

HOUSEHOLD ARCHAEOLOGY AT THE SCOWLITZ SITE,
FRASER VALLEY, B.C.

by

SANDRA LYNNE MORRISON

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Department of Anthropology/Sociology
The University of British Columbia
Vancouver, Canada

Date Dec 19, 1997

Abstract

This thesis examines the role of the household in the social history of Sto:lo society, and specifically its role in the development of social complexity. Based on the archaeological house remains from the Scowlitz site, this research proposes a model for household archaeology in the Fraser Valley as an independent line of evidence to investigate the emergence of Sto:lo social complexity. The primary assumption of this research is that the physical structure of the house itself is an accurate representation of its social counterpart, the household. Ethnohistorical and ethnographic data demonstrate that Sto:lo house size and architectural design relate to the size, status, and socio-economic behaviour of households. This thesis applies the model of household archaeology to the Scowlitz data and specifically questions how house size and architectural design change through time, and what these changes may indicate about the evolution of Sto:lo society. Structural features from four superimposed houses at the site document a general increase in house size over the past 3000 years, concurrent with increasingly greater investment being placed in house construction. These changes appear to correspond to transformations in the social and economic organization of ancient Sto:lo society, however future research is necessary to build on the Scowlitz material, and further define the relationship between house form, the household, and social change.

Table of Contents

Abstract.....	ii
Table of Contents.....	iii
List of Figures.....	iv
Acknowledgments.....	v
Introduction.....	1
Household Archaeology at the Scowlitz Site.....	2
Theoretical Perspective.....	4
House Form: Material Correlates of Social Inequality.....	8
House Size.....	10
Architectural Design.....	12
Domestic Artifacts.....	15
Research Questions.....	17
Archaeological Expectations.....	17
House Size.....	19
Architectural Design.....	21
Household Archaeology at the Scowlitz Site.....	23
Site Location and Regional Context.....	23
History of Household Research at Scowlitz.....	26
The Scowlitz Houses.....	30
Household Archaeological Data.....	32
House Size.....	34
Discussion of House Size Changes.....	41
Architectural Design.....	43
Discussion of Architectural Design Changes.....	46
Discussion and Conclusions.....	47
References Cited.....	51

List of Figures

1. Map of the Lower Fraser Valley showing the location of the Scowlitz site.....	25
2. Scowlitz site map showing location of excavation Area A as well as the 1993 burial mound excavations and house features.....	27
3. Location of the 1995 Area A excavation units and the 1993 Magnetic Trench.....	29
4. Area A showing contours of the Upper Platform (Structure 1).....	36
5. Plan of Structure 2 (Floor 2 and associated features).....	37
6. Plan of Structure 3 (Floor 3 and associated features).....	39
7. Plan of Structure 4 (Floor 4 and associated features).....	40
8. Structure 3 construction techniques.....	44

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Introduction

The goal of this project is to contribute to a better understanding of the role of household organization in the emergence of social complexity among the ancestors of the Sto:lo people inhabiting the Fraser River Valley, British Columbia, through the archaeological analysis of house remains at the Scowlitz site. The Sto:lo, a social and linguistic sub-group of the Coast Salish culture of the Northwest Coast, have undergone many socio-economic changes during the 3000 years prior to historic contact, most notably the intensification of resource production, and the emergence of social inequality. The quest to understand the process of emerging social complexity drives much of the current archaeological research on the Northwest Coast. A variety of theoretical perspectives and methodological approaches have been employed elsewhere in the New World to explore the social, economic, and political processes at work during this social transition, yet the archaeological analysis of houses and households has proven to be one of the most valuable methods (Wason 1994). The household was the basic unit of Sto:lo society, therefore large-scale changes such as the development of social inequality should have produced significant changes in household organization (Ames 1995: 159; Duff 1952). The diachronic analysis of domestic architecture -- the physical manifestation of the household -- should enable archaeologists to monitor changes in household organization, and ultimately the emergence of social complexity.

The household, intrinsically connected to social, economic, and political endeavors, has been a focus of recent research both because of its theoretical significance to the topic of the development of social complexity, as well as its methodological potential for archaeological investigation (Blanton 1994, 1995; Lightfoot 1994; Wilk 1983). Wilk and Ashmore (1988: 4)

define the household as a social unit that shares in definable activities such as production, consumption, transmission of wealth, reproduction, co-residence and shared ownership. These activities produce relevant physical remains which, when coupled with the archaeological context of the house, create the potential for archaeological research on emerging complex society. The expansion of household research has fostered an ongoing development of theoretical and methodological strategies in the study of the household's social, economic, and political position in society, and the ways in which this basic unit of society can address larger anthropological questions regarding social organization and culture process (Blanton 1994; Wilk 1983; Wilk and Rathje 1982).

Archaeological research on the Northwest Coast has focused on the questions of how, when, and why a complex social order developed in the absence of intensive agriculture and large controlling polities (Matson and Coupland 1995). Despite the growing body of research on this topic, the role of the household in the emergence of cultural complexity has yet to be fully explored in the archaeology of the Northwest Coast. Until recently, archaeological research on the Coast has primarily focused on excavating middens, conducting subsistence studies, and creating culture histories. This is ironic, since the household is the fundamental social-economic-political unit of Northwest Coast society, and as such it is an obvious topic for archaeological research to address (Ames 1995; Ames et al. 1992; Coupland 1996a, 1996b).

Household Archaeology at the Scowlitz Site

The Scowlitz site (DhRl 16), located in the Fraser River Valley 100 kilometers inland from the Pacific Coast, provides an ideal location to conduct household archaeology research. A series of cultural depressions and platforms, situated on a 200 meter long terrace overlooking the

confluence of the Harrison and Fraser Rivers in Sto:lo territory, represents the remains of an ancient village. Test excavations in two of the depressions in 1992 and 1993 have recovered evidence of at least four superimposed structures from one of the two test trenches (herein referred to as Area A), providing clear evidence of household occupation at the site (Blake et al. 1993; Matson 1994). Archaeological work conducted at the site in 1995 and 1997 enhanced the understanding of the occupational sequence at Scowlitz. The 1995 data provide the primary source of information for this research. The long term use of the site, as suggested by radiocarbon dates ranging from 2500 to 1000 years B.P., provides the necessary components to investigate house and household change as society's social and economic organization changed. The earliest dates for the houses at the site fall within the period that many ascribe to as the transition from non-ranked to ranked society (Burley 1980; Chatters 1989, Matson and Coupland 1995). Thus there is enormous potential at the Scowlitz Site for investigating change in house form during this critical period of social transformation.

The first stage of this research is to discuss the role of the household in Sto:lo society and specifically how the socio-economic behaviour of the household relates to the processes of emerging social complexity. The second stage is to establish the theoretical framework linking the physical structure of the house to the social status of the household unit occupying it. It will be argued that house form is a material expression of a household's social status, and therefore, the emergence of social complexity can be monitored and investigated through the diachronic analysis of houses. Specifically, the attributes of house size, architectural design, and domestic artifacts vary according to household social status. As such, the primary question of this research is, how do house size, architectural design, and domestic artifacts change through time at Scowlitz, and

how do these changes reflect transformations in the social history of the Sto:lo? The third stage of this thesis is to link these attributes to the ethnographic and ethnohistoric documentation of Sto:lo house form to determine how they vary according to the social status of ethnographically known Sto:lo households. Archaeological expectations of house form are then derived. The fourth stage is to examine and define the form and structural sequence of the Scowlitz houses, looking specifically at house size and architectural design, and how these changed through time. This thesis does not examine domestic artifacts primarily because of the sparse ethnographic descriptions available for comparative evidence, as well as the limited horizontal area excavated during the various seasons of fieldwork at Scowlitz. Comparing data from the Scowlitz house excavations with ethnographic expectations of houses and the general culture history of the area enables an evaluation of similarities and differences between ancient and ethnographic houses. From this information it is possible to make preliminary statements of how house form changed through time at the site between 3000 and 500 years ago, and how this reflects changes in household organization and social complexity.

Theoretical Perspective

This research is generated by the ongoing theoretical discussion of the rise of social complexity on the Northwest Coast. Traditional approaches to studying the development of Northwest Coast cultural complexity have been primarily concerned with explaining its origins using cultural ecological models (Feinman 1995: 256). Although many of these models (such as Suttles 1960) are useful for understanding some of the natural and social conditions from which social and political complexity arises, ecological perspectives are inherently limited in that they

often ignore human behaviour and social processes in the emergence of cultural complexity. More recent discussions of the emergence of complexity in this region have dealt with the socio-economic processes underlying this development rather than 'origin-focused' ecological analyses (Arnold 1996b). These process-oriented analyses of cultural development focus more on the actions and intents of social actors in the face of socio-cultural conditions to account for such changes.

With greater attention to human decision-making as a factor in the development of social complexity, archaeologists are now arguing that it was the actions of people accumulating a surplus of goods from abundant and reliable resources, such as salmon, that contributed to disparity in the economic wealth within society. This practice of surplus accumulation ultimately led to the development of an elite social class (Ames 1995: 162; Matson 1985: 246; Matson and Coupland 1995: 154). Rather than adapting to external conditions, people actively used available natural and human resources to maintain or increase their prestige and status. Coast Salish households participated in an economy of competitive economic behaviour, one based on an elaborate network of exchange (Suttles 1987). Households had to produce enough surplus to either give it away at feasts in exchange for symbolic wealth (prestige), or else use it to pay back debts and obligations established by higher ranking households (Boas 1896 : 235; Ames 1995; Blanton 1994; Hayden 1995). Much of the process of increasing social inequality was played out at the potlatch, feasts hosted by a household desiring to increase or validate its prestige and rights to inherited status and privilege by giving away wealth (Suttles 1987: 22). These links with other communities were a critical element of the social network and the development of differential wealth in Northwest Coast, because it was the distribution of

property at such feasts that brought honour and increased influence to the giver, and obligation and debt to the receiver (Boas 1896: 235).

The whole tribe and a great many friends from neighbouring villages were assembled to celebrate the great religious ceremonial which takes place mid winter. There was excitement in all the houses. Here preparations were made for feasts...Others were busy collecting all their property in order to pay off debts, which is considered one of the most important transactions in the life of these Indians.

(Boas 1896: 232-233)

In economic situations of abundant subsistence surplus, competition for resources occurred, and kin group ownership was more a source of wealth and status than a necessary means for survival (Richardson 1982: 101). Furthermore, this readily available surplus was used not as a leveling mechanism to equalize food consumption (e.g., Pidocke 1965; Ruyle 1973; Suttles 1960), but rather as a means to establish debt and inequalities in power through competitive feasting (Hayden 1995: 46-47). These occasions of social exchange and competitive feasting not only provided the opportunity to lure membership to a growing household, but also provided the arena where social obligations and debts were established and the dynamics of social power were enacted. The development of hereditary social inequality among the Sto:lo, as in many other societies, may have been an unforeseen result of the socio-economic process whereby emerging leaders were competing for prestige (Clark and Blake 1996: 259).

The critical relationship between surplus production and social status and power can be elaborated upon through a discussion of household economy. The household was the primary organizing principle of society, whether during the execution of daily and seasonal activities, or manifest in less tangible aspects such as social identity or ownership rights (Ames 1995: 159; Duff 1952). As the majority of subsistence production was household based, all economic

decisions that took place in a community, were based on the household: its needs, goals, and choices governed the actions it took as a participant in the economy. The household was the fundamental tie between status, wealth, and socio-economic behaviour (Hayden and Cannon 1982: 133). Households held title to resource extraction areas, were the primary organizing unit of labour, and provided the means to maintain ties with other communities through activities such as marriage, trade, and social gatherings. Since the household unit occupied such a central place in most Northwest Coast societies, the evolution of social inequality “cannot be understood apart from the evolution of the household economy” (Ames 1995: 157). The two are theoretically, and archaeologically, inseparable.

The key to a household leader’s success and prestige is thus the ability to accumulate surplus and wealth. This in turn depends on the size of the productive household unit and the leader’s ability to organize labour (Acheson 1995: 289; Feinman 1995: 270). The nature of Sto:lo society’s economic base in the Fraser Valley region required people to engage in complex simultaneous tasks to take full advantage of natural resources. For example, people had to schedule fishing in the middle Fraser River, which itself required a large labour force, with other subsistence activities, such as hunting land and sea mammals and gathering plants (Ames 1996: 145; Coupland 1996b: 121). As resources themselves were relatively abundant, labour was the critical factor in the quest for status. (Coupland 1996b: 128). In order to be more productive, households engaged in many activities, not just salmon fishing, and therefore larger households were more successful. The emerging elite maintained larger residential groups in order to enhance their resource procurement, the profits of which could be invested in prestige competition (Clark and Blake 1996: 260; Cliff 1988: 217). Incipient elites required large amounts of surplus of

production to fuel their social power. Competing for prestige, based on the effective control and exploitation of resources, meant competing for people - their labour and support (Arnold 1996a: 7; Clark and Blake 1996: 260; Feinman 1995: 270). The desire to accumulate surplus for acquiring prestige resulted in, whether intentional or not, emerging leaders increasing the size of their household unit (Coupland 1996b: 128). People were encouraged to join the household through traditional means of kinship, marriage, and co-residence (or perhaps by obtaining slaves) in order to increase its economic efficiency, and along with a larger household unit came a larger dwelling to house these additional members (Ruyle 1973: 609).

Social status on the Northwest Coast has been equated with access to and control over essential resources to compete for prestige and status, resources which included raw materials, labour, and wealth from surplus goods (Ames 1994, 1995; Arnold 1996b; Coupland 1988; Hayden 1995; Matson 1985; Matson and Coupland 1995). As the household was the primary unit in which these processes operated, it follows that these activities, and the resultant household social inequality, would be manifested in house size and form.

House Form: Material Correlates of Social Inequality

The archaeological analysis of architecture has been credited as one of the most productive means of studying the development of social complexity (Feinman and Neitzel 1984: 57; Wason 1994: 136). The physical form of houses, and the patterning and variability of material culture within them provide the basis for interpreting the nature of the household, and ultimately its role in social and economic processes. Given that architecture is not arbitrary, that it is an expression of culture which promotes enculturation and communicates social meaning, it can be used to monitor the social dynamics of past cultures (Blanton 1994; Mehrer 1995;

Rapoport 1969). People build houses, and they do so for a myriad of purposes extending far beyond the essential need for shelter. Labour is a conscious action; therefore, a house is a social product of this labour, not simply a component in a system of adaptation (McGuire 1992: 104). Even though environmental and technological factors predispose to a degree the nature of houses, it is the socio-economic processes affecting architectural variation, such as community and household organization, subsistence economy, and social inequality, which are the primary concern of this discussion.

Knowledge of the household and its role in the evolution of social complexity is limited to information which can be derived from the archaeological remains of houses (Lightfoot 1994). The primary assumption of this research is that the physical structure of the house itself is an accurate representation of its social counterpart, the household. House form is the result of decisive actions of household members who, in building the structure, took into account the need for space, the ability to mobilize labour, raw materials available, culturally accepted house forms, and the range of messages the household desired to communicate to their neighbours about their social position in society (Wason 1994: 136). In a society which does not display a regional settlement hierarchy, such as the Sto:lo, within-site variation in house form should not result from the environment, technological knowledge, or culturally accepted aesthetics, but from socio-economic factors, most notably social inequality (Flannery 1976: 16; Wason 1994: 136). Therefore, house structures: 1) symbolize the social status of the occupants, 2) collectively symbolize the social structure of the community, and 3) change in recognizable ways as the social structure of the society changes (Cliff 1988: 202).

As previously discussed, emerging elites' abilities to increase their prestige rest on three factors: their ability to control essential resources, their ability to mobilize and control labour (kin and/or non-kin), and their ability to maintain strong bonds with other communities. The implications of such household behaviour are that larger household units: 1) have greater productive efficiency to produce surplus needed for prestige competition, 2) have greater resources at their disposal, whether this be surplus accumulation or labour, and 3) tend to communicate their elevated importance in society through the material form of their houses (Blanton 1994; Feinman and Neitzel 1984; Hirth 1993; Mehrer 1995; Tringham 1991; Wason 1994; Chapman 1990). The articulation of these implications with house form is a result both of the functional need to shelter the household unit and efficiently manage its economic and social production, as well as the household's desire to express its social and economic status to the community. Three elements of house form document these implications in the archaeological record: house size, architectural design, and the patterning of domestic artifacts (Hirth 1993: 122; Wason 1994: 136).

House Size

Archaeologists rely heavily on house size as a measure of social inequality because there is a strong cross-cultural relationship between these two variables (Cordy 1981: 86; Hirth 1993: 122). Large households tend to form in situations where: 1) there is competition for key resources, 2) the technology associated with the extraction and production of key resources requires a co-ordinated labour force, and 3) a large number of tasks must be performed simultaneously (Coupland 1996b: 121). In the case of the Coast Salish economy, complex simultaneous tasks were required for the household to take full advantage of natural resources.

As a result, there is a strong positive relationship between household population (and thus house size) and rank or status of the household in the community (Acheson 1995: 285; Ames 1996: 146; Coupland 1996b: 121). As household leaders competed for prestige using wealth acquired from production surplus, it follows that larger households would be preferred because of their greater productive power (Cliff 1988: 214; Feinman 1995: 270; Hirth 1993: 123; Netting 1982: 657). Larger households, rather than seasonal aggregations of people, could deal with diverse or unexpected economic opportunities throughout the year, and thus would have greater potential to be successful in production for prestige competition (Ames 1996: 145). The impact of this intensified socio-economic activity on house size would be two-fold. First, there would be a preference for larger co-residential groups and larger houses to enable greater surplus production, and second, the subsequent competitive feasting would require the physical space to host kin, friends, and neighbours for the event.

Larger houses require a greater degree of investment to build; greater investment implies greater wealth and power of a household (Ames 1996: 132; Rathje and McGuire 1982: 708; Wason 1994: 137). Larger houses are also a manifestation of the social power of the household leader. The labour expended in the construction of houses positively correlates with the social rank of the household's leader in that he had the ability to mobilize labour for house construction, calling on social obligations and debts of others, or relying on an accumulation of wealth from surplus to "pay" people to do this (Cordy 1981: 86). Cordy's (1981) analysis of emerging social complexity on the Hawaiian Islands demonstrates how house size as an indicator of labour expenditure can be used to document status differences in terms of social power/wealth between houses within a community. Cordy (1981) tested whether this hypothesized relationship holds

true in a world-wide sample of ethnographic household data. Of the 56 societies Cordy (1981: 233-235) examined, *all* demonstrated a positive relationship between rank and the amount of investment involved in house construction.

Architectural Design

The expression of household status in architectural design, as with house size, is measured both by differences in the physical form itself as well as the varying degree of labour expenditure invested in house design. Archaeological attributes which relate to variations in architectural design resulting from differences in social status are: 1) exterior and interior elaboration of the dwelling, 2) the internal organization of house space according to family rank, 3) storage facilities, and 4) elements of construction such as substructure preparation (i.e., raised platforms), floor preparation, and the nature of building materials (Hirth 1993; Marshall 1989; Wason 1994). Architectural variation provides insight into the relative status of inhabitants because it demonstrates differing lifestyles such as differing production activities and rates of participation in ceremonies and feasts among households (Ames 1996: 133). Domestic architecture also reflects the availability of materials (both labour and wealth) for construction, and how the household occupants express their social status to the rest of the community through the medium of house form (Wason 1994: 111).

Elaboration of the dwelling, whether external (e.g., painted house fronts, welcoming posts) or internal (e.g., interior carved house posts), conveys to the rest of the community the wealth and importance of the household in society (Blanton 1994, Nabokov and Easton 1989: 229). The external elaboration of architectural style, along with house size and its location in the village, would have been the first indication to others of the household's status. The intentional

communication of the household's status indicates a desire and ability to differentiate themselves from the rest of the community -- a clear sign of social inequality.

The second attribute of architectural design that displays inequality in the social organization of a community is the spatial arrangement of families in the interior of a house. This could be recognized archaeologically through the placement of hearths, plank partitions, and/or artifact clusters. In societies where multi-family dwellings occur, such as the attached longhouses of the Northwest Coast, the internal ordering of space is a physical manifestation of the ordering of relations between people (Hillier and Hanson 1984: 2). For example, in Nuu-chah-nulth society, formal ranking is materially expressed in the internal ordering of household space (Marshall 1989: 15). The ideology of rank in society is upheld through household organization and ritual (Blanton 1995). All people who co-reside are socially positioned with respect to one another in the domestic setting. "Within a single household, the ranking of members was expressed materially in the location of family areas assigned within the Longhouse" (Mauger 1991: 25; Ruyle 1973: 609).

Third, evidence for storage has important implications for the model of emerging social complexity since it is part of a complex series of socio-economic processes. Storage facilities, critical to this process, serve to identify both the existence of storage activity, as well as its intensification and variation between households. Variation in the scale of storage facilities between houses of different ranks are expected to have occurred. Those households producing greater surplus for purposes such as competitive feasting require storage facilities capable of dealing with this level of production. Wealthier houses therefore, would be expected to have evidence of greater storage facilities.

The fourth consideration of architectural design from which variation in household social status can be inferred are those elements of house structure in addition to house size which reflect the relative amount of labour and wealth invested in its construction (Rathje and McGuire 1982: 707). Variables such as substructure preparation, floor preparation, and the nature of building materials have been demonstrated in many ethnographic and archaeological societies to vary according to social rank within a community (Cordy 1981; Hirth 1993; Wason 1994: 141-142). Substructure preparation (i.e., raised platforms) require large amounts of effort to build for a function which is rarely mundane (Wason 1994: 142). Platforms go beyond mere structural necessity by raising the house to a prominent position in the village; a position which suggests its importance in society. Variation in floor preparation and building materials between dwellings also reflect differences in investment of house construction. For example, laying down a clay surface for a floor, or leveling out a surface before house construction using excavation and fill techniques requires more effort, time, labour, and materials than a house constructed on an unprepared existing surface.

Obvious differences in labour expenditure have been noted above as a clear sign of inequality occurring between households within the community. This inequality may be interpreted in terms of prestige, wealth, or social power of the household within the community. In Sto:lo society, a house with a single owner was most likely built by "someone wealthy and influential enough to command the labour force required to build it" (Suttles 1991: 216). It also indicates that the expression of social status was permitted in society, and that these differences were both recognized and accepted. The archaeological investigation of measurable differences in

elaboration of style, internal patterning, storage facilities, and construction investment are concrete and productive means to trace the emergence of a complex society.

Domestic Artifacts

The house is a locus for daily activities which eventually result in material by-products for archaeological investigation. Daily activities and household practices are, by definition, marked by repetition, and often are confined by domestic architecture. These remains display material patterns within the house which are socially and economically induced (Lightfoot 1994). Therefore, patterning of household archaeological evidence can be an accurate indication of household behaviour. Domestic artifacts and their spatial patterning within the house and its associated midden also can reflect household status (Hirth 1993; Wason 1994). The nature and diversity of artifacts display the types of activities in which households participate and their control over certain resources. But most importantly, they document behavioural differences between households -- behaviour which may indicate differences in status (Richardson 1982).

Although the analysis of archaeological remains found on house floors can be a reliable means of interpreting household activity, it should by no means be considered an indisputably accurate means to interpret events which occurred in the house during its occupation (Samuels 1991). In recent theoretical discussions of household archaeology, increasing attention has been devoted to issues of temporal scale in archaeological interpretation (Binford 1986; Smith 1992). How can archaeologists be sure that the remains found on a house floor represent identifiable, definable activities, given that they result from years or generations of repetitive use and have been subject to site abandonment and transformation processes? The archaeological record is one rarely marked by discrete events. It is more often one which explains slow cultural processes,

change, and ever-recurring cycles (Smith 1992). Houses are often used and reused for generations and up to several hundred years (Ames 1995). Thus, what is visible archaeologically is a compressed record of successive household occupations as opposed to one, frozen in time. Interpretation of house content then must be done cautiously and should focus on long term patterns rather than discrete events and activities (Smith 1992). As such, it is often more reliable to analyze house form rather than artifacts because archaeological remains often reveal more about the place where activities were repeatedly carried out rather than the activities themselves (Smith 1992).

Given ethnographic descriptions of Sto:lo houses it is unlikely that household artifacts provide reliable archaeological information regarding social status in the absence of other supporting data. There is debate whether artifacts on the floor are truly indicative of household activities. "The floors of both pit and plank houses were sprinkled and swept daily...one would be most unlikely, therefore, to find any considerable collection of occupational debris inside house sites" (Smith 1947: 259). As most plank house floors were continually swept clean, the majority of reliable cultural material that remains to be analyzed is either domestic features, or material too small to be swept away (e.g., microdebitage, microfauna, and microbotanical remains). The patterning of floor midden material may provide information on social units within the house, but to be meaningful this requires extensive horizontal excavation (Samuels 1991). Given the ethnographic descriptions available and the limited amount of floor area excavated at Scowlitz, the analysis of domestic artifacts to interpret variation in household activities is unwarranted at this time. Although studying the patterning of domestic artifacts may have interpretative value, given these limitations, future research should take up the challenge, and

instead I will focus on house form to assess ancient Sto:lo household status inequality at Scowlitz.

Research Questions

In order to further our understanding of Sto:lo social history, and particularly the role of the household in the process of changes in socio-economic complexity, we must determine the diachronic nature of the Scowlitz archaeological house remains. This thesis will examine data from excavated Scowlitz structures in order to answer the following question.

1) How do house size and architectural design change through time at Scowlitz?

Relating the archaeological house data from Scowlitz to the theoretical and ethnographic information discussed in this thesis, I will then address the following two broader questions.

2) Does house size and architectural design relate to the status of the household unit?

3) Does the evolution of the household economy play a role in the emergence of social complexity?

Regardless of whether these questions can be adequately answered at this time, the Scowlitz data will increase our knowledge about the relationship between houses and households in ancient Sto:lo society, and thus it will be possible to evaluate the potential of household archaeology in the investigation of the evolution of social and economic complexity in the Fraser Valley.

Archaeological Expectations

The ethnographic and historic descriptions of house form and household behaviour should permit the construction of a reliable interpretative context for archaeological house data (Beaudry 1989: 86). Employing ethnographic analogy to derive archaeological expectations enables us to interpret house remains in a meaningful cultural context. Ethnographic Sto:lo house data come

primarily from two sources; 1) early explorers, most notably Simon Fraser's account of villages and houses of the Fraser River peoples during his 1808 expedition to the Pacific Coast (Fraser 1889), and 2) anthropologists working from a) first hand observation (Boas 1896; Hill-Tout 1904), b) ethnohistoric accounts, and/or c) oral histories (Barnett 1938; Duff 1952; Smith 1947; Suttles 1987, 1991). From this ethnographic literature a body of data regarding both the physical form of houses as well as the organization and behaviour of the household unit occupying them can be derived.

Sto:lo houses mirrored the social structure, daily and seasonal activities of their members, and represented the needs, desires, and goals of those who built them. Dwellings described during the ethnographic period were typically cedar plank houses; either large segmented (attached) or detached shed-roof structures. The smaller, detached shed roof houses were frequently used as summer dwellings, reserving the larger attached houses for the winter season. However, this was not a fixed pattern, and often longhouses were occupied year round. The frame (support posts, roof beams and planks) of the shed-roof house construction was independent of the walls, enabling both the easy dismantling of the exterior of the structure and expansion of the dwelling if household membership grew (Nabokov and Easton 1989). This expandability was important given the flexible membership of Sto:lo households (Suttles 1991), as well as the continual desire to increase household size to improve economic production. Another important element of the plank house was its large open interior that served as a location for frequent feasting and both community and inter-community gatherings.

These observations of Sto:lo plank structures are fundamental to the interpretation of house remains in the archaeological record. Although infrequent, these accounts provide the

necessary information to begin to reconstruct ancient Sto:lo village life in the Fraser Valley. Supplemented with more recent ethnographic and historic descriptions, as well as oral histories, it is possible to make a preliminary interpretation of the nature of ethnographic plank houses in a stratified Northwest Coast society. Using the variables of house size and architectural design, it is possible to derive archaeological expectations of house form in the presence or absence of a competitive economy and social inequality in the past to trace the emergence of social inequality at Scowlitz.

Archaeological Expectations of House Size

In the Fraser Valley, ethnographic evidence shows that larger house structures are indicative of larger household units (Hill-Tout 1904 in Maud 1978: 117) capable of engaging in many simultaneous tasks and having greater productive power and surplus accumulation. Duff (1952: 80) stated that the marks of wealth in Upper Sto:lo territory are a “big house, many wives, large and frequent feasts”, and that larger houses coincide with the growth in size and elaboration of ceremonial and social functions. These measures of wealth all inter-relate. The size of the house was a function of household size which in turn was dependent on the number of wives, the presence of slaves, and the intensity of production.

Simon Fraser’s 1808 account of houses along the Fraser River provides the first historical reference to house size, and internal partitions or apartments within a longhouse, and mention of the chiefly occupant of the largest apartment.

At a large village their houses are built of cedar planks; the whole range which is 640 feet long by 60 broad, is under one roof, the front is 18 feet high and the covering is slanting; all the apartments which are separated by partitions are square except the chief’s which is 90 feet long.

(Fraser 1889: 197)

The emergence of these massive structures may have represented the intensification of the household economy which may have begun as early as 3000 years ago (Burley 1980; Chatters 1989; Matson and Coupland 1995). The development of large houses seen in ethnographic times may not have immediately followed the initial stages of competitive economic behaviour and the introduction of other visible signs of status in the archaeological record. It may have developed slowly as status became more entrenched in society, and competition for wealth and prestige intensified. Coupland has suggested (1996a: 88) the subsequent increase in house size indicates a concurrent increase in co-residential size which "may have been part of the conscious effort by lineage chiefs to control and organize their household labour more efficiently in order to increase production, and thereby compete more effectively for status and prestige". As household leaders attempted to produce more surplus to increase their prestige, the size of their households increased, and ultimately, so too did the size of their houses.

Changes in structures are often slower than other forms of material culture due to their embeddedness in the cultural norms of society (Arnold 1996b). Therefore, I would expect to see changes and variation in house size emerging after other signs of differential social status (i.e., burials) first appeared in the archaeological record. However, with the ever-increasing drive of the prestige economy, change in house form would eventually emerge out of sheer necessity. I would expect to see variation in house size arise within sites first, indicating that some household leaders have successfully increased the size of their household unit and hence their productive capacity. Thus, where obvious and substantial differences in intra-site house size first occur in the archaeological record, the larger houses can be interpreted as the dwellings of high status individuals. Second, I would expect that an overall growth in house size over time would occur

as the society in general was attempting to increase productive capacity. What likely resulted from this process was the emergence of large segmented houses uniting corporate or household groups that work together to produce and distribute surplus in the prestige economy of Sto:lo society. As the economy of prestige-building, debt-making, and feast-giving became firmly entrenched, the growth of large shed-roof houses would have been the eventual outcome of these processes, as documented in the ethnographic record.

Archaeological Expectations of Architectural Design

Property was the outward symbol of rank and status among the Sto:lo, and as part of this pattern, status differences were expressed in house form (Barnett 1938: 130). However, the perishable nature of Sto:lo plank houses was such that only a small number of house features would have left traces in the archaeological record. Furthermore, only a few of these features would have been used in the display of social inequality present in society. For example, although the internal and external elaboration of Coast Salish dwellings expressed status differences through carved house posts, painted facades, and "dressed" house planks (i.e., planks finished by adzing), given the preservation conditions of the Scowlitz site, no data of this sort have yet been recovered. Second, only a small percentage of the structures' areas were excavated during the 1995 season, therefore, significant interpretations regarding the link between the interior spatial arrangement of the structures and social status are difficult to make at this time.

Third, an implication of the model of competitive household production and feasting and surplus accumulation is the expectation of storage facilities associated with households.

Ethnographic descriptions of storage practices include a number of techniques: storage pits, storage areas on house benches, and storage containers and preserved foods hanging from house

rafters. However, only storage pits would be recognizable archaeologically. Thus one would expect to see the appearance of storage facilities during the initial stages of the socio-economic process of surplus accumulation, followed by quantifiable variation of storage facilities between households indicating the differential success of household leaders in accumulating surplus. Ideally, greater frequency and/or size of storage facilities should positively correlate with larger house size. Furthermore, as with house size, I would expect to see storage facilities increase, both in frequency and size, over time as the society continued to participate in the economy of surplus production and prestige building. Although storage facilities were uncovered in association with some structures at Scowlitz, given the limited horizontal area excavated up to the 1995 season, and the fact that storage occurred in many other forms besides pits, it is still impossible to assess the diachronic variation in storage at Scowlitz. With future excavation at the site, it may yet be possible to test the relationship between storage, house size, and household status variation.

The primary means to determine variation in architectural design is through an analysis of the structural elements of architecture. If higher status households invest more in the construction of their houses, then I expect that following other changes in house form (such as size), variation in architectural design should also appear. There should be evidence of variation in substructure preparation, prepared floors, and building materials.

a) Substructure Preparation: It requires greater effort to raise house floors than to build on the natural surface (Barnett 1955: 56). "On sloping benches, the earth in front of wealthy men's homes was sometimes banked up with retaining planks so as to form a level area", and furthermore, platforms were often built in front of wealthy houses for the purposes of

potlatching (Barnett 1955: 38). On the northern Northwest Coast, Coupland (1996a: 75) identifies structural details such as “dug out floors and raised rear benches” as being elements of architectural design historically linked to houses of high status individuals.

b) Variation in floor preparation and building materials also correlates with status differences. Clay floors presumably require greater effort to construct than unprepared earthen floors. Cedar planks, more valuable and labour intensive to produce than bark slabs, were used by those who could afford them, their presence may provide a means to distinguish between the relative status of households (Barnett 1955: 35). However, the presence of cedar planks alone cannot be used to identify a wealthy house, only where differences occur at the same site can this be a reliable measure of social inequality. Furthermore, variation in building materials can only be determined in the archaeological record where the charred remains of houses have been uncovered.

In summary, if obvious differences are found to exist between structural preparations or aspects of design such as floor deposits and building materials, interpretations regarding differences in household status can be made. Furthermore, I expect that over time, greater amounts of effort, as reflected in structural preparation and design, would be invested in the construction of dwellings.

Household Archaeology at the Scowlitz Site

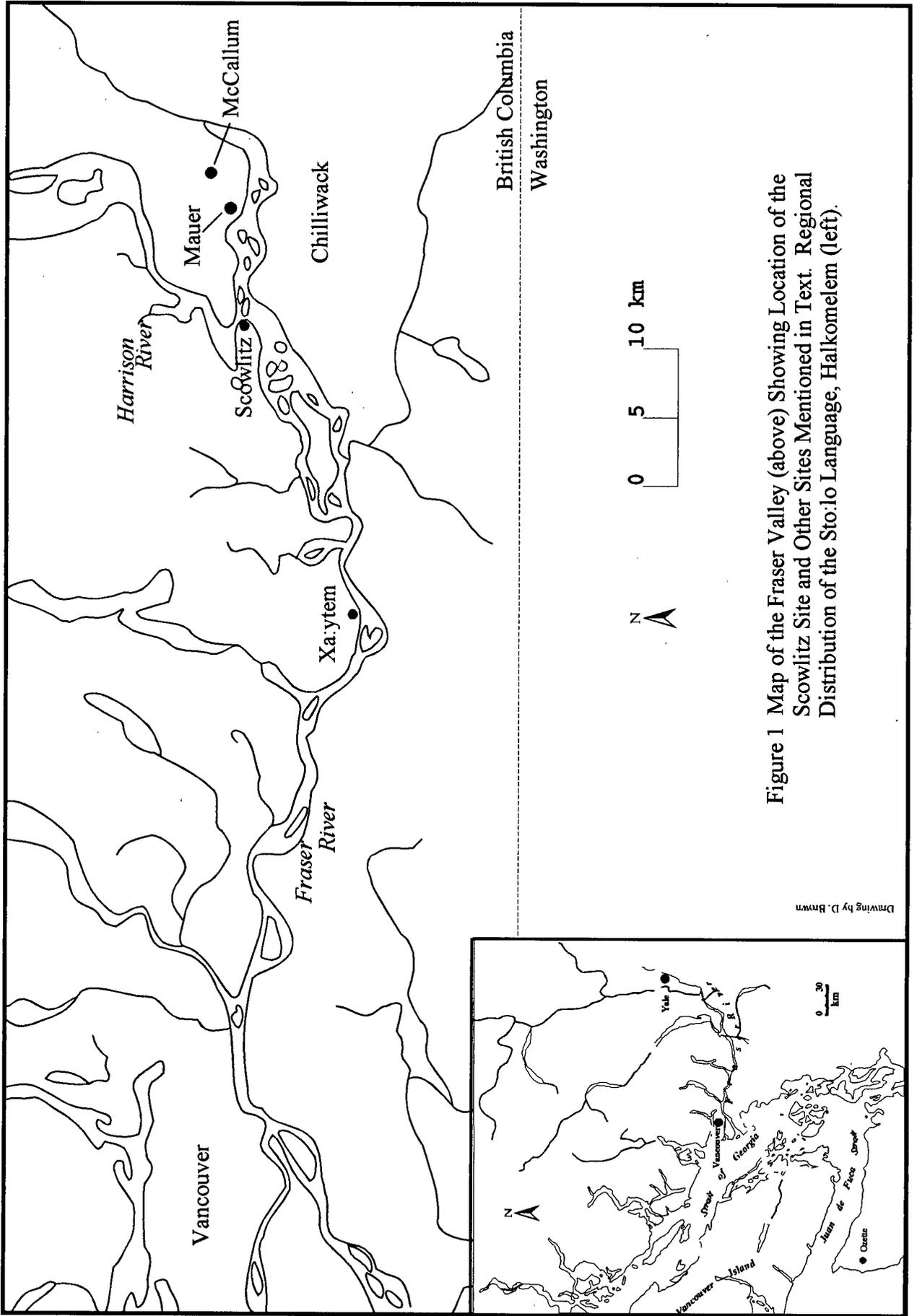
Site Location and Regional Context

The Fraser Valley has been home to the Sto:lo people and their ancestors for the past 9000 years. This long term occupation has left behind extensive remains of village sites along the Fraser River and its many tributaries. “At the mouth of any river of any size there was a cluster of plank dwellings” (Barnett 1938: 119). Archaeologists have found an abundance of large semi-

sedentary archaeological village sites which existed throughout the entire valley area. The varied and substantial resource base of the Fraser Valley and neighbouring mountains made the locality suitable for year-round occupation. However, the seasonal and diverse nature of the subsistence resources required a great deal of scheduling and mobility of labour for full resource potential to be exploited (Hansen 1973: 50).

The Scowlitz site was one of hundreds of large semi-sedentary villages in the Fraser Valley. Human occupation at the site began at least 2500 years ago and continued into the historic period. Archaeological remains at the site include burial mounds, dating from 1500 to 1100 years old (Blake et al. 1993), a wet site component, dating to 1200 to 600 years old (Bernick 1994: 22), to the remains of a plank house village dating between at least 2500 to 1000 years ago (Blake 1995; Matson 1994; Morrison and Blake 1997). Scowlitz's extensive history is partially due to its prominent position in the Fraser Valley. The site location at the confluence of the Fraser and Harrison Rivers (see Figure 1) is an ideal place for fishing, and thus provides the potential for economic surplus production. Furthermore, the Scowlitz site location facilitated trade and transportation, linking the coast and interior regions.

The site's occupation began as early as the Locarno Beach phase (3500-2400 B.P.) (Matson and Coupland 1995: 156). Although no radiocarbon dates have been obtained for this component, the presence of a Locarno Beach occupation can be inferred by an early house structure which stratigraphically predates one dated to approximately 2400 B.P. Furthermore, artifacts typical of the Locarno Beach phase have been recovered from the site's deposits (e.g., quartz microblades, leaf-shaped and stemmed points). Occupation of Scowlitz continued during the Marpole phase (2400-1500 B.P.), which has been confirmed by several



Drawing by D. Brown

Figure 1 Map of the Fraser Valley (above) Showing Location of the Scowlitz Site and Other Sites Mentioned in Text. Regional Distribution of the Sto:lo Language, Halkomelem (left).

radiocarbon dates taken from one structure ranging from 2330 to 2510 B.P. Typical Marpole artifacts (i.e., ground slate knives, triangular corner notched projectile points) were found in abundance throughout the site's deposits. Continuing into the Late Phase (1500-200 years B.P.), human use of the site encompassed both domestic activities, with a house structure dating to 1000 B.P., and ceremonial ones, with a large burial mound complex dating to between 1500 and 1100 years ago (Blake et al. 1993; Thom 1995). Following the site's use as a cemetery, the site was reoccupied near the end of the Late phase, and is evidenced by a structure which stratigraphically postdates the 1000 year old house. Small triangular side notched points also indicate that the site has been utilized in the last 1000 years. The site's long-term occupation enables a diachronic examination of the social changes at Scowlitz from before the first appearance of social inequality 2500 years ago until the protohistoric period.

History of Household Research at Scowlitz

Archaeological excavations began in 1992 as the UBC Archaeology fieldschool under the direction of Michael Blake investigated two of 40 burial mounds located at the site (Blake 1995; Thom 1995). At this time that archaeologists became aware of the village component of Scowlitz. In October of 1992 Gary Coupland of the University of Toronto conducted a test trench excavation to explore the nature of the surface depressions and platforms. This season was followed by further work by the UBC Archaeology fieldschool in 1993 led by R.G. Matson of the University of British Columbia (Matson 1994). The purpose of these excavations was to confirm the initial assumption that surface features did in fact mark the remains of ancient domestic structures. These investigations demonstrated that 1) structural remains exist at Scowlitz, 2) the structural features were well enough preserved to evaluate their size and

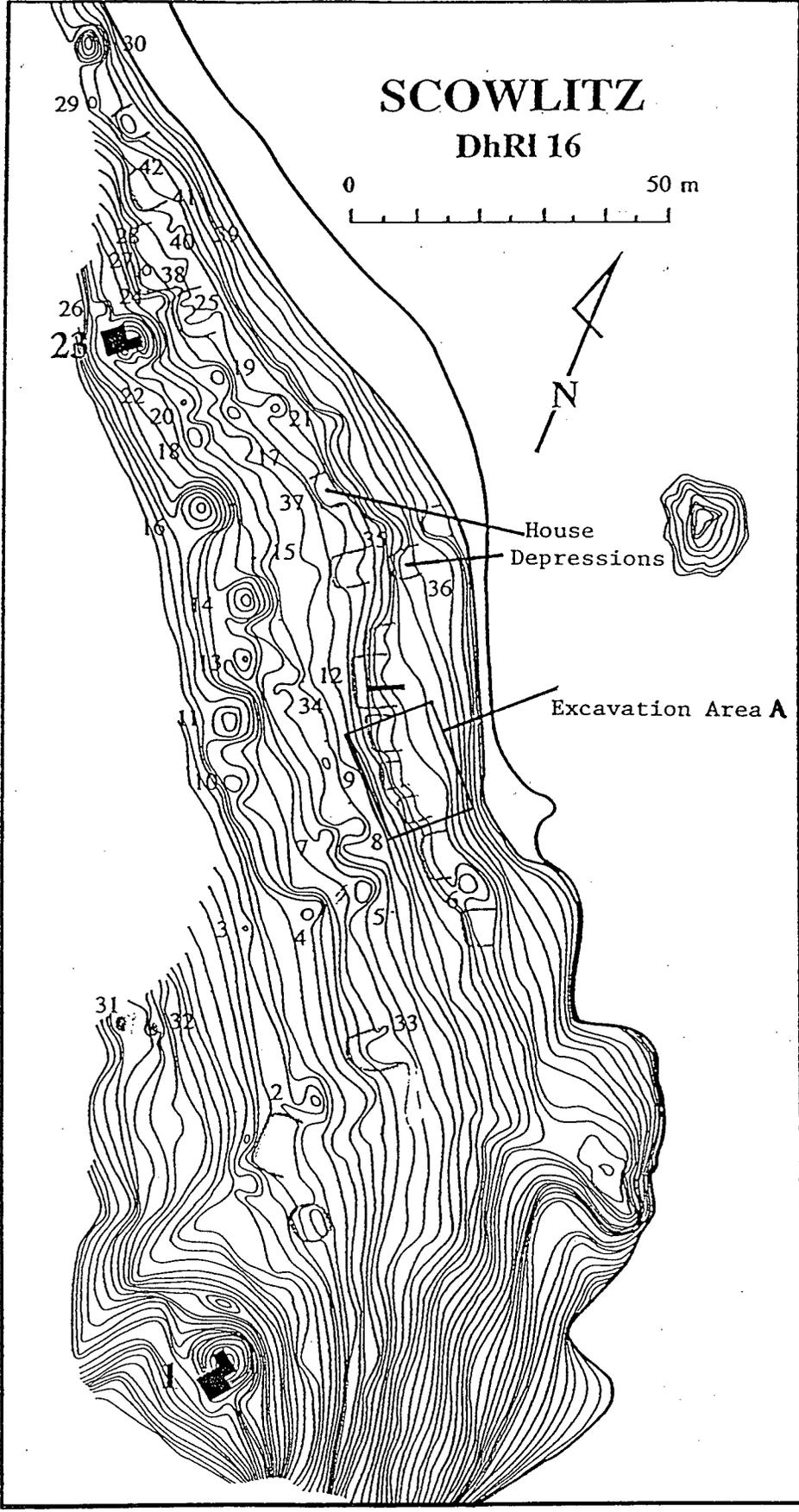


Figure 2 Scowlitz Site Map Showing Location of the Excavation Area A as well as the 1992 Burial Mound Excavations and House Features (Drawing by M. Blake)

architectural design, and 3) they were superimposed enabling a diachronic analysis of architecture.

Following the exploratory excavations of 1992 and 1993, further research was conducted at Scowlitz in 1995 by the UBC Archaeology fieldschool (Blake and Morrison 1997), and forms the primary data for this Masters research. The aim of the 1995 work was to expand the excavations of the Scowlitz house structures, focusing on evidence of structural variation through time. The 1993 trench was expanded both vertically and horizontally (referred to as "Area A", see Figure 3) in order to expose as much surface area as possible to determine the size and architectural design of the structures. We succeeded in defining a sequence of structures in Area A enabling preliminary interpretations of house form changes.

Based on archaeological evidence such as floor deposits, construction fill, pits, and post holes, most of these structures follow the expectations derived from ethnographic knowledge of Sto:lo houses. They appear to have been wooden plank houses with earthen floors, yet they varied through time in both size and architectural design. In Area A, four structural components were identified during the 1995 field season, two of which have radiocarbon dates. From most recent to the earliest deposit, the occupational sequence is as follows: Structure 1 (estimated to date between 1000-500 B.P.), Structure 2 (radiocarbon dated to 1000 ± 80 B.P.), Structure 3 (radiocarbon dated to 2270 ± 60 , 2450 ± 60 , and 2460 ± 90 B.P.), and Structure 4 (estimated to date between 3500-2500 B.P.)¹.

Archaeological research continued at Scowlitz in 1997 under the direction of Dana Lepofsky and Doug Brown of Simon Fraser University to expand the 1995 excavations. They

¹ All radiocarbon dates are uncalibrated

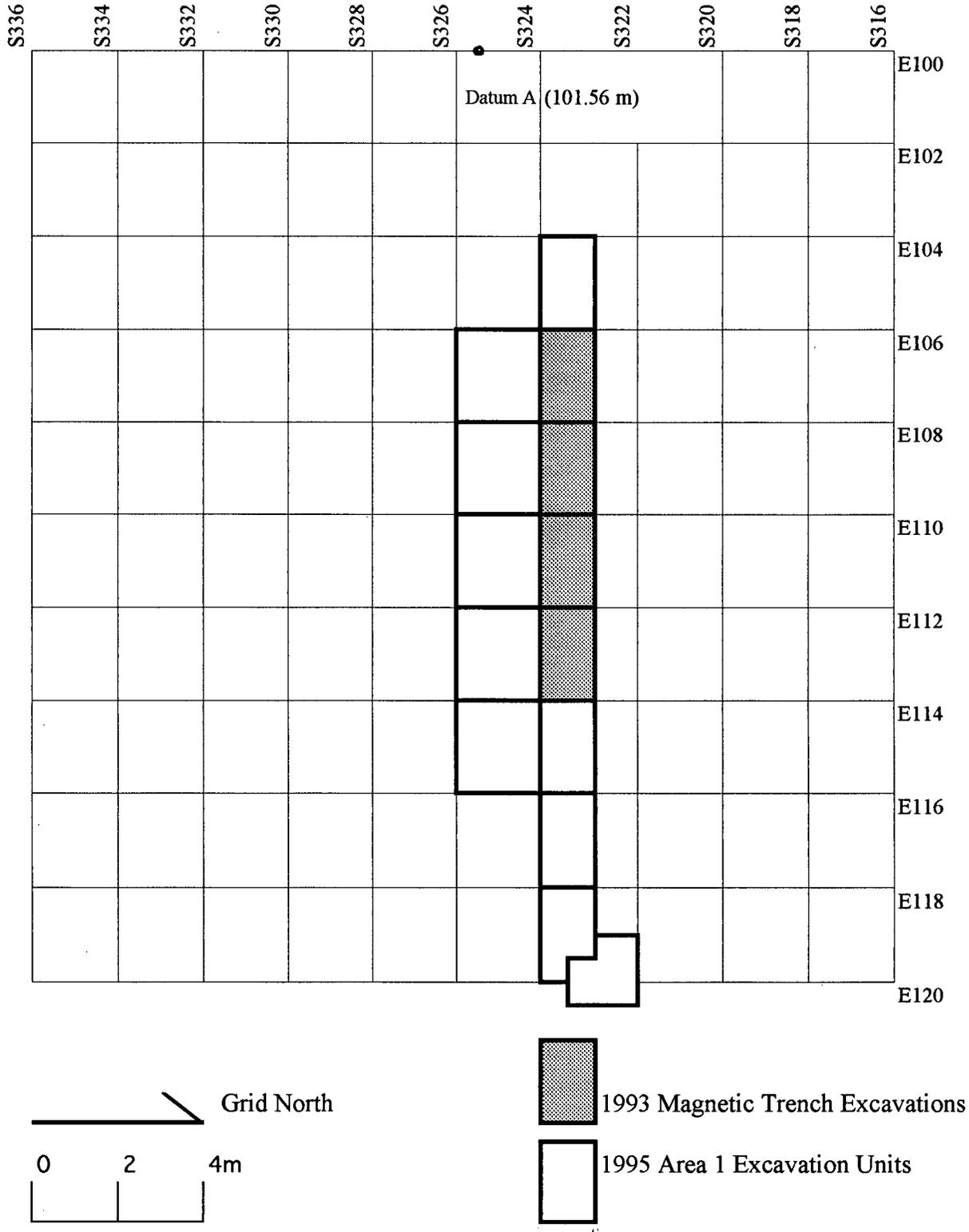


Figure 3 Location of the 1995 Area A Excavation Units and the 1993 Magnetic Trench

exposed approximately 50% of Structure 1, and parts of Structures 2 and 3. However, the 1995 data remain the primary source of information for this thesis, and where necessary, I will refer to the 1993 and 1997 excavations to supplement the information recovered during the 1995 fieldseason.

The Scowlitz Houses

Structure 1, the most recent in Area A, lies at surface level. Given its proximity to the surface, roots have severely eroded and disturbed the continuity and integrity of the deposit, thus, there is great difficulty in the identification and systematic analysis of any structural features of the house, including the floor. In spite of these difficulties preliminary estimates of both size and design have been made. Structure 1 sat atop a constructed platform, raised 30 cm above the surrounding terrace. From the surface features, the platform measures at least 10 meters by 20 meters in size. However, only the east edge of the structure was excavated. Additional excavations at Area A in 1997 have more clearly delineated the size, orientation, and to a degree, the construction techniques of the structure.

Structure 2 lies 30-45 cm below the surface (the difference in depth due to the slope of the ground surface) and predates Structure 1 by at least a few hundred years. The floor of Structure 2 displays characteristics typical of a Sto:lo plank house floor: an extremely compact earthen floor, void of large artifacts and fire cracked rock, and evidence of domestic activities such as microdebitage, microflora, and microfauna embedded in the floor. Much of Structure 2 was disturbed by intrusive burial cairn features which commonly occur at the site. Nonetheless, apart from the intact floor deposits and construction fill, three structural features were uncovered that reflect the age, size, and architectural design: a charcoal concentration which yielded a date of

1000 \pm 80 years B.P., a post hole, and a rock alignment that marked the eastern edge of the house.

The floor of Structure 3, 10 cm below that of Structure 2, is characterized by a compact layer of light olive brown clay found in large patches over the entire surface of the floor, interspersed by areas of black sandy silt where presumably the clay surface eroded away exposing the underlying compacted construction fill. Features and radiocarbon dates from Structure 3 make it the best understood structure in Area A. Identified features include intact floor deposits, construction fill, six pits, three post holes, one hearth, three carbonized planks, and one gravel bench. Two radiocarbon dates were obtained from two burned cedar planks lying on the floor surface. These date to 2270 \pm 60 and 2450 \pm 60 B.P. They are similar in age to another plank recovered on the same floor during the 1993 excavations: it dated to 2460 \pm 90 B.P. (Matson 1994).

Structure 4 is the earliest occupation in Area A, and its age is estimated at 2500-3500 years B.P. This estimate is based on the observation that it lies stratigraphically below Structure 3 and therefore must be at least 2500 years old. Artifactual data characteristic of the Locarno Beach phase (3500-2400 B.P.) (Matson and Coupland 1995: 178) suggest that there is a 3500-2400 year old component at the site. Even though only a limited area (1 by 4 meters) of Structure 4 was excavated, the feature information recovered allows a preliminary interpretation of house size and architectural design. Features such as a gravel bench, floor deposits, and construction fill suggest that Structures 4 and 3 are similar in construction and form. Both display evidence of cutting and filling techniques to level out the floor surface, and the surface of Structure 4 floor is remarkably similar in nature to that of Structure 3. The clay surface material

is quite consistent throughout the floor area except at the edges where it is highly eroded, a characteristic quite typical of earthen floors (Samuels 1991).

Household Archaeological Data

The interpretation of the size and architectural design of the Scowlitz houses is primarily dependent on features such as floor deposits, construction fill, post holes, pits, hearths, and benches. Each feature is defined and evaluated below for the information it can reveal regarding house size and design.

1. Floor: These are surfaces which extend horizontally on approximately an even plain, and are either intentionally laid down to be used as a living surface or the result of accumulated midden from household activities (Mauger 1991). Floors at Scowlitz are typically very compact due to prolonged walking, and void of large artifacts and fire-cracked rock, possibly as a result of being continually swept clean. Floors provide information on house size, and they provide an interpretive context for structural features found in association with them. The presence or absence of special floor preparation is used to interpret the relative degree of labour investment in house construction.

2. Construction Fill: This consists of the material imported from other areas on and/or off site in order to level out a surface for the house floor. Typically this matrix is midden material from the village occupation at Scowlitz, but also may include exhausted floor material reused from abandoned dwellings. The construction fill provides a source of information to infer construction techniques employed at the site. The volume of the fill, which takes a great deal of effort to transport, is another useful measure of the relative degree of labour invested in house construction.

3. Post Holes: these “hollows” or depressions form when wooden posts are removed (burned, pulled-out) or decomposed after building abandonment. Post holes at Scowlitz are extremely difficult to identify because when they are pulled out or decomposed, and then subsequently filled in with midden material, they come to resemble the surrounding matrix, and therefore may be distinct only in terms of compactness. The size, position, and orientation of posts are used to define the overall structure and internal spatial arrangement of the house (Ames et al. 1992; Mauger 1991).

4. Pit: Pits are intentionally excavated features that can serve a multitude of functions (i.e., caching, storage, or cooking) which appear archaeologically as depressions. Pits are useful interpretative aids for both the architectural design of a house, such as partitioning or activity areas, but also they indicate the nature of the economic activity of the household, especially the types and degree of storage that may have taken place.

5. Hearth: This type of feature consists of a concentration of charcoal, burned soil, and fire-cracked rock in a localized area which represents an intentional *in situ* burning episode (Mason 1994). This feature category is significant not only for its evidence of cooking activity in the house, but also for what it can reveal regarding the interior household organization or partitioning of individual family units (Samuels 1991).

6. Bench: This is a step-like feature which is the result of a natural terrace slope excavated to produce a level living surface (Mason 1994). These were often used as sleeping platforms or areas of domestic activities or storage (Mauger 1991). Since most benches probably run parallel to exterior walls, they provide reliable estimates of the orientation and size of the dwelling. They also help in determining the techniques used in house construction.

Comparisons of the Scowlitz house features can be made with data from other house excavations along the Northwest Coast and with ethnohistoric and ethnographic descriptions (e.g., Ames et. al. 1992; Coupland 1996a; Mason 1994; Mauger 1991; Suttles 1991). The location, types, and numbers of structural features in the archaeological deposits are used to determine variation in house size and architectural design of the Scowlitz houses.

House Size

The floor dimension running east to west was determined for all four exposed structures. Although this measurement does not provide a complete picture of house size, it is possible to trace the change in the east/west dimension of house size over time. Given the typical Sto:lo village pattern, where the long side of houses run parallel to the river bank (Suttles 1990: 462), the axis perpendicular to the river (east/west) should measure house width. Using this measurement as the definition of house size, the sizes of the dwellings are determined through the identification and analysis of structural features which mark the edges of the structures. For example, exposed floor area, benches which mark the back walls, post holes at the structure's edge, rock alignments which may have served as wall supports, and the presence of construction fill in association with floor surfaces are used to determine the structure's dimensions.

Structure 1

It is possible to estimate the total size (i.e., both length and width) of Structure 1. Size was estimated from the measurement of the surface of the constructed platform. The raised surface extends north to south at least 20 meters, and east to west 10 meters. On the western edge, the slope rises up sharply, which may indicate the back wall of the structure. The eastern edge dips down 20-30 cm over a horizontal distance of approximately 50 cm towards the river,

forming a fairly well-defined artificial platform on the terrace (see Figure 4). The excavation of the eastern edge of the platform demonstrates that the floor of Structure 1 corresponds with the surface contours of the platform. Using this correlation, I estimate that the dimensions of the dwelling were approximately 10 X 20 meters, giving a total estimated floor area of 200 m².

Structure 2

Given the structural evidence from the 1993 and 1995 field seasons it is possible to infer that the east/west dimension of the structure is approximately 10.5 meters (see Figure 5), based on the following data:

1. The western edge of the compact earthen floor associated with Structure 2 begins at E107.00 (Matson 1994).
2. The eastern extent of the floor is marked by a rock alignment at approximately E117.50. This rock alignment has interesting implications for both house size and architectural design. The rocks (11 in total) were arranged in a linear fashion following the edge of the compact floor. Five rocks were found stacked, one on top of another, on the floor surface near its edge. Six rocks were placed outside the boundary of the floor. Given their intentional placement in relationship to the edge of the floor, the rocks may have been used to support or reinforce the wall of the house.
3. The depth and diameter of the post hole # 1 (50 by 30 cm, and 40 cm deep) (Figure 5) indicates the dimensions of the roof-support post. The dimensions of the post hole approximate the size of the majority of roof-support posts at the Ozette site (mean size: 19 by 38 cm) (Mauger 1991: 77-80). As the post hole itself would be slightly larger than the post that once stood in its place, this comparison might possibly suggest that Structure 2 was similar in size to

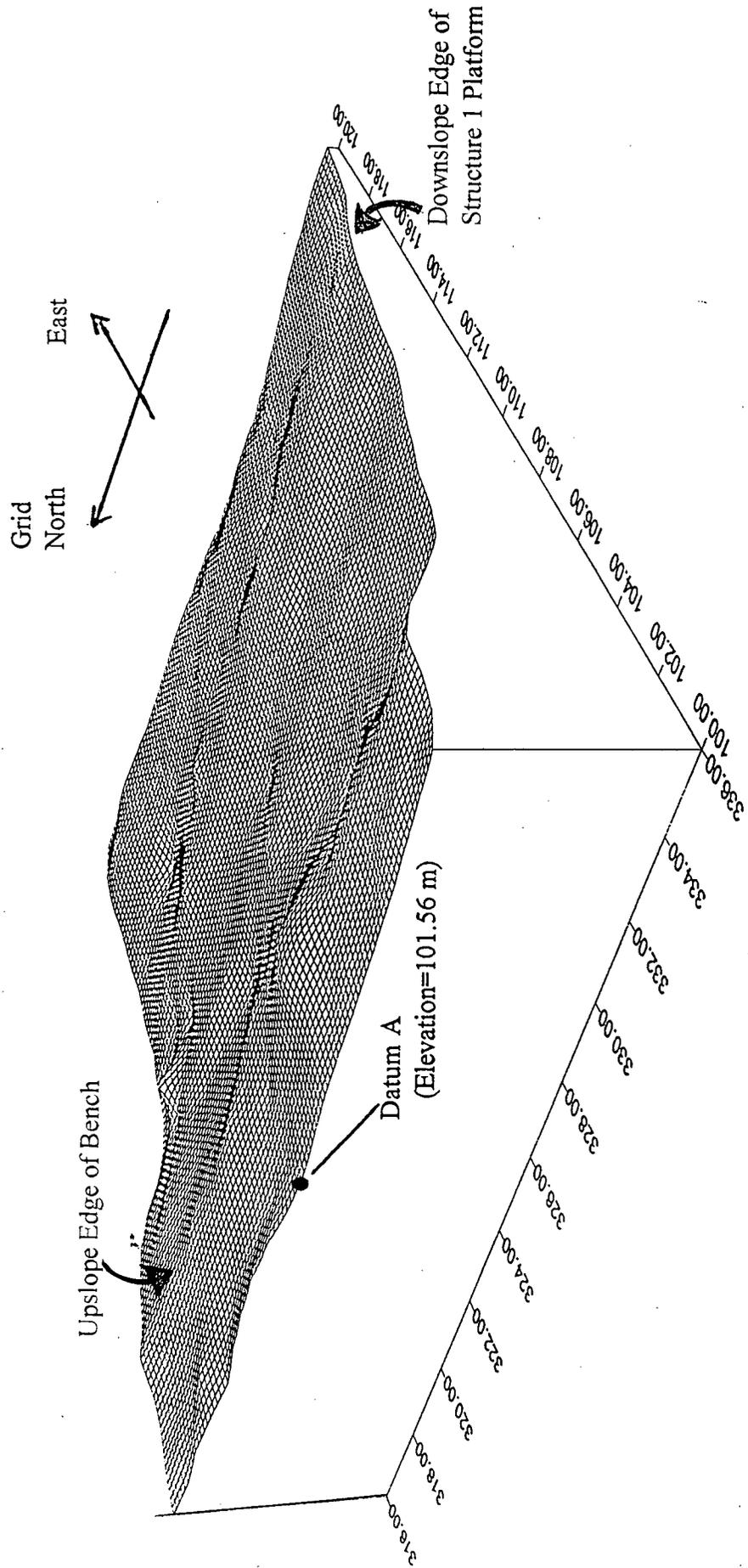


Figure 4 20 X 20 Meter Grid Area A Showing Contours of the Upper Platform (Structure 1)

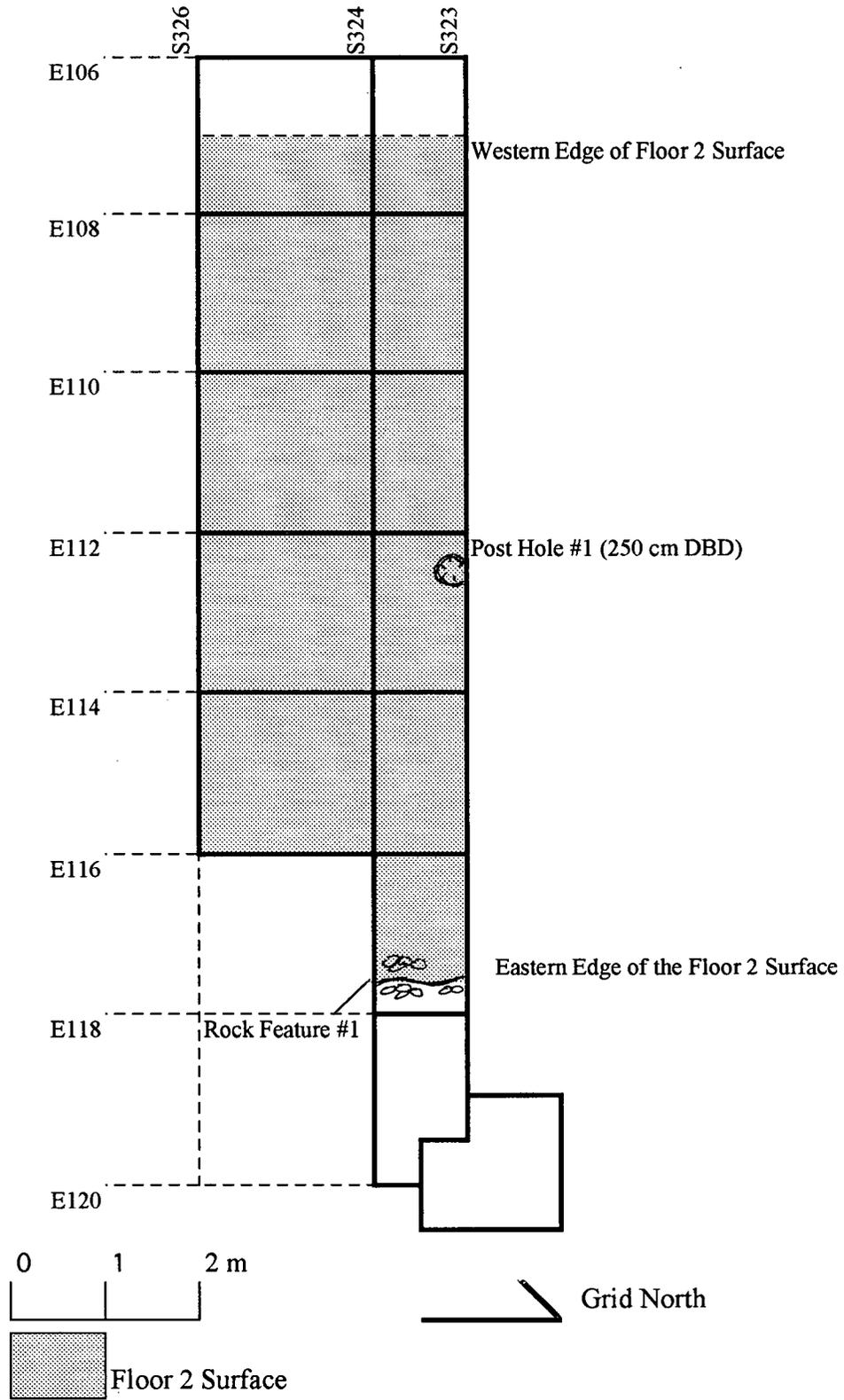


Figure 5 Plan of Structure 2 (Floor 2 and associated features)

the protohistoric structures excavated at Ozette (9 X 16 meters, and 12 X 19 meters) (Mauger 1991). A larger sample of post holes is necessary for more reliable comparisons.

Discussion of House Size Changes

Based on the four structures in the sequence, house size appears to have increased between the period of approximately 2500 B.P. (or earlier) and 500 B.P., with a dramatic increase in size occurring approximately 2500 B.P. From current data available, the structural sequence at Scowlitz Area A meets the general expectation of increase in house size through time. The

Structure 3

The east/west dimension of Structure 3 was estimated at 10.5 meters, based on the following data (see Figure 6):

1. A gravel bench feature located at E107.80 marks the back (west) wall of the dwelling. The bench was probably a cut into the sloped terrace, in order to create a level living surface.
- 2) The olive-coloured clay surface extends eastward to E118.30 where the floor deposits cease.

Structure 4

The size of Structure 4 is considerably smaller than the later structures. The east-west axis was approximately 4 meters wide (see Figure 7).

1. A second gravel bench feature, 20 cm deep, at E114.50 marks the western extent of the floor, where the clay surface extends up to its base.
2. The eastern edge of the floor extends to E118.50 where the clay eventually disappears. The eastern edge of the floor may have extended beyond E118.50, but it is too eroded to determine accurately.

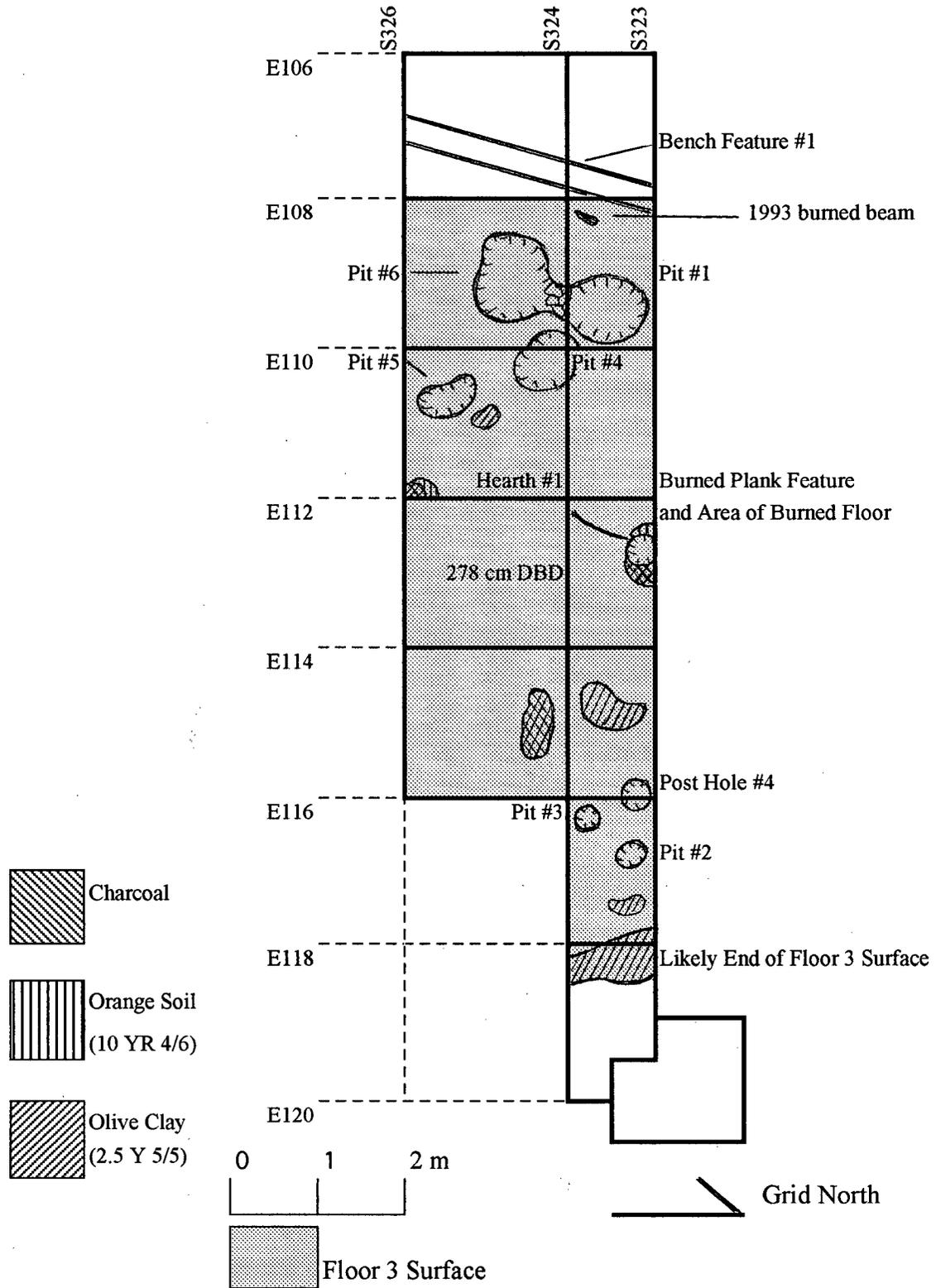


Figure 6 Plan of Structure 3 (Floor 3 and associated features)

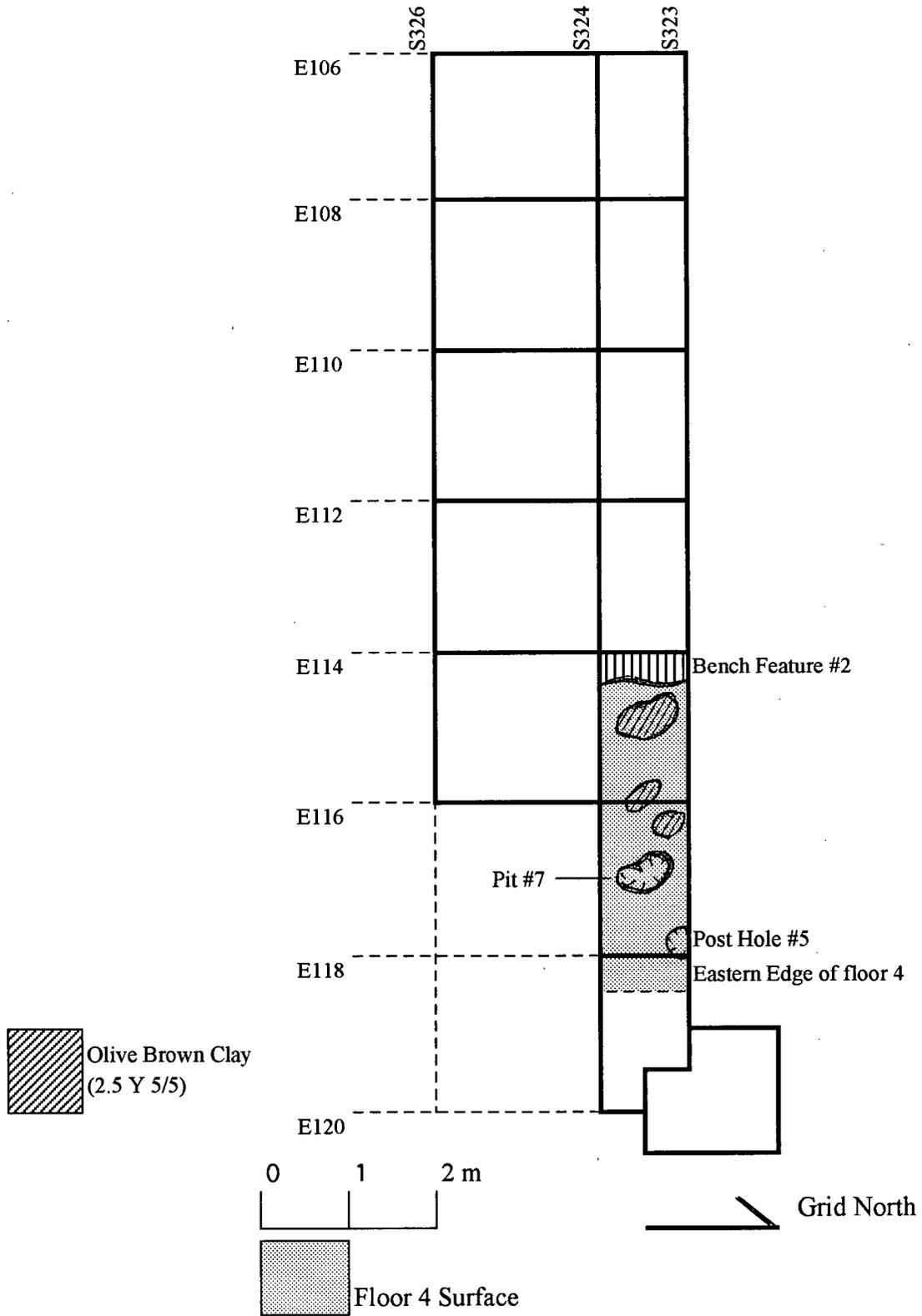


Figure 7 Plan of Structure 4 (Floor 4 and associated features)

earliest structure was the smallest of the Scowlitz structures, and smaller than two other Fraser Valley houses that are much earlier than Structure 4; the Mauer house (7 X 11 meters, circa 4000 B.P.) (LeClair 1978), and the Hatzic Rock (*Xa:ytem*) house (11 X 10 meters, circa 4500 B.P.) (Mason 1994). This suggests that house size at Scowlitz was still relatively small prior to 2500 B.P. It is unclear why the earlier Charles phase (4500-3500 BP) (Matson and Coupland 1995: 142) houses of *Xa:ytem* and Mauer are considerably larger than Scowlitz Structure 4. Without knowing the length dimension of Structure 4, it is difficult to determine whether the discrepancy is due to the incomplete size measurements of Structure 4, or whether a more significant reason for these differences exists. There is little archaeological evidence for intensified household economic activity during the Charles phase (Matson and Coupland 1995: 143), therefore the *Xa:ytem* and Mauer houses should not necessarily be expected to fit the trend in house size brought on by these processes beginning approximately 3000 years ago (Burley 1980; Chatters 1989, Matson and Coupland 1995). However, the *Xa:ytem* and Mauer houses may be exceptions to the general pattern in house size observed at Scowlitz, or alternatively, Structure 4 may be an example of a very small house for this time period. More comparative data are needed to fully understand the changing nature of house size in the Fraser Valley from the onset of the Charles phase to the ethnographic period.

The large increase in house size at Scowlitz circa 2500 B.P. corresponds to the currently accepted age for the emergence of social inequality on the Northwest Coast (Burley 1980; Chatters 1989, Matson and Coupland 1995). Prior to this date, the household unit, as depicted by the size of Structure 4, was still relatively small. From this information, I propose that the intensification of socio-economic activities such as the production of surplus and prestige

competition had not yet affected the composition of the household unit, nor house size. Other lines of archaeological evidence, such as the burial record, support this observation in that burials do not indicate the presence of ascribed status differentiation prior to the Marpole phase (Burley and Beattie 1989; Matson and Coupland 1995: 209; Mitchell 1971: 54). Thus, the household data from Scowlitz suggest that surplus accumulation beyond subsistence necessity, and ascribed status variation between households was not significant enough to be demonstrated in household size until after 2500 years ago.

The sizes of structures after 2500 B.P. (Structures 1, 2, and 3) are very similar in width, although their lengths are undetermined. They correspond to the 'detached' houses described by ethnographers in the historic period (for example; Hope 15 by 11 meters; Squamish 7 by 20 meters) (Duff 1952: 47-48), as well as Late phase and protohistoric houses of the McCallum site (17 X 9 meters) (Smith 1947), and the Ozette site (House 1: 12 by 19 meters, House 2: 9 by 16 meters) (Mauger 1991). Future research may indicate size variation through time *after* this initial increase in size 2500 years ago, possibly resulting from ever increasing demands of the prestige economy.

However future research is needed in order to determine the lengths of all the Scowlitz structures so total size and estimated household population can be compared. However, the data acquired from Scowlitz thus far support the expectation that the increase in house size occurred around 2500 years ago, and thus parallels the expansion in the size of the household unit which grew in response to the intensification and requirements of the storage and prestige economy.

Architectural Design of the Scowlitz Houses

Architectural design is defined and interpreted on the basis of a number of archaeological variables identified as culturally significant in the theoretical and ethnographic literature as a measure of social status; 1) internal and external elaboration of houses, 2) internal spatial patterning of houses, 3) storage capacity, and 4) amount of investment in construction. The archaeological data recovered from the Scowlitz site allow a preliminary examination of the amount of resources and labour invested in the construction of dwellings. The features relevant to this assessment - - substructure preparation, floor preparation, and building materials - - are indicators of the relative time, labour and wealth that went into the construction of the dwelling.

1. Substructure Preparation:

On his trip down the river in 1808 (Smith 1947), Simon Fraser's observations of the large plank houses flanking the river's edge notes the presence of constructed surfaces (through a process of excavation and fill) on which the houses sat. Constructed platforms on which massive shed roof structures were built were also identified in the ethnographic period (Matson and Coupland 1995: 208). Barnett (1955: 38) associates these constructed platforms with the houses of wealthy individuals.

Structure 1

Substructure preparation for Structure 1 differs from Structures 3 and 4 in that it does not appear to be excavated out of the natural slope to create a level surface. Instead, it was built up onto the terrace creating a raised platform on which a house could have been built. The platform was raised 30-35 cm above the existing ground surface. The fill was composed of re-deposited midden matrix (as with the earlier structures).

Structure 2

The substructure preparation of Structure 2 is not clearly understood because much of the stratigraphy of this layer was destroyed by an intrusive burial cairn in the western portion of the house. However, in the eastern end from E112-E118, construction fill ranged from 15-20 cm thick. There is no direct evidence for the floor being cut out (i.e., from a bench feature) at the up-slope end of the dwelling. As with Structure 1, it appears that the structure's surface was created entirely by building it up with construction fill.

Structure 3

The construction fill ranges from 5-25 cm thick, with the greatest depth occurring at the eastern end of the house.

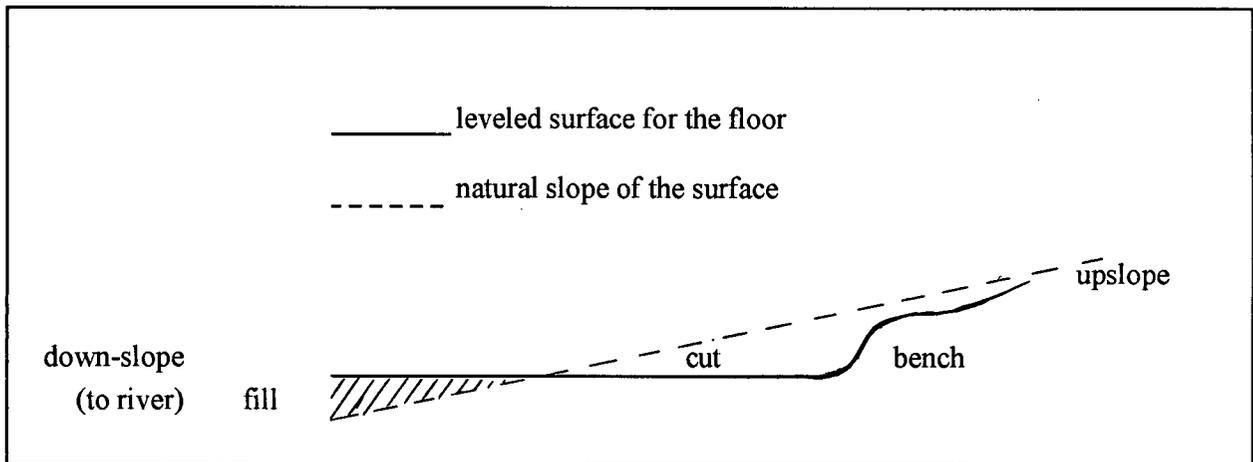


Figure 8 Structure 3 Construction Technique

Similar to the construction fill of Structure 4 (and also evident in other houses of the Northwest Coast, e.g., Ozette, Xa:ytem, McCallum), the fill is shallower on the up-slope side of the house, and deeper on the down-slope side. This is the result of ground leveling prior to house construction. The up-slope side was cut into in order to produce an even surface, which created a bench feature at the back of the house (Figure 8). The down-slope was built up with

construction fill to create a level floor. The gravel bench marks the 50 cm deep cut into the terrace on the up-slope side of the house.

Structure 4

Structure 4 directly overlies sterile soil in the western (up-slope) side of the house, and the construction fill depth ranges from 5-15 cm on the eastern end (down-slope). Substructure preparation primarily entailed leveling the surface through excavation of the terrace slope (creating a bench at the western end of the dwelling 20 cm deep), and then, as with Structure 3, construction fill was brought in to build up the eastern end to create a level floor surface. The depth of the fill increased further down-slope it (10-15 cm maximum), and was but 3-5 cms thick at the up-slope end.

2. Floor preparation:

Floor deposits for the Scowlitz houses can be divided into two groups: prepared clay surfaces, and earthen floors. Structures 3 and 4 display a light olive brown clay that was used to create a smooth floor surface. Although this clay was never continuous, significant concentrations on the surfaces of Structures 3 and 4 indicate its intentional placement. The upper two floors of Structures 1 and 2 display no special floor preparation beyond the compaction of the fill matrix and the removal of any sharp objects from the surface of the floor. Plain earthen floors were common to this area, and were observed in Sto:lo houses during the ethnographic period (Smith 1947). Over time, these midden floors became extremely hard from walking, stamping, and cleaning.

3. Building materials:

Structure 3 was the only dwelling excavated at Area A that provides evidence of building materials. This consists of the remains of two burned planks lying on the surface of the clay floor. They were both Western Red Cedar², and are consistent with ethnographic Coast Salish houses (Barnett 1938, 1955; Duff 1952; Suttles 1991), as well as previous archaeological investigations on the Northwest Coast (Mauger 1991). No direct information exists for the nature of building materials used in construction of the other three structures, therefore, whether building materials varied at Scowlitz is indeterminate at this time.

Discussion of Architectural Design Changes

Obviously more excavation is required at Scowlitz and other sites in the Fraser Valley before more reliable conclusions can be reached concerning the nature of variation in architectural design both within a single occupation and through time. Data from construction fill and floors themselves are our only current means to determine how the architecture in Area A changed through time. Throughout the occupation at Scowlitz, the changes that occurred in house construction and substructure preparation can be used to measure complex organization in terms of the power to mobilize labour, the wealth at hand to build the structures, and the ability to organize both. At Scowlitz Area A, labour investment can best be interpreted through the amount of effort invested in the creation of a level platform on which the house would be constructed. The earliest dwelling (Structure 4) has a construction fill depth of 0-15 cm. The construction fill of the superseding Structure 3 increases slightly to 10-25 cm, and Structure 2 averages around 20 cm deep. The upper-most structure has an obvious platform built up 30-35

² Samples identified by Dr. Dana Lepofsky, Department of Archaeology, Simon Fraser University

cm. The gradual yet steady increase in construction fill depth indicates a greater amount of effort placed in house manufacture. In the earliest dwelling, construction fill was only as deep as necessary to construct a level surface on the natural slope of the terrace. By the latest occupation, the uniform depth of construction fill (averaging around 30-35 cm) suggests that fill was intentionally brought in to build up the house platform, and was beyond the immediate need of leveling the surface for house construction.

Discussion and Conclusions

The changes in house size and architectural design during the last 3000 years at the Scowlitz site meet with the expectations of house form change in a society that is becoming increasingly complex. Through time, house size increased and there was generally more effort being invested in the construction of the Scowlitz dwellings. Scowlitz house size and architectural design support the expectation that household size and socio-economic behaviour were changing as the society's organization (whether in terms of social rank or economic organization) became increasingly complex. The patterns observed in the Scowlitz and Fraser Valley plank house data indicate that house size was still small in pre-Marpole times, likely supporting a population of one to two nuclear families. Large households did not appear in the archaeological record at this time, which suggests that either intensified surplus production for "social storage" was not yet operating, or if it was, it was not yet affecting household composition or house form.

With the onset of the Marpole phase some 2400 years ago, a dramatic change in house size occurred at Scowlitz. House width increased by perhaps as much as 100 % along the east/west dimension from Structure 4 (4 meters) to Structure 3 (10.5 meters). At this time there

also appears to have been greater effort invested in construction of Structure 3 than with the earlier dwelling. The expansion of house size suggests that the size of the household was growing, and as an implication of this it is presumed that household leaders had a greater labour force to produce more surplus. The Scowlitz data support the expectation that in order to build large dwellings with more elaborate substructure preparation, household leaders possessed the wealth or physical resources and social power to mobilize labour to do so. This wealth or “social power” is proposed to be a consequence of the household’s surplus accumulation.

During the Late phase, the Scowlitz data do not show an expansion in house size, however, given the limited horizontal excavations at the site, this should be interpreted as lack of data rather than information which contradicts the expected pattern. However, from Structure 3 (2400 years B.P.) through to Structure 2 (1000 years B.P.) and Structure 1 (estimated to be 500 years B.P.), the analysis of substructure preparation indicates continually greater effort placed in the construction of houses. Substructure preparation shifted from mere leveling of a surface to the build up of a platform on which to construct the dwelling. This pattern may reflect the fact that some households had the resources to invest greater time, labour, and raw materials in house construction. It also might indicate that households were communicating their prestige through the use and physical presentation of material status symbols such as houses. High status individuals, as well as having the resources to construct larger and more elaborate houses, also have inherited rights to create and display symbols of status (Thom 1995: 14). House form physically and symbolically separated people into wealthy and poor households.

This pattern of house construction in the Late phase is supported by the burial mound evidence also found at the Scowlitz site (Blake 1995; Thom 1995). Thom’s (1995) analysis of

the Scowlitz burial complex suggests that these large and elaborately constructed burial mounds marked the presence of social stratification at the site during the period from 1500-1100 B.P. He argues that during the Marpole and Late phases, social inequality was based on status competition which ultimately resulted in the conspicuous display of wealth and prestige in the form of burial mounds and cairns (Thom 1995: 15). Material symbols of wealth and power, of which burials and houses are both examples, demonstrate the presence of elite competition at Scowlitz. Although the Scowlitz house data for the Late phase is sparse, the burial mound evidence supports the interpretation that, 1) social inequality was present at the Scowlitz site during the late Marpole and early Late phases, and 2) variation in social status was visibly expressed in material symbols such as burial mounds and houses.

My goal has been to contribute towards a better understanding of the role of the household in the development of complex society in the Fraser Valley. The Scowlitz house data show changes in households that correspond with social changes, and therefore, this initial attempt has been successful. The archaeological record and sequence of deposits at Scowlitz are so complex that the fieldwork to date can only give a preliminary glimpse at the patterns of changing household architecture. At present, the structural data collected from Area A at Scowlitz do not yet allow a conclusive examination of how the changes or continuity in house size and architectural design through time correlate with changes in social complexity. Nor do the data establish that the observed changes in house form were the result of the desire of household leaders to increase their production in order to acquire and maintain prestige. Nonetheless, the Scowlitz evidence does not reject this model. Future research is needed both at Scowlitz and other sites in the Fraser Valley in order to continue testing this model, and to further define the

relationship between house form, the household, and social change. This thesis has demonstrated the potential of the diachronic analysis of household remains in the Fraser Valley, and has contributed toward the ongoing analysis of the evolution of ancient Sto:lo society in the Fraser Valley.

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