide as a result of salmon runs on other rivers and higher prices. Earlier consolidation of the industry had resulted in the emergence of BC Packers Ltd, who dominated the industry for decades to come. Export markets for canned salmon remained good through the 1920s. BC Packers then barely survived the 1930s, going into receivership and closing many plants.³⁵ The industry suffered from depressed markets and Japanese competition in their British market, but by 1939 they were exporting to many other countries. There was a shift towards greater concentration of processing around the mouths of the Fraser and Skeena rivers in the interwar years, and the number of canneries on the coast began to decline, falling from 90 in 1917 to 36 in 1928. Numbers held steady through the 1930s then fell again to 27 by the late 1940s. This did not represent a decline in canning capacity however. By 1939 the fish plants were considerably more mechanised and packing four times as much fish as they had a generation earlier.³⁶ Centralisation of canning was made possible in part because of faster and larger gas powered boats and on-board refrigeration technology. More of the catch was being taken by larger seine boats rather than the small gill-netters that had previously landed most fish. New equipment changed the geography of fishing around the Strait, allowing more fishers to fish in more locations, including the mouths of the many spawning rivers, then moor their boats in dispersed home ports after selling their catch to buyers who often followed them to the fishing grounds, then returned to canneries at the Fraser mouth.³⁷

The new geography of the fishing industry was enabled by evolving technology but also necessitated by developments in supply and demand. The Fraser Sockeye runs would require decades, and much international negotiation and regulation, to recover to something approaching earlier levels. Sockeye catches before the 1913 slide had averaged around 9 million fish while the average from 1914 to 1949 was 2.4 million. ³⁸ In 1913, the overall catch of Sockeye and Pink at the Fraser mouth had been 29 million fish. By the next 'big years' of 1917 and 1921 this had fallen to under seven million and under two million fish respectively. Up to 1913, 'big years' of Fraser Sockeye had allowed the industry to produce between a million and 1.4 million cases of tinned salmon, of which between 50% and 80% had been Fraser Sockeye. 1925 ought to have been a 'big year', but Fraser Sockeye that year contributed only about 30,000 cases (or less than 2%) to an overall 'pack' on the coast of 1.7 million cases. ¹⁹³

Global demand for salmon continued to grow through and after WWI and the local industry responded by rapidly expanding catches of other salmon stocks. Fishing for Pink, Coho, Chinook and Chum – as well other fish species – increased on other reaches of the Strait and beyond. Diversification of the fishing effort meant, among other things, a longer fishing season.⁴⁰ All these factors kept the catch growing despite the Hells Gate disaster. Continued growth in the salmon catch reflected the broader trend on North America's west coast, where the pack grew from 2,000 to ten million cases between 1870 and 1920.⁴¹

Norman Safafik spent his life in fish processing in Vancouver. His memoires are rich in detail about salmon trolling in the 1920s and 30s, the period he calls the "salad days" of fishing on the Strait.⁴² By the mid-1930s up to 1,500 trollers operated on the inland sea, mostly boats ten or eleven meters long. They fished most reaches of the Strait, even trolling in Vancouver Harbour when the weather kept them from going further offshore. They fished for Coho and Spring from

May through January, Pink in August and September. For processors such as Safarik, Coho were the most valuable because of their firm, bright red meat. They spawned in the innumerable little streams spilling onto every shore of the Strait and fed on still rich populations of herring and shrimp.

Salmon fishing and processing on the Strait were now heavily regulated. Ottawa governed the marine fishery and exports but the province still regulated fish processing and commerce within the province. The federal government had tried to influence the distribution of canneries on the coast but lost their right to license canneries in 1929 when the Privy Council in London ruled that the province alone had jurisdiction over the canneries. Ottawa continued negotiations with the Americans aimed at establishing international governance of their shared salmon resource. Twelve government boats cruised the Canadian side of the border by 1915, alert to depredations of US-based boats taking 'Canadian salmon.' Yet the fish migrating to the Fraser were not inclined to respect the border. Concerns about depletion of migratory stocks, particularly Sockeye, finally resulted in a treaty between Canada and the US, and the 'International Pacific Salmon Fisheries Commission' (IPSC), in 1937. Tasked with controlling the Sockeye fishery, the IPSC's goal was to divide the catch between Canadian and US fishers in a way that would ensure enough escapement spawning fish to restore stocks to their earlier abundance. The very long negotiations that led to the creation of this commission had also helped speed abolition of Washington State's bulimic salmon traps in 1935 although a few continued to operate off southern Vancouver Island.43

An eloquent warning about the dangers of overfishing had been delivered early in the interwar years by William Sloan. His report to the federal Minister of Fisheries in 1919 called for a shift to more efficient fisheries management, inspired by conservationist principles:

We have overdone the thing. We have drawn, and are drawing, too heavily upon our supply of salmon... What we need is a complete and radical change of policy... the Government should step in and take over our salmon fisheries and administer them for the benefit of the people as a whole... Our fisheries... will last for all time if they are properly handled. Depleted runs can be restored... All that is necessary... is to ensure that a sufficient number of fish reach the spawning beds. If the beds are well seeded there will be a certain return. The fish do all the work necessary provided the Government gives them a chance to do so... They will entirely disappear if left to corporate and individual control... the time is opportune to assure the conservation of the Pacific coast fisheries for

the present and future benefit of the whole people of Canada rather than sacrifice this great... asset to satisfy the short sighted greed of a small minority...⁴⁴

Despite Sloan's concerns, the 1920s saw the rapid expansion of salmon harvesting beyond the Fraser mouth. Through the 1930s, thousands of fishermen around the sea were utterly dependent on commercial and subsistence fishing to sustain their families. Next came WWII, when the canneries operated 'at a fever pitch', supplying guaranteed markets. Whatever conservation had been achieved was relaxed and 'virtually every catchable salmon' was pursued and canned. What was bad for conservation was good for the canneries (Sloan's "greedy minority"). They would not only contribute to the war effort but also re-establish their share of the British market earlier lost to the Japanese.⁴⁵

Fisheries research activities increased on the inland sea during the interwar years. Until 1924 Ottawa's fisheries research centre in Nanaimo had employed only one full time scientist – the director. Most of their scientific research in those early years had been carried out in the summer months by visiting scholars. By 1932, the centre's year-round scientific staff had grown to eleven.⁴⁶ Federal fisheries authorities had proposed artificial propagation of salmon almost from the moment of their arrival there in the 1870s, as a means to both increase stocks and 'smooth out' the huge variations in Sockeye populations returning to the Fraser. As in the American Pacific Northwest, early in the twentieth century some Canadian fishery experts began to question the efficacy of hatcheries. Production of salmon fry nonetheless continued to rise on the BC coast. By the time Canadian fisheries scientists finally concluded it was having little effect on the size of salmon runs, it had reached over two billion annually in the interwar years, mostly Sockeye and mostly in the Fraser basin. Catches were being maintained, most scientists now concluded, not by artificial regeneration but by greater fishing effort spread over larger fishing grounds and growing catches of species - such as Chum and Pink - earlier considered less desirable. The same pattern emerged in many parts of the world later in the century.⁴⁷ Many now concluded that the solution to stock depletion was not more hatcheries but - as Sloan had suggested in 1919 - to allow sufficient numbers of wild fish to escape the fishery and reach spawning beds. This conclusion was not universally shared however. Many in the industry viewed it as an alarmist "depletionist" narrative that ignored improvements, allowing for what was euphemistically described as "the re-adjustment" after 1913. A 1940 federal report in the

Strait's fisheries, perhaps aiming for a compromise solution, suggested the truth lay somewhere between these two views.⁴⁸

Salmon on the Strait after 1945 - great plans, challenges & aquaculture

Fishing intensified rapidly around the world after 1945 and this was reflected on the Strait. Over the whole BC coast, the marine fishery employed close to 20,000 people in boats and processing plants into the 1960s and the industry remained important for many communities. Landings in the early 1960's averaged nearly 300,000 tons a year, worth almost \$40 million or a third of Canada's total commercial fishery earnings. Salmon accounted for two thirds of this BC catch by value, herring and halibut most of the rest.⁴⁹ Of these, only halibut was not being fished commercially on the Strait. By the early 1970s, the fishing industry on the Strait, as elsewhere on the west coast, was viewed in Ottawa and Victoria as a marginal 'problem sector' in need of 'rationalisation.' A general lack of effective responses to most challenges facing the salmon fishery reflected its complexity and the array of competing interests depending on it. Incoherent and inconsistent responses to these challenges contributed to decline of the fishery. A retrospective on the first century of commercial fishing prepared by the province in the 1970s suggested that overfishing would likely always be a problem. It was apparently similar to poverty in market economies, a regrettable flaw in an otherwise effective system.⁵⁰ This fatalism helps explain the province's embrace of salmon farming in the 1970s.

Trends in salmon fishing on the inland sea were broadly similar to global ones. Maintaining yields required ever more technology and capital. Regulations on the Strait, especially before the 1960s, did little to respond to innovations increasing the range, mobility, efficiency and composition of the salmon fleet.⁵¹ Technological changes after WWII were intricately connected with one another, with fish science, and with changes in the geography and governance of the industry. Earlier in the century, fish traps had been judged too efficient and too likely to result in control of the industry by a few large companies. Though the salmon fishery still eschewed fish traps after 1945, the efficiency of other technologies grew rapidly. Equipment investments per fisherman tripled between 1945 and 1955, paying for innovations such as mechanised drums to draw in nets and sonar for locating fish. As they did in other places, such changes increased the risk of overfishing.⁵² Rapid marine transport and brine refrigeration technology adopted after WWII made it feasible to freeze fish that could later be canned. This and other innovations sped

up centralisation and closure of fish plants and changed the nature of fish processing. Haig-Brown correctly predicted the disappearance of the coast's many isolated canneries in the mid-1950s. Smaller numbers of larger canneries were concentrated - as they had been late in the nineteenth century - around the mouth of the Fraser. 40% of Canada's west coast canneries were located there by 1970. By concentrating near Vancouver they could better cope with seasonal peaks and dips in labour demand. Large scale cold storage facilities allowed these larger canneries to extend their processing seasons.⁵³ Newell reported that between 1920 and 1970 the total number of canneries on the BC coast declined from over sixty to fifteen; the number located on the Strait declined from fourteen to seven but this represented an increase from a fifth to almost half of all canneries on the coast.⁵⁴

The geography of commercial fishing also changed again after 1945. With fish stocks declining in many places, small scale operators were hard pressed to compete with larger boats carrying more sophisticated gear, able to range over more of the inland sea, and increasingly beyond it. Though the majority of the coastal fleet was now registered at Lower Mainland ports, far less commercial fishing took place at the Fraser mouth.⁵⁵ Most of BC's commercial fishers now lived on the Strait of Georgia but caught most of their salmon and other fish outside it. Almost three quarters of the 5,500 vessels fishing the BC coast in the early 1970s operated out of ports on the Strait, mostly around Greater Vancouver. The wholesale value of salmon caught on the whole coast in those years ranged between \$100 million and \$220 million each year⁵⁶; the average value of landings on the Strait alone was barely \$30 million. The adjacent region of "North Vancouver Island - Mid Coast-Queen Charlotte Islands," with less than 15% of the coast's registered fish boats accounted for over half its landings.⁵⁷ As it had been through most of the century, the Strait's salmon catch varied greatly from year to year, in size and value. Catches in the four seasons from 1968 through 1971 ranged between 26,000 and over 59,000 tons; their values from \$15 million to over \$44 million.⁵⁸ The following year, the Vancouver Sun reported the annual salmon 'pack' was down nearly 30% on the year before.⁵⁹

There were noteworthy similarities between the salmon fishery and the once vast Columbia River fishery. Many participants in the debate about salmon fishing on the Strait – the different types of fishers, the processors, citizens' groups, and different governments – demonstrated the same kind of selective memories and propensity to blame others rather than share responsibility

for effectively managing the resource. Their tactics, as in the Columbia Basin fishery, included making scapegoats and caricatures of their opponents, and marginalising the weaker ones. Taylor summed it up on the Columbia: "Complexity and contingency evaporated through deliberate acts of amnesia. Political myopia infected every group in the debate."⁶⁰ The same could be said of the dialogue over salmon fishing on the Strait after 1945.Yet the situation also differed from the Columbia in important ways. Probably the greatest difference was the ongoing absence of dams on the Fraser, still by far the sea's most important salmon river.

The propensity of stakeholders to blame others for their collective ills contributed to their inability to agree on the most important causes of those ills. It was clear that a wide range of activities, in addition to overfishing, could damage salmon (and other fish) populations around the sea - things like logging, dredging and filling of streams and shorelines and log booms along the shoreline. Yet no evidence or expert opinion changed the minds of resource economists of the 1960s and 70s who identified overfishing as the overwhelming cause of most declining salmon stocks. Commercial fishermen on the other hand focused on causes other than overfishing, which they seldom saw as a key problem. Fishers felt increasing restrictions on their fishing were a way of 'blaming the victim' for declining salmon stocks. Geoff Meggs, an outspoken proponent of commercial fishermen, suggested the main problem in the 1980s salmon fishery was its ongoing domination by a processing industry that dictated fishery policy. The salmon, said Meggs, were BC's 'canary in the mine', indicators of a dangerous situation in coastal waters.⁶¹ Despite "overwhelming evidence that salmon runs are in crisis because of environmental destruction," the "corporate conservationists," he said, continued insisting the main problem was commercial fishers' overfishing. And so on. The following discussion illustrates the clash of views on the salmon fishery and some of the initiatives that ensued from them. One of the few things the different players agreed upon was the enormous potential of salmon fishing. In one of his last articles, Haig-Brown claimed that a "fully rehabilitated" Fraser River could yield catches of 22 to 33 million salmon every second year.⁶² Unfortunately, their complex life cycle made such 'rehabilitation' challenging and created endless opportunities for stakeholders to blame others for its decline.

Salmon science, 'enhancement' and hatcheries Fisheries science gained prestige around the sea after WWII as a result of the IPSC's success in rebuilding Fraser Sockeye and Pink runs earlier devastated by the Hells Gate slide.⁶³ Fisheries biologists were increasingly at odds with resource economists however, over the best ways to manage salmon stocks. IPSC scientists were aware of the challenges of rehabilitation. Spawning Fraser Sockeye had to run a gauntlet of fishing fleets – in the Strait of Juan de Fuca, Puget Sound and again around the Fraser mouth. Each fleet had the capacity, if uncontrolled, to catch virtually every returning fish,⁶⁴ so local fisheries scientists were understandably proud of the stock's slow recovery in the 1940s and 50s. They had carried out research to support innovative 'fish ladders' at Hell's Gate and elsewhere, removed obstructions, ensured improved pollution control at new pulp mills on the upper Fraser, brought a number of vestigial runs back from the edge of extinction and created many effective spawning channels and incubation ponds.

Many activities were included under the rubric of 'salmon enhancement.' All were designed, in one way or another, to expand salmon populations and increase the numbers of fish that could survive in streams then reach the sea, grow to adults and be available to commercial or sport fishers before the survivors returned to spawn. Salmon enhancement shared a good reputation with fisheries science in general duringin the early post war decades. Writing in the 1950s, Haig-Brown described how salmon populations on tributaries of the Fraser that had seen their spawns almost wiped out after 1913 - the Stuart, Bowron and Horsefly Rivers – were now growing rapidly. The Quesnel River spawn increased from 1,000 fish in 1941 to 600,000 in 1953, with two million predicted for 1957. Sockeye returns to the Adams River were expected to reach eighteen million fish by 1958, yielding eight million for the commercial fishery. Haig-Brown was convinced the work of the Commission would restore the Fraser runs to their former abundance (and that) with … effective construction measures and the elimination of watershed abuses, the Fraser salmon runs will become greater than they ever were in recorded time."⁶⁵

In addition to carefully engineered and protected watersheds and hatcheries, restoration of depleted Fraser stocks involved elaborate controls of commercial fishers pursuing salmon in the sea. Fishing that had earlier taken place on the Strait most months of the year was now restricted to fewer months and within these months was closed for certain periods each week. Net use was increasingly regulated and certain areas, mostly close to the mouths of spawning rivers, were

closed to fishing altogether. Officials had flexibility in applying these provisions, depending on the estimated size of the spawning population. They could close a fishery entirely if necessary to ensure enough fish reached the spawning beds. They also attempted to control predatory seals and sea lions around the mouths of spawning rivers. What fisheries biologist Peter Larkin described as the "standard religion of Pacific salmon research and management" was formulated by the 1930s and persisted for four decades.⁶⁶ This creed of 'good salmon husbandry' called for research into salmon biology, catch regulations to ensure a 'sustained yield', and enough protection of the environment to ensure effective spawning. Hatcheries might be used, sparingly, to augment natural production and mitigate the effects of flawed regulation and protection.

Salmon culture techniques, abandoned by federal fisheries authorities as ineffective in the mid-1930s,⁶⁷ became the object of renewed hope in the industry again in the late 1960s, though many scientists shared Haig-Brown's reticence about them. Addressing biologists in 1965, he reminded them "...if you have a viable natural stock, don't write it off and say we can plant another; you just may not be able to." ⁶⁸ Haig-Brown and many scientists believed hatcheries should be only a solution of last resort and that too much dependence on hatcheries to maintain stocks could create as many problems as it solved. Protection and improvement of spawning habitat – controlling stream flows and temperatures, improve spawning gravels and removing obstructions – would give far better results than similar investments in hatcheries. Despite these misgivings, renewed emphasis on hatcheries figured prominently in economists' new strategies for fisheries enhancement into the 1970s.⁶⁹ Echoing Haig-Brown, Peter Larkin called for salmon management "more closely identified with the perspective of the salmon." ⁷⁰ Regulations, he suggested, should be based on salmon biology, not the demands of human convenience. New

When 'salmon enhancement' led by the hatcheries expansion became ascendant fisheries policy in the 1970s, scientists made it clear they couldn't confirm more hatcheries on some rivers would mitigate damage done to salmon on other streams. Carl Walters, another UBC fisheries scientist, pointed out that ecological studies had determined much hatchery based enhancement elsewhere showed good initial results only to see decline in the longer term, sometimes to levels below those at the start of enhancement. The outcomes of hatcheries were often affected by upsurges in investments in more efficient fishing gear and changes in the timing and location of fishing in response to initially enhanced populations. The systems within which these fisheries were conducted, warned Walters, were so complex that any enhancement had to be viewed as a huge experiment rather than pretending a level of understanding that didn't exist. They required decades of careful monitoring to determine their outcomes. ⁷¹ This sort of humility was good science but not familiar or comfortable language for resource economists, much less politicians whose success might depend on hubristic visions of guaranteed improvements in yields. The scientists pointed to tremendous uncertainty surrounding those parts of a salmon's life cycle that some – such as Sockeye – spent in the open ocean. They highlighted essentially unknown factors in the ocean that could determine population dynamics. Such observations further undermined scientists' faith in the optimistic pronouncements of hatchery-dependent enhancement.⁷²

Resource economists wanted to enhance stocks on some rivers so they could sacrifice them on others. Biologists suggested enhancement should focus on those rivers where stocks were already reduced and cautioned of the danger inherent in 'throwing away' any spawning rivers. All were needed to ensure the health of the overall population.⁷³ These views were particularly unwelcome among proponents of new hydroelectric dams on the Fraser such as BC Hydro Chairman Gordon Shrum.

Even Haig-Brown conceded that hatcheries had a role to play and admitted that in badly degraded watersheds, they might be the only solution left. Yet if hatcheries were a last resort, he said, BC "...should not be looking for last resorts." Hatcheries were a "...patent medicine panacea" especially inappropriate for keeping stocks high over long periods. He cited problems similar to those raised decades later by critics of salmon farming. Hatcheries were expensive and polluting and they bred diseases that could spread to wild stocks. They dangerously reduced genetic diversity in salmon populations. Their drawbacks tended to get worse over time and threatened to divert resources away from better enhancement approaches. Achieving large, healthy salmon stocks required "doing it the hard way," protecting and managing wild stocks, their spawning streams and the land around them.⁷⁴

Haig-Brown dismissed fisheries authorities' claims that they didn't know enough about stream rehabilitation to undertake it on a large scale. He pointed out they had thousands of damaged

streams to experiment with and while they didn't know everything about restoring them, they knew enough to get started.⁷⁵

It's not surprising that provincial leaders, now highly dependent on forest industry revenues and committed to dam construction, were more comfortable with the economists' talk of hatchery based enhancement rather than what seemed like the excessive caution and murky uncertainty of biologists. Much science would eventually be applied to different enhancement strategies, but most were a messy convergence of science, resource economics and politics.

Salmon governance, the SEP & after It was clear to many fisheries biologists that careful, flexible, multi-faceted and responsive fisheries policies were required to control the impacts of technological advances on fish stocks. Implementing such policy required political will however. As in the past, such will was hard to come by, particularly across federal – provincial lines. While Ottawa controlled the salmon fishery, Victoria controlled land based activities, including forestry, farming, dam building, industrial and urban development, that had vast impacts on salmon habitat. Provincial fisheries authorities appreciated the need to protect salmon habitat but managers in most other sectors usually ignored the issue.

Federal fisheries authorities began pursuing strategies aimed at maximising economic returns from the salmon fishery. By the late 1960s, identifying the 'common property' nature of the fishery as one its main problems, they limited access to it by reducing the number of commercial licences available. They intended to force 'inefficient' smaller operators (Illustration 58) - many of them indigenous fishers - out of the commercial fishery. As Meggs described it, resource economists were unfettered by any understanding of the salmon fishery's socio-cultural and biological complexities.⁷⁶ To them it appeared to be "an enormous government and corporate effort to reap a relatively modest volume of fish"; it accounted for 3.5% of the province's jobs but only 1.5% of its wealth. From an economists' perspective, too many fishermen were going after too few fish. Fishermen's gear was increasingly costly and its efficiency was leading to ever shorter fishing seasons. Foreign competitors on the outside coast and competition from sport fishers on the Strait plagued them. Unemployment insurance and affordable fishing licenses meant too many 'marginal fishermen' were attracted into the fishery. All these and many other factors, said the economists, were making it difficult to manage the fisheries

'scientifically.'⁷⁷ Reducing the number of licenses seemed the only logical response to the economists. For Peter Pearse, whose advice helped to guide this process, the fishery ought to achieve the greatest possible sustained yield of fish from the most efficient possible use of labour and capital. Eliminating 'inefficient' fishermen from the fleet would increase the 'health' of the industry. A complementary 'salmon enhancement programme,' would ensure healthy stocks.⁷⁸ The economists' prescriptions initially seemed to have the desired effect. Stimulated by huge growth in Japanese demand, the coastal fishing industry saw record high salmon prices, earnings and profits between 1973 and 1980.⁷⁹ Yet by the 1980s there were once again too many fishers going after too few fish. Another Royal Commission warned the coastal fishing fleet still had far more capacity than was needed to harvest the available fish. ⁸⁰



Illustration 58 – "Fishing fleet in Vancouver Harbour" 1948 (photo: undetermined). Taken before the 'rationalisation' of the coastal fishing fleet.

The 1970s had marked the apogee of the post war era of government intervention in the economy. Victoria had begun to worry in the 1960s that the province was not 'close' enough to fishery issues and called for enhanced provincial capacity for fisheries management. A 'Marine

Resources Branch' established within the province's new Ministry of Environment in the 1970s did get 'closer' to marine fisheries on the sea. They signed a Memorandum of Understanding with their federal counterparts in 1975 defining their respective roles in a Salmon Enhancement Programme (SEP). Ignoring growing scientific misgivings about hatcheries, the SEP emphasised expanding hatcheries on rivers around the Strait, while also improving habitat protection and pollution control.

A federal-provincial agreement was a critical requirement for the SEP because it called for sweeping improvements in the way the province's coastal watersheds were managed. Federal planners recognised restrictions on forestry, mining and waste dumping called for in the SEP would mean direct costs to the province. They suggested these costs should be part of the province's contribution to the SEP.⁸¹ Provincial fisheries officials had little control over such things however and Victoria did little to encourage other sectors to participate.

By the early 1970s federal authorities had begun to call for massive expansion of their earlier successes in restoring salmon on the Fraser. They maintained that Sockeye catches on the Fraser could be tripled and Pink increased up to eight times. Resource economists proposed a seductive, flexible approach known as "no net loss" - that would allow fish production capacity to be lost on some salmon streams as long as these could then be compensated by increased production, through 'enhancement,' on others. The key element of 'enhancement on demand' would be hatcheries, perceived – by the economists but not the biologists - as being able to ratchet up production as required in those compensatory streams.⁸² When Ottawa launched detailed planning of the SEP in the mid-1970s its first five years of operations were expected to cost \$150 million, with a total cost over a decade up to \$300 million. They predicted it would give a dramatic boost to the Strait and the Fraser watershed, doubling salmon production there in ten years. Federal fisheries minister, Romeo Leblanc said the SEP was "an exciting example of man's ability to enhance, rather than endanger, an invaluable natural resource." He explained that salmon catches on the west coast that had reached 360 million pounds a year early in the twentieth century had now fallen to half of this as a result of "environmental damage and overfishing." Ignoring fish scientists' uncertainty, his ministry's projections for the future were as firm as their records of the past. Without the SEP, salmon production of 145 million pounds a year would fall by 20% to 30% over the next two decades. The "application of fish culture

technology" (i.e., hatcheries) could reverse this trend, they said, and "increase production of salmonids by at least 190 million pounds annually."⁸³

The SEP would draw on diverse enhancement techniques, many of them "developed in Canada," such as spawning channels, hatcheries, 'fishways', stream modification, rearing ponds and incubation boxes. These would be combined with "new and promising techniques" such as lake and stream 'enrichment.' While other countries practiced this kind of enhancement, Canada was said to have unique comparative advantages that included its "high proportion of unspoiled natural streams, strong fishing and processing capacity... and a leadership role in the broad application of fish culture technology." Ottawa recognised that the SEP would be challenging and discouraged salmon fishers and processors from making further capital investments, because they already had all capacity needed to achieve predicted catch increases. They worried that new investments in fishing equipment would diminish the economic returns on the government's investment. They didn't speculate about their possible impacts on salmon stocks.

The list of the SEP's prospective benefits was long. By the end of the century, increased production would be worth close to \$500 million (1976) dollars, up from under \$200 million in the mid-1970s. It could create over four million days of employment. In addition to the obvious benefits to commercial fishery, the SEP would create opportunities for local anglers and tourists alike. Guides, marinas and other services would benefit, as would many small communities. Tension between commercial and recreational fishers would be reduced, particularly on the Strait where recreational demand for salmon was concentrated. Indigenous people would have more fishing income, more food fish and more jobs in fishing and fish processing. Citizens' mental and physical health would be improved and the public would be given opportunities to participate in enhancement. Canada's balance of payments would improve and welfare and unemployment insurance claims would decline.⁸⁴ They stopped just short of promising a salmon related cure for cancer but it was a more encouraging picture than the biologists' gloomy 'uncertainty' scenario.

The SEP would be active throughout the Fraser basin but many components, especially concerned with sport fishing, focused on the Strait. Of eleven hatcheries producing "sport fish" – Chinook and Coho – that were being developed or upgraded by 1977, nine were on the Strait or

lower Fraser (Figure 11). The following year plans were developed for four more salmon rearing facilities on the Vancouver Island shore.⁸⁵ Much of the appeal of these SEP hatcheries was their potential to reduce the pressure for careful conservation and elaborate governance, those other measures that Haig-Brown and many scientists insisted were far more effective than hatcheries. Some fisheries biologists decried the SEP's approach as a hopeless collection of compromises leading to a still highly inefficient fishery. Peter Larkin called it a "typically Canadian ... a creeping approach ... (involving) a half-hearted commitment to science, a weak kneed approach to licence limitation, a blunt elbowed approach to international negotiations, a soft headed approach to subsidies and a long winded approach to planning." Instead, Larkin said, they needed "hyper modern, super efficient, technology rich fisheries" that could bring down world fish prices while increasing sales.⁸⁶

As the SEP advanced it suffered from uncertainties over possible negative effects of hatchery stocks on wild salmon populations. Two other concerns were beyond the direct control of the SEP's managers. A long-standing international agreement had to be re-negotiated with the Americans. Also, much of the critical fish habitat protection promised in the SEP depended on collaboration with less interested provincial and municipal governments.⁸⁷ By the early 1980s, the winds of neo-liberalism had begun to blow and the SEP had disappeared.⁸⁸. Uncertainty about the dynamics of the salmon fishery, and Ottawa's inability to control these also hastened the demise of the SEP. As Romeo Leblanc explained in 1978, they knew how many fish were entering the sea from rivers and they knew how many were being caught by commercial fishermen but they didn't know much about all the other things happening to salmon.⁸⁹ Many federal fisheries officers looked upon the Strait's rapidly expanding recreational fishery as a threat to commercial fishing interests. Sport fishers were now taking an estimated two thirds of Chinook salmon caught in the Strait. Other uncertainties surrounded the 'food fishery' of the Strait's indigenous people and worries that their 'food fish' was finding its way onto commercial markets.



Figure 11 - Salmon hatcheries developed, upgraded or planned around the Strait by the SEP, 1977

Other challenges - forestry, dams, ports, anglers The forest industry had long had a variety of destructive effects on the Strait's salmon and they resisted pressure to reduce these impacts. Pulp mills were very slow to recognize their deleterious effects in the waters receiving their

copious waste streams. One of Larkin's graduate students in the early 1950s reported that a sulphite pulp mill produced a waste stream equivalent to that from a town of 450,000 people.⁹⁰ Forestry's greatest impacts, however, were on watersheds. It was now recognised globally that logging damage to streams was among the most important causes of declining fish stocks. Logging had deforested virtually every watershed on the Strait, at least once, by the 1950s, leaving behind thousands of streams blocked by debris. Countless smaller waterways now dried in summer and became torrents that destroyed spawning beds in winter. Summer flows were reduced in larger streams, reducing their capacities to sustain juvenile salmon. Salmon were adapted to reproduce and spend their early lives in cool, oxygenated, sediment free streams. By stripping away vegetation, clogging streams and increasing sedimentation, logging greatly diminished adult salmons' spawning success and juveniles' survival rates.

Haig-Brown's work with the IPSC focused on the Fraser but he had spent decades watching degradation of the Strait's smaller streams, ravaged by mining, road building, logging and forest fires fuelled by logging waste. A logger himself as a young man, Haig-Brown decried "...fifty years of notoriously destructive logging methods" that had destroyed thousands of salmon spawning runs. Yet he expressed optimism for the future. Logging methods, he said, were "not quite as destructive" as they were before 1950 and many forests were now regenerating. Where necessary, fisheries authorities could stimulate spawning on damaged streams with various grooming techniques and selective artificial regeneration. But he had no faith in authorities' "pious references ... to multiple use" of forests.⁹¹ Haig-Brown's skepticism was well founded; fishery authorities' requests for Victoria to properly manage riparian forests were almost never heeded. Despite the decades' long damage, a report to the province's Marine Resources Branch in 1969 stated "... relationship between streamside vegetation and salmonid stream ecology has been one of the most badly neglected areas of fisheries research in BC." ⁹² A note to file in 1970 reported "precious few foresters" recognised that harmful effects of logging on fish could be mitigated by leaving bands of trees around streams undisturbed. The author, R. G. McMynn, knew the forest industry of which he spoke. It was a stunning observation, a quarter century after 'leave strips' around streams had been recommended by the Sloan Commission. McMynn, echoed Haig-Brown, hoping that BC's policies would begin to recognise logging's impacts. Two years later the Fisheries Research Board noted that although almost no studies had looked at the impact of BC's logging practices on salmon, they were now getting started.⁹³

Haig-Brown reported in 1973 that sport and commercial fishermen had been "remarkably unsuccessful" during decades of trying to keep logging away from streams. He blamed "half hearted, ill-informed and totally inadequate co-operation" between provincial forestry and federal fishery authorities, between provincial departments and between governments and loggers. Guardedly optimistic about new fisheries legislation to improve stream protection, he worried that Ottawa lacked the capacity to enforce it and that BC's foresters were not ready to make necessary changes. The only solution for Haig-Brown was a radical shift in land use planning, away from the 'multiple use' rhetoric belied by the province's devotion of entire watersheds to forest monocultures.⁹⁴

BC's new Pollution Control Board (PCB) made anaemic efforts to control the forest industry. An enquiry in 1970 looked into how the industry might meet requirements of the 1967 Pollution Control Act. By 1972 they had issued "recommended guidelines and objectives for air pollution control, solid waste management and water, for different types of emissions, effluents and solid waste from a range of wood mills and pulp and paper mills." ⁹⁵ Yet the provincial government appeared to care far more about the health of the forest sector than the marine fishery and was prepared to sacrifice one for the short-term convenience of the other. Besides, the commercial salmon fishery was a federal domain and the forest industry was a far larger economic player, with a great deal more clout in Victoria.

Developing BC's hydro-electricity generation capacity was also a higher priority than the salmon fishery. Dams' impacts on salmon were known, elaborated repeatedly since the early 1960s. They delayed or prevented spawning and caused temperature fluctuations affecting both spawning fish and incubating eggs. Spillways and turbines killed migrating fish.⁹⁶ Provincial and federal fisheries authorities together, unsuccessfully, confronted the BC Power Commission about a dam on the Puntledge River in the 1950s. Provincial specialists worried the dam was damaging the river's migratory Steelhead, and federal authorities were concerned about spawning Chinook. Provincial biologists maintained "... the destruction of a large proportion of this resource through single-purpose river development for the sake of short term economics is not in the public interest..." They estimated the dam did \$30,000 damage a year to the Steelhead run alone,⁹⁷ damage that was never successfully mitigated.

The biggest confrontation was on the Fraser. Demand for electricity and more effective control over spring floods had risen rapidly after WWII. Evenden characterised the struggle that played out there over the next couple of decades as "fish versus power." C. H. Clay, a federal fisheries engineer who had worked on construction of the Hell's Gate fishways, and Peter Larkin at UBC vigorously rejected another engineer's suggestion that fish protection and hatcheries could render hydro dams safe for salmon. Larkin asserted later that the province had the world's strongest capacity for scientific research on interactions between fisheries and dams and had concluded fish and dams could not easily co-exist.⁹⁸ He invoked the ire of BC Hydro chairman Gordon Shrum who questioned why researchers would accept funding if they couldn't solve such problems. Shrum was convinced that science *could* solve such problems and proposed a five year "crash programme" to do it.⁹⁹ Haig-Brown declared that all the IPSC's progress and potential for future improvement of the fishery would be "...destroyed, wiped out forever, by one high dam on the river's main channel."¹⁰⁰ The Social Credit government clearly favoured power over fish, but salmons' proponents eventually prevailed on the Fraser. This rare victory for the fish resulted from an effective coalition of forces in their support but also outside factors, on the Columbia and Peace River systems, and advances in power transmission technologies.¹⁰¹

Another existential threat was rapid development of port facilities, particularly near the mouths of the Fraser and other rivers around the Strait. There was considerable debate and uncertainty over the likely impacts on fish from port developments south of the Fraser River that began in the 1960s. The impacts of dredging on the Fraser were far less ambiguous. Environment Canada developed guidelines in the mid-1970s to control practices that were killing virtually all juvenile salmon descending the river during dredging. But the dredges were still killing salmon and stirring controversy by the late 1970s.¹⁰²

Sport and commercial salmon fishers confronted one another on the Strait. The commercial fishery was most preoccupied with Sockeye travelling in large schools and living most of their lives in the open ocean, only passing through the Strait on their way to and from spawning rivers. The sport fishery was mostly concerned with Coho and Chinook, species that didn't move in large schools but did go after angler's lures. Most local Chinook spent their adult lives in the Strait. The province estimated that by the early 1960s sports fishers were landing between

200,000 and 400,000 Chinook each year, about 1.5% of the coast's total salmon catch. BC's salt water anglers were estimated to be spending \$19 million a year on their sport, the vast majority on the Strait.¹⁰³ Haig-Brown described salmon as "...the most exciting of the world's fish"¹⁰⁴ Sport fishers' fleet of small boats increased rapidly throughout the 1960s. Haig-Brown suggested to Imbert Orchard that angling on the inland sea had become "probably the most valuable tourist sport fishery in the world."¹⁰⁵ SEP planners - admittedly given to hyperbole - estimated 250,000 salt water anglers on the BC coast by the 1970s, mostly on the Strait.¹⁰⁶ In towns up and down both shores, sport fishing had become a major form of recreation and a significant element of local economies. The problem was that sport and commercial fishers pursued the same dwindling populations of Coho and Chinook. Though catching mostly Sockeye, commercial fishers also landed substantial numbers of Coho and Chinook. By the 1960s there was no doubt; when commercial Coho and Chinook catches went up, the sport fishery declined and vice versa.¹⁰⁷ Many felt the sport fishery should be given priority over much of the Strait. The rationale appeared unassailable: the economic return to the province from a Coho or Chinook caught by an angler was far greater than the same fish caught by a commercial troller. An important part of the SEP's appeal for BC was its expansion of Coho and Chinook hatcheries. One of its many unfulfilled promises was a commitment to use hatcheries to reduce tensions between sport and commercial fishermen.

International salmon agreement In 1985 John Fraser, a suitably named federal fisheries minister from Vancouver, proudly announced a new Canada - US Pacific Salmon Treaty, after fourteen years of negotiations. Fraser said the agreement would help "every salmon species and fishing area in BC" and adjacent American waters. Guided by an eight-man commission, the treaty would address concerns of sport and commercial fisheries, building falling stocks of Chinook and reducing Canadian "interception" of US bound Coho. The new agreement governed sharing of Fraser River Sockeye and Pink, with the underlying principle that each country should receive benefits from the fishery commensurate with its "production of salmon originating in its waters." It would "open the doors to much increased enhancement work and habitat restoration" and assure Canadians received the benefits of their labour, especially on the Fraser.¹⁰⁸ This treaty and its commission were expected to help manage those Fraser Sockeye runs passing through the shared waters of Juan de Fuca Strait then US waters before crossing into the Canadian part of the Strait and the Fraser. The treaty replaced an earlier 'Reciprocal

Fishing Privileges Treaty' that had required decades of difficult negotiations earlier in the century then lapsed in 1973. The central premise of this earlier treaty had been equal sharing of Fraser salmon between the two countries. Disagreement over catch allocations had led to the long delay of the new treaty and this uncertainty had helped undermine the SEP.

Salmon farming After a good decade in the 1970s, commercial salmon fishing declined again in the 1980s, as Ottawa and Victoria became very interested in salmon farming. This was a rare instance when both governments agreed, more or less, on the right way forward for the fishery.¹⁰⁹ Salmon farming's emergence around the inland sea in the 1970s and '80s responded to a series of more or less linked factors and was much in tune with global changes. For federal officials frustrated by their inability to control BC's destructive logging practices or achieve a new salmon treaty, salmon farming was an attractive alternative, perhaps even a panacea fit to replace hatcheries. Federal authorities already had a century of experience with fish culture and many were positively predisposed to it. For resource economists, fish farms were like hatcheries, only better. The government would not have to directly manage them and their fish would not be at the mercy of careless loggers, miners, factories or towns. Provincial fishery officials, also frustrated by futile struggles to control the profligate foresters, welcomed this new way to stimulate fish production. As early as the mid-1960s, Victoria was corresponding with a Vancouver Island entrepreneur who aimed to combine oyster rafts with salmon farming.¹¹⁰

The province knew there were challenges associated with salmon farming. It was costly in the 1970s, compared with fishing wild stocks, although emerging technology involving open net cages suspended from rafts could change this. Raised in pens, salmon could become sources of pollution rather than suffering from the pollution of others. Disease would inevitably threaten salmon raised in crowded pens. Ecologists warned of the dangers and instability of fish monocultures that tried to suppress complex ecological interactions in poorly understood environments.¹¹¹ These concerns, like those about hatcheries, failed to extinguish excitement about salmon farming's potential. The province's new Marine Resource Branch elaborated on the promise of aquaculture on the Strait and other protected BC waters, already among the most productive of the North Pacific. The Strait shared with Puget Sound (today's South Salish Sea) the virtue of being protected from fierce ocean storms. Powerful tidal flows would "provide a flushing ... equivalent to immense rivers," to cope with the farms' waste. Research was looking

into transforming this waste into fuel. Cheap sources of feed were available and the expertise of the federal research station at Nanaimo would support fish farmers on the inland sea. In short, the Strait was well placed to join the "Blue Revolution." Proponents depicted an inevitable transition from 'marine hunting' to 'marine farming', analogous to the Neolithic Revolution of a few thousand years earlier.¹¹² Initial provincial caution soon dissipated however and the left wing Barrett government was an enthusiastic supporter even before the economic viability of salmon aquaculture had been demonstrated. It was perceived as the 'wave of the future' and they financed a study in 1974 looking at how the industry might develop. They expected BC's 'unique marine geography' would allow it to be a leader in fish farming by 2000. The industry would be 'environmentally safe', they said, while helping meet growing demand for protein. Like the SEP, aquaculture was portrayed as a lifeline for struggling indigenous communities. They and Barrett's trade union supporters would be fully involved in new fish farming projects. One of the few threats facing marine aquaculture development in BC, they said, were large American corporations such as Union Carbide, with a growing interest in the technology, who might become competition for local salmon farmers.¹¹³

Many federal specialists were equally enthusiastic about aquaculture's potential though perhaps a little disoriented by BC's vigorous entry into Ottawa's maritime domain. They confirmed oceanographic and coastal conditions in BC were as well suited for marine aquaculture as in Norway or Japan, where it was already established. Few projects were yet underway in BC but federal authorities were receiving many enquiries from interested entrepreneurs by the early 1970s.¹¹⁴ Ottawa's specialists worried in private about their capacity to provide the technical advice and regulatory authority they believed would be needed to guide a rapid expansion of salmon farming. They needed more capacity for disease prevention, diagnosis and treatment. A pilot fish farm and breeding programs would be needed to increase growth rates and disease resistance of farmed fish and make their flesh a more attractive colour. A feedstock industry was needed, ideally using local cannery waste. Federal specialists suggested fish farming should supplement the wild fishery, not replace it. Part of aquaculture's promise was to supply fresh fish to markets even when "natural supplies" were unavailable. But it needed to be "closely regulated to ensure continued high return from native stocks." Expertise would have to be developed from scratch or else imported from other places. They called for a federal budget increase of a billion dollars to cover all required activities.¹¹⁵

Salmon farmers' early experiences on the Strait confirmed federal worries and followed a familiar pattern of federal-provincial squabbling. The Meneely family, described by local papers as "Canadian pioneers," had developed three operations off Sechelt Peninsula by 1975. They farmed Coho and Chinook and complained of difficulties getting salmon eggs from federal hatcheries. To get expert help, said Larry Meneely, he had been obliged to hire biologists from the Nanaimo Station, who then failed to support him and didn't help him get eggs. Victoria intervened on his behalf, alarmed that Ottawa seemed able to supply eggs to Union Carbide, but not to a local entrepreneur. The province began to wonder publicly whether federal authorities weren't trying to impede development of BC's aquaculture.¹¹⁶ The industry got established however, with ten farms producing a little over 100 tonnes of fish by 1984. Four years later, 118 farms produced 6,600 tonnes. Production increased four-fold again in the next three years. The 1970s's theoretical questions were now practical problems. How to feed these schools of rapidly growing fish and keep them healthy? Most answers were worked out by trial and error, with help from imported expertise and Atlantic salmon eggs. White reported that seventy operations around Sechelt had "appeared like an overnight plankton bloom" only to be "quickly washed away in a tide of bankruptcy." ¹¹⁷ Salmon prices fell precipitously in the late 1980s, a devastating blow to many fragile start-up farms (and to fishers of wild salmon). The industry became concentrated in the hands of a few large foreign enterprises, as the province had earlier worried that it might, though these were mostly Norwegian, not American.¹¹⁸

As it had in the late nineteenth century, much salmon harvesting on the Strait had again rapidly become almost unrecognisable compared with earlier technologies. Although Ottawa and Victoria supported salmon farming, it alarmed many others in the 'wild fishing' community and the public at large. Concerns about salmon farming on the Strait then became more muted as most pioneer farms closed and new ones were established mostly on or beyond its northern boundary, further away from the Strait's larger settlements.

Oysters

Settlers began commercial harvest of the Strait's relatively modest populations of native oyster, *Ostrea lurida*, in the 1880s and 1890s. They had previously been harvested mostly by indigenous people. Experimental introduction of exotic oyster species more amenable to cultivation began

just before WWI. The Atlantic oyster, *Crassostrea virginica*, thrived only in Boundary Bay, where they sustained a local oyster industry through the first half of the twentieth century. The larger Japanese or Pacific oyster, *Crassostrea gigas*, was seeded into Ladysmith Harbour in 1912. It was not cultivated in large quantities on the Strait until 1926, when twenty cases of seed oysters imported from Japan were put out in Ladysmith and Esquimalt harbours. They were introduced to a few other places around the Strait by the 1930s, including Pender Harbour, Comox Harbour, Baynes Sound and Cortes Island.¹¹⁹

The first significant natural spawn of Pacific oysters occurred on the Strait in 1932, in Ladysmith Harbour. More widespread natural breeding occurred in 1942, especially in the Strait's warmer northern reaches. Heavy seeding of what most saw as "wild oysters" provided a seed supply that partially compensated for suspension of imported Japanese seed during WWII.¹²⁰ Seed imports from Japan continued for almost two decades after the war, but dependence on imported seed declined steadily. Two large natural spawns, in 1942 and again in 1958, had allowed these exotic oysters to spread beyond seeded beaches. Seed oyster or "spat" also became available locally when entrepreneurs discovered late in the '40s that they could induce regular spawning in the reliably warm summer waters of Pendrell Sound.¹²¹

Early oyster farming had few of the inherent disadvantages of later salmon farming. Oysters are 'filter feeders', extracting nitrogen, phosphorus, carbon and suspended solids from the water column. Rather than creating copious waste, they could improve water quality. A single adult oyster can filter over 200 litres of water a day.¹²² A greater problem from an ecological perspective was the threat the Strait's growing oyster industry represented to the less prolific native oyster. As in other places, native oysters were in decline on the Strait by 1950 and one of the causes was their replacement by the larger, highly adaptable Pacific oyster.

While it had started further south, commercial oystering with Pacific oysters expanded mostly on the Strait's northern beaches after WWII. The water was mostly cleaner, the infrequent natural sets more vigorous and Pendrell Sound's seed oysters were nearby. Cortes Island was an important oyster producer by the 1970s, shipping to specialty markets around the world and experimenting with more intensive production in the island's protected inlets and harbours. While oysters were farmed on seeded beaches, 'wild' Pacific oysters were also being harvested from the foreshores of Cortes and smaller islands nearby, colonised during the great set of 1958 in particular. This natural bounty was fortuitous in the early 1970s, as traditional oyster producers, including those in France, Portugal and Japan, were facing growing problems with pollution and disease. By the mid-1970s Cortes Island oystermen had to compete with harvesting enterprises from Baynes Sound for 'wild oysters' at choice beach sites on nearby islands.¹²³ Comox Harbour and adjacent Baynes Sound had also become more important oyster producing areas. The first commercial lease on Denman Island was issued by the province in 1944. By the 1970s, oyster farming was a significant part of the local scene and islanders' Victoria Day celebrations included oyster shucking contests.¹²⁴

The 1942 and 1958 spawns also introduced these large bivalves to many beaches in front of reserves. While some indigenous people considered these plump new oysters unhealthy compared with native species,¹²⁵ others adapted to a new source of income. Despite concerns about pollution and competition from other pickers, the Chemainus people began harvesting oysters showing up on their beaches after 1958. The Comox purchased their first oyster lease in the late 1960s. A decade later the Sliammon began to invest in oyster culture.¹²⁶ For the most part though, commercial oyster harvesting remained overwhelmingly an activity based in settler communities around the sea, not indigenous ones.¹²⁷

Unlike other fisheries on the Strait, oystering was administered by the province in the post war years, following Ottawa's transfer of this function to Victoria. In the mid-1960s, with the industry growing steadily, confusion emerged over the two governments' responsibilities for managing, inspecting and researching the oyster industry. The province's Commercial Fisheries Branch began in 1966 to administer a system of permits governing oyster harvesting from "vacant Crown lands" (meaning foreshore between low and high tide lines) by commercial and recreational pickers. Prior to this, there had been no restrictions on commercial or private harvesting of oysters on public beaches. 'Recreational' pickers were now limited to forty-five kg of oysters in the shell or 4.5 litres of shucked oysters per person. Commercial pickers required monthly permits issued by Commercial Fisheries Branch. These allowed harvesting in specific areas, for a royalty payment of a dollar per ton of shellfish harvested.¹²⁸ Provincial fishery authorities began receiving complaints from irate citizens. Harvesting an estimated 1,000 to 1,500 tons of 'wild oysters' a year, the commercial harvesters were increasingly perceived as

taking more than their share. Francis Dickie at Heriot Bay voiced these feelings of injustice in a 1968 letter to Victoria

...a little oyster bed extending from our south beach. For 30 years the people living along its waterfront adjoining and nearby have conserved carefully the needed supply... Imagine my astonishment the other day to see a crew of six men 'looting' it... I was astounded to be told by one he had a LICENCE... It is incredible that the Department, before granting such licence, never sent a biologist and the local Warden to thoroughly examine this small bed, to examine its size and what could economically be taken... You personally know how for years I have written many articles stressing the need for conservation published in the Colonist, Vancouver Sun, Maclean's Winnipeg Free Press, Rod & Gun and other ... And now, at my very door, this unbelievable is happening. It may be too late."

Dickie went on to suggest the government's biologists ought to come to see for themselves, then cancel the man's permit and post a permanent notice stating the bed was closed except to "moderate use" by local residents.¹²⁹

By the late 1960s, many had come to see 'moderate use' of exotic oysters as the settler's birthright. Growing numbers of people in places such as Savary Island and False Narrows, and their legislators, were complaining bitterly of commercial pickers decimating diminishing stocks of 'wild oysters' on their favourite beaches. Relations between commercial harvesters and recreationists deteriorated as the Strait's rapidly growing fleet of pleasure boaters and other recreationists continued to take 'wild oysters' from the beach. By 1973 the province was obliged to further reduce the allowable harvest of recreational users down to a maximum of 25 oysters or a litre of shucked oysters per person per day.¹³⁰ Indigenous people were also growing incensed by commercial pickers harvesting 'their wild oysters' from the foreshore in front of reserves. The pickers believed it was their right to pick as many as they could manage because all were simply 'escapes' from their beach farms, a little like stray cattle.¹³¹

Starting in the early 1970s, commercial oyster farms on public beaches, mostly on Cortes Island, Baynes Sound and Ladysmith Harbour, began to be governed by renewable ten-year provincial licenses. Victoria was increasingly dissatisfied with the industry's performance. Influenced by resource economists, government analysis of problems and prospective solutions for oystering resembled contemporary prescriptions for salmon. The industry was allegedly plagued by too many small, marginal producers who were 'uneconomic.' Almost all oyster production was still done on the beach by small, independent, labour intensive operations.¹³² The government estimated that a more mechanised industry based on rafts could produce ten times as many oysters. Raft culture, they claimed, could produce more than 22,000 kilograms of oyster meat per hectare and this compared very favourably with land based meat or grain production. Farmed oysters, they suggested, might even be an answer to the global famines that many were anticipating in the 1970s.¹³³

Provincial managers worried about the challenges of growing pollution from diverse land and sea based sources, growing conflicts with waterfront landowners and various types of 'encroachment' by other beach users. One of the greatest concerns was to ensure that oyster producers, once they had begun the transition to raft based production, would have access to the sheltered sites needed for this new system. It was estimated that at least 600 hectares were suitable for raft culture on the Strait in the early 1970s but competition for such sites was growing intense. The forest industry was already accustomed to using many beaches for storing logs, and Victoria's oyster managers worried that the rapid growth in boating and waterfront recreation might further diminish their chances for expanding and intensifying commercial oystering. They had seen the negative effects of resorts and marinas on those vestiges of Ladysmith Harbour still available for oystering. New marine parks in places such as Desolation Sound might further block expansion of oyster rafts.¹³⁴

The health of the oyster industry provided a rough indicator of marine water quality on different parts of the Strait – it thrived where pollution was minimal and was driven out of areas exposed to growing municipal and industrial waste. Many oyster producers considered this growing pollution a more serious problem than any need to 'rationalise' their industry. Pulp mills built on the western shore in the 1950s threatened nearby oyster harvesting. Domestic sewage pollution became widespread; while oyster farming in Boundary Bay had accounted for over half the Strait's oyster production into the 1950s, by the early 1960s it had ceased due to domestic waste swept into the bay by the Nickomekl and Serpentine Rivers.¹³⁵ Over eightly hectares of beach on Ladysmith Harbour was also declared contaminated by 1965. Only one of its twenty-eight leases remained active, depending on treatment in a 'depuration plant' to render its oysters marketable. Prior to this closure, Ladysmith had accounted for almost a quarter of the province's oyster production. Pollution affecting the harbour originated from diverse sources and was difficult to manage. Much of the harbour was still closed to oystering in the early 1970s when the

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Commercial Fisheries Branch suggested oyster growing there could be compatible with the forest industry but not with municipal waste. The shellfish ban might eventually be lifted, they said, if the town 'made good on its promise' to build a secondary sewage treatment plant.¹³⁶ It didn't. At Comox, only ten acres of the original eighty devoted to leases in the harbour were still being used for shellfish production by the early 1970s. These had to relay their oysters south to Baynes Sound to be 'de-contaminated' in cleaner waters before harvest. Within twenty years the industry had shifted to Baynes Sound, where almost 100 leases employed 200 people. Even the Baynes Sound leases faced occasional summer closures due to domestic pollution.¹³⁷

From "teeming with life" to "coping with challenges"

The Strait's abundant marine life, the marine resource mine, was much diminished by the 1980s, compared with what it had been in 1849. Many types of marine life not discussed in this study, such as whales, ground fish and herring, had declined largely in response to rates of harvesting that their populations could not sustain. The changes in salmon and oyster populations discussed in this chapter were more complex. They were subject to intense pressure from harvesting and from indirect effects of diverse land-based activities, including growing marine pollution. Their populations declined in some places and recovered in others, changing dramatically in the process. Their future seemed likely to increasingly involve cultivation of exotic varieties, better suited than indigenous ones to the techniques of aquaculture. These changes diminished fears of loss among those who were reassured that salmon and shellfish production would continue more or less undiminished. Such change exacerbated the fears of others who worried about the effects of these new technologies on beleaguered indigenous species or on the Strait's recreational values. Indigenous people, having resisted prolonged colonial efforts to separate them from the sea life that had sustained their ancestors, would begin to assume more influence again over marine harvesting technologies that in some ways resembled those of their ancestors and in other ways were very different from them. Conflicts between industrial harvesters of marine resources and other stakeholders, particularly recreationists, became more frequent after the 1980s and those with municipal polluters continue. Conflict with industrial polluters diminished as traditional industries on the Strait declined and aquaculture itself became an important new source of pollution.

¹ Richard S. Mackie, "Colonial Land, Indian Labour and Company Capital: The Economy of Vancouver Island, 1849-1858" (MA thesis, University of Victoria, 1985), 59.

⁶ Keith Ralston, "Patterns of Trade and Investment on the Pacific coast, 1867-1892: The Case of the BC Salmon canning Industry," *BC Studies* 1 (Winter 1968-69) cited in: Newell *Pacific Salmon Canning*, 37-39; Diane Newell, "Surveying Historic Industrial Tidewater Sites: The Case of the BC Salmon Canning Industry." *IA: The Journal for the Society of Industrial Archaeology* 13 (1987): 1-16; TBC 21 March 1876 p 3, citing "The Canadian Yearbook": 42; Harris, *Resettlement*, 93.

⁷ TBC 27 July 1873:3.

⁸ UBCLSC RG 10 - T3967 – Volume 11028 – File SRR-1 Sproat's letters to The Minister of the Interior, Ottawa In Camp, Skwawmish River, Howe Sound, BC, 17 Nov 1876.

⁹ BCA GR-1118: BC MARINE RESOURCES BRANCH. BOX 5, File 2: Undated, anonymous four page note entitled: "Early days in the Salmon Industry;" Newell, *Pacific Salmon Canning*.

¹⁰ Newell, Pacific Salmon Canning.

¹¹ UBCLSC RHB papers, BN 137 – 3: "Canada's Pacific Salmon." Undated typed 42 pp manuscript. (probably 1956 or 57); Callum Roberts, *The Unnatural History of the Sea* (Washington, DC: Island Press, 2007); Newell, *Pacific Salmon Canning;* Dianne Newell, *Tangled Webs of History: Indians and the Law in Canada's Pacific Coast Fisheries* (Toronto, U of Toronto Press, 1993).

¹² BCA MS-0243 GROTH, Charles, 1855-1938; T. W. Lambert, *Fishing in British Columbia with a chapter on Tuna Fishing at Santa Catalina* (London: H. Cox, 1907):103, cited in Taylor, *Quadra Island:* 143.

¹³ Gordon Strong "The Salmon Canning Industry of BC" (MA Thesis. UBC, 1934): 32, cited in: Nelson, "Seaspace," 67; Newell, *Tangled Webs*, 70.

¹⁴ Newell, Pacific Salmon Canning, 13.

¹⁵ TBC 2 August 1896 p.3: "SHIPS AND SHIPPING."

¹⁶ Royal Commission on Canada's Economic Prospects, The Commercial Fisheries of Canada (Ottawa: Department of Fisheries and the Fisheries Research Board of Canada, 1956), 4 cited in: Nelson, "Seaspace," 68.

¹⁷ TBC 16 Jan 1898, p27: "HARVEST OF THE SEA"; Newell, Pacific Salmon Canning: 242-3.

¹⁸ M. C. Urquhard (ed.), Historical Statistics of Canada (Toronto: U of T Press, 1965) cited in Newell, *Pacific Salmon Canning*: 4.

¹⁹ TBC 13 August 1901 p. 4: "FISH TRAPS"; TBC 23 March 1904 p. 4: "FISH TRAPS;"

²⁰ TBC 27 July 1900 p. 7: "Provincial Legislature"; TBC 2 August 1900 p. 6; TBC 26 July 1907:5.

²¹ Meggs, *Salmon*; Newell, *Pacific Salmon Canning & Tangled Webs*; DMF, Annual Report of the Dept. of Marine and Fisheries 1893 (Ottawa: DMF, 1894) 370, cited in Lissa K. Wadewitz, *The Nature of Borders – Salmon*,

Boundaries and Bandits on the Salish Sea (Seattle: U of Washington Press, 2012), 149.

²² UBCLSC RG 10 - T3957 – Volume 11020 - File 517 Letter of June 21 1913 from Chief Inspector, Dominion Fisheries, BC, DMF, New West to McGregor Young; BCA GR-2908 Canada Department of Marine and Fisheries, Central Registry records Microfilm Ca 1895-1914 Reel B-11068.

²³ Newell, *Tangled Webs*: 89; UBCLSC RHB papers BN 146-5: R. Haig-Brown, Roderick, "Moran Dam – Dinosaur in Our Midst," *BC Outdoors* 28, 2 (March-April 1972), 24-29; Richard Rajala, "Streams Being Ruined from a Salmon Producing Standpoint: Clearcutting, Fish Habitat, and Forest Regulation in British Columbia, 1900-45," *BC Studies* 176 (2012): 93-132.

²⁴ TBC 5 Sept 1888 p. 4: "BOARD OF TRADE."

²⁵ TBC 15 July 1908 p 2: "MINORITY REPORT OF FISHERIES COMMISSION."

²⁶ Newell, *Pacific Salmon Canning*, 9.

²⁷ Jeffrey W. Bolster, *The Mortal Sea – Fishing the Atlantic in the Age of Sail* (Cambridge, Mass: Belknap Press, 2012), 224-5.

²⁸ Department of Marine and Fisheries, *Eighth Annual Report of the Department of Marine and Fisheries* (Ottawa: Government of Canada).

²⁹ Newell, *Pacific Salmon Canning*, 10.

³⁰ J. E. Taylor, *Making Salmon: An environmental history of the northwest fisheries crisis* (Seattle: University of Washington Press, 1999), 98.

³¹ TBC 16 July 1898 p 8: "BC BOARD OF TRADE."

³² Newell, *Tangled Webs*; Norman Safarik and Alan Safarik, *Bluebacks and Silver Brights - A Lifetime in the BC Fisheries, from Bounty to Plunder* (Toronto: ECW Press, 2012).

³³ BCA MS-1176 - Frederick Marsh fonds. Leisure Islands manuscript: 124

² Callum Roberts, The Unnatural History of the Sea (Washington, DC: Island Press, 2007), 144.

³ Thomas Huxley, *Inaugural Address to Fisheries Exhibition*, London, 1883.

⁴ TBC 5 June 1873, p2: "Coffin on British Columbia."

⁵ Great Britain Emigration Commission, Vancouver's Island, 5.
³⁴ This is discussed in a few places in Newell, *Pacific Salmon Canning*, as well as in: Safarik, *Bluebacks*, 107; Newell. *Tangled Webs*, 8,

³⁵ Norman Safarik and Alan Safarik, *Bluebacks and Silver Brights - A Lifetime in the BC Fisheries, from Bounty to Plunder* (Toronto: ECW Press, 2012) 11, 347.

³⁶ UBCLSC BN 137 - 3 RHB papers: "Canada's Pacific Salmon," undated, typed 42 pp typed manuscript.

(Apparently written in 1956 -1957), 26; Newell, Tangled Webs, 98.

³⁷ Nelson,"Seaspace," 68; Newell, *Tangled Webs*, 101.

³⁸ UBCLSC RHB papers, BN 146-5 R. Haig-Brown, "Moran Dam" op. cit., 26.

³⁹ Cicely Lyons, *Salmon Our Heritage. The story of a Province and an Industry*, (Vancouver: BC Packers Ltd) cited in: Newell, *Pacific Salmon Canning*: 242-3; Haig-Brown, "Moran Dam," op. cit.,"24.

⁴⁰Department of Naval Services, Fisheries Inspection Report, 1915-1916, 1917, 1918, 1919, Sessional Papers (Ottawa: Department of Naval Services, 1917-1921) cited in Newell, *Pacific Salmon Canning*: 9, 15; Nelson, "Seaspace," 69.

⁴¹ Newell, Pacific Salmon Canning, 4.

⁴² Norman Safafik, *Bluebacks*, 179.

⁴³ DMF, Annual Report of the Dept. of Marine and Fisheries 1915-1916 (Ottawa: DMF, 1894) 353-58, 360-61, cited in: Wadewitz, *The Nature of Borders*; Newell *Pacific Salmon Canning* and *Tangled Webs*; James Crutchfield and Giolio Pontecorvo, *The Pacific Salmon Fisheries: A Study in Conservation*, Baltimore: John Hopkins U Press, cited in Nelson, "Seaspace," 70; UBCLSC RHB papers BN 137 – 3, RHB, "Canada's Pacific Salmon," undated 42 pp typed manuscript (circa 1956 - 57), 38-39; J. F. Roos, *Restoring Fraser River salmon: a history of the International Pacific Salmon Fisheries Commission, 1937-1985*, (Vancouver: Pacific Salmon Commission, 1991), 37.

⁴⁴ BCA GR-1118: BC Marine Resources Branch - BOX 8 File 10: *Memorandum Respecting Salmon Fishery Regulations for the Province of BC*, December 29, 1919, Memorandum from William Sloan, Commissioner of Fisheries, Province of British Columbia, to Hon. C. C. Ballantyne, Minister of Marine and Fisheries, Ottawa.
⁴⁵ Newell, *Tangled Webs*, 106.

⁴⁶Anonymous, "The Pacific Biological Station," 140.

⁴⁷ Theodore Steinberg, *Nature incorporated: industrialisation and the waters of New England* (Amherst, Massachusetts: U of Massachusetts Press, 1991); UBCLSC RHB papers BN 137 – 3, RHB, "Canada's Pacific Salmon," undated 42 pp typed manuscript (circa 1956 - 57), 32.

⁴⁸ UBCLSC RHB papers BN 137 – 3: RHB, Canada's Pacific Salmon. Undated typed 42 pp manuscript. (circa 1956 or 57), 32; BCA GR-1118: BC Marine Resources Branch. BOX 5, File 1 – Salmon Trap, Nets. Michaud, J. E. And G. M. Sloan. 1940. Report relating to the use of 1) Trap nets at Sooke Area and 2) Purse Seines in a Portion of the Gulf of Georgia in Salmon Fishing in BC. Ottawa: J.O. Patenaude, King's Printer, 28 pages + maps, graphics and table; Haig-Brown, "*Moran Dam*, "24; Newell, *Tangled Webs*:52

⁴⁹ BCA GR-1118: BC Marine Resources Branch - Box 8, File 9: R. G. McMynn "Report to the Special Committee on Fisheries concerning the jurisdictional and administrative management of the commercial fisheries of BC and the major problems associated with the management of the resource" unpublished 184 page report by R.G. McMynn, Research Officer, Commercial Fishery Branch, Dept. of Recreation and Conservation, Govt. of BC, March 1965: vi. ⁵⁰ Ibid: BOX 5 File 2 – Salmon processing etc. Undated, anonymous four page note in file entitled: "Early days in the Salmon Industry," 4.

⁵¹ The global trend is discussed at length in: Roberts, *Unnatural History*, and on the Strait in: Newell, *Pacific Salmon Canning*.

⁵² UBCLSC RHB papers, BN 137 – 3: "Canada's Pacific Salmon," undated 42 pp typed manuscript (probably written 1956 or 57), 33-4; Royal Commission on Canada's Economic Prospects. *The Commercial Fisheries of Canada* (Ottawa: Department of Fisheries and the Fisheries Research Board of Canada), cited in: Nelson, "Seaspace," 8; VCA, *Port Watch*, 19.

⁵³ Newell, "Dispersal and Concentration," 22-36; Newell, *Tangled Webs*, 122; UBCLSC RHB papers BN 137 – 3: Canada's Pacific Salmon, op. cit., 27.

⁵⁴ Newell, Pacific Salmon Canning, 19; --- Tangled Webs, 53.

⁵⁵ C. D. Nelson, An Analysis of Recreational Boating and Boating Facilities on the Lower Fraser – Pitt River (Vancouver: Westwater Research Centre, 1972), cited in: Nelson, Seaspace, 18.

⁵⁶ BCA GR-1118: BC Marine Resources Branch, BOX 5: Confidential memo dated 15 March 1974 from W E Johnson, Senior Director, Fisheries R and D, Pacific Region, to Management Committee, Fisheries and Marine Service, Dept. of the Environment, subject: Fish Farming in Western Canada; BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 7: Underwood, McLellan and Associates "Mid Coast, North Vancouver Island, Queen

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⁵⁷ Estimated numbers of vessels by port (and percent of total BC coastal fishing fleet) in 1975: Campbell River-Courtenay 287 (5.2%); Powell River – Sechelt- Howe Sound 172 (3.1%), Lower Vancouver Island 400 (7.2%), Lower Mainland – Fraser 2888 (52.1%). Source: Underwood, "Midcoast," op. cit.

⁵⁸ Howard Paish and Associates, *The West Coast Oil Threat in Perspective*. Report to Environment Canada (Vancouver: Howard Paish and Associates), 207, cited in: Nelson 1973, *Seaspace*: 114.

⁵⁹ The Vancouver SUN reported in an article on 23 Oct 1972 entitled "Salmon pack trailing 1971" that the total 1972 pack to mid-October was 1,049,850 cases compared to 1,401,121 in 1971, of which Coho was 82,860 compared with 215,189 cases the year before and Sockeye 312,304 compared with 567,831 in 1971. ⁶⁰ Taylor, *Making Salmon*, 238-9.

⁶¹ Meggs, Salmon, 3-4.

62 Haig-Brown, "Moran Dam," 26.

⁶³ This is described in detail in John Roos' history of the IPSC (Roos, *Restoring Fraser River*) and analysed more critically in Matthew Evenden's study of the "remaking of Hells Gate" (M. D. Evenden, "Remaking Hells Gate: Salmon, Science, and the Fraser River, 1938-1948," *BC Studies* 127 (2000): 47-82).

⁶⁴ UBCLSC, RHB papers, BN 139: R Haig-Brown, *The Atlantic Salmon Crisis and how it related to the anadromous fishery in the Pacific Northwest*, address to Trouts Unlimited in Portland, 11 September 1971, 6.
 ⁶⁵ UBCLSC RHB papers BN 137 – 3: R. Haig-Brown, R. "Canada's Pacific Salmon," op. cit., 39; Ibid, BN 146-7:

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management of Pacific Salmon," *Journal of the Fisheries Research Board of Canada* 36 (1978): 98-106. ⁶⁷ Jay Taylor summarised this process, fiercely contested by the industry and fish culturists, contrasting it with the approach taken in neighbouring Washington and Oregon, in: J. E. Taylor, "Making Salmon: The Political Economy of Fishery Science and the Road Not Taken," *Journal of the History of Biology* 31 (1998): 33–59.

⁶⁸ UBCLSC RHB paper BN 58-1: unpublished typed manuscript of address to Pacific Fishery Biologists, 26 March 1965, 4.

⁶⁹ UBCLSC BN RHB papers, 138-5: R. Haig-Brown, undated, "Some thoughts of paradise," unpaginated, undated, type written manuscript; Larkin, "Maybe You Can't."

⁷⁰ Peter Larkin, "Maybe You Can't."

⁷¹ BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 37, File: PAD (Program Assessment and Development) Group: Carl Walters, Undated proposal in the file entitled *"Specific issues to be addressed with the model."* This problem of initial surges in hatchery populations followed by collapses is also seen in reservoirs created behind large dams.

⁷² Ibid. BOX 39, FILE: SEP Workshops: Randall M. Peterman, "Ocean Effects in Salmon," Workshop Progress Report, 18-20 November 1975, Institute of Resource Ecology, UBC Vancouver.

⁷³ Ibid: SEP Workshops: unpublished 7 page note in file by Carl Walters entitled "Position Paper – Where is Salmon Enhancement Likely to Succeed?" August 1976.

⁷⁴ UBCLSC BN RHB papers 138-5: R. Haig-Brown, "Some thoughts of paradise," undated, unpaginated type written manuscript; Ibid, BN 146-6: Haig-Brown, R. "Fish hatcheries: No substitute for stream protection," *BC Outdoors*, August 1973:16-21.

⁷⁵ Ibid, BN 138-5: R. Haig-Brown, "Some thoughts of paradise," op. cit.

⁷⁶ Meggs, Salmon, 177.

⁷⁷ BCA GR-1118: BRITISH COLUMBIA. MARINE RESOURCES BRANCH - BOX 8, File 9: McMynn, "Report to the Special Committee on Fisheries," op. cit., iv-vi; Newell, *Tangled Webs*.

⁷⁸ Peter Pearse, Public Management and Mismanagement of Natural Resources in Canada, *Queens Quarterly* 73 (1966) cited in: Nelson, *Seaspace*, 53.

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⁸⁰ G. A. Fraser, License Limitation in the BC Salmon Fishery. Technical Review Series No. PAC/T-77-13, Vancouver: Dept of the Environment. Economic and Special Industry Services Directorate, Pacific Region, 1977, cited in: Newell, *Tangled Webs*, 5-6, 50.

⁸¹ BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 7: Underwood, "Midcoast," op. cit.
 ⁸² Fisheries Services and International Pacific Salmon Commission, *Fisheries Problems Related to Moran Dam on the Fraser River* (Vancouver: Dept. of Environment, 1971) cited in: Nelson, *Seaspace*, 115.

⁸³ BCA GR-1002, BC ELUC Secretariat. Originals 1972-1980. BOX 37 Salmonid Enhancement Program – General: Environment Canada, *Major Development program to double BC Salmon output*. New Release from Information Branch of the Fisheries and Marine Service, Environment Canada, Ottawa, 24 March 24, 1975.
 ⁸⁴ Ibid.

⁸⁵ BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 37 File #2 March 1977-August 1978 correspondence; Larry Still "Government ready to get tough to protect salmon fishery," *Vancouver SUN*, 13 May 1978: B7

⁸⁶ Ibid. BOX 37 SEP – General: Norman Hacking, "Fisheries research program a farce?" *The Province*, 11 May 1976: 16

⁸⁷ Ibid. BOX 40 SEP – 1978/79 Review (undated, unattributed, unbound 5 page document with many annexes.
 ⁸⁸ Meggs, *Salmon*, 230.

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⁹⁴ UBCLSC RHB papers BN 146-6: R. Haig-Brown, "Fish hatcheries: No substitute for stream protection," *BC Outdoors* August 1973:16-21.

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¹³² Ibid: BOX 15 File 10 SFL - Letter of October 17, 1972 from D.S. McCaw, Inspector of Fisheries to E. W.
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¹³³ A similar rationale has been used to justify the coast's salmon farming industry in more recent years. In both cases it is a specious argument as they are not aiming to produce low cost protein but rather high value specialty seafoods, essentially a luxury food.

¹³⁴ BCA GR-1118: BC MARINE RESOURCES BRANCH. BOX 5 - Memo dated April 2 1973 from R.G. McMynn, Director, Commercial Fisheries branch, to W. R Redel, Director of Lands, Dept. of Lands, Forests and Water Resources, Parks Branch, Victoria; GR1614 Parks and Outdoor Recreation Division (re: recreation land) BOX 23 File 1.6.2.144; BOX 15 File 10 SFL File 15 Oyster culture: Letter of 4 April 1973 from R. G. McMynn to Director of Parks Branch in Dept. of Recreation and Conservation re: Proposed Desolation Sound Marina Park in Relation to Raft Oyster culture within Malaspina Inlet.

¹³⁵ BCA GR 1614 Parks and Outdoor Recreation Division, BOX 15 Letter of December 11, 1975 from T.G. Halsey, Director, Marine Resources Branch, Victoria, to Director of Lands, Land Branch, Victoria, attention: A. Rhodes re Oyster culture values – Boundary Bay.

¹³⁶ Ibid. BOX 15 Letter of November 22, 1973 from Frank G. Cope, Inspector of Fisheries to Gary Bowden, Pearse, Bowden Economic Consultants, Vancouver; Ibid: BOX 15, File 8 – SFL 01, General correspondence – enquiries re leases: Letter of August 29 1975 from D. W. Smith, shellfish biologist to Ms. Myrnal Hawes, Vancouver; Ibid: BOX 23 File 1.6.2.144: Memo of October 19, 1972 from Director of Commercial Fisheries Branch, R G McMynn to Lloyd Brooks, Deputy Minister of Department of Recreation and Conservation re: Lot 250 Sibell Bay (Ladysmith Harbour); Wolferstan, *Pacific Yachting*: 136.

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6. The Perfect Toilet – The Strait as Waste Dump

Linda Nash suggested that juxtaposing stories of colonisation and capitalist development with ones about health and disease makes for "a more complicated environmental history... in which we can perhaps begin to see ourselves."¹ Mixing the stories renders a more complex but recognisable portrait of a place such as the Strait. It helps interpret the Strait's diverse roles and the complex weave of issues present not just in the past but in contemporary contests among stakeholders. Much of the value comes from seeing how relations between narratives evolve over time. This chapter is the 'health and disease' story, one that began to change dramatically around 1950, when opposition to the narrative of 'Strait as waste dump' emerged almost from nowhere. This opposition grew tremendously in the boom decades after WWII as a result of increased waste dumping, the growing role of recreation on the Strait and ongoing fears about its threatened fish. Changing relations between waste dumpers and commercial fishers and, especially with sea-based recreation, are key issues in the chapter. While the Strait would continue to be seen as a valuable waste dump, many more people would begin to scrutinise how this function was carried out and its effects on the sea's other roles. This in turn stimulated anxiety among the waste dumpers, fearful of losing their lucrative right to consign an increasingly complex waste stream to the Strait.

A valued place to spill waste by WWI

There was little interest in the Strait's role as a waste dump in the first years of colonisation. Some settlers would have been aware of London's epic struggle with liquid waste at this time, but in their towns, London's dilemma could be avoided. The sea could be counted on to absorb their waste with no ill effects in a way that rivers could not. Settlers' laws in these decades reflected an approach adopted elsewhere in North America: they focussed on control over water sources for various uses – irrigation, industry, municipal water supplies – but not on water quality. Like indigenous society before them, settlers only worried about marine pollution because of its potential ill effects on fish. In fact, Canada's Fisheries Act of 1868 authorized Ottawa to protect fish habitat from waste dumping.² Reports from the early 1870s confirm the Ministry of Marine and Fisheries was looking into a few such cases in the older provinces, but not yet on the west coast.³ The inland sea had become a valuable waste dump for the Strait's largest settler towns and resource industries by the 1890s. Urban sanitation was the most important environmental challenge facing North America's rapidly growing cities, and sewage disposal their greatest sanitation challenge. Development of a sewage collection system came to be seen as a sign of a progressive community. An adjacent sea into which liquid waste might be dumped, was a boon to civil engineers tasked with its disposal. Towns on the shore could build sewers discharging into the adjacent sea, where currents dispersed it. Evolving theory regarding links between sewage pollution of water supplies and the spread of diseases such as cholera and typhoid was a driving force behind improvement of urban sewage systems. By the 1890s this link was generally accepted among western scientists and engineers, as was the need for efficient sewage disposal to protect water supplies. Further pressure to improve sewage systems came from growth in municipal water systems. With more water available, people used more and this overwhelmed the capacities of cesspools and septic tanks, increasing threats of surface water contamination. Virtually all major North American cities had sewer systems by 1914 and most were dumping their sewage untreated into adjacent waterways. The 'professionalization' of urban sanitation in the late nineteenth and early twentieth century noted by Martin Melosi can be seen in the development of municipal sewers and water supplies around the Strait. Guided by city planners and engineers, the largest towns invested in water distribution and sewage disposal systems that dumped untreated waste into the sea or near the mouths of rivers feeding into it.⁴

Marine sewage disposal was not contentious. Vancouver had far fewer problems with water borne contagious diseases than eastern Canadian cities at the time. This was partly because the city was newer and less congested but also due to its proximity to the Strait and the lower Fraser. Both offered effective, inexpensive waste disposal options. Vancouver's first sewers were built in 1890 and discharged into Burrard Inlet, False Creek and English Bay. It was suggested their nutrient loads might enhance local fisheries.⁵ The city grew rapidly and 25 years later a new sewerage plan was needed. R. E. Lea from Montreal spent two years studying Vancouver's sewage and drainage challenges and options. In 1913, he recommended new sewage outfalls along the south shores of English Bay, Burrard Inlet and the north arm of the Fraser. Lea also suggested the city construct separate sewage and drainage water removal systems to facilitate future development of sewage treatment. The city built the new outfalls but decided against the more expensive separate systems.⁶ A similar debate over systems separating municipal sewer lines from storm drains was taking place in many North American cities during this period.⁷ Towns on the Strait - and most larger North American cities at the time - opted for the simpler, cheaper combined systems. These relied on the receiving waters' ability to absorb and disperse any waste consigned to it. By 1916 Vancouver's investments in its combined sewers dwarfed those of other towns on the Strait: \$4.5 million for 320 kilometers of sewer lines (Table 3).

Town	Length of sewers laid by 1916	Investment in sewers by 1916
Vancouver	320 km	\$4,500,000
New Westminster	80 km	\$400,000
Nanaimo	16 km	\$200,000
Ladysmith	16 km	\$65,000
Powell River	Town sewers installed during construction of Powell River townsite, 1910-12; details not available at provincial Health Department	

Table 3 - Municipal Sewers around the Strait by 1916⁸

Industrial waste was different from sewage – for one thing it was more apt to be recognised as a wasted resource. But the sea provided the same low cost waste disposal to canneries, sawmills and pulp and paper mills. Mines mostly left their waste on land, but it generated toxic drainage that quickly reached the sea via surface streams and groundwater.

Concern was seldom expressed over industrial wastes in these years but already a pattern was emerging that would be more prominent after 1945. Recreationists and fishers were the most concerned about the (mis)use of the Strait as an industrial waste dump. Initial concerns were mostly about waste from canneries, starting in the late 1880s when their operations on the lower Fraser and Burrard Inlet were expanding rapidly.⁹ A decade later the Board of Trade announced the problem was on its way to being solved, as canneries converted their waste into fertiliser, glue and fish oil.¹⁰ Yet the problem recurred early in the twentieth century. Meggs recounted the situation in 1901

... the river was polluted with the carcasses of hundreds of thousands of fish and the offal from several million more... (while Vancouver suffered) the stench of rotting salmon carried by the tides onto English Bay beaches...¹¹

1901 was a 'big year' for Fraser River Sockeye and canneries couldn't can all the fish delivered to them. The next 'big year', in 1905, there was another accumulation of rotting salmon flesh on Vancouver's beaches. The provincial medical health officer instructed Burrard Inlet canneries to

dump their fish offal at least five kilometers offshore in the future.¹² Federal officers were tasked with controlling 'excessive' dumping of fish wastes at the Fraser mouth, if this was likely to damage a commercially important fishery.¹³ There was greater tolerance for other industrial pollution, further from Vancouver, where it was widely accepted as part of progress.¹⁴ A complaint was registered in 1912, two years after the pulp mill opened at Port Melon. Locals complained to a fisheries inspector that the mill was poisoning shellfish. He demanded the mill fix the problem but they replied their waste stream was sufficiently diluted and the fisheries department withdrew their complaint.¹⁵ No complaints were recorded at the vast new complex up the shore at Powell River (Illustration 59).

Expansion of waste dumping in the interwar years

The inland sea's role as waste dump expanded largely uncontested in the interwar years. Concerns about liquid waste remained mostly confined to sewage contamination of fresh water. The solution to these problems was often to feed the waste directly into the sea. More towns on the Strait built new sewer systems while others upgraded existing ones. Many also invested in drinking water infrastructure. The rule of thumb was: get your water as far upstream as possible then protect your sources. Dump your sewage as far downstream as possible, ideally below the low tide line and where there was enough current to disperse and dilute it.

Fear of typhoid stimulated improvements in sewerage- and water systems. A 1919 letter to Victoria's Chief Sanitary Inspector from a Parksville citizen attributed their outbreak to septic tanks contaminating wells. The issue was "increasingly vital... (they said, because) this settlement is now attracting a big holiday public."¹⁶ Authorities in Nanaimo worried about typhoid from contaminated drinking water in the 1920s and 1930s. They worried less about sewers contaminating their beaches however, despite city maps showing swimming beaches, adjacent to sewage outfalls, with "heavy bacterial growth with positive faecal contamination." ¹⁷ Powell River also worried about sewage contamination. Typhoid first broke out there the year after the town was built. Their sewers spilled into the sea in front of town just below the low tide line. This hadn't been a problem as long as people swam above the town site in Powell Lake. When they began swimming in the town's ocean beaches, their 'excellent sewers' became a problem. When an epidemic of acute gastro enteritis broke out in the 1930s, the polluted beaches were officially discounted as a cause. Health authorities took the occasion however, to advise the

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Illustration 59 – "Powell River townsite, summer of 1910" (above; photo: undetermined) and "Powell River mill" 1911 (below; photo: C. Bradbury). No longer Mack Laing's "lovely wilderness" but "... the answer to the cry of civilisation for wood pulp to feed its hungry presses." It reduced wood waste but dumped vast volumes of liquid waste into the sea.

town to either extend their sewers further into the sea or install primary treatment.¹⁸ While most authorities didn't worry much about the impact of sewage on recreation, they were increasingly concerned about contamination of their towns' water supplies by recreational water users. These

people were encouraged to recreate in sea water only, especially in summer when fresh water supplies were lowest and most vulnerable to contamination.¹⁹

Vancouver's engineers had designed a sewer system with marine outfalls located to maximise sewage dilution and dispersion.²⁰ Despite this, and substantial ongoing expenditures on sewerage, Vancouver had chronic problems with beach pollution. Controversy arose early after WWI over sewage dumping on the grounds of the Jericho Golf Club.²¹ But the most serious and persistent problems were on False Creek, a tidal basin in the middle of the city adjacent to the city's most popular swimming beach. The city had disregarded earlier recommendations to cease dumping sewage in the basin and by 1927 sixteen sewage outfalls spilled into False Creek.²² False Creek sewage was linked to a typhoid outbreak in the 1930s but 600 hectares of the city core was still dumping raw sewage into False Creek in the early 1940s.²³

Resource industries that had grown up around the Strait by the interwar, as in eastern North America before, had sought sites where fresh water was available for industrial processes then a body of fresh or salt water available to receive their waste. During the interwar period few people questioned industries' right to make such use of shared waters. Often located at isolated sites and creating employment, their waste dumping was seen as another 'cost of doing business' and pollution abatement investments unnecessary. It was recognised however that industrial waste dumping might damage fisheries and federal fisheries authorities were legally obliged to control such dumping on the Strait, though they rarely did.

The Strait's first pulp and paper mills used a great deal of freshwater. Each stage in manufacturing generated waste, from wood fibres to residual chemicals, and all was dumped into the sea. These mills generated over 350,000 litres of wastewater for each ton of pulp produced.²⁴ Despite a few early complaints, these mills operated for sixty years before there were any sustained efforts by federal authorities to curtail their waste dumping practices.²⁵ Fishermen were not the only ones to complain in vain about the new mills. John Barrow shared Mack Laing's distaste for Powell River's giant plant. Docking there in 1934, Barrow noted "... a new evil smell every hundred yards or so from the large paper works... We left Powell River without regret..."²⁶

Like the pulp mills, the Strait's mines also operated in a regulatory vacuum. Provincial and federal authorities sometimes attempted to persuade miners to respect certain waste management norms but the results of these sporadic efforts mostly depended on industries' voluntary compliance. The province's Department of Health intervened regarding water management at Britannia in the 1920s but their concern was only to ensure the town's water supply was drawn from streams high enough to avoid contamination by mine waste. They were not concerned with controlling that waste or its effect on the sea.²⁷

A case on Deep Bay illustrated industrial polluters' sense of entitlement in this period. The province began receiving complaints early in the 1940s, about a rendering plant operated by BC Packers. The secretary of the local Liberal Party Association wrote to the Minister of Health in 1941 describing "terrible fumes and smells... (that) travel all over the district" in the warmer months. Every resident in his district, he said, would sign a petition against the plant. The local MP's letter to the Commissioner of Fisheries in Victoria described a smell "one hundred times worse" than a pulp mill. It was causing nearby residents to vomit and ruining local tourism. A petition signed by ninety neighbours demanded something be done to end the unbearable stench. In mid-1941 the Chief Sanitary Inspector informed the Provincial Health Officer that these "odour nuisances" were being produced mostly by exhaust gases from the rendering plant. Scows of rotting Dogfish and offal waiting to be offloaded at Deep Bay were also foul, he admitted, but "... not considered serious enough to cause complaints at any great distance." The inspector recommended BC Packers do something only about the exhaust odours. The Chief Sanitary Inspector met with BC Packers who told him that their plant was part of the war effort, responding to "...the urgent request of the Dominion Government" but agreed to see how they might reduce the odour. By late 1941, despite cooler weather, the Chief Sanitary Inspector reported "... no lessening of the odour nuisances in the surrounding area ... the company has made no attempt to abate the nuisance..." Complaints continued through 1942 with locals still vomiting and forced to stay indoors with windows and doors shut. Citizens near Nanaimo also complained of a scow load of rotting Dogfish apparently destined for Deep Bay but left on their shore for a month. By 1943, the "vile stench" had spread and people were sickening downwind as far as Qualicum Bay, but the government continued to favour BC Packers.

After three years of this intense olfactory assault, a letter to Victoria from BC Packers' General Manager admitted "I cannot say that we have met with a great deal of success" in controlling the odours. Spraying formaldehyde on the carcasses, didn't work as well as they had hoped. Another treatment had proven more effective, he said, but it was too expensive. He welcomed any other suggestions the health officials might have. In another letter to a fisheries official he admitted that controlling the smell would require more investment than his company was prepared to make. He reminded them the plant's fishmeal and oil were a vital contribution to the war effort. He then pursued tangents that would be familiar in later decades as governments tried to become more assertive over industrial pollution. The BC Packers executive insisted they were a good corporate citizen, doing their best, and the plaintiffs were a bunch of whiners. The company had spent thousands improving both their manufacturing processes and employees' living conditions. BC Packers had exhausted "...all the known means of endeavouring to overcome this odour, some of which is inherent in the nature of the fish itself." He noted other people who lived beside meat packing plants, gas works and pulp mills lived with odours "offensive to some people." Even in San Francisco and Monterey "...the smell of cooking fish is very noticeable and offensive to some."²⁸ The writer didn't mention whether such odours were a problem in Vancouver's Shaughnessy neighbourhood where he lived.

The emergence of serious opposition after 1945

Vast physical and bio-chemical changes to the Earth's aquatic environments resulting from industrialisation and urbanisation were increasingly remarked upon in many parts of the world after 1945. These changes increasingly affected people's understandings of and interactions with these environments. Most people had been inclined in the past to think of their biophysical environment as something affected by human activities. Now, particularly after 1970, many began to see water and air quality especially as something affecting them. It was a worldview where humans were an influential component of broader 'ecosystems.' Earlier public health concerns related to aquatic environments had focused mostly on biological agents of disease, principally microorganisms bred in sewage. After WWII, public health specialists and the North American public became increasingly aware of other environmental sources of disease, such as pesticides and radioactivity, obliging them to reconsider established assumptions. This shift appeared on the Strait mostly in the 1980s, when it became clear that pulp mill waste, for

example, contained complex organic pollutants that accumulated in the tissue of marine organisms and humans, with serious health impacts on both.

The degradation of many seas and large lakes around the world was one of the most disturbing post war trends for a growing constituency worried about the Strait. Coastal zones such as the Strait of Georgia were generally less damaged than freshwater environments, though worse off than open oceans. Many coastal waters were surpassing their capacity to safely 'assimilate' further waste, threatening engineers' time honoured 'solution to pollution by dilution.' By 1970, many Mediterranean and Caribbean beaches and a growing number on the North Atlantic experienced regular late summer algal blooms. Enclosed seas were particularly prone to 'eutrophication' or premature aging due to accumulation of nutrients causing luxuriant growth of aquatic vegetation and declines in dissolved oxygen that killed fish. Industrialised areas faced the further threat of dangerous industrial chemicals and metals dumped and then taken up by marine organisms consumed by humans. The Great Lakes and US Atlantic coast seemed to be in crisis by the mid-1960s. Cleveland's Cuyahoga River spilled bacteria into Lake Erie up to 1,200 times the level deemed safe for swimmers; only three beaches on Lake Erie's south shore were still safe for swimmers. Increasingly controversial east coast harbours and estuaries such as Boston, the lower Hudson and Chesapeake Bay were broadly similar to Vancouver, the lower Fraser and the Strait. By the early 1960s most New Yorkers regarded the Hudson as an open sewer; they avoided eating fish from it or even walking beside its stinking banks. It was closed to swimmers from New York City to Albany.²⁹

Local critics were quick to compare the declining state of the Strait with this degradation elsewhere. Haig-Brown warned a 1972 gathering on English Bay "... the Baltic Sea is polluted, the Mediterranean is polluted, the Strait of Georgia can be polluted ... we can do our part by keeping our waters clean and productive ..." In a manuscript entitled "Pollution for profit" Haig-Brown had noted ominously that it would cost a billion dollars to clean up the Hudson, the Potomac another billion, and both were warnings to people on the Strait.³⁰ Haig-Brown now regularly stressed the ecological unity of the inland sea, warning that pollution of Ladysmith Harbour, Vancouver, or the Fraser mouth did not stay in those places. He reminded people of the Strait's counterclockwise currents that carried the Lower Mainland's pollution north to the Discovery Islands then along the eastern shore of Vancouver Island. He illustrated this with the story of a woman who jumped off Patullo Bridge on the lower Fraser and whose body was later found on Quadra Island.

The post war era saw growing calls to reduce municipal and industrial pollution in the Strait, contested by many governments and industries aiming to avoid the cost of more elaborate waste disposal systems. Resistance or inability to change the ways waste was managed can be explained in a number of ways. Linda Nash harked back to Donald Worster, speaking of a North American culture "built on, and absolutely dependent on, a sharply alienating, intensely managerial relationship with nature."³¹ This was certainly present on the post war Strait, as the examples below illustrate. Even where there was more willingness to change 'business as usual' approaches, engineers, accountants and the leaders they advised found their options constrained by previous design decisions. The earlier decision to build combined municipal sewage systems is a classic example of this dilemma. It greatly complicated the challenges facing towns aiming to improve their sewage treatment. Perhaps the most stubborn resistance resulted from an ongoing search for 'efficient engineering solutions' in the face of steadily growing waste streams and the abiding attraction of an inexpensive, 'efficient' marine waste dump.³²

Pollution's changing significance Arn Keeling has suggested that environmental politics in BC was transformed by a controversy over mining and related pollution on Buttle Lake, inside Strathcona Park. This affair brought author and conservationist Roderick Haig-Brown into the limelight, where he became a prominent voice in an emerging environmental movement. But to say the Buttle Lake dispute was the origin of BC environmental politics,³³ would be to overlook the controversy already welling up at other end of the Strait, over marine sewage dumping around Vancouver. The propensity of engineers to view the lower Fraser and adjacent Strait as a cheap sewage disposal system was now questioned not only by swimmers and fishermen but also by new environmental organisations concerned over the 'health of marine ecosystems'.

Much early debate over liquid effluent resulted from changing views of the 'significance' of this pollution.³⁴ Scientists and engineers were accustomed to being the arbiters of the 'significance' of different waste streams. Their definitions evolved as their ability to measure different parameters of water quality increased. Much effort remained focused on determining how much waste could be absorbed in the sea without harming commercially important fish, particularly

salmon. This approach was increasingly challenged by other perspectives gaining credibility with the public. An alternative, 'ecological' perspective, expressed by Haig-Brown, NGOs and other critics, stressed the unity of the Strait's 'ecosystem' and links among its different organisms. They suggested the significance of impacts from waste should be judged over larger areas, longer time frames and more affected organisms, including people. An increasing number of writers around the Strait, from Malcolm Lowry and Earle Birney on Burrard Inlet to M. Wylie Blanchett and Jack Hodgins on the Island, were more sympathetic to the worldview of ecologists than those of engineers or oceanographers.

The following chronology of the actions and interactions of government and non-governments actors examines their evolving interpretations of the 'significance' of marine pollution on the Strait in these decades. Much depended on whether they saw the Strait primarily as a waste dump or as fish habitat or as a recreational resource. Whatever their vision of the Strait, they increasingly feared losing it to competing stakeholders.

The province was responsible for controlling pollution of streams flowing into the Strait. As in many other constituencies in these years, this responsibility for pollution control was diffuse and actual control largely ineffective. The Provincial Health Officer was responsible for administering the Health Act and overseeing sewer construction. Victoria's Water Act also aimed to control fresh water pollution. Neither act exercised much control over polluters. The Fish and Game Branch was increasingly interested in pollution control as it related to fresh water fish, but again in its capacity to influence major polluters such as the forest industry was limited. By the mid-1950s, Victoria had come to recognise the inadequacy of its pollution control. Growing sewage pollution problems in the sea off Vancouver highlighted the need for more effective pollution control and led to the creation of the Pollution Control Board (PCB) in 1956.³⁵

Ottawa was responsible for controlling marine pollution and did so sporadically, mostly through the Fisheries Act which proscribed activities detrimental to marine fish populations. The Act theoretically outlawed dumping of organic materials - such as sawdust, pulp mill fibre or canneries' offal - in quantities that reduced water oxygen levels and killed fish, or dumping toxins - such as mining and smelting wastes, pulp mill liquors, or oil products. Such control was seldom exercised in the 1950s. Federal authorities were increasingly mobilised by worsening municipal pollution off Vancouver however. The 1953 Rawn Report shared with Lea's work of forty years earlier an inability to accurately predict complex tides and currents in the sea around Vancouver and could not anticipate episodic pollution of beaches by nearby sewage outfalls. Federal scientists working with Michael Waldchuk in 1957 began a decade of detailed studies in Burrard Inlet and the open Strait, aimed at better predicting this behaviour and the Strait's resulting 'assimilative capacity.'³⁶

Perceptions of the risks associated with marine pollution, and the related roles played by different actors, changed especially during the 1960s. The public became more inclined to see the Strait as a 'fragile ecosystem' threatened by excessive waste dumping rather than a 'valuable resource' for assimilating waste. Keeling described this shift in the public's view of the sea at the Fraser River mouth, from the engineer's vision of a "giant flushing machine" to the NGO's of a "giant cesspool." Again, Haig-Brown was a seminal figure. By the late 1960s he had emerged as a powerful voice speaking out against pollution. Addressing a regional gathering of the tourist industry in Spokane in1967, Haig-Brown declared all pollution was "use of public property for private profit" and often a waste of valuable materials. He estimated that even the newer generation of sulphate pulp mills wasted a half to two thirds of the raw material they used. He called for taxes of their wasteful, polluting operations "to stimulate much more aggressive examination of ways to put this enormous waste to good use." These mills, said Haig-Brown, should be obliged to return their organic wastes to the forests, where domestic sewage could also applied, rather than fouling aquatic environments. He spoke of "bills now due and overdue" after a century of rapid, ruthless resource exploitation. Many unpaid bills were related to water pollution's devastating impacts on recreation, fisheries and aesthetics. The Strait and Puget Sound, he assured listeners, were overtaxed "finite resources" demanding proper management and protection, whose capacities as "cesspools" were limited.³⁷ Two years later Haig-Brown wrote BC was "... within sight of destroying or seriously damaging some of our finest assets, before we have had the time or the intelligence to put them to intensive use" Assets "under some form of visible threat" included the lower Fraser and the Strait of Georgia.³⁸ In response to these threats and the obvious need for a "sharp change of thinking," the province was doing "just about nothing," wondering "how much pollution can we get by with?" instead of how to better control it. Haig-Brown singled out municipalities as the greatest polluters but conceded that

industry was "not far behind" and sometimes worse because of "the toxic nature of their effluents." He called for Ottawa to compensate for the province's "gross neglect" though he recognized that they could have little impact without provincial cooperation. Joint federal-provincial action was unlikely, he cautioned, "without the strongest public pressure, relentlessly maintained." Haig-Brown suggested this was the niche for academics and the environmental movement. If all these players made the right moves, "within a decade it should be possible to control all pollutions to rigid minimums and put most of the waste to constructive use."³⁹

In the early 1960s, many engineers designing waste disposal systems asserted that marine pollution was already controlled effectively⁴⁰ and continued to consider the "assimilative capacities" of the lower Fraser River and adjacent Strait as resources to be exploited. The resulting build-up of pollution in the Fraser estuary, and its occasional spill over onto Vancouver beaches stimulated protests, questioning of 'expert judgements', and much media attention. The engineers' dilution approach to the Lower Mainland's sewage flows was attracting increased scrutiny. By the end of the 1960s, a report from Nanaimo's Fisheries Research Board (FRB) station questioned the Strait's longer-term capacity for waste assimilation in light of new evidence that currents on the sea floor, where the waste was coming to rest, were far slower than surface currents.⁴¹

The provincial government was on the defensive by the late 1960s, responding to growing voter concerns with public enquiries into pollution control problems and options. Their loosely organised Pollution Control Board (PCB) had been reformed twice, in 1963 and 1965 and a new Pollution Control Act passed in 1967. The ministries of Lands, Forests and Water Resources, of Health and of Municipal Affairs now shared oversight of the PCB.⁴² The senior minister, Minister of Lands, Forests and Water Resources Ray Williston, issued a statement in 1969 assuring the public that untreated sewage discharge to enclosed or confined bodies of salt water were now prohibited wherever there was doubt about the "adequacy of the tidal flushing effect." Discharge of untreated sewage in fresh water was also now prohibited and forbidden in any designated recreational water or beaches "regardless of the flushing or assimilative capacity of salt water bodies." Williston assured citizens their Ministry of Health would protect them with the necessary standards for all receiving waters and the PCB would ensure all permits issued respected "prescribed effluent standards."⁴³

Three months later, UBC scientist and rising politician Patrick McGeer sent a brief to Vancouver City Council, questioning the competence of the PCB and the Greater Vancouver Sewage Disposal District (GVSDD) to ensure the safety of the city's beaches. The PCB recommended a maximum coliform count of 1000 per 100 milliliters in the seawater at Vancouver's beaches yet the American Public Health Association and the Conference of State Sanitary Engineers suggested 1000 parts per 100 ml was the boundary between "poor" and "very poor" water quality. The World Health Organisation recommended limits of 200-500 in "developed countries." McGeer challenged the PCB's assumption that bacteria didn't survive in the salt water. In fact Vancouver beach water contained only a third to two thirds as much salt as the open sea and bacteria thrived in such brackish environments; the beaches received a plume of fresh water sweeping up from the Fraser mouth, and year-round coliform levels in this plume near the Iona sewage plant's outfall averaged 24,000 per 100 ml. McGeer explained the "huge discrepancy" between the GVSDD's coliform counts and those of the city's Health Department. The GVSDD readings were taken in deep water whereas the city's, yielding coliform counts three times higher, were taken from surface and shoreline water where people actually swam.⁴⁴

McGeer and Williston agreed that improved pollution control standards would likely impose financial and technical difficulties for local governments and industries. Williston pointed out that the public had "often been reluctant to provide the necessary funds or give pollution control their proper position of priority in planning fund allocation." McGeer reminded Vancouver's leaders that the right level of pollution control was a judgement call. It required distinguishing what was "ecologically necessary" to protect humans from what was merely "desirable," but might not be affordable. Thomas Berger, a Vancouver lawyer and leader of the province's opposition New Democratic Party (NDP), was less compromising. He declared pollution control in the province was a myth and pollution out of control.⁴⁵

As marine pollution peaked on the Strait's public and political agendas in the early 1970s, industries and municipalities continued to claim their right to pollute and pushed back against demands for new standards. Municipal governments could not meet higher standards without substantial new investments to modify combined sewage and storm sewers. Their design meant that heavy precipitation resulted in volumes of storm runoff overwhelming new sewage

treatment plants. The only 'economically viable' response was discharging the whole combined stream untreated. The PCB amended its new, stricter policy early in the 1970s to allow these 'exceptional' releases of untreated sewage.⁴⁶

Again opposition politicians were less inclined to compromise. Harry Rankin, the lone communist on Vancouver Council, published a manifesto in 1970, entitled *Pollution – Suicide or Survival*, where he excoriated the province and municipalities for the current situation

The standards and tests established... are so inadequate as to be almost ridiculous. They have been deliberately designed to allow the pollution producing industries to carry on without fear of interference... government officials and the PCB are assiduously spreading the propaganda smokescreen that society as a whole is responsible for pollution and not industry... The PCB refuses to require industry to prove that its effluents won't cause undue harm; instead it requires anyone who objects to prove that the effluent is causing damage...⁴⁷

Rankin scorned provincial Minister of Recreation and Conservation Ken Kiernan who had recently announced "we are polluting the atmosphere every time we breathe." Kiernan had attacked individuals and groups seeking pollution control for being guilty of "emotionalism" and "a loss of perspective." Kiernan's perspective, said Rankin, was that "if we want pollution controls, we must give up spending money on roads, schools, and hospitals, close down our industries and go back to living... on deer and salmon."⁴⁸ Rankin maintained the way to control sewage pollution had been "known for a very long time ... (but) it costs money to do." In the absence of provincial leadership or adequate municipal response, it was up to Ottawa to solve the problem: "The federal government can, and should, offer both leadership and a significant measure of subsidy. Federal standards should be high and specific..."

But Rankin also found Ottawa deficient. They were

...going through the motions of taking a stand against water pollution (despite) the new Canada Water Act... [that] is so full of loopholes that it cannot be taken seriously... does not set out firm standards as to just what polluted water is, nor does it project any specific ways in which polluted water can and should be cleaned up... Industries can pay fines and keep on polluting ... no provision to help municipalities... to build sewage treatment plants, aside from some vague promises about loans...⁴⁹

Not surprisingly perhaps, Rankin found the union movement's growing concern about pollution "one of the most heartening developments." Maritime pollution was now so serious, he said, that the United Fishermen and Allied Workers (UFAW), led by another old communist, was worried about the fishing industry's survival. Rankin claimed the UFAW under Homer Stevens

had been "sparking" campaigns "to save our waters" for many years.⁵⁰ Rankin was partisan and didn't have to negotiate compromises, but there was much truth to his criticisms.

An NDP government elected in 1972 was more centrist than Rankin but to the left of previous governments. Pollution control and resource management had been election issues and the inexperienced, activist government promised to 'change the system.' A new NDP Minister of Lands, Forests and Natural Resources, Bob Williams, promised to use 'economic disincentives' to discourage polluters.⁵¹

NGOs, led by SPEC, had become important actors in the pollution debate by the early 1970s. Haig-Brown was eloquent, opinionated and well-informed, but SPEC was better at capturing headlines. It had affiliates in most major towns around the Strait by 1972 and garnered much press coverage of its public awareness campaigns attacking different forms of pollution. A 1970 campaign targeted MacMillan Bloedel, then owner of large pulp and paper mills in Nanaimo and Powell River. To raise awareness about the Strait-wide impacts of the Lower Mainland's sewage, SPEC dropped bottles near sewage outlets at the Fraser mouth and recovered them near Comox and on the southern islands. 1973 was an especially busy year for SPEC; in April it urged that Howe Sound be designated a recreation area protected from further industrial or port development. SPEC then called on an intergovernmental panel on oil spills to tighten shipping controls. In June 1973 it demanded closure of White Rock's public beach, alleging the local water-quality testing unit had failed to register high levels of sewage pollution. In 1974 it urged the provincial government to ensure secondary sewage treatment at Annacis Island on the lower Fraser, to protect the "\$600 million salmon fishing industry." In 1975, the PCB upheld SPEC's appeal to halt plans to discharge sewage into Ganges harbour. The wave had passed by then however; public and media attention was focused elsewhere, distracted by the first 'oil crisis' of 1973 and consequent economic downturn.⁵² SPEC remained active into the 1980s, though its membership dwindled. Marine pollution again became mostly the domain of experts. In 1981 SPEC conducted a tour of the lower Fraser to highlight its 'filth and pollution.' When industrial sediment was dredged from the floor of False Creek two years later, SPEC protested its subsequent disposal into the sea.

Many local government experts remained focused on water quality issues in the 1980s, concerned that they might affect marine recreation. BF Talbot, the Greater Vancouver Regional District's Senior Assistant Engineer, responded to concerns raised by the Eagle Harbour Yacht Club in 1985 about coliform counts high in late spring and early summer. Citing DFO research, Talbot explained this problem resulted from "slippery" fresh water from the (polluted) Fraser's peak flows riding over heavier salt water and sweeping north to Eagle Harbour.⁵³ The following year, as the city hosted hundreds of thousands of visitors to Expo 86, its staff sought advice about monitoring beach water quality from seaside cities around the Pacific. Issues raised by McGeer years before, and others even earlier, were still being debated. City officials wanted to know if their counterparts in San Diego and Sydney had jurisdiction over recreational water quality monitoring. If so, what parameters did they measure, when and how frequently? How did they decide when beaches should be closed? Did they have separate storm and sewage systems or combined sewers, like Vancouver's?

The many shifting interpretations of marine pollution's 'significance' on the Strait shaped government and NGOs' responses to the growing diversity of pollution they encountered there.

Oil on the Strait Stories about oil spills had been infrequent before WWII, although spills of different petroleum products appear to have been relatively common by the interwar years, when shippers and industry took little care to avoid them. Mack Laing complained to a colleague in Ottawa in 1928 about "our latest water bird disaster." Loggers at Deep Bay accidentally dumped over 2,000 gallons of crude oil into the bay. The result was "forty miles along this shore ... littered ... by oiled and dying birds... thousands of birds cashed in." Why, asked Laing, if federal regulations can convict a hunter for shooting "scooter out of season," couldn't they nab a logging company for killing thousands of them?⁵⁴ Such impunity slowly disappeared after 1945 as the public and different governments grew more concerned about oil drilling on the Strait, shipping oil across it, and spilling oil into it.

Oil drilling Oil exploration had taken place sporadically around the Strait without noticeable public concern since 1902, when the *Colonist* described an "oil expert's" favourably report on oil prospects in North Vancouver. Canadian Collieries drilled unsuccessfully for oil on Saturna Island in 1958.⁵⁵ There was much concern a decade later about the possibility of oil drilling on

the floor of the Strait. A jurisdictional dispute flared between Victoria and Ottawa over who owned the mineral rights under the Strait. Ottawa claimed them based on its mandate to govern maritime space. The province maintained 'near shore' undersea space was different because it was enclosed by the province and an extension of it. Victoria pointed to grants to seabed off Nanaimo by the colonial government then a succession of provincial grants to sea floor at other places around the sea. The dispute came to a head because advances in offshore drilling technology raised the possibility of discovering valuable new deposits under the Strait.

A situation reminiscent of earlier struggles over cannery licensing saw both Ottawa and Victoria claiming jurisdiction over offshore minerals and both issuing permits for undersea seismic exploration in the early 1960s. The federal Supreme Court ruled in 1967 that Ottawa had sole responsibility for subsurface minerals below low tide but the province did not accept the ruling as final and continued to issue permits.⁵⁶ The Vancouver Parks Board was still petitioning Victoria in 1970 to cancel oil-drilling permits it had granted on the Strait that threatened Vancouver's beaches.⁵⁷ Harry Rankin again weighed in, challenging provincial and federal assurances that drilling would only be allowed where governments could guarantee be no pollution would be associated with it, arguing "no one can give such guarantees." They would be "as worthless as they are meaningless.⁵⁸

The appointment of West Vancouver's Jack Davis as federal Minister of Fisheries resulted in a hardening of Ottawa's position. He stated in 1970 that there would be no oil and gas drilling on the inland sea. The Strait, Davis maintained, was "obviously a priceless asset from a recreational point of view and ... a funnel through which a hundred million dollar fishery moves." His press release the same year announced that "the combination of property and recreational values in the Strait of Georgia is so great that its possible contamination with oil could not be countenanced." SPEC and the Sierra Club of BC applauded Davis's stand while condemning Victoria. They joined Vancouver in calling for the province to revoke all drilling permits. In a letter to Frank Richter, the province's Minister of Mines, SPEC claimed oil drilling represented a "great and immediate" threat to Greater Vancouver and adjacent islands, insisting "the health and wellbeing of our people must take top priority over any other consideration." Ottawa prevailed and no drilling occurred, even as the federal-provincial jurisdictional dispute over the Strait's seabed simmered through the 1970s.⁵⁹

Oil spilled from ships Various petroleum products had been shipped across the Strait and spilled from ships since before WWII and this continued after the war. The provincial Fish and Wildlife Branch received complaints about vessels continually spilling oil and pumping bilge into the seas off Cowichan and Maple Bays in 1946. Duncan's Chamber of Commerce worried the oil was killing ducks, fouling beaches and fishing grounds, and damaging budding shoreline tourist camps and real estate markets. The province was trying harder to control pollution of streams by the late 1940s but there was little they could do about such marine spills.⁶⁰

Marine oil spills began to receive broader attention on the Strait by the mid-1950s as Canada prepared to sign the London Convention for Prevention of Pollution of the Sea by Oil, and incorporate its statutes into the Canada Shipping Act. Local focus was initially on oil products spilled or dumped during operations of vessels, especially in port. A 1955 Department of Transport report confirmed Vancouver area oil refineries had the necessary shore facilities to deal with "oily residues" from vessels arriving at Vancouver and New Westminster, and no new facilities were needed. Ship owners meanwhile complained the new system imposed hardships on them, made it difficult and "exceedingly expensive" to dispense with their oily residues. They looked to the National Harbours Board (NHB) for a solution. NHB didn't find one, and ships continued to dump oil and oily waste around the Strait. The Ministry of Transport's Marine Regulations office complained to the Coastwise Operators Association in 1960 that ships' waste oil was drifting ashore, fouling beach and fishing gear, and killing thousands of seabirds each year. He sent the Association a copy of their federal Oil Pollution Prevention Regulations and "earnestly requested" their members' compliance. Four years later they again consulted ship and towboat operators about extending the federal prohibition on marine oil dumping to include dumping of light diesel fuel.⁶¹

Concerns remained about ships dumping oil products, but by the late 1960s they were eclipsed by new worries about more substantial spills from tankers transporting large volumes of crude oil. Crude oil had been imported by rail and ship from California to refineries in the Lower Mainland until 1954.⁶² This ended when the Trans Mountain Pipeline began carrying crude from Alberta's new oil fields. For the next decade, with limited amounts of Alberta crude being shipped out but no crude moving in by sea, the risk of spills from tankers was not a contentious issue. Oil shippers on the Strait sailed into a perfect storm in the late 1960s. Public concern had been much aggravated by vividly illustrated stories of oil spills on the post card coasts of Cornwall, Brittany and southern California. Plans were being developed to ship crude from new oil fields in Alaska to the southeast shore of the Strait, just inside Washington. In anticipation of increased traffic, the US Department of Commerce and the Coast Guard commissioned a study to help identify 'promising techniques' for controlling and preventing damage from oil spills. Puget Sound and the Strait were considered together, described as joint components of "an immense salt water inland estuary" displaying "combined and interrelated characteristics of a bay, estuary and coastal region." While the Strait and Sound shared some similarities with other estuaries, they were also more complicated than most. They were governed by two countries and many lower level actors. Relatively little was known about the overall "estuarine dynamics" of this complex waterway, though it was clear these were different from those in simpler estuaries. The study deemed existing impacts of sewage and industrial effluent to be "highly localised" and presenting "no immediate danger to the ecological balance" of either the Strait or Puget Sound. Large oil spills were potentially more dangerous as oil could not be easily absorbed in the salt water and its degradation would be slow, even under 'satisfactory' conditions, which wouldn't necessarily be present after a spill. The Strait and Sound, the study concluded, were unique in several ways. First, currents, tides and winds meant that oil spilled in Puget Sound could spread all across the Strait whose coastline of countless inlets, fiords and islands would all be exposed to damage from oil pollution. The region was a major resting station for migratory birds and its many coastal marshlands would be especially vulnerable. Finally, the commercial fisheries could be badly damaged by oil spills in certain seasons.⁶³

There was much here to stoke public fears on the Canadian shores of the Strait. Worries about tankers continued to grow into the early 1970s. Tales of possible 'American pollution' spilling into Canada were compelling in the Viet Nam War years, when anti-American sentiment was high. Yet some of the most eloquent critics of the Strait's expanded tanker traffic were also American. American Friends of Earth maintained that a collision, sinking or grounding involving oil tankers on these waters would be a "statistical certainty... just a matter of time." They cited recent research from the Woods Hole Oceanographic Institution suggesting oil spill impacts on marine organisms could be far greater than earlier assumed, and might be permanent.⁶⁴ Haig-Brown described the location of the Cherry Point refinery as "totally inept," representing a

"fantastic hazard" to the Strait. In June 1972, he announced the first spill there before an assembly of small boats on English Bay. "Crude oil spilled massively," he said, though in fact it was only about fifty barrels. The mayor of Surrey (and future provincial premier) Bill Vander Zalm pointed out it could just as easily have been 500 or 5,000 barrels. The inept response demonstrated that authorities had "no experience, no knowledge, no plan" for dealing with any spill.⁶⁵ As oil began arriving on Canadian beaches, a local environmental newsletter described it as White Rock's "baptism in oil" pointing it would have been far worse in winter when the beaches hosted thousands of birds. There was "now every reason to believe that the Cherry Point refinery was located where it is precisely because of advantages expected from allowing spills to wash into Canadian waters." Readers were advised that if they wanted to help "fight the tankers," they should send donations to the Canadian Wildlife Federation. ⁶⁶

The following month, BC signed a memorandum with Washington State committing both to "work toward a joint monitoring and inspection program ... plans of actions to cope with oil spills and exchanges of information and mutual aid." Geographer William Ross noted at the time that these modest steps marked a high point in regional recognition of marine oil pollution as an international problem. The province developed its own plans for a provincial disaster fund to pay for activities related to a possible 'trans boundary' oil spill. Ross recognised that "a perception of crisis" had emerged as a result of media coverage of oil spills elsewhere combined with very minor ones on the US shore of the Strait. Echoing Bill Vander Zalm's critique, Ross concluded "...existing institutions are still either so powerless that they are unable to reduce the impact of international oil pollution or they lack the specific jurisdiction to do so." Only public opinion around the Strait had forced BC to enter into talks with mostly disinterested officials in Washington state, where the priority was still oil industry expansion. Ross noted these first steps forward were cosmetic, with much left to do before "externalities associated with pollution problems" were effectively "internalised." It remained to be seen, he concluded, whether upcoming UN conferences on the environment and the Law of the Sea might help bring in the required "new order."67

Improvement of local capacities to manage "All-Canadian" oil spills followed a similarly inconclusive path through the 1970s. Concern focused on the increasing but still modest volumes of crude being shipped out of Vancouver, on the abiding issue of waste oil spilled from ships

and, particularly, on the coastwise movement of petroleum products. By 1971, an impressive body of mostly federal laws governed marine pollution by petroleum products (Table 4). Correspondence from this period suggests that authorities were far from having effective control over ships' handling of spills on the inland sea.

Date	Law	
1868	Federal Fisheries Act, amended 11 times by 1970	
1886	Federal Navigable Water Protection Act	
1917	Federal Migratory Birds Convention Act	
1956	Canadian government's acceptance of the London Convention of Prevention of	
	Pollution of the Sea by Oil (1954) and incorporation into the Canada Shipping	
	Act	
1965	Second London Conference amends the 1954 Convention in 1962 and Canada	
	accepts the amended Convention and incorporates it into the Canada Shipping	
	Act	
1967	Provincial Pollution Control Act	
1969	Amendments to the anti-pollution sections of the Canada Shipping Act	
1971	Further amendment of the Canada Shipping Act to reflect International	
	Convention on the Establishment of an International Fund for Oil Pollution	
	Damage	

Table 4 - Laws governing oil spills on the Strait by 1971⁶⁸

Crude oil exports through Burrard Inlet had been sporadic until 1970. They began increasing as it became more profitable to move Alberta crude to California by freighter. A report to Environment Canada estimated the total port capacity for shipping oil at around thirteen million barrels a year in 1971, likely to rise to thirty million barrels by 1985.⁶⁹

Oil exports were relatively easy to monitor. Movements of petroleum products around the coast were more complicated, harder to keep track of and potentially more threatening to marine life because of the greater toxicity of many refined products. Coastal shippers of petroleum products were obliged to meet federal Ministry of Transport (MoT) standards for their ships' hulls,

machinery and navigational equipment by 1970. The next year, as public worry about oil spills spiralled upward, MoT requested advance notice of all marine shipments of 'oils as cargo' on the west coast.⁷⁰ Vancouver's Harbour Master, R.E. Holland, complained the same year of vessels still deliberately or inadvertently spilling various oil products and oily residues into the sea off Vancouver. He reported that ships' Masters and Engineers still pleaded ignorance of local regulations. He requested that the Vancouver Chamber of Shipping "once again advise all Agencies of the seriousness of these offences and stress the importance of advising the vessels prior to their arrival in Vancouver."⁷¹ The province got into the act the following year after small spills in Vancouver harbour and Nanoose Bay during movement of oil between ships and shore. Victoria amended its Petroleum and Natural Gas Act and Pipelines Act allowing them to intervene when necessary to control damage from such spills but they didn't address their causes.⁷²

In 1973, the *Vancouver Sun* reported "BC's worst spill," 450 tons of bunker oil,⁷³ "the filthiest of them all," had quickly spread over ninety kilometers of coastline after an Irish freighter ran aground in Blackfish Sound. Though north of the Strait, the event alarmed Melda Buchanan, an environmental activist in Comox. Buchanan wanted to know what Ottawa was doing to prevent such accidents on the Strait. Jack Davis, Canada's first Minister of Environment, assured her accident prevention was the prime objective of their oil pollution control policy. They had clean-up equipment in Victoria and Vancouver and "joint contingency plans" with US authorities to deal with an "international event." Ottawa, he assured her, was "pursuing the best possible means of protecting our coastal waters from oil damage."⁷⁴ Davis's reply, in fact, failed to address most of Buchanan's concerns.

Even in Canadian waters, oil spills were subject to "divided jurisdiction." Ross accused the province of "refusing to recognise responsibility for its own shores and waters." He speculated they may have wanted to avoid duplication of effort or avoid large outlays for oil pollution prevention. Perhaps they just wanted to force the federal government to re-consider its ban on offshore oil drilling. In any case, the result was difficulties in adopting comprehensive oil pollution control in coastal areas. A letter not long after the spill on Blackfish Sound reflected the muddled situation. M. L. Richardson, Director the BC Chamber of Shipping told the regional director of the federal Minister of Transport, H. O. Buchanan, of "complete confusion amongst

the Shipping Agents and Operators in BC as to the procedures to be followed in the event of an oil spill." Confusion existed because they had no specific instructions from MoT or any other agency about procedures to follow in the event of a spill. A prompt reply pointed out that if there was confusion, "it is not the sole fault of the MoT." Their Oil Pollution Prevention Regulations, they said, had been in force for many years.⁷⁵ Political tolerance for this ongoing regulatory confusion could be explained partly by the diminishing public interest in oil spills. Newspaper stories about the oil spill threat still appeared occasionally over the next few years⁷⁶ but public priorities had shifted. No major oil spill occurred on the Strait in this period but if it had, government responses would have been poorly coordinated and fallen far short of what was needed to prevent severe ecological damage. Fears of loss along the shoreline, until they slipped people's minds, had been amply justified.

Forest and mining sector pollution of the Strait was more pervasive and less episodic than oil spills; until the late 1960s, industrial waste dumping into the sea was mostly a local irritant, as well as a concern for federal scientists. Led by Michael Waldichuk, these scientists mostly focused on the physical behaviour of marine environments, aiming especially to determine coastal waters' ability to 'assimilate' pulp and paper mill waste without harming valuable fish species. As they pursued this work, new evidence was emerging elsewhere regarding the long term effects of highly toxic substances present in relatively small quantities in different types of industrial, municipal and agricultural effluent – mercury and other metals, pesticides like DDT, and other complex organic compounds. By the late 1970s local research on these new substances led by the Westwater Research Centre at UBC focussed on highly polluted waters at the mouth of the Fraser. It was clear by the 1980s that many complex organic compounds, such as polychlorinated biphenyls (PCBs), dioxins and furans, constituted highly toxic 'persistent organic pollutants' present at dangerous levels in pulp mill effluent. This new understanding undermined the strategy of utilising the 'assimilative capacity' of tides and currents to disperse industrial waste⁷⁷ though this approach continued to prevail for domestic sewage.

The most important rationale for controlling industrial pollution throughout this period was reduction of harm to fish, particularly economically valuable fish. This was different from efforts to control sewage pollution where the most compelling issue for most people was impacts of sea borne sewage on humans. The strong link between industrial pollution and fish reflected a growing belief among many observers in the late 1960s and early 1970s that industrial pollution was the greatest threat to the West Coast fishery.⁷⁸

Forest industry pollution The forest industry's most important sources of marine pollution in the post war era were related to log storage and pulp and paper production. Bark shed from logs during their handling, and particularly during water storage, caused deterioration in water quality and damage to local organisms.⁷⁹ This was a significant issue near Vancouver in particular where, by the mid-1970s, an average of close to two million cubic meters of timber was in 'water storage' each year, waiting to be processed in Lower Mainland sawmills. Inlets and bays around Howe Sound were important water storage sites and up to 40% of the sound's foreshore, almost ten square kilometers, was devoted to log booming. Bark shed from the endless abrasion of boomed logs accumulated on the bottom where the bark decomposed, resulting in very high biochemical oxygen demand (BOD), and eliminating micro and macro fauna habitat. Booms also reduced light available to bottom dwelling marine vegetation. Wood chips, sawdust and wood waste spilled from barges or stripped from logs by shoreline mills also became waterlogged, sank to the bottom and had similar effects, as well as lethal impacts on bottom feeders ingesting them. Combined with dredging, mining and overfishing, these effects contributed to a much reduced salmon spawn on the Squamish River and eliminated the Sound's once vast herring spawns.⁸⁰

Pulp and paper production presented different problems and was the focus of most efforts to control forest industry pollution around the Strait in this period. The industry had expanded rapidly in the 1950s, with construction of new mills at Crofton, Nanaimo and Campbell River. Despite growing scientific knowledge about pulp mill pollution, its regulation on the coast was mostly limited to what Keeling called a 'research and negotiation' strategy by federal authorities. Into the 1970s, federal officials were constrained by limited authority and information and generally uncooperative provincial and local governments. They attempted to work together with the industry on strategies for protecting fish from mill pollution without having to enforce laws prohibiting the discharge of effluent known to be dangerous to fish.⁸¹

A post war research programme at the Pacific Biological Station in Nanaimo focused on pulp mill effluent. It originated with research by J. P. Tully on the Alberni Canal that concluded the extremely high BOD associated with sulphite pulp mill effluent couldn't be sustained in the environmental conditions found at the head of the canal.⁸² Federal researchers on the Strait continued to work with the expanding industry there. Waldichuk carried out oceanographic surveys near where new mills were proposed or existing ones expanded. He documented the effectiveness of effluent disposal in different oceanographic contexts and concluded that mills with significant tidal flushing - such as existed off Powell River and Nanaimo (Illustration 60), resulted in relatively little pollution. He developed a system for classifying coastal receiving waters, based on their oceanographic features and capacities to 'assimilate' industrial waste.⁸³ Other research looked at the impact of Vancouver Island's newer kraft mills on oysters. Waldichuk suggested in the mid-1950s that oystering around Crofton would be little affected by the new mill, as long as effluent was dispersed out into the channel. Local oystermen continued to protest that mill's waste was damaging their production. An unpublished 1964 report from Nanaimo's Fisheries Research Station agreed with them. Two years later the PCB approved the mill's expansion and its owners bought some of the local oyster leases. The province's Marine Resources Branch noted in 1969 that "oyster culture is not compatible with pulp and paper activities." ⁸⁴ A report to the province in the 1973 suggested the Crofton mill had in fact damaged twelve local oyster leases and 'compromised' eighty hectares of foreshore.⁸⁵ By then, the local oyster industry had disappeared.

Through most of the 1960s there was little apparent concern about pulp mill's effects on oysters, or anything else, on most parts of the sea. There was a general understanding that pollution was something a town such as Crofton absorbed in exchange for prosperity and their sulphurous atmosphere was 'the smell of money.' The only reference to water quality in a 1967 history of Port Mellon concerned 'dirt' residues taken into the mill's machinery after heavy rains overloaded the filtering capacities of their fresh water intakes.⁸⁶ A Powell River history from the same period is similarly devoid of mention of the mill's prodigious pollution. It did mention however, the province's first concerted effort to raise cancer research funds, launched in 1946 under the leadership of Powell River Paper Company chairman, Harold S. Foley. Their resident manager, R. M. Cooper, led a local fund raising unit four years later.⁸⁷ The company confronted the carcinogenic complex organic compounds in their waste stream only in the late 1980s, but the town had much earlier developed a quiet reputation for a high cancer rate.⁸⁸

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Illustration 60 – "Harmac aerial" 1957 (photo: BC Govt). Waldichuk confirmed that flushing Harmac's effluent into Northumberland Channel was an effective strategy. The mill helped fill the gap left by Nanaimo's defunct coal mines.

Public attitudes became less tolerant of pulp mill pollution in the late 1960s. The PCB extended its jurisdiction to include industrial pollution control in 1965 but became a high profile political target due to its apparent inability to control pulp mills and other polluters. Haig-Brown told Imbert Orchard in 1969 that the Strait's growing and "entirely unnecessary" pulp mill pollution was "killing all local life." Pulp mills' effluent, he explained, was largely made up of chemically complex solids that were hard to manage. Pollution control standards were still "extremely lax" though he saw "some indication" they were tightening. He recognized the new kraft mills were less damaging than the older sulphite mills had been because of the lower BOD of their copious waste stream.⁸⁹ Much of this waste accumulated on limited expanses of sea bottom, where it destroyed everything, though some could be dispersed over a larger area when disturbed, causing its "evil influence" to spread further.⁹⁰

SPEC had a growing membership around the Strait in 1970 when they took aim at pulp mills. An article in the *Georgia Strait* cited SPEC's alarming statistics from eastern Canada and new federal fisheries research on the Strait. The Ontario Water Resources Commission had recently called the pulp and paper industry the "greatest pollution problem" in North America. In BC the industry produced more liquid waste than any other economic activity and more than municipal sewage plants. A kraft mill producing a thousand tons of pulp a day (about 20% less than was being producing at Nanaimo) discharged 270 million litres of liquid effluent per day. This generated BOD equivalent to the sewage of a city of 200,000 people and was highly toxic to fish. Of BC's seventeen "major mills," the six on the Strait accounted for 40% of its effluent. The Powell River and Nanaimo mills each generated close to 10% of this effluent (Table 4). These figures were alarming but qualitative differences between the effluents of different mills were also important. ⁹¹

Table 5 - Volume of effluent from coastal pulp mills, 1970 92

Mill	Effluent (million gallons / day)
Powell River (sulfite)	75
Harmac - Nanaimo (kraft)	72
Elk Falls - Campbell River (kraft)	56
Crofton (kraft)	54
Port Mellon (sulfite)	32
Woodfibre (sulfite)	31
Four new mills on the upper Fraser watershed	140
Total effluent from BC's '17 major pulp & paper mills'	811

Even a few people living in pulp mill towns began to speak out. In Powell River, the isolated company town that Michael Thoms has described as the "perfect panopticon,"⁹³ a local teacher named Colin Palmer prepared a public brief for the town's new Anti-Pollution Association. Palmer stated the mill, now the largest in the world, consumed more than twice as much water as New York City and dumped fifty million gallons of untreated effluent daily into Malaspina Strait (a conservative estimate compared with SPEC's figures in Table 4). The sea, he said, was stained brown for fifteen kilometers. Black liquors and solid debris being dumped into the sea perpetually marred local beaches. SPEC's Cowichan branch took on the mill at Crofton the same summer, accusing it of "careless dumping of pulp chips, belching sulphurous smoke visible from thirty miles away" and of dumping fifty million gallons of effluent daily into the sea.⁹⁴ Harry

Rankin explained that the problem lay with a provincial government unwilling to spend on pollution control or force industries to install pollution control equipment. The large pulp and paper producers were "foreign owned," he said, and told the government what to do. They were not interested in investments that might diminish their profits. The result was that the PCB, rather than protecting the public from pollution was instead protecting polluting industries from public criticism.⁹⁵

The Strait's dirty mills achieved international notoriety. Jacques Cousteau visited Vancouver in October 1970 and used the occasion to announce that the United Nations Food and Agriculture Organisation (FAO), with which he was affiliated, had put the Strait of Georgia on its list of "notoriously contaminated areas." Pulp and paper mills "dump an incredible amount of very toxic material into the water and are among the worst polluters in the world." If the Strait was not set aside as a marine park, Cousteau warned, there would be no life left in it by 1990.⁹⁶

Such views of the mills' impacts were not uncontested. Dr. Timothy Parsons, a biologist at Nanaimo's Fisheries Research Station, declared the Strait was *not* polluted and denounced both Cousteau and the FAO. Charles Keenan, former chief of the PCB and now a 'water management consultant' presented a brief entitled "Dollars and Common Sense" for a PCB inquiry the same summer of Cousteau's visit. Keenan declared his views were based on his "many years of close association with government and industry." He confirmed the province's existing industrial pollution legislation was "excellent and workable" and insisted people simply needed to learn to co-exist with pulp mills. Pollution was a problem and always would be but the situation was hardly the 'environmental disaster' that pressure groups and the press depicted. Keenan criticised "voluntary and ... ad hoc pressure groups" for "meddling in affairs of which they had no expert knowledge," suggesting such groups did more harm than good.⁹⁷ The "dollars" in Keenan's title were important. While the province's new interior mills had been designed to reduce the quantity and toxicity of their effluent, the Strait's older mills had not, and retrofitting them was expensive.

Political pressure for change was growing. Jack Davis, an engineer, declared himself "...on the side of the conservationist – on the side of life itself." He promised Ottawa would end the pulp and paper industry's aquatic pollution within ten years. The provincial government, now almost

twenty years in power and losing favour with the electorate, also committed to "get tough" with the pulp and paper industry at last. Even older coastal mills, they said, would be obliged to adopt some form of effluent treatment.⁹⁸ New effluent standards were introduced over the next several years but this led to prolonged negotiations of 'compliance schedules' with each mill. These aimed to ensure no mill would have to close if it couldn't find afford to meet the higher standards. Writing a decade later about the "environmental anarchy" that had been unleashed, Keenan explained these compliance schedules were negotiated on the basis of each mill's age, location and prospective upgrading costs. Echoing coastal ship owners' complaints, Keenan described jurisdictional overlap and duplications in complex new regulations. The result, he said, was confusion and conflict over ostensibly province-wide or national standards.⁹⁹ The mills slowly and unevenly complied with new provincial and federal standards as evidence of their ecological impacts grew. Responding to indications that zinc in pulp mill effluent accumulated in oysters near the Strait's mills, the industry together with Victoria and Ottawa began to monitor metal levels in shellfish in 1973. A 1980 study of the Port Mellon mill (Illustration 61) confirmed that its effluent, even diluted by the sea, was highly toxic to fish, killing juvenile salmon up to 350 metres from the mill's waste outfalls.¹⁰⁰



Illustration 61 – "Port Mellon pulp mill" 1968 (photo: BC Forest Service). The oldest pulp mill on the Strait, opened in 1908, it was a good place to make a living but a dangerous one for young salmon

Research on the Strait's pulp mill pollution continued to overlook some of the most ecologically damaging dimensions of mill waste. As early as the late 1960s Haig-Brown and others had suggested they ought to be looking for more "subtle, insidious and ruinously accumulative ... effects of pollution." Some federal fisheries reports in these years recognised that the techniques they used to evaluate effluent toxicity were not permitting them to make accurate forecasts of its effects and that more research was needed into the biological effects of pollution, such as had begun elsewhere in North America.¹⁰¹

Public concern about complex organic compounds -PCBs, dioxins and others - grew after incidents like the flushing of hundreds of tons of PCB laden sediments down the Hudson towards New York City in 1973. The public learned these compounds didn't just sicken or kill fish but also accumulated in their tissues and caused birth defects and cancers in people who ate them. By the 1980s, veteran oceanographer Michael Waldichuk, had come to recognise the need for longer-term ecologic studies into the effects of the Strait's pulp mill wastes. In 1987 the US Environmental Protection Agency (EPA) released studies demonstrating dioxins were a byproduct of pulp bleaching.¹⁰² Present in very small quantities that were hard to detect, they were apparently ubiquitous in the mills' effluent and these new forms of pollution persisted and accumulated in the environment for decades. These findings set off controversy similar to the early 1970s, only this time resistance was more muted. Not long after the EPA study, the Canadian Wildlife Service announced they had found dioxins in a Great Blue Heron colony near the Crofton mill. The mill's owner, BC Forest Products, insisted there was no need to worry about dioxins because they were present in the effluent only in minute quantities. The Vancouver Sun meanwhile described dioxins as "the most poisonous contaminant created by man." Crofton mill workers didn't trust the company and did their own sampling. When federal scientists began looking for dioxins and furans in the marine environment the following year they found high levels in prawns, shrimp and crabs around the old mills at Port Mellon and Woodfibre, and the commercial crab fishery on Howe Sound was closed. At this point, the Canadian pulp and paper industry was congratulating itself for its success in reducing the *quantity* of effluent they were dumping. The focus however, had now shifted to the chemical quality of this organic waste. ¹⁰³
Until now, pulp mills on the Strait had been remarkably slow even at reducing the quantity of their effluent and most had done little to change its quality. With few exceptions, total levels of BOD and suspended solids in the waste stream of most of the mills on both shores changed little between 1980 and 1990 and some went up (Table 5). By 1989 only Powell River had started even primary effluent treatment. Others began only after 1990 when it was one way to bring down the levels of dioxins and furans they were dumping (Table 6). The scare over complex organic pollutants was taken more seriously than earlier concerns, though the call to reduce levels of these contaminants still met some resistance. By 1988, studies elsewhere had shown "significantly above average" rates of mortality from cancer and other diseases among pulp and papers mill workers.¹⁰⁴ Two years later, Environment Canada reported BC's pulp mills were "ahead of the nation" in reducing pollution and eliminating dioxins. Others pointed out that dioxin contamination from BC's mills was among the worst in the world. The province promised tough new pollution regulations for pulp mills, requiring their discharges of complex organics be reduced to 1.5 kg per tonne of pulp produced by 1994. All coastal mills agreed to the limit, except Macmillan Bloedel's Powell River plant. The company pleaded financial difficulties impeded them from making firm commitments to effluent reduction. As the province's largest single source of complex organic pollutants, Powell River made an unacceptable exception and soon they too reported dramatic reductions in the levels of these toxins released to the marine environment (Table 6).¹⁰⁵

Mill location	Start of operations	Location of effluent discharge	Date of initiation, primary treatment	Date of initiation, secondary treatment
Crofton	1957	Stuart Channel	1992	1992
Elk Falls	1952	Discovery Passage	1992	1992
Harmac	1950	Northumberland	1993	1993
		Channel		
Port Mellon	1908	Thornborough	1990	1990
		Channel, Howe		
		Sound		
Powell River	1911	Malaspina Strait	1978	1992
Woodfibre	1912	Upper Howe Sound	1992	1992

Table 6 - Dates of initiation of primary & secondary effluent treatment at pulp mills on the Strait¹⁰⁶

Table 7 - Rates of effluent discharge at pulp mills on the Strait, 1980-1991¹⁰⁷

Mill location	BOD5 ¹⁰⁸ 1980 (tonnes / day)	BOD5 1990 (tonnes/day)	TSS ¹⁰⁹ 1980 (tonnes/day)	TSS 1990 (tonnes/day)	AOX ¹¹⁰ 1989 (tonnes/day)	AOX 1991 (tonnes/day)
Crofton	48.5	42.0	20.6	16.4	13.1	3.1
Campbell R.	37.3	46.6	19.3	29.5	12.2	2.4
Nanaimo	18.7	21.9	11.8	9.3	7.4	2.3
Port Mellon	12.5	8.8	9.5	5.3	2.8	0.7
Powell River	26.2	27.5	26.4	13.0	26.1	1.6
Woodfibre	18.9	17.4	39.9	2.8	2.3	1.1

The persistent nature of these toxins in the sea meant the public was not fully reassured by the mills' relatively quick responses to this new threat. Journalist Stephen Hume described their impact on Cortes Island oyster farmer Grant Webb in 1991 as a "creeping Chernobyl." The Powell River mill thirty kilometers to the south of Webb's oyster farm had been spewing dioxins into the Strait for eighty years. The newer Campbell River mill recently claimed to have reduced its use of chlorine (a key source of complex organic pollutants) by 70%. Webb moaned "now they're poisoning us by a third instead of by a full dose." His dismay over this invisible pollution, Hume noted, was destroying "his belief in the pristine quality of life that brought him... to Cortes Island in the first place."¹¹¹

Pollution from mining was virtually unregulated on the Strait into the 1960s. The industry was a relatively minor player on most stretches of the sea by then, although locally important mines operated at Britannia, Gillies Bay and Campbell River. Mining waste became a more high profile concern in the late 1960s and early 70s and an early SPEC campaign attacked plans to dump over two million gallons of effluent from the Gillies Bay iron mine.¹¹² In1970, Haig-Brown and Harry Rankin (strange bedfellows indeed) criticized the Buttle Lake copper mine. Rankin declared they were "... pouring their poisonous tailings into our waters, destroying marine life."¹¹³ These tailings had been linked with high levels of heavy metals in local salmon and trout by 1971 and would be the object of ongoing studies, while the mine operated, for the next twenty years. Britannia mine closed for good in 1974 but its toxic legacy lived on.¹¹⁴

Regulations appearing in the early 1970s required changes in the way miners extracted and transformed their ores. From their perspective, these were unwelcome and costly new restrictions on their rights to dump tailings in the traditional fashion. From their critics' perspective, the improvements were largely cynical gestures with minimal substance.¹¹⁵ The province was under

some pressure to respond to critics but – as with the Strait's pulp mills - seldom prepared to impose significant costs on industry. Managers of other resources within the provincial government sometimes criticised the mining industry but this generally had minimal impact. Responding to the PBC's new "Pollution Control Objectives" in 1973, the Deputy Minister of the Department of Recreation and Conservation complained the PCB accepted levels of water borne metals, cyanide and fluoride that were lethal to salmon. PCB guidelines made no reference to accelerated siltation caused by tailings, a major impact in fresh water and marine environments. The PCB, said other government agencies, ignored the contexts in which pollution was permitted, disregarding the relative sensitivity and "dilution capacity" of each "receiving environment," the interests of "competing resources users," and possible cumulative effects. The complicated nature of cumulative effects from multiple polluters on industrialised shorelines such as Howe Sound or Discovery Passage limited efforts to control individual contributions from mines, and other polluters, through the 1980s.¹¹⁶

Dumping municipal sewage outside the Lower Mainland had seldom been the object of complaints before the 1950s. Discharging sewage into the sea had more often been the solution to sewage problems. Once again, this began to change in the late 1960s. The PCB ruled in 1967 that all new municipal sewage outlets would have to receive at least primary treatment prior to discharge, and existing outlets would have to ensure at least primary treatment within eight years. Four years later the PCB set provincial standards for municipal waste treatment and introduced a permitting system for all discharge points. Controversy surrounding the city of Victoria's dumping of raw sewage into the Strait of Juan de Fuca continued through the 1970s.¹¹⁷ Smaller communities along the Strait's western shore encountered new challenges. Early in the post war period, communities from the Cowichan Valley north and those on adjacent islands experienced growing problems with septic tank contamination of drinking water. This was especially acute in summer, when tourists, campers and cottagers all used wells and septic tanks. Industrialist H. R. McMillan contacted the Central Vancouver Island Health Unit in 1948, worried about sewage contamination of the water at his Qualicum Beach summer home. Chief Health Inspector C.R. Stonehouse suggested his unit could use this opportunity to show the value of their services. They were now giving the public advice on sterilising contaminated well water with chlorine. Stonehouse hoped they might also use the occasion to convince McMillan to reduce water pollution from his mills.¹¹⁸

Sewers were still solving such local water contamination problems in smaller towns, replacing problematic septic fields. Septic tank pollution of beaches in front of Parksville led to approval of their plan for a municipal sewage system in 1963. The town's sewage would be collected and dumped, untreated, from outlets 2,400 meters offshore and 240 meters deep. A few kilometers away, slower growing Qualicum still depended on septic fields into the 1970s. After pollution warnings were posted on their beaches in 1973, Qualicum also opted for sewers connected to Parksville's deep water outlets. A local history credits new sewers for stimulating rapid population growth in both towns.¹¹⁹

Sewers built earlier in other towns were beginning to create problems. Sewage discharged from an air force base polluted public beaches near Comox in the late 1960s. Attention shifted to Comox Harbour by the mid-1970s. The debate was complicated by sewage impacts on the local shellfish industry. A 1975 report of the province's new Environment and Land Use Committee (ELUC) mostly muddied the waters. Water quality in the harbour was "similar to other coastal waters" (which were of diverse quality) but *might* be of concern to growers and consumers of shellfish, and swimmers. Theoretically, at least, there was a danger of humans contracting hepatitis and other diseases though no definite cases of such disease had arisen, to their knowledge, "as a result of exposure to the waters of Comox Bay to date, either through eating shellfish or from direct recreational use of the waters." They confirmed however that coliform counts in the harbour *did* exceed limits for shellfish harvesting, most of which had now been moved to nearby Baynes Sound.

The ELUC report on Comox Harbour was a little more coherent about possible responses to the situation. They opposed a secondary sewage treatment which, they said, would

only reproduce artificially and expensively what the Strait of Georgia has proved to do naturally and cheaply (while having)... little effect on... chemicals originating from agricultural and other land use, and which may or may not adversely affect the marine environment...

A more promising option, they said, might be land based sewage disposal but more research into the extent of marine contamination was required before any decision could be made. In any case, minimal water quality standards for the marine environment were needed and the community should be engaged in maintaining these standards.¹²⁰

The Comox Valley's population grew steadily into the early 1980s, when public pressure mounted to end sewage contamination of their harbour, nearby beaches and Baynes Sound. Engineers engaged to oversee construction of the district's new sewage disposal system explained to the PCB which options they had considered, what they had decided, and why. The report was written in a familiar style wherein 'experts' justify decisions already made while aiming to create an impression of an objective analysis of the pros and cons of each option, before they selected the one which was the specialty of the experts. The land disposal approach required too much land and too much money to operate. The engineers instead proposed, once again, a long outfall pipe sending sewage deep beneath the Strait several kilometers north of town after "partial primary" treatment. Their proposed design would protect the oyster beds of Baynes Sound because waste from the new outfall would reach the sound only after being swept back and forth by three of four tides, ensuring enough "mixing and biological die away" that "the water would be unrecognisable as having a sewage content."¹²¹

Proponents of the new Comox facility recognised that local residents' lacked of faith in their proposed monitoring programs, in the interpretation of monitoring results and in the enforcement of permits or standards for receiving waters. They blamed public scepticism on "notable examples" of poorly managed industrial pollution and "...that many treatment plants around the province (that) have exceeded permit limits." They noted also a "general concern that the total accumulative effect of all discharges into the Strait of Georgia would eventually destroy the marine environment (and) ... no local monitoring could assess the long term effect of wastewater discharges on the Strait of Georgia as a whole." They suggested a centrally operated government lab monitoring water quality all over the Strait, with each individual polluter contributing to its operations.¹²² Though modest in relation to public fears about the Strait's degradation, their suggestion was not pursued.

Marine sewage disposal around Vancouver became a highly contentious issue after WWII. Vancouver's engineering staff in the late 1940s still subscribed to R. E. Lea's proposition that water sweeping north and east from the Fraser River had a beneficial effect on water quality in Burrard Inlet. They focused on lowering the pollution in False Creek by dumping more of the city's waste into the north arm of the Fraser. Yet, with numerous outfalls dumping raw sewage into the north arm, high tides began regularly pushing raw sewage and industrial waste up the river while low tides carried it into English Bay. The province's Attorney General, Robert Bonner, described the lower Fraser in 1958 as "an open sewer draining the whole valley." ¹²³ Some sixty sewer outfalls discharged raw sewage into the river or the urban shoreline further north. Between Fraser River water, the still filthy waters of False Creek and various other outlets, the city's swimming beaches were under assault (Figure 12).¹²⁴

A. M. Rawn, an American civil engineer, had been engaged earlier in the decade to help solve these problems. A former general manager of the Los Angeles County Sanitation District and chairman of the California State Water Board, Rawn believed in the extraordinary value of marine disposal of municipal effluent. In a paper delivered to the First International Conference on Waste Disposal in the Marine Environment in 1959 he summarised the philosophy that guided his work. He criticised "indiscriminate application of secondary treatment to ocean discharges." While this might be important in fresh water with limited assimilative capacity, he said, it was "improper" at the seaside

The great economy inherent in the discharge of urban sewage and industrial wastes into near shore water for final disposal is apparent to all who will investigate. (The ocean's) ... vast area and volume, its oxygen laden waters, its lack of potability or usefulness for domestic and most industrial purposes, present an unlimited and most attractive reservoir for waste assimilation. (The sea disposal option allowed engineers)...to relegate the entire job of secondary sewage treatment to a few holes in the end of a submarine pipe and the final disposal of effluent to the mass of water into which the fluid is jetted... without material cost or maintenance and none for operation.¹²⁵

Marine disposal, Rawn said, presented "a picture of such great allure as to capture the imagination of the dullest." He recognised however that, over the longer term, ocean dumping could have negative impacts on marine ecosystems; they would have to wait and see.

Rawn was engaged to resolve Vancouver's increasingly intolerable situation with support from local scientists. Federal oceanographers, the Hydrographic Service of Canada and UBC's Oceanographic Institute at UBC all supported him during a year long survey of tidal flows and weather patterns in the Fraser estuary and adjacent Strait, as well as English Bay and Burrard Inlet. Rawn's 1953 report confirmed the future of Vancouver's beaches was at stake:

Unless corrective measures are taken to bring about more proper disposal of sewage, the conclusion is inescapable that the degree of contamination will increase as the volume of sewage flow increases until large areas of the beaches will no longer be safe or even decent to use.¹²⁶

Vancouver's situation was not so unusual among Canadian cities in the 1950s. Over five million Canadians lived in towns facing similar sewage pollution problems. A Canadian Mortgage and Housing Corporation survey in 1957 found only one sixth of the three hundred municipalities surveyed treated their sewage and most of these carried out only primary treatment.¹²⁷

Swimmers were the most conspicuous victims of growing sewage discharges around Vancouver (Figure 12). A key objective of Rawn's strategy was protecting swimming beaches. Protests through the rest of the 1950s came from local groups such as the Lower Kitsilano Ratepayers' Association and the Vancouver's Parent Teacher Association, worried about their families' health. ¹²⁸ The President of the BC Physical Fitness Association expressed his resentment to the *Province* newspaper in 1957

... in our health conscious age ... pressure to have our sea fouling sewage system improved has to come from private citizens... who, it seems are to be 'fobbed off' by glib statements to the effect that the city health authorities have been 'aware of the situation for years ... Who is responsible for community health and sanitation? If ever Vancouver needed a strong hand to direct its health and fitness policy, it is certainly now... Our present sewage system is still little more than a vast outdoor sea lavatory...Unfortunately, our children and tourists have to bathe in (and swallow) this sewage soup called seawater...¹²⁹

Frustration grew as local and provincial governments appeared to do nothing in the midst of a deepening crisis. When authorities closed city beaches in the hot summer of 1958, the *Sun* compared the Rawn Plan and the province's recent creation of the PCB to setting up a fire alarm system, then doing nothing when the fire broke out.¹³⁰

Rawn's plan was relatively simple: stop all direct flows of sewage into English Bay and divert these south while gathering the sewage already being dumped in the Fraser into a single collection system to deliver it to Iona Island, where the North Arm reached the Strait. There it could be dumped into the sea after primary treatment. Another primary treatment plant was proposed at the mouth of the Capilano River, on Burrard Inlet's north shore. Rawn's strategy involved identifying some shores – particularly English Bay – as places to be protected for recreation while others – especially off the mouths of the Fraser and Capilano rivers - were designated waste dumps.¹³¹



Figure 12 - Main sources of sewage pollution on Vancouver beaches, 1958132

Rawn's recommendations were not implemented quickly. Not all local governments wanted to incur the costs involved. Richmond opposed it, fearing they would bear much of the pollution resulting from a primary treatment plant to be built at Iona Island. The PCB, newly created to

break the logjam, approved the Rawn Plan but Richmond appealed their decision. By the summer of 1958 the situation was reaching a head, with Vancouverites alarmed over beaches closed due to sewage pollution. Vancouver's Mayor Hume implored Premier Bennett to give them an early go ahead for the Iona Island Treatment Plant. Bennett replied that they were still considering Richmond's appeal and had asked BC Research Council's Dr. Gordon Shrum to carry out further studies.¹³³

After spending \$20 million, the GVSDD claimed in 1965 they had reduced the "noxious load" pouring into English Bay by half a billion gallons a year, or seven hundred and fifty thousand pounds of "solids" and the appearance of bathing water had "greatly improved" as a result. The beach's coliform levels didn't go down significantly however. The GVSDD explained the various causes for the disappointing result. There were still storm sewers on the bay and False Creek dumping raw sewage during heavy rainfall. There were also a growing number of boats of all kinds, dumping their own waste in False Creek and the bay. Most important, the GVSDD surmised that increasingly polluted water from the Fraser was sweeping into English Bay.¹³⁴ The Commissioner confirmed that while

...great strides have been taken in the fight against pollution of English Bay... the war has not been completely won. The major battle... removing sewage discharged directly into English Bay, is behind us. The program now... calls for the construction of a large trunk sewer to intercept all sewage originating on Vancouver's south slope which discharges to the North Arm of the Fraser River. This will be carried to the treatment plant.... the effect of this development will be carefully weighed and assessed and the Sewerage District will then proceed in the elimination of outfalls from its member municipalities upstream as the need arises...¹³⁵

The GVSDD would implement this approach then see what further adjustments were needed as its impacts were better understood.

Doubts had been expressed about Rawn's plan as early as 1958. Critics pointed out that the Strait did not have the assimilative capacity of southern California's open ocean. R. W. Pillsbury, an assistant UBC biology professor, described the Strait as "a fairly large lake of sea water with extremely narrow inlets and outlets two hundred miles apart." He pointed to findings of limited exchange between the surface waters of the Strait and the open Pacific. Effluent from Rawn's proposed Iona Island treatment plant, Pillsbury suggested, was unlikely to go far from Vancouver's beaches.¹³⁶ A decade later, the city's Health Officer, G. H. Bonham, was still defending the city's dependence on the Strait's 'receiving waters' to carry away its ground up

sewage. He denied any health risks for swimmers, except those foolish enough to swim beside sewage outfalls. He recognised however that "even this resource could be over taxed" and was not calling for "unlimited dumping of human waste into sea water." Yet a growing number of people began wondering in the late 1960s if 'unlimited dumping' in the seas off Vancouver might not be the policy of municipal and provincial governments. The situation at Vancouver beaches remained ambiguous and pollution of the lower Fraser ever more severe as public awareness and concern about all forms of pollution soared. These concerns, stimulated by new critical voices outside government ushered in new standards even as new concerns emerged.

City officials were once again on the defensive. Early in the summer of 1969 they reported most of the city's beaches were safe for swimming. English Bay (Illustration 62) and Spanish Banks continued to meet their standard of 1000 coliforms per 100 ml. of sea water though the south shore of Burrard Inlet, False Creek and the North Arm of the Fraser all exceeded that level. Two weeks later Patrick McGeer condemned city health officials for failing to post warnings at "grossly contaminated" beaches on the Fraser and at Wreck Beach near the mouth of the north arm. McGeer reported he had 'posted' Wreck Beach personally, after his "spot check" found coliform counts of 15,000 per 100 ml. The city had also failed to post warnings on the beach at Lumberman's Arch, a few hundred meters from the Brockton Point outfall, still not linked to the Iona system and discharging most of the raw sewage from downtown Vancouver.¹³⁷

Both city and provincial officials were aware of the consequences of a steady build-up of untreated sewage in the lower Fraser, where highly publicised reports spoke of human faeces fouling log booms and fishermen's nets. False Creek remained the biggest concern however, an open sewer in the heart of the city adjacent to its most popular swimming beaches with coliform counts of up to 100,000 per 100 ml. Such levels revived old fears of typhoid and a report to City Council indicated that nineteen cases of typhoid had in fact been reported in the city in recent years, including three fatalities. All were traced to people eating crabs caught, cooked and rinsed in False Creek water.¹³⁸

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Illustration 62 – "English Bay Beach, Vancouver" 1975 (photo: BC Govt). Apparently safe for swimming again, as most Vancouver sewage was now being discharged into the Strait off the mouth of the Fraser River.

Local citizen groups, especially in Kitsilano had been among the first to speak out about polluted beaches in the 1950s. By the late 1960s SPEC, also based in Kitsilano and supported by young UBC biologists, attracted public attention to these concerns. SPEC spoke out not only about the untreated human waste pouring into waters off Vancouver, but also the local industries using municipal sewers to dispose of their waste.¹³⁹ Dealing with isolated industrial "point sources" was relatively easy compared with the lingering problem of the city's combined sewers. Eliminating the contaminated "first flush" required separation of storm sewers from sanitary sewers, and this would be costly for the city, its builders and its citizens. By 1970 the city required that all new construction and new subdivisions, as well as replacements for old sewer lines, provide separate sewers. For the time being these new lines were still being tied into combined trunk sewers but the long-term plan called for replacing them with separate trunk lines sometime in the future.¹⁴⁰

The city and neighbouring municipalities made significant progress in controlling sewage discharges over the next few years. The PCB had already announced in 1968 that all future sewage outlets on the Fraser below Hope required no less than primary treatment and chlorination. On the middle and north arms of the lower Fraser, effluent from all future sewage outlets would require secondary treatment and chlorination, with organic industrial effluents requiring the same level of treatment. By 1975, all existing sewage discharges into the lower Fraser also required secondary treatment, a commitment met with the opening of the Annacis Island Sewage Treatment Plant. Vancouver's sewage was also being treated by then, though only primary treatment, at the Iona Island plant at the mouth of the river.¹⁴¹ Sewage pollution of English Bay and Burrard Inlet was *still* a problem however. Pollution from sea going vessels eluded municipal or provincial control. It was a federal responsibility but when Vancouver's Health Officer raised the issue with his federal counterparts in 1972, they confirmed that no specific federal legislation addressed the issue and suggested he speak with the National Harbours Board. The city also encouraged the province to adopt uniform regulations for effluent from shoreline marinas. The province declined, pleading that they lacked sufficient 'manpower' to enforce such a regulation. The following year the city's Health Department complained again about the lack of provincial regulation governing sewage discharge from these vessels, though this was now banned on the province's interior lakes. The city noted that

the potentially dangerous situation with respect to pollution of Vancouver harbour from pleasure crafts and live-a-boards... (whose numbers) ... had increased dramatically over the last few years and will increase even more (with) the proposed marinas in the False Creek area.¹⁴²

Problems of sewage from boats were not resolved in the 1980s. Vancouver's Engineering Department blamed higher than normal fecal coliform counts on English Bay in the summer of 1986 partly on "increased boat traffic as a result of Expo 86" (Illustration 63). The city had spent fifteen years and many millions to upgrade their sewer system and improve seawater quality. They were advised that reducing sewage discharge from boats should now be a priority. The city had done everything they could, said the engineers, to control discharges from docked vessels but could do nothing about boats moored offshore. Ottawa still did not require holding tanks on vessels in Canadian waters, and most ships still discharged untreated sewage into the sea. Ottawa was considering such measures for various classes of vessels. New amendments being contemplated for the Canada Shipping Act might enable each province to decide which local waters could be protected from vessels' sewage discharge. Other regulations requiring holding tanks on tour and charter boats were also being considered for a revised act, once issues related to pleasure craft had been resolved. Next in line were regulations to govern waste dumping by ocean going freighters and cruise ships, such as those that moored in English Bay and Burrard Inlet. Because of the international ramifications, progress on these latter regulations was expected to be slow. ¹⁴³

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Illustration 63 - "Expo Centre, Vancouver" 1985 (photo: BC Govt). Risen above False Creek sewers and hoping to transcend dependence on primary resources, but still needing to dredge toxic industrial waste.

Notwithstanding these worries about sewage from boats, the Fraser mouth and False Creek remained the focus for most concerns about the Lower Mainland's marine environment in the 1980s. A *Vancouver Sun* article in 1980 described a massive fish kill on Sturgeon Banks, at the mouth of the Fraser attributed to severe oxygen depletion due to sewage. Less than a year later,

Vancouver's new Iona Island Sewage Treatment Plant was judged to be in violation of the province's Pollution Control Act. The city and province now agreed on the need for a 'deep sea outfall' to better disperse the plant's growing effluent stream which was not only killing fish, but was also still polluting Vancouver's beaches. The new plan would be based, once again, on the perceived superiority of sewage dispersion in the Strait following primary treatment rather than building a costlier secondary treatment facility.¹⁴⁴ SPEC and other members of an NGO umbrella group known as the Fraser River Coalition objected to what they perceived as yet another shortterm solution with many inherent problems for the future. There was no guarantee, said SPEC, that the proposed \$50 million project to extend the pipe eight kilometers into the Strait could prevent lightly treated sewage from *still* drifting back to the shore of English Bay. Besides, the approach would "do nothing to correct the principal sewage disposal problems the Lower Mainland must deal with - industrial and household toxic chemicals washed into the system and the lack of effective treatment plants." A Coalition brief prepared in 1985 pointed out that California and Oregon now experienced "grave problems" resulting from sewage dumping in the open Pacific, and the seas off Point Grey didn't have the flushing powers of the open ocean. They encouraged the city to aim for the best solution instead of the cheapest and suggested Vancouver adopt first secondary then tertiary sewage treatment. They warned of the critical need to remove toxic chemicals being disposed of in the municipal sewage system.¹⁴⁵

Proponents of the deep-sea option didn't address the issue of toxic chemicals in the city's effluent and excluded the possibility of combining an extended pipe with secondary treatment. The City's Health Officer, John Blatherwick, recognised this approach might be necessary at some point in the future but warned that secondary treatment technology also "creates its own problems and has a large cost." Arguments in favour of deep-sea disposal with primary treatment rested mostly on its lower cost and the dangers of secondary treatment *without* deep sea disposal. The drawback of secondary treatment cited by its opponents, apart from its higher cost, was mostly related to possible malfunctions caused by peak loads coming through the city's remaining combined sewers during heavy rains. A secondary treatment facility, he said, could not handle peak flows over four times greater than average and was likely to spill untreated sewage at the river mouth.¹⁴⁶ So the city built their long pipe into the Strait at the mouth of the Fraser. Ken Hall, a UBC civil engineer who had studied the effects of pollution at the river

mouth declared the city was deceiving itself with its eight kilometer pipeline, solving one problem by creating others down the line.¹⁴⁷

Rawn's task in the early 1950s had been to design a new system of sewage disposal to overcome problems created by in Vancouver's existing system, mostly designed in 1913. The Lower Mainland was moving in the 1980s to develop a new approach to overcome, among other things, the problems created by Rawn's plan. Profound faith in the power of marine dilution had guided Rawn's plan for greater Vancouver in the early 1950s.¹⁴⁸ The sanitation engineers of 1913, though the details of their plans were different from Rawn's, had also counted on this capacity of the inland sea to absorb any and all waste dumped into it. So too, in their own way, did the planners of the 1980s. Each successive strategy simply involved moving the sewage a little further into the inland sea, a little further away from Vancouver's beaches, with as little treatment as possible.

False Creek also continued to be a problem. By the 1980s the city's Health Department received a steady stream of computer printouts detailing various water quality parameters at the city's most popular beaches throughout the summer. In the summer of *Expo 86* they confirmed water quality was good at their most popular beaches, far better than in the late 1960s and early 1970s and "by all Canadian and BC standards... safe to swim in," with the exception of Sunset Beach at the mouth of False Creek.¹⁴⁹ This inlet was now the site of an ambitious urban renewal programme with former industrial lands being transformed into high-density housing and the site of the *Expo 86* world exposition. These activities on False Creek and the prospect of global exposure through the summer months of 1986 heightened pressure on city officials. City engineering staff had informed Vancouver City Council back in 1973 that it was unlikely False Creek waters could ever be raised to "swimming standards." Yet by 1984, after ten years of steady improvements, city engineers had become cautiously optimistic that it might eventually be feasible to swim there. In fact, although there were no public beaches on False Creek, the inlet's re-development was already leading to "incidents of swimming, windsurfing, zodiac football, etc. in spite of the medical health officer declaring the water unfit for swimming." ¹⁵⁰

After False Creek's re-development commenced in the 1970s, city officials realised they faced two distinct challenges. Water pollution from domestic sewage was diminishing as a result of the

city's new sewers. Now however, they were faced with "bottom sediment pollution," a legacy of False Creek's industrial history. Toxic sediments, especially from previous sawmilling operations, were a problem especially in the East Basin of the inlet where the sea bottom was essentially dead. Over the longer term, the situation could be resolved only with expensive dredging but this would not proceed without further investigation to determine whether the cost of such an operation could be justified by its prospective benefits. In the meantime, False Creek would remain a place where the city did not recommend water sports requiring more than minimal contact with the water. Children were particularly discouraged from participating in any water sport there and all people were advised to avoid contact with the intertidal zone or the sea bottom below low tide.¹⁵¹

Once a waste dump, always a waste dump

Popular and scientific perspectives on waste dumping in the Strait shifted during the period considered in this chapter, reflecting especially a global transition after WWII away from uncontrolled marine waste dumping towards more managed discharges of ever expanding industrial and domestic waste streams. This vision of the Strait as waste dump was increasingly contested by those who saw it as a vulnerable "marine ecosystem" providing economically valuable fish habitat and precious recreational space. Change on the Strait, as elsewhere, was driven in part by growing evidence, and fear, of the damage being wrought by pollution in aquatic environments. Resistance to change resulted from economic constraints and abiding engineering paradigms; it ensured that most changes in the actual practice of waste dumping were partial, negotiated and gradual. The 'precautionary principle', whereby the creation of possible future problems ought to be avoided was a widely touted goal of environmental managers by the 1980s. But it was not much seen on the Strait, where governments and engineers responsible for designing and operating waste disposal systems remained focused on the need for 'cost effective' solutions to present problems, and never abandoned their claim to the Strait as a low cost waste receptacle.

¹ Nash, *Inescapable Ecologies*, 2.

² Keeling, "Effluent Society," 129; Nelson, "Seaspace," 162.

³ DMF, Sixth Annual Report; DMF, Seventh Annual Report.

⁴ Joel A. Tarr, *The Search for the Ultimate Sink – Urban Pollution in Historical Perspective* (Akron, Ohio: U of Akron Press, 1996); Martin V. Melosi, *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present* (Baltimore: Johns Hopkins University Press, 2000); John T. Cumbler, *Reasonable Use: The people, the environment and the state, New England 1790-1930* (Oxford: OUP, 2001), cited in: Keeling, "Effluent Society," 16.

⁵ CVA File 46 A 2 19: J. V. Berry, "Pollution Control in the Lower Mainland Communities of BC," reprinted from The Engineering Journal, June 1960 (Kingston, Ontario: Engineering Institute of Canada); E. Mohun, "The Sewerage System of Vancouver BC," *Transactions of the Canadian Society of Civil Engineers* 2 (1888): 243-67, cited in: Keeling, "*Effluent Society*," 35.

⁶ Ibid.

⁷ Tarr, Ultimate Sink, xxxv-xxxvii.

⁸ CVA: TD 227 C35 1916: Government of Canada, *Water works and sewerage systems of Canada*, Commission of Conservation (Ottawa: Mortimer, 1916).

⁹ Newell, *Tangled Webs*, 50.

¹⁰ TBC 16 July 1898 p 8: "BC BOARD OF TRADE INDUSTRIAL ESTABLISHMENTS."

¹¹ Meggs, Salmon, 69.

¹² TBC 12 August 1905, p. 5: "Fish Offal."

¹³ For example see: BCA GR-2908 Canadian DMF Central Registry records Microfilm Ca 1895-1914 B-11071, file 100 pts 1 and 2: Fishery regulations: disposal of 1894-1895 offal; violation of disposal regulations.

¹⁴ Keeling, "Effluent Society," 16.

¹⁵ Armitage, *Around the Sound*: 117-8; National Archives, Vancouver, RG 23 Dept. of Fisheries, PR volume 2307 file 1:12, cited In: Keeling, "Effluent Society," 211-2.

¹⁶ BCA GR-0132: BC DEPT. OF HEALTH AND WELFARE, Originals 1898-1957, BOX 25 File 13: Water: letter of 10 October 1919 from Miss Winifred Philpot, Parksville, B.C. to Chief Sanitary Inspector, Provincial Board of Health, Victoria.

¹⁷ Ibid: File 25, Water Nanaimo District, 1924-36: Correspondence through the 1920s and into the 1930s reveals much abiding concern about the threat of typhoid.

¹⁸ BCA MS-0093: G.B. Brett fonds; "Powell River's first 50"; BCA GR-0132: BC DEPT. OF HEALTH AND WELFARE, Originals, 1898-1957- BOX 27 File 5: Water – Powell River, 1928-1938.

¹⁹ Examples of this kind of conflict arising early in the interwar period on Saltspring Island and later in Courtenay can be seen in: BCA GR-0132: BC DEPT. OF HEALTH AND WELFARE, Originals, 1898-1957, BOX 28 File 13, Water – Saltspring Island – Maxwell Lake, 1914-1923 and File 1, Water – Courtenay, 1916-1938.

²⁰ R. S. Lea, *Report by RS Lea to the Burrard Peninsula Joint Sewerage System* (Vancouver: Vancouver and Districts Joint Sewerage and Drainage Board, 1913) cited in Keeling, "Effluent Society," 41-2.

²¹ BCA GR-0132: BC DEPT. OF HEALTH AND WELFARE, Originals, 1898-1957, BOX 16: File 10.

²² CVA 61-C-5, file 2: A.R. Mackenzie, Report on False Creek, 14 July 1927, cited in: Keeling, "Effluent Society," 44-6.

 ²³ CVA Add. MSS. 1257, 64-A-3, file 4: Vancouver and Districts Joint Sewerage and Drainage Board Memo on Drainage Areas Flowing into False Creek and English Bay, 19 may 1943, cited in: Keeling, "Effluent Society," 46.
 ²⁴ Michael Waldichuk, "Water Pollution from Pulp Mill Effluent in BC: A general overview," in: *Regional*

Programme Report 83-15, edited by W. M. Pomeroy, Environmental Protection Service (Vancouver: Environment Canada, 1983); P. A. Larkin, *Freshwater Pollution, Canadian Style,* (Montreal and Kingston: McGill and Queens University Press, 1974), 59-60, cited In: Keeling, "Effluent Society," 209.

²⁵ Keeling, "Effluent Society," 202.

²⁶ BCA MS-1636 John Francis Barrow collection, Toktie Logs: July 9 1934

²⁷ BCA GR-0132: BC DEPT. OF HEALTH AND WELFARE, Originals, 1898-1957, BOX 23, File 15, Water – Britannia Beach, 1922-1926: Letter of 16 April 1926 from William Young (former Comptroller of Water Rights B.C. and now "Special consultant to largest industrial operators in British Columbia," to Dr. H. E. Young, Sect. Board of Health, PB, Victoria.

²⁸ BCA GR-0132: BC DEPT of HEALTH AND WELFARE. Originals, 1898-1957, BOX 7: the exchange of letters between residents, the provincial health department and BC Packers executives starts in April 1941 and continues until August 1943.

²⁹ Arnold Reitze, "Wastes, Water and Wishful Thinking: the Battle of Lake Erie," *Case Western Reserve Law Review* 20 (1968): 7-11, cited in: Jamie Benidickson, *The Culture of Flushing: A Social and Legal History of Sewage* (Vancouver and Toronto: UBC Press, 2007); Tom Lewis, *The Hudson: A History*, Yale University Press: New Haven, 2005; Eric Jay Dolin, *Political Waters – History of Boston Harbour* (Amherst and Boston: University of Massachusetts Press, 2004).

³⁰ R. Haig-Brown, *To the Small Boat Fleet Gathered in English Bay, Sunday 11 June 1972*, BC Environment News 1, 2 (July 1972), 7, in: UBCLSC RHB papers BN 146 -5; Ibid, BN 55-8: Handwritten 16 page untitled manuscript dated1969; BCA Imbert Orchard records: T0834: 0002 of Description Number AAAB0925: R. Brown interview 1969.

³¹ Nash, *Inescapable Ecologies*, 2.

³² Nash, *Inescapable Ecologies*; Melosi, *Sanitary City*; Tarr, *Ultimate Sink*, Arn Keeling, "Charting marine pollution science: Oceanography on Canada's Pacific coast, 1938-1970," *Journal of Historical Geography* 33, 2 (2007), 403-428.

³³ Or at least the beginning of Samuel Hays' "second wave" of environmentalism with its focus on pollution.

³⁴ As with many debates within 'environmental impact assessment,' a methodology emerging in the same decades,

which also often turns on disagreement over the 'significance' of different prospective impacts. ³⁵ Keeling, "Effuent Society," 5.

³⁶ Keeling, "Effluent Society"; Michael Waldichuk, "Physical Oceanography of the Strait of Georgia, BC," *Journal of the Fisheries Research Board of Canada* 14 (1957): 321-486.

³⁷ UBCLSC RHB papers, BN 55-6 Handwritten manuscript of speech in Spokane to Pacific North West Tourism Association 18 April 1967, 16p.

³⁸ Haig-Brown cited Vancouver Island's forests as another 'asset under threat.'

³⁹ UBCLSC RHB papers. BN 55-8. Pollution for profit. Handwritten manuscript, 1969, 16p.

⁴⁰ For example this article enumerating the provincial and federal regulatory safeguards in place to control pollution, in CVA File 46 A 2 19 J: V. Berry, "Pollution Control in the Lower Mainland Communities of BC." Reprinted from The Engineering Journal, June 1960 (Kingston, Ontario: Engineering Institute of Canada)

⁴¹ H. Herlinveaux and V Giovanda. *Some Oceanographic Features of the Inside Passage Between Vancouver Island and the Mainland of BC*, Technical report no. 142, Fisheries Research Board of Canada (Nanaimo, Fisheries Research Board, 1969) cited in: Nelson, "Seaspace," 33.

⁴² Keeling, "Effluent Society"; VCA File 146 B 1 4: Press release of the Pollution Control Board of BC, 14 March 1969, 1.

⁴³ CVA File 146 B 1 4 - Press release of the Pollution Control Board of BC, March 14, 1969.

⁴⁴ In 1963, 1964 and 1965, the discrepancy between GVSDD and City of Vancouver average coliform readings at Kitsilano Beach was 230 versus 700, 430 versus 1100 and 230 versus 790 respectively. McGeer meanwhile suggested a maximum acceptable count in beach water of 240 per 100 ml, in: Patrick McGeer, "A Brief to the Mayor and Aldermen, City of Vancouver re: The Pollution of Vancouver Waters," 24 June 1969; and, A. Goldie & C. J. Keenan, *Pollution and the Fraser* (Victoria: Pollution Control Board, 1968), cited in McGeer, "A Brief," all in: CVA File 19 G 4 2; C.

⁴⁵ CVA File 567 E 6 12 - Press release for an address by Ray Williston, Min of Lands, Forests and Water Resource, 23 October 1969, cited in McGeer, *A Brief, op. cit.*; Iain Hunter, "Berger calls Loffmark Unhorsed Pollution fighter," *Vancouver SUN*, 1 Feb 1969: 13.

⁴⁶ BCA GR-1118: BC MARINE RESOURCES BRANCH - BOX 12 - File 29 Memorandum dated April 29 1970 from Deputy Minister of Water Resources to Mr. F. S. McKinnon, Chairman, PCB regarding Storm overflow discharge from combined sewerage systems.

⁴⁷ Harry Rankin, *Pollution – Suicide or Survival* (Vancouver: Broadway Printers, 1970), 13-15, in: CVA File 46 A 2 19.

⁴⁸ Ibid, 16.

⁴⁹ Ibid, 16-17.

⁵⁰ Ibid, 24.

⁵¹ Qureshi, "Environmental Issues," 34; BCA GR-1118: BC MARINE RESOURCES BRANCH - BOX 12 - File 29 News release, November 1 1972, from Minister of Lands, Forests and Natural Resources.

⁵² CVA MSS 1556 - SPEC Fonds, Box 729 D 6 file 4: Gary Gallon, "SPEC's Roots," in twentieth Anniversary edition of *Spectrum* (Winter 1989): 5-10; J. W. Parlour, and S. Schatzow, "The mass media and public concern for environmental problems in Canada, 1960-1972," *International Journal of Environmental Studies* 13, 1 (1978): 9-17, cited in: Keeling, "Effluent Society," 320.

⁵³ R. E. Thomson's 1981 "Oceanography of the BC Coast" and DFO's 1983 "Current Atlas Juan de Fuca to Strait of Georgia," both cited thus in: CVA File 243 D 6 5: Letter of 19 Dec 1985 from B. F. Talbot, Senior Assistant Engineer, GVRD, to J R Rawsthrorne, Commodore, Eagle Harbour Yacht Club re water quality in Eagle harbour.
 ⁵⁴ Richard S. Mackie, *Hamilton Mack Laing: Hunter-Naturalist* (Victoria: Sono Nis Press, 1985), 150.

⁵⁵ TBC 15 October 1902 p1: "TESTING FOR OIL; BCA MS-0436 Alexander Buckham BOX 65 file 14, Gulf Islands coal report: Bucknam's summary of "bore holes" includes reference to the Saturna Island drilling.

⁵⁶ D. Borthwick, "The constitutional dispute over off shore oil right in British Columbia," 14 page undated, unbound report from Superintendent of Lands and N. Caplan, "Offshore Mineral Rights: Anatomy of a Federal Provincial Conflict," *Journal of Canadian Studies* 5 (Feb 1970), both in: BCA GR-1118: BC MARINE RESOURCES BRANCH - BOX 12 - File 45 Navigable Waters; William Ross, *Oil pollution as an international problem; a study*

of Puget Sound and the Strait of Georgia, Western Geographical Series No. 6 (Victoria: University of Victoria, Dept of Geography, 1973): 50-61.

⁵⁸ Rankin, Suicide or Survival, 9.

⁵⁹ B. McConnell, "Will Bennett Become Ruler of the Strait?" *Vancouver Province*, 14 January 1971; Ross, *Oil Pollution*, 67; Dept of Fisheries, "Jack Davis Forbids Seismic Exploration in Georgia Strait," press release of the Department of Fisheries, Pacific Region, Vancouver, cited in: Nelson, "Seaspace," 140; CVA File 594 C 9 13: Undated copies of telegrams from Robin Harger, Vice President, SPEC, and Irving Stowe, Director, Sierra Club of BC to Jack Davis and Frank Richer; BCA GR-1002, BC ELUC, Secretariat Originals 1972-1980, BOX 28 – Ports and Harbours - GVRD Lower Mainland Environmental Issues File – "Minerals on the STRAIT": Alan Merridew, "Expansion plan eyed for Roberts Bank," *The Province*, 15 Dec. 1976: 17-18.

⁶⁰ There is evidence of their greater efforts in controlling pollution in fresh water environments, and their inability to address marine issues, in: BCA GR-1027 BC Fish and Wildlife Branch, Originals 1920-1977 - BOX 40, File 3 - Pollution, obstructions, etc. 1947 (1), File 4 Pollution, obstructions, etc. 1947 (2); Ibid: BOX 41: File 2 164-O Pollution, obstructions, etc. E Division, 1949.

⁶¹ CVA File 567 E 6 10: Anonymous report dated 21 June 1955 on "Pollution of the Sea by Oil" from the Department of Transport, Ottawa; CVA File 567 E 6 11: Letter of 4 Oct 1956 from W A Sankey, Secretary of the Vancouver Chamber of Shipping to Capt. Johnson, Port Manager, national Harbours Board, Vancouver; CVA File 567 E 6 11: Letter of 18th July 1960 from Alan Cumyn, Director, Marine Regulations, Dept. of Transport to the Coastwise Operators Association of BC, Vancouver.

⁶² Refineries of the sort that fueled Malcolm Lowry's nightmares on Burrard Inlet.

⁶³ Battelle Memorial Institute and Pacific Northwest Laboratories, "Oil Spillage Study: Literature Search and Critical Evaluation for Selection of Promising Techniques to Control and Prevent Damage," report prepared for Department of Transportation and US Coast Guard, Clearinghouse for Federal Scientific and Technical Information (Washington: US Department of Commerce, 1967) cited in: Ross, *Oil Pollution*, 60-61.

⁶⁴ CVA File 594 C 9 13: "Oil spill could foul BC waters," *Vancouver SUN*, 29 January 1971: 2; Ibid: Undated newsletter from Friend of the Earth entitled "Is Puget Sound Being Set up For Disaster?":3
 ⁶⁵ Haig-Brown, "To the Small Boats," 6-8.

⁶⁶ UBCLSC RHB papers, BN 138-2: "Pollution and fisheries. Some Broad Comments," notes for address to Fisheries Council of Canada – 27th Annual Meeting, Quebec City, 10 May 1972, 8 page type written manuscript; Haig-Brown, "To the Small Boats"; Ibid, BN 146-5: Colin Clark, "Oil Spill!" *BC Environment News* 1, 2 (July 1972): 9.

⁶⁷ Ross, *Oil pollution*, 201-4, 228.

⁶⁸ Adapted from Nelson, "Seascape."

⁶⁹ Ross, *Oil Pollution*; Howard Paish and Associates "The West Coast Oil Threat in Perspective," Vancouver: Report to Environment Canada, 108, cited in: Nelson, "Seascape," 58.

⁷⁰ Ross, *Oil Pollution*; CVA File 567 E 6 12 - Letter of 31 March 1971 from N. Sigsworth, Regional Superintendent, Western Marine Regulations, Dept. of Transport, to Secretary of Chamber of Shipping of BC, Vancouver re: Oil Pollution Control Measures

⁷¹ CVA File 567 E 6 12: Letter re: Oil Pollution, 15 Jan 1971, from R E Holland, Harbour Master, NHB Port of Vancouver to W. Sankey, Secretary, Vancouver Merchants Exchange

⁷² Ross, Oil Pollution, 214-5.

⁷³ 450 tons of oil is equivalent to around 3,000 barrels.

⁷⁴ Ron Rose, "*Giant oil spill defies cleanup*" Vancouver SUN, 26 January 1973:1; MB / CAMS: Letter dated 15 March 1973 from Jack Davis, Minister of Environment to Melda Buchanan.

⁷⁵ Ross, *Oil Pollution*, 209; CVA File 567 – E – 6 – 13: Letter of 9th March 1973 to H O Buchanan, Regional Director of Min of Transport, Vancouver from M L Richardson, Director of Chamber of Shipping of BC re: Oil Spills, reply from Buchanan to Richardson on 15 March.

⁷⁶ "Oil spill expert charges outmoded rules," *Vancouver Province*, 9 March 1974:19; "Oil handling queried," *Vancouver SUN*, 2 Nov 1973: 14; "Spill gear lacking: SPEC," *Vancouver Province*, 24 Feb 1975: 6; "Massive spill certain," *Vancouver SUN*, July 15 1976: 38.

⁷⁷ Keeling, "Marine Pollution Science"; Anthony H. Dorcey (ed.), *The Uncertain Future of the Lower Fraser* (Vancouver: Westwater Research, 1976), cited in Keeling, "Effluent Society," 112.

⁷⁸ UBCLSC RHB papers BN 138-5: R. Haig-Brown, "For Earl Burton, Sport Illustrated," unpaginated, undated (late 1960s), type written manuscript; Frances Anderson, "Policy Determination of Government Scientific Organisations: A case study of the Fisheries Research Board of Canada, 1963-1973" (PhD Thesis, Univ. de Montréal); Jack Davis,

⁵⁷ Steele, First 100 Years: 260.

"The Fish and the Law that Guards against Pollution," *Toronto Globe and Mail*," 7 August 1969, cited in Benidickson 2007; CVA SPEC Fonds MSS 1556 Box 729 A2 file 6: Alan Daniels, "Kiss Fraser salmon goodbye," *Vancouver Province*, 10 September 1970.

⁸⁰ Armitage, Around the Sound, 203; Nelson, "Seaspace," 103-6.

⁸² Donald MacKay, *Empire of Wood: The MacMillan Bloedel Story* (Vancouver: Douglas and MacIntyre), 85-88, cited in: Keeling, "Effluent Society," 217. Bloedel, Stewart and Welch Ltd opted instead to build a less polluting kraft pulp mill.

⁸³ Michael Waldichuk, "Some Oceanographic Characteristics of a Polluted Inlet in BC," *Journal of Marine Research* 17 (1958): 536-551; ---, "Marine Aspects of Pulp Mill Pollution," *Canadian Pulp and Paper Industry* 15 (1962): 6; ---, "Waste Disposal in Relation to the Physical environment – Oceanographic Aspects." *Syesis* 1 (1968): 4-27.

⁸⁴ Waldichuk, "Effluent disposal"; BCA GR-1118 BC Marine Resources Branch - BOX 15: D. B. Quayle, "The effect of kraft mill effluent on the Pacific Oyster (<u>Crassostrea gigas</u>) with particular reference to Crofton, BC," unpublished, unbound 31 page report in file by D. B. Quayle, Fisheries Research Board of Canada, Biological Station, Nanaimo, B.C. February 1964; Ibid: Letter of 22 February 1966 from W.K. Kiernan, Minister to Crofton Ratepayers' Association; Ibid, BOX 16 - File 6 SFL-05 BCFP: Letter of March 5, 1969 re: Crofton Pulp and Paper from R. G. McMynn, Director to W. R. Redel, Director of Lands, Department of Lands, Forests and Water Resources, Parks Branch.

⁸⁵ BCA GR-1118 BC Marine Resources Branch - BOX 15: Letter of November 22, 1973 from Frank G. Cope, Inspector of Fisheries to Gary Bowden, Pearse, Bowden Economic Consultants, Vancouver.

⁸⁶ W. W. Brown & J. B. Stewart, *History of Port Mellon 1908-1967*, prepared for BC Centennial in 1958 and updated in 1967.

⁸⁷ "Powell River's first 50."

⁸⁸ The local RCMP detachment faced problems when officers refused assignment to their Powell River office, located adjacent to the mill, after high rates of cancer were remarked among staff. Two young local women, Ena (Clarke) Stewart and her best friend, devoted ocean swimmers, both died suddenly of liver cancer within a few months of one another in the late 1950s, after years of swimming near the mill.

⁸⁹ The old sulfite mills were also being converted to kraft processes and would all be kraft mills by the 1980s.
 ⁹⁰ Keeling, *"Effluent Society,*"134; BCA Imbert Orchard records: T0834: 0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969; UBCLSC RHB papers, BN 55-8: Pollution for profit, handwritten 16 page manuscript dated 1969.

⁹¹ CVA SPEC Fonds MSS 1556: Box 729 A2 file 6: SPEC BRIEF: "A big pulp mill spews as much waste as a city of 100,000," *Georgia Straight*, 19-26 August 1970, article cites the following report by R. E. McLaren and K J Jackson, "The Impact of Water Pollution on the Uses for Water – Fisheries," Canadian Fisheries Report 8 – 12, 1966.

⁹² Adapted from: "A big pulp mill," op. cit.

⁹³ Thoms was referring to the perfect prison, designed so there is no place inmates cannot be viewed by their minders; Michael Thoms, pers. comm.

⁹⁴ CVA SPEC Fonds MSS 1556: Box 729 A2 file 6: Barry Broadfoot, "Pollution Inquiry Expert discounts pulp mill threats," *Vancouver SUN*, 21 August 1970:15; Ibid: "Angry group wages pollution battle," *The Province*, 3Sept 1970: 27.

⁹⁵ Rankin, *Suicide or Survival*, 13.

⁹⁶ MB /CAMS: Alan Mettrick, "Georgia Strait isn't polluted," Vancouver SUN, 21 December 1970: 35.

⁹⁷ MB /CAMS: Barry Broadfoot, "Pollution Inquiry Expert discounts pulp mill threats," *Vancouver SUN*, 21 August 1970: 15.

⁹⁸ MB /CAMS: "Davis Cites New Legislation – Pulp water pollution end forecast." *Vancouver SUN* 5 Oct 1970: 13; Ibid: "Conform or close," *Canadian Pulp and Paper Industry Magazine* 23 (3 March 1970), cited in: Keeling, "Effluent Society," 249.

⁹⁹ Charles J. Keenan, *Environmental Anarchy: The insidious destruction of social order: A legacy of the sixties* (Victoria: Cappis Press, 1984), 80-88, cited in: Keeling, "Effluent Society":250.

¹⁰⁰ GR-1118: BC Marine Resources Branch - BOX 15 File 3 – SFC 01 – 2 up to 1973: Letter of March 2, 1973 from J H Fisher, Manager of Research and Development for BC Forest Products, J. A. Macdonald, Product Manager, Pulp and Paper, Crown Zellerbach Canada and J. S. Rogers, Vice President Manufacturing, MacMillan Bloedel to W. N. Venables Director of Pollution Control, Parliament B, Victoria; Ibid: I. K. Birtwell and R. M. Harbo, "Pulp

⁷⁹ Barker, *Water Resources*, 23.

⁸¹ Keeling, "Effluent Society," 224.

Mill Impact Studies at Port Alberni and Port Mellon," Transactions of the Technical Section, Vol 6 (4) TR 85-89, paper presented at the 1979 Environment Improvement Conference of the Technical Section, Canadian Pulp and Paper Association, 30 October – 1 November 1979, Victoria.

¹⁰¹ UBCLSC RHB papers. BN 55-8. Pollution for profit. Handwritten manuscript, 1969, 16p; CVA SPEC Fonds MSS 1556: Box 729 A2 file 6: SPEC BRIEF: "A big pulp mill," op. cit.

¹⁰² Michael Waldichuk, "Water Pollution from Pulp Mill Effluent in BC: A general overview," in: *Regional Programme Report 83-15*, W. M. Pomeroy (ed.), Environmental Protection Service (Vancouver: Environment Canada, 1983); MB /CAMS: Glenn Bohn, Glenn, "MB Powell River pollution called totally unacceptable," *Vancouver SUN*, 28 April 1990.

¹⁰³ MB /CAMS: Glenn Fohn "Dioxin takes its toll on labour relations at Crofton pulp mill," *Vancouver SUN*, 26 Sept 1987; Armitage, *Around the Sound*: 203; Michael F. Sinclair, *Controlling Pollution from Canadian Pulp and Paper Manufacturers: A federal perspective* (Ottawa: Environment Canada Conservation and Protection), 183, cited in: Keeling, "Effluent Society," 250.

¹⁰⁴ MB /CAMS "Hume" file: Stephen Hume "Extreme view on pulp pollution gets some hefty support," *Vancouver SUN*, 4 June 1990.

¹⁰⁵ MB /CAMS: Glenn Bohn, "MB Powell River pollution called totally unacceptable," *Vancouver SUN, 28* April 1990; Ibid: Calvin Sandborn and Bill Andrews, "Pulp mill decision is a disaster," *Vancouver SUN, 20* Dec 1990
 ¹⁰⁶ Adapted from T. C. Lemprière, "Environmental impacts and economic costs: A study of pulp mill effluent in BC" (MSc. Thesis, UBC, 1995).

¹⁰⁷ Adapted from Lemprière, "Environmental Impacts."

 108 BOD5 = Biochemical oxygen demand occurring in wastewater during a five day period, used as a measure of the organic content of waste water.

 109 TSS = Total Suspended Solids in wastewater.

 110 AOX = Absorbable Organic Halogen Compounds which include persistent organic pollutants such as PCBs, dioxins and furans.

¹¹¹ MB / CAMS "Hume" file: Stephen Hume, "Shellfish farmers brace for a 'creeping Chernobyl'," Vancouver SUN, 30 Dec. 1991.

¹¹² CVA SPEC Fonds MSS 1556 Box 729 A2 file 6: Mike Graham, "Public hearing wanted on sewage dumping plan," *Vancouver SUN*, 24 Dec 1970

¹¹³ Rankin, *Suicide or Survival*, 5-6

¹¹⁴ Armitage, Around the Sound, 203.

¹¹⁵ Their perception of cynicism was accurate. Working in the new field of 'environmental consulting' in the early 1980s, I was with a firm that did many of the permitting studies for the province's mining industry in that decade. The company head confided a simple strategy for ensuring clients' success with regulatory agencies, one that he had learned while apprenticing in New York: "look 'em in the eye and lie like a bastard."

¹¹⁶ Lynch, "Mining"; Keeling, "Effluent Society"; BCA GR-1118: BC MARINE RESOURCES BRANCH - BOX
 12 - File 29: Letter dated April 12, 1973 from Lloyd Brooks, Deputy Minister, Dept. of Recreation and
 Conservation to Mr. V. Raudsepp, Chairman, PCB, PB, Victoria.

¹¹⁷ This was resolved at the time by installing longer outfalls and diffusion systems for dumping the sewage, still untreated, further out into the Strait.

¹¹⁸ BCA GR-0132: BC Dept. of Health and Welfare Originals, 1898-1957- BOX 26 Files 1 Water – Nanaimo – Central Vancouver Island Health Unit (1941-1952): Letter 2 July 1948 from C. R. Stonehouse, Chief Inspector, to Central Vancouver Island Health Unit, Nanaimo BC Re: Water sample – H. R. McMilan, Summer Home, Oualicum Beach.

¹¹⁹ Wylie, Qualicum Beach, 169-173.

¹²⁰ BCA GR-1002, BCELUC Secretariat, Originals 1972-1980, BOX 28 – Ports and Harbours ELUC Secretariat.
 1975: "Summary Report of Water Quality Evaluation of Comox Harbour and Associated Environs," ELUC
 Provincial Interagency Evaluation of Comox Harbour. March 1975 (unbound report).

¹²¹ MB CAMS "Save our Strait from Sewage" file: Letter 23 April 1981 from Associated Engineering to Chairman and Members of Pollution Control Board, Victoria re: Regional District of Comox Strathcona Pollution Control Permit PE 5856 Summary and Rebuttal of Appeal Hearing Held at Comox, April 7-9, 1981:8-16.
¹²² Ibid.

¹²³ "How's Pollution on the Fraser?" *Vancouver Province*, 2 October 1958, cited in: Keeling, "Effluent Society," 89.
 ¹²⁴ Erwin Kreutzweiser, "City to Eliminate Polluted Beaches," *Vancouver News Herald*, 18 August 1949,

---, "Controversy Rages over Beach Pollution," *Vancouver News Herald.* 19 August 1949, --- "City's Beaches Disease Free," *Vancouver News Herald*, 22 August 1949, all cited in: Keeling, "Effluent Society,"46, 66.

¹²⁵ A. M. Rawn, 1960, "Fixed and Changing Values in Ocean Disposal of Sewage and Wastes," in: Pearson, E. A. (ed.) *Proceedings of the First International Conference on Waste Disposal in the Marine Environment*. U C Berkeley, July 22-25, 1959, cited in: Dolin, *Political Waters*, 58-9.

¹²⁶ CVA File 594 G 2 18: A letter of 17 May 1958 from Bruce Forrest of the Lower Kitsilano ratepayers' Association to Premier W. A. C. Bennett re: Appeal of the Municipality of Richmond pending on approval of the Iona Island for primary treatment sewage plan, citing the 1953 Rawn Report.

¹²⁷ George Seaden, *Municipal Sewage Disposal: Trends, problems and solutions, Volume 2* (Ottawa: Central Mortgage and Housing Corporation, 1957) and *Sewerage Service for Urban Housing in Canada* (Ottawa: CMHC, 1957), both cited in: Keeling, "Effluent Society," 81-2.

¹²⁸ CVA File 146 B 1 4, Draft Recreation Water Policy for Vancouver sent by Bonham to Board of Administration for Council Report, 3 March 1971 for a recommendation; CVA File 594 G 2 18 – undated hand written note in file from RNL (apparently R. N Latimer President of Lower Kitsilano ratepayers' Association); Ibid: memo to file dated July 20 1953 from R. Latimer, President, Lower Kitsilano ratepayers' Association re: Proposed Fishermen's Wharf, False Creek.

¹²⁹ CVA File 594 G 2 18 - Letter of 22 April 1957 from Harcourt Roy, President of BC Physical Fitness Association to the Editor, Vancouver Province re: Water Pollution.

¹³⁰ CVA File 36 A 7 109: "City Fumbling Beach Issue," Editorial, *Vancouver SUN*, 4 Aug 1958:4.
¹³¹ Keeling, "Effluent Society," 52.

¹³² Sources: CVA File 36 A 7 109: "City beaches stay open – new talks due Monday," *Vancouver Province*, 1
 August 1958: 1, "Must Beaches Be Barricaded Before the Council Acts?" Editorial, *Vancouver SUN*, 6 August 1958: 4.

¹³³CVA File 46 A 2 19: J. V. Berry, "Pollution Control in the Lower Mainland Communities of BC," reprinted from The Engineering Journal, June 1960 (Kingston, Ontario: Engineering Institute of Canada), 4-5; Keeling, "Effluent Society,"56-66; CVA File 36 A 7 109: Exchange of telegrams between Mayor Hume and Premier W A C Bennett, 9-15 Sept 1958.

 134 CVA File 146 – B – 1 – 2 Statement Regarding English Bay Water Quality by Commissioner of Greater Vacouver Sewerage and Drainage District, dated September 17, 1965. 135 Ibid.

¹³⁶ CVA File 36 A 7 109: "Some last, lingering doubts," Editorial, *Vancouver Province*, 23 October 1958; CVA File 146 – B – 1 – 3: message from G H Bonham, Medical Health Officer to Dr. R O Ramsden, 3 Jan 1968.
 ¹³⁷ CVA File 19 G 4 2: Report to Council Standing Committee on Health and Welfare, June 12, 1969; CVA File 19

G 4 2: Patrick McGeer, A Brief to the Mayor and Aldermen, City of Vancouver re: The Pollution of Vancouver Waters, 24 June 1969, 9 pp + annexes.

¹³⁸ CVA File 146 B 1 2: Letter of April 20 1970 from Bonham to Dr. D A Clarke, Medical Health Officer, South Okanagan Health Unit, Kelowna; CVA File 19 G 4 2: Report to Vancouver City Council by Minister of Health's Committee on Health Hazards from Swimming at Vancouver Beaches, June 24, 1969: 3.

¹³⁹ CVA SPEC Fonds MSS 1556: Box 729 D 6 file 4: Gary Gallon, "SPEC's Roots," *Spectrum*. twentieth Anniversary edition (Winter 1989): 5-10

¹⁴⁰ CVA File 146 B 1 3: Letter of 5 March 1970 from City Engineer to Dr. J A Taylor, Deputy Minister of Health, Victoria; CVA File 146 B 1 4: letter of 20 Feb 1970 from J A Tayor, DM of Health to the Corporation of the City of Vancouver (Attention: R E Martin, City Engineer).

¹⁴¹ BCA GR-1118: BC MARINE RESOURCES BRANCH - BOX 12 - File 29 Specific projects: A. Paget, "The policy of the pollution Control Board of the Province of BC regarding pollution control on the Fraser River below the town of Hope," 2 page note by Paget, Chairman, Pollution Control Board, February 2, 1968; CVA File 146 B 1 3: Memo of 19 Nov 1970 from G H Bonham, Medical Health Officer to Board of Administration, City Hall regarding "Pollution in the City of Vancouver and Surrounding Waters"; CVA File 243 D 4 7 - Memo of 13 June 1985 from Manager of Operations, GVSDD, to Water and Waste Management Committee re bypassing of untreated sewage.

¹⁴² CVA File 146 B 1 2: Letter of 17 Jan 1972 to Bonham from Fed. Dept. of National Health and Welfare's Regional Director for Pacific Region, G. C. Butler; CVA File 146 B 1 2: Exchange of letters in February and March 1972, between Vancouver Medical Officer G. H. Bonham and Provincial Deputy Min of Health, Dr. J. A. Taylor; CVA File 19 G 4 2 - City of Vancouver memo from City Clerk to Medical Health Officer re: Water Pollution in Vancouver Harbour, 1973.

¹⁴³ CVA File 243 D 6 9: Memo of 15 July 1986 from Engineering Dept. to City Manager for Council re: English Bay – Water Quality.

¹⁴⁴ Phil Needham, "Fraser pollution like a nightmare, witness testifies," *Vancouver SUN*, 7 May 1981. --- "GVRD gets \$10,000 fine for polluting," *Vancouver SUN*, 8 May 1981, both cited in: Keeling, "Effluent Society," 116.
 ¹⁴⁵ CVA SPEC FONDS MSS 1556 Box 729 D 5, file14: "WATER FOR TOMORROW – Time For Action"; CVA File 243 D 6 11: Brief presented by the Fraser River Coalition to a public meeting organised by the Vancouver Board of Parks and Recreation 28 Nov 1985 on the topic of Liquid Waste Management at Robson square Cinema.
 ¹⁴⁶ CVA File 157 E 2 10: Memo from B F Talbot, Deputy engineer, GVSDD to A. D. (illegible) dated 3 Sept 1982 re: Iona Island STP Upgrading; CVA File 243 D 6 3: Letter of 29 August 1986 from Blatherwick, VHD to James Johnston, New Westminster.

¹⁴⁷ CVA File 578 E 5 1: Mark Hume, "Team recalls foul times." Vancouver SUN, 11 March 1987.

¹⁴⁸ This faith was amply expressed in his later paper: Rawn, "Fixed and Changing."

¹⁴⁹ CVA File 157 E 2; CVA File 243 D 6 2: Letter of 8 August 1986 from F B Blatherwick, MD, Medical Health Officer, City of Vancouver Health Department to Clive Mostyn, Acting City Editor, *Vancouver SUN*; CVA File 243 D 6 3 - Letter of 29 August 1986 from Blatherwick, VHD to James Johnston, New Westminster.

¹⁵⁰ CVA File 239 E 6 5: Manager's Report to the Standing Committee on Finance and Administration, 31October 1984 re: False Creek Water Quality – Improvement Options.

¹⁵¹ CVA File 239 E 6 5: Manager's Report to the Standing Committee on Finance and Adminstration. October 31 1984 re: False Creek Water Quality – Improvement Options; CVA File 243 D 6 5: Memo of 1 Oct 1985 from W. C. Hutton, Director, Environmental Health Program to Blatherwick re: the use of False Creek for water activities during Expo 86; CVA File 243 D 6 10: Letter of 5 June 1986 from Shaun Peck, VHD to Michael Matthews, president, Sea Village, Granville Island.

7. Re-creation on the Restorative Strait

This chapter situates a narrative regarding the Strait as exceptionally valuable recreation space in the context of the previous four stories. It examines the slow emergence of this narrative prior to the mid-twentieth century then its virtual explosion after mid-century, when conflicts between recreationist and other stakeholders, as well as among different types of recreation, grew tremendously in importance.

Recreation on and by the sea - boating, swimming or enjoying the ambience of the shore - was firmly established in European culture as settlers began arriving on the Strait after 1850. The first 'yacht club' had been established at Cork, in Ireland in 1720 and in New York City in 1844.¹ Rowing competitions were among the oldest recorded sports. In Britain, they began as competitions among rowers ferrying passengers on rivers and were popular events by the mid nineteenth century, when the sport was also well established in eastern North America.² Sea bathing and other recreation by the shore had their own traditions associated with cleansing, curing, rejuvenation, beauty and pleasure. The concept of a 'sea cure' was popular among Britain's eighteenth century physicians. Where English coastal dwellers had once turned their backs on the sea whenever they weren't working on it, by 1800 new seaside residences were being constructed to provide unimpeded views of the sea, now understood to be a font of physical, intellectual and socio-cultural well-being. Brighton became the quintessential site of healthy interaction with the sea in the early nineteenth century, its shoreline benches facing the sea, visitors from smoky cities taking the air on seaside promenades, and children playing on the beach. Similar resorts appeared along the coastlines of northwest Europe.³ Europeans increasingly recognised not just the healthful properties of the sea and its shore, but also the spiritual value of these places. British romantic poets, including Coleridge, Shelley, Keats and Byron, all extolled the power of the sea and its shore to stir the soul and induce visions, epiphanies and physical liberation. Part of the seashore's growing attraction was the contrast between the sea and its healthful littoral on the one hand and the smoky squalor of rapidly growing European and North American cities on the other. The curative properties of 'sea air' were coming to be seen as even more important than those of sea water.⁴

Beginnings of settler recreation on the Strait: 1849-WWI

Recreation on the Strait was not often mentioned in the first decades of colonisation. Yet it was early recognised as a good place for newcomers to restore or re-create themselves. The Great Britain Emigration Commission confirmed in 1859 that "No fevers or epidemics of any kind are known among the white populations" of Vancouver Island.⁵ By the 1870s, sailors jumping ship to join the good life of Vancouver Island had become a concern for ship owners.⁶ The comfortable classes of mid nineteenth century Anglo American society were also inclined to see untrammelled corners of the world such as the Strait of Georgia as appropriate places for recreation. People coming from afar could appreciate recreational fishing and hunting and spectacular coastal scenery. The *Colonist* reported in 1866 - perhaps aiming to drum up business for steamships advertising in their paper - the great beauty encountered cruising along Vancouver Island's eastern shore, which "...for the sake of the scenery alone, would amply repay those having leisure from business." ⁷ Victoria settlers were holidaying in the Comox Valley by the 1880s, attracted by the wealth of game and fish.⁸ Navigating the capricious tides and winds that had earlier drowned so many miners became another summer adventure for a privileged few.⁹

The Strait also had the virtue, for some, of being far from traditional centres of Eurasian civilisation. It was a place well-suited for starting over, for making oneself anew. Afro-American settlers arriving on Saltspring Island in the late 1850s announced their "Declaration of Independence" from an oppressive American federation, declaring their determination "to seek an asylum in the land of strangers... so that they might... repose... under the genial laws of the Queen of the Christian Isles."¹⁰ Less oppressed refugees followed them to the southern islands, some determined to re-create the confines of British social life and others to escape them. Life on islands further north was less congenial, but even there some could see the recreational potential. When the Royal Navy's *HMS Tribune* put into a broad sand beach on Hornby Island, its crew leapt ashore to play polo, dig for clams and swim in the clear water. The captain and another Englishman married local indigenous women and pre-empted land around the *Tribune* 's bay.¹¹

Settlers' journals and letters from the Strait mostly talk of hard work fishing, logging, mining and farming into the 1880s. Many remarked on the good fishing and hunting but it was still work to most people – a way to feed the family or earn a living. By the early twentieth century, however, those who prospered had begun to find time for outdoor leisure and recreation. The Pidcock family diaries from the Comox Valley and Quadra Island began to talk less of logs 'pulled' to the shore or hundreds of salmon caught and more about tennis, skating and angling. Others took advantage of the sea's mild climate and exquisite scenery.

The southern islands had been settled by 1900, mostly by middle and upper class Britons who valued the islands' combination of fine weather and scenery, good fishing and hunting, all close to new British towns. Many self-consciously re-created the trappings of English country life, with calling cards, formal dinners, cricket and festive all-night dances. Adventurer Warburton Pike made a "gentleman's estate" on Saturna that soon became a gathering place for well-heeled young Englishmen, "equally at home with rifle, oyster fork or champagne glass." ¹² Even islanders of more modest means led lives of relative leisure; their elders worried their life might be *too* easy, failing to prepare young men, in particular, for life outside.¹³

Land on the southern islands became valuable. A notice in the *Colonist* in 1893 asked \$2,000 for a mile and a half of beach property on Galiano. Pre-empted a few years earlier, it had "a splendid view of the pass and the Gulf of Georgia." ¹⁴ The damper islands further north were dominated by farming, fishing, logging and mining, but even Denman and Cortes had a few bush gentry before WWI.¹⁵ A Seattle buyer posted an ad in 1903, seeking an island for sale in the southern Strait of Georgia. They may have been inspired by Captain Horatio Robertson, an "old China hand" reputed to be the first person who saw the southern islands' potential for genteel retirement. He bought Moresby Island in 1888 and populated it with family and household servants who had accompanied him from China.¹⁶ The *Colonist* reported that farms were selling well in the southern islands by 1907. "Artisans" were buying some but most buyers were "well to do people with a knowledge of farming." Wealthy retirees arrived with fortunes from the Yukon gold rush. Max Enke from Belgium imported twenty Belgian labourers to work his 320 hectare estate on Galiano.¹⁷ The *Colonist* now regularly praised the "beautiful islands of the Gulf of Georgia... famed throughout the length and breadth of North America as rivalling the Thousand Islands of the St. Lawrence." ¹⁸ A series of articles by Captain Clive Phillips-Wooley illustrated the link between recreation and real estate speculation. Phillips-Wooley confirmed that, despite problems finding suitable help, the islands were thriving and already boasted "some of the most beautiful homes in the province." Good steamship connections to the capital and the new Saanich railway, twice weekly mail service and the recent advent of gas powered motor launches all contributed to the quality of island life. Telephone connections were expected soon.¹⁹ A couple of years after his effusive articles began appearing the paper announced that Phillips-Wooley's own 250 hectare estate on Piers Island was for sale. It had something for everyone, the *Colonist* reported "a regular sun trap," with pheasants and grouse, salmon and clams; "...a rare opportunity for one who is fond of fishing, shooting or boating..." The following year they announced his land – "one of the most desirable tracts ... in the Strait of Georgia," had been sold.²⁰

Howard White has pointed out that the mainland north of Howe Sound resembles an archipelago, isolated by impassable fiords. The name 'Sunshine Coast' was assigned to this shore by creative entrepreneurs early in the twentieth century, when it began to be promoted as a place to restore oneself away from the madding crowd. Imbert Orchard spoke of a family who sold their house in Ladysmith shortly before WWI and moved to the wilds of Jervis Inlet, to restore the father's failed health.²¹

Not all retirement on the Strait was voluntary. D'Arcy Island off Saanich served as a leper colony for the City of Victoria. A handful of unfortunate Chinese immigrants were confined there indefinitely "...in order to prevent the spread of this loathsome disease among the Asiatic population and its possible transmission to the whites..."²² Quisissana Sanitarium on Saanich inlet catered to more fortunate unfortunates, "post-operative cases, and those requiring change, rest and outdoor recreation..." but not "tubercular or mental cases." ²³

Summer cottages were now particularly North American places for a 'rest cure.' They arrived on the settlers' Strait's before WWI, mostly near the largest towns – on Indian Arm, Howe Sound, Saanich Inlet and Gabriola Island. Many were accessible only by water and built on the same land indigenous people had occupied during summer harvesting of clams, camas and fish.²⁴

Rowboats were everyday work objects for some but also recreation (Illustration 64). Workers on Burrard Inlet staged the first formal rowing races there in 1882.²⁵ The Burrard Inlet Rowing Club was formed in 1890 and their rowing races became major sporting events in the decade that followed, with the winners taking hundreds of dollars in prizes.²⁶

Victoria's first yacht club was founded in 1882, Nanaimo's and Vancouver's in 1897. Recreational sailing was already popular around Vancouver by the mid-1880s; sailing races were being organised and heavily bet on during the summer that the City of Vancouver was founded. By 1900 sailing yachts regularly explored the hidden corners of Strait and races were staged from Vancouver to the northern Strait and back.²⁷ Alexander MacLaren, a local lumberman and founding member of the Vancouver Yacht Club, launched his racing yacht, *Maple Leaf*. A 21 meter, 21 ton schooner made from local Douglas fir and yellow cedar, it was a wonder of west coast shipbuilding equipped with an auxiliary diesel motor and electricity.²⁸ Others explored the inland sea in power boats. The *Colonist* reported Mrs. Joan Dunsmuir's 1906 tour on the steam tug *Lorne*. Her cruise took her to "... many of the beauty spots of the archipelago of the Gulf of Georgia."²⁹





Illustration 64 "North Vancouver; Boating on Seymour Creek" ca. 1890 (photo: undetermined). This was also a prime angling site. Note the mix of rowboats, canoes and sail.

Recreational fishing and hunting became widespread on the Strait. Frederick Nunn, still on his pre-empted land at Campbell River, boasted in his letters back to England of the splendid salmon fishing nearby.³⁰ Victoria's merchants worried that the Strait's magnificent sport fishing – far better than New Brunswick's salmon rivers they insisted – was not being properly advertised.³¹ By the 1910s there was considerable pressure to eliminate commercial fishing from Cowichan Bay, Saanich Inlet and other places that had become popular angling sites.³² Before the construction of the Powell River mill, hunting was so good on Malaspina Peninsula that it seldom took visiting hunters more than an hour to kill a deer.³³ Complaints of overhunting were already appearing, with Indian hunters often identified as the culprits. The province had commissioned a fast motor launch to patrol hunting on the islands by 1908 and was encouraged to appoint additional game wardens.³⁴

Good swimming beaches on the Strait were becoming valued. New opportunities for picnics at the beach came with the expansion of rail service. A CPR employee working on the northern extension of the E & N was so impressed by Qualicum's beach that he had the area subdivided into eight hectare lots. The Rath family developed a picnic site near Parksville that became a popular commercial campground.³⁵ A concentration of summer camps organised for city children, designed to encourage healthy living while promoting Christian values, began to emerge around Howe Sound.³⁶

Vancouver's Stanley Park was established in 1887, the first substantial public park on the Strait.³⁷ Mimicking a pastoral model adopted in larger cities, Stanley Park's character was nonetheless defined by the presence of the Strait on all sides. The city expanded its shoreline park space at Hastings Park and around English Bay (Illustration 65) but Stanley Park remained Vancouver's principal recreation area and "tourist destination," visited by 50,000 people a week by 1913, when automobiles were finally allowed to enter.³⁸

Different sorts of parks appeared elsewhere on the Strait. James and Moresby Islands were sold to a local politician and a "wealthy Englishman"³⁹ in 1906, to be converted into private game parks. The provincial government established Strathcona Park near Comox and Campbell River

in 1911, the first in their provincial system. Much debate ensued over the rules that would govern the park.⁴⁰

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Illustration 65 – "English Bay, at the foot of Denman Street, Vancouver" ca. 1900 (photo: W. J. Moore). Young women enjoying the waters of English Bay, already a popular recreation site. The photo looks east to False Creek, source of much future pollution in the Bay.

Growing recognition of the Strait's recreation values made it an important attraction for the province's budding tourist industry. Travellers were drawn to the spectacular coastal beauty and fishing but also to the raw power of the Strait's frenetic extractive industries.⁴¹ The *Colonist* raved about the Strait's superb beauty while reporting in the same article on excited travellers with front row seats to a whaler dispatching its cetacean prey. Tours of the Strait extolled its virtues as "one of the most delightful parts of the world ... in the sense of natural beauty, wildness and healthfulness" while including visits to logging sites and the lively mining town of Vananda. Nanaimo, "the Black Diamond City" and centre of the Strait's booming coal industry, was also "a beautiful summer resort... overlooking the picturesque Gulf of Georgia."⁴²

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Illustration 66 – "Port Augusta Hotel, Comox" 1900s (photo: undetermined) J. B. Holmes, a former HBC man, opened a trading post here in the 1880s. By 1900 his business was coastal steamers and navy ships. His daughter married a sportsman come to fish and hunt.

Travellers were offered shelter in a growing collection of hotels (Illustration 66, Illustration 67) lining the Strait. Mayne Island had long offered a convenient place for travellers between the mainland and Vancouver Island to stop for a drink and maybe camp overnight. In the 1890s it boasted the Point Comfort hotel:

The Right Place for Spending a Summer Holiday Pleasantly and Well – Scenery, Accommodation, Hunting, Fishing – Everything to Make Visitors Happy ... Greatly needed in the Province of British Columbia heretofore has been some comfortable and quiet resort where the business man in search of needed rest from his many cares, could, without being too far removed from his office, find pleasant means of recuperation. The tourist too, wearied with long journeys, often sighs for some picturesque spot where the bustle and roar of civilisation are left behind and its comforts alone remain... a virtual sportsman's paradise... fishing... hunting... white sand beach... (with a wharf being built so passing steamers can stop at the hotel on every trip...).⁴³

Many new establishments appeared on the mainland and Vancouver Island shores in the 1880s and '90s as well. Parksville's Seaview Hotel opened next to the beach in the late 1880s and Comox had three hotels near the dock by the 1890s. The Thulin brothers operated a hotel at Lund by the early 1890s and opened another in Campbell River a few years later where they

announced "Sportsmen will find ... the best HUNTING and FISHING." ⁴⁴ Bowen Island's first tourist establishment, the Howe Sound Hotel, opened just south of Hood Point in 1895, catering to an eclectic mix of loggers, boaters, and "wealthy foreigners." The Cates family opened the Hotel Monaco on Bowen the following decade, offering meals, lodgings and their own private park complete with lagoon, Japanese tea garden, dance pavilion and a telephone link to the city.⁴⁵

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Illustration 67 – "Wigwam Inn" ca. 1914 (photo: C. Bradbury). The inn on Indian Arm did brisk business with steamship passengers from Vancouver. It became a Royal Vancouver Yacht Club 'outstation' in 1985.

The parks, cottages, camping beaches, excursion boats and hotels all attested to the Strait's growing currency as a place to restore oneself, to escape the pressures of work and regain one's health. Yet there were already tinges of what would later become a familiar fear, a perceived threat of impending loss. This mix of joy and fear appears in a short story by T. L. Grahame published in the *Colonist* in 1903. The narrator is from Toronto, employed in Vancouver and vacationing on the shore of what he calls "Gabriano Island," where he waxes lyrical on the sea:

... it was a gorgeous riot of colour indescribable, making all the waters over by Howe Sound like autumn peaches on autumn leaves of maple... I stood there breathing my fill of that exquisite panorama. The Gulf lay like a vast mirror of beryl, the young sunbeams flashing joyously from its vast expanse... Texada's purple sierra sharply cut the tender azure of the northern skyline... The air was of that indescribably delicious freshness which comes when sea and mountain mingle their fresh breaths. So there I was, in Nature's very temple, exulting in form and colour and feeling... unashamed to cry in the ecstasy of the moment...

He dives in and is suddenly enveloped in the tentacles of a giant Pacific octopus. He assures us that he was a big, strong and virtuous Briton, but he is scared to death. We don't learn how the encounter ends though it seems the author survived to tell the tale.⁴⁶ In later decades this tale of a submarine monster would be replaced by other narratives of threatened paradise on the Strait, from rich Americans buying up shorelines to various kinds of pollution.

Re-creation in difficult times: the interwar years

Different forms of recreation evolved despite – and partly because of - the grave challenges of the interwar years. The railways now regularly brought tourists and others who stayed longer. Excursions became a heavily promoted diversion, particularly out of Vancouver where day trips to Bowen Island, Indian Arm and Newcastle Island became popular entertainment. Seaside houses appeared on many shores, from modest cottages to palatial mansions on private islands.

The E & N Railway ran along the western shore all the way to Courtenay by1914, stimulating a diverse mix of recreation and tourism. The PGE hadn't yet overcome the challenging cliffs of Howe Sound but by 1920 it extended south to the head of the sound and north to its mouth at Horseshoe Bay. Both lines supported growing recreation on the water between. Automobile tourism was also becoming an important dimension of recreation. Rail traffic was first supplemented then increasingly replaced by new highways. Replaced by buses in the late 1920s, the PGE ended its service from North Vancouver to the beaches of Whytecliff and Horseshoe Bay. When the Lions Gate Bridge was built across the First Narrows a decade later, recreational automobile traffic on the North Shore increased. Drivers could now easily reach a USC resort at Whytecliffe and rent cottages or take a passenger ferry to Bowen.⁴⁷

Recreation became a mainstay of USC's business, catering mostly to the growing population around Vancouver. The company helped develop tourism on Savary, Hornby and Cortes islands, hitherto seldom visited corners of the northern Strait, and they owned hotels and guest cottages on Sechelt Peninsula. Earlier christened the "Sunshine Coast," in the 1930s they began calling it "The Gulf Coast Riviera."⁴⁸

The pressures imposed by global conflicts and deep economic malaise help explain why there was so little apparent conflict between recreation and other activities on the Strait in these years. People complained in private about the forest fire induced haze over the Strait in summer. The local stench of pulp mills, fish plants and sewage outfalls were all noted. But little was said about the esthetic impacts of deforestation of the shoreline around the sea. Complaints and silences about these things are remarkably similar in the otherwise very different diaries of the Pidcocks in Courtenay and John Barrow from Victoria.⁴⁹

People like Barrow, cruising the Strait in summer on private boats, could usually pull up anchor and move on to escape local irritants. Barrow spent his summers through the 1930s on extended cruises around the northern Strait and beyond. Searching for petroglyphs, filming life and work on the Strait and thoroughly enjoying themselves, Barrow and his partner encountered independent minded settlers and well-heeled fellow travellers, mostly rich Americans. Barrow had a jaundiced view of wealthy American boaters, as did M. Wylie Blanchett, who recorded her own family's summer wanderings around the sea in a small cruiser in those years.⁵⁰. Both saw these southern visitors as unwelcome intruders threatening their idyllic summer sea.⁵¹ Americans - including many 'movie stars' and their entourages - figured large among the summer cruisers. Growing numbers of prosperous locals began to join them on the sea (Illustration 71). Vancouver's Yacht Club thrived in these years; the Depression did not appear to harm it. The club's move to a new dock on English Bay in 1927 was followed by years of growth. Increasing numbers of club members now operated power boats rather than sailboats while many larger sailing craft began carrying auxiliary motors. These changes eased their access to all corners of the Strait.⁵²

Recreation beside the sea grew faster than boating and involved a broader cross section of society. It attracted wealthy members of the international elite; the Strait was now known across much of the English speaking world. Beaches at the mouths of the Englishman and Qualicum Rivers were recognised as particularly auspicious recreation space. Qualicum Beach became a resort town after the railway's arrival in 1914. Wealthy celebrities, from the King of Siam and

Edgar Rice Burroughs to Errol Flynn and Shirley Temple, now stopped at the Qualicum Beach Hotel. The town also nurtured a colony of genteel retirees and by 1943 a quarter of its population was over fifty-five.⁵³



Illustration 68 – "Cowichan Bay Regatta" 1920 (photo: undetermined). Pleasure boating and salmon fishing were important to the area's many 'remittance men,'.

The islands attracted their own wealthy visitors. An exclusive lodge on the Twin Islands off Cortes opened for distinguished guests in 1939.⁵⁴ Portland Island was bought in 1920 by another wealthy retiree from China, General "One Arm" Sutton. An American named Fred Lewis established his domain on nearby Coal Island in the 1930s, "...with a fleet of boats, a modern machine shop, wharves, roads, houses and a productive farm.⁵⁵

Many others, wealthy and not so wealthy, sought refuge on the Strait. Some were seeking to restore themselves and start again. Francis Barrow described numerous encounters with such folk in hidden corners of the northern Strait in the 1930s. Often eccentric and always intensely individualistic, many were also many deeply wounded. Frederick Marsh found them again in the southern islands immediately after WWII. The seclusion of these places and their reputation for a healthy lifestyle attracted people escaping the strife ridden world beyond. A Captain Waard and

his family attracted much attention when they crossed the Pacific from Shanghai to Victoria in a small junk in the early 1920s, explaining their need to escape the chaos in China; they settled on Galiano.⁵⁶ Many others escaped to the Strait only after being caught up in the violence of these turbulent decades. 'Soldier settlements' aimed to give veterans a chance to work in a healthy environment and restore themselves after the nightmares of the Western Front. Authorities were again motivated by the myth of agricultural settlement.⁵⁷ Most land cleared for soldier settlements on the northern islands was poor and most farms soon abandoned, but veterans could make a living fishing and lumbering.^{58.} Hubert Evans, another recovering WWI veteran, published a short book in 1932 entitled *The Western Wall* describing people such as himself washing ashore on the Strait.⁵⁹

Still others sought spiritual restoration on the Strait. Jeanette Taylor describes Read Island in these years as "...a haven for people seeking religious and personal freedom." ⁶⁰ By the 1920s the island hosted "...so many different kinds of religion ... that it was hard to find a suitable day for community celebrations." The Hamilton family chose Saltspring for their "Spiritualist Camp" in 1940 because it offered a "peaceful, restful detachment from materialism."⁶¹

Edward Wilson's was probably the most extraordinary story of re-creation and questing for spiritual restoration on the Strait. Before re-creating himself as Brother XII, the English born accountant from Victoria spent much time exploring the shores of the Strait in small boats. As Brother XII he declared himself Earth's representative of a supernatural order known as Chila that encompassed eleven other domains floating in the 'Outer World.' Together with his partner Madame Zee, XII created the 'Aquarian Foundation', a syncretic cult weaving together ancient Egyptian religion, Buddhism, astrology and theosophy. Their doctrine of impending doom and reincarnation appealed to many intelligent and wealthy people at the time; XII promised them:

...a wondrous land... a place by the sea... (with) trees around it... our headquarters... will usher in a new dispensation, a new sub-race to make way for the return of the Messenger... around $1975.^{62}$

Brother XII's Foundation had attracted 8,000 followers worldwide by 1927, many of them rich Americans disenchanted with the materialism of their age. Preaching the need to eliminate greed and evil from the world, XII established a colony of followers at Cedar-by-the-Sea near Nanaimo. He made his headquarters in Cedar on a beach that had earlier been a meeting place for the Cowichan people. The Aquarians laid out their waterfront lots in the shape of the zodiac,
with a place for each member of their 'Inner Circle.' XII assured his people their seaside location offered perfect conditions for personal development. As contributions poured in, Brother XII and Madame Zee converted them to gold bars in Nanaimo. Following accusations of financial misbehaviour in 1929, they moved their operation to nearby de Courcy Island. A visitor to their island home remembered years later:

...the exquisite loveliness of the ceremonial scene: In the centre of a clearing, lit by the moon a huge fire... Near this was a sort of rock altar behind which Brother XII (had) stood in long blue robes embroidered in gold... against background sounds of the sea breaking upon the rocky shore...⁶³

Hounded by further criminal proceedings, XII and Zee disappeared in 1933 and were never seen again on the Strait.

Not all religious groups on the Strait were attracted by religious freedom or spiritual growth; in the early 1930s, over 600 Doukhobors from the BC interior convicted of parading naked were imprisoned on Piers Island, the erstwhile domain of Clive Philips-Wooley. The tiny island was divided by a barbed wire fence, with female prisoners on one side and men on the other.⁶⁴ This experiment in penal isolation lasted only two years but the idea of rehabilitating the unruly sect on the Strait re-appeared in the 1960s.

The Strait's growing reputation for health and freedom, at least for some, also attracted more people looking for a good place to close out their years. A settler named Gibbs sold his 'Beach Acres' property near Parksville to his son-in-law Matthew Beattie in 1920. After a lucrative career in the Far East, Beattie sought 'a tranquil retirement retreat.' The Beattie's gracious home, Newbie Lodge, became a social hub for the area's remittance men, retired soldiers and colonial administrators. They lost their fortune and dream home with the economic collapse of 1929.⁶⁵ A visitor characterised the southern islands in the 1940s as being "... without visible means of support," a place where "the main industry was undoubtedly the cashing of pension cheques and dividends."⁶⁶ A North Pender resident in those years suggested they re-name the place "Pensioner Island." The islands were "fine places to live but poor places to make a living."⁶⁷

The hotel business expanded with the rest of the economy in the 1920s, guests now able to reach different seaside hotels by steamship, train and automobile. The interwar saw the opening of the Hornby Island Lodge, the Qualicum Beach Hotel, the Royal Savary Hotel, the summer lodge on

Cortes Island's Gorge Harbour and similar establishments. The summer hotel business also thrived around the docks at Sechelt.⁶⁸ As their primary resource wealth diminished, many of these small communities were destined to become highly dependent on seasonal tourism.

Summer cottages spread further around the Strait (Illustration 69), many sharing the shore with tourist hotels. The USC and other resort owners offered visitors to Bowen Island and Sechelt their choice of hotel room or cottage. On Bowen, the USC offered visitors outdoor concerts, tennis courts, picnic grounds, putting and lawn bowling green, hiking trails and horses and ponies for riding. Savary Island became one of the coast's most popular summer cottage colonies in the 1920s with hundreds of cottages lining its white sand beaches. The local real estate agent greeted visitors at the USC dock dressed in grass skirt and lei. More sedate cottaging developed by Qualicum's broad beach, where a succession of notables - including two provincial Lieutenant Governors, the Mayor of Vancouver, four judges and forestry magnate H R MacMillan - had summer homes by the 1930s. Other enclaves attracted people looking to holiday among their own. A summer colony of school teachers grew up in the mid-1920s on Texada's Gillies Bay. Keats Island hosted a collection of Baptist cottages. Cottages also proliferated closer to cities, at Crescent Beach, Point Roberts and White Rock on the mainland, the Saanich Peninsula and Maple Bay on the Island. These places could now be easily reached by train and, increasingly, by automobile.⁶⁹

The less well-off had excursion boats. White described the town of Sechelt, swamped by factory and officer workers pouring off excursion boats in those years. ⁷⁰ USC's *Lady Alexandra*, carried up to 1,400 passengers on picnic and dancing excursions to Bowen.⁷¹ CPR's *Princess* ships began offering competing cruises to their own lively dance pavilion at Nanaimo's Newcastle Island. Earlier a coal mine, the island had become a vast recreation site accommodating up to 12,000 people at a time. CP ships moored there became floating weekend hotels. Locals had to get there early to beat the flood of humanity from Vancouver, and everyone danced far into the night.⁷² CP steamships covered many other routes as well. By 1931 they offered "weekend excursions" from Vancouver to Jervis Inlet, Powell River, Princess Louise Inlet, Knight Inlet and the San Juan and Gulf Islands. They ran "holiday excursions" linking Victoria, Seattle and Vancouver and various "cruises" between New Westminster and Nanaimo, Nanaimo and Bellingham and many other combinations.⁷³

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Illustration 69 – "Crescent Beach" 1920s (photo: Stride). Many Vancouver families now had summer cottages along the beach, easily accessible by train or automobile from Vancouver.

Tourist hotels, cottages and excursion boats were spreading around the Strait but these were difficult years for many, especially after 1929. Francis Barrow's summer tours found deep rural poverty among settlers eking out their existence on lonely bays of the northern Strait. Barrow spoke of visiting a poor family on Cortes Island in 1933

They said they had a very hard time last winter... They have not bought any clothes for five years but Mrs Roark showed us cushions she had made out of gunny sacks...We bought two pillow slips she had made out of flour sacks.⁷⁴

Poorer families in the city could hope for a subsidised place for their children in new church camps. The shores of Howe Sound hosted many of them, aiming to combine healthy summer fun with a good dose of spiritual instruction (Figure 13, Illustration 70).

Provincial and municipal parks also offered more affordable access to the Strait. The provincial park system grew, with new parks created at Englishman River Falls and Little Qualicum Falls in the 1930s. Neither of these places, nor Strathcona established earlier, were actually on the shores of the Strait however. Initially they were used for accommodating unemployed young men rather than for recreation.⁷⁵ Citizens in the Comox Valley began a concerted effort to

establish a major park on the seashore, proposing a stretch of beach near Oyster River. Their initial goal



Figure 13 - Church camps on Howe Sound, 1930; in coming decades they would spread up Sechelt Peninsula

was a national park. Their appeals seemed more designed to engender envy than gain support in Ottawa. They stressed the area's spectacular sport fishing and freedom from pests of all kinds. On the brink of WWII, Elma Theed-Pearse appealed again, this time to the province's Lieutenant General Eric Hamber. She stressed the park was needed especially by the province's children. The sandy beach was "better than Qualicum... a children's paradise." It was also the "last large piece of sandy beach left on east side of Vancouver Island (not yet privately owned)..." Theed-Pearse pointed out that, while Canada had numerous national parks in mountains, there were few by the sea and none at all on the Strait.⁷⁶ Ottawa declined to develop a national park there, in part because most of those 'mountain parks' she had referred to were in BC; with four national parks, the province already had more than its share.

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Illustration 70 - "Dock at Camp Artaban, Gambier Island" 1920s (photo: undetermined). Attempts to convert the island into a giant open pit copper mine in the 1970s were vigorously opposed by islanders.

Municipal parks by the sea were becoming more numerous and heavily used. Nanaimo's Newcastle Island Park received tens of thousands of visitors annually in the 1930s⁷⁷ and Vancouver's Stanley Park remained the flagship of that city's growing park system. Alarmed over shoreline erosion, the city began building a corniche or 'seawall' promenade around the periphery of the park in 1917. In 1919, the park experienced its first weekend traffic jams⁷⁸ but

English Bay was the city's most crowded beach. Vancouver Parks Board was gradually gaining control over waterfront around English Bay. They vigorously opposed plans to expropriate Squamish reserve land for new construction south of Burrard Bridge. The city eventually developed parks there instead. They inherited more beach park at Locarno and Spanish Banks when it absorbed the Municipality of Point Grey in 1929.⁷⁹ Swimming was the principal form of recreation at urban beach parks (Illustration 71). A new bathhouse on English Bay and North America's largest salt water swimming pool at Kitsilano opened in 1930. Other forms of recreation also blossomed on the beaches. The English Bay Carnival became an annual event in 1937, evolving into the Vancouver Sea Festival.⁸⁰

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Illustration 71 - Crescent Beach Girls Relay Swimming Club; Mary McLean, Lilloet Green, Marian Shelley, Frances Giske" 1920s (photo: Stride Studios). Swimming was the principal form of recreation at beach parks and competitive swimming in the sea was popular.

Vancouver Parks Board publications began to speak cautiously of an indigenous past in their parks. Their 1944 report explained that:

Archaeologists delving into the secrets of the Great Fraser Midden tell us that Indians inhabited the coast of BC perhaps as long ago as three thousand years. For numberless generations tribes of these Indians made homes at Snauq and Eyalmu on the southern shore of English Bay, as well as at Whoi Whoi, where Lumberman's Arch now stands, in Stanley Park...

Then, they explained, as the city grew up and became "too noisy for Indians," they looked for somewhere else to live.⁸¹

Indigenous people were not much involved in settlers' recreation around the Strait. Their motifs appeared in tourism promotion material however and adventurers such as Francis Barrow sought out pictographs, 'Indian graveyards' and coffins suspended in trees. But these were beyond the recreational experience of most and, increasingly, beyond the northern edge of the Strait. Some reserves on the Strait enhanced settlers' recreational opportunities by leasing them low cost waterfront land for cottages. Recreational anglers, meanwhile, were growing more upset about the negative effects of Indian's 'wasteful fishing practices' on dwindling stocks of Chinook and Coho.

Fishing had become among the most important recreational activities and visitors were attracted by the inland sea's reputation for salmon fishing. The quality of the Strait's fishing and hunting was becoming well known thanks in large part to a cadre of nature writers with a substantial national and international readership. Hamilton Mack Laing in Comox, Quadra Island's Francis Dickey and Campbell River's Roderick Haig-Brown all published widely in those years, extolling the virtues of hunting, and especially fishing, around the inland sea. USC's tourist brochures, first published in the middle of WWI, also enticed tourists. *North by West in the Sunlight* described the company's attempt "to give knowledge to the outside world regarding the beauties, grandeurs and sport potentialities of the coast of BC." *Fin, Feather and Fur on the BC coast* spoke to a war weary population seeking relief from the "strife in Europe" (and the) "nerve wracking work" of war. It offered them "a much needed vacation" and informed readers of the USC's network of coastal resorts offering an array of healthful outdoor sports.⁸²

The interwar period, despite the serial hardships it imposed, saw the emergence of a 'modern' tourist industry that was later a more important part of the Strait's economy. Particularly in the 1930s, Victoria came to see tourism as an important economic activity in its own right, not simply a means for promoting the province's resource industries, as it had been widely viewed in

earlier decades. By WWII the province was also throwing its weight into tourism promotion and helped attract an estimated 1.7 million American tourists during the war years, most of them to the shores of the Strait.⁸³

As tourism grew, so did other ways of savouring the attractions of the Strait. A community of wildlife conservationists grew up, especially on the western shore. Most were avid hunters and fishermen and some were writers; all were keen observers of the natural world around them. Haig-Brown eventually became the best known (and most widely published) among them. But a remarkable community of naturalists a generation older than Haig-Brown emerged after WWI in the Comox Valley. Attracted by the valley's gentle climate, beauty and profusion of wildlife, the Comox Valley group included artist Allan Brooks, a WWI veteran who went on to become a distinguished wildlife painter. His work appeared in "National Geographic" and other international publications in the 1930s and he illustrated Aldo Leopold's Game Management.⁸⁴ Brooks convinced hunting companions and fellow bird watchers Ronald Macdonald Stewart and Hamilton Mack Laing to settle in the valley, which he described as 'a very birdy place.' Stewart arrived first, another veteran and hunter, a farmer turned game warden. He became Laing's mentor in the woods when the latter settled on Comox Harbour in the 1920s after studying art at Brooklyn's Pratt Institute.⁸⁵ The fourth member of the group, another birder-neighbour on the beach, was a lawyer named Theed-Pearse. With his wife Elma, he became an outspoken supporter of local conservation issues; they eventually donated their own land for the provincial park at Miracle Beach.

Publishing hundreds of articles over several decades, Mack Laing (Illustration 72) became the best known of the Comox group and their unofficial spokesman.⁸⁶ His writing revealed a complex relationship with the natural world. Laing and the rest of the group were unabashedly enamoured with many aspects of the Strait's natural world. "Yes" Laing wrote at one point "I am dippy over trees – beautiful, useful, wonderful creations..."⁸⁷ He and Stewart devoted much of their lives to watching birds and both collected thousands of specimens. This led to conflicts with Theed-Pearse but Brooks was happy to have the shooters' specimens as models for his painting. Foreshadowing later debates, Laing was frustrated when people depicted the natural world as a romantic, idyllic place and man as its despoiler come from outside. Laing saw himself unequivocally as a part of nature, where he believed he was locked in a constant, matter of fact

struggle for survival. He made no attempt to be impartial about his fellow creatures. He regularly killed deer, raccoons and rodents that threatened his well-being and harboured a visceral hatred for species that preyed on animals he loved to hunt, fish or observe. He had an especially jaundiced view of the "blackfish" (Orcas) that fed on so much other marine life in the Strait. Bald eagles and cats were "bird killers" that he shot on site.⁸⁸



Illustration 72 - Comox writer Hamilton Mack Laing with a 65 pound Chinook, ca. 1925 (from private collection): Laing and friends fished a "Tyee pond," near where vast indigenous fish traps have recently been uncovered. Haig-Brown described such fish as "powerful advertising for the province".

Laing and the rest of the Comox group had all converged on this distant shore for the agreeable lifestyle close to nature that they could embrace there. Laing was born in Ontario and Brooks in India. Theed-Pearse came from Britain and his partner Elma from the British Caribbean. Stewart was born in Sussex, then lived and worked around the Pacific and Indian oceans. Despite philosophical differences with Thoreau, Laing saw himself as a 'back to the lander' and his 'Baybrook' farm on Comox Harbour as his Walden. He bemoaned the contemporary youth he saw "streaming headlong into the yawning gape of that vast monster we call the Industrial Machine."⁸⁹ Laing's prolific writing and occasional guiding supported a lifestyle that allowed him to savour the place. None of the Comox Valley naturalists were wealthy but they lived rich lives, as did Francis Dickey and Roderick Haig-Brown along the shore.

Younger writers such as Haig-Brown and Dickey became convinced that this special place needed better protection. More than thirty years before Islands Trust took up the cause, Dickey had begun to complain about the esthetic damage wrought by the Public Works Department on Quadra Island, slashing at the margins of springtime roads, so "beautifully lined by young firs, hemlocks, maples and willows."⁹⁰ Malcolm Lowry, well down the road to alcoholic oblivion during his years on the Strait, wrote some of the best fiction of the twentieth century there. Less prosaically than the naturalists, Lowry depicted the Strait as a threatened paradise, a theme that found greater resonance in the second half of the century.

The flowering of recreation on the sea after WWII

The postwar decades were a time for consolidation, as recreation came to be seen as an important part of the Strait's economy and culture. Not many really new types of recreation appeared after WWII and only a few established ones disappeared. Most simply grew in importance and some, such as boating, grew spectacularly. By the early 1970s the Strait was being described as a "veritable Pandora's box of diversified recreational opportunity."⁹¹ The metaphor was apt because tremendous growth in recreation on the Strait had stimulated much tension between recreationists and other stakeholders with conflicting visions of the Strait.

The elaborate network of dance cruises, dance pavilions, sea shore hotels and cottages linked by steamships that had grown up around the Strait by 1940 disappeared as highways, automobiles and ferries proliferated early in the postwar era. Bowen Island and USC changed rapidly after 1945. The population of Vancouver was 365,000 in 1946 when there were over 100,000 round trips between the city and USC's Bowen Island playground, mostly in summer. Barry Broadfoot suggested that when Bowen reached its peak of popularity right after the war, it was probably "the most used resort in Canada other than Toronto's Centre Islands." USC still advertised it heavily, as "a pleasure garden (and) ... a wonder of scenic charm (on) ... the happy isle." Yet mass recreation on Bowen declined rapidly after 1947 and the decline proved terminal. USC ships servicing Bowen were gradually taken out of service through the early 1950s, their hotel closed for good in 1957 and the company's cottages were sold off, often barged to other locations on the mainland coast. Broadfoot attributed the decline to changing interests and the broader range of alternatives available to post war citizens travelling in cars on a rapidly growing

highway network. "The idea of a boat ride, a picnic basket on the lawn and splashing in the ocean" he concluded, was now "just a little passé..." ⁹²

Car ferries linking new highways contributed to rapid transition in places further along the mainland coast earlier dependent on USC's scheduled rounds. By the mid-1950s all the "landings" from Williamsons, Hopkins and Gibsons to Vananda and Powell River could be reached from the Lower Mainland by car and ferry. People could still sail on a luxurious CP *Princess* ferry from downtown Vancouver to downtown Nanaimo⁹³ but ever fewer people did and the service disappeared in the mid-1970s. Ferries were meant for moving cars, not for recreational sea travel.

There were few really new types of recreation on the Strait after 1945. Sea kayaking became popular in the 1970s and windsurfing a decade later but both were variations on older themes. Scuba diving was more novel and started in the 1950s in clear, protected waters like Howe Sound. Relatively complex, physically demanding and expensive, it was limited to a small number of practitioners though it helped stimulate development of marine parks. The advent of recreational diving also helped bring a new perspective on the marine environment, reflected in Jacques Cousteau's robust condemnation of the Strait's pulp mills in the early 1970s.

By the end of the 1970s, the Underwater Archaeological Society of BC had identified a number of 'underwater heritage sites' in need of 'conservation and development.' Many were shipwrecks on the seafloor - places where marine transport disasters were now described as repositories of the Strait's settler culture, *and* novel recreation sites: the *SS Zephyr*, lost off Mayne Island in 1872; the *SS Chehalis*, sunk off Brockton Point in 1906; the *SS Iroquois*, wrecked near Sidney in 1911 (already a provincial heritage site); the *SS Capilano*, lost off Savary in 1915 and so on.⁹⁴

The restoration of Vancouver's False Creek was a marine recreation initiative of a different sort – converting a highly polluted shoreline industrial site into a series of parks and residential neighbourhoods. Parks Board Commissioner Joseph Malkin had earlier envisioned a 25 year project converting False Creek into a single marine park that included public marinas, a seawall, a bird sanctuary, and a rowing course. He proposed to dredge the basin and make it safe for swimming by re-routing its many sewage outfalls. The city embarked on a more modest version

of Malkin's vision in the early 1970s. False Creek's seawall, constructed between 1973 and 1988, gave the city a seaside promenade stretching over 25 kilometers. New marinas, parks and residential developments replaced old industries, though water quality remained a problem and the city still advised against 'unnecessary' contact with its water.⁹⁵

Established recreation activities expanding - boats Most recreation on the post war Strait was more of the same, often *far* more. The same mix of factors that contributed to other dimensions of the recreation boom - rising incomes, greater leisure time, evolving technologies - stimulated rapid growth in recreational boating (Illustration 73, Illustration 74), as did improvements in outboard motor technology and the advent of inexpensively manufactured small boats. Most small boats were still powered by oars or small inboard motors immediately after WWII. In 1949 the City of Vancouver's Parks Board reported receipts of \$4,394.75 from the rental of 2,838 inboard powered dories and 564 rowboats. This was over three times what they had earned in 1945. The introduction of inboard powered boats was leading to rapid growth in business. This worked well as long as renters heeded warning to avoid the First Narrows. Three boaters didn't and drowned there in 1948. The North Shore Boat Rental Association boasted that year they were giving "the average working man a chance to fish at a cost which is not prohibitive." They complained of Ottawa's attempts to impose new safety standards on their "glorified rowboats," most around four meters long, powered by motors under two horsepower and a maximum speed of eight kph. 300 of these little boats were available for rental on the North Shore that year and another 500 privately owned.⁹⁶

The recreational boat fleet grew explosively over the next several decades. This stimulated government studies in the late 1960s and early 70s into the novel challenges of supporting and governing an increasingly diverse collection of small craft on the inland sea. By 1966, there were an estimated 72,000 pleasure craft operating around the Strait, more than 50,000 of them in Greater Vancouver. Overall numbers were projected to increase to over 100,000 by 1976. A later survey estimated that the number had risen to 88,000 in 1973, suggesting the earlier projection was accurate. The same study found 17.4% of households around the Strait now owned one or more pleasure boats, though numbers varied greatly among communities, with the lowest rates of ownership in Vancouver and Victoria and the highest on the mainland north of Howe Sound (Table 8).⁹⁷

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Illustration 73 - "Vancouver Harbour" 1953 (photo: BC Govt). The rapid expansion of the Strait's pleasure craft fleet had begun and docking facilities close to the city would soon be at a premium.



Illustration 74- "Bathtub Race, Nanaimo" 1969 (photo: BC Govt). The first annual Bathtub Race across the Strait; the race was invented by Frank Ney (front left), a swashbuckling Nanaimo politician who also developed Hornby Island's "Galleon Beach" subdivision.

Community	Number of households with one or more pleasure boats, 1973
Greater Vancouver (excluding Delta, Surrey, White Rock)	12.5%
Victoria	17.1%
Powell River area (including Texada, Lasqueti, Harwood, Savary Islands)	45.1%
Sechelt area	41.5%
Gibsons area	40.2%
Campbell River region (including Quadra Is)	40.7%
Comox Valley (including Denman and Hornby),	36.3%
Parkville	32.8%
Ladysmith	31.3%
Duncan-Gulf Islands	32.4%

Table 8 - Household Ownership of Recreational Boat around the Strait, 1973⁹⁸

Average for all communities surveyed on the Strait

17.4%

As the small craft fleet grew, the proportion of motorised craft also increased. In 1966, a little over 60% of these boats were powered by inboard or outboard motors, about 6% by sail and the rest, or about a third, either oar or paddle. Another survey seven years later found power boats had risen to over 70%, sailboats to 10% and that man powered craft were now less than 20% of the fleet. People indicated they would continue moving to gas or diesel powered craft; over 90% of the boats they planned to buy that year would be motorised.⁹⁹

There was similarly rapid growth in numbers of larger pleasure craft requiring 'wet berths' and moorage space. The sheltered waters of English Bay, Burrard Inlet and Saanich Inlet were the most popular boating sites and all saw large increases in adjacent marina facilities throughout these decades. In 1971 there were an estimated 13,000 small craft berths available around the Strait, most near Vancouver and Victoria. Projections by the mid-1970s suggested that 7,000 more berths would be needed by 1980 around Vancouver alone.¹⁰⁰ Ottawa responded with plans to reduce commercial fishing wharves and other shore facilities in False Creek in order to add hundreds of new berths for pleasure craft to the existing 1,700 in the basin. The province was typically more ambivalent about marine issues but nonetheless also reacted to this growth by reserving a few patches of shoreline for small boat moorage. By the 1970s they were developing

a network of provincial 'marine parks' largely for this purpose. Yacht clubs on the Strait offered their members docks near as well as safe moorage at a growing network of 'out stations' around the inland sea (Figure 14).

Fishing As interest in salt-water angling on the Strait also grew dramatically, many of the new boats carried sport fishermen. Haig-Brown vigorously promoted the expanding sport fishery, declaring it an important component of the tourist industry and defending its claim to a greater share of the Strait's salmon. The sport fishery, he said, was suddenly "an immensely important mass consumer demand." Haig-Brown confirmed that "A lot of people want to spend money on going fishing" and this was fostering an industry which created employment:

The sportsman's dollar ... (is) just as hard and tough and real as any other dollar... It represents a consumer's choice and a consumer's demand... with the additional advantage that it also contributes to the physical health, the mental well-being and the spiritual character of the nation.¹⁰¹

Haig-Brown announced in 1969 that the Strait's sport fishery was probably now the most valuable in the world, though he was short on hard numbers.¹⁰² Barker estimated in 1974 that Canadian sport fishers on the Strait were spending 800,000 'recreation days' to land over 750,000 Coho, Chinook and Pink salmon each year. Provincial and federal authorities had begun trying to improve management of the Strait's sport fishery already in the 1950s and 60s, when both governments employed growing numbers of fisheries biologists. The life cycles and behaviors of Chinook and Coho salmon, the most important species for the sport fishery, became better understood as a result of their research and this helped improve husbandry of these species. These benefits were mitigated by the growing demands of the commercial fishery and ongoing damage to spawning beds and estuaries by land-based activities.

Camps and cottages The network of children's summer camps earlier concentrated around Howe Sound now expanded, especially along the Sechelt Peninsula. Howard White later described the peninsula as "infested with summer camps," run by a range of NGOs, including the Boy Scouts, the Girl Guides "and every church in the phone book."¹⁰³



Figure 14 - Royal Vancouver Yacht Club places on the Strait, 1985

Better highways, more car ferries, more electricity service, and more leisure time all contributed to very rapid growth in the numbers of recreational cottages after WWII. The changes were most evident on the mainland north of Vancouver and in the southern islands. Demand was mostly

from people around Vancouver and Victoria; even the province's long serving leader, W.A.C. Bennett, had a getaway on Saltspring by the 1960s.¹⁰⁴ Gibson pointed to soaring prices in the mid-1970s reflecting "fantastic" demand for shoreline recreational property on the Strait.¹⁰⁵ Part of the pressure resulted from the transition of earlier cottage territory into suburbs in places such as Tsawwassen and Departure Bay. On islands near cities, including Bowen, Gabriola and Saltspring, the distinction between suburb and cottage territory became hazier as ferries improved. Full page ads running in Calgary and Edmonton newspapers in 1963 offered cottages on North Pender Island; the developer would reimburse the airfares of people who bought at least one property.¹⁰⁶

Lifestyles and re-creation Promises of mild weather, relaxed lifestyles and healthful recreation attracted growing numbers to the post war Strait. Many older people moved to places such as Qualicum Beach. Summer residents had been the most important group of taxpayers there in 1942 but forty years later the majority were full time residents, almost half over 55 years old.¹⁰⁷ The islands were particularly favoured by those aiming to cultivate their 'lifestyles' away from mainstream stresses and pressures. Marsh commented extensively in the late 1940s on the lifestyles of residents in what he christened the "Leisure Islands" of the southern Strait. These were now destinations for people seeking escape to simpler lives surrounded by beauty and supported by art loving communities that tolerated eccentricity. With the exception of a few tiny Indian Reserves, these were very white communities, places for...

the carpenter with tools and a little money, the small farmer, the amateur gardener, the fisherman, the business man with stomach ulcers, the pensioner, the lover of earth and sea who had found a distraught world too much with him... an earthly heaven entirely surrounded by sea ... There, a man and his family can be close to all that grows and walks and swims and flies...

A Saltspring Islander explained to Marsh what made the island life special in those years:

... most of us here believe there is still such a thing as an art of living... people need to relax, to stand off and look at themselves too. What is life without fun?¹⁰⁸

The islands' forests and farmsteads were already being sub-divided for sale by the end of the 1940s, mostly as retirement or recreational properties. This sub-division was highly controversial by the 1960s, yet throughout these decades the southern islands retained much of their idyllic, sometimes sybaritic character and remained a destination for seekers of a 'better lifestyle' - for a few days or a few years or the rest of their lives - and the freedom to pursue interests outside the

mainstream. Growing numbers of writers and journalists, from Jean Howarth and David Conover to Bill Deverell, Audrey Thomas, Jane Rule, Bill Richardson – took up residence and explored the quirky, unconventional personalities of their islands.¹⁰⁹

The northern islands - a little wetter, colder and more isolated - remained more sparsely populated in the first post war decades and more devoted to the Strait's resource industries. They also began to change dramatically in the 1960s and 1970s as they became destinations for the escapists, artists and retirees already familiar in the southern islands and also a new wave of 'back to the landers', young middle class searchers for 'alternative lifestyles.' Their arrival signalled a cultural revolution on a number of islands hitherto populated mostly by settler farmers, loggers and fishermen looking forward to financing their retirement by sub-dividing family lands. They were now told that many of their traditional practices and goals were misguided, while nude swimming and marijuana culture were not. Des Kennedy described Denman Island's newcomers in the 1970s, where the population prior to their arrival had been around 250:

We were a pretty bizarre looking bunch ... the men had wild hair and big beards and they arrived en masse, in the span of a few years... (up to that point) there was nobody like that here and then all of a sudden there were several hundred of us ...¹¹⁰ Writing in the newcomer's 'alternative newspaper', after a discussion of the role of tree worship in ancient belief systems, Kennedy questioned the way Denman's old timers did things:

Do we need to cut all those trees down? Do our roads always need to be wider and wider? Do we have to batter and push and slash at everything living around us until we've destroyed it all? Perhaps no tree-spirit will descend and smite us for needlessly destroying living things; but if we destroy the tree of life, the tree of the knowledge of good and evil, then we shall have destroyed the chance of ever becoming any better than we are now; and that, perhaps, is the worst punishment of all. ¹¹¹

The division between old timers and new arrivals, and issues such as limiting sub-division of land were more contentious on some islands than others. Read, Lasqueti and other more isolated northern islands were more open to newcomers than those closer to mainstream society, such as Quadra, Denman or Texada. When the Islands Trust was established in 1974 to preserve the treasured 'islands lifestyle,' it encompassed most larger southern islands¹¹² but extended no further north than Denman and Hornby. Yet even northern islands that would remain outside the ambit of the Trust were increasingly recognised for their unique lifestyles. Texada, site of four limestone quarries and active logging, was described in the early 1970s as a place blessed by its

beauty, quiet and slow pace, and its friendly and close knit people. 'Trust Islands' became even more unique. The objectives of Gambier Island's 1976 'Official Community Plan' reflected the growing influence of the Trust's philosophy (and Gambier's struggle with a mining company):

To preserve the Island's rural character and peacefulness by limiting the road system and discouraging the use of motor vehicles;

To secure a reasonable degree of privacy for property users;

To prevent air, water and visual pollution and protect Islanders from objectionable noise and odour;

To preserve marine, animal and bird life and designate nature preservation areas where advisable;

To prohibit any sewage disposal system that discharges effluent into water bodies, including the sea;

To limit industry to labour intensive, small scale, non-polluting activities with priority given to servicing Island needs;

To prohibit extension of log booming, sorting and storage and encourage relocation, where necessary, to produce the least environmental damage and conflict with adjacent land uses;

To secure a moratorium on timber licences on Crown land. ¹¹³

The islands' invasion of back-to-the-landers was part of an established tradition of people seeking new lives - restoration or re-creation on the Strait. Broken men fleeing the killing fields had now sought out isolated bays and islands to escape and heal after both world wars. Others sought escape and restoration in religious colonies and organised spiritual retreats more reputable than Brother XII's experiment. The Cold Mountain Institute on Cortes Island, reincarnated later as the Hollyhock Retreat, specialised in restoring short-term visitors with Gestalt therapy.

Tourism and hotels Building on foundations established before 1945, the province was an increasingly enthusiastic backer of tourism after WWII. Tourism came to be seen as a key sector, a means of 'economic diversification' that created jobs, generated government revenues and drove development on a par with the Strait's resource industries. The BC Government Tourist Bureau had begun to describe tourism as early as 1950 as "one of the first ranking industries in the Province." The tourist industry by the early 1970s, largely serving visitors from the western US and Canada's prairies, had become the province's third largest source of revenue. Tourists had become valuable commodities whose spending was vigorously stimulated and carefully monitored by the province.¹¹⁴

Growing commitment to tourism, combined with the looming or actual senescence of the Strait's traditional resource industries, stoked Victoria's enthusiasm for improving car ferry services and securing waterfront parks. By the 1970s the province faced a dilemma that would endure through future decades. Tourism on Vancouver Island, the smaller islands and the mainland north of Howe Sound was overwhelmingly dependent on tourists travelling in cars and therefore ferries. The greatest need for infrastructure to move and accommodate them came in summer, when ferries, tourist lodgings and camp grounds were overtaxed. Most were chronically underused during the other nine months. A study for the province's inter-ministerial Environment and Land Use Committee in the mid-1970s recommended promoting tourism that didn't require automobiles, noting that the 20% of 'out of province' tourists travelling without cars typically spent almost three times more than the average tourist.¹¹⁵ This was an era when car dealers were prominent in most provincial governments and the idea was not vigorously pursued.

Many tourist dependent communities debated the roles that tourism should play, how to encourage it and what kinds of tourism to encourage. Tourists and local residents inevitably competed for local recreational facilities and other resources. As early as the 1950s, Haig-Brown encouraged the province to make sure the recreational needs of local populations would continue to come first, despite tourism's heady growth.¹¹⁶ Tourism remained the mainstay of Parksville, Qualicum and other places into the 1980s, where local needs were sometimes compromised to meet the demands of paying guests. Their situation was not unique: local authorities in a growing number of wealthy countries were struggling to mediate among competing demands along their shorelines from tourists, seasonal home owners and local residents.¹¹⁷

Some communities wanted tourists more than others. Despite the importance of the industry in Qualicum, they didn't seek tourists as aggressively as Parksville after the 1950s. Parksville's stock of hotel and motel rooms grew by almost 150% between 1959 and 1988 while Qualicum's declined by over 10%. Qualicum increasingly shifted their focus to meeting the needs of incoming retirees rather than the seasonal peak demands of tourists (Table 9)

Year	Parksville	Qualicum
1957-58	136	296
1959-60	188	325
1967-68	186	245
1969-70	192	230
1977-78	326	304
1979-80	335	264
1985-86	397	304
1987-88	354	258

Table 9 - Tourist accommodation units in Parksville and Qualicum 1957-88

Source: Wylie, Qualicum Beach: 72

Parks Rapid post war growth in demand for recreational space encouraged provincial, municipal, and federal authorities to expand their park systems on the Strait. The province was the largest player, though not a particularly enthusiastic one before the 1960s. By then, options for creating new parks by the sea were much diminished by the soaring price of land. When Roderick Haig-Brown described the 1950s and early 60s as "a bad time...an open season on parks," he was mostly referring to provincial parks. These, he said, had lost "much good ground ... both literally and figuratively, in spite of the protests of those who saw and understood the steadily increasing recreational needs." The provincial park system as a whole had acquired over 44,000 square kilometers of land between 1911 and 1948 but then shrunk significantly down to about 25,000 square kilometers by 1961. Provincial park attendance nonetheless increased over the same period from a little over 100,000 visits in 1948 to an estimated 3.5 million in 1960. The interests of resource industries, particularly forestry and mining, were consistently put ahead of the park system; the concept of parks as instruments for wilderness preservation in particular was devalued, while parks more accessible to population centres were more likely to be recognised as economic assets.¹¹⁸

Victoria's network of parks surrounding the inland sea did not keep pace with rapid growth in outdoor recreation there but neither did it shrink dramatically, as had parks in wilder regions of the interior. Parks on the Strait were mostly the kind that the province now preferred, high volume sites close to towns. A new Ministry of Recreation and Conservation created in 1957, partly in response to Haig-Brown's vociferous criticism, assessed potential park sites around the Strait in terms of their ability to cope with expected increases of ferry and highway borne visitors and the demands of boaters. Haig-Brown was embittered by the province's cavalier treatment of

his beloved Strathcona Park in the late 1940s and 50s. His unsuccessful struggle to protect it marked his 'coming out' as a strident critic of the Social Credit government's policies on industrial development and protected area management. Part of Strathcona had been "sacrificed" by the British Columbia Power Commission, in what he described as "industrial vandalism." They would now

...supply cheap electricity to pulp mills – power whose cheapness has been handsomely subsidized by reckless disregard for the recreational and other uses of the watershed.

The dam was only necessary as

...an additional subsidy to pulp and paper companies already making immense fortunes out of provincial timber... all power made from parks looks cheap on paper if the book keeping is carelessly done, as it surely has been in this case...

It was in fact

...a simple matter of selfish, short-sighted and badly planned resource use, an incompetent decision based on totally inadequate information, tolerated by a public that has been deliberately misled.¹¹⁹

There were also some notable additions to the provincial park system around the Strait in the early years after WWII. There was growing fear that most citizens would be excluded from seashore recreation as more and more waterfront land fell into private hands. The provincial government reacted with slow and cautious expansion of shoreline parks. Most acquisitions early in the post war years were the kind favoured by the Social Credit government - small parks near towns, acquired as gifts. The beach north of Comox that Elma Theed-Pearse had earlier lobbied to have gazetted as a national park became Miracle Beach Provincial Park in 1950, after she and her husband gave the land to the province (Illustration 75). Fillongley Provincial Park opened on the east side of Denman Island in 1958 on land bequeathed to the province by its settler owner, George Beadnell. Similar parks opened on Quadra in the 1950s and Hornby in the '60s, following the deaths of their previous owners. Further south, the province gave Portland Island to England's Princess Margaret in the 1950s then lobbied to get it back; it was returned and gazetted as "Princess Margaret Provincial Park" in 1967.¹²⁰ In 1974 the Parks Branch established another shoreline park on Quadra Island's Wyatt Bay through a more complicated deal when Robert Filberg, owner of Comox Valley Logging and Railway Company, agreed to cede almost 2.5 kilometers waterfront there in exchange for land on adjacent Reid Island.¹²¹

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Illustration 75 – "Miracle Beach" 1955 (photo: BC Govt). Earlier rejected as a national park, local pressure and a private gift of land allowed it to become a provincial park.

Not all appeals to the kindness of strangers were as successful. The province spent years in the late 1960s and into the '70s trying to engineer a complicated deal to secure waterfront parkland north of Heriot Bay. They approached private owners based in the US and Toronto, as well as the provincial Ministry of Forests. The Toronto owner, a prominent banker, eventually agreed to trade for land elsewhere but the Americans, based in Oregon and Idaho, were sceptical of the province's ability to offer them equivalent properties elsewhere, insisting they had spent a long time finding this ideal Quadra Island waterfront. The Ministry of Forests was willing to trade, but only for timberland inside Strathcona Park. Eventually the Parks Branch decided the area, though perfect for a park, was more trouble than it was worth. A 1965 attempt to secure Pym Island near Sydney, through an appeal to Seattle's aviation magnate William Boeing, was equally unsuccessful.¹²² Provincial park authorities were obliged to trade or beg for land because their budgets for acquisition were derisory in relation to the soaring costs of waterfront. Early warnings to expand the system while land was still relatively affordable had been ignored. Where donors could not be found, park acquisition was slow and unsteady because so many desirable sites around the Strait were unaffordable. Speculators repeatedly looked to the government to

acquire waterfront property they couldn't sell; the province was often interested and monitored different pieces of shoreline around the Strait for years, but was seldom able to buy.

The Parks Branch was lobbied as well by land owners appealing to the rising anti-American sentiments of the time, declaring they were desperate to have the province buy their waterfront in order to prevent it from falling into the hands of 'rich Americans.' By the 1970s, with the public's fear of being cut off from the sea continuing to grow, this narrative of the best shoreline being bought up by wealthy Americans was widespread and clearly a concern for at least some officials in Victoria.¹²³ Whether American owned or not, affordable waterfront land was increasingly hard to come by. A 1970 study of the southern islands determined that waterfront land prices there had increased by 300% between 1950 and 1970. Only about ten kilometers or 3% of all waterfront land was still in some form of public ownership, with most of the rest now private, mostly recreational property.¹²⁴

Many local authorities were anxious for the province to open new parks in their areas, as these came to be viewed as important economic assets. The Powell River Chamber of Commerce lobbied the province in 1967 for a provincial park on Hernando Island. Powell River's business community was concerned about rumours that the island's aristocratic German owner, F.W. Fuerzuwlied might be preparing to sub-divide and sell off the island. In their proposal to Victoria, the merchants signalled their disapproval of the kind of "commercial development" that had taken place on nearby Savary Island. Yet their vision for a park on Hernando sounded like a high latitude Club Med. The island, they claimed, had

... unlimited potential for development over the next century for all kinds of recreation, served by both sea and air traffic. Sandy beaches second to none in the Province surround much of the island and sheltered anchorages make public marine development ideal. As a Provincial Holiday Resort, developed over the years, one can easily envisage camping areas, golf courses and other recreational facilities, tourist accommodation of all kinds, an aerodrome, ferry connection(s) and many other attractions...

The province was unable to consider the proposal because they were already committed to acquiring bits of land at Porpoise Bay, Smugglers Cove and Pender Harbour that would consume all available funds.¹²⁵

Victoria's parks policy was evolving away from a strictly economic perspective by the mid-1960s. In 1964 they embraced the concept of "Nature Conservancy Zones" aimed at preserving areas representative of the province's 'bio-geo-climatic zones.'¹²⁶ Haig-Brown was not impressed. As Premier Bennett appointed Kenneth Kiernan his new minister of Recreation and Conservation, Haig-Brown declared Victoria's governance of parks "utterly incompetent and hopelessly inefficient." One of Kiernan's first initiatives was to open previously protected parks to mining and logging. While doing "substantial damage" to the park system, said Haig-Brown, the Minister was making no improvements to its management, opting instead to make "aggressive use of his department ... as an advertising agency to attract more and more tourists to less and less value." Even Haig-Brown had to concede however that the province had responded to growing public pressures by establishing many smaller, 'strategically placed' seaside parks, camping and picnic grounds around the Strait by the late 1960s. In 1974, though a combination of donations, complicated trades and outright purchase of small parcels, the province had gazetted a total of thirty shoreline parks around the inland sea.¹²⁷

A new system of marine parks catering primarily to recreational boaters was one of the province's most important initiatives on the Strait in the 1960s and 70s. The first marine park was established in 1959 at Montague Harbour on Galiano Island, another in 1961 when Nanaimo ceded Newcastle Island to the province. By the late 1960s, Victoria was committed to systematically developing a chain of marine parks to meet the needs of an estimated 75,000 Canadian and another 10,000 American pleasure craft then plying the Strait in summer. As with the Strait's terrestrial parks, establishment of new marine parks was inhibited mostly by the lack of suitable shoreline in the public domain and the prohibitively high cost of acquiring private lands. Yet by 1973 the province had established a dozen marine parks around the Strait and was proposing a half dozen more (Figure 15).¹²⁸

Through the rest of the 1970s and into the 80s provincial authorities continued to spend much time looking on, frustrated, as attractive prospective park sites around the Strait became increasingly unaffordable. They were able to consummate a few plans for marine parks in places such as Desolation Sound, Jervis Inlet and Indian Arm, where land prices were less inflated due to a lack of road access. Acquisition was seldom rapid. The need to establish one or more marine parks in Indian Arm was identified as an 'urgent priority' for the province in 1974. The tiny Twin Islands and nearby Raccoon Island were gazetted as provincial marine parks seven years later.¹²⁹

The problems of the Strait's underfunded provincial parks were not confined to their chronic inability to acquire land. Growing numbers of citizens found themselves next to new shoreline parks wondering if these were really such an asset. Not all visitors to new parks were welcomed by locals and a chronic lack of resources meant that many parks were managed less well than their neighbours expected. To many, it looked as though Victoria had put 'the cart before the horse', acquired new parks and improved road and ferry services to them before they had the capacity to manage them. Discontent spilled over on Saltspring Island in 1967 when local residents discovered a new provincial campsite at Beddis Bay, which they had hitherto considered "their" park. The locals complained to Minister Kiernan that their beloved beach had been changed from "amateur to professional status" and was now attracting undesired visitors. They suggested the province post a sign at the site: "No hippies, no harpies, no boat launchers – and particularly, no sharpies."¹³⁰

Others worried about fires and vandalism in the province's new 'undeveloped' parks, particularly on islands. A new ferry connection and several new parks were attracting growing crowds to Cortes Island in the early 1970s, where locals began to complain that they felt like "bears in cages," there to be viewed by visitors passing through.¹³¹

An aging couple on Hornby Island, identifying themselves as socialists, began negotiating a deal with Victoria's new social democratic government after 1972. They aimed to live out their lives on seven of their seventeen waterfront acres, giving the rest to the province for a park. The deal fell through when the prospective donors backed out. They had spent a summer camping on their beach and observed the devastation wrought by the visiting public who dumped garbage, carved their script into petroglyphs and carted away sea anemones. Victoria assured the couple that if the land became a park, then the Parks Branch could help with posters and other 'public education' but admitted they couldn't exercise any real control, even in other park land they had already acquired on Hornby.¹³²



Figure 15 - Existing and proposed marine parks on the Strait, 1973 (adapted from Nelson 1973)

Municipal parks Many cities and towns established their own waterfront parks in the first few decades after WWII. Mack Laing left his two hectare property for the creation of a municipal park on Comox Harbour in the early 1980s. Vancouver embarked on an ambitious programme of shoreline park expansion in the 1960s and 70s. This was partly in response to concern that the city's 'per capita public shoreline' might be in precipitous decline. A mid 1960s study suggested public beach frontage in Greater Vancouver (Illustration 76) had fallen from 100 feet per thousand people in 1941 to 70 feet per thousand in 1965. The authors recommended a target of eighty-eight, which would require twenty more miles of public waterfront.¹³³ Vancouver acquired or developed new park lands at Jericho, Locarno and Spanish Banks Beaches, Vanier and New Brighton Parks by 1980. This acquisition of new shoreline recreation space slowed to a crawl as land prices climbed but Vancouver was able to improve citizens' access to the shore in other ways as well. The ten kilometer seaside promenade around Stanley Park was completed in 1980. In 1985 the city established its first park on the Fraser then the first municipal marina in 1988, on former Kitsilano Indian Reserve Land at the mouth of False Creek.¹³⁴

Still no national park After rejecting the idea of a national park on the Strait in the 1930s, Ottawa was open to the idea again by the late 1960s, though they recognised it would be a complicated process. Minister of Indian Affairs and Northern Development Jean Chrétien was interested in the possibility of a federal park on Hernando Island, but reminded local proponents that any land would have to be acquired by the province then transferred to federal jurisdiction.¹³⁵

A lively controversy broke out on the southern Strait a couple of years later when Liberal MP for Esquimault-Saanich, David Anderson, began to talk of some form of land trust on the southern Strait. Anderson explained the idea to a constituent in early 1971:

...the suggestion regarding preserving the large (and largely uninhabited) tracts of land and the as yet unbuilt-up coastline is very sound. There is absolutely no need... to turn the islands into a park in the traditional sense... no need to remove houses and cottages and try to turn the islands back to what they were before settlement began. What is needed is to preserve the character of the islands, not only for the present residents but for the inevitable influx of visitors and residents who will be going to the area in the years to come... a private non-profit body to be known as the Coastal Trust or some such name to administer, to acquire land by gift or purchase... the time has come to think about present trends and where they are leading us... more and more Americans are turning to Canada for land. We know this will increase, particularly when their Island Trust is established (in the adjacent San Juan Islands)... we can expect the number of boats to double every seven years... 136



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Illustration 76 – "Vancouver, English Bay" 1947 (photo: BC Govt). Its recreation value would drive much of the local debate about marine sewage pollution over the next four decades.

Anderson was *not* talking about a national park and the province would go on to form an "Islands Trust" several years later that in many ways resembled the model he had in mind. Nonetheless he *was* a federal politician and initially his suggestion was widely perceived as a hint that Ottawa was about to launch a vast expropriation of private lands across the southern islands. Many reacted badly to the rumour. Tommy Douglas, former head of the federal NDP, was drawn into the debate to defend the private property rights of constituents in his Nanaimo-The Islands riding against the spectre of the federal takeover of their island properties. Those who read Anderson's proposal carefully mostly agreed with his ideas for some kind of 'trust.' But fears of a park persisted.¹³⁷ An editorial in Saltspring Island's *Driftwood* newspaper at the end of 1971 declared

Mr. David Anderson... has made a remarkable proposal for the establishment of a national park... The operator of a business is well aware that the implementation of the Anderson plan will leave him penniless and without recourse to a court of law. A number of property owners are reported to have already abandoned plans for home construction here for fear of losing their homes after working on them and spending their life savings... As a park devoid of people, devoid of homes, populated by tent dwelling refugees from Esquimault-Saanich (Anderson's riding), without ferries, accessible largely to the wealthier elements of United States coastal cruising traffic, the Gulf Islands would yet be a scenic wonderland, though reserved for the wealthy and the eccentric.¹³⁸

Buzz Brown, a retired provincial tax assessor turned director of Salt Spring Lands Ltd, dismissed claims by Anderson and others about the threat of foreign takeover, estimating that at most five percent of Gulf Island properties were held by Americans. On Saturna, closest to the US, they owned only 31 out of 410. On North Pender, then the focus of the most intense real estate development on the southern islands, Americans held barely 2% of the island's almost 1,900 properties. The real problem, said Brown, was people trying to protect the southern islands as an "exclusive and undeveloped reserve" for people from greater Vancouver and Victoria.¹³⁹

Jack Davis, then federal Minister of Fisheries and Forestry, tried to reassure voters that Mr. Anderson did not intend to turn the islands into a national park. He reminded them, as Chrétien had, that any national park would depend on the province acquiring the land and handing it over to Ottawa, adding "Can you really imagine Premier Bennett doing this in the 1970s?" Davis on the other hand was enthusiastic about converting stretches of the sea around the islands into a national underwater or marine park. "All land below the low water mark," he pointed out, "already belongs to the people of Canada and so it is not a question of expropriation ... or of transfer of provincial land to the Federal Government."¹⁴⁰ Davis pursued this idea of a federal marine park as aggressively as his earlier initiatives. Many areas on the Strait, he said, had become more valuable for achieving 'social' goals than for economic ones and needed to be preserved for their aesthetic qualities and 'peculiar' ecological characters. In 1971 he appointed a task force to study the feasibility of a marine park, proposing to link it with a marine 'water quality management area.' After Jacques Cousteau endorsed the idea of an underwater marine park on the Strait the same year, the task force declared that the waters around Gabriola Reef and Plumper Sound and Victoria's Race Rocks all met the standard for national marine parks.¹⁴¹ Roderick Haig-Brown commended this "bold idea" of a Strait of Georgia marine park, marvelling that a concept that "could scarcely have been seriously considered a few years ago"

was now almost certain to become a reality.¹⁴² Haig-Brown may yet be proven right but the idea did not become a reality as quickly as he expected.

The province responded to the idea of a federal marine park in the Strait with a familiar mix of truculence and paranoia often seen in their relations with Ottawa. In a detailed memorandum to Minister Kiernan, the deputy minister of the Department of Recreation and Conservation traced many connections between Ottawa's high minded pursuit of marine protected areas on the Strait and other federal policies where they were at loggerheads with the province. The province was particularly sensitive about federal initiatives to stop oil drilling and reduce marine pollution on the inland sea. From Victoria's perspective, Ottawa's proposals overlooked the province's progress in developing its own system of marine parks and improving their Pollution Control Board. The feds were failing, once again, to demonstrate what Victoria considered the required "knowledge or sensitivity on just how province and federal must work together," choosing instead to flex their muscles and exclude the province from important consultations.

Senior officials in Victoria worried that the public interest generated by Davis' and others' pronouncements threatened to make the province look bad. A better strategy, suggested Kiernan's office, would be to deflect interest, or in their word, "to upstage the federal proposal" by calling instead for creation of an "International Quality Marine Management Region." This would encompass all the islands and adjacent shores of both the Strait of Georgia and Puget Sound, under the guidance of an international commission. This kind of proposal would help refocus federal interest onto issues where their mandate was more clearly defined, and hopefully put an end to their meddling in the province's inland sea. The province's strategy apparently worked. A proposal for an international marine park was jointly developed by the US National Parks Service and Parks Canada the following year. The project was vast and complicated and went nowhere.¹⁴³ Ten years later, the federal Minister of the Environment and provincial Minister of Lands, Parks and Housing both responded to a Nanaimo citizen enquiring about plans for a Gulf Island marine park. Ottawa indicated that federal-provincial plans were progressing, with new policies proposed for identification, selection and management of protected areas and new discussions on these policies scheduled in a few months. Victoria replied to the same enquiry a month later with no reference to any such federal-provincial

discussions. The province now had its own extensive marine park system, they said, and planned to continue improving it. They had "no current plans for such a national marine park." ¹⁴⁴

Clashes with other stakeholders on the Strait The Strait's role as a place for recreation was rarely contested before the mid-twentieth century. Then, as many came to consider recreation as the Strait's most important role, conflicts grew exponentially. Witnessing the rapid post war growth in recreation, combined with ongoing demands from the Strait's other users, Haig-Brown began in the early 1950s to warn of the dangers of such clashes and of the need to manage them more effectively. He was convinced the province's rapidly growing resource based economy and population, combined with the growing wealth and leisure time available to that population, were destined to continue increasing the pressure on recreational resources, especially on the 'outdoor heritage' he treasured. BC had reached a 'borderline' Haig-Brown warned, one that places further east and south had already crossed. Beyond this line, "... the means of outdoor recreation no longer come naturally... (they) must be protected, managed, planned for." Many other places, including Ontario, New York and California, had 'woken up' after WWII to find their outdoor recreation resources badly degraded, especially near their largest population centres where they needed them the most. They were now faced with spending many millions to buy back badly needed park lands.¹⁴⁵ Haig-Brown insisted the solution to growing challenges was long term planning that recognised public demands and rights to outdoor recreation space. He expected this to come with the creation of a provincial ministry devoted to recreation in general and parks in particular, for which he lobbied vigorously.

Haig-Brown was still calling for more careful husbandry of the province's recreational lands in the late 1960s, thoroughly disillusioned with the new department Bennett had established for this purpose. He subscribed to a now widespread belief that BC and other wealthy places in the world were heading towards ever greater economic security and leisure time. Faced with a future of guaranteed annual incomes and twenty hour work weeks, he said, people were starting to ask: "What kind of life do we want to live?" and "What kind of world do we want to live in?" Their answers, Haig-Brown confirmed, were lives with high quality outdoor recreational opportunities and a world where environmental damage was minimal.¹⁴⁶ In the absence of the careful planning he called for, challenges to 'high quality recreational opportunities' and 'minimal environmental damage' on the Strait grew rapidly.

Increasing ease of movement around the Strait by sea and by land improved access to recreational opportunities but also threatened to diminish them in other ways. As ferry terminals grew bigger, especially on the major routes between Vancouver and Vancouver Island, conflicts increased between them and the competing needs of smaller boats. Most marinas near the Strait's larger settlements suffered from growing congestion but this was most acute where they shared harbours with ever larger ferries arriving and departing all day long. By the mid-1970s, collisions between ferries and smaller craft were expected every summer around the busy Horseshoe Bay terminal.¹⁴⁷ The provincial ferry fleet was also blamed for degrading recreational values by delivering too many new visitors to places earlier reached only by a few. An irate Saltspring Islander complained to the Minister of Recreation and Conservation in late 1967

I suppose it can be partly blamed on summer TV commercials ... sponsored by our own Government ... which say, more or less, - 'want to enjoy an old fashioned picnic? Then why not go to the Gulf Islands by Ferry for a picnic; ... AND THEY ALL END UP ON OUR BEACH! Have you ever seen the size of the beach?¹⁴⁸

Ferries were not the only culprits, though threats to recreation from other modes of transport were sometimes resisted more effectively. Civic politics in 1960s Vancouver was leavened by struggles between proponents of 'more efficient' road networks and opponents who strove, among other things, to protect valued recreational land along the shore. A plan tabled in the early 1960s called for an eight lane highway along the beach at English Bay, from Prospect Point to Burrard Bridge. Later in the decade a planned second crossing of the First Narrows called for a bridge landing at Brockton Point and a highway along the shore of Coal Harbour connecting it to city. Both were resisted successfully, as had been proposals in the 1950s and 60s to establish a small aircraft runway on the beach at Spanish Banks.¹⁴⁹ A similar attempt to convert recreational beaches to a commercial landing strip was successfully resisted two decades later in the Comox Valley.

Much shoreline recreation inevitably took place on sites earlier utilised by indigenous people whose lives had been lived mostly by the seashore. The proliferation of provincial and municipal parks helped consolidate earlier dispossession at various shoreline sites and often contributed to the degradation of indigenous heritage resources. The City of Vancouver long sought control over lands still officially owned by the Squamish band at Kitsilano Point. These were finally absorbed into the city's growing shoreline park system in 1967, when the federal

government granted Vancouver a ninety-nine year lease for a dollar a year. The province's first marine park at Montague Harbour was on a sheltered bay popular with recreational sailors that was also the site of a half dozen clam shell middens built up over thousands of years of indigenous occupation. Sandy Island Marine Park at the northern entrance to Baynes Sound was established in 1966, on territory claimed by the nearby Comox people and three other indigenous groups. The Comox maintained they had used the island and its foreshore for centuries for shellfish harvesting, hunting and ceremonies prior to its sudden pre-emption in the late nineteenth century. A park master plan prepared in 1987 called for protection of any remaining 'archaeological resources' from further disruption though few artifacts were left by then.¹⁵⁰

The destruction of indigenous heritage had been extensive at many other sites around the Strait. Permanent homes, and increasingly, shoreline summer cottages were a particularly potent cause of disturbance. A survey by the Provincial Archaeologist at eight hundred archaeological sites around the islands of the southern Strait and Howe Sound in the mid-1970s found under 10% of them still intact. Most had been disturbed since the 1870s and the worst damage had been caused by construction of permanent and summer homes. Ferry landings, wharves and marinas had also taken a great toll.¹⁵¹

Clashes between recreation and the Strait's resource industries became more frequent after 1945. These reached an unprecedented scale in a growing number of places on the Strait not just because of rapid growth in marine recreation but also because of the growing clout of recreation and tourism as an 'economic sector' in its own right. Haig-Brown once again described the shift early in the post war period. Outdoor recreation enthusiasts, he wrote in 1955, were accustomed to being bullied by the "heavy handed bluff" of the province's primary resource industries which typically caricatured recreation advocates as "sentimental, unrealistic and anachronistic" and saw recreation resources as "inevitable sacrifices to progress." Though things were changing after WWII and demands by "consumers of recreation" were becoming impossible to ignore, defenders of recreation values still had to fight, he said, because "...the pressure of other resource users will always work against the sportsman." To successfully resist threats from pollution, encroachments into parks, loss of access to recreation space and "all the other dangers of increasing civilization," they would have to demonstrate the socio-economic and moral values of recreation.¹⁵²

So the conflict that arose on Gowland Harbour, discussed earlier, was not simply a matter of the rights of loggers versus those of small boat owners and swimmers. It was a case of competing socio-economic and moral values. The cottagers around the harbour eventually stopped the spread of log booms in 'their bay' despite the economic influence of the logs' owners. Similar scenarios were occurring around the Strait by the 1960s. The established rights of logging companies to use sheltered bays were being undermined in many places by economic and moral arguments for recreation, not to mention the growing property values of recreational land along the shore.

The claims of recreational fishers to a portion of the Strait's dwindling catch of Coho and Chinook salmon also attracted growing support, especially from provincial and local governments who sought to boost economic returns from this sport fishery. Reduced availability of salmon for tens of thousands of salt water anglers around the Strait, though hard to quantify, could be counted as real economic damage by reckless forest harvesting in coastal watersheds, of commercial fishermen taking 'more than their share' or of hydro dams blocking access to spawning beds. Haig-Brown testified in 1962 to the "severe damage" done to salmon runs on the Puntledge River near Comox, as BC Hydro contemplated expanding its dam there. Overall, he claimed, the Strait's sport salmon fishery was "one of the greatest on the continent" and the large Chinook bred on the Puntledge made a valuable contribution to it; they were a "powerful advertising for the province." Close to 100,000 salmon were still being taken by the sport fishery around Comox each year and it could not afford further damage from ill-conceived dam expansion.¹⁵³

The competition that fishers were most aware of was between people who fished for sport and those who fished for a living. It was clear by the late 1950s that the Strait's sport fishers had a substantial claim on its salmon. On the whole BC coast, commercial trollers – those who used hook and line instead of nets – were still taking six million salmon, or twenty times the number taken by anglers. But in the Strait, sport fishers were now taking fully a third of all salmon caught there by hook and line; their share of this catch, and the money they spent to catch it, were both expected to grow rapidly. Economists could demonstrate that each of the several hundred thousand Coho or Spring salmon caught by anglers in the Strait every year were

generating far higher returns to the local economy than could the same fish when caught by commercial trollers or gill netters. In the State of Washington it was estimated the sport salmon fishery was worth now \$70 million versus only \$20 million for the commercial fishery.¹⁵⁴

As the sport fishery increased in value in the 1960s, so did pressure to manage the Strait's salmon in its interest. In 1969, Howe Sound was closed to all but sport fishing of salmon¹⁵⁵ and Haig-Brown suggested it might be time to do the same thing for the whole Strait. The Fraser River Sockeye run would still sustain a commercial fishery – they didn't often take an angler's lure anyways. But Coho and Chinook were now so important for the sport fisheries in most major towns on both sides of the sea that they might simply be too valuable to leave to the commercial fleet.¹⁵⁶ Tensions between commercial and sport fishers grew in the 1970s, with the provincial government remaining a strong advocate of the sport fishery. Victoria considered whether they should promote Haig-Brown's proposal in the context of the Salmon Enhancement Programme (SEP) then emerging under federal leadership. A report prepared for Victoria's Environment and Land Use Committee in 1975 indicated that closing the Strait to commercial salmon fishing of Chinook and Coho might not cause significant reductions to commercial fishermen's returns and could greatly enhance "recreational returns from the resource."¹⁵⁷

There was also growing tension between fish boats and pleasure craft on shore, where they competed for the same limited wharf space around the sea. The Strait was different from coastal waters further north and west that remained the domain of commercial fishers. Competition between sport and commercial fishers was certain to increase on the inland sea and would need careful policy guidance. In the event, federal authorities ensured that the commercial fisheries remained open for all salmon species on the Strait and, as predicted, competition between sport and commercial fishers grew more intense. Sport fishers began calling for "social justice," complaining that they received far less value for their license fees than their commercial competitors and still would only be assigned a tiny portion – 700,000 of 24 million - of the extra salmon predicted by the SEP.¹⁵⁸ Sport fishers didn't often contemplate the possibility they might also be contributing significantly to the depletion of the Strait's Coho and Chinook stocks.

The Strait had long been seen as a place not just for healthy recreation but also for restoration and re-creation. That pollution might now be causing it to become a place bad for one's health
was particularly galling for many shore dwellers in the post war era. Like recreational boaters and fishers, swimmers in the inland sea were becoming more aware of the Strait's other users. Around Vancouver especially, swimmers – or their parents - were at the forefront of growing public outrage over the expanding sewage stream flowing into False Creek, English Bay, Burrard Inlet and the Fraser mouth. The key issue for civil engineers designing improvements to Vancouver's sewage management infrastructure starting in the early 1950s, discussed earlier, was how to minimise this pollution of local beaches.

The growing waste stream from recreational boats was a new source of marine pollution. It linked recreationists' conflicts with waste dumpers to their conflicts with other recreationists. Waste discharged by boats of all kinds operating on the Strait was a growing and largely unresolved concern through this period. Worries about human waste discharged from small pleasure craft were becoming common in places where these boats congregated, especially in summer. Concern spiked in the mid-1980s in anticipation of a surge in sea borne traffic around the southern Strait and on Vancouver's False Creek. In 1984-85, the Islands Trust office in Victoria tried, unsuccessfully, to mobilize federal, provincial and Vancouver City support for measures to improve regulation of waste dumping from small craft. City health officials advised Vancouver's Mayor Harcourt that, while the Trust's concerns were laudable, the problem was far less serious than unresolved problems with land based sewage discharges into the sea around Vancouver. ¹⁵⁹ For the Islands Trust on the other hand, such conflicts between different forms of recreation was their *raison d'être*.

Competing recreational demands in coastal areas had become a widespread problem in many wealthier countries by the 1950s with governments facing a growing list of conflicts among tourists, residents, cottage owners, boaters and others, "all of whom want(ed) a piece of the beach pie." ¹⁶⁰ It could be seen on the Strait, in growing competition between yachters and cottagers, between swimmers and boaters, between recreational shellfish harvesters and both cottagers and boaters and so on. The growing constellation of parks, especially underfunded provincial parks, faced a particularly challenging array of conflicts with the recreational goals of others. Constraints imposed on park acquisition by soaring prices for waterfront recreational property and the objections of local populations to having poorly managed parks as neighbours, and having to sharing their shores with outsiders, have all been discussed earlier. Local

populations were just as likely to oppose recreationists arriving by sea as by land, and the list of conflicts grew to include locals opposed to new marine parks and docks.

Islands Trust was one of the most innovative and controversial responses to growing competition among recreational demands on the Strait. Created by the province's short lived NDP government of the early 1970s, it attempted to adapt a British model of land trust. The Trust aimed to preserve what many people perceived as the unique character of the Strait's islands, the heart of the marine playground. As Frederick Marsh moved around the islands in the late 1940s taking careful note of the islands' many unique inhabitants and benign lifestyles, old settler families with large parcels of pre-empted land discussed plans to subdivide them. By then the islands had grown distinct from most mainland and Vancouver Island communities. Islanders shared a strong sense of their own uniqueness and their islands' value as refuges from the excesses of modern life.

Much of the islanders' earlier work – logging, fishing, boat building, mining and quarrying – became progressively less viable after WWII. Farming continued, especially of specialty products such as seeds, bulbs and flowers. But by the late 1960s service industries, mostly tourism and real estate development, had become the largest economic sector on most of the larger islands south of Nanaimo. Many residents had also begun to worry about the loss of island character resulting from rapid population growth. In the early 1970s, in the wake of improved car ferry services and subdivision of a growing number of old farms into tiny building lots, fear was widespread that the islands were destined to become crowded exurban wastelands with substandard services.

From 1959 to 1968 3,000 new lots had been developed – one third of them on Saltspring alone. In 1969, Victoria announced a temporary freeze on further subdivision of island lands; future lots would now have to be at least four hectares. Another 1,900 applications for development were accepted by local governments *before* the freeze came into effect in 1970. Victoria was now under considerable pressure from developers to end the freeze and from many island residents to make it permanent. One of the most disturbing new developments for those who would preserve the islands was built around North Pender Island's Dead Cow Swamp, which was re-named Magic Lake. The development was the largest in the capital regional district and one of the largest in the province. Magic Lake Estates consisted of 1,400 lots on 480 hectares, on an island with 700 fulltime residents. Almost all the lots were sold in 1971; developers saw Magic Lake as the wave of the future and their optimistic public pronouncements confirmed many islanders' worst fears. James King, one of Magic Lake's principal owners, told the *Vancouver Sun* that there was "no way they are going to hold the islands down – the population pressure is right there... I know a lot of people who, if there was a commuter service put in, would live there now." Another busy developer, Cy Porter, predicted Mayne Island's population would grow in the next five years from 250 to 10,000, and could well reach 50,000. He forecast 15,000 to 20,000 for North Pender.¹⁶¹

Gabriola Islanders managed to block one of the major developments proposed for their island in 1972. A Gabriola resident explained their reaction to "speculators' plans" for a 550 lot subdivision

I am constantly aware of truth here... so close to the earth, and to the ocean, you are continually reminded about reality... Very often people who live in the plastic city dimly realise that they're missing out on reality and so they go out trying to buy it. In places like this, where the land is unspoiled and the air is free. But they don't leave it the way they found it – they immediately begin cutting down trees and putting up supermarkets... Gabriola Islanders had other reasons to oppose new developments. The water and sewerage systems serving the island's 1,000 residents (4,000 in summer) were already sub-standard and the impact of the threatened "instant suburbia" promised to be disastrous.¹⁶² Other islands, from Saltspring and Galiano to Bowen to Hornby, faced their own threats of rapid, unmanageable growth of summer and year round populations.

The idea of special status for the islands was discussed – and widely misunderstood - as early as 1970. A committee of provincial legislators toured the islands in 1973 and expressed "distress and alarm" at the effects of speculation and poor planning. They declared the islands too important to the people of Canada to be left to developers and speculators; they recommended an "Islands Trust" to oversee them and the new NDP government supported the idea.¹⁶³ The Islands Trust resulted from a paradoxical, emotional crusade to protect the recreational value of the Strait's islands from the influx of too many urban refugees attracted by the islands' high quality

recreational opportunities. The 'Trust islands' were now to be protected for the benefit of the province as a whole, especially growing urban populations nearby. Much as proponents of Stanley Park had seen it as a necessary counterpoint to city growth almost a century earlier, defenders of the islands argued that they met a need for 'balance' in harried urban lives. To protect the islands' unique character, neighbouring city dwellers would need to be discouraged from visiting too frequently or staying too long. Unlike Stanley Park, the islands' roughly 10,000 people would be allowed to remain and their numbers to grow, albeit at a more modest pace than that seen in the decade before the creation of the Trust.¹⁶⁴

The Islands Trust Act of 1974 encompassed roughly 5,000 square kilometers; 250 islands accounted for 15% of this and the rest was open water, including stretches of Howe Sound, Haro Strait and Baynes Sound. Most residents in the Trust area lived on thirteen of the largest islands (Figure 16). Some larger populated islands like Quadra, Cortes and Texada were conspicuously exempt from the initiative.¹⁶⁵

David Anderson had earlier spoken of a Trust based on a British model but Hilary Brown, the first head of the Trust, also saw it following in the footsteps of North American initiatives. Its goal, as with similar initiatives in Ontario, California and New York, would be to reject the "premise of greed" underlying Garret Hardin's "tragedy of the commons,"¹⁶⁶ an idea now being widely invoked. Under Brown, the Trust formulated an ambitious policy agenda. The policy tabled in 1975 explained the rationale behind the Islands Trust initiative, where it hoped to go and how it would get there. To many, the Trust still looked like a park by another name. The islands were "...a resource of national importance but of finite size." Their core objectives included "...provision of a varied recreational opportunity and experience ... retention of native flora and fauna and both unique and typical island scenery." Further reserves would be created within the Trust area to protect the "most fragile ecosystems." The Trust's initial policy statement used language foreshadowing the 1990's sustainable development discourse. It called for "patterns of land use which will allow needed and reasonable development in the present but which will ... (allow future) generations (to have) opportunity to make their own choices and decisions." The welfare of the islands' current and future populations would be one of the



Figure 16 - The large islands in the new Islands Trust, 1974

Trust's primary concerns even as they ensured the islands developed in ways that were "in sympathy with the landscape and which makes the most of each site's natural characteristics."¹⁶⁷

Trust policy promoted careful planning and zoning regulations that would allow local island communities rather than off-island development companies (presumed to be more susceptible to the "premise of greed") to determine the character of their communities. The Trust would "encourage types of development that will maintain the essentially rural nature of the islands."

There was growing concern in the 1960s and early 1970s over the rate at which the relatively limited expanse of farmland around the sea was being converted into suburban and recreational building sites. One of the more controversial measures introduced by the Barrett government was an "Agricultural Land Reserve" (ALR) under which agricultural land could not be readily converted to residential or other use.¹⁶⁸ The Islands Trust embraced the ALR not for reasons of food security but because it could help them pursue their goal of preserving their islands' rural character. The Trust rushed to protect moribund island farms – to the dismay of many owners who had hoped to cash in on the real estate boom and secure their retirement. Studies looked into problems faced by islands' farms and how they might be resolved.¹⁶⁹ On the Trust islands at least, farming had gone from an instrument of dispossession to a modest source of livelihood to a means for protecting 'valued rural character', all in three or four generations.

Closed forest was even better than open farmland for the Islands Trust. They nonetheless recognised the key role that logging still played on many islands. From the point of view of the mainstream logging industry, Trust policy called for a sort of 'boutique logging' entirely foreign to an industry accustomed to doing things very differently. The Trust called for logging that recognised the special character of the islands, done "on a scale appropriate to the island concerned." Moving logs to water and gathering them in booms would be "carried out in a manner that is the least damaging to the environment and in areas that will not conflict with other shoreline uses." Sawmilling would be restricted to small mills supplying mostly local markets. Pollution would be strictly controlled and mills screened from public view.¹⁷⁰

Most other extractive industries were perceived more as threats than opportunities and would be even more tightly controlled. Quarrying of sand and aggregate from beaches would no longer be allowed, as all the islands' beaches were now deemed more important for their recreational and aesthetics values and ecological functions. For similar reasons, the entire Trust area, land and sea, would also be closed to all oil and gas drilling.

Infrastructure that had until recently been seen by islanders as unalloyed blessings were also subject to stricter standards, to minimise threats they might pose to the islands' "unique and fragile" natural areas. The Trust engaged in a prolonged struggle with the provincial Department of Highways, whose "urban road standards" resulted in "excessive tree clearing and unsightly cuts and fills which destroy the pastoral nature of the islands." The Trust also took aim at increased automobile traffic, fed by expanding ferry services, that was deemed to be "contributing to the destruction of the islands." The Trust lobbied BC Ferries to improve their foot passenger services.¹⁷¹

Protecting the islands as recreational space was central to the Trust's mandate. But recreational activities would also need to be carefully managed on Trust islands. A 1975 study conducted together with Nature Conservancy identified the Strait of Georgia-Puget Sound region, with the Trust islands in the middle, as North America's most important outdoor recreation area. The Trust committed to safeguarding the recreational resources in its care with a "well planned and integrated recreational system." The needs of both residents and a diverse range of visitors would be addressed while promoting recreation with the least negative impacts on the islands. They would try to increase public access to shoreline but also to prevent the overuse or abuse of beaches. Marine activities from swimming and scuba diving to kayaking and other forms of boating, as well as wilderness parks, hiking trails, riding and bicycle paths were all to be promoted. Scenic drives and automobile-based camp grounds would be discouraged - some recreational needs were more equal than others.¹⁷²

The Trust didn't underestimate the challenge of their commitment to enhanced recreational opportunities for (almost) all. By the mid-1970s, land access to the shore was "virtually non-existent" on many islands. Though the importance of recreation and environmental protection was now recognised, less than 4% of Trust island land was dedicated to these purposes. Many island residents now looked upon visitors from off-island as an inconvenience or worse, bringing enhanced fire risk, garbage and crowded ferries.¹⁷³

It seemed that residents might also have to be screened in the future, or at least their occupations. Artists and craftspeople, and other small businesses catering to local markets and creating local jobs were all to be encouraged. The elderly occupied a special place in many island communities and home nursing, elder housing and community care facilities would be given priority. Larger scale enterprises in general were judged to be at odds with the islands' character.¹⁷⁴

Predictably, the Trust's sweeping utopian vision encountered resistance from various quarters on and off the islands. Previous, often rocky relations between certain islands and other actors seldom improved with the introduction of this new level of government. Provincial ministries of highways and forests continued to pursue their established policies. Private forestry companies still controlled much of the islands' forests and developers still harboured ambitious schemes. Most Trust islands remained under the jurisdiction of adjacent regional district governments who were often sympathetic to the salutary effects of land development on their local tax base.

The key instrument for delivering the Trust's vision was the 'Official Community Plan' (OCP) to be prepared by each large island.¹⁷⁵ The first OCPs developed under the Trust were contentious, especially on islands close to large towns. An article in *Victoria Magazine* described the process in 1975 on Saltspring, where "...islanders found themselves so much in agreement with one another concerning the details of their future development that it took only seven years to produce an official community plan." ¹⁷⁶

Locally elected Trust officials on Saltspring now had considerable control over land use decisions determining the island's tax base but the Capital Regional District remained responsible for delivering services to island residents that had to be paid for with their land taxes. If islanders wanted an industry-free and recreation-intensive island without subdivisions, then they would have to accept the combination of higher land taxes and lower services that went with it. Despite the goals of the Trust, Saltspring's population continued to rise significantly into the 1980s. The population on Bowen, now under both the Greater Vancouver Regional District and the Trust, doubled in the 1980s. Denman Island's first OCP was passed into law in 1978; it identified the preservation of the island's rural environment as its highest priority. Two years later the community was locked in a protracted struggle with the provincial government

authority that had approved a new land development in contravention of their OCP. The island prevailed in court, establishing a legal precedent that limited but didn't eliminate Victoria's right to ignore their local bylaws.¹⁷⁷

Bill Bennett's new government elected in 1975 had close relations with the land development industry and did not share many of the values expressed in the Trust's policy. His government was ready to repeal the Island's Trust Act in 1982, and hand the islands back to the sole jurisdiction of their respective regional districts. William Vander Zalm, Bennett's Minister of Municipal Affairs, suggested the Trust was no longer necessary, now that all major islands had prepared an OCP under Trust guidance. Public opinion was powerfully opposed and the government backed down. The *Vancouver Sun* suggested Vander Zalm and his advisors were "naive in the extreme to think that remote control by regional districts could effectively protect the islands from the predations of greedy developers." Various islands' trustees confirmed that developers still exerted tremendous pressure through regional districts. In the absence of the Trust, said the *SUN*, the islands were destined to become "Coney Islands in the Strait."¹⁷⁸

The Islands Trust experiment had clearly helped protect recreational and other values that many on the Strait wanted preserved. But the Trust's vision of rural communities in pristine environments where artisans and old folks enjoyed a high quality life style, and harried urban folk came to regenerate, was regularly contested. Des Kennedy summed up the Trust islands' situation by the mid-1980s. It was not perfect and certainly not the utopia envisioned a decade before. The province's Minister of Municipal Affairs, William Ritchie, appeared more committed to opening up the islands to rapid development than to respecting the Trust's mandate to 'preserve and protect.' Other provincial agencies continued to contravene local Trust policies and island populations continued to grow rapidly. The islands overall population had grown from 9,500 to 12,700 in the latter half of the 1970s. By 1983 there were 5,200 permanent homes and 4,500 summer cottages on the islands. Another 10,000 properties were zoned for development; most were under a hectare and many were on the market. Despite a steep down turn in the economy and real estate market, the Trust was still approving sub-divisions creating an average of 600 new lots each year and the islands' by-laws could now accommodate a total population of 70,000. Many islanders were deeply disturbed by these trends while others found Trust policy unacceptably restrictive. Despite the broken dreams, said Kennedy, the islands remained a

"magical heritage" and their lifestyle a magnet "... to rich, to poor, to dreamers and tinkerers, artists, farmers, fisherfolk, retired executives and a cast of characters as eccentric and hospitable as you'll find anywhere." Their future, and that of recreation on the Strait more generally, remained uncertain.¹⁷⁹

Claims for recreation space & other narratives, 1850s to 1980s

Settlers on the Strait early recognised it as a valuable place for recreation and re-creation. The more the settlers' Strait was transformed from barrier to highway – by steamships, ferries or diverse small craft - the more recreational opportunities it offered. Colonial dispossession facilitated settler recreation; many beaches previously offering indigenous people access to the sea and its resources became high quality sites for shoreline parks or recreational real estate. Relations with the resource mine were more complicated. Resource industries generated the higher personal incomes that made recreation on the Strait affordable to growing numbers of people but also stirred growing resentment when they were seen as taking too many salmon or turning prized retreats into industrial wastelands or dominating shorelines now cherished for recreation. The Strait as waste dump narrative conflicted more unequivocally with recreation along the sea's most densely populated shores after 1945, especially around the Lower Mainland. But some of the most intense conflicts after the 1960s were between different forms of recreation, competing for the same patches of sea and shore.

¹ R. Knox-Johnston, *Yachting: The History of a Passion* (New York: Harper Collins, 1990).

² Neil Wigglesworth, Victorian & Edwardian Boating from old photographs (London: Batsford, 1987).

³ Margarita Dritsas "Water, Culture and Leisure: From Spas to Beach Tourism in Greece during the Nineteenth and Twentieth Centuries," in: *Water, Leisure and Culture – European Historical Perspectives,* ed. Susan C. Anderson and Bruce H. Tabb, (Oxford: Berg, 2002): 193-208; Lena Lenček and Gideon Bosker, *At the Beach – The History of Paradise on Earth* (New York: Penguin, 1998).

⁴ Lenček and Bosker, *History of Paradise*, 97; Christiana Payne, "Seaside Visitors: Idlers, Thinkers and Patriots in Mid-nineteenth century Britain," in: *Water, Leisure and Culture – European Historical Perspectives*, edited by Susan C. Anderson and Bruce H. Tabb, (Oxford: Berg, 2002), 87-104.

⁵ Great Britain Emigration Commission, *Vancouver's Island*, 6.

⁶ TBC: 23 Oct 1873 p3: NANAIMO.

⁷ TBC 9 July 1866 p3: "From The East Coast."

⁸ Wild, *Comox Valley*, 126.

⁹ TBC 13 July 1881 p 2: "A HOLIDAY JOURNEY – ALONG THE EAST COAST AND THE ADJACENT ISLANDS."

¹⁰ Cited from an article in BC Historical Quarterly of April, 1939 by Judge F. W. Howay, in: Wolferstan, *Pacific Yachting:* 45.

¹¹ BCA MS-0436 Alexander Buckham – Volume 106: Rona Murray "Hornby is Lovely, It Historic, but It's One of The Forgotten Islands," *Victoria Daily Colonist*, 6 September 6 1959:16.

¹² BCA MS-1176 - Frederick Marsh fonds, "Leisure Islands," 480; TBC: 1 Sept 1885 p 3: "KAMLOOPS SECTION."

¹³ Reimer, "Gulf Islanders," 15.

¹⁴ TBC 13 May 1893: 1.

¹⁵ They appear in both Paula Wild's account of early settler Denman Island and Jeanette Taylor's of the Discovery Islands: Wild, *The Comox Valley* and Taylor, *Tidal Passages*.

¹⁶ TBC 4 October 1903 p11: "WANTED"; BCA GR 2940 –BOX 6 File 25 – Gulf Islands 1973-77: James K. Nesbitt, "Moresby's Master Held to Blame. Chinese Man and Woman Were Near Death on Raft," *Daily Colonist*, 2 August 1952: 14

¹⁷ TBC 2 Nov 1907 p7: "FARM LAND SELLING IN THE GULF ISLANDS."

¹⁸ TBC 9 April 1907 p 15: "THE ISLANDS."

¹⁹ TBC 18 August 1907 p 16: "LIFE ON THE ISLANDS"; TBC 11 July 1909 p 18: "Life on the Islands of the Gulf."

²⁰ TBC 16 May 1909 p 27: "Are You Seeking an Investment?" TBC 7 June 1910 p 6: "NEWS OF THE CITY – Pier Island Sold."

²¹ BCA MS-0364 ORCHARD - BOX 4, File 1: "People in Landscape" series I (Gulf of Georgia) "A Space Sequence," 4.

²² TBC 16 June 1895 p3: "THE ISLAND OF DEATH."

²³ TBC 20 May 1910 p 11: "QUISISANA."

²⁴ Gibson, Urbanisation, 25; Nelson, "Seascape," 73-4; Armitage, Around the Sound.

²⁵ Delgado, *Waterfront*, 74.

²⁶ TBC 1 October 1892 p2: "THE OAR"; TBC 11 August 1893: 5.

²⁷ Nelson, "Seascapes," 74; Dunham, "Developing Harbour," 69-74; Delgado, *Waterfront*, 74; Hacking, *Vancouver Yacht Club*, 2.

²⁸ BCA MS-2009 Margaret Ormsby's records - BOX 11, File 7, Maple Leaf Preservation Society, 1981: Proposal for the Restoration of the "Maple Leaf," unpublished proposal to BC Heritage Trust Division. IN: Letter of 10 November 1981 from E. A. Raymond, City Clerk, City of North Vancouver to BC Heritage Trust.
²⁹TPC 15, but 100(ar 2): "A PLE A SUBE TRUE."

²⁹TBC 15 July 1906 p 3: "A PLEASURE TRIP."

³⁰ BCA MS 0292 - Frederick Lloyd Nunns fonds 1882-1912, various diary entries.

³¹ TBC 7 June 1900 p 4: "ADVERTISING VICTORIA."

³² BCA GR 2908 - Canada Department of Marine and Fisheries. Central Registry records Microfilm Ca 1895-1914 Reel B-11068.

³³ "Powell River's first 50"; my grandfather and friends rowed across from Comox to hunt there.

³⁴ TBC 19 Feb 1908 p7: "CHANGE IN THE GAME LAWS."

³⁵ The beach site became Rathtrevor Beach Provincial Park in 1967.

³⁶ Wylie, *Qualicum*, 36; White, *Sunshine Coast*, 21.

³⁷The complicated processes of establishing the park, its character and mythology are described in Sean Kheraj's: *Inventing Stanley Park, An Environmental History* (Vancouver: UBC Press, 2012).

³⁸ Barman, *Stanley Park*; Board of Park Commissioners of the City of Vancouver, *The Parks of Vancouver, Canada* (Vancouver: City of Vancouver, 1944); Steele, *First 100 Years*, 216.

³⁹ TBC 22 December 1906 p1: "BUY GULF ISLANDS AS GAME RESERVES" report that the Englishman, G. L. Findlay, was "struck with the climate and... the plenitude of the game..."

⁴⁰ Baikie, Strathcona; TBC 10 June 1910 p 2: "ENDORSES IDEA OF PROVINCIAL PARK."

⁴¹ M. Dawson, *Selling British Columbia: Tourism and Consumer Culture, 1890-1970* (Vancouver: UBC Press, 2004).

⁴² TBC 8 Dec 1907 p 10: "TRAVELLERS SEE THE WHALER IN OPERATION; TBC 22 Dec 1907, p 32:

"ISLAND'S NORTH END"; TBC 5 April 1896 p 11 "THE BLACK DIAMOND CITY"; TBC 12 August 1905, p5: "Take a trip on the Iroquois Sunday and you will be delighted."

⁴³ TBC 1 January 1893 p 14: "PICTURESQUE PT. COMFORT."

⁴⁴TBC 29 June 1904: 6.

⁴⁵ Armitage, Around the Sound, 100, 126.

⁴⁶ TBC 2 August 1903 p 9: "THE COWARD – The Story of a Fight" by T. L Grahame.

⁴⁷ Armitage, *Around the Sound*, 126; T. McCarthy, *Auto Mania: Cars, Consumers, and the Environment* (New Haven: Yale University Press, 2007).

⁴⁸ In a tourist pamphlet published in ten thousand copies in 1930, VCA. Add Ms. 75. Vol. 5, cited in: Mackie, : 20

⁴⁹ BCA MS-0728: Pidcock family fonds; BCA MS-1636 John Francis Barrow collection. Richard S. Mackie, *The Newcastle Island Resort Pavilion* (Unpublished manuscript prepared for the Heritage Conservation Branch, Victoria, BC, March 1983).

⁵⁰ H. Wylie Blanchett, *The Curve of Time* (Vancouver: Whitecap, 1961, 2002).

⁵¹ BCA MS-1636 John Francis Barrow collection, Toktie Logs: 29 July 1934.

⁵² Hacking, Vancouver Yacht Club, 213.

⁵⁵ BCA MS-1176 - Frederick Marsh fonds, "Leisure Islands Laughter," 558, 567.

⁵⁶ Ibid, 103.

⁵⁷ James Murton described such a post war soldier settlement near the Strait at Merville in: James E. Murton,

Creating a Modern Countryside: Liberalism and Land Resettlement in British Columbia (Vancouver: UBC Press, 2007).

⁵⁸ Taylor, *Quadra Island*, 169.

⁵⁹ Discussed in Alan Twigg's Hubert Evans: the first ninety- three years (Madeira Park, BC: Harbour, 1985).

⁶⁰ Taylor, *Quadra Island*, 20.

⁶¹ BCA MS-1176 - Frederick Marsh fonds. "Leisure Island Laughter," 331

⁶² Ronald MacIsaac, Brother XII: the Devil of Decourcy Island (Victoria: Porcepic Books, 1989), 26.

⁶³ BCA MS-1176 - Frederick Marsh fonds "Leisure Island Laughter," 169-170.

⁶⁴ Wolferstan, *Pacific Yachting*, 73.

⁶⁵ Leffler, *Parksville*: 91; BCA MS-2009, Margaret Ormsby's records - BOX 9, File 9: Kevin M. Brown, "Beach Acres Holiday Resort," Unpublished report prepared for Arthur S. Charlton, Planning and Resources Management, BC HCB, Victoria. November 1981: 1.

⁶⁶ BCA MS-0364 ORCHARD - BOX 4 File 2.

⁶⁷ BCA MS-1176 - Frederick Marsh fonds. "Leisure Island Laughter," 553

⁶⁸ BCA MS-0436 Alexander Buckham - VOLUME 106; Wylie, *Qualicum Beach*, 26; BCA Jack Mayne MS
 "Sechelt down through the ages," 1965 in: Mackie, *Newcastle Island*; BCA MS-0364 Imbert Orchard fonds - BOX 3 file 4; Wild, *Comox Valley*, 102.

⁶⁹ Irene Howard, *Bowen Island 1872-1972*, Bowen Island, cited in: Mackie, "Newcastle Island," 20, Armitage, *Around the Sound*, 126, 151; White, *Sunshine Coast*, 13; Wylie, *Qualicum Beach*, 138; "Powell River's first 50"; Thompson, *Texada Island*, 97-107; C. Campbell, *An Analysis of Shoreline Use and Capability for Cottaging in the Georgia Lowland of BC* (Vancouver: Canada Land Inventory, 1967) cited in: Nelson "Seascapes," 74.

⁷⁰ White, *Sunshine Coast*, 44.

⁷¹ Gerald A. Rushton, *Whistle Up the Inlet: The Union Steamship Story* (Vancouver: J. J. Douglas, 1974), cited in: City of Vancouver Archives, *Port Watch – A Retrospective Look at 100 Years of Ships and Shipping in Vancouver Harbour* (Vancouver: Vancouver City Archives, 1986), 46.

⁷² Norcross, *Nanaimo's Playground;* Mackie, "Newcastle Island."

⁷³ Mackie, "Newcastle Island," 34.

⁷⁴ BCA MS-1636 John Francis Barrow collection: Toktie Logs, 9 July 1933.

⁷⁵ J. K. Youds, "A Park System as an evolving cultural institution: A case study of the BC Provincial Park System 1911-1976" (MA thesis. University of Waterloo, 1978), 52; Leffler, *Parksville*, 109.

⁷⁶ BCA GR1614 Parks and Outdoor Recreation Division (re: recreation land) BOX 25: Oyster River Park Committee, "The Oyster River Beach, Vancouver Island, BC – A description of the Beach, adjacent property, immediate surroundings, etc. of a site that would make an excellent Seaside National Park," Prepared by the Oyster River Park Committee, E.A. Macdonald, Secretary, Courtenay, BC, 1937; Ibid: Letter from E. M. Pearse of 12 June 1939 to Lieutenant-Governor of BC, Eric Hamber, Government house, Victoria.

⁷⁷ Mackie, "Newcastle Island," 3.

⁷⁸ Stanley Park seawall construction continued for decades. In 1921 they began to receive federal support for the wall as seashore protection and support from federal government employment programmes continued in the 1930s. See details in: Board of Park Commissioners of the City of Vancouver, BC, *Vancouver and its Parks and Resorts* (Vancouver: Board of Park Commissioners of the City of Vancouver, 1919).

⁷⁹ Steele, First 100 Years, 224.

⁸⁰ Steele, First 100 Years, 118.

⁸¹ Indeed. Source: Board of Park Commissioners of the City of Vancouver, *The Parks of Vancouver, Canada* (Vancouver: City of Vancouver, 1944). The same introduction was later used in Parks Board reports for 1946, 1954, and 1958.

⁸² VCA, Additional MS 75, vol. 5, cited in: Mackie, Newcastle Island, 14.

⁸³ Dawson, Selling British Columbia, , 117.

⁸⁴ BCA MS-1900 Hamilton Laing fonds - BOX 7: FILE 33: Biographic sketch of Allan Brooks by Allan C. Brooks.

⁸⁵ Mackie, *Hamilton Mack Laing*.

⁵³ Wylie, *Qualicum Beach:* 169.

⁵⁴ Taylor, *Tidal Passages*: 139.

⁸⁶ Laing was a good enough writer to figure in a 1930 compendium of short stories published for teaching writing at Columbia University where they reprinted his 1930 article from Nature Magazine entitled "Nature's Precious Babes, From Egg to Self-Reliant Life in Birddom," in: Ernest Brennecke and Donald Lemen Clark, *Magazine Article Readings* (New York: Macmillan, 1931), 41-48, in: BCA MS-1900 Hamilton Laing fonds – Box 2, File 15.

⁸⁷ BCA MS-1900 Hamilton Laing fonds - BOX 17 File 19: "Romance of Stump Ranching," 20

⁸⁸ Ibid. Much to the chagrin of his neighbours.

⁸⁹ BCA MS-1900 Hamilton Laing fonds, BOX 18, File 11.

⁹⁰ BCA MS-0006: Francis Joseph Dickie, Papers 1932-52: A letter 20 August 1939 to Chief Protection Officer of Forestry Department in Victoria.

⁹¹ Nelson, "Seascapes," 135.

⁹² BCA MS-2009 Margaret Ormsby's records - BOX 6, file 3, Bowen Island Park and Store Use Society: "The old Union Steamship General Store building, Bowen Island, BC," unpublished brief prepared for The Provincial Heritage Advisory Board Heritage Conservation Branch of the Ministry of Recreation and Conservation by the Bowen Island Park and Store Use Society, April 1979, Volume II ("largely written by author and island resident Barry Broadfoot"); Jack Little, "Vancouver's Playground: Leisure and Sociability on Bowen Island, 1902-1957," *BC Studies* 171 (2011): 37-68.

⁹³ "Sail the Princess of Vancouver to Nanaimo," advertisement in *BC Outdoors* 28, 3 (May-June 1972).
 ⁹⁴ BCA Imbert Orchard records: T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969; BCA MS-2009 Margaret Ormsby's records - BOX 11, File 11: Letter of 27 March 1979 from L. S. McFarland, Past President of the Underwater Archaeological Society of BC (UASBC) to Honourable J. V. Clyne, Chairman, BC Heritage Trust, c/o R. Irvine; Ibid: Letter of 19 March 1979, from Leonard McCann, Curator of the Vancouver Maritime Museum, to UASBC.

⁹⁵ Steele, *First 100 Years*, 164-5, 264-6.

⁹⁶ VCA 52 E 1 file 2 Boating – 1945-1959: Letter from T. Sewell, Secretary of the North Shore Boat Rental Association to T. M. Stephens, Divisional Supervisor, Steamship Inspection Service, Vancouver, 5 Feb 1948; Ibid: Letter from C. Smith, President of the North Shore Boat Rental Association to Chief Steamship Inspector, Vancouver, 27 October 1948.

⁹⁷ Gordon Woods, An overview of recreational boating by residents of Metropolitan Vancouver (Vancouver: Marine Trades Association of BC, 1974), cited in Gibson, Urbanisation, 26; N. D. Lea and Associates, Analysis of Recreational Boating in the Strait of Georgia Area (Vancouver: Dept. of Public Works, 1966):46-48; BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 28 – Ports and Harbours: Gerald J Mos and Mary C. Harrison, Resident Boating in Georgia Strait, Southern Operations Branch, Pacific Region, Technical Report Series No. PAC/T – 74 – 5 (Vancouver: Environment Canada Fisheries and Marine Service, 1974).

⁹⁸ BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 28. Ownership rates in Nanaimo-Gabriola, Squamish, North Shore, Delta/Surrey/White Rock were between 20 and 30 %.

⁹⁹ BCA GR-1002 BC ELUC Secretariat. Originals 1972-1980. BOX 37 File: PAD (Program Assessment and Development) Group: Katherine J. Racey, "A notional follow up to the 1973-74 survey of resident boating in Georgia Strait --- Subsequent Boat Purchases," unpublished and undated note. Social Science Unit, Southern Operations Branch, Pacific Region. Environment Canada, Fisheries and Marine Service.

¹⁰⁰ Woods, *Overview of recreational boating;* Barker, *Water Resources, 40.* A requirement of 7,000 new berths was probably optimistic, from an industry keen to minimise disincentives to boat ownership.

 ¹⁰¹ UBCLSC RHB papers BN 137: R. Haig-Brown, and S. B. Smith, Forward to *Distribution and Economics of the BC Sport Fishery – 1954* (Victoria: BC Game Commission, 1955). The rapid post war growth in salt water angling is also noted, for example, in: Newell, *Tangled Webs*; Qureshi, *Environmental Issues*; Taylor, *Quadra Island*.
 ¹⁰² UBCLSC - BN 52-1, Roderick Haig-Brown papers: "The Biologist and the Sportsman," handwritten 15 page manuscript dated 1954; BCA GR 1614, BOX 21, File 1.6.1.75: Cowichan Boat Launching Site; BCA Imbert Orchard records: T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969.

¹⁰³ White, *Sunshine Coast*, 21.

¹⁰⁴ Spalding, Enchanted Isles, 64.

¹⁰⁵ Gibson, Urbanisation, 26.

¹⁰⁶ Spalding, Enchanted Isles, 64.

¹⁰⁷ Wylie, *Qualicum Beach*, 173.

¹⁰⁸ BCA MS-1176 - Frederick Marsh fonds: "Leisure Island Laughter" manuscript: 2, 259.

¹⁰⁹ Spalding, Enchanted Isles, 53-54.

¹¹⁰ Sharon Weaver, "First Encounters: 1970s Back-to-the-land Cape Breton, NS and Denman, Hornby and Lasqueti Islands, BC," *Oral History Forum d'histoire orale* 30 (2010): 19

¹¹¹ Des Kennedy, "Editorial," *The Denman Rag and Bone*, first issue, May 1974, cited in: Weaver, *First Encounters*, 19.

¹¹³ BCA GR 1614 Parks and Outdoor Recreation, BOX 29 File 1.7.2.510.

¹¹⁴ Dawson, Selling British Columbia; Nelson, "Seascapes," 75.

¹¹⁵ BCA GR-1002, BC ELUC Secretariat, Originals 1972-1980. BOX 11: BC Ferries Study.

¹¹⁶ UBCLSC RHB papers, BN 138-3 "Recreation and wildlife for tomorrow." 12 page undated text for an address to a committee to promote better recreational planning and management and calling for a recreation ministry.

¹¹⁷ These growing tensions around the world are discussed in: Lencek and Bosker, *Paradise on Earth*.

¹¹⁸ Youds, "Evolving Cultural Institution"; UBCLSC RHB papers, BN 146 – 5, R. Haig-Brown, "Parks and the New Conscience," in: *Park News – The Journal of the National and Provincial Parks Association of Canada* 8, 1 (January 1972): 3-4.

¹¹⁹ UBCLSC Roderick Haig-Brown papers, BN 52-2: The Fight for Strathcona Park. Handwritten, undated, 9 page manuscript for address to Rod and Gun Club.

¹²⁰ Wolferstan, Pacific Yachting, 72.

¹²¹ BCA GR 1614, Parks and Outdoor Recreation, BOX 24 Files 1.6.2. 517 and 518.

¹²² Ibid: BOX 26: File 1.6.3.481.

¹²³ It appears in numerous files in: BCA GR 1614, Parks and Outdoor Recreation, BOXES 22, 23, 24, 27, 28; Peter Stevens discusses a similar upsurge of anti-American sentiment in relation to central Canada's recreational space and property in: "A Little Place in the (Next) Country: Negotiating Nature and Nation in 1970s Ontario," *Journal of Canadian Studies* 47, 3 (Fall 2013): 42-66.

¹²⁴ Gulf Islands Study (Victoria: Capital Regional District): 18, cited in: Nelson, Seascapes: 136.

¹²⁵ BCA GR 1614 Parks and Outdoor Recreation, BOX 26: File 1.6.3.535.

¹²⁶ Qureshi, "Environmental Issues," 82.

¹²⁷ UBCLSC BN 138-7 RHB papers: "Undermining the Park System; or Tear It Up. There Might Be a Buck around Somewhere," undated (but apparently mid-1960s) 8 page manuscript; Ibid: R. Haig-Brown, "Resource Management in Canada – A Point of View," unpublished, typed, 33page manuscript, undated but apparently 1966 or 67 from context; Barker, *Water Resources*, 38.

¹²⁸ BCA GR 1614 Parks and Outdoor Recreation, BOX 28: File 1.7.2.20.

¹²⁹ Ibid: BOX 27, File 1.7.1.127, File 1.7.1.122: Briefing notes for the Minister dated 16 November 1982, by M H Turner, Acting Regional Director, Lower Mainland Region

¹³⁰ Ibid: BOX 22 File 1.6.1.351

¹³¹ Ibid: BOX 26: File 1.6.3.540.

¹³² BCA GR 1614 Parks and Outdoor Recreation, BOX 25: File 1.1.1.440.

¹³³ Waterfront Lands in the Lower Mainland Region, Technical Report. (New Westminster: Lower Mainland Regional Planning Board, 1966), 34, in: Nelson, "Seascapes," 135.

¹³⁴ Steele, *First 100 Years*.

¹³⁵ BCA GR 1614 Parks and Outdoor Recreation, BOX 26, File 1.6.3.535.

¹³⁶ BCA MS-2042 ANDERSON, David - File 5: Undated letter from David Anderson to anonymous (name taped over in file) constituent.

¹³⁷ Ibid: "Anderson wants National Trust," *Gulf Islands Driftwood*, 9 September 1971.

¹³⁸ Ibid: "Editorial," *Gulf Islands Driftwood*, 17 December 1971.

¹³⁹ Ibid: Letters from private landowners fearing expropriation by federal government park; Ibid: "Gulf Islands US Owned? *Victoria Daily Times*, 21 June 1971: 17.

¹⁴⁰ Ibid: File 6. Letter dated 24 November 1970 from Jack Davis to Mr. T. W. Cross, Port Credit, Ontario.

¹⁴¹ BCA GR-1118: BC Marine Resources Branch - BOX 8 File 8 - Letter dated 11 August 1971, from Jack Davis, Minister of Environment, Ottawa to Ken Kiernan, Minister of Recreation and Conservation, LB, Victoria; Jack

Davis, "A national underwater park in the Gulf of Georgia," luncheon Address to Hollyburn Gyro Club, 5 June 1971, cited in: Nelson, "Seascapes,"4; BCA GR 1614, Parks and Outdoor Recreation, BOX 24 File 1.6.2.406: Letter dated 23 February 1983 from Federal Minister of Environment to an enquiry from a citizen in Nanaimo.

¹⁴² UBCLSC RHB papers BN 146 – 5: Roderick Haig-Brown, "Parks and the New Conscience," *Park News – The Journal of the National and Provincial Parks Association of Canada* 8, 1 (January 1972): 3-4.

¹⁴³ BCA GR-1118: BC Marine Resources Branch - BOX 8- File 8: Letter of June 21, 1971 re: Strait of Georgia National Marine Park Proposal, from Lloyd Brooks, Acting Deputy Minister to the Hon. K Kiernan, Min of

¹¹² Except Penelakut (formerly called Kuper) Island, an Indian Reserve, and Valdes, with no ferry connection and little population.

Recreation and Conservation, PB, Victoria; GR 1614, Parks and Outdoor Recreation, BOX 24 File 1.6.2.406: Letter dated 23 February 1983 from Federal Minister of Environment to an enquiry from a citizen in Nanaimo. ¹⁴⁴ BCA GR 1614, Parks and Outdoor Recreation, BOX 24 File 1.6.2.406: Letters from Federal Minister of Environment, 23 Feb 1983, from provincial Minister of Lands, Parks and Housing, 31 March 1983, to the same

¹⁴⁵ UBCLSC RHB papers BN 50-8: "What Wildlife Means to BC," handwritten 4 page manuscript dated 1953.
 ¹⁴⁶ UBCLSC RHB papers, BN 55-6. "Lands and space requirements for conservation." 16 pp handwritten manuscript of speech given in Spokane to Pacific Northwest Travel Association, 18.4.1967: 6.

¹⁴⁷ BCA GR 1614, Parks and Outdoor Recreation, BOX 21File 1.6.1.66: Swartz Bay Boat Launch; Nelson, *Seascapes*, 22; Gibson, *Urbanisation*, 56.

¹⁴⁸ BCA GR 1614, Parks and Outdoor Recreation, BOX 22 File 1.6.1.351.

¹⁴⁹ Steele, *First 100 Years*, 246, 250, 255.

¹⁵⁰ VCA File 92-F-3 file 7, PD 42, M4985: "Kitsilano Indian Reserve – Last Indian Departs April 11, 1913"; Spalding, *Enchanted Isles*: 28; MB / CAMS, Tree / Sandy Island File: Kris Kennett, "Marine Protection Area Addition to Sandy Island Provincial Park," Note submitted 16 Dec 2002 to Comox First Nation, prepared by Kris Kennett, Planner, Environmental Stewardship Division, Ministry of Water, Land and Air Protection.

¹⁵¹ BCA MS 1246 - Islands Trust Fonds 1974-76, Box 1: Memorandum dated March 8/1976 from Provincial Archaeologist, Dept. of Provincial Secretary, Archaeological Sites Advisory Board of BC to Hilary Brown, Islands Trust, Ministry of Municipal Affairs.

¹⁵² UBCLSC RHB papers BN 137–3: R. Haig-Brown, and S. B. Smith, Forward to *Distribution and Economics of the BC Sport Fishery* – *1954* (Victoria: BC Game Commission, 1955): 4.

¹⁵³ UBCLSC RHB papers BN 54-8: "Statement for Puntledge River inquiry," Handwritten 12 page manuscript dated 1962.

¹⁵⁴ Ibid: "Pacific Salmon – the Miracle of Abundance," 29 page manuscript dated 1958.

¹⁵⁵ Armitage, Around the Sound, 203.

¹⁵⁶ BCA Imbert Orchard records: T0834: 0001-0002 of Description Number AAAB0925: Roderick Haig-Brown interview 1969.

¹⁵⁷ BCA GR-1002 BC ELUC Secretariat, Originals 1972-1980, BOX 7: Ibid. BOX 7: Underwood, "Midcoast," op. cit.,

¹⁵⁸ Ibid, BOX 37 Salmonid Enhancement Program – General: Traveller, "What's new outdoors? Is the \$300 million Salmonid Enhancement Program discriminating against 255,000 BC sportsmen who fish for salmon and steelhead? Yes, says Traveller," *BC OUTDOORS* (1976?): 76-79.

¹⁵⁹ VCA File 243 D 4 6 Islands Trust: "A proposal to regulate the discharge of sewage from pleasure vessels into the strait of Georgia," Submitted to the Fed Min of Transport and the Provincial Min of Environment, November 1984; Letter of 22 March 1985 from Mike Humphries, Chairman, Islands Trust to Mayor Mike Harcourt, Vancouver; Memo of April 11, 1985 from Dr. Shaun Peck, Dep. MHO to Mayor Mike Harcourt re: Islands Trust letter and proposal to regulate sewage dumping by pleasure vessels in the Strait of Georgia.

¹⁶⁰ Lenček and Bosker, *Paradise*, 273.

¹⁶¹ MB /CAMS. "Gulf Islands" file: Jes Odam, "Gulf Islands at the crossroad: Water wonderland or just another suburb?" *Vancouver SUN*, 7 Dec 1971.

¹⁶² Ibid: Kay Alsop, "With her back to the land" *The Province*, 31 Aug 1972.

¹⁶³ Des Kennedy, "Whither the Gulf Islands? Nature's largesse spawns a B.C. dilemma," Canadian Geographic, 105, 5 (1985): 42.

¹⁶⁴ Des Kennedy, "Whither the Gulf Islands? Nature's largesse spawns a B.C. dilemma," *Canadian Geographic* 105, 5 (1985): 40-49.

¹⁶⁵ Ibid.

¹⁶⁶ Garret Hardin, "The Tragedy of the Commons," *Science* 162 (1968): 1243-48. Hilary Brown cited the need for an alternative model at various times when explaining the new Islands Trust Policy.

¹⁶⁷ BCA MS-1246 Islands Trust Fonds 1974-76, Box 1: Islands Trust, "The Policy of the Islands Trust," (Victoria: The Islands Trust. Parliament Buildings, 1975): 2-6, 13-14.

¹⁶⁸ Although continuously under pressure and subject to steady erosion, the ALR is still in place today.
 ¹⁶⁹ Another example confirming the wisdom of H. L. Mencken's suggestion that you ought to run the other way when you see someone coming to help you.

¹⁷⁰ BCA MS-1246 Islands Trust Fonds 1974-76, Box 1: Islands Trust, "Policy of the Islands Trust," op. cit., 6-7; Ibid: Briefing notes for the Minister, 22 December 1975.

¹⁷¹ BCA MS-1246 Islands Trust Fonds 1974-76: Box 1: Briefing notes for the Minister, 22 December 1975.

enquiry from a citizen in Nanaimo.

¹⁷² BCA MS-1246 Islands Trust Fonds 1974-76, Box 1: Islands Trust, "Policy of the Islands Trust," op. cit., 11; Benn, "Natural Areas Inventory," op. cit., 2.

¹⁷⁵ BCA MS-1246 Islands Trust Fonds 1974-76 - BOX 1: Briefing notes for the Minister, 22 December 1975

¹⁷⁶ Ibid: BOX 2: Saltspring Island file: Doug Watters, "Are storm clouds clearing from Saltspring Island?" Monday-*Victoria's Magazine*, December 15-21, 1975: 10-11.

¹⁷⁷ Armitage, Around the Sound, 212; Ibid; Kirk, My Ain Folk, 78.

¹⁷⁸ CAMS MB Fonds: "Crown jewels," Editorial, *Vancouver SUN*, 28 July 1982: A3; "Ending Islands Trust would bring 'Coney islands," *Vancouver SUN*, 27 July, 1982: A3.
 ¹⁷⁹ Kennedy, *Whither? 49*.

¹⁷³ Benn, "Natural Areas Inventory," op. cit., 2.

¹⁷⁴ "Policy of the Islands Trust," op. cit: 13

8. Conclusion and Reflections on the 21st Century Strait

Historical studies such as this one are firmly rooted in the present, from where they speak of the past, with an eye to the future. Mark Phillips has suggested that historians seek to 'mediate relationships' between both present and past *and* present and future. This study is certainly such an attempt at mediation, motivated in large part by a belief that a better understanding of the Strait's past will be, at least potentially, a valuable asset for those who aim to better manage human relations with the rest of nature there in the future.¹ For example, if we hope to develop the capacity to better control the effects of technologies on the Strait in the future then we need to understand how past technological changes - in fishing, forestry, pulp and paper milling and municipal waste management and other fields - have so consistently run ahead of our capacities to manage them effectively. If we aim to redress past injustices towards the Strait's indigenous people and co-operate with them effectively in future management of shared space and resources, then it is critical to understand these First Nations' experiences in relation to these same introduced technologies, and all that has followed in their wake, since the mid-nineteenth century. Those who would protect the recreational values of the region need to be familiar with the historical experiences and narratives upon which others base their own long-standing, competing claims to future use of this space. And so on.

The preceding chapters have analysed issues that have not previously been considered together in histories of British Columbia, examining relations among them. My contention from the outset has been that one needs to come to terms with at least these five stories and their complicated interactions if one wants to begin to understand what has happened since colonisation began on this body of water that remains central to the present and future of most British Columbians. If you want a nuanced understanding of any of the five stories I've engaged with – the Strait as highway or barrier, the Strait as empty or stolen space, the Strait as resource mine, the Strait as waste dump, or the Strait as a space for recreation - then you need to know about the other four and how all relate to each other.

I have considered a relatively large space over a relatively long time period. I could have opted for a smaller scale set of stories around the same five themes, focusing say on Baynes Sound or Burrard Inlet. These might have been of more interest to academic historical geographers but of less value to the broader, 'Strait wide' readerships (both inside and outside academia), that is ultimately the audience that I hope to reach. This study aims above all to help people around the Strait better know it, and their evolving place on it. It has used the tools of historical geographers to reach out to others beyond the discipline.

I could also have told just one of the five stories, focused only on the Strait as highway and barrier, or the Strait as recreation space, for example. But we all know that our shared problems – such as the problem of managing the almost embarrassingly rich environment of the North Salish Sea – always entail multiple, entangled histories, not just one. Besides, I wasn't sufficiently interested in any single story to devote years of research and writing to it. It was the relationships and complex interactions among the parallel stories that interested me. A single story, about the Strait as barrier / highway or as recreation space, would have been simpler and would have allowed me to more readily identify heroes and villains. As Jay Taylor said about the Columbia River fishery, "the best way to cast blame has been to tell simple stories."² But assigning blame wasn't my objective either.

Each way of thinking about the Strait involved various and shifting, but usually very real, existential threats to 'their Strait' from people who saw it differently. The nature of the threats perceived by different stakeholders around the sea evolved steadily. On the indigenous people's sea, the threat of colonial dispossession loomed large. On the settlers' industrialised sea, different resource extractors threatened each other in various ways. On the post-war recreational sea, key threats were polluters, resource industries and other recreationists. The many different 'fears of loss' that appear throughout these chapters are closely related to another abiding truth about the place, what one might call 'the law of the jungle.' Powerful actors in these stories expect to rule and expect all others to get out of their way or face the consequences. At one time or another, land hungry settlers and their governments, miners, canners, fishers, lumbermen, port authorities and recreationists variously seized, devastated, exhausted or fouled space or resources that were either shared with others or owned by others, with virtual impunity. This made, and still makes, all stakeholders' ongoing and shared 'fear of loss' a very rational sort of worry.

Each of the five stories ends somewhere in the 1980s, a decade that began with the deepest economic downturn since the 1930s and one that hit coastal BC particularly hard. It was also China's first decade under the economic reforms of Deng Xiao Ping and a decade of heady economic success for Japan. The Strait's role as Canada's portal to rich Asian markets, a dream of the Canadian federation since its creation, was maturing. These economic challenges and opportunities helped suppress familiar urges for more effective conservation in the Strait's resource mine. The now highly urbanised population around its shores was as firmly attached to its marine recreation space as it was dependent on it as a waste dump. Indigenous people were slowly beginning to exercise some influence again over the Strait and its resources.

The 2010s --- plus ça change...

Roughly two thirds of BC's current population of over 4.5 million people live by the Strait today. They account for about a third of western Canada's population and 10% of Canada's. Most live in Greater Vancouver which remains among the fastest growing places in the province and country. People living around the Strait today value it for widely varying reasons. In this they are little different from those who preceded them as residents of this place between the 1850s and 1980s. Considering the present situation in very general terms it is evident that familiar stakeholders – commodity exporters, First Nations, resource miners, waste dumpers, and recreationists - face issues such as competition for shoreline and marine space, aquaculture, and pervasive flaws in governance, that are new twists on familiar stories. Other interactions involve familiar sorts of stakeholders in radically transformed social, economic, technological, and environmental circumstances. Here new stories emerge, or familiar stories are entwined in fascinating new ways. The growing, changing population of this littoral and those further away who claim the right to use it, remain anxious about the threats that others pose to 'their Strait.' They face diverse challenges in a globalising world that are often difficult to understand without the context provided by the histories outlined in the previous chapters.

These five studies of the Strait's past were inspired not just by a love of place and desire to analyse and explain it, but also by a number of other beautiful places I have worked and admirable people I've worked with since the 1970s. I have often found resource rich places and clever, capable people – in much of Central Africa or Central America or Central Asia for example - plagued by human folly. Think of the toxic cesspool that the Aral Sea has become

and the Caspian is rapidly becoming, of the endless and highly lucrative chaos of the eastern Congo, of poisoned imperial legacies, old and new, in the heart of Central America, from Guatemala to Nicaragua. Is there a lesson in these well-endowed, benighted places peripheral to global empires? All are places that could be, should be, and perhaps used to be so much better places to live. All are resource-rich crossroads, struggled over by local clans backed by powerful, distant interests, each pursuing their claims to these places and their riches.

The North Salish Sea has finally coming into its own as a 'gateway' to a vast East Asian economy that is itself finally realising the ambitions of its citizens and the long standing expectations of its European and North American trade partners. The gateway Strait has also become as much a 'resource mine' to the pan Pacific economies as it was earlier to the adjacent American realm and, originally, the British Empire. It has become a place between the world's two dominant socio-economic powers, with strong ties to both. With BC's exports now roughly split between the US and China,³ we have assumed a location between powerful interests well known to Congolese, Guatemalans, and Kazakhstanis. The comparison may seem outlandish to many. Such suggestions always do, until one has the sobering experience of going somewhere exotic, seeing its manifold flaws then returning home to perceive local versions of these same shortcomings. Consider our own crumbling federal and provincial civil service, our short sighted or corrupt political leaders, our traditions of profligate waste of valuable shared resources, of bullying and theft by dominant economic players, and so on. These five simple stories of evolving relations between the Strait and its people have offered, among other things, various disturbing historic examples of such shortcomings. As competition for space and resources intensify around the Strait in the 21st century, these sorts of challenges will intensify. They will need to be vigorously addressed by those of us who do not wish them to be accepted as the norm.

Some may see this as an unjustifiably pessimistic vision of the Strait's past and present, and its future prospects. In response, I would cite one of Haiti's choicer proverbs: "A paranoid is someone who understands the situation."⁴ Mr. Harper is *not* Nazarbayev,⁵ Christy Clark not Nazarbayev's venal daughter, though all have hitched their wagons to the hydrocarbons industry, with its inherently corrupting influences, and all have well-earned reputations for ruthless tactics. Our provincial and federal civil services are still repositories of remarkable expertise; but for how much longer, as they continue to be decimated and hobbled by debilitating cuts and

"streamlining" legislation? Canada's resource base is still vast by global standards - faint praise perhaps - but around the inland sea we have rapidly squandered a vast wealth of renewable resources. Now we are told by the ruling parties that our economic future hangs on the fastest possible extraction and export of non-renewable mineral and energy resources.

Still overfishing In 2005 Tony Pitcher of UBC's Department of Zoology and Fisheries Centre noted that fish scientists were no longer disputing the reality of a global fisheries crisis, the result of over a century of overfishing by ever more efficient industrial fleets. Boris Worm and his colleagues at Dalhousie University estimated that same year that two thirds of all fisheries exploited since 1950 had collapsed.⁶ Fisheries managers had consistently mismanaged the resource for the benefit of large industrial interests and at the expense of small fisheries-dependent communities.⁷ –The Strait of Georgia is still one of Canada's most productive marine ecosystems but the Strait – along with the rest of the world's seas, has seen many of its fish stocks dramatically depleted.

As in the past, there is disagreement and uncertainty about the extent and nature of resource depletion. Resident salmon stocks, mostly Coho and Chinook, appear to be the most severely depleted, their numbers down to perhaps ten percent of what they were in 1900. Journalist Stephen Hume reported extreme cases in 2002: Coho runs in the Seymour River fallen from around 14,000 in the early 1980s to fewer than 500, the Coho spawn in Black Creek on the east side of Vancouver Island fallen from close to 8,000 in 1975 to fewer than 150.⁸ 'Transient' salmon populations, such as Sockeye and Pink salmon have fared better but their numbers are perhaps a half of what they were a century ago. Populations and catches of bottom fish such as cod and halibut have essentially collapsed after decades of overfishing.⁹ The dynamics of resident herring and transient Sockeye populations are the object of the most acrimonious debate.

Herring have begun to spawn again at once heavily polluted sites, including False Creek, Howe Sound and others, where they had not been seen for decades. At the turn of the millennium, observers celebrated the largest herring populations on the Strait since 1950. Yet others called for a multi-year moratorium on all commercial herring harvests in the Strait and blamed the widespread disappearance of local herring populations for the alarming decline in resident salmon and other species. In part at least, chronicdisagreements over herring stem from what

Daniel Pauly has described as a 'shifting baseline.'¹⁰ Proclamations of 'the largest catch in fifty years' rest on baseline populations that were substantially lower than earlier maxima. It is like extolling (as many have) Mozambique or Rwanda's near miraculous economic growth rates since the 1990s, while failing to acknowledge the absolute economic devastation from which they were recovering. First Nations' and settler histories and recent archaeological research all suggest that past herring populations in many parts of the Strait were once vastly larger than they are today. We might expect that they would have supported substantially larger populations of the many fish, bird and marine mammal species that feed on herring.

Dramatic changes in the numbers of Sockeye salmon returning to the Fraser River from year to year stimulated some of the earliest rumblings of conservation on the inland sea; they remain a source of uncertainty and debate among fish scientists and fishers today. For several years prior to 2010, Fraser River Sockeye levels reached lows rivalling those last seen following the catastrophic Hells Gate slide of 1913. In 2009, when federal fisheries authorities were expecting a return of ten million Sockeye, only 1.5 million returned. Many attributed this latest collapse to the influence of farmed Atlantic salmon, escaped from their pens and competing with indigenous Sockeye for diminishing resources in the sea and on spawning beds. Salmon farms were also blamed for new diseases afflicting wild salmon populations. Then, in 2010, again confounding the experts, Sockeye returns to the Fraser reached levels not seen since 1913, over 25 million fish.

Not surprisingly, in the face of this chronic uncertainty and apparently conflicting trends, there are multiple prescriptions for ensuring 'sustainable' fish harvesting on the Strait in the future. Some observers call for a greatly reduced industrial fishery, substantial marine protected areas and widespread rehabilitation of salmon spawning streams to halt the decline in the Strait's fish populations.¹¹ Others, as in the past, see fish breeding as the answer and aquaculture of various kinds as the only way to maintain high rates of biological productivity in the Strait. But none disagree that the overall production of the Strait's fisheries falls far short of past levels, and is far from meeting the demands of commercial and recreational fishers.

First Nations re-emerging There has been much ferment in relations between the Strait's indigenous people, now referred to as 'First Nations,' and the majority settler population since

the Canadian Constitution Act of 1982. Legal decisions have confirmed the existence of aboriginal rights to land and resources that were not formally ceded to 'the Crown' and the potential validity of indigenous oral histories for establishing claims to land and resources. An ambitious programme of treaty negotiations between First Nations, Victoria, and Ottawa has yielded very modest results to date. The province of British Columbia in particular is anxious to achieve lasting settlements with aggrieved indigenous people, who are now in a position to block much local resource and infrastructure development on the basis of their strong legal claims to extensive 'unceded traditional territories' outside their tiny reserves.

Victoria and the mostly tiny 'First Nations' with whom they are negotiating around the sea are both subject to debilitating constraints on their abilities to negotiate. Both commission archaeological and historical studies to confirm where and how indigenous people lived and harvested resources in pre-colonial times, but final resolutions are difficult to achieve due to overlapping claims to the same territories and resources, especially fisheries resources, by competing First Nations. The province can't walk away from the table – they are obliged to reach negotiated treaty settlements if they want to remove the uncertainty that constrains local and regional development plans wherever land claims are unresolved. Nor can Victoria offer to return much of the land First Nations claim as traditional territory, because most is now in the hands of voters who would never countenance its expropriation.

One of the few ways out of the impasse, at least from Victoria's perspective, is to offer 'softer' resources that are more available to put on the table, such as park lands, land frozen in the Agricultural Land Reserve (and therefore of far lower market value) or 'common property' fisheries resources. This has not pleased those who would preserve parks or farm lands or have competing claims to fisheries. White fisherman have been resentful, feeling increasingly unable to resist growing First Nations claims to fisheries resources, and indeed indigenous fishers may be the beneficiaries of a 'white exodus' from the traditional fishing industry, much as other fishers benefitted from the precipitous forced exit of Japanese fishers in the early 1940s. Indigenous people would however, inherit a much diminished fishery.

Valued recreation spaces around the Strait, such as 'Tree Island' (Sandy Islets) between Comox and Denman Island and components of the new National Park Reserve in the southern islands,

have long been part of the dispossession process and now figure in attempts at indigenous 'repossession.' As with indigenous repossession of fisheries, this has been an acrimonious process, setting local community groups devoted to nature conservation and stewardship against local First Nations keen to acquire space and resources than can help them overcome chronic poverty. Recreation space on the Islands Trust islands, whose unique governance aims to maintain them in a kind of park-like status, could be among the higher profile targets of the ongoing treaty process. The province's willingness to sacrifice conservation values to achieve treaties was seen in the recent agreement with the Tsawwassen First Nation, which involved transferring to them almost four hundred hectares of land from the Agricultural Land Reserve, which the Tsawwassen were then entitled to develop without constraint. The province and Ottawa in return were able to proceed with ambitious plans for the expansion of adjacent port facilities.

Aquaculture on the Strait continues to build on a long history of hubris about the strength of Canadian fish culture science. Proponents of salmon and shellfish farming, like the backers of hatcheries in the past, extol their near miraculous ability to deliver spectacular biological and economic results, while downplaying ecological challenges and other public concerns.

The tumultuous early growth years of salmon farming on the Strait in the 1980s followed the disappearance of the ambitious Salmon Enhancement Programme of the 1970s. By the end of the century, as farmed salmon production began to exceed the wild fishery on the BC coast, salmon farmers had mostly abandoned all but the northern passages into the Strait of Georgia. Most had moved to the less heavily populated fiords, bays and channels further north and on the west coast of Vancouver Island. These farms now raise Atlantic salmon (*Salmo salar*), which are better able than Pacific salmon species to live in high densities in confined pens. While Atlantic salmon are less prone to disease outbreaks, they have repeatedly been linked with outbreaks of parasites and diseases among wild salmon that must pass near salmon farms during their migrations to spawning grounds around the Strait.

Federal fisheries policy in relation to the salmon farms has been questioned repeatedly by independent scientists such as Alexandra Morton, an eloquent and widely trusted leader of the opposition to current modes of salmon farming. Morton has repeatedly challenged the industry

and its government backers over the impacts of salmon farms on the health of wild salmon and marine mammal populations. Even Ottawa's Auditor General has questioned whether DFO is capable of fulfilling its mandate to protect the wild salmon fishery while also supporting the salmon farming industry. Federal reluctance to share information about DFO's scientific research on salmon pathology has drawn sharp criticism from the national and international scientific community.

The provincial government also remains a steadfast supporter of salmon farming, though the industry has not evolved in the way originally envisioned in Victoria in the 1970s. Then, the province worried about how to stave off foreign control of the industry; now most salmon farming is controlled by a small handful of Norwegian firms. The contribution of the industry to the local economy is represented in vastly different ways by its proponents and its foes. The former extol the gross value of fish produced, the latter complain that the farms employ relatively few people compared with the wild fishery while the diseases they propagate threaten to decimate wild salmon populations and thousands of small, independent fishermen who depend on them. The aquaculture industry and its government supporters are inclined to wrap salmon farmers in a cloak of sanctity, as efficient producers of protein in a protein deficient world, as leaders in an inevitable transition from 'fish hunting' to 'fish farming' a 'Blue revolution' analogous to the Neolithic revolution on land ten thousand years earlier. They imply that what applies for pond farmed carp in the Yangtse Basin is equally true for salmon raised in open ocean pens along the BC coast. Their detractors demonise the fish farmers as gratuitous wasters of resources, using unconscionable amounts of smaller fish to feed expensive, drug-riddled salmon bound for supermarkets and restaurants rather than famine relief operations. Their farms, say the critics, damage the marine environment in ways that remain poorly understood; they threaten - much as the forest industry did with impunity in the past - to undermine the health of the wild fishery and the natural environment, for the profit of a few large corporations.

As with earlier debates over salmon around the sea, this one is complicated by the baffling number of other factors that can affect the health of wild salmon populations, such as warming temperatures in salmon spawning streams, the growing impact of 'run of the river' hydroelectric producers around the Strait and a variety of ongoing changes in the North Pacific Ocean. As did the tobacco industry before them, and as do hydro-carbon producers today, salmon farmers can use uncertainty to justify avoiding costly adjustments, such as confining their salmon to fully closed pens. In any case, because their farms are now concentrated outside the inland sea, salmon farms are less of an issue to many people there. Ambitious plans to expand shellfish aquaculture on the Strait may prove to be more controversial in coming years.

Resources, repossession and recreation entangled on Baynes Sound Shellfish aquaculture continues to grow in scale and intensity in a number of places around the Strait and Baynes Sound remains the centre of the industry, producing over half of the province's output of close to 4,000 tons of shellfish annually. So it was not surprising that shellfish growers figured prominently among opponents to a recent attempt to renew coal mining in the Comox Valley, after an absence of almost fifty years. Shellfish growers on the sound contended that toxic drainage from the proposed coal mine would have devastating effects on their cultivated oysters, scallops and clams.

One version of events depicts the proposed new mine as the harbinger of a string of coal mines stretching from Fanny Bay to Campbell River, effectively converting the Comox Valley into a west coast West Virginia. In another telling, this proposal was only a stock market gambit, an elaborate ruse familiar on Vancouver's Howe Street, to bid up the shares of its proponent, Compliance Energy.

Given the region's history and today's robust East Asian market for thermal and metallurgical coal, the suggestion that central Vancouver Island turn again to coal mining might have been expected. More remarkable was the BC Environmental Assessment Office's (EAO) refusal to permit Compliance Energy to develop the Raven Mine above Baynes Sound. Until that point the EAO had a history of approving virtually every proposal submitted to it. The EAO may have been influenced by the provincial Auditor General's office, which observed in 2011 that they could find little evidence the EAO exercised any control over the environmental impacts of proposed resource development projects. The EAO may also have been sensitive to a shellfish industry lobby that has had much support from Victoria, including the opening of a shellfish aquaculture research centre at nearby Deep Bay. In any case, the EAO identified hundreds of shortcomings in the coal mining proposal and declined to approve it. The K'omoks First Nation, which has its own growing stake in local shellfish aquaculture, was also opposed to the proposed

coal mine. Given the determination of the government in Victoria to negotiate a treaty with the K'omoks, this First Nations' opposition may have been a decisive factor in rejecting the coal mine proposal.

People who value the region's outdoor recreational amenities are also strongly opposed to the return of coal mining near Baynes Sound. Their vision for the sound, and the Comox Valley as a whole, is of a high quality destination for recreation, tourism, and retirement; this is not compatible with the noise, dust, liquid effluent, and heavy vehicle traffic that would accompany a return to large scale mining. As evidence of the havoc that mining can wreak, opponents point to a copper mine that operated near Courtenay for only of a couple of years late in the twentieth century, but devastated salmon and trout populations on the Tsolum River.

Should the Raven Mine project be re-submitted for provincial approval, it will likely once again galvanise this coalition of local opponents. In the meantime, there is growing tension between the shellfish industry and its local critics. Some of the most eloquent opponents of the expansion of shellfish aquaculture are Denman Islanders who urge respect for the Islands Trust mandate to 'preserve and protect' their natural environment. The growing conflict between shellfish growers and islanders bears some resemblance to Richard White's story of loggers versus environmentalists in the western US in the 1990s¹² - a classic split between those for whom nature is a place to work and those for whom it is a place to play. But critics of the shellfish industry seek to protect the long term resilience, productivity and biological diversity of the local marine environment as well as its recreation value.

Shellfish farmers are even more inclined than salmon farmers to extol the benign nature of their business; theirs is "a protein source that takes nothing from the planet other than phytoplankton."¹³ Both shellfish farmers and would-be coal miners aim to prosper by supplying new markets across the Pacific. The market for geoduck clams seems particularly promising. The annual value of geoduck landings on the BC coast has risen from virtually zero in 1970 to over fifty million dollars in 2012. Much of this harvest is wild stock from the Strait of Georgia. The K'omoks First Nation has announced ambitious plans to cultivate the large bivalves in the sandy sea bottom off Denman Island. They aim to secure control over hundreds of hectares of suitable sea bed as part of their treaty settlement with Victoria and predict that their geoduck

harvests will equal the province's entire current production. If, as some observers suggest, shellfish cultivation on the Strait is destined to grow into a billion dollar export industry, then geoduck could well be one of its primary commodities and local First Nations could play a significant role in its production.

Proponents of the shellfish industry depict it in much the same way that policy makers in Victoria foresaw salmon farming in the 1970s – ecologically benign production by a large number of small-scale, independent local operators. If recent developments on Baynes Sound are any indication, the industry is more likely to follow the actual path of the salmon farmers, with many unanswered questions about their ecological impacts and production increasingly controlled by a few large foreign interests with local partners, perhaps mostly First Nations.

Critics of shellfish aquaculture, like those who question salmon farming technology, decry its damage to the marine environment. Growers, and the DFO staff who work with them, drive their vehicles on the beaches, damaging or destroying the sensitive foreshore habitat of other species of vertebrates and invertebrates such as spawning herring and other forage fish. Shellfish growers working the beaches during the winter's nocturnal low tides keep neighbours awake with their noise and lights. Growing fleets of rafts, from which the mollusks are suspended in plastic containers, spread further across the sound each year. Many local sand beaches are now draped in 'predator nets' intended to protect clams from burrowing predators but also threatening a variety of fish, marine birds and mammals, including swimmers, who become entangled in these nets. The prospect of expanded geoduck clam cultivation is particularly daunting to local inhabitants. The technology now being introduced in the intertidal zone on the Denman Island shore of the sound involves driving plastic pipes 15 cm in diameter into the sandy substrate. These pipes protect the juvenile geoduck that are seeded within them; they are covered with the same predator nets used on other beaches, that often break lose during storms, increasing the danger of their entangling other animals. The big clams take seven years to mature and are then harvested using high pressure hoses that transform sand bars into an amorphous slurry uninhabitable for many other species.

Disturbing new evidence now indicates the Strait of Georgia as a whole is an important source of various persistent organic pollutants accumulating to dangerous levels in the flesh of marine

mammals, increasingly through ingestion of plastic debris, while Baynes Sound is apparently the source of much of this plastic.¹⁴ Denman Islanders meanwhile collect literally tons of mostly plastic refuse left on their beaches each year by the shellfish industry: they stage high profile waste gathering events designed to shame the growers into reducing their waste stream, apparently with little effect. The dedicated stewards of the island's shores – like the US environmentalists Richard White wrote about twenty years ago -- may be drawing such a strong dividing line between the marine environment they aim to protect and the human work of the shellfish growers, that they risk being deemed expendable by local and provincial decision makers. This seems particularly likely should they emerge as impediments rather than participants in a settlement between an anxious province and the K'omoks First Nation, impatient to regain a century and a half of lost ground.

By the 1970s, farming on the Strait had evolved from an instrument of dispossession to a means of protecting the 'valued rural character' of the 'Trust islands.' In the 21st century, new techniques of farming the sea have become a preferred instrument for re-possession of indigenous peoples' rights to marine space and resources.

Resources versus recreation on Howe Sound Close to Vancouver and contiguous with the "Sea to Sky" corridor in which the province and local governments have invested many hundreds of millions of dollars, Howe Sound is now closely associated with various kinds of recreation and tourism, from wind surfing and scuba diving to fishing and cruise ships. Many of the sound's older, resource based activities have ended while tourism and recreation, and a real estate market that draws upon its proximity to them, have become the backbone of the local economy. Though the change from resource mine to recreation space is a dramatic one, the transition has been gradual, and it is still contested today.

Many places on Howe Sound were valued recreation space throughout the twentieth century because of its secluded beaches, good fishing and proximity to the Vancouver metropolitan area. The sound was closed to all but recreational salmon fishing in 1969¹⁵ and a few years later SPEC called for the entire sound to be designated a recreational area, protected from any further industrial development. Since then most development on Howe Sound has followed SPEC's vision, with the closure of the giant Britannia copper mine and, more recently, the aging pulp

mill at Woodfibre. Both sites left their own toxic legacies of heavy metals or PCBs, dioxins and furans in the waters of the sound, though the province has recently begun a costly long term programme to contain to acid drainage from Britannia. Another old pulp mill still operates at Port Mellon but with far less impact on the marine environment since a refit twenty years ago. Results of the sound's rehabilitation have been encouraging, with once abundant marine life returning to places long abandoned. A few Pink salmon were reported spawning in Britannia Creek in 2012, for the first time in eighty years. With the help of volunteers sealing off pilings soaked in toxic creosote, herring have begun to spawn again in the Squamish estuary. Dolphins and larger whales are also visiting the sound again.¹⁶

Others still view Howe Sound – at least its less populated western shore - as a valuable industrial location and there is growing tension between opposing visions for the future. The abandoned pulp mill site at Woodfibre has been identified as a potential liquefied natural gas (LNG) storage and export facility. A few miles south of Woodfibre, a Calgary based firm proposes to extract, crush and barge out up to four million tonnes of gravel annually, for twenty years, from a site on McNab Creek. Both projects are vigorously opposed by those who view the sound as 'restored natural space.' The proposed LNG plant may be particularly difficult to resist, as it figures prominently in the current provincial government's economic development strategy.¹⁷

Pollution and oil spills Daily volumes of municipal sewage dumped into the Strait increased by almost two thirds between 1983 and 1999, though a growing proportion of this domestic waste was subject to secondary treatment. By the early 21st century over half the coastal waters of the Strait were closed to shellfish harvesting, mostly due to sewage pollution. On the other hand, much progress was achieved in the final years of the twentieth century in reducing persistent organic pollutants in industrial effluent and concern today has shifted to polybrominated diphenyl ethers or PBDEs, a fire retardant now ubiquitous in the tissues of both marine animals and humans.¹⁸

As in the early 1970s however, the most contentious pollution issue on the Strait is not related to an ongoing source of contamination but rather one that *might* happen, in the event that large volumes of petroleum are spilled into the Strait. There is an escalating clash of interests between those who see the port of Vancouver as a national asset needed to move Canada's resource exports to the world, and others who see the Strait as a precious marine environment and treasured recreational space bordered by waterfront real estate worth billions of dollars that must not be exposed to the risk of a catastrophic oil spill.

This confrontation echoes discord in coastal areas around the world as do similar stories that have emerged on today's Strait, Many cities such as Vancouver, originally developed as ports, have grown increasingly disenchanted with port related activities and particularly with the environmental costs associated with them. In the Vancouver area, as in many older ports, much port activity has migrated out of the heart of the city in recent decades, but not far enough away to avoid conflict with other stakeholders on the littoral.

Vancouver's sudden emergence as a settler city owed much to its promise as a conduit for Canadian resource exports. Successive governments in Ottawa and Victoria have never lost sight of this critical function. Three federal port authorities created early in the twentieth century to govern Lower Mainland ports were consolidated in 2008 to create a single entity named Port Metro Vancouver. By 2011, Port Metro Vancouver was handling 122.5 million tonnes of cargo, almost eighty percent of its foreign trade. As always, most of this tonnage was exports of raw or semi-processed natural resources – lumber, wood chips, potash, coal and so on - as well as far smaller volumes of consumer goods imported in containers. Port authorities estimated (somehow) that their activities generated close to 130,000 jobs across the country in that year, \$6.1 billion in wages and \$10.5 billion in GDP.¹⁹

Petroleum products currently make up a modest portion of exports through Vancouver, though this may change in coming years. After 35 years of rapid economic growth, China's demand for imported hydrocarbons is now also growing rapidly. Heavy oil producers in northern Alberta, some of which are now Chinese owned, are anxious to improve their access to this market. One way of doing so is to increase the volume of heavy oil exported though Port Metro Vancouver.

While the value of Canada's Pacific portal on the Strait has increased, so has the value of the Strait for recreation and re-creation. The shores of the Strait today are a kind of cool, damp Canadian Riviera or Florida, a place whose natural physical endowments and clement climate (by Canadian standards!) continue to attract thousands of short term visitors and longer term

immigrants. Many who earn a living in the blighted landscape of northern Alberta's tar sands retreat to the Strait when they're not working. Most towns on the Strait, outside the Lower Mainland, are retirement destinations for refugees from Canadian winters east of the mountains.

Land along the shore of the Strait is mostly privately owned but it is also the site of some of BC's and Canada's most valued parks, including Stanley Park and many other municipal and district parks. The province's extensive network of marine parks and land based shoreline parks reaches virtually all shorelines of the inland sea, from Indian Arm to the Octopus Islands. Even the federal government, though it has never fully consummated its 'bold idea' of a national park on the Strait, has assembled an impressive collection of parkland there. Scattered through the southern islands, these were named a 'National Park Reserve' in 2003. Shoreline real estate is beyond the economic reach of most citizens in most places. But - just as the twentieth century Strait attracted luminaries from Rudyard Kipling and the King of Siam to the Aga Khan and Joanie Mitchell - in the 21st century it is the destination for discrete visits from a long list of contemporary celebrities, many of whom own property there. Park visitors and waterfront land owners share a vested interest in protecting the shorelines of these places.

Previous pollution control strategies on the Strait involved concentrating pollution in one place or counting on its subsurface dispersal from a fixed point over a well-defined stretch of the sea. An accidental oil spill on the Strait, by definition, could not be so carefully planned and controlled. As in the 1970s, there is widespread concern that different levels of government are poorly prepared for such a spontaneous event. An added cause of stress is uncertainty over the likely behaviour of diluted bitumen or 'dilbit' - the product now carried in many tankers plying the Strait – when it is spilled into the marine environment. Industry assurances that it will behave like lighter crude oil appear disingenuous following experience with a recent spill of dilbit into Michigan's Kalamazoo River. In the presence of much uncertainty over the likelihood of oil spills on the Strait and their impacts should they occur, the current debate over future growth in tanker traffic is reminiscent of debates in the late nineteenth century. Then, as now, the hazards of navigating the Strait were systematically understated by some and overstated by others, depending on who was backing which horse. A respected early study of the possible effects of an oil spill of the Strait (and Puget Sound) pointed out that the geography of the inland sea means that a great deal of its littoral – hundreds of kilometers of shoreline along inlets, bays and islands - would be exposed to damage from oil pollution, as well as large populations of migratory birds, ecologically important coastal marshlands and still significant commercial fisheries.²⁰

More recent studies have focused instead on the statistical probability of a spill occurring and on local capacities for responding to a spill. A study commissioned by Kinder Morgan, the proponent of a five billion dollar pipeline expansion that would increase oil shipments through the Strait by five hundred percent and entail the movement of over four hundred tankers annually, has concluded the likelihood of a spill to be very low. They have calculated a major spill is likely once every 460 years (about the same as the probability of a major earthquake); this probability sinks to about once in 2,300 years, they say, once suitable "mitigation measures" are in place.²¹

Opponents point to other evidence suggesting oil spills are far more likely and doubt that there is sufficient local capacity to mitigate the risks. They invoke evidence that the responsible federal and provincial authorities on the coast are mostly unprepared to deal with a major spill. A demonstration of local spill response capacities backfired in 2013 when the flagship of the oil cleanup fleet ran aground on its way to a scheduled press conference.²² A study commissioned by the current provincial government, committed to ensuring a "world class" capacity to respond to coastal oil spills, further confirmed the current state of unreadiness. ²³

Efforts to greatly increase oil shipments through the Strait will remain the focus of considerable political struggle over the next several years. The Strait's shoreline communities are mostly determined to defend their treasured recreational resources while many people, perhaps most, in the rest of the province and western Canada are convinced of their historic right to use the Strait as a highway to world markets.

Neo-liberal governance of the Strait The Federal government has authority over the marine environment and is clearly committed to the rapid development of the infrastructure needed to expand Alberta's heavy oil exports. Ottawa's commitment to carefully managing the marine

environment is far less clear, partly because their tight control over different types of information makes it very difficult to ascertain exactly what they, or their scientists, really know or think about such issues. Yet it is impossible to imagine a minister of the current federal government stating - as did federal Minister of Fisheries Jack Davis in 1970 - "the combination of property and recreational values in the Strait of Georgia is so great that its possible contamination with oil could not be countenanced."²⁴

Davis became Canada's first Minister of Environment shortly afterwards and the capacity of the federal government to manage the marine environment of the inland sea developed, albeit slowly and unevenly, in the following decades. It has been shrinking rapidly in recent years under the Harper government. In 2012 Bill C-38, an extraordinarily wide reaching 'omnibus bill' disguised as a federal budget, greatly reduced the scope of Ottawa's involvement in many areas related to marine protection. Responsibility for much environmental assessment of new infrastructure projects was downloaded from the federal to provincial governments, many of which, including the one in Victoria, have little demonstrated capacity to carry out this role. Protection of fish habitat has been reduced while different types of pipeline construction activities under federal scrutiny have been granted new exemptions. Budgets for environmental monitoring and restoration in the federal Gulf Islands Park Reserve have been cut.

The federal Department of Fisheries and Oceans, as Environment Canada, has also been shrinking. It is widely criticised by independent scientists and community groups for failing to pursue its mandate to ensure the long-term viability of marine resources and habitats. The controversial policy of ensuring "no net loss" of fisheries habitat remains in place, despite widespread evidence that it does not work and results instead in considerable "net loss."

As in the 1970s the provincial government remains preoccupied with 'dollars and sense' issues on the Strait, resisting pressures from local environmental lobby groups even as their own capacities and analyses suffer from profound gaps and oversights. The federal and provincial governments are far better aligned than they were in the 1970s however, sharing a vision of future prosperity based on hydro-carbon exports. The federal government is partial to heavy oil; the province prefers liquefied natural gas. The two administrations also share a commitment to shrinking the machinery of government, including government capacities for environmental management. The province's system for environmental impact assessment - to which the federal government aims to defer as much as possible in the future - is wholly inadequate. The provincial Auditor General's report for 2011 reported that Victoria's Environmental Assessment Office had become virtually a rubber stamp for industry, rejecting only one out of 219 development proposals submitted in the previous fifteen years, while failing to carry out any monitoring to ensure that approved projects met their legal obligations for environmental management. The province's approach to environmental assessment reflects a commitment (shared by the federal government) to allow industry to 'self-regulate' wherever possible. Many citizens and local governments around the inland sea question whether this will be sufficient to prevent accelerating environmental degradation or respond to major accidents such as oil spills.

Local governments around the Strait are generally far more concerned than their senior counterparts about the damage that might result from the activities of 'self-regulated' industries. But these lower levels of government mostly lack the capacities and legal authority to challenge initiatives favoured by Victoria and Ottawa. The larger and most vulnerable players among them, such as the City of Vancouver, will almost certainly pursue whatever other means are at their disposal, starting with vigorous representation in the federal hearings being launched this year, over the proposed expansion of a pipeline that would dramatically increase diluted bitumen flows through Burrard Inlet. Most First Nations, municipal and regional governments lack the technical capacities needed to participate effectively in environmental management on the Strait. But they do wield considerable influence stemming from their unresolved land claims and could play decisive roles in future disputes with the province and Ottawa around the Strait.

Some analysts propose provincial legislation to create some form of 'integrated coastal zone management' that can address rising conflicts and threats of degradation on the Strait.²⁵ Echoing Roderick Haig-Brown, contemporary critics of such approaches are sceptical of the ability to deliver the promised results. Rather than providing opportunities for diverse interests to participate in the planning and management of valued coastal areas, say their critics, such approaches may simply provide a fig leaf, a smoke screen for the dominant players to continue exerting control over shared space and resources. Nonetheless, on a Strait threatened by large new projects with unknown and potentially very negative consequences, 'integrated coastal zone management' would be a marked improvement over the current governance vacuum.

Declining ferry service on the Strait and the decline of tourism and recreation Many in communities around the Strait outside the Lower Mainland see further evidence of failed governance in the downward spiral of their ferry service. Since its 'semi-privatisation' in 2003, the erstwhile provincial crown corporation has seen its ridership plummet, its costs and fares soar and its 'losses' (earlier known as 'operating costs') continue unabated. While the corporation's many managers received a variety of bonuses in the past decade, BC Ferries vehicle and passenger numbers fell steadily. Vehicle traffic in 2012 was the lowest in thirteen years, passenger traffic the lowest in twenty one years. Fares on the larger boats between the Lower Mainland and Vancouver Island have been increasing several times faster than the rate of inflation, on the smaller routes they have increased almost twice as fast again.²⁶

The communities most affected by declining ferry service are generally not supporters of Victoria's Liberal government, and are unlikely to get much relief from a government apparently determined to progressively 'eliminate subsidies' to what had earlier been considered an essential public service. The effects of this policy have been predictably devastating on communities dependent on ferries to help them overcome marine barriers to the movement of people and goods. It has been particularly devastating for the seasonal recreation and tourism activities that many coastal communities have come to depend upon for their economic survival. Journalist Stephen Hume reported recently that the "tourist dependent Gulf Islands" had lost a total of 2.7 million "visitor trips" since the privatised BC Ferries began reducing service and raising fares. Hume blamed disastrous ferry service for a decline in value of residential properties on the islands of over \$1.6 billion dollars between 2010 and 2013 alone.²⁷ Further cuts in service and fare hikes far beyond the rate of inflation were introduced early in 2014.

Ocean warming, acidification & rising sea level in the era of 'jobs, growth and prosperity'

A few truly new issues have arisen around the sea in recent decades and rapidly become entwined with the older stories. As the two senior levels of government pursue their goals of 'jobs, growth and prosperity,' those closest to the sea have begun to witness changes resulting from rising temperatures and shifting chemistry in the global atmosphere and oceans.
Sea temperature rises have been recorded all along the BC coast over the past fifty years with the highest – 1.5 degrees Celsius – recorded in the Strait of Georgia. The trend is expected to continue, causing some marine species to thrive and others to move north to cooler waters, or to perish. Pink salmon, for example, are the smallest and most thermally tolerant indigenous salmon species and appear likely to be the best adapted to such rapid temperature changes. Other salmon are less well adapted and more vulnerable to rising temperatures.²⁸

Except in places being uplifted by ongoing geological processes, sea levels are also rising around the Strait and the rest of the coast. The effects of this change will be relatively modest along many rocky shorelines but are likely to be far more dramatic in low lying areas such as coastal estuaries and the alluvial plains behind them. Most of these low lying areas are rich habitat for a wide diversity of animal species as well as the location of a great deal of agricultural, industrial and port activities and much densely populated residential land. Andrew Yan, a local planner, has estimated that the City of Vancouver, with over fifty kilometers of shoreline, will be obliged to spend more than \$500 million on dikes and seawalls in the 21st century and billions more to purchase the land for these structures. Damage to shoreline real estate and infrastructure is expected to cost a further \$25 billion.²⁹

The productivity of the inland sea is likely to be profoundly affected by growing acidification. As with rising sea temperatures, acidification may be more extreme on the Strait than in the open Pacific; or it may not - scientists are still debating the alternative scenarios. In any case, acidity levels are likely to broadly follow average pH levels of the open ocean, which have already declined from 8.2 to 8.1 and are expected to fall to 7.8 or below over the rest of the century as more CO₂ is absorbed from the atmosphere. This third trend may prove the hardest of all for many species to adapt to. It cannot be escaped by moving north, for example, and even species less sensitive to acidity will be affected by increased mortality among other organisms, such as zooplanktons, at the base of marine food chains. Shellfish farmers on the Strait have already begun to suffer from die backs of those bivalves most sensitive to increasing acidity.³⁰

To date, the response to these trends from governments in Victoria, and especially Ottawa, can most generously be described as 'cognitive dissonance.' Displaying the kind of short sighted profit seeking and chronic *'imediatismo'* that characterised most earlier industrial resource

exploitation around the inland sea, both governments appear determined to increase production and exports of hydrocarbons – oil, gas and coal – as quickly as possible. They are reminiscent of the smoker who has recently learned of a probable link between smoking and lung cancer. The news has made them nervous, causing them to smoke more heavily. They hope perhaps to enjoy the buzz just a little longer, before taking the necessary corrective measures. As most climate scientists arrive at the conclusion that the bulk of our hydro-carbons should be left in the ground if we are to preserve a semblance of global climate stability, the hydrocarbon industry, and governments controlled by them, grow more desperate to extract and sell the stuff as quickly as possible. Their approach could contribute to disruptive future changes on the Strait. Such change, as dramatic as it may be, would be a drop in the global bucket.

What does the Strait's history mean for today's policy makers?

Taken together, these five stories from the Strait's past and glimpses of its contemporary challenges confirm what is already known – or should be – by all those who must make decisions affecting today's Strait: This is a highly valued, complex and contested space whose management is remarkably challenging and is certain to grow more so in the future. Effective management of this space will be impossible under a neo-liberal governance regime of growing neglect overlain with ideologically driven hubris about the need for "streamlining" of government regulations. "Self-regulating" industries may be reliable when it comes to making the right decisions for their shareholders, at least in the short term. But they are not reliable managers of the diverse resources of the Strait that these industries share with millions of citizens who also have a stake in this highly valued space. If this precious sea is to be passed to future generations with some semblance of its inherent richness and diversity intact, then the wide range of public and private sector interests whose actions affect it need to be effectively guided and regulated. Getting such players - especially those from federal, First Nations, provincial, regional and municipal governments - working effectively together will almost certainly require some sort of "coastal zone management framework." This is the best available option, despite the recognised flaws in such an approach. On the other hand, quaint nineteenth century faith in the transcendent wisdom of the market place such as now animates the neoliberal economic ideologies of governments in both Victoria and Ottawa, will not succeed. If this misguided faith prevails then it is certain to lead to the rapid degradation of many valued

attributes of this region, as surely as it earlier led to the rapid decline of much renewable natural

resource wealth worldwide.

⁴ Haiti, with its rugged terrain eroded to the nubs, rainy climate and beautiful coastline, is as dysfunctional as anywhere in the world today. It is another disturbing example for British Columbians if they contemplate how that benighted place once was the resource-rich treasure chest of the eighteenth century French Empire.

⁵ Nursultan Nazarbayev is the President of Kazakhstan. A comparison between Stephen Harper and Vladimir Putin is more compelling, particularly their shared links with the hydrocarbon industry, their approaches to suppressing environmental activism and their determination to forge a path for their respective countries as "energy super powers."

⁶ Boris Worm et al. "Impacts of biodiversity loss on ocean ecosystem services." *Science* 314 (2006): 787-790.

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⁸ MB CAMS: "Hume" file: Hume, Stephen. "Coho decline a record of shame." *Vancouver SUN*, April 13, 2002.
⁹ S. Wallace et al, "Combining Knowledge of the Strait of Georgia," and J. Dalsgaard et al, "Mass–Balance Model Reconstructions of the Strait of Georgia: the Present, One Hundred, and Five Hundred Years Ago," both in: In: *Back to the Future: Reconstructing the Strait of Georgia Ecosystem*, edited by Daniel Pauly, Tony Pitcher and David Preikshot: 65-71, 72-86 (Vancouver: UBC Fisheries Centre Research Report 6, 5, 1998).

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¹² Richard White, "Are You an Environmentalist or Do You Work for a Living?" In: *Uncommon Ground: Toward Reinventing Nature*, 171-185, ed. William Cronon (New York: Norton, 1995).

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¹⁴ Juan Jose Alava, "Marine Mammal Habitat. An overview on Contaminants in Marine Mammals from British Columbia: Legacy versus Emerging Pollutants," in: *Stewarding the Sound-Taking Responsibility*, 14-15. Conveners Report of the invitational dialogue on management of sensitive marine ecosystems: lessons from case studies to identify solutions for Baynes Sound, April 3rd - 4th 2014, Simon Fraser University.

¹⁵ Armitage, Around the Sound, 203.

¹⁶ Ruth Simons, "A Vision for Howe Sound," *Strait Talk* (Summer 2013): 9, Accessed 12 April 2014, <u>http://www.georgiastrait.org/files/share/13_06_Strait_Talk.pdf</u>

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²⁰ Battelle Memorial Institute and Pacific Northwest Laboratories, "Oil Spillage Study."

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