SNOW SENTINELS *of the* PACIFIC NORTHWEST

BY JOSEPH T. HAZARD

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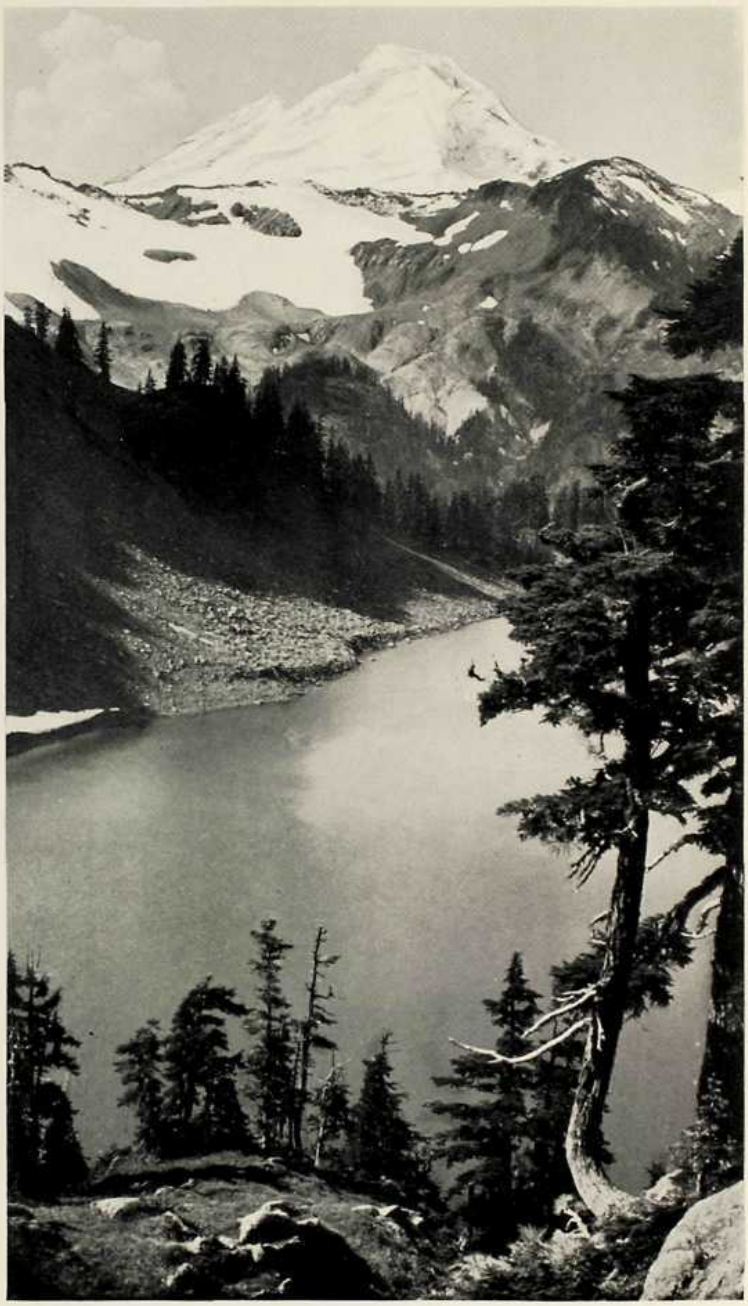

Mount Baker and Chain Lake. *Bert Huntoon*

Snow Sentinels
of the
Pacific Northwest

By
JOSEPH T. HAZARD

ILLUSTRATED

With best wishes from one
geographer to another.
Joseph T. Hazard

1932
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SEATTLE, WASHINGTON

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To

EDMOND S. MEANY

President of The Mountaineers

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PREFACE

EIGHT SNOW SENTINELS of the Pacific Northwest have looked down upon man and upon the movements of men, as page by page, have been recorded the manifold details of history and of exploration. No one individual, in the span of a lifetime, could delve into the archives and by the most laborious seeking bring forth all the facts and the spirit of living them, of a changing frontier. Many must work together to that end.

This volume endeavors to tell simply and in part the events unfolded beneath these eight historic mountains. By far the greater content of their message has been left untold. A book devoted to each of them could not contain it. It is possible, now, in a single summer, to visit each of these eight peaks and to store away memories of its own distinctiveness. It has been the purpose of the author to include enough of the history, the exploration, and the tourist development of each of the eight, to assist those visitors whose time or opportunity is limited.

The task has been one of selection rather than of research. The research has been done but it is, essentially, that of others. Since 1894 The Mazamas of Portland, Oregon, have published annuals that contain valuable studies in science, in exploration, and in adventure. The Mountaineers of Seattle, Washington, have issued similar volumes since 1907. Both organizations have granted most generous permission for the use of their contributions. The only regret is that so small a part of these riches can be included in this one volume.

The Garibaldi Park Board has given the cooperation that is typical of Canadian public service. Mr. Bert Huntoon of Mount Baker Lodge has contributed both illustrative material and essential information. Major O. A. Tomlinson, Superintendent of Mount Rainier National Park, has made possible an accurate statement of some of the plans and purposes of National Park Service within the Park. Mr. L. A. Nelson has given both special and general information that is invaluable. Mr. C. A. Fisher has assisted with facts about Mount Baker. Mr. Asahel Curtis has permitted the inclusion of copyrighted photographs.

Mr. Arthur Bailey, Mr. Ray Atkeson, Mr. A. H. Denman,

Miss Mabel Furry, Mr. A. H. Hudson, Mr. P. M. McGregor, and Mr. Everett A. Philpoe, have generously furnished unusual pictures from the many they have acquired through years of selection of mountain scenes.

It is impossible to overvalue the work of Doctor Edmond S. Meany in all that relates to the Pacific Northwest. Without his life of devotion to research and his participation in the upbuilding of these frontiers, there would be less of opportunity and of inspiration in the lives of thousands. His activities reach far beyond his chosen field of history. For twenty-five years he has been President of The Mountaineers, and through the years that have witnessed the pioneering of the trails of the Olympics and of the Cascade Range his leadership and his endless work of research have been given freely to The Mountaineers and to other worthy organizations. It is impossible to include special mention of all that Doctor Meany has contributed to the making of any book about the mountains of the Pacific Northwest, so this acknowledgment must remain inclusively general.

JOSEPH T. HAZARD.

Seattle, Washington,
March 1, 1932.

Part One
The Cascade Trail

CHAPTER ONE

Summer Snows

FOR A LONG TIME after recorded history was in the making in the Pacific Northwest there was no established name for the rugged range of snowy mountains that sweeps aggressively through Oregon and Washington, northward into Canada. The Olympics, to the west and in front of this great range had been named in 1788 by the English explorer John Meares, but the main long range of the Northwest had been left to chance designation.

George Vancouver, in 1792, named four dominant peaks of this range, Baker, Rainier, Saint Helens, and Hood, but ignored the range that gave them so stupendous a background. True, he referred to it many times in his journal by one of three titles, "eastern snowy range," "ridge of snowy mountains," or "range of rugged mountains." Strange that he neglected this naming, for he was deeply impressed both by the beauty and by the significance of all snow summits and was the most methodical and exact of all the explorers of the eighteenth century.

Even Lewis and Clark, in 1805-1806, while meeting the need of a definite name, neglected the bestowal of one. They named Mount Jefferson, and verified Saint Helens and Hood conferred some thirteen years before by Vancouver. Meriwether Lewis used the expression "the range of western mountains are covered with snow," while William Clark wrote "western mountains covered with snow." John Work of the Hudson's Bay Company, in December 1824, contented himself with "a ridge of high mountains covered with snow."

Dr. Edmond S. Meany, who has made exhaustive research into the naming of geographic and historical features of the Northwest, says, "So far as now known, David Douglas, the botanist (October 13, 1826), was the first to use the name Cascade Range." Dr. Meany explains that David Douglas had probably heard others use the name Cascade; that in 1825-1826 the name Cascades was used to designate the rapids of the Columbia River just west of Mount Hood; that Cascade Range probably came

naturally to designate the mountains that led south and north from the Cascades of the Columbia River.

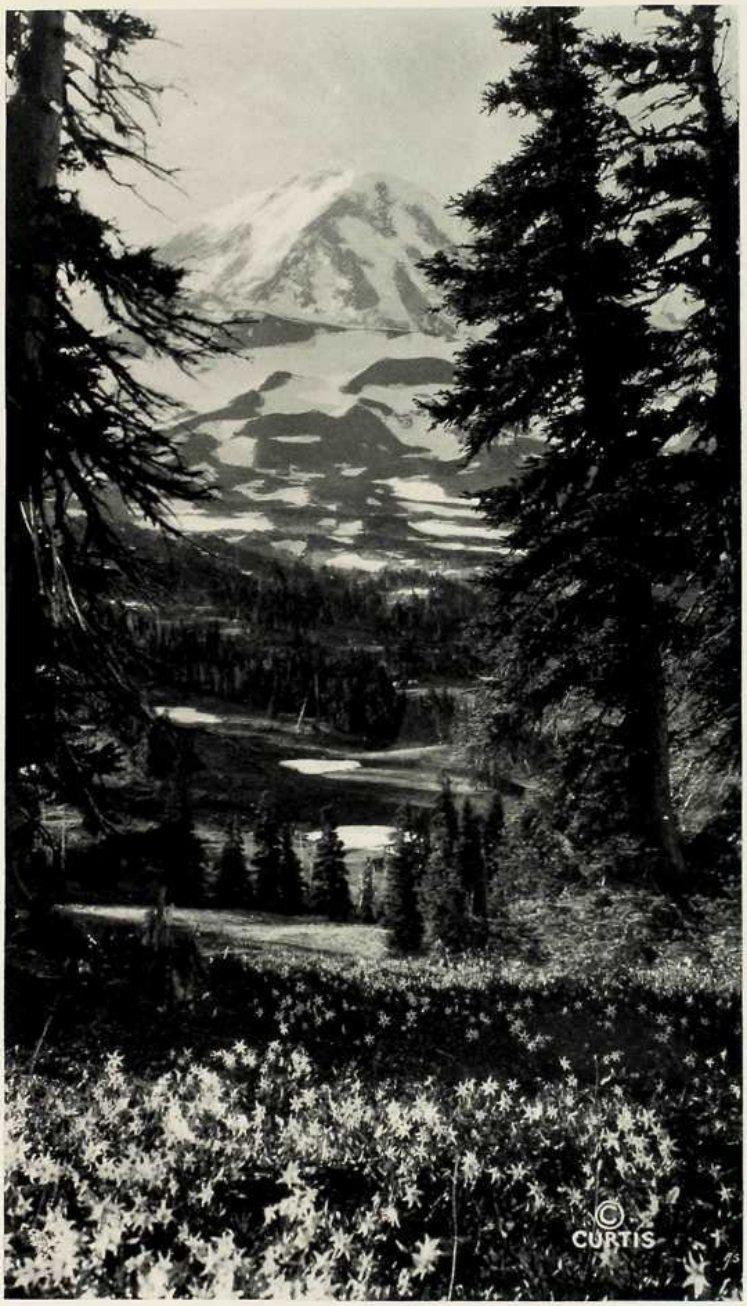
The striking thing about this early delay in naming, and its attendant confusion of names, is that the pioneer observers were most impressed by the snowy summits and the snowy ridges of the range. The high snowfields, the lasting snows of summer gave the Cascade Range its distinctiveness and its identification. And now, along the serried crests of the Cascades, winding through its summer snowfields, passing its historic "Snow Sentinels" is the Cascade Trail.

Man has a natural longing for things out of season. No matter how completely he has ignored apples in August, he crunches them right merrily in February. January strawberries loosen his wallet and tighten his waistband. This natural perversity carries over in other ways. Green bananas, gathered too soon in the tropics, acquire synthetic ripeness and occasion indigestion in Canada. A shriveled, blackened, pitiful mango, without its marvel of juicy pulp or its intriguing flavor of turpentine, is served as a morsel de luxe in Seattle. By all the tenets of common sense these out-of-season, out-of-place things should present themselves before our jaded appetites with the humility of an inferiority complex. But do they?

We of the Pacific Northwest know the charm of our summer snows. They are both an anomaly and a contradiction. Snowfields with flowers! Glaciers that are warm and comfortable! Snowfingers and cornices that give easy approaches and secure observation platforms for the most stupendous panoramas! We have them all! Ours is snow with infinite variety, comfortable snow, vacation snow, gala playfields!

Our realm of summer snows in the Pacific Northwest is far-flung. It approaches the tides of the Pacific at Vancouver, British Columbia, then sweeps south with a wide curve inland to West Central Oregon. Seven snowy mountains, sentinels, keep watch over regions that are distinctive, and that are each as individual as a human life. An eighth, Mount Olympus, guards the front the Olympic Peninsula, serene in its isolation, south of the Straits of Juan de Fuca in most western Washington.

1. MOUNT OLYMPUS alone, of the eight snow sentinels, is not a well defined cone of volcanic origin. Its summit is a rag-



Spray Park, Mount Rainier. *Asahel Curtis*

ged and elongated cluster of rock pinnacles, some twelve in number, central in a little Switzerland.

2. MOUNT GARIBALDI, an extinct volcano, with a summit weathered to ridges, lies east and north from Vancouver, B. C. It dominates a frozen sea of uptossed peaks, hundreds of square miles of summits and glaciers, where the continental divide slants west to invade the domain of the Cascade Range.

3. MOUNT BAKER, just south of the Canadian line, east of Bellingham, Washington, is a peak of dazzling whiteness, with extreme purity and grace of outline. It towers on the western edge of the Cascades, where its summit, a level snowfield, stands sentry-go over swift rivers, dense forests, and deep valleys.

3. GLACIER PEAK is similar to Mount Baker in a region vastly different. The area around it has just been officially set aside as recreational. It is east and south of Mount Baker near the eastern rim of the Cascades. Near it is that long marvel of mountain waters, Lake Chelan. Around it are great ridges and long sweeping valleys. It is central in most primitive Washington.

5. MOUNT RAINIER, some twelve miles west of the Cascade Range, is one of the world's domes of greatest bulk. Built by successive eruptions through a vent in the floor of the Pacific slope, it looms in view from more than half of the State of Washington. It is near Tacoma and Seattle, a little east of south, in the Mount Rainier National Park.

6. MOUNT ST. HELENS, one of the three "Guardians of the Columbia," is the youngest volcano in the Pacific Northwest. It is fifty miles from Mount Rainier, a little west of the direct line south. So recent is St. Helens in geologic time that it slopes evenly from all sides. It lifts high above the surrounding country, a symmetrical cone of white. In Indian legends St. Helens is a beautiful maiden.

7. MOUNT ADAMS is thirty miles directly east from Mount St. Helens. It is on the main ridge of the Cascade Range, the middle "Guardian." Its dome is broad like that of Mount Rainier. Like St. Helens, it dominates a surrounding range that is relatively low. Unlike St. Helens, its lower slopes are covered by hard lava rock shattered into great boulders, while St. Helens is clad in soft pumice. Its volcanism is complex.

8. MOUNT HOOD, the third "Guardian of the Columbia,"

is fifty miles directly south from Mount Adams, across the Columbia River, in Oregon. The City of Portland, Oregon, lies fifty miles west of the mountain. Mount Hood has the sharpest summit of the eight. All but the northern edge, almost the northern point of the original crater, has been weathered away. This acute peak challenges the Columbia Gorge, north, and the rugged, yet wooded Cascades, stretching south. In Hood's western foothills can be found, to this day, the deeply worn Oregon Trail.

Some years ago the Mount Baker Club of Bellingham, Washington, proposed to other mountain clubs of the Northwest a Cascade Trail. The plan was approved and committees are now at work on the project. The time will come when devotees of outdoor life, mounted or on foot, will leave Mount Baker and trail south through Washington, into Oregon. They will follow a path with mile-markers and will find lean-to shelters available to their use. After that should come a still longer trail, from Mount Garibaldi, Canada, to California. If, or rather "when," this has come to pass, the feet of multitudes will tread a long wonder way in the "Charmed Land" of summer snows.

The picture of the Charmed Land of the Pacific would be incomplete were it limited to these snows of summer. It should begin far below in the depths of the dense forest.

The trail of the low country leads toward these snow heights. Upon it gigantic trunks of fir and cedar tower to a canopy above a hushed twilight. The climb begins. At both sides of the rifting switchbacks are matted ferns and Devil's Club, while festooning mosses clamber aloft in a rank yet graceful profusion. Beneath the feet the green orchid, Tway Blade, companions the creeping raspberry and clings to the softened contours of old logs. Twin Flowers, trailing delicate odors, redeem here and there an infrequent barren or a mouldering brush heap. The Princess Pine, wearing her raiment of long, dark, pointed leaves, carries her green jug, daintily parasoled. The Little Tiara raises its circlet of decorative spikes, laughing to gentle scorn the hard, glittering baubles that form the man-made crowns of royalty.

As the entrancing trail lifts still higher there appears the yellow mountain violet. In moist half-open places it follows snow-patch and stream. The brooks give way gradually to cataracts that thread-whiten sheer rock masses. The trees shorten under the

burden of increasing altitude. Behind, the deep contours of the valley drop away beneath, and darken with mystery.

We arrive at the summer snowfields. The air is clear, the sun bright, and to the reaches of dimming distance the floating maelstrom of snow summits is stilled to a white silence.

CHAPTER TWO

Why Climb Mountains?

THE MIGRATIONS OF MAN into new lands have given us the most fascinating pages of history. Since Adam started it and subjected us to the ceaseless search for another earthly paradise, we have moved on and on. In caravans, in the tiny ships of the ancient navigators, in wagon trains, in special homeseekers' excursions, we have, from then until now, embattled the retreating frontiers. They are gone, beaten forever by engulfing waves of increasing population that, since the days of Adam, have rolled relentlessly onward.

In these countless years—years that were old before recorded history began—the human race has deepened the habit of exploration. No sane human being ever has succeeded in wholly uprooting from his system the lure of the primitive in environs of isolation. It's there, this lure, inside of all of us, waiting for expression.

There are no exceptions. In the brutally frank days of my early youth I knew an effeminate nephew of "Buffalo Bill." He wore spats and carried a cane in days when such things demanded punishment that made mere hanging a preliminary promise of what was to come. He apologized for the old warhorse of Cheyenne and called him "Uncle William." But even he weakened one day and confessed, "Sometimes I wonder if after all there was not a somewhat rude satisfaction in carrying the United States mail through places infested by Indians like Uncle William did."

Our only escape in these days, from inhibited longings for pioneer scenes, is in the mountains. Until they, like the lower mountains of the old worlds, are "terraced and tilled to the top," we still will find retreat in a fastness where we may salute the dawn or linger the setting sun upon untarnished horizons.

We, of the Pacific Northwest, have at our very doors many a mountain paradise. The vast wilderness of the Cascade Trail invites us to winter sports and to summer pilgrimages. There is

room for all without crowding, and you are cordially invited to join us upon our mountain trails.

The absolute negation of the claims of mountain summits, of the "Land near the stars and the free higher air," has appeared so often with poor grammar and faulty diction that such negation has become a standing joke. Time and again has come this statement, "I never left nothin' up there I'm goin' after!" It always is uttered with a naïve assumption of invention, originality, and superiority.

Mountain climbing is for the young and the old, the weak and the strong, the simple and the complex. It may be done in automobiles, on foot over low, easy trails, or by the more strenuous routes of the climbing rope and the ice-ax. No longer do the summer snows belong to a queer few, intrigued by unconventionality. Why, it is even proven that the panoramas are more impressive when viewed from altitudes between five and seven thousand feet, than from higher up places. Too much altitude causes a scene to foreshorten and to seem less immense.

Nor is it necessary to visit the mountains entirely from motives of unselfish idealism. Most of us find it hard to be that way except at rare moments. It pays to play around in the mountains.

One of our first scientific psychologists analyzed the hard effort of man to attain a heavenly paradise. The Mohammedan longing for a hereafter of wine, women, and song, was listed as physical self-seeking beyond the grave. Those who desired exclusiveness after death were social self-seekers. The perfect few who elected the few only to be saved were spiritual self-seekers, arrogant in self-selection. One man only was exalted—the idealist who did strive unceasingly for a redeemed inner nature.

That psychologist has given us an outline for a discussion of the profit side of the mountains, although he used it for a different purpose. The dividends accrue upon the common stock of the "Physical," the preferred stock of the "Social," and the bonds of the "Spiritual."

THE PHYSICAL WHY—

We will ask and offer a possible answer to three questions:

1. How many will receive distinct physical benefits from following mountain trails?

2. What are some of these benefits?

3. Who should be warned against mountain trails and summer snows?

A most pungent conversation took place one summer morning in the guidehouse at Paradise Valley in the Mount Rainier National Park. A heavily upholstered woman of middle age approached the chief guide, to whom had been delegated final authority in the selection of summit climbers.

"What about my chances of getting into the summit climb today?" she asked.

The guide eyed her with disfavor, then answered briefly, without double meaning:

"Your chances are slim."

Question and answer followed like rapid firing:

"Why can't I go? My friends are going."

"Frankly, Mrs. Blank, you are too heavy to make it."

"You're no shrinking violet yourself, and your badge says 'Chief Guide.' Is that just a bluff, or do you climb this mountain?"

"That's different—I've led a strenuous physical life for many years. I'm trained for it."

"How do you know that I'm not?"

"I do not know—I merely judged so."

"Judge not that ye be not judged! Now you listen to me a while. I can make that summit. I want to make that summit. Please let's have no more words about it—you let me make that summit!"

The chief guide was sunk without a trace. He routed that massive heroine to the summit. She made a beautiful climb all the way and helped others.

It is to be remembered that this climb was to the summit of Mount Rainier, the most exacting ascent from the standpoint of endurance in the United States proper, and that it was made by a woman of middle age, one who would tip, or perhaps flatten, the scales at over two hundred pounds. Not that such climbing should be attempted by everyone of similar contours. The woman who did it was of determined will, of rare courage, and was possessed of great muscular power.

The mountain trails of the Pacific Northwest are open to all who have a willing spirit in a sound body. These trails vary so

A Mountaineer Campfire. *P. M. McGregor*

Ice Cave, Paradise Glacier. (See page 30.) *P. M. McGregor*

much from easy to hard that each individual can go as far as he likes, choosing the degree of difficulty that is best suited to his inclinations and to his physique. But we must disabuse ourselves of the old notion that trails are for the few!

The physical benefits of trail life are many. They are not so apparent in short, week-end trips unless such trips become an almost weekly habit. A solid week of mountain work will bring results; a two-week unit is still better; three weeks will work wonders; a month is ideal. The first time I witnessed the transformation of a selfish weakling into a rugged sportsman in a three-week mountaineering trip, I marveled at the miracle. I have learned now to expect just that result.

Richard W. Montague, in Mazama, 1920, "Why Do We Come Back," writes in verification of these quick and startling changes in human beings, "Everybody has seen the timid become courageous in the dangers, the mean become generous in the wants and hardships, which are so interesting a part of our common lot in the wild."

Those who lack experience would do well to join an organized outing of a mountain club, or to accept the services and the advice of a trained guide. The guide will insist upon a proper pace. A world-known physiologist reports from experimental demonstration, "if sufficient intervals are allowed to pass between successive contractions of muscle that no fatigue is apparent." The guide, too, knows the power of mind over matter. He will introduce mental stimulus at the proper time. John F. Bovard, of the University of Oregon, a national authority on physical life, states, "Sometimes it is just the monotony of the effort that causes ennui and we think we are tired; a sudden change of effort, a stimulated interest, perhaps a glimpse of the top of our mountain peak causes all sense of weariness to leave and we make the top with flying colors."*

"The Mountaineers," a mountain club of Seattle, Tacoma, and Everett, Washington, has conducted annual outings for twenty-five years. Over these many years, successive committees have worked to improve the commissary department for these trips. An outing committee will conduct, next summer, the

*Mazama, 1925, The Physiology of Exercise As Applied to Mountain Climbing.—*John F. Bovard.*

twenty-sixth annual outing. The findings of all these years will be available to its use. The food it will provide will be abundant, varied, most delicious. But best of all, it will be just right, scientifically right, for its purpose. The thin will grow muscular; the over-plump will transmute mere avoirdupois into ruggedness; thick or thin, short or tall, young or old, trained or untrained, the good man physically will become a better one.

But this is not all. In this twenty-five years of summer outings, with parties that have varied from fifty to one hundred thirty, on trips that have been, mostly, of three weeks duration, and all in exploratory regions, "The Mountaineers" have never lost a human life. To the members of this organization, both to trained leaders and to ardent followers, human life is sacred. Rules are few, but common sense is the inevitable order of the day.

After one outing with a real outdoors organization, or with a real guide, a sane man can, if he wishes, take charge of the yearly regeneration of his own physical life.

The third question, the one of warnings, is easily answered. Those afflicted with a high blood pressure or with any organic defect of bodily structure should avoid severe exertion in high altitudes. A low blood pressure is a help rather than a hindrance. Recent surgical operations are prohibitive to such activities. These three things then are about all of the real obstacles: high blood pressure, organic defect, and recent surgical operation.

Children under seventeen years of age should not be encouraged to endure great strain. The most tragic conversation I have ever overheard occurred in the guidehouse at Paradise Valley.

A woman approached the chief guide in angry protest:

"The summit guide has refused to sign a certificate that Walter made the summit. I want you to sign one."

"Walter did not make the summit," said the chief. "He was sent back from Camp Comfort at 12,600 feet elevation."

"That's practically the summit."

"No, Madam, three hours from the top."

"But Walter is only nine. If you will give me that certificate, he will be the youngest person ever to make it."

"Let me tell you again, Madam, he didn't make it—and besides this, the whole thing is wrong."

"See here, guide! I want that certificate and I'll pay you fifty dollars for one."

"You are offering a bribe to a guide in a national park, responsible to the United States Government. You ask him to violate a trust. You force me to be brutally frank with you.

"Walter knows he did not make that summit. If you produce a certificate that he did, Walter will know all his life that his mother is not honest; the national park service will be convicted of criminal callousness in allowing children to be subjected to such strain; other heedless, irresponsible parents will be encouraged to follow your example."

The next week the chief guide secured an official order from the late Stephen T. Mather, then Director of National Parks, barring the summit of Mount Rainier, and all similar summits to children under sixteen years of age. The age seventeen is still better.

The physical basis in all this is obvious. Chew the heart of a spring chicken. It will be tender. Chew the heart of a hen or rooster. It will be tough. The heart fibres of a boy or girl of tender years may not show immediately the bad effects of overstrain, but the heart inevitably will be weakened.

Swiss guides do mountain work far into the hale and hearty eighties. Just one admonition should be offered to age. Slow up at forty. Go more and more slowly as the years increase. Creep joyously over the mountain trail as long as the route is a happy one. Speed is for youth. Muscular power and endurance linger through the long years of an active and well-ordered life.

Age is relative. If at thirty you find yourself logy, puffy-eyed, slow in coordination, dulled in the keenness of your senses, or listless, enervate, pallid, anaemic, you probably have yourself to blame.

The mountain trail will burn away the dross and upbuild the vital fibre of a human body, of your body. It will, if you invite the result, make your physical life more resilient, more resourceful. It will make your body a marvelous machine to your will.

THE SOCIAL WHY—

The most rapid melting pot, the most immediate amalgamation, are both to be found in the flickering light and the glowing warmth of the mountain campfire. Previous classifications de-

marcated by poverty or riches, crudeness or culture, gents or gentlemen, sports or sportsmen, ignorance or erudition, disappear over night.

But nothing human is static. New classes appear. It is a classification that is not absolute, that is subject to rapid change. Its lines are of laziness and industry, indolence and energy, following and leading, repression and vivacity, dullness and repartee, selfishness and service, chechahco and sourdough.

Twenty-four hours will ripen a friendship. Twice that will mellow it. A week will establish it for the rest of a natural life. Inversely, an instant may interrupt a friendship previously and less discerningly formed, while a short hour may entirely eradicate it. The only danger is to those so emotionally young that they are not content to stop with mere friendship! And here again age is most engagingly relative!

The campfire entertainment of a mountain organization is unique. It ranges from burlesque and imitation to historical research and astronomy. Many a nationally known vaudeville act would fall flat in these mountain groups for lack of real merit. The source of the unfailing fount of cleverness remains a mystery. Talent is prone to break out irrepressibly from the least suspected individual in a circle of these inspired devotees.

The safeguard of these associations is the law of natural selection. No person not worthy of the group remains long with it. There is little to interest him, nothing to hold him. The bonds are self-imposed and easily broken.

Those who find themselves happy in the ups and downs, the comforts and the rewarded hardships of trail life, are swiftly and irrevocably welded into a unit. No two of them, meeting afterward by accident in Shanghai or in Edinburgh, fail to regard the meeting as a reunion.

THE SPIRITUAL WHY—

Spiritual is used here as pertaining to moral states, and to the artistic, intellectual and emotional reactions. We are thinking of the influence of mountain life upon appreciation, thought, and character.

This is the short, short story of the making of a man.

He was a successful business man. For years he had ruled his office by "Yes" or "No." Seldom was either word uttered in

kindness, or even in tolerance. Socially he was a total loss, both to his friends and to his business associates.

By some wand magic, or perhaps by some ironic jest of pure chance, he went to the mountains with a choice company of his associates. Upon an easy ten-mile trail to the first camp, he was the victim of nausea. He reached camp last and promptly pre-empted the best camping spot. He demanded different food and special service. The next morning he arose after breakfast, disrupted arrangements by insisting upon fresh coffee, and delayed the breaking of camp.

On the second day he refused to serve on a dish-washing committee of his peers.

On the third day he suggested to volunteer helpers with the pack train that they refuse to help unless they were allowed to receive compensation for services.

On the fourth day he washed dishes and was allowed to eat once more.

On the fifth day he volunteered to help with the pack train.

On the sixth day he gathered wood for the camp fire, and asked for the privilege of doing it daily for the rest of the trip.

He had the right stuff in him but he had been reared wrong. Civilization had well-nigh ruined him. Today he will tell on himself the whole story of his first three weeks of trail work, and will punctuate the tale with hearty laughter. He was always successful in business. Now he is successful in living. He is a joy to all who know him.

The love of mountain scenery is acquired rather than natural. It is, at first, as impersonal as a picture. Until one has learned to exploit his sufferings and to take pleasure in his miseries, he can ignore the most stupendous panorama with a groan of self-pity. He can concentrate so fully upon the protest of unused muscles that he will pass a waterfall without seeing it. But later, he will drive himself until he drops to take a few pictures, that others may be tempted to view the myriad splendors of a favored region.

The heedless first impulses of most of us toward plants and animals are deadly. We pick flowers and by so doing kill the plants that bear them. We go a-hunting and slaughter the birds and the animals. But as we live with these flowers and birds and animals, they become to us kindred creatures and creations of the

wilds. They enter into our emotions. We learn to protect them. Finally, by personal example, by ardent pleadings, by protective legislation, we fight their battles for them as our own.

I have never heard profane language upon the summit of a mountain. Again this is not meant in its religious sense. There is an uplift of spirit, an intellectual fastidiousness that just naturally inhibits the uncouth utterance that would profane the harmony of those stupendous reaches. Of course there may be, here and there, from some of us, ejaculations of euphony that are not strictly conventional. But a cuss word, breathed in pure ecstasy, may be a prayer. And rapture will make impressive and sincere the most poverty-stricken vocabulary.

A great thinker has defined courage as "Persistent Energy." If so, the mountain trail will help all of us to attain a high degree of courage. Each hour has its crisis, its demand upon the will. No man is, at heart, a quitter. In the enervating turmoil called civilization, where false values are rampant, he may, for a time, doubt himself.

The high trail is calling him back into his own. His optimism will be reborn. He will grow in faith in his destiny. In daily battles of the will he will wax mighty in confidence, in helpfulness, in sportsmanship, in courage, in all the attributes of the spirit that go to make the man.

CHAPTER THREE

Snow Dangers

ELEVEN SNOW SENTINELS rise in the Cascade Range and intercept the Cascade Trail as it sweeps south from Canada to California. Upon each of them are snow fields, snow fingers, and glaciers. These present an ever-threatening problem to the exploring visitor. The problem is more technical than any other in outdoor life. Some factors of it justify analysis.

A volcanic cone born of successive lava flows, of rock from internal explosions, and of settling clouds of pumice dust, rears its mighty head high over the ridges and the wooded valleys that flatten away from its base. The storms of both summer and winter bring burdens, yearly accretions of sleet and snow, to bear hard upon the steep upper slopes. These multiplying layers solidify underneath from the terrific pressure, into névé or ice. The growing burden becomes too heavy for those upper slopes to bear. The great fields slip slowly down the mountain, and a glacier, highborn, begins the ruthless destruction of its parent dome.

The early writers about glaciers spoke of them as "summit born." This is only partially true. Only six of Mount Rainier's twenty-eight find origin upon the top. Even they receive most of their content not from the top where the snowfall is slight, but from the greater blizzards and the wind-blown deposits of the heavier middle-altitude precipitations. The zone of cirques, where so many glaciers originate, almost coincides with the stormy girdle.

That growing glacier pushes incessantly against its rock floor. It discovers a weaker stratum, shears a groove, carries the rock mantle downward, shatters it, and fashions it into a grinding mass that adds momentum and exerts a mighty power of attrition. That groove widens, deepens, and lengthens. It becomes a canyon, that narrows or widens, wherever there is changed rock resistance to the power of the glacier.

Wherever the canyon changes, upon its deeply buried floor, or in its rugged walls, there come stresses and strains, laggard areas,

increased pressure areas, ice fields that are curved and bent. The ice of the glacier is separated into cavities or cracked into crevasses or is thrust upward into great bulges. Still farther down, near the foot of the glacier, other agencies combine to make breaks and holes in the moving river of ice. Each change in the even texture or the steady sweep of that great icy mass, brings danger to the puny human who has ventured out upon its surface or has burrowed into its depths.

Those who best know the glaciers are the most respectful toward their insidious dangers. Nine times out of ten the expert, by careful study of a glacier field, can tell just where to look for choked bergschrund cavities, concealed crevasses, or hidden holes. That tenth time may be the fatal one and the expert will take no chances. As in all other fields of action where special preparation is essential, "A little knowledge is a dangerous thing."

A glacier guide from Paradise Valley was conducting a party of fifty over the Stevens-Paradise Glacier. The field was a maze of hidden crevasses. The pressure area was indicated by long, sweeping curves of alternating white and darkened snow. Those curved lines of white were crevasse lines. The whiter snow was new snow from the preceding winter. It had formed plugs that were more or less temporary. Some of these snow plugs were strong enough to bear the weight of a man. Others were not. The wider, darker curved expanses were of old, hard snow, covering the solid glacier ice.

A glacier party of fifty is too big. The guide, even with the help of his assistant, had found it difficult to keep the climbers in line, to lead them safely. He grew more stern and more insistent with each infraction of his rules. At last he exploded:

"I'm no longer asking you," he said in a voice that was far from gentle, "I'm ordering you to stay in line until we leave this glacier!"

"You are treating us like a bunch of children," a man replied with angry sarcasm. "There's no danger here. Most of us have seen glaciers before, and we don't like to be told where to head in when it isn't necessary."

"Perhaps you could lead this party better than I," said the guide quietly.

Without Trails—in the Olympic Forest. *Asahel Curtis*

"If I did I'd give 'em a real trip!" said the man, restored to good humor, "I'd give 'em a treat."

The guide called him forward. He tied his climbing rope around the man's waist with the double bowline knot, and sent him into the lead. The guide and others kept the rope taut, the guide taking his place twenty feet behind the new leader.

The man stepped out confidently and headed for a blind crevasse. The snow gave way beneath his feet and he toppled through. The rope held and the horrified leader found himself dangling over a black abyss. He voiced his tribulation in words that were neither arrogant nor profane. They were subdued and pleading.

Much good came of that demonstration, and small harm. True, there were sundry cuts and abrasions upon the man's face and hands. The broken lip of a crevasse is an awkward place to handle the dangling body of a full grown man. There were, too, other inconveniences, for a waist-hanging from a rock ledge or in a crevasse is just a degree removed in discomfort from a neck-hanging. The saving grace of the more gentle form of torture is that it spells salvation and not complete dissolution.

The guide gave a second lesson that same day. He followed a return route across a lower glacier snowfield. The snowy expanse was virgin white, unmarked by crevasse line, hummock, or ice patch.

The leader halted about a quarter-mile above the snout of the glacier upon that innocent-looking snowfield. He pointed to a single black spot some hundred feet in front of him. He put the bowline knot upon himself, and approached the tiny black spot, securely roped. As he inched closer he jabbed ahead as far as he could reach with the pointed end of his ice-ax.

The point broke through some ten feet from that black spot. He worked with the ice-ax, jabbing and twisting. A hole appeared, grew visibly larger as the guide worked away at it. He dislodged larger snow masses. One could hear them striking deep down in the glacier.

The guide had known that there was an "ice mill," a moulin, at that spot. The day before there had been no warning sign, not even the tiny black hole. A week later there would be a cavernous mouth upon that snowfield, some twenty feet across, and a full

seventy-five feet deep. At the bottom were great boulders in the bed of an under-surface glacier torrent.

That particular ice mill may be explained simply. A rivulet upon the surface of the glacier found a crack that let it through to the under-surface stream. Year by year that well grew larger as the water milled it out. Each year the winter snows plugged it and each summer it was a menace until exposed again by the melting of the snow.

It was my privilege to visit this spot ten years later. But I approached it from below, not from above. The snout of the glacier had receded. The under-glacier stream had formed a tunnel. I walked along the stream, under an arched canopy of deeply tinted and glittering ice, for several hundred feet. I found a great opening where the roof, the glacier surface, had fallen in. The vent above was more than a hundred feet wide. It was the aftermath of our old ice mill and is now visited as the ice caves of the Paradise Glacier.

Glaciers change rapidly. The glaciers that flow from great mountains seem, at times, the most dynamic thing in nature. These are not the "Silent river of ice" of our old textbooks. It is true that there are silent glaciers, almost stationary, found upon more level terrain. But these mountain glaciers crack and groan and rumble. They undermine rock walls, and rock avalanches thunder down upon them. They are eternally at work scraping, polishing, crushing, tearing, undermining, milling, sweeping everything before them. As the mountain is worn away, these agencies of erosion recede, steepen, grow more violent, and rise to heights of grandeur. In their earlier stages glaciers work by attrition. Later they rend and tear and gouge and smash. The mightiest paean of destruction near the battle-scarred summit of an old mountain is the reverberating avalanche from the hanging glacier!

And far away, below, is the inevitable aftermath, the compensating contrast, the upbuilded green valley and the fertile plain.

Because glaciers change so rapidly they demand eternal vigilance. I climbed Mount Garibaldi every other day for eight days. It was in the hot days of mid-summer. No two climbs were alike. In that short time crevasses opened, snow shelves weakened, snow fingers avalanched, ice bridges became unsafe, bergschrunds split

more widely open. Each ascent meant new scouting, a modified route. What was safe in the cold morning became dangerous in hot mid-day.

A snow bridge at the "Big Crevasse" on the Gibraltar Rock Route up Mount Rainier had been used for fourteen years. It gave way with three members of a climbing party upon it. Fortunately the crevasse was broad and only thirty feet deep. The three climbers, uninjured, were dug out from the fifty tons of snow and ice, more or less, that had dropped with and upon them. More and more urgent is the admonition that we should take no chances while romping about on the snows of summer!

But not all of these most necessary admonitions should stop with glaciers. Mere snowfields, snow fingers, cornices, coasting slopes, may present problems.

A snow avalanche is easily started under certain conditions. I well remember a week-end trip along the backbone of the Cascades. It was the day after a heavy snowfall in early spring. This new mantle was heavy because it was moist. The day was warm for the season. The new snow rested insecurely upon the hard winter fields beneath. All that day the snow was avalanching. It slipped from trees, from rocks, from cliffs, from shoulders, from open snow-slopes, from summits. Wherever the starting point was high, the movement gathered momentum and became irresistible. At times great masses poured into the valleys far below.

Some of these avalanches started from gravity alone. Others were jarred loose by the mere sound of a human voice. Still others were occasioned by the careless feet of the climbers. Toward the summit of Denny Mountain we were forced to climb straight up. A switchback route with its diagonal traverses would have cut those great fields of snow and would have released the sections as though they had been sheared off by gigantic scissors. Never should a high, steep, insecure snowfield be crossed from side to side or slantingly. The path should lead straight up, that the immense burden may not be cut loose.

New snow is more apt to avalanche than old.

Not all avalanches are dangerous. Most of them move irresistibly but slowly. It is only when they are broken up by trees in a steep forest or by rock cliffs and walls that they threaten injury.

A climbing party was eating luncheon just under a summit

ridge on a minor peak in the Cascades. It was an unusually hot day in May. A small rock was dislodged by gravity from the rim above. The rock started some of the new spring snow mantle, less than a foot in depth. This tiny slide poured over a larger, stationary rock and dislodged a wide snow strip which quickly gathered momentum It swept eighteen of the climbers through trees and then eleven hundred feet down an open slope of the mountain. Not all were hurt, but in those upper trees some received cuts which will leave them scarred for life. Had that same avalanche poured over a cliff or over a rock wall, it would have carried death in its path.

Once we were in a great canyon on our way from Provo, Utah, to Mount Timpanogas. There had been a recent snowstorm although no snow was in sight upon the walls of the canyon. We glanced up a side canyon and saw a first spray of snow dash out from the rim. It poured over with increasing volume until it filled the floor of the canyon and dashed like huge, broken waves far up the opposite wall. Soon afterward we clambered over an immense and jumbled mass of snow that had hurtled over the high, distant brink of our own, larger canyon. Those floods of snow had come from mountain slopes far above, where they could not be seen from the floor of the canyon.

A true tale was told of death and destruction that came down upon an entire pioneer wagon train in our identical canyon, out of a clear sky. And that stark tragedy had taken place, after a thousand adventurous miles, upon the last day's trek into a promised land.

The next is told by contrast.

We were returning, the party of five of us, from the first ascent of Mount Rainier by the Nisqually Glacier Route. We angled to the edge of the Muir Snowfield and reached the high rim of the Nisqually Canyon. Far below us, almost dim with distance, was the east lateral moraine of the Nisqually Glacier. We spread out at a break in the rim and launched out upon the steep snow. It was our intention to glissade to the moraine, a full mile distant in the depths of the canyon, to save time in our return to Paradise Valley. We had been on the go without rest for twenty-four hours.

When the five of us hit that snow we took it with us. The

whole side of the canyon let loose and carried us downward upon the slow, majestic sweep of a white tide. At times we were buried waist deep, but squirmed out easily to the surface. We were seized by a joyous abandon. We shouted and sang, heedless of voice quality or harmony. Leading us, the two Swiss guides—long, lanky, powerful fellows—sat cross-legged, twirled their ice-axes, and yodeled right merrily all the way to the moraine at the bottom. And never was a mile an easier, a happier, or a safer one.

There are unmistakable signs by which we may judge the safety of steep summer snow. If there are no traces of previous snow slides, the chances are against avalanching. If there are rock ledges or cliffs above, and falling rocks have lodged upon the field, the slope is safe. If the rocks have rolled all the way to the bottom, the slope is dangerous. A steep field that shows ice patches will require step cutting. Avoid steep snow fields, slopes that are tilted to forty-five degrees or more, that are cut by crevasses or are hung over a precipice. Do not play with the edge of a cornice. A snow finger of old snow is safe at almost any angle unless undermined by running water.

Just a final word about glaciers. Other snow routes are reliable. A glacier is tricky. It is the confidence man, the come-on artist of the high places. Its rule of conduct is as old as the ages—"Never give a sucker a chance!"

Snow climbing is easily learned. Some men* do not need to be taught. It is mostly a matter of individuals. A reckless man is reckless and just cannot help it. A cautious man may be overcautious. Blessed be he who is endowed with common sense. For example, no man with average judgment will subject his eyes to snow glare when colored glasses are so universal. He knows that the exposure, even though it seem to have no immediate effect, will, in the long run, impair his vision. And so it is with the hundred and one things that mean "Living most and serving best" in mountain regions. Sense and judgment must rule.

*Men means both men and women. It would be unfortunate otherwise, for all too often is some fair maiden forced to offer an encouraging or a steadying hand upon a dangerous slope to some mere man who is badly in need of it.

Mount Olympus. *Asahel Curtis*

Part Two

Mount Olympus

(*Santa Rosalia*)

CHAPTER ONE

Discovery and Exploration

IN 1774 A TINY SHIP sailed northward along the Pacific shores of North America. Above its strangely fashioned sails floated the flag of Spain. Its commander was a Spaniard, Juan Perez, the first "Civilized Man" to name a "Geographical feature in the State of Washington."*

For thousands of miles Juan Perez had sailed along those Pacific shores of North America without discovering a snow-capped mountain range. True, there had been isolated snow peaks—but no snow region. But at last, seeming to rise from the very shores, came not a single peak but a range of peaks, a turbulent upthrust, a jumble of snowy crests and ridges. The Spaniard named the impressive center of it, its culminant heights, *Santa Rosalia.*

The journal of Juan Perez was not generally known until another and later name, *Mount Olympus,* had been given to the world and had been accepted.

Fourteen years later than Juan Perez, the Spaniard, came John Meares, the Englishman. In 1788, this English navigator, sailing along the same impressive shores, proved both the dignity of the mountain and the romance of his own soul by the name *Olympus,* "Home of the Gods."

Following Juan Perez many explorers, within a relatively few years, visited the sands of those Pacific shores and saw the mountains massed majestically, forty miles from the ocean. This tabulation will indicate a few of the explorations:

1774—Juan Perez (Santa Rosalia)
1775—Bruno Heceta and Bodega y Quadra
1778—James Cook
1787—William Barkley
1788—John Meares (Mount Olympus)
1792—George Vancouver

Between 1789 and 1795 there were many quarrels between

*The Olympics in History and Legend.—*Dr. Edmond S. Meany.*

Spaniards and Englishmen over the possession of these shores. To the word "shores" may, perhaps, be added "rivers," but not "lands." The Pacific slope slants off for forty miles from Mount Olympus to the ocean. It is a region of heavy rainfall, of dense tangle, and of immense trees. Even the Indians did not penetrate inland by trails. They poled the rivers.

Even to this day, with all the travel from Lake Quinault,* down the Quinault River to Tahola at the beach, there is no trail. Since the days of Juan Perez the Indians have poled up the river from Tahola to Lake Quinault in two days and have made the return trip down the rapids, with the current, in one day.

In 1913 some hundred-odd of us in twenty-seven Indian canoes made the river trip from Lake Quinault. We left the lake in the early morning and reached the ocean in the evening.

If we had taken the same trip in the days of Juan Perez, in 1774, the only difference would have been in the matter of price and of Indian costume. Then the price would possibly have been our lives, instead of a moderate amount of money, for in those days the Indians of the shores of Olympus proceeded at times to blot out landing parties. And, of course, the clothes were different in style if not in purpose. But the canoes, the river path, the trip would have been the same. It is my devout belief that some of the fallen trees, obstructing the river, have been there since 1774. No self-respecting Indian ever removes a river obstruction. He lifts the canoe over, drags it around, or pushes it under. If you want a genuine thrill of the primitive, duplicate our trip of 1913. It is still there waiting for you. If you do take it, not once in all those river timber tangles, or white-water rapids, will your canoe ship water. Those Quinault Indians are as good as the Indians were in 1774—perhaps a hundred fifty-seven years better in skill—but their methods on the Quinault River are unchanged.

The yearly downpour—it can scarcely be designated by so gentle a term as precipitation—at Lake Quinault is one hundred forty-four inches. It is less at sea level and increases with the altitude, reaching its maximum at heights varying in localities

*There has been confusion in the spelling of the name of the Indian tribe, "Quinault." It has been spelled Quiniult, Queniult, and Quinault. The National Board of Geographic Names has recently decided on the spelling Quinault as the official form.

from three thousand to four thousand feet. Above four thousand the rainfall becomes less again, as it does near the ocean level.

This heavy drenching of the land has had certain results. The forest tangle is of a tropical density. The potential farmlands are the minimum for the latitude. The Olympic Plateau is almost as primeval as it was in 1774. It will remain that way, in greater or lesser degree, to the joy of future generations.

It is logical then that we leap a great span of years in detailing discovery and exploration. The next cycle of development in this most intriguing region begins then with 1855 when Governor Isaac I. Stevens made three treaties with the Indians of the Olympic Peninsula.

That is, it would have begun with 1855 except for Colonel Benjamin Franklin Shaw and Henry D. Cock. They succeeded in making 1854 historical when they dignified it with the great event of a "First Ascent."

The record of this first climb of Olympus is a scanty one, but we must not hold these hardy pioneers, these grand old sportsmen of the high places, to any particular brand of record tube. Any climber who has made the top of Olympus with the help of trails and a wealth of information, will grow eloquent over that first climb. It must have been a big enough job to get anywhere near Mount Olympus in those days, to say nothing of climbing it.

And these are the meager details that we can give you.

In the summer of 1854 a party of five white men and four Cape Flattery Indians went on a private exploring trip into the Olympics. Finally they found themselves near Mount Olympus. There is nothing that tells how they got there. The forests that surround the lower mountain regions are pathless and matted with dead and living masses of vegetation. I remember one of the hundred times I have set foot upon what I thought was solid ground in an Olympic forest. My leg broke through and I discovered that I was trying to navigate a mess of down stuff at least five feet above bona fide terra firma. Once I fell clear through a hole started by my unwary foot and found myself wedged into a dank, musty cavern lined with saprophytic vegetation. The walls of this cavern were the prone trunks of fallen giants of the forest, with shattered limbs intermingled with things that grow

in darkness. And to think that all of it was above the surface of mother earth, a mere accretion through her astounding fertility. A man who could make a half-mile in an hour in some of those places could pit himself against horses and win a Kentucky Derby.

But to continue the story—

The party as a whole discussed making an ascent of Olympus but decided against the "Extra hazardous expedition." But Col. Benjamin Franklin Shaw and Henry D. Cock took two of the Indians and successfully made the top. Unfortunately we cannot give even the names of the Makah Indians!

We do not know the month of the climb—it was supposed to be July. We do know the year—1854.

It just happens that a lot took place on the major peaks* of Washington, in the years of the strenuous Fifties. We will tabulate part of it:

1853—August 27, first ascent of Mount St. Helens by Thomas J. Dryer, founder of the *Oregonian* of Portland, and three companions, Wilson, Smith, and Drew.
This is the first recorded ascent of any major peak of Washington. The account of the climb was published in the *Oregonian* on September 3, 1853.

1854—July. First ascent of Mount Olympus by Col. Benjamin Franklin Shaw, Henry D. Cock, and two Makah Indians.

1854—Late August or early September. First ascent of Mount Adams by A. G. Aiken, Edward J. Allen, and Andrew J. Burge.

1854—August. First ascent of Mount Shasta, California, by Captain E. D. Pierce.

1854—August. First reported partial ascent of Mount Rainier by Benjamin Franklin Shaw, Sidney S. Ford, and "a man named Bailey." Verification is possible and important. The author would be grateful for added information.

1857—July 15. First recorded attempt to ascend Mount Rainier by Lieutenant A. V. Kautz, U. S. A. Lieutenant Kautz reached an altitude of 12,000 feet, approximately

*The Six Major Peaks of Washington in order of altitude are Rainier, Adams, Baker, Glacier Peak, St. Helens, Olympus. They were designated as the "Six Major Peaks of Washington" in 1919 by Dr. Edmond S. Meany, president of The Mountaineers. A "Six Peaks" emblem is now granted by the Club to each member who has succeeded in climbing all six.

three hours from the summit. He had conquered every technical difficulty as he stopped above the ice falls, upon the secondary summit snowfield.

1857—George Davidson, "The Grand Old Man of Pacific Coast Geography," named *Mount Constance, Mount Ellinor,* and *The Brothers,* feature peaks of the eastern Olympic Range.

1857—First ascent of Mount Hood, Oregon, by Henry L. Pittock, W. Lyman Chittenden, James G. Deardorff, William Buckly, and Professor J. L. Powell.

But to return to the significant year of 1855—

In the year Governor Isaac I. Stevens made three treaties with the Indians of the Olympic Peninsula:

January 26—At Point No Point. Area ceded included shores of Hood Canal and Strait of Juan de Fuca to Hoko River and interior lands back to the mountain summits.

January 31—At Neah Bay. The ceded area began at the Hoko River, extended around Cape Flattery and down the Pacific to Ozette or "Lower Cape Flattery." Again the terrain stretched back to the summits.

July 1, 1855, and January 26, 1856—At mouth of Quinault River and at Olympia. Ceded lands began at "Lower Cape Flattery" and extended south to the Quinault River and back to the summits.

In these three treaties the Indians ceded all of the Olympic Peninsula, except three large reservations, to the United States. The consideration was money and schools and other help for twenty years. Our government has kept every agreement, not for just twenty years, but to this day.

These three treaties opened the Olympic Peninsula to unrestricted exploration and to settlement. The dearth of prairie or meadow, the well-nigh unconquerable forests, the astounding ruggedness of the mass of interior mountains limited settlement to the shores of Hood Canal and to the Straits. Even the shores of the Pacific were left alone.

Even the exploration of the Olympics lagged most woefully. There were wild warnings about ferocious animals! In the dark interior was a central valley with tribes of cannibal Indians! The Olympics became widely known as the most isolated, the most virgin region of the whole United States.

In 1890 Elisha P. Ferry, Governor of Washington, announced

to the world that the mysterious Olympics contained the greatest unexplored area in the United States. Mr. W. E. Bailey, owner of the *Seattle Daily Press*, turned the job of looking into so fell a condition in a large portion of a sovereign state to his city editor, Edmond S. Meany. Dr. Meany is today the greatest authority on the upbuilding of the Pacific Northwest, and has had more influence over it than has any other one man. He took the matter in hand and organized the Press Expedition into the Olympics. Mr. Bailey of the *Press* financed the expedition.

J. H. Christie, who had just returned from three years of travel and exploration in the Peace and Mackenzie River districts of Canada, and who was then en route to Africa, became interested. He consented to lead the expedition. He and his party of five spent a hard six months back-packing through the Olympics. Boats would not work for them, nor would horses.

They moved supplies and equipment by relaying them on their own backs. They accomplished much in centering attention on the Olympic Peninsula. They disposed of all the cannibals, filled up that fictitious valley, and tamed the animals. They named Mount Meany, Mount Barnes, Mount Christie, Mount Seattle, Bailey Range, and many other outstanding features. The next year Mr. Christie accompanied Professor I. C. Russell to Mount St. Elias for relaxation!

The Press Expedition was real exploration. It gives one a thrill, today, unexpectedly to come across one of the old triple blazes of the Press Trail.

On September 13, 1890, B. J. Bretherton and six army men left the east fork of the Quinault River for Mount Olympus. By September 22 they had reached what they thought was the big mountain, although the descriptions do not seem to fit Mount Olympus. Bretherton and two companions climbed. They left a copper box and record book on a high summit. It may have been one of the peaks of Olympus, but the records have never been reported although diligent search has been made for them. If discovered, credit should immediately be given, for the task in 1890 was a great one. These men could easily be understood and forgiven if they left the record on some other mountain. Olympus has three main peaks and a jumble of lesser peaks. The main summit is over a mile long. Worse still, the whole country around

Olympus is a glorious labyrinth with snowy peaks galore that get in the way and add to the confusion. We sincerely hope the Bretherton records eventually will be found for Bretherton was a man with courage and with high ideals.

1897, February 22. On this date President Cleveland set aside the heavily timbered, mountainous interior of the Olympic Peninsula as the Olympic National Forest.

We come now to the period of records that exist today upon the summits of Mount Olympus. We will give the recorded first ascents of the three main peaks, distinctly separated upon the roomy summit fields.

East Peak. 1899, August 12. Jack McGlone, a member of the Dodwell-Rixon survey party.

Middle Peak. 1907, July 7. W. E. Humes, guide, accompanied by Herschel Parker, Belmore Brown, Mr. Clark.

West Peak. 1907, August 13. L. A. Nelson, leader, and ten other members of The Mountaineers. This is the highest point of the mountain and so, to L. A. Nelson, a leader of leaders among the mountain climbers of the Pacific Northwest, and to his party of eleven, should be accorded the honor of the "First Recorded Ascent of Mount Olympus."

1909, March 2. On this date Hon. W. E. Humphrey called upon President Roosevelt. It was two days before the inauguration of President Taft.

For years, Congressman Humphrey had tried to have the heart of the Olympics set aside as a National Monument. His bill had been killed in the senate. At last he remembered that such areas could be set aside, by mere executive order, to preserve features of scientific value. He knew also that President Roosevelt had favored the passage of the bill.

We will tell the rest of the story in the words of the Congressman, taken from The Mountaineer, Volume II, 1909.

"I was waiting in the Cabinet room when the President came in. He had that wearied and tired expression that comes from long continued exertion, when there is more work crowding upon you than you can possibly do. This was the first and only time that I ever saw him when he showed the effect of the almost unbelievable amount of work that he did in those closing strenuous days.

"Without waiting for any formal greeting, as soon as he entered he called to me across the room,

" 'Tell me what you want, Mr. Humphrey, and I will give it to you. Do not take time to give me details, simply tell me what you wish me to do.'

"I said 'Mr. President, I want you to set aside as a National Monument, 750,000 acres in the heart of the Olympic Mountains, the main purpose of this is to preserve the elk in the Olympics.'

"He replied 'I will do it. Prepare your order and I will sign it.'

"This was the whole of the transaction. I shook hands with him, wished him success in Africa, and told him good-bye. That is the last time that I saw him."

In a National Forest, by the special homestead act of June 11, 1906, and under the mining laws, the public domain is not safe from encroaching private interest. A National Monument is the next thing to a National Park and the "Heart of the Olympics" is safeguarded by the full power of the nation, for all time. Through the patient foresight of Congressman W. E. Humphrey and the vision of President Theodore Roosevelt, the Olympics, said by Professor Elliott of the Field Columbian Museum to be "A thing apart from all the known and accessible mountains of the world," are forever the priceless possession of the American people.

There are two more main events in the development of the Olympic Monument.

1913—August 2 to August 23. The Mountaineers' Summer Outing Party, over one hundred strong, conducted the first packtrain, 32 horses, entirely through the Olympic Mountains. The trails, built jointly by The Mountaineers and the Forestry Service, were completed on the days that called for their use. The leader of this epochal expedition was the same mountaineer supreme, L. A. Nelson, who conducted the first recorded ascent of Mount Olympus.

1931—August 26. On this date a splendid automobile highway that encircles the entire Olympic Peninsula was completed and opened for public use. The State of Washington has given to the nation this great artery of travel that the weak as well as the strong, the time-driven tourist, as well as the visitor blessed with more leisure, may come into his heritage.

From now on exploration in the Olympics will be more gen-

eral. In its turn, today's pathfinding will be transmuted into tomorrow's history. A recent news item will show, more graphically than anything else, the transition from the days of Juan Perez to today:

"Aberdeen, Saturday, January 9 (1932). Here is a careful estimate of the Olympic Peninsula's share of the six months' tourist travel scheduled to the Pacific Coast in 1932:

Automobiles, 100,000;
Tourists, 300,000;
Receipts, $3,000,000."

CHAPTER TWO

Up the Elwha and Down the Quinault

THE OLYMPICS, from Seattle, present the panorama of a long, high range. This snow-capped, impressively abrupt front is deceiving in that it implies a mere mountain chain. In reality, what you see first are introductory foothills. Behind are 250 square miles of mountain masses, longer from north to south than from east to west. There are innumerable ridges, several ranges, and an outstanding group of peaks in a surprisingly intricate center. The whole region is sculptured from an elliptical plateau that rose at its high center to the approximate level of the Cascade plateau, east of Puget Sound.

The high point of the Olympic skyline from Seattle is Mount Constance. Despite its constant invitation, its high point eluded ambitious climbers for two generations. Men and women climbed around it and over it but could not find the extreme high point. A. E. Smith and Robert Shellin finally conquered it on June 26, 1922. The main top is interesting. It presents nearly a mile of elusive rock routes, where one must scramble over a round dozen sheer sharp pinnacles to reach the highest one. In telling the story of the pioneer ascent, A. E. Smith indicates most graphically the character of Mount Constance, and its type of rockwork by saying, "It was not necessary to tell either of us to keep our hands full of mountain."

We will pass by boat or by automobile highway in front of this eastern border of the Olympics, turn north of it, and arrive at Port Angeles, where we will make final preparation for the trail up the Elwha River. From this point on the Strait of Juan de Fuca, we will be trekking south for three days then west for three days more, to Mount Olympus at approximately the center of the mountain region.

The trail starts from the Elwha River bridge, ten miles south of Port Angeles. Packhorses and guides may be secured in or near Port Angeles. Back-packing is taboo to the many, for the trip in and out to Mount Olympus will require two weeks unless you

An Indian Dugout Canoe near the mouth of the Quinault River. In 1774, just north of these rocks, Juan Perez saw and named Santa Rosalia, now Mount Olympus.

P. M. McGregor

wish to hurry too much. Horses are all the more necessary if you decide to continue the greater trip beyond the Elwha Basin over the Low Divide and south to Lake Quinault.

To most of us who live in the Puget Sound region, Port Angeles is synonymous with vacation. Each year we grow weary of the daily task and begin to repeat the jingle that attempts to justify our truancy:

"Away to the mountains, there's joy in the going!
Forget the drab city, the spiced winds are blowing!
The year of our labor has lagged to its close,
We're off to the summits, through forests and snows."

The Elwha River trail into the Olympics leads to flower meadows in dense forests. It introduces us to fishing streams and to the haunts of tame, wild animals. For a time we are lulled to sleep by the song of a streamlet in the shelter of a darkened glen. For three days and three nights we are the welcome guests of the lower Olympic Forest.

The first day upon the trail covers a ten-mile river grade along the Elwha from the Bridge to Humes' Ranch. Eight and one-half miles deeper in the forest, at the end of the second day, is Elkhorn camp. At the end of the third day we are ten miles farther south, still on the Elwha River at Lethe Creek camp.

When one is plunged suddenly into the life on a forest trail, after an enervating year in the city, the adjusting process is not simple. We are asked to make basic changes in three of the most vital habits of living, those of sleeping, of eating, and of using our muscles. Until these adjustments are made much of the charm of the trail is lacking. Those who have allowed themselves to slump into a poor physical condition suffer most from the sudden changes. It may be a week before they are not punished by nausea, insomnia, and intense fatigue. But the heavier the price to be paid in discomfort or suffering, the more obvious the necessity.

All this leads me to repeat a suggestion given in Part One, Chapter Two, of this book. The first trail trip of any magnitude should be taken with an organized outing or with the assistance of a trained guide. The purifying processes of life on the trail are so valuable that they should be taken under the supervision of those who know. There is nothing mysterious about it. Any serious student of physical life is qualified to give advice. It is not

necessary to call upon those who are obviously professional. Many men and women have made a basic study of the why and the how of living that is sounder than they realize. The best thing about the age in which we are living is not found in its mechanical progress or in its luxurious standards of living. It is found in a more universal knowledge that complete living comes from a common sense coordination of things physical, intellectual, and spiritual.

The full flavor of trail life must accumulate. The vitality of this flavor is great. It will survive a thousand vows of "Never again," and will wax strong on cast-out selfishness and self-pity. The chechahco will seek his sleeping bag, sore in body and wounded in spirit. Hard mother earth is under him and he knows that he will not rest. Yet, in the morning, he arises and tries again. All night the strength and the fortitude of mother earth have been flowing into him. Soon he ceases to be a chechahco, and his real fun begins.

For three days we have been following the Elwha River through dense forest.

The forests of the Olympic Peninsula contain one-eighteenth of all the standing timber of our one hundred sixty national forests. A rough estimate will classify this great stand as hemlock, thirty-nine per cent; Douglas fir, thirty-one per cent; Amabilis and other true firs, sixteen per cent; cedar, seven per cent; and spruce, seven per cent. About twenty-nine billion feet, board measure, is overmature. When government plans are completed it will be possible through reforestation to produce annually three hundred million feet of timber for use by our own people. This can be done and should be done without touching a tree upon the seven hundred fifty thousand acres of the National Monument.

There are other angles to the business values in the Olympic National Forest: power sites, mineral springs, lake resorts, limited farm and grazing areas, scenic centers. All these are more or less commercial and can be handled with mutual consideration for the public and the individual.

But there are still greater values. As the years pass and the real folk of the nation grow wise, the dozens who visit this great summer playground will multiply to hundreds, and the hundreds will expand to thousands. Even now the annual visitors in sev-

eral of our national parks number to the hundreds of thousands, and the Olympic Monument is equal in appeal to any national park.

Many times this question has been asked, "Which is more magnificent, The Grand Canyon of the Colorado or Mount Rainier?" The answer always has been "There can be no comparison —each is the supreme expression of its kind." So it is with the Olympics. They are different—they are unique. Those who have seen the world say that nowhere else on the surface of the earth are mountains that are so supremely sharp and rugged thrust up so suddenly from dense forests.

So, in the span of a single day, our fourth upon the Elwha Trail, we pass from the opaque aisles of heavy forest into that glistening arena of white ruggedness, the Elwha Basin.

But the change is even more sudden than the "span of a day" in this unique mountain fastness. We quote from The Mountaineer, Volume I, 1907:

> "This dense growth (forest) extends up the valley until the basin is reached, where the growth changes to Alpine within a hundred feet, and one steps across a branch of the Elwha into a mountain meadow surrounded by high mountains."

What a cirque of ragged, jagged, towering peaks surrounds this opulently dowered Elwha Basin! Mount Seattle, Mount Noyes, Mount Meany, Mount Queets, Mount Barnes, no two alike, yet each within the easy limits of a carnival day of alpine endeavor!

Of the five, Mount Meany is the most distinctive. It was named by the Press Expedition of 1890 in honor of Edmond S. Meany. Then, as now, Dr. Meany was as straight as a pine tree, and nearly as tall.

The mountain was tall and straight and red on top. Add to these facts that it had a glow upon it—a glow that gave an impress of idealism to everything around it—and the analogy is perfect.

Thus the mountain was named after the man.

In the Elwha Basin, and in the mountain meadows of the Olympics are many flowers. There are at least a dozen that are not found anywhere else. But there are two things about the flora of the Olympics that are more striking and more characteristic than are these new and different varieties.

Because of excessive rainfall, heavy snow blankets, short summers, ruggedness at low altitude, the habitat of mountain flowers is lower than elsewhere. Add to this that there is an unusual mingling of lowland and mountain forms, and again we sense the individuality of the Olympic region.

The summit route to Mount Olympus leads west from the Elwha Basin. A snow finger now covers the shadows and stills the voice of the "Singing Elwha." The Elwha Snow Finger is miles long and leads us from an altitude of 2750 feet to one of over 5000 feet. Here we cross through the high Dodwell-Rixon Pass and drop down to our final climbing camp in the Queets Basin at an altitude of 3750 feet.

The final climb of Olympus from the Queets Basin camp should start not later than 4 a.m.

An elk trail leads down a four hundred-foot canyon wall to a glacier stream. Follow the stream to its source at the Humes Glacier. Climb the glacier face where seasonal changes make it possible, avoid the ridge to the right for, once on it, you cannot descend to the Humes Glacier snowfields. At times the end wall of ice of the Humes Glacier is difficult, but it can be conquered.

Wide snowfields cover the upper reaches of the glacier and lead easily to Blizzard Pass, between the Humes and the Hoh Glaciers. And right here at Blizzard Pass comes the most scurvy trick of the mountain!

It is necessary to lose seven hundred feet elevation to reach the Hoh. The slope down to the glacier is not a gentle one! In fact, so steep is it that the front climbers of a line drop out of sight from the rear of the line. The best method for party climbing is to anchor a long rope securely at both ends and to cut ice steps that are both broad and deep.

The Hoh Glacier approach to the summit from here on is safe and easy. It is deeply crevassed but crevasse crossings are many and cause little delay. At our right as we climb is a great westerly lobe of the glacier that cascades directly from East Peak. On hot days it contributes the thundering roar of the avalanche as great masses fall away and grind downward to the lower glacier.

The Hoh Glacier steepens as we climb toward its source beneath the face of the mountain. At last we turn upon a high sky-

line ridge of snow up to East Peak or continue on below the southeast face of the summit mass.

The best way to make the summit of Olympus on the Humes Glacier Route is to take the West Peak, the highest one, first, and to make an easy ascent of Middle Peak on the way back. To make all three summit peaks on the same day would require about two hours on the summit field with loss of altitude and a heavy schedule of work. Only the most rugged climbers should tackle it as it is a big job. And always, back in the brain cells that form the "Bump of Caution" should lurk warnings that plenty of time and energy should be left for the return to camp. This return trip is unique for it demands two hard climbs while coming down off the mountain! One is a seven hundred-foot climb back to Blizzard Pass, and the other a four hundred-foot scramble up the canyon wall from the glacial stream in front of the Humes Glacier, to the Queets Basin camp.

There are two main parts to West Peak. Pass between them to a snow saddle north of the highest rock spire. It is easy to make mistakes on the mile-long summit field of Olympus. Seldom will you find a cloudless day. Usually you will be forced to climb by glimpses and that demands real mountaineering. Now the last one of these many admonitions!

The highest point of Olympus, the sharp, jagged pinnacle that is the real West Peak, is not the rock spire farthest west. There are at least two pretentious ones with dire intent to deceive, still farther west upon this most aggravating and intriguing summit maze.

The last seventy-five feet up the West Peak spire, from the snow saddle beneath it to the north, is real rock work. The actual top is crumbling and changes yearly. The safe space is limited and not more than six should venture upon it at one time.

But once there, upon a clear day, you have reached one of the real places of America!

Forty miles below, to the west, are the shores of the Pacific where, in 1774, Juan Perez first saw the mountain and named it Santa Rosalia. If your bent is toward history you can see a ghostly procession of sailing ships creeping wonderingly up and down those unknown shores. You may reconstruct some of the thoughts of Juan Perez, of Bruno Heceta, of Bodega y Quadra,

of James Cook, of William Barkley, of John Meares, who gave the name Olympus, of George Vancouver. You can shudder as you trace the Hoh River to the sea and witness there in your dark imaginings the first Indian massacre in the Northwest.

Most of all you will marvel at the hardihood, the courage, the ambition, the intelligent vision of those great pioneers. If you are one who climbs mountains, and one who feels at home upon them, you will pay generous tribute to the great souls of the past who have paved the way for you and for countless generations unborn.

If the day is exceptionally clear you can about-face and trace the great sweep of the proposed Cascade Trail.

You cannot see the end of it in far-off British Columbia except as a dim northern horizon. Mount Garibaldi with its great lake and its frozen solitudes is too vague to be distinguished by one who has no memories of its scenes.

But south of it, beautifully distinct, is Mount Baker, the second jewel of the Cascade Chain. Then comes Glacier Peak, farther back from the coast, but transcendent in the middle distance. The noble outlines of Mount Rainier seem as close as a neighboring county, directly east. Then farther south are the three distinguishing guardians of the Columbia, St. Helens, Adams, and Hood, terrestrial watchmen towering alone to great heights.

In the region of each one of this unparalleled chain of snow sentinels are a thousand devotees who will fondly cherish that one peak as supreme. It is right and just that their loyalty should shine forth as a steady flame. But it remains for the watcher upon the summit of Olympus, standing apart and alone, to survey them all and to proclaim the procession of them peerless.

The Lake Quinault camp is the fifth from the Elwha Basin. These camps with altitudes and distances are as follows:

Low Divide—3850 feet, 7 miles.
Promise Creek—3000 feet, 6 miles.
South Kinta Creek—3950 feet, 8 miles.
Round Lake Trail—3100 feet, 13 miles.
Lake Quinault—200 feet, 14 miles.

From the Elwha River Bridge near Port Angeles we have been traveling a peculiar stretch of country that never really has been inhabited. The Indians have roamed over it, upon hunting ventures, and white men have explored it. To this day it is not a

home country. To us now, it is a summer playground just as it was long ago to the Indians. The part of it within the National Monument should remain sacred to three things—the back-pack, the horse, the open campfire, with, perhaps, one or two hotels and supply depots.

At Lake Quinault we reach the confines of the Indian reservation established by treaty at Olympia in 1856. Part of the lake is given over to white man's hotels and resorts. A modern automobile road leads out of the Olympics to Aberdeen, Washington. But those of us who have lived through a day of greater joy plead with you not to desert the ship.

It is not exactly a ship. It is an Indian dugout, a primitive canoe. As important as this craft is the Indian to pilot it. He will give you thirty-five wonder miles, down the rushing Quinault river to Tahola at the Pacific, through virgin forest.

It must be an Indian, for he alone knows that tricky river. In 1913, Herbert Olson, a white man, conducted one of our twenty-seven canoes from Lake Quinault to Tahola. He did a great job of it, although he did, at times, ship some water. Our Indian canoeman, a little man of some seventy years, went as far as an Indian could possibly go under such circumstances. He said of Olson, with immense admiration and obvious friendship:

"Herb Olson most good as Indian!"

Every log that has fallen in or across the river since 1774 is still there in one form or another. And after all, is not the Indian right? Is it possible to improve upon nature in her most sacred temples? One, like an Indian, may always go over, under, or around a log!

You will be made welcome at Tahola, the Indian village at the Pacific. The next day a nine-mile walk along the beach will take you to Moclips and out.

Ever afterwards the Olympics will be a vital part of your inner life.

CHAPTER THREE

The Sol Duc-Blue Glacier Route

THE BEST TRAIL, the shortest and safest, to the summit of Mount Olympus begins at the Sol Duc Hot Springs and reaches the foot of the mountain near the Blue Glacier. The round trip can be made in a leisurely way in seven days. One who is forced to the deplorable necessity of burning up his own energy and the trail can take a day off both going and coming. Omitting any weather or other mishap he can go from Sol Duc to the top of the mountain and return in five days.

The entire trip is taken upon the western slopes of the Olympics. It alternates deep forest and park country, and is well worthy of the seven days rather than the five.

There is a bit of philosophy about mountain climbing that comes only with experience. To the beginner one spot only, the highest point of the mountain, is the objective. He seems possessed to hustle up there, to jam his name into a record tube, and then to hustle back again. If he does try to look at some scenery he is too out of breath to appreciate the finer flavor of it. And besides, he feels that he is wasting time and is making no records.

A mountain slope is no place for a race. The Mount Baker Marathon at Bellingham, Washington, was abandoned after it had been found to be too severe upon the racers. Moderate climbing builds up a physique, forced climbing breaks one down.

The objectives of a mountain trail multiply as contacts are added. The first deep breath that carries the ozonic air of a Pacific forest to the atrophied lobes of a too-civilized lung accomplishes a real objective. The first day that carries you up slope with a heart that is strongly and rhythmically pulsing instead of fluttering feebly, marks another great goal. When you find yourself eating plain, nourishing food, naturally, with a fine savor of appetite, and without the slightest temptation to over-eat you have won a reward that is worth while. When you just can't resist helping a neighbor set up his tent; when you want to jump and run as naturally as when you were a whole-

some child; when you are irresistibly impelled to laugh and sing, you find that each moment of living is just the one that you have so long sought.

The saucy impudence of that bold buccaneer of birds, the mountain grey jay, the Camp Robber! His fight with a righteously indignant chipmunk for a choice morsel! The wisely trusting close-up scrutiny by a huge elk! The smoothly rolling retreat of a portly bear! The surprise of a flower in a barren rock wall! The flashing vista between the trees! The unexpected, gentle spring, or the gush of imprisoned water breaking free! The mattress of heather! The waterfall! The reflection lake! The raging white water of a tumbling river! All these objectives and many more are upon the Sol Duc-Blue Glacier trail. The freshness and the pull of each moment is irresistible—for you never can tell just what you are going to run into next!

Three days upon this trail will bring you to the Blue Glacier.

First Day.—Leave Port Angeles and drive your automobile past a mighty mountain lake, Lake Crescent, to Sol Duc Hot Springs. Take the trail and climb slowly to Deer Lake. The distance is short, about four miles, and it will make easy your transition to trail and camp life.

Deer Lake is a jewel that gleams darkly beneath the shadows of the forest. The campsite is ideal.

Second Day.—Your trail winds up and down along the backbone of the mountains. At times it rises to about 5000 feet elevation. You pass Hoh Lake where there is abundant animal life, both great and small, and arrive at a wide park area, the Seven Lakes region.

Here is a strange contrast, a country that is unlike any other in the Olympics. It is not park-like, with flowers and heather and green verdure. It is a high barren, a rocky floor dotted with tiny lakes. There are seven main lakes and others to spare. The altitude of the Seven Lakes Basin is about 4000 feet. It is hemmed in by forested ridges, not so much jagged as subdued and rounded. In this, again, is a contrast, for most of the Olympic region is dark forest or bold peak.

The Seven Lakes Basin is the center of a gentler panorama! It is one of the many surprises of the Blue Glacier trail.

You next drop away from the high open country through Sol

Duc Park, and on a long slant of 4000 feet to the broad, heavily forested valley of the Hoh River.

The trek for the day has been a long one—fourteen miles. You will camp near the Olympus Ranger Station, less than 400 feet above sea level.

Third Day.—You will regain today the elevation you were forced to abandon yesterday. A densely wooded forest vale leads to a strong log bridge over a gorge. Then the trail winds upward, past Beaver Lake and reaches Olympus Camp just below the Blue Glacier.

You are again at the base of Mount Olympus. This time you are north and west of the summit field, within easy reach of it. The third camp from Sol Duc is the climbing camp.

In the three days from Sol Duc Hot Springs you have climbed a 5000-foot range, traversed a park country, dropped down again nearly to sea level, and have climbed a second time to over 5000 feet elevation. In all these miles you have been with the tame wild animals of the Olympics. Neither you nor the animals have regretted it. You have both been unafraid.

The Olympic Elk, Cervus Roosevelti, is "An antlered monarch on his high mountain range." There are none like him, as large or as perfect, elsewhere, in the whole world. He, more than any human, awakened the interest of Theodore Roosevelt and assured the protection of all elk, forever, within his sacred precincts of the Olympic Monument. It is just that the name of Roosevelt should be honored in the naming of this species. The Roosevelt elk now has been protected for years, and has learned to trust man. He will stand within seventy-five feet of you, at times, and will graciously allow you to photograph him.

One of the most interesting articles about animals, written in recent years, is entitled "Kidnaping in the Olympic Wilds." It is by Doris Huelsdonk, The Mountaineer, Volume 19, 1926. This is quoted from the article:

> "There is a sort of desperation in the gun hunt, a quiet lure in the camera hunt, but a deep fascination lies in the hunt for young elk, a veritable kidnaping process. The reason for such kidnaping is that the western Olympic region is quite overstocked with elk, causing hundreds to starve to death when a severe winter comes.
> "Our weapon of warfare is a mere rope.

"through the generations the elk have developed many tricks to mislead the hunter.

"Though a mere infant he has to his advantage his instinctive cunning. * * * He puts great faith in his protective coloring * * * and will lie perfectly quiet as long as he thinks there is the slightest possibility of being unobserved.

"When we grab him he is usually very quiet. He plays that he is tame or crippled * * *.

"Once home, they (the baby elk) tame very easily.

"When our elk are about three weeks old we drive them over twenty miles of trail and then they are shipped to Seattle by truck and boat and from there distributed to various places."

The cougar is the bad man of the Olympics. He is a powerful member of the cat family, sometimes over five feet long, exclusive of tail. His presence in the Olympic forests does not mean danger to a human visitor. He will not attack man. Some evidence has been offered that he will prey upon a lost child, or a person who is helpless through injury. But this we know—he is the enemy of all decent animals. He is the dastard, the crook, the ruthless, fiendish, uncontrollable killer of his animal kind.

He does not kill alone for food. He kills to be killing, through unforgivable blood-lust.

Oscar Peterson has guided and packed in the Olympics for many years. He has hunted cougar with dogs, and without them. He loves animals—but not the cougar! Two of his experiences should be told in that they indict this great outlaw cat, and condemn him to punishment by death.

Oscar was deep in the western Olympics without dog or gun. He saw an elk, a magnificent specimen of its kind. A cougar crouched upon a limb above the elk. He launched himself upon the huge animal, tore a shoulder but did not get the elk down. The cat had missed.

An Olympic elk is a mighty animal. A cougar cannot kill him when he is on his feet. Nor can he down the elk without the added momentum of a leap downward through space.

The cougar avoided the striking front feet of his intended victim and slunk away. He bided his time and maneuvered to another tree. Again he missed, inflicting more wounds. The battle

of death continued. That great elk passed from berserk desperation to terrified despair. At last he fell, died, and was disemboweled. Just another tragedy of the forest!

But Oscar Peterson who had witnessed part of that ruthless killing, and had read sign on the rest of it, got his dogs, took the trail of the cougar and killed him. He did it not for a bounty, but as the stern duty of an executioner!

There is a saying that a cougar will average a deer or an elk a week. There is no average about it. He will kill as many times as he has a chance to kill.

On another day, Oscar Peterson, hunting with his dogs, took the trail of a cougar. He found the cougar's first kill, an elk. The elk had been, as usual, disemboweled. The liver and part of the loin, the choicest part, had been eaten. The next kill of that cougar, another elk, had received the same butchering attention, but the liver only had been eaten. In that one day the same cougar killed seven elk. The last five were murdered maliciously and were left untasted.

Oscar and his dogs kept to the task until they finally treed the criminal cat and blotted him out of existence.

Such things should spell the doom of all predatory animals. A bounty of $100 instead of a mere $25 would put an end to the cougar in the Olympic forests. A cougar hunter will do well to get one cat a month, and the larger bounty would be fully earned. The cost to the State of Washington would be justified.

This should not be considered the plea of an impossibilist. If the cougar killed for his needs he could be tolerated. It is his wantonness that condemns him.

The human killer of helpless wild animals may be just another cougar, without the excuse of ignorance. If he slaughters for a record with which to impress someone, he is low enough to look up into a cougar's face. At least the cougar is not playing to the galleries!

If the blood-letting hunter wants the exhilaration of the chase or a test of his courage, he should hunt with a camera, or like Doris Huelsdonk, with a rope and a friendly purpose. It takes no more fortitude to shoot a non-predatory animal than it does to slap your grandmother—perhaps not so much in these days, for grandmother might have a comeback!

But necessity changes all this. A human being, no matter how humane, is supposed to consider the lives of his own kind as sacred, even his own life. One of my friends, a man who loves and protects animals, was forced to kill and eat a whistling marmot!

And the whistling marmot, a canny little two-foot rodent, is a great favorite.

Trevor Kincaid describes him in a most sympathetic and realistic way in The Mountaineer, Volume V, 1912:

"Suddenly a shrill, buoyant whistle breaks upon his ear, and he is startled to think that the seeming waste of rock and moss is tenanted by man, and by youthful members of the species at that! When, however, he searches for the author of the flute-like cadence he is astonished to find the musician is not a biped but a four-footed mountaineer, clad in a warm furry coat to meet the exigencies of his alpine domicile. Familiarity with this fur-clad flutist does not breed contempt, but leads us to appreciate more fully the picturesque qualities of this dweller upon the lofty places of the earth."

It is impossible to spend three days upon the Blue Glacier Trail without meeting some of its animals. The three we have introduced are but a few of the many. Of course you will be disappointed—you will not see the cougar.

One winter day in the Cascades I was leading a group on snowshoes—we had not at that time adopted that high-powered rifle of the snows, the ski. Being on snowshoes, we were plodding along and were in a compact body. We crossed a cougar track in the snow. Shortly afterward we crossed another and another, until we had encountered eight. One impressionable young woman exclaimed fervently:

"This forest is full of cougar!"

"It is full of one cougar," said a young woodsman, correcting her, "And none of us will get a glimpse of him. And he's a-circlin' and a-seein' of us all the time—right now!"

It is to be confessed that the staccato emphasis of the young man's last two words did more damage to our nerves than to those of the cougar. Unnecessarily too, for that cougar dislikes you as thoroughly as you dislike him, and he would not deign to

lay a claw upon you. Yours is not the skin he loves to touch—he wants feathers or hair or fur on it.

We have said little or nothing of the birds and bees, the flowers and the fluttering butterflies upon the Blue Glacier Trail. Many of them deserve a volume. A bee with sense enough to choose a home in the western Olympics should call forth at least an appendix from a Maeterlinck!

The climbing camp below the Blue Glacier is well chosen. There is a small mountain lake just a few hundred feet beyond it. The lower Blue Glacier, almost against the camp, deserves a visit. You will have time for this on the late afternoon of your third day from Sol Duc. On the fourth day comes the summit climb.

Fourth Day.—We start at four o'clock in the morning up a long, easy draw at the left of the Blue Glacier. It is not deep enough to be called a gorge or even a ravine. It is shallow, boulder strewn, comfortable. Still it leads us nearly a thousand feet in altitude before it eases out upon the upper floor of the Blue Glacier.

We cross the Blue Glacier on a long slant directly toward the highest skyline mass of the Mount Olympus summit field. We find the glacier surface comparatively level, with few crevasses, and those, small ones. Not a dozen times are we forced from a direct line on that long slant up and across the glacier floor.

At the right hand wall of the glacier, right hand when climbing at the mountain, we will find slopes that are surprisingly even, leading to the broad, lower summit field. Here we turn an acute angle and slant away from the mountain, climbing the steeper slope that leads from the glacier floor. As we climb we keep the mountain over the left shoulder. As we approach the lower summit field we curve gradually left until, again, the mountain mass is directly in front.

Do not do as our party did at this point. Supposing that West Peak meant westmost pinnacle we hit over in that direction, right, and climbed the pinnacle. It was neither the highest point nor the West Peak. Then we ran all over the landscape, hunting short cuts back that would not cut through to the upper field.

Instead of this foolishness, climb directly toward the highest mass of the middle skyline. It is the real West Peak.

At a point about a quarter of a mile below West Peak you will swing left as we did and attack the easiest approach over the cornice. As you top this cornice and reach the upper summit field, West Peak will be near, over the right shoulder. Middle Peak will be nearly a mile away directly ahead.

You will then turn directly toward West Peak and will approach it. The first rock mass is not the real West Peak pinnacle. You will half-circle it from right to left, keeping the rock wall on the right side as you circle around it.

Behind is a steep snow saddle between the two parts of West Peak. You will climb this sadlle and will find yourself on the snow at the north base of the highest pinnacle of Mount Olympus, within seventy-five feet of the top of it.

This last seventy-five feet will demand more real climbing than all the rest of the ascent, which has been to this point, mostly route finding and snowfield plugging.

But an average rock climber will make this last seventy-five feet without any unjustifiable risk. You will climb up the northwest face of the pinnacle. No mistake can be made. The rocks that seem best for hand and foot are best, and you will gain the top after an interesting and a somewhat clinging scramble.

Once more, as at the end of the Queets Basin-Humes Glacier route, the climbers of your party and of ours are upon the narrow and crumbling, the maze-guarded and isolated, the exalted summit of Mount Olympus.

This is the second time that we have stood upon it. The first time we made the summit, through Blizzard Pass and over the upper Hoh Glacier, we found the day so clear that we could indulge the rapture of panoramic appraisement. Ships of the dim past sailed the historic shores of the Pacific. Far to the north, veiled by distance, was Canada and Mount Garibaldi. The Cascade Trail swept southward past the sentinel peaks of Baker, Glacier Peak, Rainier, St. Helens, Adams, to Hood across the majestic Columbia, in Oregon. We surveyed in grand sweeps of imagination and of vision, the realm of a commonwealth, the romance of its past, hopes for its future.

But today, a sudden summit storm is closing in upon us. Gray curtains sweep across the distant view. They engulf East Peak, then Middle Peak, and attack with flashing guns and rumbling

chariots—cloud cohorts mad with tempest wrath. West Peak is in the path of these charging hosts. Storm driven we fight our way from the inhospitable summit and back to camp.

The storm wounds of summer are soon healed. The long trail back to Sol Duc was drenched and freshened. In three days we were at Port Angeles. Behind us, the Olympics, well worthy of a yearly pilgrimage, had impressed not a single message, but a complexity of indelible impressions, a composite of things discerned of the senses and of things unseen. It has remained for one man, resting upon the summit of Olympus, to give us a summation of the Olympics in the musical imagery of poetry:

ODE TO THE OLYMPICS
N. D. Showalter

A circlet of glory I behold
In nature's beauties, so often told
By word, in picture or in song
Of bard, who feels his accent strong
Re-echoing—or rising within the heart
Dreams which no language can impart.

Mountain ridges jagged and bold,
Grapple the mid-air's stinging cold
Of hoary meteor sifted down
To mould each giant's silver crown
Of glittering purity—Who can trace
The mystic majesty of such a place?

Sentinel turrets rising high
Their heads against a cloudless sky
Shivering, though vertical the rays
Of summer's sun sends forth his blaze
Of heated glints in myriads blast
Against the shimmering whiteness cast.

Changed from a thousand winters' store
Crystal streams from the ice-caves roar,
And charge the stones in the pathway wide
Glacial moraine on the mountain side,
But emerging swift from the whirlpool plight
They usher again from the dizzy height.

Down, down the foamy waters leap
The precipitous walls of the rocky steep
And gurgle a song to the wildwood air
In guttural tones; and the fir trees fair
Answer to the wail with their graceful sway
Of limbs—A chinook just passed this way.

The wondrous mantled blue o'er head
With ruffled clouds, a billowy bed
They seem to make for angels sleep
Who wait and watch, their vigils keep

For us—the filmy veil of cosmic light
Shuts out the "Promised Land" from sight.

Within this dreamland beyond my ken
There are other beauties withheld from men.
For "heart-beats" alone can record the bliss
I feel, and no other can know or miss
The "still small voice" with its sweeter tone
For it answers my call, comes to me alone.

Mount Garibaldi, Lake Garibaldi. *Arthur Bailey*

Part Three
Mount Garibaldi

CHAPTER ONE

Some History and Geography

THE MOST INTERESTING WAY to approach Mount Garibaldi, one of the highest and greatest snow peaks in Canada's Pacific Southwest, is to navigate, by steamer, the Puget Sound and the Gulf of Georgia from Seattle to Vancouver, British Columbia, the first day; to sail the Howe Sound north from Vancouver to Squamish and then to take the Pacific Great Eastern Railway to Daisy Lake station the second day. There are two trails from this point to the Black Tusk Meadows in Garibaldi Park. One of them is eleven miles long, the other sixteen. There will still be time the second day to climb to the Black Tusk Meadows.

But what a crime it would be to make this approach in a one-paragraph statement of fact!

The island labyrinth of the Puget Sound is like the Inland Sea of Japan. The hundreds of islands, green verdured, never have been accurately counted. Many of them, in the Puget Sound, are still owned by the State of Washington. With each incoming and outgoing tide currents rip and surge and pluck with relentless hands at rocky shores and at anything and everything afloat. A small craft upon these waters is best off with both sails and a motor—sails for long open sweeps, wind-blown and dependable—motors for ever-threatening emergencies. Japan's Inland Sea and ours invite the adventurous boatman. The one offers the added inducement of foreign-looking trees and strange architecture. The other rivals these inducements with its panoramas of rugged, whitened plateaus, ranges, and high-flung snow summits.

We will start from Seattle's harbor, Elliott Bay, on a sunny July morning. As we sail westward out from the harbor entrance we see the high front line of the Olympics, with three sentinel peaks, Constance, The Brothers, Ellinor, romantically named by George Davidson, in 1857. The bow of the boat swings up-Sound. Far north of us is the graceful summit of Mount Baker, pure in outline, undimmed by distance.

Gradually we bear to the west of north and enter a narrow

stretch of water between Hood Canal and Whidby Island, both discovered and named by George Vancouver in 1792. The Olympics are now southwest and are changing front and appearance hourly. Whidby Island, low-lying and wooded, our right shore, gives us one of the many contrasts in climate found in Western Washington. Less than seventy miles southwest of it, upon the western slope of the Olympics is an annual rainfall of 144 inches. Upper Whidby Island, partly wooded, partly open prairie, is moistened by a mere 22 inches a year. And the mainland, at Everett, ten miles northeast, is bathed by a yearly downfall of nearly 40 inches.

Still a little west of north, the water lane, now called Admiralty Inlet, leads past Port Townsend and upper Whidby Island into wide, open waters. We head northwest into what seems to be an open sea. As we sail on we soon raise the dim north and south shores of a strait at our left.

The strait of Juan de Fuca, curving away a little north of west, stretches out seventy-five long miles to the Pacific Ocean. It was named in 1788 by John Meares, who named Mount Olympus on the same voyage. He named it after the man who was supposed to have discovered the Strait in 1592. Or rather, John Meares gave it that Greek navigator's assumed name. The historians tell us that this is one of those "borderline cases."

We quote from Dr. Edmond S. Meany, Professor of History, University of Washington. Dr. Meany's article, "History of Garibaldi Region," was published in The Mountaineer, Volume 16, 1923.

He gives this interesting information:

"Oldest of them all in civilized tradition is the Strait of Juan de Fuca. A mariner claiming that name was a Greek, whose real name was Apostolos Valerianus, and his Greek home is given as Cephalonia. In 1596, he told a tale to an Englishman named Michael Lok, to the effect that in 1592, under Spanish colors, he had sailed into a great waterway on the northwest coast of America. Michael Lok wrote a letter embodying the tale and the letter was published in 1625 in 'Samuel Purchas, His Pilgrims.'

"The tale was believed by many navigators, but in subsequent centuries ardent searchers failed to reveal any further evidence

and historians have long ago concluded that Michael Lok was made the bearer of a sailor's wild story."

We soon pass the City of Victoria, "more English than London," perched on the extreme southeast point of big Vancouver Island. And here again we meet another item of history. Vancouver Island was first named "Quadra and Vancouver Island" after George Vancouver and after a Spanish gentleman who carried with great dignity the name of Don Juan Francisco de la Bodega y Quadra. The partnership name, Quadra and Vancouver Island, lasted from 1792 until a half century later. It is to be regretted that the combined name did not endure, for it was a monument to the friendship of strong men of different races and rival nations.

We sail north, with the City of Victoria at our left, into a maze of water gaps and islands. Far to our right are Anacortes and Bellingham on the mainland. They cannot be seen but Mount Baker, behind them, still farther east, appears to be as approachable as a next door neighbor. It seems almost incredible that Edward T. Coleman, an "English gentleman of Victoria," an experienced alpinist, was forced to live through so many years, such wild Indian rumors, and the burden of several punishing attempts before, in 1868, the first recorded ascent of Mount Baker fell prey to his indominable will.

This myriad island puzzle was solved in 1792 by the redoubtable George Vancouver, who passed through its intricate passages, named the Gulf of Georgia beyond, and sailed through it to our first stopping point on the mainland, the City of Vancouver, British Columbia.

We will sail onward the next forenoon from Vancouver, some thirty miles to Squamish near the head of Howe Sound, the fiord-like waterway that cleaves the Coast Mountains.

The mountains are with us even in the City of Vancouver. As we leave the dock sailing straight north in the early second morning of our journey to Mount Garibaldi, they loom over us on both sides. At our right as we turn into our water lanes are Grouse Mouutain, only five miles away, and Vancouver's couchant Lions, farther along the range, twin mountains that have become world known.

The narrow waters of Howe Sound reflect the shadows of

five-hundred-foot rock cliffs and of five-thousand-foot forested hills. At Brittania we are reminded of Alaska. It is the site of one of the largest copper properties in the world. A small town is builded upon a narrow beach. Behind it are picturesque mine structures, great spider-legged buildings that straddle rock masses, and sprawl up the precipitous side of a mountain. One always ponders over the fate of such trustful and optimistic towns should they find themselves engulfed in a tidal wave. But year after year they bask in heedless contentment in the path of avalanches from above and of floods below.

At Squamish, near the head of Howe Sound, we leave our boat and transfer our equipment to the Pacific Great Eastern train. It pulls out about noon, shortly after our arrival by boat, and carries us promptly past the high Tantalus Range, into the rugged Canyon of the Cheakamus River. For twenty-two miles our train clings precariously to the sides of the canyon, over a mountain river that varies with unexpected celerity through all the changing degrees from smooth velocity to torrential madness.

Either the trip up the Howe Sound or the ride through the Cheakamus Canyon would give all the scenic sustenance that could be digested in a single day, but the combined two are but the introduction to the second day of our Garibaldi venture. We arrive at Garibaldi Station in mid-afternoon and take the eleven-mile trail to Black Tusk Meadows in Garibaldi Park.

We will take the old trail, the steep one of eleven miles, rather than the more gradual new one of sixteen miles. The main reason is The Barrier. The old trail leads us so near to The Barrier that we may visit it, while the new one does not.

This old trail to the Black Tusk Meadows is not so different from many other mountain trails of the Pacific Northwest. It climbs by slants and curves and switchbacks, through forests, across small meadows, past rock cliffs. It gains elevation rapidly, mile after mile, by crowding the slopes as aggressively as possible. In some places it just manages to stay within the borderline of safety for packhorses, while it caters most of all to the needs of those who carry their packs upon their backs. Those who are not trained to carry back-loads up mountain sides should engage packhorses and travel this trail as lightly burdened as possible, for it rises three thousand feet in nine miles of the eleven.

Half way up this elevation, we arrive at the base of a strange formation. We will turn aside, find the source of Rubble Creek and make our first visit to The Barrier. It will not be our last, for nowhere else on earth has nature done a more unique or a more successful job of engineering.

Rubble Creek gushes out from beneath a sheer, even wall of lava rock over a thousand feet high. This wall, coming from a great flow of lava in comparatively recent geologic time, forms a perfect dam, called The Barrier, across a deep mountain gorge. It rests upon the original country rock, partly limestone, that formerly lined the bottom of the gorge. Below The Barrier is a boulder flat through which Rubble Creek noisily pushes its way. This boulder flat is a continuation of the bed of the gorge that existed before nature, through the agency of volcanic eruption, engineered the building of that marvelous dam.

There are many mountain gorges. This one, originally fifteen hundred feet deep, is of the order of greatest magnitude. It recalls a story of Alaska.

A roadhouse upon an Alaskan trail, kept by a sourdough, was possessed of a large sign displayed prominently, that all who passed might read. The sourdough, hoping to make the meaning of the sign clear even to the most hopeless chechahco, had added these words at the bottom of the sign:

"Snack—Two bits
Lunch—Fifty cents
Meal—A dollar
Real Meal—A Dollar and a Half
A Hell of a Gorge—Two Dollars"

The Stony Creek Gorge, now dammed by The Barrier, was originally a "Two-Dollar Gorge."

What is it now?

We will climb the canyon walls to the top of The Barrier and see!

Beyond the top of The Barrier, backed up by that great dam, in lieu of the old fifteen hundred-foot gorge with its mountain torrent, is Garibaldi Lake, two miles wide and five miles long. It is a mountain lake as strangely formed as Crater Lake, Oregon, and majestic beyond words.

The Barrier, from its thousand-foot front wall, back to Garibaldi Lake, fills the old gorge for a solid mile and three-quarters.

Surely nature took no chances when she fashioned a dam nearly two miles thick!

From the lower end of Garibaldi Lake a swift stream empties into Lesser Garibaldi Lake, a mile away, upon the surface of that lava-wedge dam. There is no visible outlet from Lesser Garibaldi. Stony Lake, between Lesser Garibaldi and the front wall of The Barrier, is without either inlet or outlet, as it is not connected with Lesser Garibaldi, except at extreme high water.

Garibaldi Lake receives a great supply of water each year. At its upper end, two primary glaciers, The Sentinel and the Sphinx, empty directly into it. It is fed by rills and streams and waterfalls by the hundred. And yet, the lake never overflows.

Where, then, does the water go?

The scientists tell us that it has forced subterranean channels in the limestone rock, a thousand feet below the surface, where the lava Barrier rests upon the older rock bottom. Rubble Creek, gushing with hydrodynamic force from the bottom of the thousand-foot Barrier wall, is part of the underflow. The rest of it, seeking sea level, lives its own life and keeps its own secrets!

We will climb from The Barrier to the Black Tusk Meadows, and select a campsite in a most noble spot, upon a stream, near small lakes, five hundred seventy feet above the shores of Lake Garibaldi. This will be our mountain home as long as we remain in the Park.

In our two days from Seattle to Garibaldi Park we have sailed an inland sea with its hundreds of tranquil islands, gentle scenes that are surrounded by snow-clad mountain ranges and plateaus and high sentinel summits. We have crossed the Gulf of Georgia to Vancouver, a city that might well be the pride of any nation. We have sailed rugged, picturesque Howe Sound; threaded turbulent, impressive Cheakamus Canyon; climbed a wild mountain trail; viewed The Barrier, one of Dame Nature's most surprising feats of engineering; and have, at last, arrived at a camp in the Black Tusk Meadows—a camp that could comfortably accommodate an army—a camp that would never permit one soldier of that army to tire of its attractions.

Black Tusk Meadows, a mile wide and two and one-half miles long, is hung up over the shores of Garibaldi Lake at an altitude of 5392 feet. Within the Meadows are lakes, gentle brooks, tur-

bulent streams, flower meadows, amphitheatres, and wooded dells. But other mountain campsites offer many or all of these things. There is a difference that sets the Black Tusk Meadows camp apart.

Many meadow camps are in a secluded basin, hemmed in by higher country. Their charms are limited by the fact that we cannot "see out" to any great distance. A hard climb of one hour to many hours is demanded from those who seek the rewards of a panorama. The distinctive camps offer more. Olympus camp gave us from within its confines a vista that included the Blue Glacier and Mount Olympus. Elwha Basin, another exceptional camp, offered a whole close-up circle of mountains surrounding the campsite. In the Black Tusk Meadows you may ask for anything, everything, and it will be granted you in full measure.

Garibaldi Lake lies right in front of camp, five hundred seventy feet below it. From the outlet at the lower, to the Sphinx and the Sentinel glaciers at the upper end of the lake, lies a five-mile expanse of changing tints and colors, a transcendent mirror. The broad surface of the lake reflects sunshine and storm; a turquoise blue that gleams with pale, ethereal light, or deepens to shadows of intense indigo. With each mood of cloud or sky there is change; change that is slowly insidious, or as sudden as a blow. Along those tremendous shores are mirrored forests, cliffs, rock chimneys, cirques, and summits; the reflection of a whole mountain region in translucent waters.

Looking from the meadows, across the lake, we include in one composite scene three glaciers, a wide snowfield, and six mountain peaks. They are, from left to right, Sphinx Glacier, The Sphinx, Guard Mountain (formerly Sentinel), Sentinel Glacier, Glacier Pikes, Garibaldi Snowfield, Mount Garibaldi, The Table, Warren Glacier, and Mount Price (formerly Red Mountain).

But we have, so far, looked in one direction only! We will turn our backs to the lake and see if there is anything worth looking at in the opposite direction.

Standing over us as gloomy as the threat of a gigantic toothache is the Black Tusk, a most peculiar mountain. It is shaped like a tooth, and its color is as black as coal. It looms up 2300

feet over our camp, to the altitude of 7680 feet. It may be climbed from camp in a round-trip of four hours.

The Black Tusk is the distinguishing feature of the Garibaldi Park from a hundred-mile radius. Whenever the Tusk is seen, the Park is oriented, for there is no other peak like it in all of Canada.

The Tusk tells the geologic age of the Garibaldi region perhaps better than anything else. From it we learn that compared to the Scottish Highlands or Ireland, Garibaldi is but "Day before yesterday,"* while it is much older than The Himalayas or The Alps.

The ridge at the base of the Tusk is of a striking greenish grey, an andesite rock. The Black Tusk proper is basalt, jet black. It is definitely considered the plug of basaltic lava, the solidified "Pipe" of a volcano. It is columnar in structure. Near the top, the rock columns can be pried apart with the hands. The cone of the former volcano is judged to have been weathered entirely away, leaving this plug of its old vent standing up like a neglected, blackened tusk.

Many who climb the Black Tusk are tempted to give full freedom to their imagination. They are poised over molten lava, in a flaming cauldron. In the chaos of an eruption, forests vanish, rivers turn to steam, granite walls are riven. The whole world rumbles and cracks and roars out a paean of destruction. The sun is swallowed up in a red sky above, while the earth below staggers as though mortally wounded—

But why worry! The Black Tusk now is a safe and a comfortable place compared to that! And while we believe—until science changes its mind—that wild volcanic dramas have been enacted on the very spot on which we stand, we know as truly that they are forever stilled.

The belief that both the Tusk and The Table were remnant necks of former craters did not stand up under more complete research. The Table is believed now to be mesa-like remnant of a great bed of Tertiary lava. This is a less poetic theory, but one founded upon sounder conclusions. Dr. Burwash has made complete and recent studies of the Garibaldi Park region. He agrees with the theory that Garibaldi Lake was dammed off by lava

*Northern Cordilleran, 1913.

flows from Mount Price (formerly Red Mountain), but holds that The Table is of Tertiary origin.

The scientists themselves are never obstinate about theories. They agree privately that "Science is the consensus of educated opinion of today," and that educated opinion may change its "consensus" tomorrow.

The panorama from camp should be completed!

We are standing in camp, facing the Black Tusk. Behind us is Garibaldi Lake and a great tangle of glaciers and mountains. We look over the left shoulder. The high-lifted Tantalus Range, forty miles away, beyond the headwaters of Howe Sound, stands revealed in a long, lacey mantle of white. Over the right shoulder are hundreds of peaks, unnamed, unclimbed, unnumbered.

As a last introduction to Garibaldi Park we will climb Panorama Ridge and seek a vantage point some thirty minutes from camp. Here we are held helpless, humble, too emotionally stirred for the slow vehicle of language. In the words of Irvin S. Cobb, descriptive of another scene, you "Look and look until you haven't an adjective left to your back—all the parts of speech go dead lame."

We stand and hearken to the poet.

"ON PANORAMA RIDGE

"O horizon majestic,
Uncharted sea of mountain crests,
Surge on to touch the sky's far rim!
I gaze and, lo, the billowed white
Takes shape and kingly meaning—
Ermine robes from royal shoulders hanging,
Fold on fold to forest fringe of plumes,
And granite crown for stately sovereign peak.
I come and boldly once again I come
To stand in awe within they magic realm."

By Edmond S. Meany

CHAPTER TWO

The Park, The Lake, The Mountain

IN THE EIGHTEEN-SIXTIES a squadron of the British Navy was navigating the waters of the Gulf of Georgia and the Howe Sound. The word came that Giuseppe Garibaldi, the renowned patriot of Italy, had succeeded in making his life dream come true. He had established the "Unity of Italy." These men of the Navy, on the far fringe of the Pacific, wanted to do something to show for all time how warmly they approved the Italian achievement. They fired a salute in honor of Garibaldi, and named the finest snow peak they could see Mount Garibaldi.

This naming was the first event that attracted sustained attention to the Garibaldi region. For many years there were few trails north of Howe Sound and none to Mount Garibaldi. But the interest grew. There was no railroad, even contemplated, in those early days. First came short trails that crept by years into the back country.

The trail that led the earliest climbers to Mount Garibaldi approaches from the south in a section of the Park that has not been made readily accessible to this day. It passed Columnar Mountain, so named because it is composed entirely of slender pillars of rock, and approached giant Garibaldi by way of Diamond Head at the southern tip.

The first ascent of Mount Garibaldi was made in 1907 by a party of six climbers. Their names should be recorded: J. J. Trorey, A. T. Dalton, W. T. Dalton, T. Pattison, Atwell D. King, G. B. Warren.

Another ascent was made shortly afterward by J. C. Bishop and Dr. E. W. Bridgman. This ascent is of equal importance, for these two men did much to interest others in the development of the region. They are described as men of "Kindly nature, with tact and charm, true lovers of mountains."

Explorations and discoveries by ardent, social-minded members of the British Columbia Mountaineering Club and the Alpine Club of Canada followed swiftly upon these pioneer

exploits. The movement to make the whole Garibaldi region a park, gathered momentum.

But this southern section where "Few eyes save those of goats and eagles have yet looked upon the serene beauty" was not destined to be the official way of approach to the new country. It is visited less today in the south than twenty years ago. But within the span of a few more years it may come again into its own.

The historic old Pemberton trail along the Cheakamus Canyon grew into a rude wagon road, and then into a better one. Plans were formed for the building of a railroad, north from Vancouver, to open up a new empire.

This was done, finally, by the Canadian Government. The Pacific Great Eastern, a government railroad, now serves the Garibaldi region. The Pemberton Trail, first traveled by moccasins, has become a modern railway with schedules, stops, and timely excursions. It has made the Park accessible. Its first use was in 1913.

British Columbia passed the Garibaldi Park Act in 1926-1927. Under its authority the Garibaldi Park Board was appointed, and, since then, it has functioned in the development of the Park. An office is maintained in Vancouver, B. C. Colonel F. C. Bell is chairman and H. J. Graves is Honorable Secretary. Those who have conducted large parties into Garibaldi Park have received efficient, courteous assistance and are most enthusiastic in urging individuals, tourist parties, and organizations to visit Garibaldi Park and to enjoy there the fine flavor of Canadian hospitality.

Garibaldi Park, as a public park, is still in the making. Plans are being pushed energetically to complete an automobile highway from Vancouver, British Columbia, to Garibaldi. The longer trail to the Meadows, by way of Nineteen-mile Creek, is being improved by constant work. It will, eventually, complete motor transportation to the Black Tusk Meadows, that thousands may visit scenes that are, today, the marvel of the few.

Much has been done. There is no call to delay your visit. There are modern lodges, moderate in price, perfect in cheerful and efficient service, at Garibaldi Station, where the Park trails begin. Saddle and packhorses may be secured there. A tent camp at the Meadows provides meals and sleeping accommodations.

And all service to the public is controlled and supervised by a most considerate Garibaldi Park Board.

The first trip from camp in the Black Tusk Meadows should be by boat, around Garibaldi Lake. In distance it is a mere matter of fourteen miles, but it should start at dawn and end in the dusk of evening. Even so, the jaunt will be hurried, and incomplete, a mere introduction, a close-up that will leave a fine flavor of personal contact. It gives the one thing lacking in the orgiastic, overpowering, scenic ceremonials from Panorama Ridge. Upon the Lake, one is conscious of the very breath, the beating heart of nature.

The trail from the Black Tusk Meadows camp to the shores of Garibaldi Lake drops 570 feet in a short quarter of a mile. It will be easy to carry a good-sized pack down to the boat landing. It is sound advice to suggest that a goodly part of the load should be food, not tinseled wafers or anaemic sandwiches, but honest-to-goodness provender. The boats upon Garibaldi will mean work—and work at the oars seems to have an irreducible ratio to hunger, demanding proportionate food.

The history of navigation on this lake is peculiar. In 1923 there were three creations of naval architecture extant upon Garibaldi's pellucid bosom.

The "Bill Wheatley" came first, and is still in use. It will hold from seven to nine people. It has a distinct advantage in that its speed is not much reduced if it is rowed sidewise, as it often is. Perhaps it would race best cornerwise. It was apparently modeled after a boxcar. The "Alpine Beauty," capacity seven people, is different, pinched until it narrows at both ends. Perhaps its pinching affected its vitality for, although it came after the Bill Wheatley, it faded out first.

The "Hap-Hazard" came third. It had a slanting bottom and curving sides. It would glide through the water without requiring adequate effort. It had, perhaps, been refined too much in design for it did not last many seasons. They say that we humans never truly love anything until we have suffered for it. If so, these three boats should be truly loved. The parts of them that were too awkward for the packhorses were carried up the long eleven-mile trail from Daisy Lake to Black Tusk Meadows and down to the lake upon the backs of men.

It reminds one of a story told of Rex Beach. He went to Alaska to find gold. He found it in the life of a freighter and packer. He said, "Whenever the gang found anything too heavy for the mules they would call out, 'Come here, Rex.' "

The Bill Wheatley and the Alpine Beauty were carried and assembled by stalwart members of the British Columbia Mountaineering Club.

The Hap-Hazard was contributed in 1923 by The Mountaineers of Seattle. It was named after "Happy," who has unselfishly contributed to the happiness of his fellow members on innumerable occasions. "Happy" is a small giant of a man. His muscles are a combination of rubber and steel that never will be duplicated in inanimate matter. His mind sparkles and his irrepressible spirit soars. The task of carrying the parts of a boat up the side of a mountain and of putting them together with a hammer and a few spikes were a mere nothing.

To show up the enervating influence of the habit of luxury it must be added that The Mountaineers, in the summer of 1931, carried outboard motors up that mountain trail rather than row without them.

The Garibaldi Lake trip leads east from the landing below camp. The first effect of weirdness comes from the fact that there is no beach. The thousand-foot slopes from Panorama Ridge, above, plunge into the depths of the lake without a shore shelf. Most of the lakeshore is that way. The shore is an accidental line along the old walls of Rubble Creek Gorge, now Garibaldi Lake.

Farther east, the walls of the lake tower still higher. They are relieved at intervals by rock chimneys and by streams that flow by leaps and waterfalls into the lake. Near the east end of the lake, the route passes under the slopes of Mount Castle Towers. Here is one of the most stupendous features of the day. The high summit of Castle Towers lifts back from the lake over some 4000 feet of avalanching walls. A great cirque has formed as rock masses have gouged out the mountain walls.

Mount Castle Towers is only ninety feet lower than Mount Garibaldi. It offers a one-day feature climb from camp. Not alone does it possess its cirque, its 4000-foot walls threateningly poised above those waters. The North Castle Towers Glacier spills from

it in 3000-foot ice falls toward Cheakamus Lake. And Cheakamus Lake, nearly as large as Garibaldi Lake, is 6000 feet below the Towers. It lies there, nestled away in its own limitless mountain horizons, the sister jewel of the northern Park areas. Upon the summit of Mount Castle Towers you long for eyes that will gaze both north and south at the same time, that you may envisage both of these matchless mountain lakes at the same instant.

The Garibaldi shores swing south past Sphinx Glacier. Here the first river of ice flows into the lake.

Beyond Sphinx Glacier, still south along the shore, we pass precipitous Guard. Its west, front face, lifting abruptly nearly 3000 feet from the shore, still challenges the "stunt" climber.

I tried it once, with two companions from the British Columbia Mountaineering Club. The three of us, roped together, were within 200 feet of the top. A goodly portion of the rock wall crumbled and cascaded over and around us. When it had passed us and had thundered off the mountain, our rope had been cleanly severed in three places. We just do not believe to this day that we are still alive. And now for the conventional comment of a confirmed climber, one that he seldom means seriously, "Never again!"

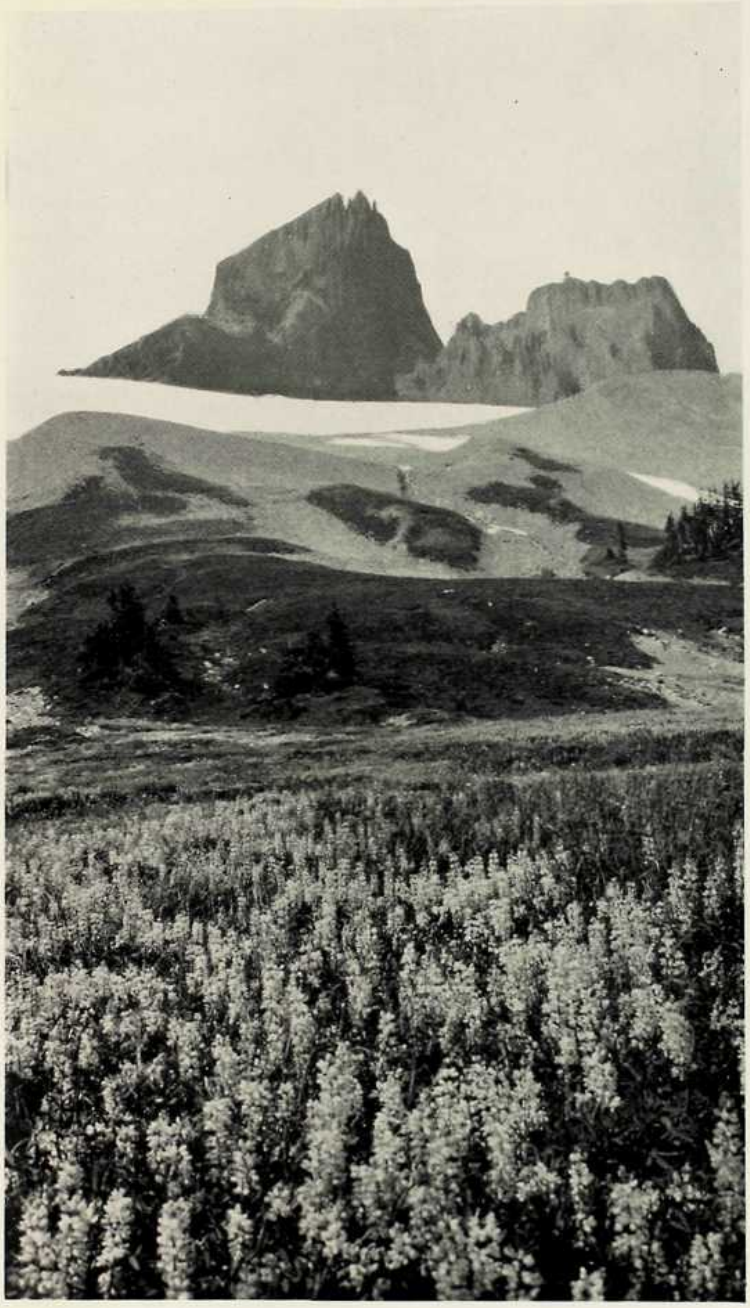
Beyond Guard Mountain, at the west turn of the shore, is Sentinel Glacier, the second ice river feeding into the upper end of Garibaldi Lake.

South of Sentinel Glacier, away from the lake, is Mount Garibaldi. There is nothing here, looking south, to obstruct the view or divide the attention. A broad snowfield leads past the Glacier Pikes to Garibaldi's dome.

Beyond Sentinel Glacier the shore turns north past The Table, Table Meadows, to Table Bay, the most perfect camping spot at lake level, on the entire lake.

It is a splendid place to stop for luncheon, if there is any food left.

The Table, like the Black Tusk, is different from other mountains. Its level top and sheer sides can be seen at great distance. In shape it is a gigantic inverted teacup. The top of the mountain is the flat bottom of the cup. The handle is at the right, looking south. The hole in the handle is a hundred feet high, and is symmetrical enough for a giant's use. Like The Tusk, The Table



The Black Tusk. (See page 74.) *P. M. McGregor*

was once supposed to be the solid core of a former volcano. The Tusk concedes the climber a safe chimney for an ascent. The Table does not. It vouchsafes nothing. The Table presents the most dangerous rockwork that has been successfully surmounted in Garibaldi Park.

Tom Fyles climbed it first, and he did the job alone. In 1922 this same master climber made it again and took Neal Carter and Bill Wheatley, the sponsor of the first lake boat, with him. These three members of the British Columbia Mountaineering Club left 120 feet of good Swiss rope and a pioneered climbing path, with dread removed, behind them. The rope was left tied to a four-inch tree and draped over sundry, more or less secure, horns of rock. The next year, 1923, Wallace Burr, with the help of this rope and of "Happy" Fisher, made the third ascent. The climb is so unusual that it should be described in detail.*

Wally and Happy climbed a fifty-foot face of scaling rock, of disintegrating, columnar structure, to a sharp edge. Here Happy lay on his back for thirty minutes, bracing himself in position by hooking his legs to both sides of the knife-edge of rock. He held Wally's legs in his arms while for a half-hour Wally cast the middle of a hundred-foot rope at a point of rock, thirty-five feet above. At last he snared it. Happy held the two ends of the rope while Wally negotiated that sheer rock spire. Above this, Wally connected with the rope left by the B. C. climbers. From here on the climb was torture to the nerves. The rope angled for 120 feet up the perpendicular face of The Table, with a sheer drop of hundreds of feet below. At one place, Wally was forced to pluck out loose rock and to drop it casually off into space, for a full six minutes by my watch, before he could venture his next step. He worked with the three essentials of such tasks, patience, caution, and skill, and made the top. Later he returned, retrieved Happy who had waited at the lower rope, and came back to earth.

I suffered more than either of the climbers, for I stood safely below, with raw nerves and nothing to do. With each harsh scraping on the rock above, or hard thud of a hurtling fragment, I saw in my apprehensions, the toppling form of a friend, plunging hundreds of feet to his doom.

*The Table was climbed again this summer, 1932, by four "Mazamas." They used the old rope and replaced it with a new one.

Tom Fyles, one of Canada's greatest rock climbers, took six hours and 180 feet of rope to make the last 240 feet of The Table on his first ascent. How he did it alone, he only can tell. He is modest and he will not give the whole story.

The danger of The Table before the route was gouged out, peeled off, and ironed out, was so great that my comment as a mere witness is the proverbial "Never again!" It borders on "unjustifiable risk," a classification recognized among experts.

North from Table Bay is another rugged shore leading to Mount Price, formerly Red Mountain, at the lower end of the lake. It is directly across the lake from Black Tusk Meadows and camp. Price is a more recent volcano. Its crater is still clearly defined. From the crater, looking south, are Mount Garibaldi, the Warren Glacier and vast lava fields spreading west from Mount Garibaldi and Mount Price. These fields offer an interesting study, for they are recent enough to be still starkly chaotic. Along the rim of the crater are weird rock gargoyles and other strange formations.

From Price Mountain came the lava flow of The Barrier, and the creation of Garibaldi Lake.

The circle of Garibaldi Lake is almost complete at Mount Price. The boats will skirt the low end of the lake along the upper shore of The Barrier, pass the mouth of the swift outlet stream that drains to Lesser Garibaldi, a mile away and some 200 feet lower, on The Barrier, and then will turn eastward to the landing below camp. The slow, rhythmic climbing step with its swing, relax, lift, will bring the party easily up the steep 570-foot slope to camp. Dusk is just deepening into night—and tomorrow is the dawn of another day!

Garibaldi is the only park in Canada with volcanic mountains. It presents a curious mixture of old and new volcanic phenomena. The Black Tusk and The Table are old, so old that the original field of Tertiary lava has eroded almost entirely away. Mount Garibaldi is younger, although its crater has crumbled until formless. Its dome, scarred and reduced by the ages, dominates the surrounding scenes, the monarch of every view. Mount Price is still younger, its crater intact. Its engineering masterpiece, The Barrier, is as staunch as ever, its lava fields

as obvious in cause and structure as when the "Cataclysm strangely gave birth to the loveliness of Garibaldi Lake."

Many shorter excursions should be taken from the Meadows Camp. Eastward up the flowery valley, between Black Tusk and Panorama Ridge, are twin lakes. Beyond and northward are Helm Peak, a pass, Helm Lake, Desolation Valley. Not least in interest is a cinder cone, five hundred feet high, with a lake tucked away in its crater. But an inclusive review of all the fascinating trips in Garibaldi Park would demand pages of tabloid discussion and bare tabulation. Garibaldi is a multi-feature domain!

The ascent of Mount Garibaldi from the Meadows camp should start at 3:30 a.m., for the round-trip time needed for party climbing is sixteen hours, and the return to camp should be accomplished before dark. The first part of the trip follows the route of the boat excursion around the lake except that it cuts straight down the middle of the lake from the landing below camp to the end of Sentinel Glacier, four miles.

An hour and a half from camp, at the foot of Sentinel Glacier, at five o'clock in the morning, we buckle down to the final climb to the summit. Within the first hour we leave the icy surface of Sentinel and head directly at the distant dome. We take to a wide snowfield of glistening white. Without actors' greasepaint, white, flesh, or pink, our faces would fry like over-crisped hotcakes in our ten hours, going and coming, upon the dazzling snow, with its myriad burning-glass chrystalization of summer. Our eyes would become swollen, inflamed, blinded, excruciatingly painful, without colored glasses—amber preferred. Without skilled leadership we would be helpless in the Gordian knot of crevasses, dangerous snow bridges, and Bergschrunds. Mount Garibaldi, while not the highest snow peak in the Pacific Northwest, demands as much patience and as much specialized skill from its leaders as does any one of the six major peaks of Washington or Mount Hood in Oregon.

Greasepaint should be light in color. Black absorbs light, is not so protective, and is hot and most uncomfortable. White reflects light, is most protective, and is coolest. The lighter shades are all permissible, the darker are taboo. Dark glasses impair the visibility and give dangerous obscurity where keen vision is of

greatest importance. Amber is perfectly protective, clarifies distant panoramas, and leaves normal keenness of sight.

Upon the lower snowfield we find Crescent Lake, where the snow has melted back from rock cliffs forming the lake. This is probably the largest and the most evenly contoured lake of its kind in the Northwest. It is a marker for our climbing route. We pass it upon our right, toward the mountain. For several miles the snowfield is not dangerous. We pass Glacier Pikes, pinnacles of rock almost buried in snow, the slopes grow steeper, and crevasses are upon us.

At this point one of two plans should be followed. The older plan is to divide the party into groups of not more than five or less than three for roping on snow. Each climber is tied into his rope with the bowline knot for the end climbers, and the open-handed loop for the middle climbers. The best climbers should be at the front, climbing up, and at the rear coming down. In case coming down involves route finding, the best man should go ahead as in the ascent. This method of roping is dangerous unless at least two out of every three upon the rope are skilled in rope work. There should be not less than fifteen feet of rope between climbers; twenty is better; fifty, ideal, where climbing is extremely dangerous. One caution is absolute: In passing dangerous crevasses or Bergschrunds, or moulins, or any of the snowfield or glacier pitfalls, *there should be no slack rope.* A six-foot momentum of one climber upon a loose rope may cause serious injury, at least to the next in line. The slip of one of a roped party has been known to tear a whole roped party loose from its moorings and to catapult the entire group into a crevasse or down the mountain.

The second method is more complicated, safer in extreme points of danger, and better suited to large parties, unskilled in climbing. There should be, ahead, a party of not less than three skilled climbers, tied in a rope, scouting the route. They should remain within hailing distance of the main party. The head climber of the large party should be tied in by the double bowline, as should the rear guard or "anchor." The rest of the climbers, between, work with an arm over the rope or a hand upon it, with the rope on the down-slope side. Again there is no slack. This party-rope method should never be used except upon a

route that has just been scouted. In this way as many as twenty-five can be handled safely upon a hundred-foot rope. A last admonition is of such great importance that no exceptions should be allowed. In passing places of extreme danger, when the climbers are not tied in, the rope should be stationary, anchored securely at both ends. This is a mere part of the method of handling large parties of unskilled climbers in untied groups. It should never be used by those who have not learned all about the method. At its best, properly applied, it is the superior method for large party climbing on snow.

The iceax is the best climbing tool for skilled climbers; the Alpenstock is best for the unskilled. In the hands of the unskilled, the iceax, with its two steel points and its cutting edge, is most dangerous. But there comes a time, after long use, when the iceax is indispensible—a veritable extra part of the human body. Then it is priceless for its purposes.

It was my privilege, in the summer of 1923, to take four large parties to the top of Mount Garibaldi in seven days. In each party there were fifteen members. The route from the Glacier Pikes to the top had to be scouted anew each trip. It was a hot, sunny week, and the snow formations changed rapidly. Snow bridges that were tight in the morning were weakened by afternoon. With all the caution that we could muster we just did escape catastrophy. One day a snow shelf rimming a Bergschrund above Glacier Pikes dropped off, carrying one of our climbers with it. It had been safe until that day, and we had taken it too much for granted. Fortunately the Bergschrund was only twenty-five feet deep, with soft snow at the bottom. No harm was done, but someone in the party must have carried a horseshoe for a collar and a rabbit's foot for a tie! Somewhat above that spot, on the same Bergschrund, on a later trip, came one of the quickest and most resourceful bits of mountaineering I have ever witnessed.

One of the party, a climber who had accumulated tonneau in improper proportion to strength, became exhausted on the descent. Happy and Paul tied her between them and, for safety, conducted her down the mountain as a separate unit. There were reasons for clinging to the route along the Bergschrund. On one side was the Bergschrund, the great cavity between snow rim and rock wall. On the other was a snowfield turned on edge with

steepness, and split open by deep crevasses. The weary climber slipped and shot down slope toward a yawning crevasse.

Happy, small giant that he was, weighed less than one hundred forty. His charge, as before mentioned, had accumulated. Happy knew he could not hold her. He plunged headfirst into the maw of the Bergschrund. Paul held rigidly in place with his end of the rope. When help arrived, Happy hung joyously on his rope on one side of the snow edge in the Bergschrund, while his large responsibility reposed safely above the crevasse on the other side. Quick thought and action had saved one life, perhaps three.

Several hours of cautious contriving and of steady plugging will see us from the vicinity of Glacier Pikes to the saddle beneath the upper dome of Mount Garibaldi.

Here are two routes. One, an arête, leads directly from saddle to summit. It is steep and too severe for the average climber. We will drop through the saddle, lose two hundred feet elevation, and climb the east face on steep snow, with crevasses below. It is possible here to show how a large party may be handled upon a rope.

The route angles aggressively up the steep field with the right shoulder of each climber close to the snow of the mountain side. The rope, running taut from lead man to rear guard, passes under the left arm of each climber. The iceax or alpenstock is held under the rope, in both hands, the right hand holding the point in the snow above the footsteps. The right hand holds firmly as close to the snow face as possible. In the steepest places one only of the three points of contact are moved at a time. One foot moves while the other foot and the steel point hold, or both feet hold while the steel point stabs ahead to another holding point. By this method, that line could not be torn loose by less than an avalanche.

It is summer snow, a hard, anchored snowslope where no avalanche can break loose. If this were not so, the diagonal route, the slanting trail would not be safe. It would be necessary to climb straight up the steep face of snow to avoid shearing off a slice of the snow side of the mountain.

But the steep danger is soon below us. We turn right and climb easily to the summit field. We scramble up a final loose rock chimney. Then we are on top.

Margaret W. Hazard

In the saddle below the summit of Mount Garibaldi, looking east toward the Continental Divide.

The Barrier. *A. H. Hudson*

The summit of Mount Garibaldi has three parts. The Peak on which we stand is the high point north. The high point south is the Pinnacle. The west elevation is the lower Dome. Beyond the Pinnacle, south, are Diamond Head, Columnar Mountain, the interesting Mamquam district, and a sweep of rugged country to Vancouver, an airline of less than forty miles.

It is impossible to interpret for any other mortal soul the panoramas from the summit of Mount Garibaldi. No words can do that. We struggle in vain with memory, and with a dictionary. We juggle a little with words like infinite, immense, far-flung, and then farther along in *effs*, we happen upon the word "futile." And that is just the word for any endeavor to put the summit scenes of Garibaldi into language.

Some enumeration may help.

Dark lava fields below glaciers.

Indigo, the deep violet luster—Garibaldi Lake, at our feet.

The gleams of nearby and distant lesser lakes.

The Tusk, The Table, Castle Towers, and five hundred others within a circle of a two days' trip.

A succession of volcanic peaks bearing NNW. to the headquarters of the Lillooet River.

Mount Baker and the Olympics, south.

A turbulent, frozen sea of mountains west toward the Continental Divide.

A sky with lazy clouds, close above.

J. C. Bishop, the second climber of Garibaldi, in the Northern Cordilleran, "A Romance of the Mountains," has given us a formula for fixing the exposure:

"Look first at the living picture. Close your eyes and develop it in the dark. There will never be anything indistinct about that picture in your memory."

The policies and the management of Garibaldi Park are most inviting. It is the avowed and understanding purpose of the British Columbia Department of Lands to make the Mount Garibaldi region as easy of access and as outstanding in service as it is through intrinsic worth, unique in charm and thrilling in grandeur.

Accommodations are comfortable, cost is reasonable, service is unexcelled. Flowers and birds and animals are protected. Life,

both human and lesser, is held sacred. Rangers and guides devote their lives and their training to you and to all that surrounds you. And when Canada invites you, she means it. She serves you, safeguards you, and makes you happy. I regret that I cannot tell a tale of the Mount Robson Park, of rival packers, of a miliciously damaged government bridge, of prompt policing, and of sudden justice. A party of us, in 1926, received such prompt assistance and the perpetrator of an act of vandalism such sudden punishment, that we are firm believers in Canadian government.

There are glorious reasons why you should make a firm resolve to visit Garibaldi Park for winter sports and for summer splendors of living.

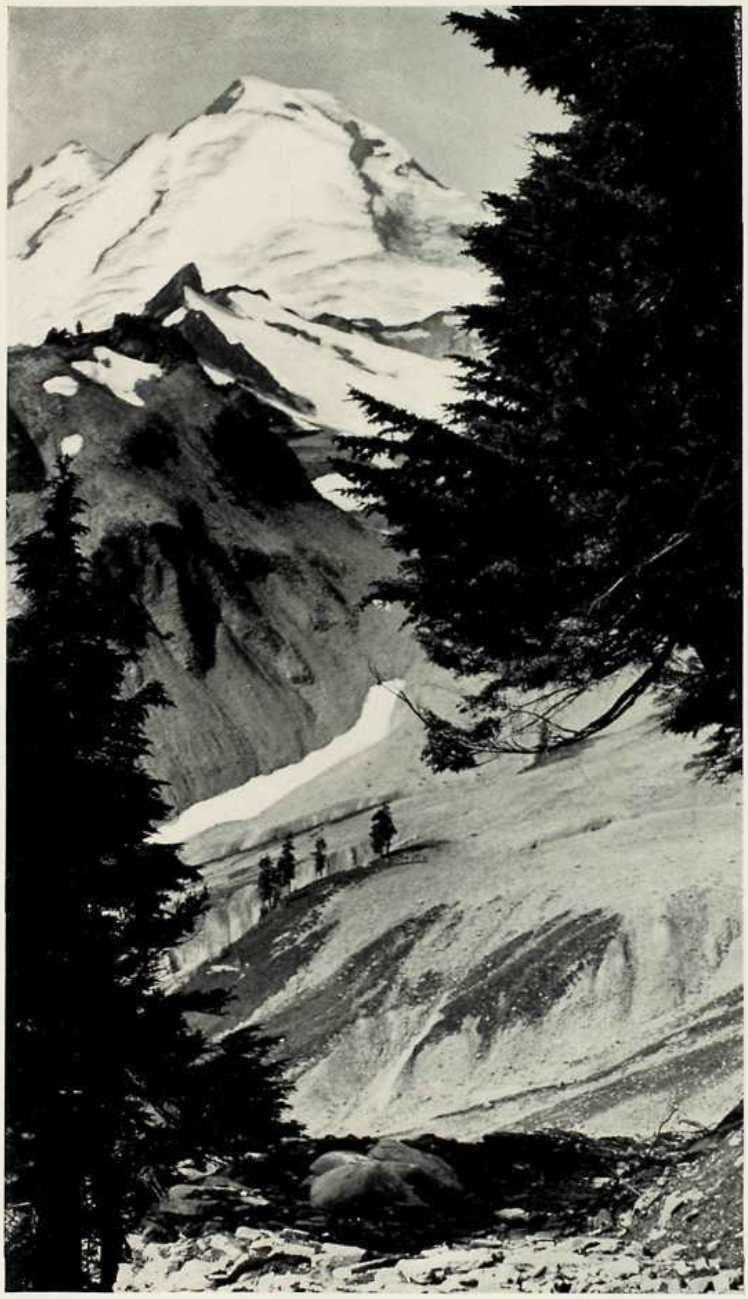
We quote in conclusion from the official pronouncement of the Garibaldi Park Board:

"So long as we cling to the wisdom of keeping a little of the loveliness of earth unmarred by a dollar-worshiping world we shall not fully fail to 'keep faith with beauty,' and it is for this that parks, hundreds of square miles in extent (450 square miles in Garibaldi), have been set aside among the peerless mountains of the West as sanctuaries of the wild and primitive, as playgrounds where mankind may recover with a strange thrill the ancient wholesome companionship with nature, may recapture that old sense of wonder in the mystery and miracle of the wilderness, may rediscover the pure pleasure of simple and untrammeled life in the open, and where generations yet to be may know something of the beauty and marvel of the land which is our heritage."

Part Four

Mount Baker

(*Koma Kulshan*)



Mount Baker from Table Mountain. *Bert Huntoon*

CHAPTER ONE

Events in Early Days

THERE ARE IN THE WORLD a few incredible mountains that rise from the shores of the sea in awesome majesty. Their effects are invitational in proportion to man's adventurous boldness. Mount Fairweather of Tongass National Forest, Alaska, is one of the greatest of these. To most people these ultra-rugged rock masses are proof positive of the adage that "Distance lends enchantment." There is a sublime threat in the arrogance of Fairweather that does not lure the average man to strike gaily inland for close personal contact. All of which does not change the fact, equally true, that some few men would rather stand on the top of such mountains that anywhere else on earth. Just last summer, June 8, 1931, Allen Carpe and Terris Moore, of the American Alpine Club, conquered Mount Fairweather for the first time. It was a great feat of mountaineering endurance and skill.

Mount Baker, a dormant volcano, rises from the shores of Puget Sound, the Inland Sea of the Pacific Northwest. It is not another Fairweather. Its charms, all its own, are of gentleness, of gracefulness, of a transcendent beauty that tempts everyone to approach it as closely as possible. It stands alone, in front of the Cascade Range, with no visible obstructions to bar a visit. Its upper dome is white with a spotless purity that does not carry a threat of hardship or of danger to those who gaze upon its lofty outlines from great distance. Again a difference! So clear-cut are the lines of Mount Baker that its summit seems undimmed from the farthest reaches of visibility.

It is not strange, then, that the earliest explorers recorded Mount Baker's intriguing appeal in distant Europe.

George Vancouver named it in 1792. Other explorers mentioned it. Later ones wrote enthusiastically about it. The searchers of the literature of discovery took note of it. In those olden days gradually was manifest what is expressed in modernity as a "Summation of Stimuli." At last an English gentleman, who had climbed and sketched in the Alps and had written a success-

ful book about the experiences, moved to Victoria, on Vancouver Island, for a declared purpose of exploring and of ascending the mountain.

Edmund T. Coleman arrived in Victoria, from England, in 1862. He was an artist who had exhibited in the Royal Academy in 1849, 1853, and 1854. When he reached Victoria he was thirty-nine years of age. He was forty-five when he made his last and successful climb of Mount Baker. In 1864 he navigated the Skagit River—he spelled it Skadgett—for fifty miles. He went no farther that year for he believed the Indians more than unfriendly, in fact, positively dangerous. Still Coleman persisted.

In 1866, with Tennent and Bennett, he fought his way slowly and tenaciously farther north up the Nooksack River, through the dense forest, over the glaciers, to the cornice of the summit snowfield, just below the extreme top. Had he known of an easy slant across the upper east face of the mountain, his troubles would have been over, and the victory won. But not knowing this, he failed for the second time. Time had flown and provisions were low. Coleman returned to Victoria, defeated but not disheartened.

In 1867 Coleman could not assemble a party. The two previous attempts had dampened the ardor of most of the men of that frank and free band of pioneers in Victoria. Several years later, on Coleman's approach to Rainier with the Stevens-Van Trump expedition, he deplored with dignified and disillusioned regret the lack of interest shown by the average man in climbing mountains.

There was an amusing aftermath to Coleman's dissertations on that occasion. Sluiskin, the Indian guide of the Stevens-Van Trump party, listened in on the discussion. Like all Indians he, too, was wholly out of tune with sentiments favoring the pastime of climbing to mountain tops. At the end of the diatribe he made caustic comment in the Indian language. Stevens, who could understand, neglected to translate out of consideration for Coleman's feelings. Sluiskin's side remarks, with free translation, were to the effect that "White men in Victoria have good sense—everybody look out of window while King George man talk mountain top!"

In 1868, Coleman made his third attack on Mount Baker. The party was larger than before. It included Edmund T. Coleman

of England, Thomas Stratton, Inspector of Customs of Port Townsend, then the United States Port of Entry, David Ogilvy of Victoria, and John Tennent, a rancher from Bellingham Bay. Tennent had accompanied the second expedition. The rest were recruits.

By this time Coleman knew more about Indians and had learned to admire and to trust them. He secured four to assist the expedition. His generous words of appreciation should be quoted:

"We cannot forget the expertness displayed in many difficulties by Squock and Talum. Squock is son-in-law of Umptlalum, the principal chief of the Nooksac Indians. Though a Flathead, Squock is very handsome, and with his swarthy face and long, thin limbs, resembles an Arab."

The party took provisions for a month's journey. They paddled up the Nooksack River, then called the Lummi. They passed the "mansion" of Umptlalum, the Chief, near the present-day town of Deming. They took the Middle Fork of the Nooksack and followed it to Thunder Creek, which heads E.NE. toward Coleman Glacier.

This approach was wisely chosen for pioneer conditions. It made available the maximum of canoe travel and the minimum of forest tangle, the bane of early exploration when there were no trails except game trails leading up the mountain. By the Thunder Creek approach there were, too, almost no crevasses until reaching the vicinity of the Black Buttes—and at that point half the climb is over.

Coleman made camp at the end of canoe navigation at Thunder Creek and prepared for his final attempt.

In leaving Victoria, the English climber had expressed himself more strongly than the warrant of facts. Undoubtedly he took advantage of writer's license in the following statement:

"The expectation of five years' solitude and exile was about to be realized, or else delayed until another season had wearily come around."

His five years in Victoria and between Victoria and Mount Baker had been far from weary. To disprove the "Solitude and exile," one has only to call attention to the fact that Coleman, after completing the Mount Baker ascent did not immediately return to England. Two years later, in 1870, he joined Stevens

and Van Trump and made attack upon another Pacific Coast mountain—Mount Rainier!

The canoes and the extra supplies were cached on August 11, 1868, at the mouth of Thunder Creek. By August 14 an upper camp had been established. On August 17, from a climbing camp at 7054 feet elevation, Coleman led the final ascent. His Indians, having Indian ideas, went no farther than the 7000 foot level. They stayed behind in camp and rested.

The upper fields of Mount Baker have more crevasses than are to be found upon any other snow sentinel of the Pacific Northwest. Coleman reports:

"The route lay through more than five miles of névé. This was intersected by twenty-seven great crevasses. They were so close that sometimes they were not more than five yards apart * * *."

At the saddle, a thousand feet below the top, Coleman turned left and climbed the steep slopes between the bare-rock southern exposure and the "Perpendicular wall of ice about thirty or forty feet in height." The party took two hours for the last thousand feet.

They cut three hundred fifty steps with the iceax. An avalanche started straight at them but, fortunately, it stopped. I saw a similar thing in 1926 and can, perhaps, tell why it stopped. Our avalanche poured into an immense crevasse and was swallowed up and digested.

Tennent sank part way into a hidden crevasse but "managed to extricate himself."

Coleman's description of the summit in the November number of Harper's magazine, 1869, is a gem. He wrote as follows:

"The plateau on which we stood was about a quarter of a mile in diameter, and embraced an extent of about eighty acres. The scene was grand in the nakedness of its desolation. The white surface of snow was unrelieved by a single rock. The forests had been on fire for weeks and a dense pall of smoke veiled the surrounding scenery from our view. It lay like a reddish cloud beneath us. We felt cut off from the world we had left. Overhead the sun poured down his bright beams from a sky which formed a dome of purplish blue, unsullied by a cloud. We felt at heaven's gate, and in the immediate presence of the Almighty.

My companions, to whom for the first time this wonderful scenery was unfolded, were deeply impressed. The remembrance of the dangers they had escaped, the spectacle of the overwhelming desolation around, effects of the terrible forces of nature which had been at work, these combined evidences of Almighty power filled their hearts with deep emotion and awe. The spirit of the Gloria in Excelsis burned within us. With one accord we sang the familiar Doxology."

The Coleman party, after a most cautious descent, made doubly dangerous by the indistinct night light upon the crevassed fields, reached camp at eleven o'clock. The Indians were awaiting them in stolid comfort.

Edmund T. Coleman was an unusual man in more ways than just in pioneering the Mount Baker ascent. That in itself was an undertaking that demanded those sterling qualities of manhood, patience, courage, and indomitable will. It needed a lot more than the mere three obvious virtues that might result from inherited nerves, experience, and a trained physique. It required fairness to the Indian savage in an age when such fairness and sympathetic understanding were at a premium. It presupposed leadership that would awaken the interest and establish the loyalty of other free spirits.

Coleman had all that and more. He was so painfully accurate and so inherently honest that at times he seemed actually to lean backwards. He was an artist with the power to put feeling into exact reproductions. He furnished Harper's with sketches of Mount Baker that were reproduced in woodcuts. Forty-seven years later, in 1916, Winona Bailey and Mae Webster secured modern photographs covering the scenes depicted in Coleman's sketches. The photographs duplicated the details of the sketches.*

This was truth in an age of hyperbole! Read an early book on Arizona. The scenes, the animals, the people, the outlandish abnormalities never did exist.

The first books on mountain climbing were mostly a mass of exaggeration. At one time I was moved to write a key to translate the secret code of a popular account of an expedition. Here are a few of the interpretations:

*The Mountaineer, Volume 9, 1916, Early Explorations on Mount Baker.

"Smooth wall, straight up"—a 45% slope.
"So steep it leaned backward"—60% slope.
"Half the summit fell off"—bird started a few pebbles.
"Impossible ascent"—a cinch for the average ranger.
"Oh mon! It's warse than parpendicular!"—an honest ejaculation, without intent to deceive.

Edmund T. Coleman should be honored most of all for his sterling character, for the fineness of his reactions to his fellowmen, and for the honest expression of emotion in artistry. A man whose sketches of a wild, new mountain region in 1869 can be reproduced by photographs in 1916 is a rare soul, and the truth is in him!

The first woman to make the top of Baker was Miss Sue L. Nevin, an artist from La Conner, Washington. It seems that Coleman, the artist, and Miss Nevin, another artist, the first man and the first woman to stand on the summit of Mount Baker, are bearing out our contentions about its singular beauty.

Miss Nevin's party included six men. They entered the region from the south, by way of Baker Lake. The climb was made on the east side of the mountain.

The first large party ever to make the top was on July 29 in 1908. The Mountaineers made it with an organized party of thirty-nine, under the leadership of L. A. Nelson, the man who had led, the year before, the first recorded ascent to the highest point of Mount Olympus. The climb was made by the way of the Park and Boulder Glaciers on the north side. This is the steepest route on Baker, and one seldom taken.

The largest party ever led to the summit of Mount Baker in one organized line was from the Bellingham Normal School. The personnel of this group was exceptional. There had been try-out trips and training treks all summer under expert supervision. The line was divided into eight groups with a captain in charge of each group. I was supposed to be the general leader of the expedition. Any one of these eight captains could have managed the climb as well as I. I selected them for that reason, turned all of the hard work over to them, and just coasted along in front, doing little and looking wise. This is a friendly suggestion to leaders of other mountain climbs—try my method. It's fun.

There were ninety-six persons in our party—sixty-six of whom were young women.

Just below the Saddle we encountered a long lateral crevasse that split the entire snowfield from Colfax Peak to Grant Peak, the main dome. We paralleled the crevasse for two hundred yards and found a safe snow bridge. The only trouble was that the upper lip of the crevasse was fifteen feet higher than the bridge. By dint of ropes and great boosting we derricked the whole party to the snowfield below the saddle.

From the saddle we angled across the east face of the main dome, thus side-stepping the crevasses, the avalanches, and the cornice that had caused Coleman so much trouble in 1868. This brought us to a bare, easy pumice slope, half-way between the crater and the main summit field. The rest of the climb to the high point of the mountain was mere routine.

The summit that day was exceptionally clear. We could see Mount Garibaldi and a rugged skyline north, in Canada. East was Mount Shuksan, a villain of a mountain with a shaggy head and crushed and tortured and clinging glaciers. E.SE. was Glacier Peak, across the infinite detail of the Cascades. East of south was the great dome of Mount Rainier, and west of south the snowy skyline of the Olympics. In the west was the Puget Sound, dotted and dashed with islands and water lanes, and beyond, an uneven skyline of Vancouver Island.

But distant mountains and water scenes were not all. The near slopes of Mount Baker led to great glaciers, twelve of them with forty-four square miles of snow and ice, of crevasses and ice-fall. Beyond were gleaming rivers, forested ridges, deep dark valleys leading away to lower lands.

An hour on the top of Baker is not enough. One is torn and tossed by the conflict of competing scenes. If it were possible to take in simultaneously the far and the near, the high and the low, the north, east, south, west, one might be content. But that can never be—and once upon Baker, there always will be the longing to return to its boundless horizons.

Some years ago came a development that threatened to give a wrong turn to the use of Mount Baker by its own community and by the outside world. In the interests of sensationalism and of immediate publicity the first Mount Baker Marathon was promoted. The plan was for an annual race from the City of

Bellingham, on the Puget Sound, to the top of Mount Baker and back again.

Two routes were used. The one by the town of Glacier and by Heliotrope Ridge will be reviewed.

The racer was to transport himself from Bellingham to Glacier at the foot of Heliotrope Ridge trail by any conveyance in the quickest possible time. From Glacier he was to go on foot to the top and back again. From Glacier to Bellingham he was to use, as before, the quickest possible transportation. To win the marathon the contestant was forced to make the thirty miles of trail and to climb 10,000 feet in elevation without rest and with insufficient nourishment, for one cannot get value from food while under the punishment of terrific exertion.

The human body is not made that will benefit from long continued exertion to the limit of strength. The most exacting toll upon the human anatomy in depletion of reserve energy is taken by speed uphill or down.

A racer upon a mountain trail is deaf, dumb, and blind to all that is worthwhile in a mountain region. He could not see the marvel of a flower or the perfection of a tree. A wild animal or a bird would see in him a being gone berserk, while he, in turn, would not even see the bird or the animal. The weird beauty of a sunset would fall upon vision blurred by reeking perspiration. Worse than all this, the speed demon of a mountain marathon who had driven himself to the borderland of collapse would thereafter look upon mountain trails with degrees of dislike that might vary from cold distaste to shuddering revulsion. And the pity of it! A mountain trail enjoyed in moderation, or taken by the strong even to the point of wholesome exhaustion, will build up a resourceful body and fill a soul until it brims over with contentment.

Then, too, the public loses by it—loses individual incentive to take the trail to the mountain heights. It is easy to lose perspective. It is all too easy to conclude that mountains are for the strong few and not for each one of us and for everybody.

There were fourteen marathon contestants the first year, and sixteen the second. Joe Galbraith won the first race, while Harvey Haggard won the second and made the record time. How times have changed. Coleman started his ascent in 1864 and finished it

in 1868. Haggard left the Puget Sound at Bellingham, made the top, and returned to Bellingham in nine hours and forty-eight minutes. His time from Glacier to the summit and back to Glacier, about thirty miles trail distance and 10,000 feet elevation, was seven hours and fifty-five minutes!

The Mount Baker Marathon faded out. It died because it did not deserve to live. In its place came something infinitely better, born of high purpose, and the result of clearer thinking. Public-spirited folk of Bellingham and of Northern Washington opened trails and highways, and built a magnificent Lodge, that Mount Baker might be given freely and generously to everybody.

Mount Baker was made available to the general public in the Austin Pass region, in 1925, through tent service. In 1926, cabins and a Lodge center had been added. In 1927 came Mount Baker Lodge, a most convenient hotel structure and one of the finest mountain hotels in the country. This beautiful building was destroyed by fire in August, 1931, but will soon be replaced. For the year 1932, there will be with the existing buildings, splendid service and a capacity for about 150 guests.

Enough cannot be said here about the exceptionally fine atmosphere of this "open house" upon the side of a mountain. Mount Baker Lodge is a public venture for the public good. It deserves and will receive a separate chapter.

CHAPTER TWO

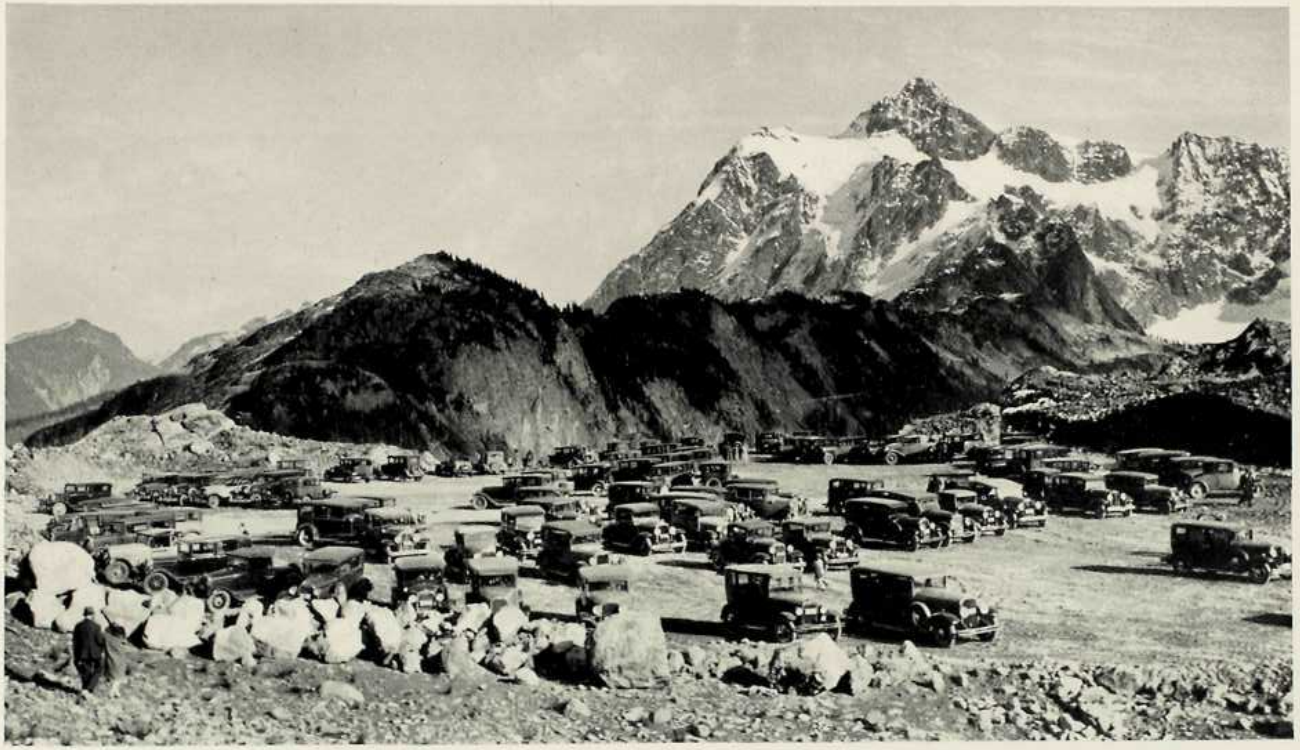
Two Trails of the Mount Baker Region

THE OLD HELIOTROPE RIDGE TRAIL was a quick, an easy, and a safe approach to Mount Baker. For years it was considered the best route for a mountain road. The Austin Pass region finally won out over it for two good reasons. Austin Pass offered building and parking space in a wide, open meadow. The top of Heliotrope Ridge narrows to a limited campsite, enough for a hundred people, but no more. Austin Pass lies between Mount Baker and Mount Shuksan, and gives access to a wonderland. Mount Shuksan, as regal as Mount Baker, more threatening in effect, its opposite in type, would alone invite the preference. The Heliotrope Ridge, at 5,000 feet, offered the fascinating Coleman (Roosevelt) Glacier, and the Mount Baker dome. All other views were lost in the forest. It was ideal for week-end trips, often repeated. Austin Pass justifies a home for the summer.

Still, to those who have the flair for the open camp, and the fortitude for a ten-mile, 4,000-foot mountain trail, Heliotrope should prove ideal. Its rewards are immediate and it concentrates upon one thing—Mount Baker. It gives, too, an isolation, an emotional tone of seclusion and solitude that never will be lost in future multitudes. From your upper campsite at timberline you could look forth from a mob, and be alone with "Koma Kulshan."

The trail itself, leading up from Glacier, is one of the three most inviting trails of the Pacific Northwest. It has never a mosquito nor a stinging gnat. There are no steep pitches. After the first few miles it leads through dense forest. It passes lacey waterfalls and cool nooks. No trail has more natural luncheon spots. It is a lazy trail, always intriguing.

The upper two-mile stretch of the old Heliotrope Ridge Trail has been abandoned, and the steep approach that led the marathon runners up to snowline is almost obliterated. Some years ago the Mount Baker Club and the Bellingham Normal School built a splendid lodge on Grouse Ridge, to the right of Heliotrope.



Skyline Heights and Mount Shuksan. *Bert Huntoon*

It gives a cozy climbing home, and the easiest, most direct approach to snowline and glacier. This modern mountain climb is about eleven miles from the town of Glacier. Many grateful climbers have paid cabin fees for the use of Kulshan Cabin and have blessed the strong backs and the willing hands that fashioned it for their use.

In climbing Baker from Kulshan Cabin you start at daylight and follow a good trail that climbs directly up slope. At the edge of the Coleman Glacier you swerve right and work your way through crevasses to the main ridge of snow, the backbone of the Coleman Glacier. This right bearing takes you away from the most heavily crevassed field. On the ridge, you have joined the route of the Coleman party, which, you will recall, led up from Thunder Creek.

You now turn left and climb without dangerous crevasses toward the distant Saddle, with the rock peaks and cleavers at your right.

When you reach the Black Buttes, half-way up the mountain, you will find an ideal spot to rest and refresh yourself. Of course, there are no acacia trees, or pines, or firs, or vegetation, but you can find a soft niche in the rocks, protected from the morning breezes, and can, there, nibble your Swedish hardtack, and raisins, and sugar, and prunes.

From the Black Buttes on, to the Saddle, is the long field of névé where Coleman found his thirty-five crevasses. This field requires cautious climbing with roped-in scouting.

At your right, as you climb, is a rugged rock ridge decorated by sharp peaks and needles. The winter winds have piled great masses of snow against these rock faces, and the summer has decorated them. Many a climbing party has been redeemed from obsessions of weariness by hunting for animal and architectural forms in that amazing field of snow sculpture. One year there was a perfect battleship of half ice that had been launched from a high snow ledge and had glided majestically half-way across the broad snowfield. When we saw it, the snow ship was at rest, but it had caught in its pose all the romance of a moving and irresistible dreadnaught. Elephants and couchant lions, with now and then a sphinx, were there in proportion to the alert imaginings of the beholder.

Just below the Saddle comes the test of the season and of your leader's resourcefulness. Some years the central field is entirely severed by a large crevasse. If so, there are two possible answers. Usually there will be a safe bridge to the right, toward Colfax Peak. Always will the rock avalanches have bridged the crevasse under the left main dome.

At the Saddle you climb up the pumice ridge directly at the main left shoulder for some three hundred feet elevation. Then you take the east face of the dome and angle across it well under the sheer cornice of the upper summit field, gaining, insistently, some elevation as you work across the east face. There is a natural path, just above the sudden steepening of the field where there are no crevasses. If you choose wisely you will cross the entire east face and arrive at bare yellow pumice slopes without encountering a single crevasse.

At this bare pumice face you are half-way between an old crater, some seven hundred feet in elevation below the upper field, and the summit. You can, if the wind is from the northeast, smell the sulphur, and resolve upon a better life.

Here, you turn left, and climb directly at the summit field. On top, you find the eighty-acre snowfield described by Coleman. You turn right, north, and walk easily to the extreme north shoulder, the highest point on the mountain.

On a cloudy day you can concentrate on the closer scenes. Directly below you, so steep and so crevassed that it seems impassable, bearing northeast, is the 1908 route of The Mountaineers, leading up from Austin Pass and the new Mount Baker Lodge country. A little north of east, some ten miles away, is Mount Shuksan, a dangerous mountain when it is not treated with due consideration. Shuksan alliterates with sheer and shrink and shudder and shiver.

I climbed Shuksan in the days of my inexperience. I certainly was tempted to sheer away from Shuksan's awful precipices, and I remember distinctly how I did shrink and shudder and shiver as its hanging glaciers were gouged and torn by roaring avalanches.

Courage is defined as persistent energy. That definition alone saved me from the despised opposite of "courage." I persisted and

made the top with twenty-four others. But I did it with fear and trembling.

There is no more striking feature to be viewed from the top of a Northwest mountain than is Mount Shuksan.

The summit route of Mount Baker from Kulshan Cabin is so split and so undermined by crevasses, both open and hidden, that the return from the top should be as cautious as the ascent. Then, too, snow bridges that were firm in the morning may be too weak by afternoon. Follow the leader, if you have one; your own good judgment, if you are, unfortunately, climbing alone.

Every now and again should this side comment be inserted in a book on snow mountains: Three is the minimum, four the ideal, in venturing over crevassed fields or slopes.

We will now climb Mount Shuksan from Mount Baker Lodge, at Austin Pass. Its trail is for you and for those of your friends who have become skillful climbers.

The "Fisher" route up Shuksan is becoming popular with experts. It was named after "Happy" Fisher, who was introduced to you in Garibaldi Park, where he spent his time building boats, in lying helpfully on his back on a sharp rock shoulder of The Table, and in snubbing a rope from a bergschrund.

One of Happy's favorite expressions about lesser mountain climbs is most descriptive:

"I could push my grandmother up there in a wheelbarrow!"

He never said this of his route up Shuksan. It invites the borderline of safety in its difficulty. It is safe enough when taken with Happy, for he has never allowed anyone to get into serious trouble on a mountain. His trail starts at Austin Pass with a climbing camp above Lake Ann. It leads up a series of rock chimneys, past hanging glaciers, to an upper snowfield. The final rock pinnacle seems simple after what has gone before. The ascent may be made from Lake Ann in seven hours. This route, as far as I know, is the least popular in our whole region for picnics or "wheelbarrows."

The safest route for the average climber is the one taken in 1916 by twenty-five Mountaineers, the largest single party ever to make the top of Shuksan. This was also the second ascent of the mountain. The route, however, necessitates a round-trip of three days, and a climbing camp high on the mountain. It was

discovered and recorded for use in 1906 by Asahel Curtis and W. Montelius Price.

On August 4, 1906, Mr. Curtis and Mr. Price made the first ascent of Mount Shuksan, thus pioneering the way for others. Mr. Curtis, who taught many of the earlier climbers of the Northwest the art of climbing, has left his mark on the Northwestern peaks. He was chairman of the outing party in the Olympics when the first ascent of Olympus was accomplished. The year before, 1906, he made this first ascent of Shuksan. The year afterward, 1908, he conducted the outing of The Mountaineers to Austin Pass, when the first large party made the top of Baker. In 1909, Mr. Curtis led his fellow club members into the north region of Mount Rainier. The climbing camp of that year has been officially named Camp Curtis. This is an unique four-year record of leadership and pioneering. Mr. Curtis is as active as ever today as chairman of the Rainier National Park Advisory Board. With all this, he has become world-known for his photography of outdoor life and scenery.

The Curtis route up Mount Shuksan leaves Austin Pass and Mount Baker Lodge by the Baker Lake Trail. It passes Paul Bunyan's Wood Yard and follows open meadows left to the $2.00 Gorge of Shuksan Creek, drops into the gorge, and crosses Shuksan Creek. Beyond Shuksan Creek is a most peculiar formation. A long shelf slants for several thousand feet up the side of the mountain. It widens to a wagon track and narrows to a footstep. It leads safely to a forested shoulder of Shuksan at 6,500 feet elevation, an ideal climbing campsite.

The next morning, early as dawn, you gird yourself for a hectic day. The Curtis route is not dangerous if the proper precautions are taken, but the word hectic is used advisedly. It is defined, as you know, as indicative of the slow wasting away of tissue of some sort. At the first dull boom and reverberating roar of a Shuksan avalanche, there will begin the first attrition of your own nerve tissue. You climb for hours up steep rock cleavers and over up-ended snowfields. Your rope, attached, or taut with a firm arm hold, will save you if you do slip, but nothing can save you from the constant bombardment of your nerve control. On a hot day there will be for five hours an almost continuous roll and crash of disintegrating masses of snow and rock. That

mountain is never idle, never peaceful in attitude or in deed.

Near the summit you find yourself on a broad, safe snowfield, comparatively level. You glance south toward Baker Lake and become aware of the fact that Shuksan has, after all, a gentler angle. From Baker Lake up, the route would be utterly devoid of climbing thrill or danger.A long, easy ridge would lead you to a point within six hundred feet, altitude, of the top.

The last six hundred feet of these two routes is safer than it looks, for small parties. It is a spire of ragged, jagged, shattered rock, with an easy chimney. But every moment, that chimney calls for alertness. At times, rock from above are jarred loose, perhaps by the mere sound vibration of your voice, and will come hurtling down upon you.

Our party of twenty-five was too large for safety. All could not dodge in time. Two of the young women received minor injuries from small rocks.

The top of Shuksan is interesting in itself. It is a limited rock space all scorched and blackened by lightning flashes. The metal record tubes are always partly fused and battered by these bolts from the high storms. There is a quartz ledge, appearing to be mineralized, at the very top. It is promising enough to warrant an assay.

But I have been keeping away from words about the views from the sheer north and west faces of Mount Shuksan. Justice can't be done with mere words. You cannot utter them, for you are breathless. If you could, they would be too slow to keep pace with those plummeting distances. You are 9,038 feet above sea level, and most of the 9,000 feet seem on edge beneath you. Perhaps the last thing to look upon, before starting down, is the graceful summit of Mount Baker, just over there, ten miles west, within reach of your hand.

In descending Shuksan in 1916, I received a much-needed lesson. I had been learning to coast snow slopes, and with the arrogance of slightly educated youth, had concluded that I could hold any slope where the snow would stick. I angled out of line. Before I knew what it was all about I found myself speeding on the snow toward a boulder-strewn ledge. I hit it full speed and swept the ledge clear of rocks for some thirty feet. Fortunately, the ledge was polished to smoothness by glacial action and the

rocks were rounded and not frozen in. They got in their work, but not in black and blue spots. The imprint was too general to be called spots. Never again without looking! That steep snow face had been composed of an inch of snow over solid ice!

Show me the benighted individual who was not relieved when we were all safe in camp! If he did not fear for himself, he did for others.

CHAPTER THREE

Mount Baker Lodge

BELLINGHAM, THE GATEWAY TO MOUNT BAKER, is built around a harbor of Puget Sound. North is the Gulf of Georgia, south, the Puget Sound. Steamship lines, the Pacific Highway, and three transcontinental railways, together with the proximity of Canada, makes Bellingham the "International Tourist Center" of the Pacific Northwest. It is, also, the starting point for a visit to Mount Baker Lodge.

The highway distance from Bellingham to Mount Baker Lodge is sixty miles. The last twenty-four miles is within the Mount Baker National Forest. This is one of the largest of our tree reservoirs. It contains nearly a million and a half acres, more than twice the land area of the entire State of Rhode Island. In its timber there are eight main varieties, with a wealth of ten and one-half billion board feet. The silver fir, a most noble tree, is found in the greatest abundance.

In this large national forest are two important projects, both conceived and engineered for the public good. One is the City of Seattle Power Development, the other is Mount Baker Lodge.

At the town of Glacier, mentioned in the previous chapter, as the beginning point of the Heliotrope Ridge Trail to Kulshan Cabin, is a boundary arch of the National Forest. Beyond is the splendid new highway, twenty-four miles long, leading through dense timber up into the mountain meadows, to Mount Baker Lodge in Heather Meadows, and beyond to Skyline Heights.

The forest roadway leads through stands of immense red cedars, Douglas firs and hemlocks. Some of these forest giants are two hundred fifty feet high, others higher. An occasional yew enlivens the vari-shaded green. In the more open spaces are banks of bright red berries, elkhorn mosses, glossy twin-flower vines, and creeping berry vines. The vine maple, with its exquisite foliage, appears in groves and mellows the shades of green as they fall and are diffused. On the most sultry days of summer there is a coolness and a tang to the forest that soothes the body, expands

the lungs, and keens the senses. All nature is vibrant, and the spirit of mortal awakens to responsiveness.

This highway within the Mount Baker National Forest cost about a million dollars. Besides the Federal Forest funds, there were other contributions. One of them, $300,000, was provided by Whatcom County, the most northern and western county of Washington. The entire highway from Bellingham to Skyline Heights has been dedicated to the people of the State of Washington. The State, then, maintains and improves this magnificent project, assisted by forest funds, in the interests of visitors from all over the world. There are no strings attached to the gift, and the Mount Baker Lodge country belongs as truly to all the people as though it were, officially, a National Park.

In response to a recent question, Mr. B. W. Huntoon, general manager of the Mount Baker Development Company, has made the following statement:

"With reference to the origin of our plan and its purpose I will say that the Mount Baker Lodge was built by a stock company of about six hundred Bellingham citizens as a community effort to bring about interest in the Mount Baker National Forest and to furnish service to the visiting tourists * * * * * in this magnificent mountain region. The Bellingham people have invested practically $450,000 in the Mount Baker Lodge development * * *."

Enough cannot be said about the fine public spirit of the City of Bellingham. The population of the city is some forty thousand live folks, and it is the business center of Northwestern Washington. Whatcom County, with and without state and national aid, has developed a most unique and usable system of paved highways radiating like the spokes of a great wheel from Bellingham to the far corners of that favored county. And not the least of these generous and farsighted expenditures was the contribution of $300,000 toward the building and the improvement of a road to serve the public within the confines of a National Forest!

The mountain highway leads through many miles of this lower forest. Tall trees, as perfect as the fluted columns of a temple, seem endless.

It is still a controversial question about the world's tallest trees.

The Mount Baker Highway. *Bert Huntoon*

The California redwood reaches a height of 300 feet. Firs in the Pacific Northwest are reputed to grow to 325. There are too many Paul Bunyans still extant to rely upon hearsay. Some ambitious young man is invited to prepare a monograph on tall trees and to search the world for facts for his thesis. All this dissertation is included in the account of the approach to the Lodge because so many of us love to linger in the sanctified aisles of the forest.

Camp Shuksan, maintained by Mount Baker Lodge, is a retreat in the forest. It is on the highway half-way from Glacier to Mount Baker Lodge, and offers both furnished cabins and housekeeping cabins at moderate rates. Its position in the heart of the forest upon the bank of the Nooksack River makes it the center of branching trails.

Many guests who visit Mount Baker stay at Camp Shuksan. There is for them, both night and day, the low melody of the river's song. The subdued sough of gentle breezes through giant trees adds an almost inaudible accompaniment. To ears that are attune to the undertone of forest sound, there is harmony that gives relaxation, a completeness and a joy that is not elsewhere to be found. There is, too, a wholesome freshness in the Camp Shuksan forest that sets it apart. Young trees are joyous, average trees are perfect, gigantic trees, hundreds of years old, are robust and unmarred, with vigor unimpaired. Almost imperceptibly the wearied spirit revives and becomes vital with new energy.

When energetic days arrive, and when ambition to do harder things and to visit changing scenes is born, there is plenty of opportunity to indulge the pull of it. One day will allow a visit to the Twin Lakes country. Another will open the panoramas of Hannegan Pass. A third will present the startling adventure of a trip under the frowning walls and avalanches of Mount Shuksan to the head of the Nooksack River. And always there is the round-trip to the open spaces of Heather Meadows and the exciting life of Mount Baker Lodge. Truly, Camp Shuksan is not a mere convenience or an intermediate stopping point. It is a major objective of the Mount Baker opportunity.

With elevation, upon the highway beyond Camp Shuksan, the trees grow shorter and finally group as the meadow region begins. To the north is the rising panorama of Ruth Mountain,

Hannegan Pass, and the rugged skyline that crosses the Canadian border. Threatening Shuksan and graceful Baker fall into place at left and right, and Mount Baker Lodge is near at hand.

Heather Meadows is nestled away between Shuksan and Baker. An alpine park! A carpet of heather! Mirror lakes and clustered evergreens! Mountain flowers and bees and butterflies! Lazy breezes with the tang of ozone, and the uplift of purity!

Mount Baker Lodge, at 4,200 feet altitude in Heather Meadows, has all the generous consideration for your financial preparedness of a National Park. There are free campsites in the Meadows and de luxe accommodations at the Lodge.

For your greater enjoyment there are trail trips, with or without horses, summit trips, and swimming carnivals that will test your fortitude, and will make you long for the cold-resisting anatomy of a seal. The latest gift to you is a two-mile extension of the highway, costing some $95,000, to Skyline Heights, at 5,000 elevation. A great parking space and turn-around has been so arranged that maximum panoramas are yours for minimum effort. You face your auto at Mount Baker and, like poor Lot's wife—look backward at Mount Shuksan—or vice versa. But do not fear—the only pillars of salt have come from the saline and penitent tears of those who have planned their time heedlessly, and have been forced to look and to run away. The Mount Baker Lodge country invites by virtue of multifold and diversified charms, a long visit, and an annual pilgrimage.

The folder issued by Mount Baker Lodge contains interesting historical and geographical information. No one can read it without being impressed by the fact that the Mount Baker Development Company, the builder of the Lodge, is more devoted to service than to commercialism. Under the heading "The New National Playground," comes information about the discovery and the naming of the mountain.

Mount Baker was first named by the Indians *Koma Kulshan*. Authorities differ in the translation of the name. Charles Finley Easton, the honored historian of the Mount Baker Club, gave the following information:

"Kwina, the last chieftain of the Lummi tribe, now upwards of eighty years of age, says that Koma Kulshan (pronounced Ko-o'-mah kool-shan') is the name by which Mount Baker was

known in common with his tribe and the Nooksacks and Skagits. The meaning of Koma is White and Shining; of Kulshan, Precipitous, in other words, the White, Steep Mountain* * *."

Dr. Charles M. Buchanan, the superintendent of the Tulalip Indian Reservation, interpreted Kulshan, in 1916, as follows:

"Kulshan means 'Shot at the extreme end or very point.' * * * One of the most intelligent of the Lummi Indians attributes the name to the fact that the mountain was once conical and that the peak itself was destroyed by volcanic eruptions and explosions. The summit is not now conical. The name Kulshan is applied to other things than the mountain—any object that is long, slim, or tall becomes Kulshan when shot at, struck, or affected at the end."

Both Mr. Easton and Dr. Buchanan agree that Kulshan was used by the Indians to designate Baker for many generations.

In 1790, Ensign Manual Quimper, the Spanish explorer, named the mountain *La Montana del Carmelo*. A poetical interpretation, The Great White Watcher, has come from the translation of the Spanish name. Lieutenant Joseph Baker was the first man to see the mountain in the Vancouver expedition of 1792. He reported it promptly to his commander, George Vancouver, who as promptly and most officially named it *Mount Baker*. The names bestowed by Vancouver have the habit of permanency. The main difficulty with Indian names is encountered in the conflicting testimony of the Indians themselves. It is not that they lack veracity—it is that they, lacking records, must rely on hearsay or tradition.

In the Lodge folder are many interesting paragraphs that may well be quoted for a final word about the two great peaks, standing a short ten miles apart, that dominate Heather Meadows and the Lodge:

"Outstanding features of this district are, magnificent Mount Baker, like a queen among mountain attendants, rising 10,827 feet above the sea, * * *. Mount Shuksan, in contrast, bares its head to the clouds in a sharp rock pinnacle, 1,000 feet in height, reaching an elevation of 9,038 feet above the sea. This mountain is characterized by ice-filled gorges, frowning crags, massive rock faces, and dashing waterfalls."

We will grant the modest contention of the devotees of the Mount Baker Lodge environs that "There is no beauty spot in all America that surpasses it."

Glacier Peak from Buck Creek Pass. *A. H. Denman*

Part Five
Glacier Peak

CHAPTER ONE

Exploring a Wilderness

WHEN GEORGE VANCOUVER, in 1792, sailed eastward through the Strait of Juan de Fuca, he saw before him a long horizon line of snow-capped mountains, the chain of snowy summits that was destined to mark the sweep of the Cascade Trail. Near Admiralty Inlet he recorded Mount Baker, N. 22 E., and Mount Rainier, N. (S.) 42 E., as the northern and the southern sentinels of an astounding panorama. We know that he saw Glacier Peak for he refers repeatedly to the "Eastern snowy range," and Glacier Peak was the highest middle point of it from where Vancouver stood upon the deck of his ship. Both Baker and Rainier stood out in front of the Cascade Range and were placed on the great explorer's surprisingly accurate chart and map of the Puget Sound back country as distinct end-markers of that long mountain region.

His map does not show the highest central point of this far-flung sweep of grandeur. But there it stood, the biggest wave of a frozen sea, half way between Rainier and Baker. Vancouver must have seen it. He had a sharp eye for mountains, and a vision of their future significance. But it is not strange that he did not single out Glacier Peak for naming. It stands near the far middle divide of the Cascade Range, sixty miles from the closest indentation of the Puget Sound. Its bulk and its high altitude, a mere 314 feet less than Mount Baker, are concealed, not so much by distance and the earth's curvature, as by intervening peaks.

Sometimes a digression is more logical than mere logical order. While Vancouver did not name Glacier Peak, he should be credited with its discovery. The earlier Spanish explorers did not pass through Admiralty Inlet into the Puget Sound proper, so they did not approach closely enough to distinguish individual mountains at any distance away from the coast. But more than all this, Vancouver has had such a vital influence as the first methodical explorer of the Puget Sound region, was so outstanding a workman in an age that was confused by a multitude of new scenes,

that he should not be dismissed as an indistinct and a shadowy figure.

George Vancouver was born in 1758 and died in 1798 at the age of forty. He entered the British navy at the age of thirteen and was an able seaman within the year. Captain James Cook, the greatest navigator of his day, was Vancouver's last teacher. He was with Captain Cook from 1776 to 1779 upon Cook's second voyage. On Vancouver's world voyage, he received his instructions from the Board of Admiralty on March 8 and sailed from England on April 1, 1791. He completed his work and returned home to England four and one-half years later, on October 20, 1795. The personnel of his crews on that great venture was unusual. He picked ability and youth. Only one man was over forty. Many were less than twenty years of age. These men, with all the vitality and the arrogance of youth, were held under stern control—and liked it, the final proof of real leadership. Dr. Edmond S. Meany says of him, "Vancouver was evidently one of that intelligent, alert, well-disciplined class of men, who would have succeeded in any walk of life."*

From the summit of Mount Baker, Glacier Peak is seen, the highest peak in a maze of high peaks, sixty miles south and a few degrees east of south. The region surrounding Glacier Peak has been ably described by the late Professor W. D. Lyman, formerly Dean of History of Whitman College.**

"Between Shuksan (ten miles from Baker) and Glacier Peak is a perfect wilderness of serrated peaks, more numerous than anywhere else in the entire range. Here, too, are more glaciers than in all the rest of the United States, aside from Alaska, put together. Along Thunder Creek, the Suiattle, the Skagit, the Stehekin, and Methow, are the mightiest masterpieces of mountain, lake, canyon, river, and cataract scenery in the entire state. Here are Horseshoe Basin, Agnes Canyon, and North Star Park. Here is Chelan, 'beautiful water,' the diamond setting of the stupendous circlet of the granitic and volcanic hills. Most of the snowy peaks of that vast sweep of mountains are nameless, yet such is their number

*Vancouver's Discovery of Puget Sound, by Edmond S. Meany. The Macmillan Company.

**The Mountaineer, Volume 1, 1907. The Mountains of Washington, by Professor W. D. Lyman.

Waterfall above Lyman Lake. *P. M. McGregor*

that I have been told by a miner that from one of the loftiest he had counted two hundred distinct snow mountains."

Many of these mountains are still unnamed in 1932, but there is justice in the hearts of men. Nestled away in the eternal hills that he loved, one of the most perfect of them all, is Lyman Glacier, honoring the name of Professor W. D. Lyman. The lake at the foot of the Lyman Glacier is named Lyman Lake. The glacier may disappear, for glaciers do recede. But the lake will bask in that valley of the protecting hills long after a thousand future years have drifted down the stream of time into a dim, glorious past.

North of Glacier Peak is the broadest back of the Cascades. In the number of peaks it resembles the east and north Garibaldi country. There is this difference. While that part of the Garibaldi circle seems almost all snow, the Glacier Peak distances are softened by rivers that flow through the deep valleys of the Mount Baker National Forest. There is a network of streams, big and little, that extends, in and around the mountains, as far north as the Canadian border, about sixty miles away.

And all this is new country, back country, unsullied and untamed. It will be all yours when the Cascade Trail has grown from a dream to a realization. Not so many years to wait, at that!

In The Mountaineer, Volume 24, 1931, Fairman B. Lee, 1932 Chairman of the Cascade Trail Committee, gives you information that can be used now, today, in following the proposed route. The Forestry Service has cooperated, maps are available, many trails already exist for your use. The continuous line of shelter huts, the mile by mile markers from Heather Meadows on Mount Baker to the Columbia River and Oregon, will come later.

The Cascade Trail is divided into four great sections. Mr. Lee details in his article the guiding facts for each section. The four parts that will be welded into one mighty trail, nationally and internationally known by outdoor devotees, are:

1. Mount Baker Section:
   From Heather Meadows, across the Mount Baker National Forest to Indian Pass.
2. Snoqualmie Section:
   From Indian Pass through the Snoqualmie National Forest to the vicinity of Pyramid Peak.

3. Mount Rainier Section:
   From Pyramid Peak across the Rainier National Forest to Chain of Lakes.
4. Columbia Section:
   From Chain of Lakes through the Columbia National Forest to Stevenson, on the Columbia River.

Simple isn't it, this greatest trail project! Thanks to the acumen and the foresight of our federal government, four national forests follow the backbone of the Cascades continuously, from Canada to Oregon. No need to tell of the morale of the Forest Service. We know those rangers, and the whole world knows no better men. They are with us in all of the three real things that remove difficulties and accomplish objectives—Knowledge, Sympathy, and Insight.

Just another little tip. The Oregon Skyline Trail, from the Columbia River south, already exists. Soon it will be, by mountain trail, Canada to California!

The first ascent of Glacier Peak was made in August, 1898, by T. G. Gerdine of the United States Geological Survey, and a party of four. The object of the climb was the placing of a tower with a flag to be used in map making and in determining elevations. Such a structure is called a target.

The climb was made across the Whitechuck Glacier to the divide between the Whitechuck and the Suiattle Rivers. In the last hours of the climb the summit beckoned straight ahead, the end and objective of an easy route. But alas, in 1898 as now, mountains had a way of turning up with a joker at the wrong moment. The alleged summit was, as usual, a false summit, and the real top was a mile on and up. How history does presage the actions of men. The party stopped, objected, argued, and went on to the main top. Of course the mere packing of heavy poles and other impedimenta was no excuse for hesitation. Gerdine told afterward how insistently he urged his men to go on. I know those man and they were like all outdoors men. Had Gerdine, the leader, tried to turn back and leave the job incomplete, those men would have turned on him and would have urged him onward.

The approach used by Gerdine ends the one most used today. Its successive stages are:

First Day: 15-mile trail from Darrington to Stujack Camp on Whitechuck River.

Second Day: 12 miles on trail to Kennedy Hot Springs.
Third Day: 7 miles on trail to Glacier Lean-to Cabin near head of Whitechuck River.
Fourth Day: Cross River and the Whitechuck Glacier, follow ridge, right of False Summit, pumice saddle and rock chimney to main summit of Glacier Peak.

Later in 1898 Professor I. C. Russel duplicated the Gerdine ascent.

In 1906, C. E. Rusk and A. L. Cool made the first ascent from the east side.

On August 5, 1910, L. A. Nelson led the first large party to the top, a long line of fifty-sevent members of The Mountaineers. So far there seems to be a lot of L. A. Nelson in our mountains:

1907—Leader of first recorded ascent of Olympus.
1908—Leader with Asahel Curtis of first large party ascent of Baker.
1909—First large party ascent of Mount Rainier, assisting Asahel Curtis.
1910—Leader of first large party ascent of Glacier Peak.

With this Mountaineer party of 1910 were the first women ever to stand upon Glacier Peak. The delightful climbing camp of that occasion, a park at 6,150 feet elevation, just south of the Chocolate Glacier, has been named Camp Nelson.

Between 1898, when both Gerdine and Russel made the summit, and 1910, when the large expedition of The Mountaineers made free with the mountain, Glacier Peak was disturbed in its isolation once only. In 1906 C. E. Rusk, a well-known climber of the Pacific Northwest, and A. L. Cool camped at Buck Creek Pass. Their climbing camp was at timberline north of Cool Glacier, named after A. L. Cool, Rusk's companion of the ascent. They climbed over the Chocolate Glacier and made the saddle south of the main peak. From there to the top they followed the usual route.

The Mazamas made Glacier Peak and Lake Chelan in 1911. For years afterward the region of Glacier Peak was again neglected except by the faithful ranger and an occasional trapper. One of these trappers had a sense of humor. It is evident that he had been unfamiliar with winter in the Cascades. Written on the side wall of a deserted cabin was this notice:

"October—10 inches of snow—this country is not much good for trapping."

Below was his final word:

"January—10 feet of snow—this country is no good for anything."

Years passed. At last the region began to come into its own. The Mountaineers repeated their earlier trip in 1921 and again in 1928. The Mazamas revisted the region in 1926. The Everett Branch of The Mountaineers began to conduct yearly outings to Glacier Peak by way of the Darrington-Whitechuck approach. But still one more event of its history was to come to pass before the Glacier Peak environs were to receive the increasing attention from the geenral public, that they so well merited.

President Cleveland established the Mount Baker National Forest by proclamation on February 22, 1897. Glacier Peak is at the extreme southern tip of it, where the Forest Reserve line bisects the summit. The east and north slopes of the mountain are within the National Forest, as is the rugged country north to Canada.

In September, 1931, three hundred sixty-five square miles of Forest lands were set aside as a Recreational Area. The announcement came from C. J. Buck, district forester, who gave details. The new Area is in four national forests: Chelan, Mount Baker, Wenatchee, Snoqualmie, although it is only twenty-five miles long and a minimum of twenty miles wide. The four national forests involved meet near Glacier Peak. Three of them corner on the Peak itself, while the Chelan Forest corners in less than ten miles from it. No roads will be allowed to encroach on the preserve that it may remain a wilderness playground.

Usually the naming of a peak is one of the vital facts of its history. Not so with Glacier Peak. The name ill fits it. Three of the major peaks of Washington—Baker, Adams and Rainier—have greater glaciers. It is not glaciers that distinguish Glacier Peak. The Peak is a center of a region that has passed through eight great glacial periods, but the climax of the last one of them was passed 20,000 years ago. Small glaciers alone are left. Where the Skagit Glacier was once one hundred miles long and a mile thick, there are but remnants. There is a strong movement extant, in this year of 1932, to change the name of the Peak to some-

thing more distinctive, more worthy of its real contribution. No wilder recreational area exists in the United States, and the Peak that commands it will some day come into its own.

Another peak in the same national forest is named Glacier Peak. It is less than sixty miles directly north, one mile south of the Canadian border. It is 8,894 feet high, a lesser peak. If many more features are named "Glacier" in this one forest the name will begin to lose its last shred of identity like those most abused class names, Goat Mountain, Old Baldy, and Bridalveil Falls. Surely we humans have not reached the end of our resources in naming! From the top of Glacier Peak (and now I must insert Big Glacier Peak to distinguish it) one can count more than two hundred snow summits over seven thousand feet high. Many are above nine thousand. This great Peak honors an astonishing mountain realm—and the Peak, in turn, should be appropriately honored.

CHAPTER TWO

The New Recreational Area

ONE OF THE BEST APPROACHES to the wilderness of the northern Washington Cascades is by way of Lake Chelan. The Lake is reached by automobile over a good, surfaced highway from Wenatchee, Washington. The town of Chelan, at the end of the Lake, is four miles above Chelan Falls, which is on the Columbia River. This is the section of the river at the Big Bend of the Columbia in east-central Washington.

The end of Lake Chelan starts in the rolling sagebrush country of Eastern Washington. Out here we call everything east of the Cascade Divide, Eastern Washington. In still another way the designation is almost perfect, for the low end of Lake Chelan is just half way between the Pacific shores, nominated as Olympian by John Meares, and the Idaho state line.

Lake Chelan starts west from its levigated sagebrush environment, bends majestically north and is soon out of sight behind a rising mountain country. It stretches away, northwest, a mile wide, along forty-eight miles of sky-roofed corridors, an inexhaustible picture gallery. Nature has certainly outdone herself in this freak lake.

The creation of this strange lake, with its magic miles of narrowed shores is another astounding feat of the glacial age. The Cordilleran Ice Sheet found expression in Chelan Glacier. Dr. F. E. Mathes of the United States Geological Survey found that it was ninety miles long and that it casually scooped out a forty-eight-mile lake, Lake Chelan. Lest we should believe that Chelan Glacier stood alone in this region in tooling out long, deep valleys, it may be added that Skagit Glacier was one hundred miles long and that the Cordilleran Ice Sheet was approximately a mile thick.

There are so many things about Chelan Lake that are freakish that the word must be used—with reservations. A lake so long that it exhausts one range of mountains and starts another, and less than two miles wide at any point! True, the Sawtooth Range

at the east outlasts it, but the Chelan Mountains, west, reach only three-fourth of the way, to Lucerne on the Lake shore. The surface of this long, narrow lake is 1,079 feet above the sea, yet its deep bottom is more than a thousand feet below sea level. At one end, dust and sagebrush, at the other, wooded canyons and green valleys! An exalted slit cutting through from commonplace to colorature landscaping! But there are those reservations. You forget the freakishness and glory in the greatness of Lake Chelan. Your interest grows for forty-eight miles from the city of Chelan below it to the Stehekin River, feeding into it, farthest north.

Glacier Peak is thirty-three miles west from Lake Chelan. The trail approach starts at Lucerne, ten miles from the head of the Lake. Its successive markers are Holden Mine Trail, Railroad Creek, Lyman Lake, North Star Park, Cloudy Pass, Suiattle Pass, Big Meadows, Buck Creek Pass, Camp Nelson, Glacier Peak.

From Stehekin, at the head of Lake Chelan, up the Stehekin River and over the mountains to Canada, there is not one burg, hamlet, or settlement, and few individuals. In fact there is so much virgin country in the Mount Baker National Forest that one is appalled by the magnitude of it.

There is an atmosphere in this greatest wilderness area of Washington that is distinctive. From childhood to death, we all love to read the romantic fiction of pioneering. We travel with author and hero through the forest tangles of the Ohio, or camp upon the marshy banks of the Chicago River. We trade beads for land at the mouth of the Hudson River, or flee from a snaky Seminole through the morass of a Florida resort.

But here, in the northern Cascades, we will need no author to create illusions of the primeval forest, or to invest the open meadows with wild animals and birds and flowers. The only thing lacking to a Lewis Wetzel and a Cortez would be the hot blood of revenge and the unearned rewards of stolen treasure. The wilderness is there without the danger or the treasure madness. As truly as in any age or any place you thrill to the wonder of isolation.

The Buck Creek Pass route is another approach to Glacier Peak.

"Mac" and I, some years ago, made a round-trip climb of

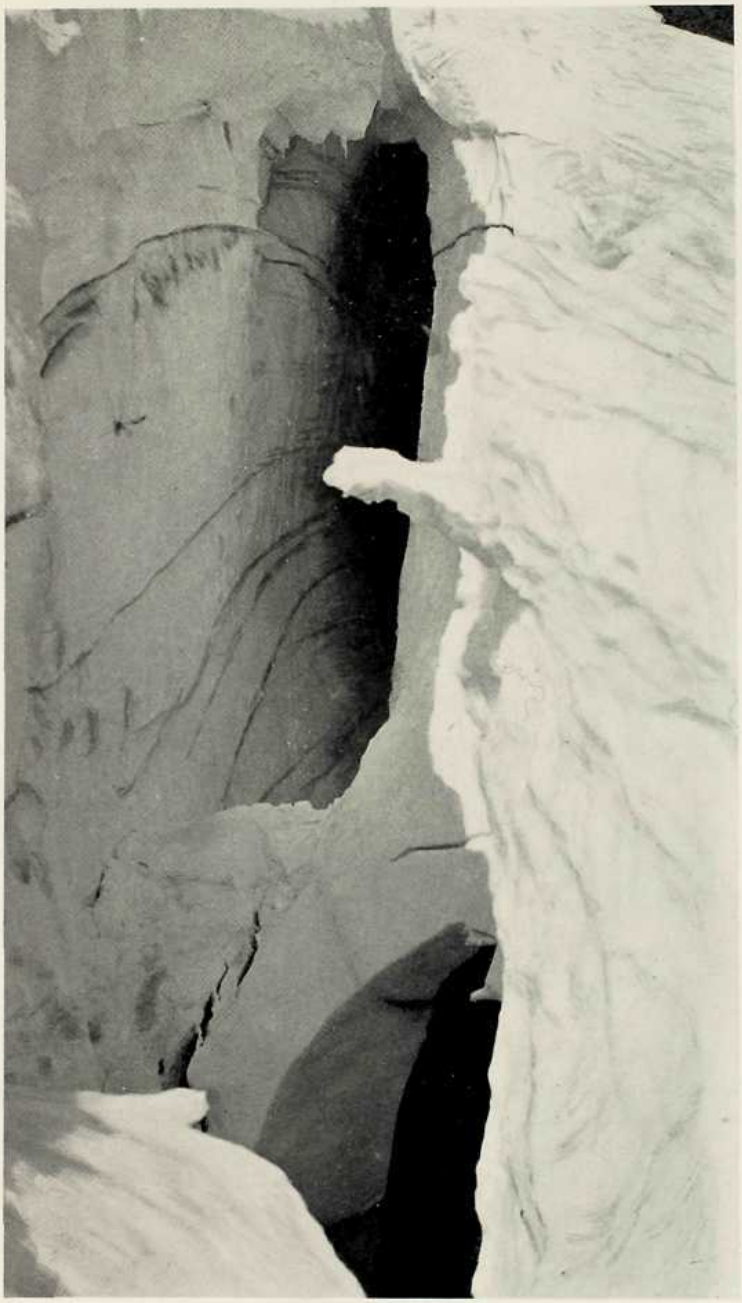
Glacier Peak in five days from Seattle. "Mac" is a Scotchman, Hugh McKenzie, as fine and true a Scot as ever insisted on giving you the shirt off his back, or fought valiantly for values in buying one to replace it.

We took the Great Northern to Leavenworth. "Dude" Brown, outdoors gentleman and packer de luxe, drove us in his car north from Leavenworth to the junction of the Chiwawa river with Phelps Creek. We carried our packs four miles along the Chiwawa to its junction with Buck Creek. Here we met our first problem. There was no bridge on the trail and the river was very high with the spring thaw. We climbed up stream, where within a half-mile, we found a fallen tree across the chasm. We took the swaying chance, not knowing until we returned to Leavenworth that a quarter of a mile down stream instead of up, there was a perfectly normal bridge for the sheep herders. Because of the delay in crossing the Chiwawa we camped when we regained the trail.

We packed, the second day, over Buck Creek Pass, abandoned the trail and angled down steeply, left, to the Suiattle River. There we found a trapper's cabin beside the river and a log jam across it. We camped beside the cabin for the second night.

At pale dawn we left camp and our packs and provisions, except a few sandwiches, sugar, prunes, and such provender, and crossed the river on the log jam.

Some question may have arisen as to the food we carried on this forced trip. Just one suggestion! Bacon, fried at night and placed tenderly between two ample slices of bread, puts the finishing touch to a good dinner sandwich. Leave the bacon grease in the frying pan. The next morning fry cheese in the bacon grease. Place the enriched cheese between two more thick slices of bread. You will have the finest of breakfast sandwiches. A cup of rice placed in a covered bucket with three cups of cold water, and left at the edge of the fire for a half-hour, will be beautifully steamed when the bucket lid is removed. This and a few other simple essentials varied the monotony of the bacon and cheese. There is too much palaver about trail commissary. Take what you can best carry, and eat it when you get a chance. Mac said that cheese was "Pairfactly fine, Mon," although he told me afterward that he hasn't eaten cheese *every* day since that trip. Another secret—Mac is the man who hung out from a



Crevasse in the Chocolate Glacier on Glacier Peak. *P. M. McGregor*

bending, small tree above a cliff face near Mount Denny and ejaculated with devotional glee, "Mon, it's warse than pairpendicular."

Across the Suiattle we took to a wooded shoulder and climbed for miles through a rising and thinning forest. We reached a rock cleaver north of the Chocolate Glacier by mid-afternoon, crossed the Glacier and tackled the south ice wall. The bulky snow dome of Glacier Peak was directly west, and we were, by then, on its lower slopes. In the south ice wall of the Chocolate Glacier we struck plenty of trouble. I tied myself on the end of our rope and crawled into a hole in the upper ice wall of a crevasse. The third member of our party, my wife, whom I have not mentioned so far because she could so thoroughly take care of herself, called out, "Hold him, Mac, while I take his picture." My feet only were then showing out of the hole. Another thing was happening inside. A stream of water, the size of my little finger, was flowing out of the ice wall into my waistband. Mac was strong enough to hold me. I never liked the picture that was taken.

We made it off the Glacier and found a crevassed snowfield above Camp Nelson. We headed toward the high point of the Peak, and crossed crevasses on snow bridges. Some of them were found by following the tracks of a mountain goat. Never distrust a snow bridge selected by a mountain goat. He knows his business, and he conducts his business on mountains.

Instead of taking the route to the saddle at the left, we followed an arête to the rounded dome of summit snow. And it was steep. It fell off a long way, on both sides, dangerously. The "lady" climber here offered a practical suggestion:

"If either of you men slip," she said, "the other one must plunge over the other side of the ridge. I'm tied between you and can hold you both ways."

We made the summit without testing either the plan or the rope. I have not hinted it so far, but when I step on weighing scales, the weighing arm doesn't oscillate, it rebounds. I'm glad the rope was not tested.

The summit of Glacier Peak was an ample snowfield. The crater is not perfect in form, as the volcano is old and most of its former lines have disappeared. The crater is about a quarter of a mile across, and is filled by snow. Some jagged remnants of the

rim serve to indicate its former shape and position. Later in the season there would be much less snow than we encountered.

The panoramas from Glacier Peak are different from those of either Olympus or Baker. They are more like Garibaldi. The east and west sweeps envelope both the "sagebrush" and the "Sound." Mountains north, and mountains south, some little, many big, then more mountains. It pleased me to concentrate on the region between Glacier Peak and Mount Rainier, a region so available from Everett, Seattle, and Tacoma, that it is more the "Back wood-lot forty" than a wild fastness. It is both a winter and a summer country. In winter, cozy lodges and skis and snowshoes—in summer, alpenstocks, ice axes, calks, and tarps. And most of it just a few hours from home!

In going off the summit we followed the saddle, south, on the Whitechuck route, to a point halfway between the false and the main peaks. Here we turned east, found our snowfield tracks, recrossed the Chocolate Glacier and regained the wooded ridge. As we had done in one day the work of two days of The Mountaineer party of 1910, darkness descended upon us. For several hours we moved down through the forest in the dark, keeping close together. We reached the Suiattle River, and slept out that night in the brush by a tiny campfire. It was pitch dark and we did not attempt to orient the trapper's cabin. Enough that we had found the Suiattle River!

The next morning, the fourth from Seattle, we were delighted to discover that we had struck the Suiattle about a hundred yards above the log jam and the trapper's cabin. Perhaps, to be honest about it, we were more lucky than sane to come that close to our objective in a jet-black night without a trail!

On the fourth day we climbed to Buck Creek Pass from the Suiattle, through a half-blizzard, and found the Buck Creek trail. It was late in May, and the upper trail was buried in several feet of winter snow. In crossing Buck Creek, something else happened.

Mac does not like ice-water, nor does it like him. He can lick anything else on earth with a smile. Our crossing log was small and of a severely futurist shape. When Mac stepped down upon it, it came up to meet Mac. He landed waist-deep in Buck Creek. Still the banks were soft enough, some four feet of snow, and he

scrambled out easily. But Mac seemed wet and cold. For a couple of miles we saved time by spending little of it on each mile. At last we reached a grove of trees and found that nature had done her best to be helpful. There was dry wood. At the foot of each tree was a melted-out space large enough for a sleeping bag. Against some rocks was a bare spot for a fire. We dried Mac out and later spent a comfortable and restful night.

At Phelps Creek, on the fifth day, we found a surveying crew for a mining camp road, steak, potatoes, vegetables, bread, cheese, coffee. Neither Mac nor I took cheese.

At noon, Dude Brown met us with his car. We returned to Leavenworth and arrived in Seattle by midnight of the fifth day.

CHAPTER THREE

From Glacier Peak to Mount Rainier

SOUTH OF GLACIER PEAK the highline of the Cascades divides the Wenatchee National Forest from the Snoqualmie National Forest. The White River leads southeast to Wenatchee Lake, while the Sauk River flows northwest past Sloan Peak. Still farther south is Indian Pass, and directly west of the Pass is the interesting Monte Cristo district.

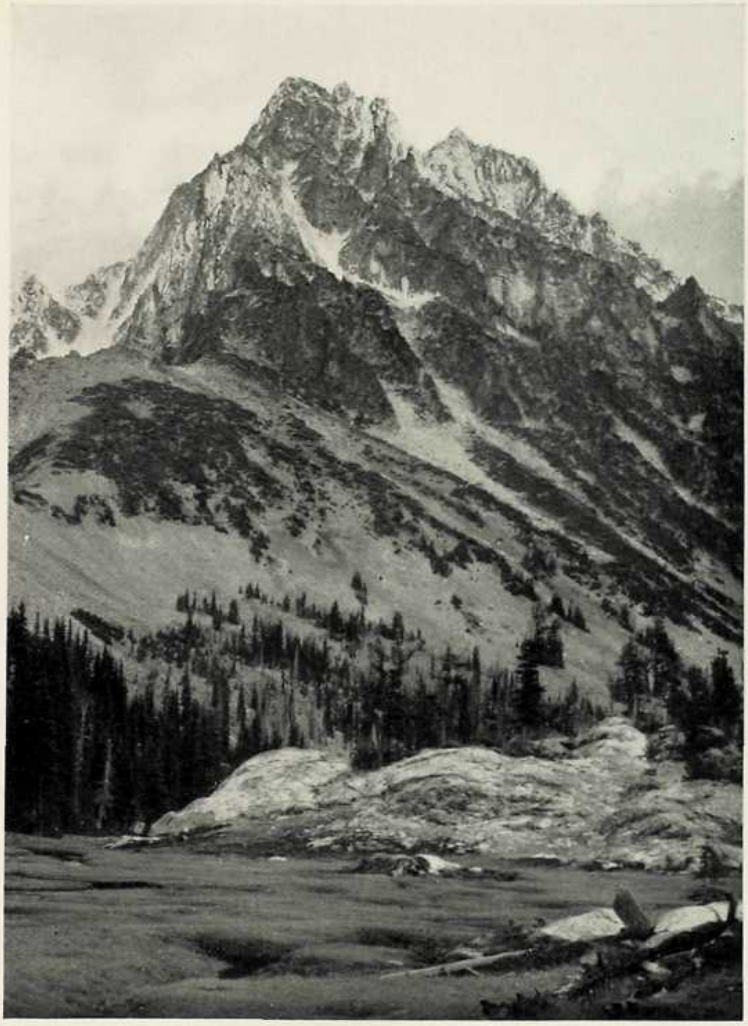
All this is in the direct path of the fast-developing Cascade Trail. From Indian Pass to Mount Rainier, however, it will be impossible to predict the course of the actual trail. We will follow its general trend, pointing out just a few of its many objectives.

Trails along the North Fork of the Snoqualmie River and over a divide to the Beckler River will lead south to the town of Skykomish, another center of mountain endeavor. The East Fork of the Foss River leads still south to La Bohn Gap and to one of the major climbing regions of the Cascades. Just below is Dutch Miller Gap, where a trail may be taken east and south past Waptus Lake and Salmon LaSac to Mount Stuart.

Mount Stuart, over the divide in Eastern Washington, is said to be the largest single granite mass in the United States. It is 9,470 feet high, 432 feet higher than Mount Shuksan. C. E. Rusk has called it the "Mountain of a thousand thrills."

It is a thrilling mountain, that great mass of gray granite! On three sides it is almost unclimbable. But on the fourth side, by the long slope from Ingalls Creek, it is easy, in fact, one of the most comfortable high climbs in the Northwest. The extreme top leads out on a knife ledge overlooking the precipitous north and west faces.

Mount Stuart was named on September 20, 1853, by General George B. McClellan. He was then a captain, scouting for the Pacific Railway Survey, under the command and direction of Isaac Stevens, who afterward became the governor of Washington Territory. McClellan reveals a lot about Jimmie Stuart in the following entry in his diary:



Mount Stuart. *A. H. Denman*

"On the 18th of June, 1851 (1854), at five in the afternoon, died Jimmie Stuart, my best and oldest friend. He was mortally wounded the day before by an arrow, whilst gallantly leading a charge against a party of hostile Indians. He was buried at Camp Stuart, about twenty-five miles south of Rogue River (Oregon). * * *."

Near Dutch Miller Gap is a striking rock mountain named Summit Chief. Near it another, christened "Little Big Chief" after L. A. Nelson, who is Little Big Chief to all his friends.

In the summer of 1925, on the rock walls of Little Big Chief, there was a demonstration of climbing technique that left the party of us too far beneath the other climber in prowess, even to be jealous. Our demonstrator was a mountain goat.

One thing does arouse our jealousy. Please do not confuse that flighty Big Horn sheep of the Rockies with our mountain goat of the Northwest. The Big Horn is a mere sheep with big, rolling horns, who produces hair like a deer. Our goats grow real wool, two sharp spikes for horns, and they are vastly superior—out here on the Coast.

Eight of us were climbing Overcoat Mountain, so named because in 1893 Forest Supervisor Sylvester, then surveying, went off the mountain and forgot his overcoat. On the way past Little Big Chief we noticed a mountain goat climbing a series of rock ledges that made the rock wall somewhat less than sheer. It was a face that no man, working alone, could have found possible.

This is the way the goat climbed. He would spring toward the top of the next ledge, catch his sharp front hoofs over the edge, and pull himself easily up and over. It was uncanny, the height he could jump and pull up that way. At last he tried one that was too high—his front feet did not catch. He slammed all four feet against the wall, turned a complete somersault, and landed safely upon the ledge from which he had jumped. Later the eight of us signed an affidavit before a notary, giving these facts, and sent it to a naturalist.

After the goat failed in his jump he seemed disgusted. He ambled off the wall in a series of down jumps that should have broken legs of steel. He arrived at a seventy-degree snow finger. He bunched his four feet together and glissaded. Over his shoulders arched twin sprays of snow as he smoked down the incline.

No man, alone, could have matched that goat either in rock

work or in coasting. Since then I have seen other stunts. I have come to the conclusion that our best mountain goats can cavort on mountains just about any way they choose to cavort.

Just a short distance from Overcoat Mountain is Chimney Rock, the last spire in this district to succumb to a "First Ascent."

On August 27, 1930, Arthur R. Winder, Forest Farr, and Laurence D. Byington successfully climbed Chimney Rock. It would be impossible to estimate how many attempts had gone before. There had been no failures—for any trip is successful from the moment it approaches Chimney Rock The parties before had just desisted after trying to mount to the high point. The three young men, all expert rock climbers, who did finish the ascent, report a few final details that may be reviewed by the word-phrase-dash method of narration:

"—apparently unscalable face—towered four hundred feet directly overhead—rubber-soled shoes—blind chimney—ledge around east face—smooth out-sloping walls—complete lack of holds—sheer rock face overhanging glacier 1,200 feet below—perpendicular chimney—deep vertical crack—large chokestone—removed shoes—no grip—removed socks—tied shoes around neck—back and heel method—final summit."

And this is climbing!

The trail from Dutch Miller Gap connects with the Middle Fork of the Snoqualmie River, passes Goldmyer Hot Springs, picks up the Snow Lake Trail and reaches Snoqualmie Pass.

The Burnt Boot District is a feature of this section. It was named by an unfortunate trapper who dried his boots too near the fire. A practical reader will ask how he hobbled out of hills like those.

Near Snoqualmie Pass, about seventy miles by Sunset Highway from Seattle, are the mountain homes of the Commonwealth Ski Club, the Seattle Ski Club, and The Mountaineers. The Mountaineers' Snoqualmie Lodge is central for twenty listed peaks, a First Ten and a Second Ten. Paradoxically, the second ten is harder than the first, and all twenty ascents are equally important.

From Snoqualmie Pass, south, the Cascade Trail continues over the Silver Peak trail to Olalee Meadows, on through Yakima Pass, Meadow Pass, down Sunday Creek, up the Green River, and enters the Rainier National Forest near Pyramid Peak.

Beyond Pyramid Peak the trail follows a divide to Chinook Pass, turns west, and enters Mount Rainier National Park.

Mount Rainier from the south. Paradise Valley, with its hotels and camps, is just below the cloud—right center. *Asahel Curtis*

Part Six

Mount Rainier

(Takhoma, Duk-hwahk, Pus-ke-house, Tiswauk, Ta-co-bud)

CHAPTER ONE

The Life History of Mount Rainier

THE LIFE HISTORY OF MOUNT RAINIER, as it is read by scientific man, began in a far-away geologic age. No geologist can tell how many times the Cascade Region was uplifted and then worn back to a comparative level. Bailey Willis, one of the first geologists to work on the Rainier region during the Northern Transcontinental Survey, 1881-1883, Professor of Geology, Stanford University, has proven that at least once before its last uplift the Northern Cascades were worn down to a plain. The final uplift was in recent geologic time. This upheaval took a long time and reached a maximum height of 8,000 feet. During the period of its lifting, like all plateaus, it was subjected to erosion. By the time it had reached its greatest development it was cut by chasms, gorges, canyons, and had nutured divides and drainage, rivulets and rivers. On the western slope of this last Cascade Plateau, at the time of its completed elevation, twelve miles west of the divide, Mount Rainier was born.

The internal forces caused a vent to appear upon the 5,000 to 7,000-foot granite floor of the uneven plateau. There were great lava flows. The cone of the volcano began to arise. For a long time these flows were lava only. The first flow was fully 300 feet thick. Then came explosions, and broken rocks and dust were spewed forth. Mixed with the later sheets of lava are cinders, bombs, lapilli, all the products of explosive eruption. The volcano seems to have become more fiery tempered as it grew older. The great cone arose to the height of 16,500 feet above sea level. Then came the great explosion!

We have seen these mountain catastrophies in recent years. In 1883 there was a tremendous eruption of Krakatao in the Strait of Sunda. Dust in the upper air floated around the world, painting more gorgeous sunsets for the whole earth.

In 1912, Mount Katmai on the Alaskan Peninsula had its day of violence. It blew up. Kodiac Island, a hundred miles away, was buried a foot deep in powdered ash. Ashes fell at Ketchikan,

nine hundred miles distant. For sixty hours there was black night. The booming blast was heard at Anchorage, for the sound had carried over a hundred miles. Over hundreds of square miles every sign of vegetation was blotted out. Twenty-five hundred feet of the Katmai volcano was shattered and blown into small portions —and into the distance.

Mount Rainier had its own wild night out, but the date cannot be given. It blew twenty-five hundred feet of itself apart and hurled shattered portions of itself as far as the Puget Sound on one side and the Yakima Valley on the other. Like Krakatao and Katmai, Rainier's orgy of reduction cost about one-sixth of itself, two thousand five hundred feet. It left a summit hole, like Katmai's thousands of feet deep. The holes filled up. Minor craters formed, at least four of them, two almost perfect in form today. The largest one is built up, with a mound of snow on its highest west rim at Columbia Crest, to 14,408 feet, Mount Rainier's present altitude.

The subsequent formation of snowfields and glaciers, and the gradual tearing down of this great mountain mass was described in Part One, Chapter Three, of this volume, "Snow Dangers." This wearing down has been most rapid on the south face of the mountain, where the sun speeds erosion—least rapid on the colder northeast side. The two largest cirques eating back into the main dome are at the N.NW. face under Willis Wall, and the high west face cirque at the Puyallup Glacier. Two immense rock cleavers, Little Tahoma and Gibraltar Rock, are most obvious remnants indicating the much greater bulk of the mountain, before erosion began to take its toll.

Because of that great rending and destruction of over two thousand feet, altitude, of the top of Mount Rainier, its summit does not resemble the summits of other volcanoes. It hasn't the parabolic curve that steepens to an even crater rim like Fuji-san in Japan. It has not worn to a sharp-pointed rim-remnant like Hood, in Oregon. Its shoulders are resistant, for they are part of the solid walls of the former dome, not the most recent and most easily eroded crater rim. Then, too, Mount Rainier, most unseemly in volcanoes, does not present the same summit form from any two angles of vision. Lastly, the summit is too broad, nearly four miles at its longest diameter, for a mere volcano!

No one man has ever known the entire top of Mount Rainier. To do so would demand three things that would occupy the leisure of a lifetime. It would be necessary:

1. To encircle the whole mountain at a distance.
2. To climb to the summit by every possible route.
3. To spend days in exploration upon the summit fields, the nine square miles of them.

The mountain was about as it is today, except that its glaciers were much longer, when civilized man first looked upon it.

The Indians of the Pacific Northwest had known it away back in the flood-waters of antiquity. There are, even, vague traditions of the "Great explosion." Not entirely discarded in Indian lore is Rainier's former "Lake of fire." But Indian tradition, while poetically worth while, is historically too nebulous. It seldom has been possible to induce two tribes or two chieftains to agree upon the translation of a disputed word or phrase. Also, as with some of white folks, Indians were not always "Exact with truth." "Drawing a long bow" never has been limited to rural England. George Vancouver, in 1792, was brutally frank about it, when he wrote in his journal:

"The little respect which most Indians bear to truth, and their readiness to assert what they think is most agreeable for the moment, or to answer their own wishes and inclinations, induced me to place little dependence on this information, although they could have no motive for deceiving us."

This is no abuse for the aborigines. It's rather a comment on human nature, red or white, isn't it? Nor was George Vancouver unfair to the original American. He was, for example, their strongest defender against the indictment of cannibalism.

We do not have to rely on white men to prove the inaccuracy of Indian records and white records too. Henry Sicade, a Nisqually Indian, later adopted by the Puyallups, wrote an article on "Aboriginal Nomenclature" in the 1918 Mazama, the magazine of the Mazamas of Oregon. In it he wrote:

"For instance, my tribe, the Squallys, now officially known as the Nisquallys; derived their names from the tops of flowers, herbs, and grass; waving back and forth when the wind blows. When the first French explorers came to our country, they asked our people their tribal name and were informed Squally, 'Oh, *Quarre!* Nez-quarre!' My people have blunt noses, the French,

naturally named them 'Nez-quarre,' square noses; the Americans now call us Nisquallys."

Henry Sicade tells also of conflicting translations of "Tacoma":

"My own people call it 'Tacobud.' Ta—that or the, Co—water, Bud—where it comes from. The plains people, those living east of the mountain range, call it 'Tahomah.' When a Klickitat says Tahomah he gives that ring in awe; the mountain, the great mountain, which gives thunder and lightning, having great powers."

The white man, arrogant with alleged superiority, gives the translation entirely a different twist, one not at all justified by Indian meanings, and, poetically inspired, translates, "The Mountain That Was God."

Henry Sicade says modestly:

"My people, the red race, has never been a party to any disputes as to names of rivers, lakes, bays, mountains or ranges, nor do I desire to take part in any such controversy. * * * I want to thank you, you the American people, for having perpetuated aboriginal names."

But it all goes to prove that for our major premises in the 'Life History of Mount Rainier' we must rely upon what is written in the rocks and in the time-tested books of civilized men.

We, therefore, nominate George Vancouver as the discoverer, the first explorer, and the one who named Mount Rainier.

The following record appears in the second edition of Vancouver's journal, published in London in 1801; under the date of Tuesday, May 8, 1792:

"The weather was serene and pleasant, and the country continued to exhibit, between us and the eastern snowy range, the same luxuriant appearance. At its northern extremity Mount Baker bore by compass N. 22 E.; the round snowy mountain, now forming its southern extremity, and which, after my friend Rear Admiral Rainier, I distinguished by the name of Mount Rainier, bore N. (S.) 42 E."

Vancouver's description of the mountain on Saturday, May 26, 1792, was as exact in fact and as great in literary values, as anything that has been written since:

"The forest trees, and the several shades of verdure that covered the hills, gradually decreased in point of beauty, until they became invisible; when the perpetual covering of snow commenced, which seemed to form a horizontal line from

> north to south along this range of rugged mountains, from whose summit mount Rainier rose conspicuously, and seemed as much elevated above them as they were above the level of the sea; the whole producing a most grand, picturesque effect. The lower mountains, as they descended to the right and left, became gradually relieved from their frigid garment; and as they approached the fertile woodland region that binds the shores of this inlet in every direction, produced a pleasing variety."

In these simple words, Vancouver records the three zones encountered in the eye-sweep from the waters of the Puget Sound to Rainier's summit. He saw Mount Rainier as a "Round snowy mountain" towering above a rugged range and a lower stratum of forest. And indeed, it does so appear from that particular radius of its varied 360 degrees circumference.

In the summer of 1833, Doctor William Fraser Tolmie, the first white man to approach the mountain, on August 27, "Obtained Mr. Herron's consent to making a botanizing excursion to Mt. Rainier, for which he has allowed 10 days."

It was my misfortune for many years, and I suspect that others have had the same trouble, that I failed to "humanize" history. Those strange beings of the past, stalked the dead leaves of a book, without vitality, human feeling, or frailties. What a victory when these deadly monotonous automatons came suddenly to life! Then history became real. These pioneers of the "Big He" (another translation of Takhoma by Hazard Stevens), were real men, and we should sense their personalities.

Doctor William Fraser Tolmie was a graduate of the "great medical University of Edinburgh" when he came to the United States. He was a man of real scientific attainments, versatile, with deep interests in many subjects beyond the scope of his immediate profession. Doctor Tolmie was a full-fledged medical officer in the Hudson's Bay Company, only twenty-one years of age, when he obtained permission to "Botanize" Mount Rainier. He was a strong Scot, mature beyond his years, as his early graduation at the University of Edinburgh will bear evidence. He was both kindly and stern. Before starting the trip, he: "Told the Indians I am going to Mt. Rainier to gather herbs of which to make medicine, part of which is to be sent to Britain and part retained

in case intermittent fever should visit us when I will prescribe for the Indians."

A few random quotations will give the flavor of the trek to the mountain:

"Slept ill last night, and as I dozed in the morning was aroused by a stroke across the thigh from a large decayed branch which fell from the pine overshadowing us. A drizzling rain fell during most of the night. Got up at dawn, and finding thigh stiff and painful thought a stop put to the journey, but after moving about it felt easier.

* * *

"Find myself very inferior to my companions in the power of enduring fatigue. Their pace is a smart trot that soon obliges me to rest.

* * *

"My companions are all snoozing. Shall presently arouse them and hold a council of war.

* * *

"Passed a very uncomfortable night in our troglodytic mansion.

* * *

"Propose tomorrow to ascend one of the snowy peaks above.*

* * *

"Lay shivering all night and roused my swarthy companions twice to rekindle the fire.

* * *

"At sunrise, accompanied by Quilliliash, went to the summit (Mount Tolmie) and found the tempr. of the air 33 deg.

* * *

"Mt. Rainier appeared surpassingly splendid and magnificent; * * *.

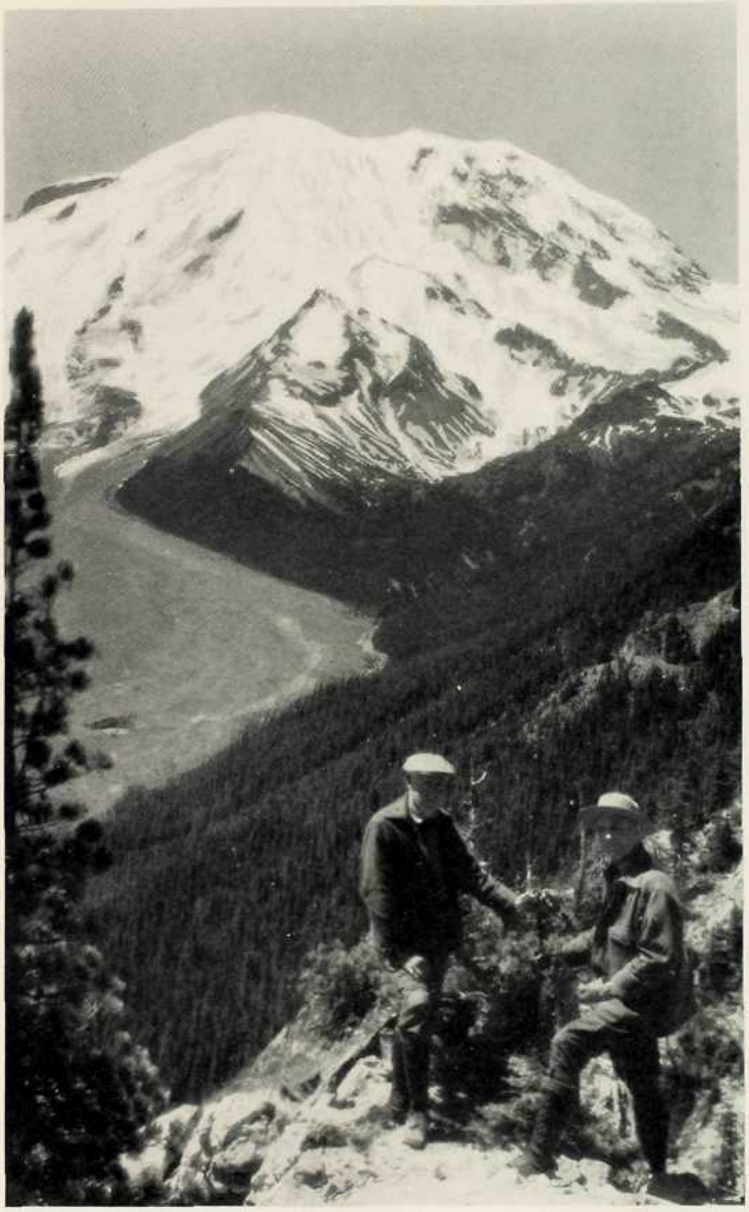
* * *

"Sept. 5. Nusqually. Reached Tekatat camp in the forenoon and regaled on broiled elk and shallon. Pushed on ahead with Lachalet and Quilliliash, and arrived here in the evening, where all is well."

* * *

Doctor Tolmie, reliable Scot, had used nine days only of the ten granted him. While he did not know it, he had spent the first vacation in the Mount Rainier National Park country, a custom

*Doctor Tolmie did climb the peak. It is now named Tolmie Peak.



Asahel Curtis

Left, the late Stephen T. Mather, Director of National Parks, 1917 to 1929; right, Major O. A. Tomlinson, Superintendent of Mount Rainier National Park. This view, from Sunrise Point, Yakima Park, was taken during Mr. Mather's last trip to the West.

later to be followed by millions.* He rounded out a successful career, Chief Factor 1856, also a member of the "Board" of the Hudson's Bay Company. He retired in 1860 and lived until 1888.

In 1841 Charles Wilkes, commander of the United States Exploring Expedition, 1838-1842, sent Lieutenant Robert E. Johnson across the Naches Pass, in the first recorded trip through the Cascades. He explored the north and east section near what is now the Mount Rainier National Park. Two quotations from the Johnson report will tell something of things seen and of difficulties encountered:

"The route lay, for several days, through forests of spruce, and some of the trees that had fallen measured 265 feet in length. One of these at a height of ten feet above the roots, measured 35 feet in circumference, and at the end which had been broken off in its fall, it was found to be 18 inches in diameter, which would make the tree little short of 300 feet when it was growing.

* * *

"These were not the only difficulties they had to encounter: the path was to be cut for miles through thickets of brushwood and fallen timber; steep precipices were to be ascended, with slippery sides and entangled with roots of every variety of shape and size, in which the horses' legs would become entangled, and before reaching the top be precipitated, loads and all to the bottom. The horses would at times become jammed with their packs between trees. * * * In some cases, after succeeding in getting to the top of a hill thirty or forty feet high, they would become exhausted and fall over backwards, making two or three somersets, until they reached the bottom when their loads were again to be arranged.

* * *

"* * * one of them fell upwards of one hundred feet; yet in consequence of his fall having been repeatedly broken by the shrubs and trees, he reached the bottom without injury to himself, but with the loss of his load, consisting of their camp

*On August 2, 1933, the new Northwest, "Mowich" entrance to the Mount Rainier National Park will be dedicated. The ceremony will be a Centennial Celebration of the White Man's first visit to the Mountain. The son of Dr. Tolmie, a most worthy son of the first visitor, who is now Premier of British Columbia, Canada, will be the guest of honor. Much of the pioneer trail followed by the father in 1833 will be found by the son, in 1933, unspoiled by the civilization that has come to the Pacific Northwest. It makes one realize, more than anything else, how much we owe to our policy of national park development, for another hundred years will find these trails as virgin as in the discovery year of 1833.

utensils & etc., which were swept off by the rapid current of the river."

* * *

This was real pioneering. Of course, other white men had been in and around Naches Pass. The guides of the Johnson expedition had been there before. They were Pierre Charles and Peter Brecier, a young relative of Simon Plamondon of the Hudson's Bay Company and of the Cowlitz Valley. But Lieutenant Johnson left the first authentic records of crossing the Cascades at Naches Pass. The expedition was successful, and Naches Pass was afterward used as a popular entry to the Puget Sound country. Just last year, 1931, the east side of Mount Rainier saw the opening of Sunrise Camp with splendid accommodation for the general public. The camp is located not far from Sunrise Point in Yakima Park. The approach to it is by a modern "Boston Hooihut" (white man's road), the new Naches Highway, in the White River district.

Congress provided a separate bureau, under the Secretary of the Interior, for the administration of national parks, on August 25, 1916. On April 17, 1917, this bureau was made effective by the necessary appropriations. Secretary Franklin K. Lane requested Stephen T. Mather, his assistant secretary, to become the first Director of the United States National Park Service. Mr. Mather accepted the appointment and acted as Director until illness forced him to retire from active work in January 1929. It was during the regime of Stephen T. Mather that the national parks were welded into a great unit of service to the American people. His wisdom and his enthusiasm were irresistible, and under his inspired leadership the yearly park attendance expanded into the millions.

On March 22, 1924, President William Wallace Campbell, of the University of California, conferred upon Stephen T. Mather the honorary degree of Doctor of Laws. His words of salutation on that occasion tell the whole story of what Mr. Mather has done for us through National Park Service:

"Stephen Tyng Mather: Mountaineer and statesman, lover of nature and of his fellow men; with a generous and far-seeing wisdom he has made accessible for a multitude of Americans their great heritage of snow-capped mountains, of glaciers and

streams and falls, of stately forests and quiet meadows."

Sixty miles of the new Naches Highway has now become the *Mather Memorial Parkway*. It comprises the entire highway from the western boundary to the eastern boundary of the Rainier National Forest, and a half-mile on each side of the highway proper. This will save the forests and will conserve nature in all her virgin beauty for sixty square miles, through the forest. The Mather Memorial Parkway includes the eastern entrance to Mount Rainier National Park at Chinook Pass.

On July 2, 1932, a program was carried through at Chinook Pass under the director of Asahel Curtis, Chairman of the Rainier National Park Advisory Board. Its crowning event was the unveiling by Governor Hartley and Doctor Edmond S. Meany of a beautiful tablet dedicating the Mather Memorial Parkway.

The plaque bears this inscription:

"STEPHEN TYNG MATHER
"July 4, 1867 *January* 22, 1930
"He Laid The Foundation Of The National Park Service, Defining And Establishing The Policies Under Which Its Areas Shall Be Developed And Conserved Unimpaired For Future Generations. There Will Never Come An End To The Good That He Has Done."

Chinook Pass is twenty miles south of historic Naches Pass and is part of the new country observed by Lieutenant Johnson in 1841. Soon after the Johnson expedition through Naches Pass, a new chapter in the life history of Mount Rainier was begun. The first attempts were made to climb the mountain.

CHAPTER TWO

Early Summit Climbing

COLONEL BENJAMIN FRANKLIN SHAW was a mighty man of valor. Well over six feet tall, six feet three to be exact, his hair a fighting red, he was called a "Flame" in battles of the Indian wars of the eighteen-fifties.

You will recall that, in July 1854, Colonel Shaw with Henry D. Cock climbed Mount Olympus. True, they left no record box upon the peak—such were not the customs of those days—and they could have had no time or no inclination to ferret out the high point, West Peak, from that maze of upthrusts. L. A. Nelson and his party did that in 1907, after days of scouting. But it is certain that Colonel Shaw did climb one of the many peaks of Mount Olympus, and the glory of that pioneering is justly his.

Now comes the possibility that another landmark in the history of western mountaineering should be recorded to the prowess of the doughty Colonel. Olympus in July and Rainier in August! Would that not be the acme of epochal effort from one man in the far-away days of 1854?

The records regarding Colonel Shaw on Mount Rainier, should they ever be verified by conclusive evidence, would not be those of a "First Ascent of Mount Rainier" but rather of a "First Attempted Ascent." But that would be glory enough! At present, Lieutenant A. V. Kautz is credited, 1857, with this "First Attempt." But the evidence now offered regarding Colonel Shaw is sufficient, and its source is reliable enough, to be included in this volume.

Both Colonel Shaw and Lieutenant Kautz, as is seemly with men of great deeds, were honest to exactness. Neither claimed to have reached the highest point, the summit of Mount Rainier. The account of the Kautz climb, written by Lieutenant Kautz himself, is so complete in detail that it has been possible to reconstruct his partial ascent and to establish the exact height where he stopped as 12,000 feet altitude.

George H. Himes, a well-known and credited authority on events of pioneer days in the Pacific Northwest, gives the following statement:

> "In this connection it is proper to state that in a recent interview with Colonel Shaw, already mentioned in this issue of Steel Points (record on Olympus), I learned that he with Sidney S. Ford and a man named Bailey, made the ascent of Mount Rainier in August, 1854. While Colonel Shaw does not claim to have been on the highest point, he does say that no other point seemed higher than the one whereon his party stood."*

Hope is justified that more detailed evidence will come to light. Colonel Shaw knew this country and so did Sidney S. Ford of Ford Prairie. Those who know most about both men, say that they were capable physically, mentally, and temperamentally, of performing "Prodigies of Valor." We hope that more will be found out about "a man named Bailey." These three men may have been near the summit of Mount Rainier in August, 1854. Possibilities of proving this fact justify faithful research.

The Kautz climb of 1857 is a fact of complete record. Until proof otherwise has appeared, Lieutenant August Valentine Kautz will be accepted as the man who first climbed high upon the main dome of Mount Rainier.

In 1921, O. B. Sperlin, Stella Shahan, Wallace Burr, and I, reconstructed the Kautz climb. Before then it was supposed that Lieutenant Kautz had reached the vicinity of Success Peak at nearly 14,000 feet elevation. We discovered that he was forced back by night and by heavy winds on a secondary summit field at not more than 12,100 feet elevation. The reconstruction of this climb from Kautz's own written records, will be detailed by successive steps.

On July 13, 1857, the fifth day of his trip, Kautz wrote as follows:

> "We followed the main stream (Nisqually River), which very soon turned in toward the mountain, the valley growing narrower, the torrent more and more rapid * * *
>
> * * *
>
> "* * * just where the glacier (Nisqually) terminated the immense vein of granite that was visible on both sides seemed

*Steel Points, July, 1907, Published Quarterly by William Gladstone Steele, Portland, Oregon.

to form a narrow throat to the great ravine * * *. We made our camp under a pine of great foliage, whose limbs at the outer end drooped near the ground."

The campsite of Kautz at the 1857 end of the Nisqually Glacier is 725 feet below Glacier Bridge of the National Park road to Paradise Valley. Since 1857, the Nisqually Glacier has receded from that point to a present position 2,106 feet above Glacier Bridge. The recession has averaged 37.7+ feet a year for seventy-five years.

July 14, 1857. Sixth Day. Kautz left camp at the end of the Glacier, climbed the face, and followed the floor of the glacier through a "drizzling rain." He reached the crevassed section and "resolved to find a camp." He identifies his climbing camp, without a possibility of error, in these words:

"But getting off the glacier was no easy task. We found that the face of the lateral moraine was almost perpendicular, and composed of loose stones, sand, and gravel, furnishing a very uncertain foothold, besides being about fifty feet high. Wah-pow-e-ty and I finally succeeded in getting up, and with the aid of the rope we assisted our companions to do the same. When we reached the top we had to go down-hill again to reach the mountain side. Here a few stunted pines furnished us fuel and shelter, and we rested for the remainder of the day. I explored a little in the evening by ascending the ridge from the glacier, and discovered that it would be much the best route to pursue in ascending to the summit."

We found this spot in 1921. It is unchanged in seventy-five years, and cannot be mistaken for any other, today. The elevation is approximately 6,000 feet. The moraine is formed from debris swept from great cliffs on the west side of the glacier. There is no moraine with "stones, sand, and gravel" beyond this point. Here, also, are the last "few stunted pines" on the west side of the Nisqually Glacier. "Down-hill again to reach the mountain side" is obvious. The moraine there, swept off the cliff end by the glacier, is piled as evenly as a railroad "fill" beyond a "cut." Kautz merely crossed the "fill" at the side of the glacier, climbing up on one side and dropping down on the other to the "mountain side." Lastly, one must today "ascend the ridge from the glacier," as Kautz did, to scout the summit route up the Wapowety Cleaver.

July 15, 1857. Seventh Day. Kautz began his climb after eight o'clock in the morning and stopped after six in the evening, ten hours:

"It was after six o'clock, the air was very cold, and the wind blew fiercely, so that in a second my hat which it carried away was far beyond recovery."

* * *

"* * * we passed over in three hours, coming down, what required ten in going up."

The climbing speed of the party is established as slow by three things:

1. There were five in the climbing party. They were not in good climbing condition through exposure and undernourishment:

   "Tired, hungry, dirty—clothes all in rags—the effects of our struggles with the brush—we were not the least happy;"

2. Climbing conditions were against speedy progress:

   "The travel was very difficult;the surface of the snow was porous in some places, and at each step we sunk to our knees."

3. The ratio of ascending time to descending time shows slow climbing by the Kautz party. In fast climbing the time ratio is 2 to 1, two hours up to one down. The Kautz ratio was 3 1/3 to 1, ten hours up and three down.

Given the conditions faced by the Kautz party, the climbing speed of 600 feet elevation an hour, from 6,000 feet altitude to 12,000 feet, checks absolutely with probabilities. But most convincing evidence of all as to the elevation attained by Lieutenant Kautz is found in his own description of the "crest":

"Between four and five o'clock we reached a very difficult point. It proved to be the crest of the mountain, where the comparatively smooth surface was much broken up, and inaccessible pinnacles of ice and deep crevasses interrupted our progress.

* * *

"* * * there were points higher yet * * *.

* * *

"From what I saw I should say the mountain top was a ridge perhaps two miles in length * * *."

This is a complete identification of the Ice Falls or Cliffs of the Kautz Glacier, between 11,000 feet elevation and 12,000 feet. Above this there are no "inaccessible pinnacles of ice," merely an easy snow climb from the secondary summit snowfield to the upper one. At the 12,000-foot level, above the ice cliffs, there are "points higher yet" and the top looks like a "Ridge perhaps two miles in length." Above 12,000 the top does not look like that at all.

Kautz did a wonderful piece of exploring that day. He was held back by his party:

> "Carroll and the Indian gave out early in the afternoon, and returned to camp. The doctor began to lag behind * * * Dogue * * * he would say 'I guess, Lieutenant, we petter go pack'."

The climb started too late in the morning. Kautz says so:

> "We had, however, demonstrated the feasibility of making the ascent. Had we started at dawn of day we should have had plenty of time for the journey."

Kautz is right. He was a rugged climber. Had he started at 4 a.m., alone, he could have climbed 8,408 feet of elevation to the summit, under bad snow conditions, upon a strange major mountain, and have gotten safely back to camp. As it was, handicapped by time, weather, and companions, he performed his "Prodigy of valor," by reaching 12,100 feet elevation upon the secondary summit field of Mount Rainier.

O. B. Sperlin, vice-president of the Washington State Historical Society, was with me in 1921 on the reconstruction of the Kautz climb, and checked every detail carefully with the Kautz written records.

In 1924 I conducted the "Completion of the Kautz Climb," a first ascent with a lucky thirteen party. With me was Herbert C. Fish, historian, who checked upon our former check, and arrived at the same conclusions.

Every one interested in the Kautz expedition should read the Kautz article in Professor Meany's book of Mount Rainier. (Mount Rainier. A Record of Explorations, by Edmond S. Meany. The Macmillan Company.) Although the first complete ascent by the Kautz way was a slow one, beginning in 1857 and ending in 1924, the ones that follow will be most cheerfully accomplished. Each, in turn, will be a tribute to the memory of

a brave explorer, a forceful leader, a true man, August Valentine Kautz.

In 1870, Hazard Stevens and P. B. Van Trump made the "First Successful Ascent" of Mount Rainier. Both were uncommon men as was their Indian guide, Sluiskin, who stayed below, in camp at 6,000 feet, while they climbed. All three should be introduced.

Hazard Stevens was, physically, the "Little Giant" type of man. No one could have lived more actively. Before the age of thirteen he came west from Minneapolis with his father, Isaac Stevens, the first governor of Washington Territory. They were on the original Pacific Railroad Survey. Once his father trusted him to bring a tribe of Indians from a wrong treaty ground to the right one. It was a hair-trigger emergency and Isaac Stevens would trust no one else. Thirty-six hours later, on horseback, without having stopped for sleep or rest, the boy arrived on time with the Indians in tow. In 1854-1855, young Hazard Stevens, then a full thirteen, accompanied his father on treaty-making expeditions and helped interpret. (Our Col. Benjamin Franklin Shaw was the main interpreter.) At twenty-three he was a brigadier general of volunteers, the next to the youngest general in the Civil War. When he climbed the mountain in 1870 he was surveyor-general of Washington, twenty-eight years of age, one of the most rugged outdoors men in the West.

P. B. Van Trump, the other climber, was a stalwart pioneer. He climbed the mountain by various routes, after his first ascent, until he had achieved a graceful old age. For many years he was a Park Ranger in Indian Henry's Hunting Ground where he was a most gracious and attractive host to mountain visitors. Stevens and Van Trump remained close friends throughout life, and they shared many honors in the bestowal of their names upon features of the mountain they had both loved and had pioneered together.

Sluiskin, the Indian, was worthy of the company he was chosen to guide. Both white men were hardened to outdoor life, and early in the expedition won Sluiskin's approval and loyal friendship. Edward T. Coleman, who had climbed Mount Baker two years before, in 1868, was not so fortunate. He had taken on the folkways of European alpinists. He was a stickler for English

methods and for a multiplicity of mountain-climbing gear. The Indian believed in a practical minimum. The "folkways" of Coleman offended the "mores" of the Indian and caused, more than anything else, Coleman's failure to complete the climb. Sluiskin approved the Packwood type—Packwood in preparing to guide a surveying party across the Cascades, demanded a $2.50 advance on his wages, and purchased his whole outfit, a "jackknife and a plug of tobacco." Stevens and Van Trump were like Packwood, and Sluiskin designated them, promptly, "Skookum."

Both Stevens and Van Trump approved Sluiskin, his tall slenderness, his "fierce and martial" appearance, his friendly dignity, his rare sense of humor. They even understood and tolerated his attempts to guide them obliquitously, that he might keep them away from terrain that was virgin territory to white men. They knew that Indians, like other people, want some privacy and that they keep new country undefiled by white men as long as possible.

So it happened that Sluiskin, in leaving Bear Prairie, just below what is now Longmire, led up Eagle Peak to the backbone of the Tatoosh Range instead of heading in directly up the Nisqually River toward the mountain. He climbed Eagle Peak, packs and all, led two miles along the range to a "grassy hollow," and made camp. Coleman, separated from the party upon the steeps of Eagle Peak, returned to camp at Bear Prairie and stayed there until the others arrived from their successful climb. At Eagle Peak, Sluiskin, sent back to help Coleman, did not drive himself to any super-human effort. He reported that Coleman had thrown away his pack and was returning to main camp.

Intentionally or not, Sluiskin was wrong. Coleman had not given up. His five-year attack on Mount Baker proves that he was not built that way. He told afterward what had happened. In attempting to follow, he had reached a precipitous place on Eagle Peak where he could go neither up nor down with the extra burden of his huge pack. He had dropped his pack through sheer necessity. It had rolled clear off the mountain and he had been unable to find it. Minus his supplies, he had gone back to main camp.

His indomitable will was still working. He had found some cricketer's spikes and had decided to climb alone. When Stevens

and Van Trump returned from the summit, Coleman already had placed two caches of food on Eagle Peak and was ready to go. He welcomed the successful climbers without reproaches for being left behind, rather with a fine spirit of congratulatory rejoicing in their success.

Had Coleman known it, he could have short-cut the Nisqually Glacier, found the Kautz route, or even the Gibraltar route, and have beaten the others to the top by a full day. But he was the conventional, plodding type of climber, not the kind to cut loose from tradition and do the unexpected.

It is by a mere degree of initiative or of insight that some men have lost and others have won victories in exploration. Edmund T. Coleman has his own monumental victory—Mount Baker.

It is amusing to follow what Sluiskin did to Stevens and Van Trump the next day. He waltzed them up and down, in and out of the Tatoosh Range for seventeen hard hours, and at that made only Mazama Ridge. If Sluiskin had had his way, they probably would be angling around up there yet, for Stevens finally forced Sluiskin to lead from the saddle between Pinnacle Peak and Castle Peak down to the stream draining Reflection Lake. They camped that night on Mazama Ridge, two miles below Sluiskin Falls. All three men were fast on trails and could have made that distance, from well past Eagle Peak to the Reflection Lake vicinity, in a maximum of four hours instead of seventeen.

It was at this camp, just above Reflection Lake, not at the Sluiskin Falls camp, where Sluiskin gave his eloquent speech against mountain climbing, and indicated his second reason for making a labyrinth out of the simple Tatoosh approach. The first, naturally, was that white men should be kept in proper subjection regarding new country; the second was that Sluiskin was actually afraid of the mountain, and, still worse, was truly concerned about what the mountain would do to his new friends.

His warning speech, delivered at this camp "in Chinook jargon accompanied by natural but effective gestures,"* was a classic. At the close of the speech Sluiskin demanded a "Paper" to protect himself from blame should the two white men be so

*Sluiskin's entire speech is given as translated by Hazard Stevens, pp. 133-134, in "Mount Rainier" by Edmond S. Meany.

boneheaded as to fool around the top of that mountain. He intended to file the document at Olympia, the capitol, to prove his innocence.

Stevens gives an effective picture of the night in camp after Sluiskin's dire message:

> "Sluiskin's manner during this harangue was earnest in the extreme, and he was undoubtedly sincere in his forebodings. After we had retired to rest, he kept up a most dismal chant, or dirge, until late in the night. The dim, white, spectral mass towering so near, the roar of the torrents below us, and the occasional thunder of avalanches, several of which fell during the night, added to the weird effect of Sluiskin's song."

The second day from Bear Prairie, Stevens and Van Trump moved two miles up Mazama Ridge and made their last, their climbing camp, at Sluiskin Falls. Two things mark the site of this camp. The falls beside it have been named Sluiskin after the Indian. A memorial seat has been erected upon the spot where the camp was made.

On August 17, 1918, at the forty-eighth anniversary celebration of the ascent, only two months before his death, Hazard Stevens pointed out the spot to Edmond S. Meany. A rock cairn was erected to record the location. Afterward The Mountaineers and The Mazamas erected the memorial seat. On September 22, 1921, Edmond S. Meany, President of The Mountaineers, dedicated the memorial to the public and presented it to the United States Government. W. H. Peters, Superintendent of the Mount Rainier National Park, accepted the seat officially. Since then it has been maintained by the Park and cherished by all who have paused in passing.

After making camp at Sluiskin Falls, Stevens and Van Trump took four hours and scouted up to the foot of the Cowlitz Cleaver, altitude 10,062 feet, to what is now Camp Muir. They saw what seemed to be a possible route for the next day's climb and returned to camp at Sluiskin Falls.

On August 17, 1870, came the final climb. At six a.m., Stevens and Van Trump started, taking with them the bare necessities for a round-trip of a day. They took an "Alpine staff," as big as a pike-pole, creepers, rope, iceax, inscribed brass plate, flags, canteen, gloves, green goggles, and luncheon. Slu-

iskin, the prophetic and gloomy image of doom, stayed behind in camp.

While the Gibraltar summit route is not difficult—it is not safe, for there is unavoidable danger—it doesn't look easy. It looks as though you are climbing right into the face of destruction. We may pay tribute to the courage if not to the discretion of the two first climbers. From below it seems that they had picked the worst possible path up the mountain, and rightly so, for, today, the Gibraltar Route is the most dangerous used route up Mount Rainier. Mountain guides do not call a route dangerous where all danger can be avoided by knowledge and skill. The Gibraltar Route approaches today, and it always has approached, the borderline of "Unjustifiable Risk." The trail beneath Gibraltar Rock is bombarded by falling rocks while in the Chutes at the end of Gibraltar, the rocks, ice, and snow hurtle and rebound down an icy trough.

It may be that, some day, the Gibraltar Route will be closed to the public. If so, a safe one, the Kautz Route, is available to take its place.

Stevens and Van Trump left Sluiskin Falls, elevation 5,900 feet, and were at Camp Muir, 10,062 feet, in three hours. They climbed the Cowlitz Cleaver past the Beehive to Camp Misery without once losing the route, something that cannot be said for all climbers today, when the route is so well known. At the Chutes, the snow-trench where the summit névé connects with the back of Gibraltar Rock, some steps were cut with the iceax, and then the same snow pockets and pyramids that we find so safe today were encountered.

From Camp Comfort, elevation 12,600 feet, at the top of Gibraltar Rock, these first climbers angled far left, avoiding the straight, steep climb at the summit that we use today, and arrived at Peak Success, elevation 14,150 feet. It was then five p.m., eleven hours from Sluiskin Falls, too late to descend the mountain that night. The intrepid climbers saw that they were doomed to spend the night on the summit. The wind was a frigid gale, and survival through the night a very present problem.

Something must be done about it, so a decision was made to visit the higher middle peak, a mile away. The small, two hundred-yard north crater was discovered and entered. Van Trump

smelled sulphur, and then both found for the first time Rainier's heated apartments, the steam caves of Crater Peak.

A dozen times since, men have described nights spent in the steam caves of Crater Peak on Mount Rainier. Not even literary license has caused any material deviation from the original tale of Stevens and Van Trump. They descended forty feet on the thirty-degree slope of the inner crater floor, under a roof of snow. They built a wall of rocks around a strong steam jet. They ate luncheon and then turned in, or rather turned around for the night. When one side or one end of the body froze up, they turned it around to the steam jet, where it was thawed out. Two sentences written by Stevens tell the whole story; that was, and that ever will be:

> "The wind outside roared and whistled, but it did not much affect us, secure within our cavern, except when an occasional gust came down perpendicularly. However, we passed a most miserable night, freezing on one side, and in a hot steam-sulphur-bath on the other."

Dawn came with one of Rainier's typical cloud-caps. Looking at it from the Puget Sound, it appears to be a gentle mist hovering over and enveloping the mountain top. Up there it is a whishing gale of at least forty miles an hour, driving horizontal needles of snow designed particularly to slive a cheek or, temporarily, to blind an eye.

But in mountain memories, past pain is present pleasure, and nothing has ever happened that has not contributed its thrill to a gala day!

At nine o'clock the sky began to vouchsafe glimpses of blue. Stevens and Van Trump, men of wisdom, did not short-cut to Gibraltar. They retraced their climbing route and reached Camp Muir by way of Peak Success, Camp Comfort (top of Gibraltar Rock), the Chutes, talus of Gibraltar, Camp Misery, and Cowlitz Cleaver at one-thirty p.m., in four and one-half hours.

There was no danger from Camp Muir down, and so, inevitably, came the accident!

Van Trump slid forty feet out of control, hit a rock pile, bounded several feet in the air, and fully recovered after two months had elapsed.

He dragged himself into camp, aided by his companion, and

there had his mind distracted from his hurts by the actions of Sluiskin.

Being a thoughtful person, like Sluiskin, you can understand his dilemma. He had, with his own keen eyes, seen the bodies of his friends disappear into nothing in the dread maw of the mountain. Now their ghosts had returned to haunt him. Perhaps he had been neither explicit nor forceful in his warnings. Perhaps, despite the "Paper," he was to blame.

It was two full days before Sluiskin was again entirely comfortable in the presence of his white companions, who claimed that they had accomplished the impossible. No less skeptical was the "old Puget Sounder" who, for years afterward would growl, "They say they went on top of Mount Rainier, but I'd like to see them prove it." Sluiskin's tribute to Stevens and Van Trump is now the universal verdict:

"Skookum Tillicum! Skookum Tumtum!" From such are recruited the ranks of:

"Strong men! Brave hearts!"

CHAPTER THREE

Encircling The Mountain

IT IS TWENTY MILES around Mount Rainier, at an altitude of 8,000 feet, but it would be impossible to encircle the great dome at this height. At 8,000 feet elevation, approximately, is the arena of greatest precipitation of rain and snow. Only six of Rainier's twenty-eight glaciers are summit born. Even the six that originate on top receive their greater bulk between the levels of 8,000 and 10,000 feet. Most of the other twenty-two, some of them among the mountain's largest, originate near that exalted 8,000-foot circle. Many cirques, digging cruelly back into the mountain mass, are found near the 8,000-foot level. This is, then, one of the magic circles of the mountain. But it is one of the most cruel, most barren, and least visited horizontals of the mountain's planes.

It is a glorious fifty miles around the mountain at 5,000 feet. Miles wide and fifty miles long, a girdle of mountain parks is adorned with flowers and softened by myriad couches of heather. It is the zone of gentleness, a hostess zone awaiting unlimited millions of mountain visitors. The procession started in 1915. Before then, a few hardened individuals, driven by super-strength or excess zeal, had managed to rough it around the park circle. They were looked upon with awe. Now, less than twenty years later, the one who has not accomplished this circle of enchantment is regarded with degrees of pity or of scorn, commensurate with the character of the one who tells of the magnitude of the deprivation. In other words, one is told that if he has not made the park circle of Mount Rainier, he hasn't seen anything and hasn't been anywhere!

The loyalty to Rainier's park region is not limited to one type of man. The emotionalists have this loyalty, and the intellectuals—even the scientists—feel deeply the charm of these gentle lands. John Muir declared the flowery miles of Rainier the most priceless of any of our western mountain gardens. He climbed to the summit in 1888. He selected the half-way camp of the Gib-

raltar Route, which has been named Camp Muir.

In 1870, just after the first ascent by Stevens and Van Trump, S. F. Emmons with A. D. Wilson made the second ascent. Emmons is honored and accepted as a world authority. Exceedingly modest and reserved by nature, he allowed his enthusiasm to break through in ardent appreciation of the mountain in his reports. Later Rainier's largest glacier, the Emmons, received his name.

In 1881-1883 Bailey Willis, afterward acclaimed a leader in his field of geology, explored the northern slopes. His reports are prose-poetry. Great Willis Wall was named after him to fix, forever, his name upon the mountain.

In 1896, the mountain was visited by Professor Israel Cook Russell, world authority in geology. He climbed by the north side, descended by Gibraltar, and left records that were published and fully illustrated. The Mountaineers, in 1909, named Russell Cliff, a great crest near the summit, overlooking the Winthrop and the Emmons Glaciers, in honor of Professor Russell.

The Winthrop Glacier, under Russell Cliff, records the visit to the mountain region in 1853, of Theodore Winthrop, descendent of John Winthrop, and a man of letters in his own right. His book, "The Canoe and The Saddle," 1862, is one of the most literary appreciations of the West ever written.

In 1897, Professor Edgar McClure measured the height of the mountain and lost his life in the service. His last words bravely carried a warning of danger to his companions. His monument is McClure Rock, above Paradise Glacier.

These are but a few of the many who have given freely of their time and their talents to the mountain. They explored and mapped and analyzed the grinding glaciers and the rough rocks, while they lived in compassionate nooks and protecting vales of the gracious meadows.

But to return to 1915, the year that brought on the deluge!

In that year The Mountaineers took cooks and commissary, a packtrain, and more than a hundred people, entirely around the mountain. In so doing, they made fourteen camps in twenty-two days, and came through beautifully without accident or injury. They demonstrated the possibilities of the great park

girdle as it never before had been demonstrated.

More than that, the trip was an example in decorous conduct in mountain regions. No forest fires followed them. There could be found behind them no destruction of animals, of flowers, or of trees. They left no unseemly litter. Each camp of the fourteen can be found today by one thing only, a triangular aluminum plate fastened to the trunk of a tree. The last camp marker was inscribed "The Mountaineers, Camp No. 14, Aug. 22, 1914." This was the last of fourteen campsites with an average altitude of 5,005 feet above sea level. In each of the fourteen there was wood, water, verdure, comfort, entertainment, happiness. 105x22=2310. This equation means that twenty-three hundred ten days of human life were lifted away from the sordid or the commonplace into the ideal.

Since 1915, many expeditions have encircled the mountain. The Mountaineers alone have conducted four such undertakings. Some years ago the National Park Service of the Department of the Interior took note of the success of The Mountaineers in this greater use of the mountain meadow belt. The interest developed into a plan of operation that bore fruit. The Park Service now offers the following:

"The Wonderland Trail encircles the mountain. Total travel distance 145 miles. The Wonderland Trail trip if taken in whole, means 12 days of life in saddle and camp, of endless changing panoramas of mountain and glacier, canyon and forest, lakes and rivers, and wild flowers. Comfortable open-air camps, good food, and cozy sleeping bags are supplied. * * *."*

You will remember that the flower-meadow girdle of the mountain is fifty miles, while the "travel distance" is 145 miles. A masterpiece of trail engineering—when we understand the reasons:

That 8,000-foot plane of cirques and glaciers does dire things to the tender 5,000-foot plane of meadows. Twenty-eight glaciers gather mass and momentum. Fourteen of them have torn deep canyons through the meadow areas. Some are box canyons with precipitous walls of thousands of feet. Others develop precipices, waterfalls, and raging torrents. None of these glacial

*Circular of general information regarding the Mount Rainier National Park, issued by U. S. Department of Interior, National Park Service.

streams are safe for fording beyond the knee-depth of a man or the belly of a horse. Once down, a man or a beast is ground resistlessly down stream with the pounding boulders. Many of the canyon walls cannot be scaled.

There is the offer of an alternative. You may climb high, on foot, above these impassable canyons, take to a shoulder of the mountain, or to the broken face of a glacier, and safely pass over, beyond, and down to the next meadow. Or you may take, on foot or upon your horse, a long trail that fades downward, deep into the lower forest levels, and then climbs back into the next realm of the heather. From necessity, born of box canyon, glacier, and milky torrent, has come the one hundred forty-five-mile Wonderland Trail.

From the Wonderland Trail it is possible to make contact and to hold parlance with each feature of the mountain; its physiography and geology, its flora and fauna, its history and legend, its fun and adventure. The narrative side is sadly handicapped by the inadequacy of our language. Many a man who has quaffed the waters of the Hassayampa has strained for hyperbole and has fallen short of the truth.

Despite a severe effort toward inhibition, one's mind returns to the idea of encircling the mountain, as nearly as possible, upon the 8,000-foot circle. It cannot be done.

Let us then follow an imaginary traverse at about 8,000 feet altitude.

Leaving the hotel at Paradise, a trail leads north, up and down, to the Nisqually Glacier at about 6,000 feet elevation. Beyond this, the east lateral moraine of the Nisqually leads comfortably to 7,000 feet. The floor of the glacier rises past ever larger and more intricate crevasses to 8,000 feet.

The glacier has become a frozen inferno. The canyon walls have pinched closer together and have started to curve around a corner. Bottom rock masses have obstructed the flow. The deep ice stream has been tortured, turned aside, twisted, jammed upward, broken over, until there is a confusion of pressures and a multiplicity of compound fractures. At one place there was, a few years ago, a rectangular pit on the surface, one hundred feet wide, three hundred feet long, and seventy feet deep. Near it was a knife-edge of blue ice where one was forced to "coon it acrost"

with fear and trembling inside, and with black depth on both sides.

Straight ahead, looking up the mountain, is the half-cirque where the Nisqually spills off the secondary summit field. At the right is the broken talus slope of Gibraltar Rock, undermined by the glacier, exposed to falling rocks and huge icicles, the danger route of the mountain.

Some years ago Hans Führer, a strong, a resourceful, a cautious Swiss guide, a true man with the heredity of generations of special guide training behind him, was bringing his party off the mountain. They were in the Chutes. There was a dreadful crash and thunder from above. Tons of rock fell out of the Gibraltar Rock.

"Jump to the wall!" ordered Hans.

All jumped to precarious shelter except a thirteen-year-old boy, who did not heed the command in time. An athlete, one who had just received his university diploma, jumped out, hurled the boy to safety, and gave his life instead. He was struck by the rock avalanche and received a compound fracture of the skull. He was carried out after almost superhuman work by Hans Führer and other helpers. This was the first accident in Führer's years of successful guiding, and no criticism of leadership was involved. The victim received prompt medical attention, but died two days later, without regaining consciousness. No individual was to blame for the tragedy—it was the toll exacted by the Gibraltar Route.

In 1929 a roped party of climbers, most of them guides upon the early July scouting ascent, slipped out of control on the icy slopes above Gibraltar. They gathered momentum for many yards and plunged into a crevasse. Four were injured and two were killed. Park Ranger Charles B. Browne, climbing up from Camp Muir, saved one life and later retrieved the bodies of those who had died. He received on July 24, 1929, from Secretary Wilbur, the first citation for heroism ever issued by the Department of the Interior. These are but two tragedies of the Gibraltar Route, and others could be cited. In all fairness we should add that hundreds of people have made the ascent on this route without accident, led by trained guides.

Leaving the Nisqually, our traverse leads W.SW. over the

Mabel Furry

Upper right of the crevasse is dangerous snow, undermined.

Wilson Glacier, a large secondary glacier leading into the Nisqually. It is named after A. D. Wilson who, late in 1870, made the "second ascent" with Emmons.

Just above the Wilson Glacier, up the west side of the Nisqually, is another summit route, safer than Gibraltar, but unsuited to use by the general public. There is no safe place upon its steep cliffs and ice falls for a shelter hut, and the climb from Paradise to the top is too severe to be taken without a night's sleep at 10,000 feet elevation.

The first and only ascent by the Nisqually Glacier Route was made on July 2, 1920, by Hans and Henry Führer, Peyton Farrer, Thomas Hermans, and the writer.

Following the 8,000-foot traverse, traveling west, we leave the Wilson Glacier and cross the Wah-pow-e-ty Cleaver, the rock ridge that leads to the summit by the Kautz Route. It is the approach used in 1857 by Kautz, in 1921 during the reconstruction of the Kautz climb, and in 1924, when the first complete ascent by the route was accomplished. Since then many parties have used this route.

At 8,000 feet elevation, 9,000 elevation, and 10,500 elevation, there are solid sites for a shelter cabin. The Kautz Route is absolutely safe for those who have, or follow, knowledge and skill. It is available for use by the general public from Paradise Park. Some day the Kautz Route may take the place of dangerous Gibraltar.

This rock ridge is named after Wah-pow-e-ty, the Indian guide of the Kautz party.

Beyond, west, is the Kautz Glacier, one of the six summit-born ice rivers. It is a glacier of singular slenderness. It is four miles long and only a thousand feet wide. F. E. Matthes says of it that "On the map it presents almost a worm-like appearance, heightened perhaps by its strongly sinuous course."

In 1920 Roger Toll, then Superintendent of the Park, and Harry M. Myers, with Hans and Henry Führer, made a first ascent by the Kautz Glacier Route. At one point this route approaches within a hundred yards of the Kautz Route and the spot where Lieutenant Kautz ended his attempt at the summit. It is a safe route, approached by Van Trump Park, and Van

Trump Glacier, a secondary glacier between Wahpowety Cleaver and Kautz Glacier.

Beyond Kautz Glacier, still going west, is Success Cleaver, leading to Success Peak. This is the great left skyline rock ridge so evident from Paradise Valley. It offers a severe but safe all-rock route to the summit, the only all-rock route on the mountain. It gives a sixteen-hour ascent from a climbing camp at the upper limit of Indian Henry's Hunting Ground. This park, Indian Henry's, is one of the most popular camping regions, isolated from roads, in the entire meadow girdle.

The first ascent over the Success Cleaver was made on July 27, 1905, by John R. Glascock and Ernest Dudley of the Sierra Club of California. These two climbers were super-men. They just ran over from Paradise and climbed the mountain. The next day, for good measure, they made another first ascent, the front face of Pinnacle Peak, in the Tatoosh Range, a daring feat that was duplicated in 1919. Since Glascock and Dudley made the Success Cleaver climb, the route seldom has been used.

On July 15, 1914, three people climbed the Success Cleaver Route, Joe Stampfler, guide, with Margaret Hargrave and Henry T. Dill. This event is outstanding for two reasons: It is the only recorded ascent of the route where the descent was made by the same way; and Margaret Hargrave is the only woman known to have made the summit of Mount Rainier by the Success Cleaver Route. Either of these two factors would make the climb distinctive.

It is a long, monotonous grind, and by the nature of the terrain, the climbing camp is too low upon the mountain, at about 6,000 feet.

Our 8,000-foot traverse now swings north over the Success Cleaver, the rock shoulder of the mountain, and heads directly north, along the highest cirque of the mountain. This is one of the most majestic theatres of mountain entertainment in America. The cirque itself, or rather the series of cirques, forms the heads of six glaciers of the first magnitude. From the distance, this west side of the mountain seems to form one uninterrupted glacier field but, closer up, our traverse is confronted by mighty divisions and features that individualize them.

The South Tahoma Glacier is first, as we traverse north, along

the west face of the mountain. It heads into a mighty buttress of rock below Success Peak. It is fed by direct snowfalls and by wind deposits, not by summit avalanches. Success Cleaver confines it on the south side while on its north is the disconsolate remnant of a once-rugged ridge, a row of torn and worn rock pinnacles.

The Tahoma Glacier is beyond, tearing away the north side of the same remnant cleaver. It lifts to the summit through a gap choked with shattered névé that has cascaded from the summit field.

Lower down, dividing the Tahoma from the South Tahoma, is Glacier Island. Again we quote F. E. Matthes, whose masterly reports to the Government on the "Glaciers of Mount Rainier" are literary science and scientific literature:

> "* * * the two ice streams abruptly part company and flow in wide detours around a cliff-girt, castellated rock mass—Glacier Island. * * *."

P. B. Van Trump, who climbed with Stevens in 1870, pioneered these glaciers. In 1891 and again in 1892, each time with a single companion, he fought his way through the névé cascade at the gap of the Tahoma Glacier and reached the summit field. Lower down he worked upon both the South Tahoma and the Tahoma. At the top he visited Liberty Cap as well as Crater Peak, two of the three named peaks of Rainier's summit. On his first climb with Stevens, Van Trump landed at Success Peak, the third. This gives P. B. Van Trump the outstanding distinction of being the first man to conquer all three peaks of the summit of Mount Rainier.

The Puyallup Glacier is next, to the north. Beyond, the South Mowich Glacier, the Edmunds Glacier between, and the North Mowich Glacier, head into cirques at about 10,000-foot levels. The Puyallup Glacier has a beautiful cirque, the highest, the most perfect cirque on the mountain, at 12,000 feet. F. E. Matthes is again quoted:

> "Encircled by a great vertical wall that cuts into the Liberty Cap platform from the south, it has evidently developed through glacial sapping, from a hollow volcanic origin."

A paradox is defined as "sentiment seemingly opposed to common sense but that yet may be true in fact." This definition

expresses my attempt to climb the mountain by way of the Puyallup Glacier. Everything went wrong and I had as fine a trip as I ever had upon the mountain.

Five of us cut west, below Indian Henry's Hunting Ground, and worked past the Tahoma Glacier to the cleaver between the Tahoma and the Puyallup Glaciers. We gained the rock ridge and camped high up, in the lee of a straight-faced cliff. The wind blew and we were protected. The wind changed and we were not protected. Parts of the cliff fell near us at exciting intervals of the night. The chill of the wind had no intervals. We overslept. We took the right side of the cliffs to connect with the glacier. We were wrong. We came back and took the left side.

Soon we were on mighty St. Andrews Rock, with the marvel of Sunset Amphitheatre lifting before us to the high cirque of the Puyallup. At the left was our possible summit route through a shattered glacial overhang to a spired rock path that led to Liberty Cap. Behind us was too much wasted time. We went no farther.

Just to stand upon St. Andrews Rock and to lift the eyes to the close-up details of that mountain face is over-pay for any time and effort. Someone may climb the mountain that way. It is well worth trying. If you try it, you may fail, as we did, with success. If you win you will never put on afterward a more thrilling performance on any mountain. Do not try to take a group—just take with you a few of the best climbers you know. They will bless you, win or lose, always and ever thereafter.

Both the South and the North Mowich Glacier (Mowich is Chinook "jargon" meaning deer) have lesser cirques under Liberty Cap. They are fed three ways, by snowfall, by wind deposit, and by summit avalanching. The Edmunds is a large, triangular ice field between them.

Spray Park, beyond the North Mowich, is the only park on the mountain that lifts up to the level of our 8,000-foot traverse. It lies, or rather spreads, between 6,000 and 8,000 feet, a large park with many zones, and with everything in it that mountain parks should have. A trail leads down from Spray Park to Mowich Lake. This lake was once named Crater. When it was demonstrated that the lake was not in a crater, but in a blocked

drainage, the name was changed to Mowich. It is an attractive mountain lake for a permanent camp.

There is a possible summit route straight up from Spray Park. L. A. Nelson has been up to 12,000 that way. Dora Keen, who accomplished the first ascent of Mount Blackburn, Alaska, a world-famous alpinist, tried it twice. The first time one of her party of three became ill at 9,500 feet. Two days later a "terrific wind made it unsafe to proceed." That and a cloud cap, the sign of summit storm, caused retreat. Miss Keen left this final word:

> "If the start is at 2 a.m., with wind-proof Alpine lanterns, this interesting first ascent by the northwest side might safely be accomplished in a day."

This route connects, at about 12,000 feet, with the possible route from St. Andrews Rock and the Puyallup Glacier. There is then virgin territory on the northwest shoulder of the mountain.

Our traverse now leaves upper Spray Park for Carbon Glacier, under Willis Wall. Crossing the wide névé of Russell Glacier, named in honor of Professor I. C. Russell, we reach the most wicked, the most destructive, the most awe-inspiring cirque of the mountain, beneath Willis Wall.

Willis Wall, named for Professor Bailey Willis, is the sheer north face of the mountain. At its top is a thin ribbon of white, the edge of the summit snowfield. At its great height this stratum of white seems but a shallow layer, covering the rocky dome. But that névé is a full three hundred feet deep. At times it avalanches over the great wall. In the hot hours of a summer day it avalanches often. The half-ice mass pours down the 3,600-foot vertical cliff for a descent that is minutes long. Before striking the Carbon Glacier below, at its 10,000-foot head, these snow masses are shattered, then pulverized until they float gently down in massy white dust-flakes that billow and gleam like cumulus clouds. In 1909, P. V. Caesar took a photograph of a large avalanche on Willis Wall. Mr. Caesar caught the seemingly suspended clouds from the stupendous breaking away of hundreds of feet horizontally of the three-hundred-foot-deep summit field. One might watch that wall for a lifetime and fail to duplicate the scene. Or it might appear overwhelmingly before him at any moment of a midsummer day. Therein is the fascination of Willis Wall.

The first scientific observers considered that the Carbon Glacier was built up, mostly, by the Willis Wall avalanches. At the same time, they held that the vertical face was eating rapidly back into the heart of the mountain through attrition by the falling masses. It is now established that both contentions were wrong. The bulk of the Carbon Glacier comes from the excessive precipitation in the 8,000-10,000-foot zone, and from catch-basin accumulations swirled in by the shrieking winter gales that belabor that forlorn north cirque. The devouring process that is biting back into Rainier's dome is due to the arrogant attack of the Carbon Glacier itself and to the thawing, freezing, cracking operations in the borderland zone between rock face and Glacier. Mount Rainier, then, is being cut down by foul blows struck just below the belt, along that most vulnerable midsection, the zigzag cirque belt of the 8,000-10,000-foot traverse.

Our route continues from the Carbon Glacier under Willis Wall, east under Russell Cliff. It leads high across Winthrop Glacier to Camp Curtis at 9,000, or Fo'castle Camp at 9,500 feet, on Steamboat Prow. This remnant rock thrust, Steamboat Prow, formerly called the Wedge, is the upper point of the wedge-like rock cleaver that divides the Winthrop from the Emmons Glacier. Both of these camps, Curtis and Fo'castle, are used as climbing camps for the Emmons Glacier route, the northeast route to the summit. There are as yet no shelter cabins there, and those who use them sleep on rocks and pumice. It is interesting to note that Steamboat Prow is almost directly across the summit from the Tahoma Glacier, the last successful route, on our traverse, before the Emmons. The north by west and east half of Mount Rainier has yet to be beaten by mountain climbers.

The northeast side, or Emmons Glacier Route was first used in 1896, July 23-24. Never has any mountain been climbed by a more distinguished company. There were five men in line. Professor Bailey Willis of Stanford University, Professor Israel Cook Russell of Michigan University, George Otis Smith, Director of the United States Geological Survey, accompanied by F. H. Ainsworth and William B. Williams, packers and helpers.

The men of the party spent the night on top in steam caves, on the sloping inner floor of the crater. They selected a cavern sixty feet long, forty feet wide, and twenty feet high. It had arched

doorways leading to other apartments. The heat problem, as in all apartments, mountain top or city, bothered them. Icy drafts of air met the vapor from hot rocks and chilled it to steam. The situation was saved by the "muffled roar of the gale" outside, which, as usual, made the discomforts within the icy cavern seem trivial.

Almost straight south from Steamboat Prow, across the upper Emmons Glacier, is sharp-crested Little Tahoma. Gibraltar Rock and Little Tahoma are the only remnants of the original dome of Greater Mount Rainier before explosion and erosion had cut it down to its present magnitude. It is now, as you know, one of the dozen biggest domes in the world, rising 11,000 feet above its foothills. Incidentally, Mount McKinley is supposed to be the greatest dome in the world, with Mount Logan a close second. Mount Everest is merely a small peak on a high plateau and range, while the dome of Mount Rainier is one of a greater order. If it is that today, what must it have been when Little Tahoma and Gibraltar Rock were just parts of a slope to a summit far above!

Little Tahoma, altitude 11,117 feet, offers an easy but dangerous ascent. Just last year, 1931, a party of Mountaineers were caught in a snow avalanche on the steep Whitman Glacier on Tahoma's north face. A switchback across the snowfield had cut a quarter-mile field loose from the mountain. All were startled, none hurt. Most of the party retraced their steps and attained the summit. In 1919, John D. Meredith lost his life descending Little Tahoma. The climb is not acrobatic but demands caution. Near the needle top the danger is from avalanching scree slopes. In the words of Stella Shahan, the first woman to make the top (1921), "It's easy if you have good luck."

Professor J. B. Flett, afterward park ranger and nature guide, with H. H. Garretson, made the first ascent of Little Tahoma, August 29, 1895. Professor Flett was one of the first and the few men who have traversed the mountain at an approximation of 8,000 feet. Little Tahoma was in the path of his travels.

The summit of Little Tahoma gives a most intimate introduction to the east face of Mount Rainier. It is so close to the big mountain that every detail of crevasse and slope is etched into the picture. Gibraltar Rock, like a giant flatiron, seems to be ironing

out the wrinkles of the crumpled snowfields. This eagles' nest for observers is being visited more often as years pass. Now that its dangers are understood, it has become less dangerous. Like the Emmons summit route, on this same side, it may be made safe by skill and knowledge.

The Ingraham Glacier is next, south of Little Tahoma. The naming of this glacier is another bit of mountain history. On the morning of July 25, 1896, Major Edward Sturgis Ingraham was in "the Camp of the Clouds" in Paradise Park (a group of trees a little above the present Paradise Inn). Two men staggered into camp, after a shivering night in the crater. Both were in their shirt sleeves. One of them was Professor I. C. Russell. Major Ingraham ministered unto them. When a mountain map was issued it contained Ingraham Glacier.

The glacier starts from the east summit and flows into the Cowlitz Glacier, the next one south. Another sharp-toothed remnant ridge divides the Ingraham from the Cowlitz. This ridge, Cathedral Rocks, meets Gibraltar Rock, shutting off the summit névé. Under these meeting rocks is the head of the Cowlitz Glacier, a singularly perfect glacier-ice stream.

In a protected, soft pumice pass, between the Cowlitz Glacier and the extensive Muir snowfields is Camp Muir, altitude 10,062 feet. In 1888 Major Ingraham conducted John Muir to the summit by the Gibraltar Route. At the request of the Major, Muir picked out the climbing campsite, which afterwards was given his name. In 1915 Stephen T. Mather, Director of National Parks, authorized the erection of a stone cabin at Camp Muir. The Mountaineers had urged the project for several years and had contributed the first funds toward it. A snug hut, 8x20x7½ feet high, was completed in 1916 and was used for years afterward. Later, a much larger rock cabin was added, and now there are over-night accommodations for forty people in the two miniature rock strongholds.

A little above Camp Muir is the Cowlitz Cleaver, lifting to Gibraltar Rock. Standing upon the Cleaver you may toss a snowball east to the Cowlitz Glacier, which leads to the Columbia River. Then you may turn west, and toss another to the Nisqually Glacier, which drains to the Puget Sound. Your second missile, whishing out of view to the Nisqually Glacier, will com-

plete your 8,000-foot traverse of the mountain.

Above this embattled zone of 8,000 elevation towers the great central dome of The Mountain. For three hundred sixty degrees of its circumference, beneath icefalls and avalanches, within majestic, devouring cirques, past crumbling cliffs, torn asunder by the relentless, grinding, rending forces of nature's most destructive moods, we have ever turned our eyes upward to Columbia Crest, the highest crown of the snow sentinels of the Cascades. It is our privilege, having lived these stupendous scenes, to hearken with understanding to the inspired words of one of Our Mountain's greatest explorers, Major E. S. Ingraham:

"After long hours of incessant climbing I stood upon Columbia's Crest! A cold wind pierced my tired body to the marrow, but my soul forgot the discomforts of its habitation and surged and expanded in reverence and admiration of the scene around me. At my feet slumber the snows of a century, yielding not to winter's blast nor summer's heat. One law alone they obey —that causes the apple to fall and the planets to keep in their appointed places. Inch by inch they are dragged down the mountain's rock-ribbed sides until changed into the slow-moving glacier. The stunted trees upon the glacier's bank have grown old beckoning it onward. The flowers of a hundred summers have smiled upon it and bid it welcome. Yet it pauses not nor yet hastens. When the snows upon which I now stand will have reached the silver stream far below, our children's children may listen to its murmurings."

CHAPTER FOUR

The Mount Rainier National Park

1899—MARCH 2—ACT OF CONGRESS.

SUCH ARE THE BARE FACTS of the creation of the Mount Rainier National Park. The original rectangle set aside for the Park was approximately eighteen miles square and contained 207,782 acres, three hundred twenty-five square miles. A total of about 34,000 acres of land was added on the south and east boundaries, on January 31, 1931. This land affords a natural boundary on the east, based on topographical conditions. It includes Chinook Pass, which will be the east Park gateway.

Mount Rainier National Park is entirely surrounded by Rainier National Forest. The units of administration are separate, yet there is complete cooperation for the general good. There are many lines of mutual work and the forest protection of each fortifies the other. Both are most gracious hosts to the public.

Behind the Act of Congress selecting Mount Rainier, with all of its environs, and making it the property of the people of the United States forever, there is an ingrained love of the frontier. We have been pioneering, as a people, for many generations. It is now, in 1932, four hundred forty years since Columbus found land in the Western Hemisphere. Three hundred twenty-five years ago we established our first settlement. Ever since that time we have been exploring and settling new frontiers.

All peoples that have learned to record history in books are sure to read and to think. The past becomes part of the environment of the present. We inherit frontier emotions, and through reading and thinking about them, make them our own ambitions and aspirations. Facing a vanishing frontier, we began to think of preserving choice bits of nature unspoiled, for future generations. In the words of the Garibaldi Park Board of British Columbia, we are learning "the wisdom of keeping a little of the loveliness of earth unmarred * * *."

First came National Parks, then National Monuments and Recreational Areas. There are now, in 1932, twenty-three Na-

tional Parks, with an area of over twelve thousand square miles. To these parks, monuments, and areas must be added the National Forests with their immense spreads, for the people of the United States are invited to use these forests as their own as far as seasonal hazards and the observance of outdoor ethics may permit. In the State of Washington alone there are ten National Forests with over eleven million acres. As mentioned elsewhere in this volume, Mount Baker National Forest, just one of the ten, is more than twice the size of the State of Rhode Island.

For these frontier areas, preserved now for all time, there must be policies. What should be these policies? The answer is immediate—the "greatest good for the greatest number."

The question may arise as to why the government selects certain parts of the country for national parks and refuses to so dignify others possessed of almost equal charm. The powers, so far, have used excellent judgment and have established a sound basis for selection. To qualify as a national park, the region must be outstanding of its kind. Several examples will demonstrate the consistency with which this rule has been followed.

Yellowstone—1872—Wyoming.
The Yellowstone National Park was the first one created. The big factor was that it contains more geysers than all of the rest of the world combined.

General Grant—1890—California.
Created to save the General Grant tree, 40.3 feet in diameter.

Mount Rainier—1899—Washington.
Largest single peak glacier system in United States proper. Most wonderful sub-alpine flower fields in America.

Mount McKinley—1917—Alaska.
Highest mountain in the world above its surrounding country. Highest summit in North America.

In each of our twenty-three National Parks there is, then, an outstanding something that sets it apart from and above its kind. All twenty-three belong to you and to everybody.

During the early years, the formative years of the policies of National Park Service, there was a distinct clash of ideas. The queer few who at that time were so unconventional as to climb mountains or to camp out, believed righteously that they alone should enjoy these sacred realms. They resented furiously crowds

and caravans, roads and roisterers. They demanded the silence and the dignity of isolation.

Their opposites, in turn, scorned them. Outlandish to crawl way up there where it was barren, bleak, and dangerous. And ye gods! The men wore colors like women, and the women wore trousers like men. It just wasn't to be done.

But now, in our age of freedom, and tolerance, and health knowledge, these squabbles have ended. The great outdoors areas are big enough for all kinds and conditions of men. There are designated areas that never are to be molested by roads or cabins. They are ever to remain as wilderness. In contrast, those who through extreme age, weakness, the habit of luxury, or sheer inertia, do not cotton to beds of heather with, perhaps, intrusions of sharp root and rock, are offered hotels and cabins and meals de luxe. The division was never one of wealth and position. The most cheerful camp dishwasher that I know, can count his millions. He loves to patch his old dunnage bag, to gather wood for the camp fire, and to seek another elusive soft spot in the heather.

There is a recognition in National Park Service of the limitations of the pocketbook. In all national parks there are free camp grounds, community buildings, and for sale, stocks of the necessities of camp life. Again this is seldom a matter of wealth or of poverty. Many a time and oft, the comparatively poor man will seek the ornate hotel and will associate with those who used to be called, in the old days in Yellowstone Park, the "Frozen Faces." And again, the man who is inured to luxury will find ferocious delight in roughing it like his pioneer ancestors.

Seriously, there should be in our national parks every comfort and convenience and luxury. There are many who are not strong; there are others who are nearing the end of life's trail; there are still others, as human and as emotionally alert to mountain beauty as anyone, who have never learned to go without luxury of service. They are as truly entitled to what physical condition or life habit has decreed necessary as are those who have learned to delight in the salty taste of their own exertion. Our national parks are the common property of all types and conditions of men. No individual, young or old, strong or weak, strenuous or inert, rich or poor, should be denied his heritage of bracing mountain air, or of the intoxicating charm of nature unadorned.

There is a significant statement at the bottom of the cover of the National Park Service booklet of information regarding Mount Rainier National Park: "Open All The Year."

These words take us back many years. In 1912, A. H. Denman, of Tacoma, originated the happy plan of conducting a winter outing to Longmire Springs within the Park. The trip started December 28, 1912, and ended January 1, 1913. This was the beginning of winter sports and winter outings in Mount Rainier National Park.

Mr. Denman did this as a member of The Mountaineers. Three of the important present-day developments of park service, and many other lesser ones, were proposed and originated by The Mountaineers. The three are: 1912, the opening of the Park to winter sports; 1915, the first large party encircling the Mountain by the Wonderland Trail, originating the plan now followed; 1915, the suggestion for shelter buildings at Camp Muir, and the donation of funds for the purpose.

The hardships of those early winter outings in the Park were "taken in stride." It was necessary, at first, to walk the icy, slushy twelve miles from Ashford to Longmire Springs, carrying snowshoes and packs of varied shapes and sizes. Skis had not yet arrived. Commissary and cooks had to be provided by the party. The Mountaineers conducted these winter trips to the Park, without interruption for sixteen years. For more than ten years no other organization seemed interested. Then the National Park Service awoke to the charm of winter, and developments followed rapidly. Now National Park Inn, at Longmire, and Paradise Lodge, at Paradise Valley, are kept open all winter. Winter clothing, toboggans, skis, and snowshoes are included in the "rental of sports service equipment." The highway to Longmire is kept open, and beyond that point as far as seasonally is possible.

Longmire, where the winter sports begin, is historic. In 1883 James Longmire discovered iron, sulphur, and soda springs within a few feet of each other. He made, that year, the first settlement within the present park area. It was maintained for many years as a home, and as a mountain inn, known as the Longmire Springs Hotel.

James Longmire was one of the romantic figures of early Washington pioneer life. He was with the first large wagon train

to approach Puget Sound through Naches Pass, and his lusty strokes with the ax helped to hew a precarious road through the dense forest. He was living at Yelm Prairie, thirty miles east of Olympia, in 1870, when Stevens and Van Trump and Coleman started for the mountain. Longmire opened his home to the visitors and was persuaded to guide them to Bear Prairie. It was he who found Sluiskin and engaged him to lead the Stevens party the rest of the way to the mountain. Stevens says of Longmire:

"He had explored the mountains about Takhoma as thoroughly, perhaps, as any other white man. One of the earliest settlers, quiet, self-reliant, sensible, and kindly, a better counselor than he could not have been found."

There are many winter ski trails from Longmire. Among them are:

6.5 miles—Longmire to Indian Henry's Hunting Ground.
5.5 miles—Longmire, via Rampart Ridge, to Van Trump Park.
3.5 miles—Longmire to Eagle Peak.
5.9 miles—Longmire to Paradise Valley.

The winter trail from Longmire to Paradise Valley is kept open. It must be taken with snowshoes or ski, since the opening of the road to Canyon Rim has reduced its use. In the first four and four-tenths miles you pass the mouth of Paradise River, Carter Falls, Madcap Falls, and arrive at Narada Falls.

Narada in winter is adorned by scrolls and mosaics, draped by veils and curtains of ice and snow. The stream, the Paradise River, is chilled to a small flow, yet its frozen accretions multiply throughout the winter. The sheer drop of the falls is one hundred sixty-eight feet, and in the frozen months it becomes a continuous chute of marvelously congealed decorations.

Above Narada, usually, the dark pines bear burdens of fleecy white. Winds are not often in evidence in the protecting forest above Narada and in the cupped-in lower Paradise Valley. The trail winds through the soft silence of snow-laden trees until it gradually lifts to more distant vistas. There is always, in the last mile, the Great Mountain with its deep wounds of erosion healed by the magic blanket of winter. But it still seems distant, cut off with varying completeness by intervening ridges, while the Tatoosh Range, the Indians' mountains of the "Nourishing Breast,"

stand out in neighborly invitation, with a nearness and completeness of detail that is enchanting.

At other times you will face changed conditions. You may be engulfed in a blinding blizzard of horizontally driven snow, and you may gasp for returning breath when you reach the safe haven of Paradise Lodge. But at the worst, your blizzard will not be a ruthless zero blizzard, demanding a few fingers and toes, or even life. At worst it is a playful blizzard giving the stimulus of an opposition, and the thrill of a victory.

These lower Paradise blizzards are often agencies of adornment rather than of ruthless punishment. One winter's day moist snow was driven into the trees and was frozen there, forming fantastic figures from branch tip to trunk. Nothing from top to root was left uncoated. The next day brought revealing sunshine. The transformed forest glistened and gleamed in radiant reflection. The scene was dazzling yet relieved by myriad creations that were touched with individuality. Professor J. B. Flett exclaimed that it was the most beautiful day he had seen upon the mountain in eighteen years!

Throughout the winter it is possible to drive to Canyon Rim, or even to Narada Falls. Then the trail calls for a mere two miles or less of hiking or of skiing. Even so, the last two miles of the winter trail to Paradise is the part that holds the greatest rewards for your venturesome trek into the more or less frozen silence.

The Park administration is invested in a Park Superintendent who represents the United States Government. He is assisted by a force of rangers, men of merit, worthy of the high calling of public service. Employees of the hotels, camps, and transportation lines are not Government employees. They are responsible, through their management, a concessions company, to the Park Superintendent, who is your immediate representative, in the administration of your property. You will find him vigilant, wise, tolerant, and just. Rules are necessary. Flowers, birds, and animals must be protected. A code of collective use must prevail.

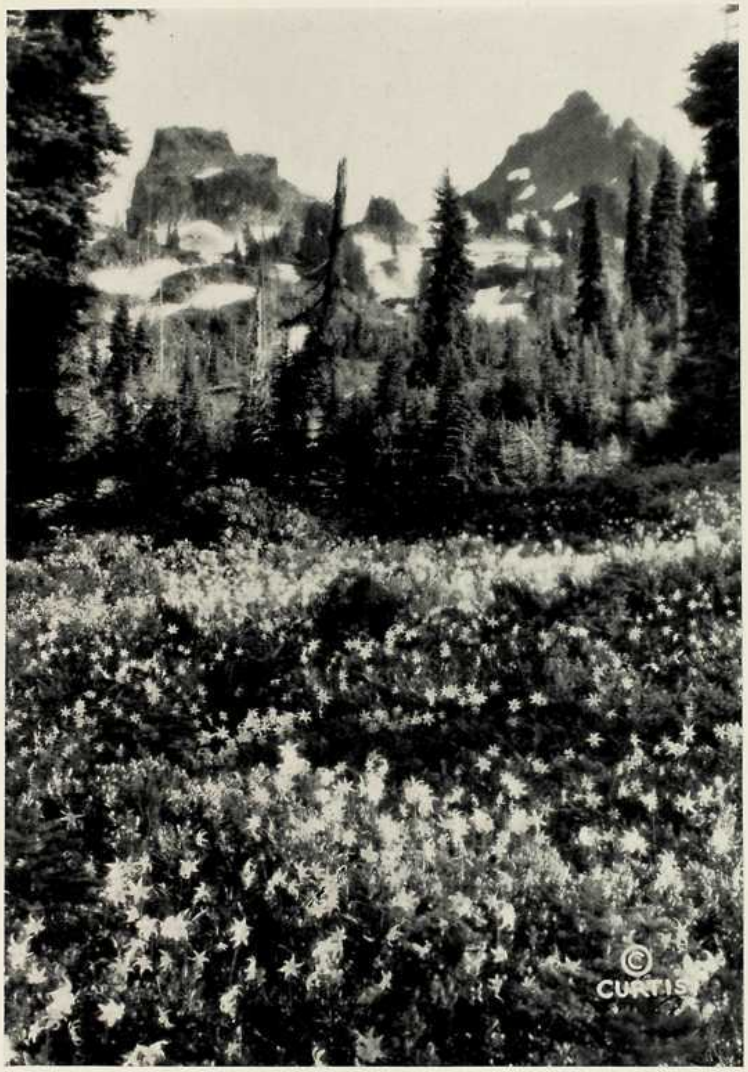
One of the outstanding gifts to you in your park is a Nature Guide Department. A park naturalist and ranger naturalists conduct free hikes of varying duration, from short walks of one or two hours to longer trips of a day; maintain exhibits; and give nature information in lectures. There is a small museum at Long-

mire. There are natural history exhibits at Paradise Valley and at Sunrise. Flower displays, as well, are shown, and there is issued regularly through the year a publication entitled "Nature Notes."

Of all the administered functions of our government, by the acid tests of personnel and of performance, no one of them is more outstanding than National Park Service in its three orders of National Director, Park Superintendent, and Ranger.

There are four distinct zones in the Mount Rainier National Park. Briefly reviewed, they are:

1. The Forest Zone—elevation 2,000 to 4,500 feet.
   The dense conifer forests are continuous except where they are broken by the fourteen box canyons heading up to the glaciers. There are some other isolated breaks caused by protruding rock masses.
   The forest zone is subdivided at 3,000 feet. Below are tall trees with many forest giants—above 3,000 feet the trees shade off in growth from "lowland" to "sub-alpine."
2. The Flower Meadow-Park Country — elevation 4,500 to 6,500 feet.
   John Muir described it: "Above the forest there is a zone of the loveliest flowers, fifty miles in circuit and nearly two miles wide, so closely planted and luxurious that it seems as if nature, glad to make an open space between woods so dense and ice so deep, were economizing the precious ground * * *.
   * * *
   "Altogether this is the richest sub-alpine garden I have ever found, a perfect flower elysium."
   * * *
   In encircling the mountain in 1915, The Mountaineers visited sixteen named parks. There are many others, both small and big. Your favorite of them all is the one you happen to be visiting.
3. The Glacier-Cirque Zone—elevation 6,500 to 10,000 feet.
   This is the zone of origin of twenty-two of the twenty-eight glaciers of Mount Rainier. It contains the 8,000 circle, the line of heaviest precipitation of rain and snow. Its traverse at 8,000 feet contacts more history, exploration, and mountain sculptoring than any other circuit. It is a zone that proves that the irresistible force of a glacier can encounter no immovable, earthly, body.
4. The Summit Zone—elevation 10,000 to 14,408 feet.
   This zone is divided into an approach zone from 10,000



Asahel Curtis

The Castle and Pinnacle Peak. In the foreground is the lower end of Mazama Ridge, approximately the campsite where Sluiskin gave his eloquent speech against mountain climbing. (See page 151.)

to 13,000 feet and the actual summit fields. The approach zone has been penetrated in seven places where summit climbs have forced a way through. This is the harsh circle of the mountain that contains Gibraltar Rock, the Kautz Ice Falls, upper Success Cleaver, the Liberty Cap massif, Willis Wall, Russell Cliff, and Little Tahoma. The summit fields proper contain the top of the mountain "stump" left by the "Great Explosion," some nine square miles in area. In these fields are the four secondary, more recent craters with the ice caves in two of them and Columbia Crest between.

Columbia Crest is the high point of the mountain, a windswept dome of snow between the two most clearly defined secondary craters. It is the center of Mount Rainier's four circling zones, the aerie of the Pacific Northwest.

Two points in the United States proper are higher. Columbia Crest is 14,408 feet in elevation. The two excess elevations seem to thrive on the four hundreds as does Rainier. Mount Elbert, in Colorado, is twelve feet higher, 14,420. The highest point in the forty-eight states is on Mount Whitney, California, 14,496 feet.

It is futile to compare the values of mountain summits. The crest of Mount Elbert is ideal for Colorado, where so many peaks thrust up beyond 14,400 feet. Elbert is just a little higher, and from its summit a straight line of vision will carry to a horizon that is just a little more distant. Every bit of the mountain country between Elbert and the distant horizon, each park and precipice, each valley and mesa, has a value all its own.

The same is true of Mount Whitney. It is the most lofty endeavor of the high Sierra. Its broad rock summit can be most gentle with its infrequent visitors. While they rest upon the mighty crest of a country they may look from its highest point to its lowest, below sea level in Death Valley, less than one hundred miles away.

Columbia Crest is the eye of a glacial octopus. Fourteen canyons radiate like arms from its central body, reaching deep into the dark green forests. Just below, west of north, so close that your first searching glance will overreach them, are Tacoma and Seattle. The mind may cease for a moment the appraisal of stupendous scenes and busy itself with its human kind. George Vancouver will lead a procession of pioneers which will wend its way

rapidly into the busy present. The true heart will glow with gratitude that the kindly meadow circle, so close below, and the considerate wisdom of a government have brought this great mountain with its contrast of grinding glaciers and nodding flowers, within the compass of a quick and comfortable return. For, once you have visited the Mount Rainier National Park, you will discover that a habit has been formed.

The habit of visiting the Mount Rainier National Park is rapidly fastening itself upon the nation. Two things have combined to bring this about: The mountain and its environs have a universal appeal and present an inclusive invitation; the National Park Service has been both wise and considerate. The result of Mount Rainier's appeal and service is shown in the following tabulation of park travel, furnished from official registration records by Park Superintendent O. A. Tomlinson:

TRAVEL TO MOUNT RAINIER NATIONAL PARK
From the Year of Its Origin, 1899, to September 30, 1931
(The figures quoted are for the year, at five-year intervals)

Years	*Cars*	*People*
1899 to 1903, inclusive	------	2,000
1905	------	928
1910	863	8,000
1915	3,230	35,166
1920	10,814	56,491
1925	39,860	173,004
1930 to September 10	60,930	255,183
1930 September 11-30	1,936	10,435
1931 to September 30	74,517	293,562

In thirty-three years, more than 500,000 automobiles and 2,000,000 people have visited the Mount Rainier National Park. What will be the record of the next thirty-three years?

Many things are combining to make continuous this marked increase of park attendance. The most important of the many is the development of winter sports. For three months only, of each year, is the meadow girdle of the mountain freed from its blanket of snow. For nine months, three times as long, it invites the devotee of the toboggan, the snowshoe, and the ski.

National Park Service is endeavoring to make the park the center of these winter sports. A new winter road has been opened to Canyon Rim. Parking space is provided for those who drive

their own cars this extra eight miles toward Paradise Valley. For those who desire it, stage service is maintained.

From Canyon Rim the trail to Paradise Valley is a mere two miles, and it never exceeds a fifteen per cent grade. This two-mile trail beyond the limits of the automobile is no burden upon the winter visitor, but rather a joy and an inspiration in its vistas through the lacery of snow-covered trees.

Other winter sport centers within the park will be developed. There are now four highway entrances: at Carbon River, at White River, at Chinook Pass, at Longmire. Each will give easy access to a winter wonderland.

Mount St. Helens across Spirit Lake. *Asahel Curtis*

Part Seven

Mount St. Helens

(Loo-wit, La-wa-la-clough)

CHAPTER ONE

From Rainier to St. Helens

CAPTAIN GEORGE VANCOUVER was the first white man in history to see Mount St. Helens. On Saturday, May 19, 1792, he recorded this in his journal:

> "* * * I continued our course up the main inlet, which now continued as far as, from the deck, the eye could reach, though, from the masthead, intervening land appeared, beyond which another high round mountain covered with snow was discovered, apparently situated several leagues to the south of Mount Rainier, and bearing by compass S.22E. This I considered an extension of the eastern snowy range; * * *."

This identifies Mount St. Helens. At that time, Vancouver did not name the mountain. It was merely incidental to his search for an easterly passage and he passed it by with mere mention. Later, however, he completed the record.

After discovering and exploring Puget Sound, Vancouver returned to Nootka to negotiate with the Spaniards regarding possession, one of the major objectives outlined in the original instructions given him in 1791 by England's Board of Admiralty. This concluded, he sailed southward along the Pacific shores. On Saturday, October 20, 1792, five months and a day after his first sight of the mountain, he completed his record by naming, and by identifying the exact position of the new peak:

> "The clearness of the atmosphere enabled us to see the high round snowy mountain, noticed when in the southern parts of Admiralty inlet, to the southward of Mount Rainier; from this station it bore by compass N.77E. and, like Mount Rainier, seemed covered with perpetual snow, as low down as the intervening country permitted it to be seen. This I have distinguished by the name Mount St. Helens, in honor of his Britannic Majesty's ambassador at the Court of Madrid. It is situated in latitude 46° 9′, and in longitude 238° 4′, according to our observations."

It is prophetic that Vancouver should have added in his original journal entry of May 19, 1792:

"* * * but the intermediate mountains, connecting it with Mount Rainier, were not sufficiently high to be seen at that distance."

These mountains, thus mentioned, are upon the route of the Cascade Trail from Mount Rainier to Mount St. Helens.

The Cascade Trail, continuing beyond Rainier, may be considered to start from Longmire Springs. It will head for Cowlitz Pass at 5,191 feet elevation. In leaving the park it will pause at Ohanapecosh Hot Springs and Ranger Station, an attractive resort. This first section of the trail will be 19.4 miles long. Its intermediate points are Narada Falls, Reflection Lake, Stevens Canyon, Muddy Fork Box Canyon, Cowlitz Divide, Ohanapecosh Ranger Station. The Muddy Fork Box Canyon is one of America's most startling small canyons. A twenty-two-foot horse-bridge is one hundred feet above the river. A few years ago this chasm had to be crossed on a foot log.

From the Cowlitz Divide beyond Muddy Fork a splendid side trip of a day may well be taken to Ohanapecosh Meadows and Indian Bar. Below Indian Bar, following down Ohanapecosh River, you will pass as wild a series of waterfalls as is offered in the entire Northwest. Wauhaukaupauken Falls makes seven frenzied leaps in less than two miles of a series of frothy canyons. Wauhaukaupauken must have been an eccentric dancer, for each leap is different from the others and is unorthodox beyond the descriptive power of words.

Leaving Ohanapecosh Hot Springs for Cowlitz Pass, the trail offers a mountain river approach to a high pass.

Cowlitz Pass is not a mere gap between hills. It contains at least five square miles of park country. It is landscaped by groups of firs and decorated by grass and flowers. Many little lakes have been left by melting snow banks. A mile high, its days are cool and stimulating, while its nights are crisp and nippy.

Leading from Cowlitz Pass south to Goat Rocks, the trail winds up and down through a high mountain and lake country. At the right, going south, is Packwood Lake, named in honor of the pioneer, Packwood, the man who would guide a caravan through a new country on a wage advance of $2.50 for a jackknife and a plug of tobacco. At the left, east, is the Tieton Reser-

voir, a large artificial lake in the midst of a mountain region, impounding irrigation water.

For days the trails and the camps follow the ideal summer line of 5,000 feet elevation. Gradually the Tatoosh Range, behind, shrinks to a chain of ragged foothills, losing identity as a feature, while Mount Rainier, in contrast, grows higher and more sublime. It seems, almost, as though distance were necessary in solving its ratio of magnitude to its lesser environs.

It is sixty miles, trail distance, from Cowlitz Pass to Mount Adams. After some three days, you seem to have reached the central point of a triangle, its angles pointed by the three isolated, snowy domes of Rainier, Adams, and St. Helens. It is hard to choose among them. The magnetism of each mountain changes with its cloudy attire, and with the beckoning fingers of light that invite your verdict of exclusive attention. Perhaps you will decide with some of us on Rainier in the challenging light of morning, on Adams in the golden glow and the peace of evening, and on St. Helens, slim, graceful, faultless in the bloom of volcanic youth, in the revealing light of the middle day.

At Goat Rocks, near the center of the eastern line of your mountain triangle you feel an isolation, an aloofness from the civilized world that can be found in three spots only of the Pacific Northwest. You are miles and more miles from any highway or human habitation. Once again, as at Olympus and at Glacier Peak, you are in the midst of a wilderness. Your aloofness in a spacious solitude seems to speed the stream of life rather than to retard it. The five senses are keener, the body more resilient, the mind more mercurial, the spirit more buoyant. A glowing warmth, as from inner flames, melts away the drab of disappointment, the futility of endeavor, and the drear finality of dissolution. Nothing bothers, nothing urges—just life itself is a goal and an abundance.

The name, Goat Rocks, seems at first inadequate for the agrestic region it designates. Here is the roughly sculptured granite spire, the towering wall, twin remnants of the ancient 8,000-foot plateau of the Cascade Range. The name grows upon you. "Goat" for the delitescence, and "Rocks" for the hard defiance of the resisting upthrusts, and as a gage of combat for the ambitious climber. The name "Goat Rocks" becomes as distinctive, as much

a thing apart, as the neglected sanctuary it identifies.

There are several passes through Goat Rocks, varying from 6,000 to 7,000 feet in elevation. At Cispus Pass there are five diverging trails leading in directions that occupy three-fourths of a circle. There will be plenty of leeway for choice in placing the future mile markers of the Cascade Trail. The high point of Goat Rocks stands at 8,201 feet elevation, and the entire platinate is unruly in the extreme.

The main bench marks from former surveys from Cowlitz Pass to Mount Adams are:

5,191	Cowlitz Pass
6,134	Shoe Lake
7,775	Tieton Peak
8,201	Goat Rocks
4,500	Cispus Pass
6,512	near Cispus Pass
6,124	Lake Correl
6,661	above LeConte Lake
4,285-4,259	Two Lakes
5,010	East Canyon Ridge, near Chain of Lakes detour to Mount St. Helens
12,307	summit of Mount Adams.

This will give evidence of the uniformly high trail country from Mount Rainier to Mount Adams. Again The Mountaineers pioneered this division of the Cascade Trail. Between July 15 and August 5, 1911, sixty-seven people made a trail distance of one hundred sixty-two miles between Mount Rainier and the Columbia River. The trail led over the top of Mount Adams, and stopped at sixteen camps in the twenty-one days given to scouting, traveling, and climbing in the new enclave.

Undoubtedly the Cascade Trail will continue south to Mount Adams. By then, St. Helens should be taken as a thirty-mile side trip, supremely justifying the detour to the west. Its trail eventually should be as plainly marked by mile posts as the direct Adams trail. By turning aside, west, at Chain of Lakes, a direct trail to Spirit Lake at the foot of Mount St. Helens may now be followed. This trail leaves Rainier National Forest and enters Columbia National Forest. Intermediate points are Table Mountain, the Niggerheads, and Bear Meadow.

Spirit Lake, where this trail ends, is one of the most heteroge-

neous lakes of the Pacific Northwest, as well as one of the truly sovereign. If it rains hard enough to raise the level a foot, the lake measures 3,200 feet in altitude. Usually it lies peacefully at 3,199. It does not seem so peaceful. It is a lake of dark green shadows and of chill depths. One is conscious, while swimming upon its surface, of its frowning shores and of the limitless fathoms below. Its setting is impressive. Its huge amphitheatre faces Mount St. Helens, and is hemmed in by steep, wooded walls, 2,000 feet high. At times, from certain angles, it reflects the white cone of the mountain. At rare intervals, when the lake surface is a mirror, and the light is perfect, a reflection photograph may be taken that, inverted, loses little by dimness, and seems the true image. More often the lake reflects its forested borders, sinking them in threatening somberness. In the shades of evening the effects are those of dim obscurity and dusky gloom.

Perhaps, after all, these impressions of Spirit Lake are entirely personal. The dark "Spirit of the Lake" may have been exorcized by the many cheerful lovers of those shores. It has become a district of summer camps and of young and lilting voices. It is a favorite pastime to spoof the unwary stranger into wagers about stones that will not sink into the inky water. Many of the "pebbles on the beach" are of light pumice, blown full of air chambers by volcanic forces. Some of them will float for five minutes, others longer, before their saturation will allow them to sink out of sight.

There are other inconsistencies that justify our use of the word heterogeneous in characterizing this strange lake. When you try to measure it, Spirit Lake seems much larger than its 1,800 acre expanse. We read of western desert scenes where mountains, seemingly five miles away, are finally reached after a punishing two-day journey. Just the opposite holds true of this contradictory body of water. The dimness of the shores and the dark green of the amphitheatre seem to magnify distances. Memory is ever tricking one into thinking of the lake as five miles long, whereas it is not more than half that. It has been sounded to the depth of 1,300 feet without reaching bottom. Even the trout seem possessed by the lake spirit. They are countless, from one to three feet long, and they are the most elusive, indifferent, satiated, piscatorial aristocrats that ever disdained a tempting bait.

It has been my fortune, good or otherwise, usually to arrive at Spirit Lake in the dead of night. At those times the lake was a five-mile vista of dim light (two and one-half miles by an unromantic steel tape), engulfed in an outer darkness. On one of these occasions our party surprised the most beautiful sight that may be seen in wild places. Our road led to the timberline climbing camp by skirting the low end of the lake. It was a tunnel between big trees. The auto, rolling slowly and silently, rounded a turn, and its light revealed a full grown wildcat frozen motionless by surprise, in the middle of the narrow road. The machine stopped within twenty feet of the animal without alarming it to action. It crouched there without a tremor and glared into the lights. There was outlined in every curve of its body and in every imprisoned attitude the very quintessence of ruthless violence. Some instinct gave warning of danger. Like a streak of gray light the wildcat shot high over a large bush into the darkness.

Our reactions were varied. One deplored the lack of proportionate power in dashing up mountains. Another gave vociferous sympathy to woodland victims. All of us were agreed that we had seen the most marvelous tableau of a lifetime.

One other black night, near Spirit Lake, our lights disclosed a doe and two fawns. The deer-children were tiny, about the size of overgrown jackrabbits. The mother deer held to the road, running lightly before us, and peering anxiously over her shoulder. Her intentions were obvious. When her small children had scampered safely out of sight in the underbrush, she, too, gave herself wings to an instant oblivion. In her solicitude she had held to the road for more than a hundred yards, when every nerve in her body must have subjected her to a most cruel flagellation. It is at such times that we learn to know wild animals.

The road from Spirit Lake to timberline climbs gradually for four miles. There are no flower meadows between timberline and the mountain. The cone of St. Helens is too new to have developed an encircling zone of fertility. The forest fades abruptly into pumice slopes at about 5,000 feet elevation, the end of our trail from Mount Rainier.

An Indian legend of St. Helens is one of the most romantic of those of the entire Cascade Range. Among other things, it records

Mount St. Helens. The Lizard is the dark strip just under the rocks of the right skyline. *Margaret W. Hazard*

Indian recognition of the distinctively feminine ways, grace, and beauty of the mountain:

In the long ago there was a Tomanous Bridge where now there are but the Cascades of the Columbia River. A wrinkled old witch, Loowit, had faithfully kept the sacred fire upon it and had generously prevailed upon all-powerful Sahale to allow her to bestow the blessing of fire upon the cold and wretched natives of the Columbia. Because of her faithfulness and kindness, Sahale granted her a single wish.

From old and wrinkled she became young and beautiful.

Lovers came to her—all the chiefs and mightiest warriors. She favored two only, and could not choose between them. The rivals fought and burned, burned the forests and villages, each of the jealous other. Sahale frowned in righteous wrath. He smote Tamanous Bridge, and the heavy might of his hand crumpled it into the river, where today it fills the river and makes it boil and cascade in angry protest. Sahale smote Loowit and her too-warlike lovers. Sahale loved the three erring ones, even as he chastised them. He reared a mighty mountain peak where each one fell.

The white man came and, in his ignorance, gave other names.

Loowit is St. Helens, the beautiful maiden.

Klickitat, Adams, and Wiyeast, Hood, are the warrior lovers.

CHAPTER TWO

Explorations of Mount St. Helens

MOUNT ST. HELENS WAS THE FIRST of the eight Snow Sentinels of the Pacific Northwest to be explored by civilized man.

In 1850, Thomas J. Dryer moved from California to Portland, Oregon, and in December of that same year, founded *The Oregonian*, known today as one of the best newspapers in the entire nation.

In 1853, in the month of August, Dryer took a party of friends from Vancouver, Washington, and headed in toward the mountain. They followed trails blazed by railroad surveyors as far as possible, then turned directly toward the peak. They rode horses as far as practicable, and then camped.

On August 26, four men, Dryer, Wilson, Smith, and Drew, took packs and worked up some miles to a timberline camp.

Unlike Kautz, on Mount Rainier, they started for the summit at the earliest possible hour, "as the eastern sky began to show the approach of day." They reached "the highest pinnacle of the mountain soon after Meridian." It was August 27, 1853.

The leader, Thomas J. Dryer, published an account of the pioneer ascent in his own paper, *The Oregonian*, on September 3, 1853. His article makes good reading. Unlike most early writers on mountain themes, he ignored, entirely, the hyperbole, and indulged in delightfully restrained enumeration of details rather than of emotional effects. He deserves to be quoted:

> "The ocean, distant over one hundred miles, was plainly seen. The whole Coast and Cascade ranges of mountains could be plainly traced with the naked eye. The snow covered peaks of Mounts Hood, Rainier, and two others [probably Adams and Jefferson] seemed close by. These form a sort of amphitheatre on a large scale, diversified with hills and valleys."

The personal side of the journey of return is handled with equal calmness:

> "After spending sufficient time to see what was to be seen, and building a pyramid of loose stones on the highest spot of level

earth and ashes, we commenced our descent, and reached camp at 4 o'clock in the afternoon, tired and worn out in body and in boots. At dark we reached the timber and camped for the night. The next morning we left our encampment on the mountain for home [Portland, Oregon], which we reached in four days."

St. Helens is the easiest to climb of the eight principal snow mountains of the Pacific Northwest. The volcano is so young that the cone is not deeply eroded. It can be ascended from almost any radius of its circumference. Endurance is called for, as the summit is high, and particularly because on parts of almost any route you will plow up heavy slopes through ankle-deep soft pumice. It is a great relief, as well as a thrilling venture, to keep to the snow coming down, and to glissade to your heart's content.

Dean Henry Landes, of the University of Washington, has given us interesting notes on the physiography and the geology of Mount St. Helens. During and before the year of 1911 he made exploratory trips to the region. His "Notes on Adams and St. Helens" appeared that year in The Mountaineer, Volume 4. The brief and informal account that follows will review and quote some of the findings of the Landes article:

"St. Helens in most respects is a typical volcano, and it affords an excellent opportunity to see and study vulcanism. Its eruptions seem to have all been approximately from one opening and hence the symmetry of the cone is conspicuous. There are many evidences of very late eruptions and erosion has made but little progress in the destruction of the mountain.

* * *

"The erupted matter seems to be confined almost wholly to two classes of material; viz.: lava and pumice.

* * *

"It was not until late in the history of the volcano that explosive action gave rise to large amounts of pumice which were ejected from the crater. At the present time the northern slopes of St. Helens are covered with fragments of pumice, which have accumulated to the depth of many feet.

* * *

"In the ejection of the pumice much of it was thrown high in the air and carried by the winds to points rather far removed from the mountain. It has been found at points more than 20 miles away on the north and the west.

* * *

"* * * as the lava arose through the tube or conduit in the

> earth's crust, it broke off many fragments of the solid rock along the way * * * such rock is now generally disseminated through the erupted material.
>
> * * *
>
> "After all, the chief glory of St. Helens is in its capacity of a sleeping volcano and not as a center of an important glacial system."

It is true that the glaciers of St. Helens are comparatively small, seldom more than a mile and a half long. But that very fact gives the mountain its distinctive symmetry. Add to its graceful curves of youth, the dazzling and unblemished mantle of white and, as a scenic attraction, especially at a distance, the mountain stands alone.

St. Helens is the sister of Mount Fuji in Japan. The contours are almost identical. The craters are of similar size and shape. St. Helens is a little older, and not so high. The biggest difference is superficial—Fuji is without snow for many months of the summer, while St. Helens is always clad in garments of dazzling white.

The exceptional beauty of St. Helens attracted early attention. Professor W. L. Lyman (Lyman Glacier and Lyman Lake, near Glacier Peak), one of the most highly regarded authorities on the mountains of the Cascades, was a zealous explorer of both St. Helens and Adams. Of St. Helens, in 1907, he wrote:

> "Making with these two [Rainier and Adams] a vast triangle is the lesser, but most exquisitely beautiful St. Helens, perhaps for pure beauty the finest specimen of all our unrivaled peaks."

Professor Lyman, in relating the Indian legend of the Bridge of the Gods, at the Cascades of the Columbia River, gives St. Helens the Indian name of Loowit.

In 1895 Ole Peterson hunted wild animals near the mountain. He found lava caves. One of them lies six miles from the base of the mountain, southeast. The phenomenon differs little from those of other lava fields. Lava cools rapidly outside. The inner molten mass runs out from under itself, leaving a tunnel. This particular one is extensive. The lower end is choked with lava. At some places the roof has fallen in. An air current circulates through the flume-like structure, making it safe for exploration. It has been followed for more than a mile and a half back toward

the volcanic dome. No one, so far, has ventured to the extreme upper end. The channel winds back like an underground river, rising toward the source at some vent in the mountain, on a 3% grade.

The banks are well contoured, six feet high, with obvious lines of successive flows. The bed is twenty feet wide, with debris from the last activity. The roof averages fifteen feet below the surface, and has a twenty-foot arch. It is a glazed brown, decorated by tiny stalactites. Even the most casual observer would not fail to read this indelible record of cause and effect in vulcanism.

That St. Helens, as mountains go, is still in her "teens" is proven by well holes upon the southern slope. Molten lava flowed around trees, both prone and standing. The trunks are gone but the imprint of the bark is most legible.

There was frequent activity in the St. Helens volcano in the nineteenth century. S. F. Emmons, of the National Geological Survey, obtained a credible story of great volcanic action in 1841-1842, from a French-Canadian voyageur. Light was intense, from St. Helens, in a cabin twenty miles distant. Pioneers of Astoria, Oregon, have recorded major disturbances within the past sixty-five years. The sky at Vancouver, Washington, was darkened during eruptions between 1830 and 1845, and ashes were blown to The Dalles, on the Columbia River, some sixty miles away. Yale University has directed recent studies on the lava flows south of the peak. These findings all help to prove St. Helens' flaming youth.

The development of plant life upon a disintegrating lava flow presents an interesting field for research. Instead of a detailed account including the agencies for the distribution of seed and the evolution of fertility from the first cracks and abrasions of the barren lava, a few striking facts illustrative of rigors of environment will be introduced. At the 4,000-foot level of St. Helens, where some soil obtains, trees are dwarfed. Fifty years is required to produce a trunk three and one-half inches in diameter. At timberline, growth is even more retarded.

At timberline, and just above, direct injury is added to poor nutrition. At Mount Rainier tiny trees, struggling for existence, are wind-wracked, buffeted and twisted, bunched and gnarled. Observations have been made of exposed trees at snow line. One

dwarf, twelve inches high, showed rings of a hundred years of battle against overwhelming odds. Another, fourteen inches high, was one hundred and fifty years old. In the life and death struggle they had been held almost even, but had managed to exist and to acquire a microscopic growth.

Usually trees between lava and timberline are wind-blown from prevailing air currents, or are spread flat for sheer self-preservation. It is always intriguing to toss a sleeping bag upon a mattress of matted tree tops. There is no chance of injuring these persecuted pioneer growths, for your weight will be just another insult added to a life of ruthless exactions. These tiny tree structures are unbelievably strong. A climber may trust a shrub as thick as his finger with his entire weight, with the solitary exception of heather.

These trees and shrubs and flowers of developing mountain meadows give color and warmth to the severities surrounding them. When winter's whiteness covers them, they are hidden away for a sure awakening. Each year, as they emerge to greet us, they radiate the freshness and the abandon of elfin charm.

There is a good forty-eight-mile highway, along the Toutle River from Castlerock, Washington, to Spirit Lake, at the northern base of Mount St. Helens. The new highway has replaced an old puncheon wagon road that jolted over Green Mountain and dragged painfully over roots and rocks to the Spirit Lake camp. It may be well to tell a tale of an approach and an ascent some years ago by the old route, that we may properly be grateful for recent improvements. Even then the new highway was under construction, but it was new, the time was Decoration Day, and the winter's toll had closed temporarily, the new route. Three parties, one from The Mazamas of Oregon, another from The Mountaineers of Washington, and still another composed of independents, converged at Castle Rock on May 29, and started, despite warnings of disaster, for Spirit Lake.

It was my privilege, that day, to drive a Model T, alone, in an endeavor to overtake the earlier Mountaineer party. At Green Mountain came the detour over the old wagon road. It was immediately evident that the ominous information given at Castlerock was all wrong. The old puncheon road was not "all broken up and torn to pieces." It was as regular as ever except that every

fourth puncheon, or thereabouts, was missing, leaving a hole every few feet that was not less than one or more than two feet deep. The five miles up and the five miles down Green Mountain was driven in low, and the trouble was supposed to be over.

It happens, however, that fourteen miles beyond, had been "improved," recently, by certain operations. The Cowlitz County roadbuilders had heaped black dirt into the middle of the alleged highway, to be surfaced with gravel. Six weeks of rain had come on and the surfacing had been postponed. I went back into low and began to pass parties who had been ahead in low-slung, powerful cars. The ruts were deeply cut in mud and were filled with water. The procedure in those nice, new, low-slung cars was to plow ahead a hundred yards and then to pile out and to shovel mud off the fenders and hood. One car, with five men in it, had managed to make three miles in three and one-half hours.

At the half-way point of that gala fourteen miles of "low" driving was the Mazama bus, halted by the side of the "mire-way." The weave and pitch of the big bus had actually made the driver seasick. This mal-de-mer, induced by that land-going tug, had not affected the judgment of its sponsor. He refused to let anyone else drive. From there on I was not alone. I have a confused impression of one or more of my passengers, upended, with mountain boots protruding over the back of the driver's seat, tightening "low."

We reached Spirit Lake at two a.m., on May 30. I folded up in the back seat and slept until three a.m., a solid hour. At that time, the earlier arrivals, and some stragglers, started with the gray of dawn and with a climbing luncheon of sugar, prunes, and hardtack, for the summit of the mountain.

From timberline, four miles up from the lake, we took a steep angle toward the middle point of the Lizard. By so doing, we avoided the deep mud canyons, with caving brinks, that are numerous toward the baseline of the cone. We made the Lizard across uncrevassed glaciers and simple pumice gullies and ridges. At the Lizard, easily identified by strangers because it is exactly a lizard in shape, we climbed the snowfields beside it, straight, up slope, at the summit. Later in the summer, in some seasons, it

becomes necessary to take to the backbone of the Lizard and to toil up in ankle-deep pumice.

At the upper end of the Lizard we angled across to the Boot, avoiding the Island on the direct line to the peak. In July and August the Island always must be avoided as it is in the direct path of rock avalanches from the top. The easy way to judge the safe crossing from the Lizard to the Boot is to look for marks of sliding or bounding rocks upon the snowfield. There is a safe zone across, almost level with the top of the Lizard, where rocks never come.

The climb up the Boot, a soft pumice cleaver, is safe but slow. There are hot spots upon it, where the internal heat of the cone breaks through. A three-hundred-foot, steep snow slope connects the top of the Boot with the summit dome. This dome rounds, flattens, and leads through a gap in the summit rock rim of the crater.

The route now leads across the snow-filled crater, about a half-mile, to the high point of the mountain, a mound of snow at the south rim. There is a ranger cabin upon the high point, where one may find rest and shelter. It was built for a forest-fire lookout station, used during the summer months.

On the way off the dome, a stranger who had joined us for the descent, illustrated a point of technique in the use of the iceax. He had provided himself with neither thong nor wrist loop. He slipped upon the icy slope of the dome and jabbed the pick of his ax into the surface to stop himself. His ax stuck but he did not—the ax slipped through his hands because of the hard jerk caused by his momentum. He caromed off the mountain, bounding, sometimes, several feet in the air, and was unable to stop sliding for over two miles. When we caught up with him, thirty minutes later, he was without serious injury, but was bruised and scratched from head to foot. A strong thong, tied to the wrist, or a wrist loop for the upper hand is necessary for safe use of the iceax.

Not always is the approach to the summit as simple as it was on May 30, 1926.

On September 24, 1910, C. E. Forsyth climbed by the same route. Part of his report follows:

"We tried going up the ice along the boot leg but the wind

blew the rocks loose to such an extent that we were forced west to the top of the ridge on the leg of the boot. We stayed with the ridge till it met the glare ice six hundred feet from the top. Now our troubles were on.

* * *

"The wind now would discount a Kansas cyclone. While cutting steps for the first three hundred feet, it would pick up the coat from the back and flop it over my head, easily. (Have forgotten the list of adjectives used.)

* * *

"At 1:20 p.m. we dropped over the chimney rock into the crater, chilled through and through, with the four fingers of my right hand frozen through heavy gloves."

Many of us, on May 31, 1926, the day after our climb, had our own punishment for indiscretion. May 30 was opaque, thin upper clouds allowing half sunlight to seep through. There was no sun-glare to impair vision, so many of us neglected colored glasses, and actor's grease-paint. The sure result was that by the next day our eyes were red and swollen, while our faces were fields of waterblisters. There was no excuse for this, for we knew that these days of tempered sunshine burn more deeply than the days of blazing light.

The immediate view from the summit of Mount St. Helens impresses one with obvious details of a volcano in the making. Wide ribbons of lava, ash, cinders, and pumice, wind down into the base forests. They cut lanes for miles that show from the top like dull, red arms, barren of any vegetation. The probable cause of Spirit Lake becomes more firmly intrenched. It seems certain that flows of lava and deposits of pumice have cut off the natural drainage to the Toutle River, and have backed up the lake against its steep, wooded shores. In checking summit observations in the forests below, one will find where lava flows and avalanches have sheared off the forest as easily as grass to a reaper.

The distant views are the more easily distinguished because of the relatively low base country which averages about a thousand feet. A higher ridge leads east toward Adams and continues north to Rainier. All but Garibaldi of the Snow Sentinels can be seen and identified without effort. The Pacific seems less than its hundred miles away, while Jefferson and the Three Sisters, toward central Oregon, are neighbors. The sleeping fires beneath you

manifestly are merely banked and smouldering, while you, ever conscious of their presence, direct your roving vision to the farthest connascency of summit and horizon.

Spirit Lake and Mount St. Helens are now open to the public all the year around. This winter, 1931-32, the snow at the lake is nine feet deep. But Mount St. Helens Lodge is cozy inside, and the outside is another winter paradise.

The snow line is six miles below the lake. The Lodge attendant meets all visitors with skis and snowshoes and escorts them from snowline to the lake. This season, the growing popularity of the new winter sports region demands advance reservation.

So fair Loowit, bereft of her lovers, Klickitat and Wiyeast, is no longer lonely. The world has discovered her charms, and many new admirers obey the beck of her smiles or frowns.

Mount Adams from Killen Creek Camp. *A. H. Denman*

Part Eight

Mount Adams

(Pah-to, Klick-i-tat)

CHAPTER ONE

The Approach to Mount Adams

MOUNT ADAMS stands thirty miles east from Mount St. Helens and fifty miles distant, a few degrees east of south from Mount Rainier. Its altitude of 12,307 feet makes it the second mountain in height in the Pacific Northwest. St. Helens is a cone, while Adams is a broad, long dome, like Rainier. St. Helens was raised through one crater vent while Adams was constructed through many. St. Helens is surfaced, particularly upon its northern and eastern slopes, by pumice, while again in contrast, Adams is covered by hard lava rock, shattered into fragments both great and small. One has grace and beauty, the other, might and majesty.

The trip between St. Helens and Adams merits four camps, another two being added by half-encircling the dome at a mountain meadow level of elevation. The trail of the first day passes the southern shores of Spirit Lake and follows a marked degree of ups and downs to Bear Meadows. The camp of the second day is at the Niggerheads, reached after high miles along the divide between the Lewis and the Cispus Rivers, which flow respectively south and north of St. Helens.

The Niggerheads, three main peaks and a group of lesser ones, terminate in black, rounded rocks that suggest the name. They rise to 6,000 feet on a ridge that is some five miles long. In fact, the trail between St. Helens and Adams follows rather consistently the summit of a narrow, moderately sharp ridge sometimes called "Niggerheads Ridge." Spur ridges flank the main ridge and carry height north and south. The valleys between these spur ridges are deep and even. They appear to result from glaciation rather than from erosion. The Niggerheads proper are mostly fashioned as smooth crags with wall faces.

Leaving the first of the Niggerheads, traveling east, there soon comes a loss of 2,000 feet trail elevation which is easily regained by a series of long switchbacks. The route is over desolate slopes through vast areas of burned country. The third camp is near

Table Mountain. View heights and flower meadow depths lead for the fifteen miles of the fourth day to the Killen Creek camp on a shoulder of Mount Adams.

The Killen Creek camp lies in a mountain meadow 6,000 feet high. The campsite is exceptional. It has flowers, lakes, waterfalls, a snow-bridge, close-up views of Mount Adams, a high-lifted, "looming-up" view of Mount Rainier, fifty miles away, air-flight, north.

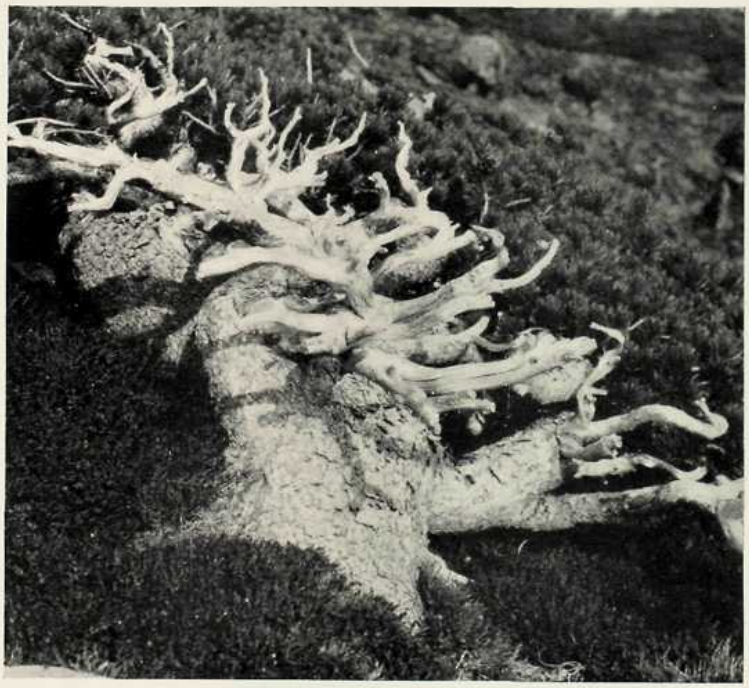
Two events have become history to Killen Creek visitors.

In 1911, July 31, fifty-two Mountaineers made one of the early ascents of Mount Adams. The first five thousand elevation was climbed up a lava ridge, the next thousand, over a snowfield of easy grade. The last three hundred feet at the top was a steep, semi-cornice approach to the broad summit. This pioneer party was like the bear that went "over the mountain," for those fifty-two people climbed gaily up the north side of the mountain, and even more gaily down the south side to Morrison Creek Ranger Station. In toto they lifted themselves 6,300 feet and lowered themselves 7,000 feet, all in one day and in a ten-mile distance. This was excellent large-party climbing, indicative of intelligent leadership. Although the routes were not difficult, elevation is elevation. Five thousand feet up and down is a good day's work, and every hundred extra follows a mathematical rule comparable to the "square of the distance." Not less significant is the fact that the routes were new to the organization. Then, too, the other members of the outing and the packtrain with the commissary made a twenty-mile half-circle of the mountain, arrived at the Morrison Creek camp, and had "a hot dinner waiting, and hands ready to serve it."

The second event that has become history has to do with one man, traveling alone. A most serious problem in leading large bodies of people over trails for three weeks, through new country, is the matter of providing food. The other two problems of life, clothing and shelter, are up to the individuals of the party. But food in varieties and in abundance must be provided. Sometimes something slips. It did in 1917, through no fault of the outing committee in charge. It became evident at the Killen Creek camp that the Mount Adams commissary cache was missing. H. B. Bennett, one of the leaders, left Killen Creek, skirted the west side

An ancient wind-blown pine. Note the size of its gnarled and twisted trunk.

Mabel Furry



Pine growing flat on ground. *Mabel Furry*

of Mount Adams, discovered that the supplies had been sidetracked at Lyle, on the Columbia River, and ordered the supplies inland. He commandeered a packer with three horses, led the cavalcade to the next camp at Goat Butte, and delivered the food before there was an uncomfortable shortage. There were sixty-seven potentially hungry people involved, so the service of Bennett was to him an urgent duty. The leaders of these outings are not on any basis of remuneration, for they donate their services to their fellow club members. In this forced marathon, Bennett made seventy-five miles on foot over mountain trails in some thirty-six hours of elapsed time. It is at such occasions that the powers of a man, the result of courage and of a well-ordered life, prove themselves in valorous conferral.

The last trek of the six-day approach from Goat Butte to Happy Valley, follows the scenic east side of the mountain. The pass beyond Goat Butte is 7,500 feet high. Beyond it from the south, Mount Rainier and the Goat Rocks are no longer seen. For days, from St. Helens to Adams, they have been great comforters. Kinks and abrasions are as nothing when a mere lift or a turn of the head will substitute wondering appreciation for anatomical unease. The old slogan "Accept no substitutes" implies that all substitutes are inferior. Not so here. While the near views of the east Adams region beyond Goat Butte Pass are substitutes and different, they are so changing, so absorbing in interest, that nothing more is needed for completeness. In passing along the east Adams array of features, one is lost to hope of doing justice to all of them. But more about them later.

Happy Valley, our sixth camp from St. Helens, is roomy with its three thousand acres of sub-alpine park. It is a glen at 6,300 feet altitude, encircled by rock and forest. Its forte is not so much views as comfort and convenience. It offers all that is needed for a base camp as well as the easiest, the southern, approach to the summit.

In following the Rainier approach to St. Helens, we turned west at Chain of Lakes, and predicted that it would be a detour from the Cascade Trail. From Chain of Lakes to Killen Creek camp, beneath Mount Adams, is but a short day upon a good trail. From Killen Creek camp on, the St. Helens and the Rainier approaches coincide.

This approach from St. Helens to Adams and the one from Mount Rainier are the only approaches that give you wilderness areas. It is possible, now, to motor from the Yakima Valley, from Goldendale, lying east, or from White Salmon, lying south, to the base region of the peak. The highway approach from White Salmon, which is on the north bank of the Columbia River, passes through Guler and Trout Lake to a good forest road up the mountain. Last summer, July 11, 1931, fourteen of us climbed Mount Adams from the south. The first day we motored to White Salmon, to Guler and Trout Lake, to Morrison Creek, to Cold Spring. The mountain road to Morrison Creek and to Cold Spring was constructed and is maintained by the Columbia National Forest. It is well engineered and is being improved yearly. We arrived at Cold Spring, 5,500 feet elevation, in mid-afternoon and packed to 6,500 feet for our climbing camp. This camp was on a wooded rock island just below Macdonald Ridge. It is the finest climbing camp that I have ever found upon a mountain. I have used it twice now, and it never will be forgotten.

The first recorded ascent of Mount Adams was in 1854, a year later than St. Helens. It happens that Mount Olympus was first climbed during the same year, 1854. Rather a busy time for high mountains in the Pacific Northwest.

The only record of this first ascent was given us by George H. Hines in "Steel Points," Volume 1, July 1907. The statement by Hines has been fully accepted. His record as a pioneer and as a research student of Northwest pioneering is such that he speaks with authority. To him, also, we are indebted for the account of the first ascent of Olympus by Shaw and Cock. The following, quoted from Steel Points, appeared, by permission, in The Mountaineer, Volume 10, 1917:

"In conversation with Mr. A. G. Aiken, of Marshfield, Coos County, Oregon (who, by the way, was in the same train to which I belonged while crossing the plains in 1853), I learned that Edward J. Allen, Andrew J. Burge and himself made the ascent (Mount Adams) late in August or early in September, 1854. These persons belonged to a party of men that left Steilacoom a few weeks before the ascent was made, to work on the military road that was then being constructed by government authority from the Columbia River through the Naches Pass to

Puget Sound, following generally the trail partially made by the immigrant party of the fall of 1853. It was while this company was camped a few miles northeast of the base of Mount Adams that the three above-mentioned persons decided to make the climb. As I have a personal acquaintance with all three men, I have no doubt as to the fact of their making a successful ascent."

The first white men to approach Mount Adams closely enough to record its existence were in the Lewis and Clark Expedition. The Lewis and Clark journal, Thursday, April 3, 1806, bears this entry:

> "From its entrance [Willamette River] Mount Regnier [Rainier] bears nearly north, and Mount St. Helens north, with a very high humped mountain a little to the east of it, which seems to lie in the same chain with the conic-pointed mountains before mentioned."

The naming of Mount Adams was long delayed and was complicated by rival names. Even the Indian traditions and legends give the mountain two names. In the legend of the Bridge of the Gods it appears as "Klickitat." The Yakima Indians, in actual usage as well as in legend, called it "Pah-to." There is small record of the actual use of Klickitat, so Pah-to should, perhaps be its sub-title.

Vancouver did not see Mount Adams. While Lewis and Clark saw the peak they did not name it, although they did name Mount Jefferson, south of Mount Hood.

Hall J. Kelly, known in history as the "Boston Schoolmaster," was a stormy petrel of the contentious days that marked the struggle for permanent possession of the Oregon Territory. Hubert Howe Bancroft, the historian, in a footnote (Works, Volume XXVIII, page 558), says of him: "When Senator Linn arose upon the floor of congress the champion of the United States for Oregon, the school-master placed in his hands more information from his own writings than the statesman could obtain from all other sources put together."

Hall J. Kelly bore grudges, fought windmills, alienated his family, and died in 1874, a most miserable hermit, eighty-four years of age. Still he had ideas, and he has left his imprint upon more than one page of history.

One of his obsessions was the naming of mountains after for-

mer presidents. The Cascade Range was to be the "Presidents' Range." St. Helens was to be "Washington"; Mount Hood, "Adams"; Mount Jefferson, "Jefferson"; Three Sisters (Middle Sister), "Madison"; and Mount Shasta in California, "Jackson."

We note, in passing, that in 1843 Thomas Jefferson Farnham, following the Kelly plan, tried to change the name of Mount Baker to "Tyler," Mount Rainier to "Harrison," and Olympus to "Van Buren."

The "Kelly scheme of names," worked out from 1834 to 1839, failed for three main reasons—lack of maps, confusion of names and peaks, and the trend of history toward honoring early explorers by accepting their records.

Hall J. Kelly, like most of the earlier observers, missed Mount Adams entirely, and many others confused it with Mount St. Helens. Its latitude is 46° 12′ 12″ while that of St. Helens is 46° 11′ 53″. The difference, then, is slight and mistakes are logical. From the west, especially from a distance, Mount Adams is behind St. Helens, and is thus obscured. Strange that one mountain, twice the bulk of another, should be so victimized!

Dr. Edmond S. Meany, whose exhaustive researches regarding the naming of western mountains have been my source of information, credits Farnham with the naming of Mount Adams. He points out that Farnham was inaccurate, that he made a mistake of a whole degree of latitude, interchanged without intention the Kelly names for St. Helens and Hood, and lastly, mistook St. Helens for Adams. Outside of that he was correct. But he did name Mount Adams. Dr. Meany writes as follows:

> "He (Farnham) saw Mount Adams lying 'about 25 miles north of the Cascades of the Columbia' and gave it the name it now wears."

Dr. Meany concludes the whole matter with these convincing words:

> "It is not surprising that early travelers confused the two peaks and called them both St. Helens. This sort of thing continued until 1853 when the Pacific Railroad Expedition, under Governor Isaac I. Stevens, placed the mountain on the map and gave it the permanent name of Mount Adams. After definitely fixing that name and while describing the surrounding coun-

try those railroad engineers occasionally wrote the name 'Mt. St. Adams.' Historians will, of course, refuse to see in the use of the word 'Saint' anything more than a slip of the pen and a lingering confusion with the name of St. Helens."

The naming of Mount Adams is not the only thing about it that is confusing. Viewed from the four cardinal points of the compass it, somewhat like Rainier, seems to be four different mountains. Worse still, from the distance, it gives the impression of level plains lifting to a smooth dome. When approached, all this deceptive "smoothness" fades away. While some of the box canyons of Mount Rainier are deeper, none of them seem so menacing. Perhaps it is the color of the rock in the profound gorges, for it runs to violent tints of reds and greens, while Rainier's colors are, relatively, more pastel. C. E. Rusk, who knew as much or more than any other living man about Mount Adams, insisted that the word "awful" must be used to do justice to certain scenes. At least, this is evident to all who make the approach to Mount Adams—impersonal approval gives way gradually to perturbations of astonishment and to disquietudes of bewilderment. It can be worse, really, than indicated by any combinations of words of more than nine letters. I was lost for four hours in one of those infernal regions that give approach to Mount Adams. Darkness was threatening, and I am supremely aware of what Mount Adams can do to any degree of self-sufficiency.

But the most deceiving fact of all about Mount Adams is its pronounced appearance of being squatty, when viewed from afar, despite its high altitude. From the east and from the west it seems long and low. In view of the intense volcanism of its formation, one wonders why so great a bulk has not been builded higher. Here the geologists are reduced to the barren expedient of explanations that include multiple venting and elongation by the formation of north and south shoulders through relatively low lava exits. Not so the Indian. He knows, and his legend about it is as plausible as abstract truth.

Pah-to (Adams) and Wiy-east (Hood) were strong warriors, rivals for fair La-wa-la-clough (St. Helens), the damsel of the peaks. Both lovers performed great deeds in honor of their alluring inamorata. They slew in the chase, killed in battle, ripped off many a scalp, and counted "coup" with finesse and firmness.

Pah-to began to forge ahead and La-wa-la-clough favored him. Wiy-east, the loser, gave way to a mighty rage. He smote Pah-to on the top of the head and flattened him so severely that he towered nevermore to his erstwhile magnificent height and with his former imposing presence. Tyee Sahale frowned down upon this primitive triangle of passion, for a mere warrior had arrogated too mighty a power of punishment unto himself, and the other two angles had contributed to this insubordination. Sahale smote all three and changed them into mountains, doomed forever to stand apart in frozen watchfulness.

CHAPTER TWO

The Volcanism of the Adams Region

TO THE GEOLOGIST, Mount Adams is unique among the main peaks of the Pacific Northwest. Olympus alone of the eight snow sentinels that have been given "major" rating is not of volcanic origin, being the high central remnant of an upthrust plateau. Of the other seven in the Cascade chain from Garibaldi to Hood, Mount Adams is set apart as a central structure in a huge field of volcanism. The other six are the result of centralized vents, while Adams and its surrounding craters are the product of a whole vented floor. Or it is, as described by Dean Henry Landes: "A great volcano in a sea of vulcanism."

The central volcanic cone, Mount Adams proper, is, itself, the complex accumulation from several openings. One of the most recent eruptions found egress from the slope, 4,000 feet below the summit. It dumped a great shoulder on the lower two-thirds of the main dome, and trailed down into the valley south of the mountain. It left two main south ridges and a third, lesser one. The surface of this voluminous lava flow is black, ropy, and recent. It has no soil for many miles down into the forest zone, where it splits the trees apart with its reaching arm of barrenness. Only at the lowest extension of this recent lava flow are there scant soil and stunted trees. Macdonald Ridge, leading north from the Morrison Creek camp, is one of the integral parts of this new ridge addition. As a modern impudence to old "Vulcan," the western offshoot of Macdonald Ridge bears a puny thread of metal laid by the vandal hands of humans, a telephone line to the summit.

South and west from Mount Adams are neighboring cones, mostly low and forest-covered. Their origin allows a choice from two hypotheses. These vents may be connected with the main body of the Adams structure, by pipes or cavernous conduits, or they may be independent, just so many more ruptures leading from the "molten magma." The second postulate is the more tenable, for a whole row of lesser cones is strung out from Mount

Adams to the Columbia River. But it is always well, in the interests of scientific certainty, to remember that a postulate is defined as an "assertion without proof," an "assumption of a possibility."

This possibility of a long line of weakened resistance to molten out-flows holds with proven facts in the country east of Mount Adams. In Eastern Washington are, probably, the largest level lava fields in the world. They come, not from isolated vents, but from fissures that allowed long lava flows to be squeezed out all over the landscape. The huge joke of these formidable lava fields is that they have been decomposed into fertility and transmuted into onions and rutabagas.

Pyroclastics are always more noisy, more dramatic, in fields of volcanism than lavas. Ashes, cinders, pumice, and bombs, make pyroclastics the materials for pyrotechnics. Explosive eruptions may not be as lurid as lava flows but they are more destructive. Adams had some of them, but not many. Lava flows were more frequent. The probable reason for this is that the multiple venting of the floor field was not conducive to inhibitions. Should this be interpreted as justification of the so-called modern viewpoint on moral conduct? Even so, volcanic inhibitions do lead to delayed, destructive explosions. Adams, then, must have been a safe mountain, for it has been more the phlegmatic, lava type—although it has had its great moments.

Through its predominant lava run-off, Mount Adams is a flatter peak than St. Helens, which favors pyroclastics and pumice. The Indians have a more romantic background for the noticeable flatness of Mount Adams in the legend quoted in the preceding chapter.

There are three distinct parts to the summit of Adams, due to its many vents. The south shoulder has been described earlier in the chapter. The false summit, south above this shoulder, is six hundred feet lower than the middle, or highest summit. The north summit, still lower, forms another, a northwest shoulder. This, again, is due to a lower event and to the building out of the slopes. It adds to the elongation of the summit ridge, viewed from the west or the east, and exaggerates the flattened appearance. Viewed from Killen Creek camp, Adams has the appearance of twin connected peaks.

A. H. Denman

Burned area between the Niggerheads and Mount Adams.

A lava flow through the forest. *A. H. Denman*

No crater outlines show clearly on the top of Mount Adams. Perhaps one or more small craters would become visible should the two main snowfields be melted away.

The earliest explorers of the White Salmon Valley discovered lava caves near Guler and Trout Lake, twelve miles south of the Adams timber line. These caves lie several miles along the valley in the most recent lava flows. They were formed like those of St. Helens. The surface of a lava stream cooled and hardened while, beneath the surface, the lava remained hot and flowing. The middle, still molten, ran out from under, leaving an underground channel. Many of these long caves have been explored, and countless others must lie buried and hidden.

It is customary to visit these caves through caved-in openings. One climbs down on a ladder, carrying an electric flash or a flambeau. Many of the cave chambers are long. Upon the floor are masses that have fallen from above. It is recorded that one hundred per cent of the visitors have come out safely—it is also recorded that another one hundred per cent have cringed from the thought of being flattened hopelessly out of shape by falling masses. One of the popular lecturers on Oregon geography says that all of the rocks fall upon the Columbia Gorge Highway after midnight. Perhaps the same is true of lava caves.

There are characteristic facts about these buried lava stream beds. The floor is fairly level; the walls usually lean outward from the center; the roof is low-arched, almost flat; the floor is rough and ropy while the walls are smooth, ribbed like washboards; the caverns are from twenty to forty feet high and wide; the length, direction, and shape of each cavern is modified by the "relief map" of the ground before the lava flow.

It is rather startling when driving the highways of the lava cave district to hear, unexpectedly, internal rumblings. You know, naturally, that the ominous reverberations come from the passing of the car over the hollow chambers beneath. But some of the sounds almost impel a different interpretation. They seem the signal of an internal uprising, the renewal of throes of volcanism. No hollow sounds are ever conducive to lightness of spirit. Ever and anon comes the thought that a cavern that easily reverberates might just as easily cave in beneath you. At least you resolve gen-

erously to let the other fellow drive the heavily-laden truck over all sonant concavities.

Among these lava caves are some that retain ice in the summertime. Certain conditions must obtain before ice caves are possible. The cavern must be near enough to the surface to freeze in winter. There must be a seepage of water. Still the cavern, while exposed to cold weather, must be sufficiently protected from summer heat to prevent sudden melting. A mere man would be confused were he to endeavor artificially to create such ice reservoirs. But nature's experimentation is upon so grandiose a scale that she produces many marvels. One of these, a most grateful relief after a hot, dusty trail, is the cold breath from a cavernous refrigeratory.

The lavas of Mount Adams are mostly basaltic, although there is some andecite which usually breaks up in wide, thin slabs. The basalt is black and is not shot with steam holes. It has been broken up, on the upper slopes, by extreme temperature, and by the action of glaciers. The fractures are still angular, and because they are not rounded off, the rocks upon the summit route are held firmly in place. This makes them easy to climb. For nearly 4,000 feet altitude below the false summit they are piled, steeply and firmly, in immense cleavers that give as safe and easy going as a rock stairway.

These rock fragments are more than average in size, some of them weighing tons. They are not so comfortable for descent, for the added momentum of down traveling makes many of the steps too long for safety. Most parties take to the snowfields, which are uncrevassed on the southern slopes, and glissade right merrily more than three miles from summit to climbing camp.

Sometimes an absurdity is more expressive of fact than sober, dignified statement. The rock cleavers of broken basalt, on the south side of Adams are so big and the rocks so beyond estimate in number that they impressed a certain climber to the point of dejection. He gazed sadly up the mountain, gauging the rocky path that he had left behind, and observed solemnly, "When I am an old man, too far gone to climb any more mountains, when I want a routine job that will last me all the rest of my natural life, I'll apply for the position of official rock counter on Mount Adams."

Because of the unweathered harshness of Adams' slopes, which

carry barren rock so much farther down the mountain than does Rainier, the run-off of water is rapid. On all snow mountains there is a noticeable swelling of streams during the mid-day hours of summer. Melting is rapid, the snowfield reduction often exceeding twelve inches a day at altitudes of 5,000 to 6,000 feet. On Adams there is little or no soil, or pumice, or even coarsely ground rock, to hold the water back.

It is always a joy to initiate the stranger into the mystery of Morrison Creek, at a little less than 5,000 feet elevation. On the drive in from Guler it must be mentioned to him that the creek is a roaring torrent of drinking water, cold off the glaciers. The arrival at that point is usually early in the afternoon. The unwary visitor rushes to the rocky stream bed and finds it bone-dry. He spoofs you about your beautiful mountain torrent. You remark casually, "Oh well, it'll be along about 3:30!"

Then at 3:30 or a little later, depending upon the melting proclivities of the weather, there will be a murmur in the upper forest that soon deepens into a roar. Morrison Creek has arrived for the day. It runs strongly far into the night, and then turns off the torrent until another day.

Dark red, in a box canyon, always gives it an emotional tone that savors of solemnity or of limitless force. The effect upon your feelings at Mount Rainier comes more from glaciers than from rocks. The glaciers of Mount Adams, while important, do not measure up with its rocky gorges in strong effects. Dean Landes says, "The glaciers on Adams look like pigmies when compared with those on Rainier, or even on Baker." True, the Klickitat and the Rusk Glaciers on Adams sort of make this look like overstatement, yet it is truth. But the dark red and dismal green gorges of Adams lift the average of feeling to the level of Rainier or of any other mountain. Especially is this true when you have lost your way among the titanic jumbles of rock masses below the snowfields.

Both volcanism and vulcanism are words in good usage. To me, "vulcanism" is more useable for scientific description of processes, while "volcanism" more typifies the forging and rending, the scorching and blasting of great mountain spaces. Perhaps this is a distinction without a difference, but the south and east mountain base regions of Adams are the result of pure and un-

adulterated and unbridled volcanism. There is more than a volley, rather a broadside, a whole fleet salute in those thunderous scenes. Even in hours of mountain silence, your thoughts will wing back to darkened skies and to unleashed demons of destruction.

CHAPTER THREE

The Patriciate Circle of Mount Adams

THE MOST NOBLE CIRCUIT of Mount Adams is at altitudes varying from 5,000 to 7,000 feet. Mountains differ in their feature regions. Olympus never, so far as I know, has been encircled in one continuous trip. When this is done, the best trail will include a high upthrust region rather than a single mountain. Garibaldi, like Olympus, is central in a showy area, rather than ultra-dominant. Baker, because of its splendid glaciers, is best absorbed well above the line of perpetual snow. Glacier Peak is central in what the United States has rightly designated as a recreational unit. It should be encircled widely through high adjacent passes. Rainier is most mighty at its cirque circuit between 8,000 and 10,000 feet. St. Helens will always alternate inveiglement with Spirit Lake. Hood offers its double gift in a high forest thoroughfare where the mountain is revealed through lofty trees, or, for the more strenuous, high glacier paths between cliffs and icefalls. Adams alone invites a practical encirclement through embattled box canyons and gorges.

A labyrinth of old Indian trails is found around Mount Adams. There are wide, succulent huckleberry fields that have lured these original Americans to annual pilgrimages for unrecorded generations. Just as the summit of Glacier Peak marks the boundary between the Mount Baker and the Snoqualmie National forests, so the summit of Mount Adams separates the Rainier from the Columbia National Forests. The Forestry Service has selected certain of these old Indian trails for patrol use and for yearly maintenance and improvement. It is possible now entirely to encircle Mount Adams upon these trails, leaving them daily for detours to higher altitudes for closer contact with the special scenes of the day.

For the first day we will start from Morrison Creek, at about 5,000 feet elevation, where there are shelter structures, camping conveniences, but at this time, no ranger or permanent lookout station. If you have entered the Adams country by automobile,

Morrison Creek is a perfect place to cache your car.

Perhaps it will be well to plunge at once into a zone of extreme volcanism. Macdonald Ridge, at 500 feet above camp, will reach half-barren lava in its first throes of tree production. Here century-old trees rise less than five feet, while they trail the lava for three times their height, fighting poor nutrition and prevailing high winds. At 7,500 feet all vegetation ceases and we press upward upon raw lava. At about 10,000 elevation, Macdonald Ridge reaches the place of its origin, where in geologic recency it was forced forth from the side of the Adams cone. There are at the top of the ridge, broad snowfields beneath the steep rock cleaver leading to the summit.

From this point we will take, by deliberate choice, a route that in 1930 I took by mistake. I had climbed the mountain and was on my way down. It was three in the afternoon and my climbing camp, just off the snow, below Macdonald Ridge, was less than an hour away. The weather was ideal, my physical comfort after a leisurely climb, complete, and my bump of caution reduced to a minimum. I made a wrong turn, to the right, west, off the Macdonald Ridge route. Within a hundred feet I realized the mistake and knew that I should climb back. But I decided, never having seen the diversified devil's dooryard below me, to clamber down a half-mile, and then to traverse to Macdonald Ridge. I made the camp five hours later, after topping four immense rock ridges, two of them demanding much maneuvering and acrobatic climbing, a half-hour after darkness had fallen. By that hundred feet off direction and a half-mile descent, I had let myself in for four extra hours of punishment by uncertainties in a strange domain and by worry about an elusive camp destination. The puny telephone wire on Macdonald Ridge, west of and above camp, was, in the gathering darkness, a golden thread of light.

This incident, not really a serious situation as mountain crises go, is introduced for a purpose. Nothing is easier to lose than a mountain trail. Upon a mountain the slightest change of direction substitutes a radius that, at the base, is certain to be miles out of line. Worse, if the climber is not experienced, the tendency toward panic is almost irresistible. Some abandon the level of a traverse, and rush down slope, putting more and more miles behind them. Others climb everything in sight, choose new and

worse directions, and some lose themselves hopelessly. If lost, sit down and reason with the aid of every check you can muster. If hopelessly lost, follow a stream down to a habitation.

Just a word further, a proof by exaggeration. At the North Pole you face south, for there is one direction only, not counting up and down. A step in one direction starts you for Cape Town, Africa; in another, Rio de Janeiro; in still another, Mauch Chunk, Pennsylvania.

Instead of taking that traverse, east of Macdonald Ridge, we will traverse west, above the "Devil's Dooryard." (This is my personal name for it, abusively conceived.) Looming above is the southeast shoulder of the main peak, too steep for snow, avalanching rock, too dangerously decomposed to climb. Below is Avalanche Glacier, darkened by debris from the summit slides and rock avalanches. Beyond Avalanche Glacier is Madcat Meadows, and between are reddish rock ridges, reddish bench lakes, and a riotously rough maze of rock protuberances that are the antithesis of orderly. This southwest face of Mount Adams is a rude, untamable bailiwick. I wonder about the name Madcat Meadows. Perhaps an inoffensive pussy got lost on the reddish rocks around Avalanche Glacier and turned mad.

We will continue west past Avalanche Glacier, over White Salmon Glacier between The Bumper, 6,470 feet, and The Hump, 6,584 feet, to Lake Camp Lookout Station of the Columbia National Forest. This will be our first camp for the encircling traverse.

From Lake Camp the steep precipices of the gigantic west side buttresses are completely in view. The northwest shoulder, like the Macdonald Ridge formation, comes from lava flows squeezed from the slopes below the summit. It is, however, much higher than the south buttress, almost like a separate peak, joined by growth. It would be wonderfully interesting to see both a vertical and horizontal cross-section of Mount Adams, to show its entire lava piping system. How easy it would be, then, to check with the compound massif as it now stands, and to say "I told you so!"

The western slopes of Mount Adams are unstable. In 1921 a great slide originated about one thousand feet below the summit, over the head of the White Salmon Glacier. For its first hundreds

of feet of avalanching it was narrowed by rock walls. When it escaped lower down it spread inclusively over White Salmon and Avalanche Glaciers, gathering momentum and volume. It swept downward a full mile vertically and included nearly 6,000 acres in its destructive sweep. Canyons were filled; levels became hills; a forest was uprooted and its trees were ground to splinters; most peculiar dirt-covered cones of ice were lathed out; a whole mountain face was altered. This, too, is but one of many catastrophies that may be observed on the long, insecure west side.

The northwest Adams Glacier is more snowy than any other on the mountain. And why not? It is the most protected of any from the rays of the sun, and it has the twin advantages of summit feeding and exposure to wind deposit of snow from the northwest. This glacier has the added distinction of being climbable from both sides. The north end route lies between it and the Lava Glacier. The peak is possible to small parties on the profound cirques and steeps of the west, in the vicinity of the Adams and the Pinnacle Glaciers. The sweep of the Pinnacle Glacier, directly west from the middle summit, is interrupted by a high peak with an altitude of 7,320 feet, beyond it, west. It is possible to make the Adams summit upon the rock shoulders massed in the west near the Adams Glacier.

On August 6, 1924, Fred W. Stadter, John Scott, and Lindsley Ross made the first ascent of the west side of Mount Adams. They climbed the lower Adams Glacier to a precarious bridge, where the ice falls of the Adams Glacier block the way and force the route to the arête between the Adams and the Pinnacle Glaciers. The arête to the summit was "easy but sensational." Stadter reports that "at one time that whole portion of the mountain * * seemed to be on the move." At 10,000 feet where this "moving" happened, Stadter and Ross "hovered under the protecting boulder" while an avalanche of angular rocks and flat slabs dashed over their heads. Scott was above when this happened. At the top ice cap they turned south and by cutting steps in the two-hundred-foot ice wall made the upper field and the summit. This west side climb should be undertaken only by small parties of skillful climbers. A full account of this daring climb may be found in Mazama, 1924.

Divide Camp, another Lookout Station, might be a good stop-

ping place for the second day. It is below the Adams Glacier, at the north edge of an interesting lava field. Miles are unimportant upon a traverse, and there is a wealth of exploring and of view-taking offered on the rugged west side of Mount Adams. This second, should be a long day of short miles and of high climbing or lingering.

The third day will sweep past the north end of Mount Adams, to Red Butte, which stands on the high range path that leads straight north to Goat Rocks, Cowlitz Pass, and Mount Rainier. Beyond Red Butte the trail swings south to Goat Butte, an ornate cliff-contoured peak that is both decorative and useful.

Profound changes may occur suddenly in mountain regions. We observed that merely by crossing Elwha River near Mount Olympus we were led from dense Western Washington forest to Elwha Basin, a typical sub-alpine meadow. This transition takes place in less than a hundred feet. Almost as abruptly between Killen Creek and Red Butte come changes in topography and vegetation that differentiate Western from Eastern Washington. The Alpine firs and hemlock of Killen Creek are replaced by juniper and white pine. Extreme erosion from heavy rainfall fades out in less than a half mile. Near Red Butte, black formations show minimum weather markings. Wet climate has changed to dry climate, lush grass to sparse grass, moist soil to sand.

Goat Butte stands at 7,487 feet, with a distinctiveness that makes it ideal both for triangulation use and for boundary marking. It is the western, obtuse angle point of the Yakima Indian Reservation. Then too, Goat Butte is really the beginning of what C. E. Rusk sets apart as "The Great East Side." It is mere justice that a most dynamic glacier, directly between Goat Butte and the summit, has been named and accepted on all maps as Rusk Glacier. The southern exposure of Goat Butte is a yellow castle cliff. The predominant color, however, is that dark, threatening red that seems to give the key-note to the Mount Adams cliff and gorge paeans, to the mountain's non-metrical chants, its canticles of chaos.

Avalanche Valley, just south of Goat Butte, will be our camping ground for the end of the third day. It is the approach vantage point for visits to the "incomparable eastern side, the superfeature of Mount Adams, the thing that makes it truly great and

places it in the front rank of the grand mountains of the earth." Again we have quoted C. E. Rusk, who tells us further that this eastern arena has "three tremendous ridges, two great canyons, and four big glaciers." Of the avalanches seen from Avalanche Valley, Rusk observes potently that, "On most snow peaks avalanches are a diversion; on Mount Adams they are a business," and later that, "One visiting the east side of Mount Adams may be absolutely sure of seeing several avalanches any summer's day. This certainty is one of the things that makes the mountain unique."

The most impressive lesser climb upon Mount Adams is from Avalanche Valley, up Battlement Ridge to 10,000 feet. Battlement Ridge divides the eastern face to an elevation of 11,500 feet where The Castle, a towered dome, stands valiantly, like Gibraltar Rock on Mount Rainier, against the onslaughts of the snow-walled summit. A break in the backbone of the ridge stops the climber at 10,000 feet. But he feels that he is high enough anyhow. The ridge has narrowed to a good foothold. Rocks, jarred loose, thunder, south, for 2,000 feet to the Klickitat Glacier, and north, a thousand feet to the Rusk Glacier. The chances are that while they are doing this, an opulent avalanche is pouring over the giant drops of the Klickitat Glacier cirque, and is being ground to frozen dust as it plunges for more thousands of feet into the depths. And while the rocks roar and the avalanches pour, the mountain walls tower far above with aggressive colorings of green and red, red and yellow, and red and gray and black.

As this highly dramatic crest of Battlement Ridge was pioneered, many years ago, by Rusk, and is most personal to him we will ask him to describe his own Rusk Glacier which was, at the time he wrote, still unnamed:

"The glacier north of Battlement Ridge [now Rusk Glacier] rises to a higher level than the Klickitat and does not lie in so deep a gorge. It has a very rapid descent and is broken by tremendous crevasses. Its upper end is overhung by the highest absolutely perpendicular precipes on the mountain."

In August, 1931, C. E. Rusk led six companions on a first east-side ascent of Mount Adams by the way of the Rusk Glacier and The Castle. The climb was hard and dangerous. Edgar E. Coursen, of The Mazamas, an authority on difficult climbing in

the Northwest, writes this estimate: "Hitherto I have considered Shuksan, Jefferson, and Prouty Peak of the North Sister (near McKenzie Pass, central Oregon Cascades), our three hardest snow-peaks to climb, but now I believe Mount Adams from the east is the worst of them all." Coursen should know, for he climbed with Rusk on the first ascent, and he has climbed the other three. Incidentally, when I made the ascent of Shuksan in 1916, Coursen was the first man on top. So, knowing Coursen, if not the east ascent of Adams, I must add that only expert climbers should attempt it.

C. E. Rusk died at Grants Pass, Oregon, February 2, 1931. A last request was honored by the mountain club that he had formed, "The Cascadians" of Yakima, Washington. On July 27, 1932, Clarence Truitt and Clarence Starcher carried an urn that contained the ashes of the beloved founder and fellow member of their club to the small, level plateau at the top of "The Castle" which holds high watch over Rusk Glacier on Rusk's "Great East Side" of Mount Adams. From this exalted eyrie, 10,000 feet above the drab level of the sea, the spirit of this great Western mountaineer may stand eternal sentry-go over the scenes that he pioneered and loved.

The Klickitat Glacier, next south upon the traverse, may be seen to advantage from the summit field. As you peer over the brink you see the head of the glacier far below. From a rock ledge view point, you enrich your grasp of Klickitat's startling precipices, and wonder at its mighty bergschrunds where deep snowfields split away from upper rock walls that are decorated by giant icicles. Later, from the upper end of the Ridge of Wonders, you reverse this view and look into the very vitals of the mountain "where broken ice hangs around red cliffs that drop their sands like blood on the frozen white cascades."

The Ridge of Wonders is named The Island upon Forestry Service maps. It is a resistant upthrust that blocks the flaring end of Klickitat Glacier and turns its natural drainage north where its dirt-filled waters roar out through the Big Muddy. The upper end of the Ridge of Wonders, as mentioned above, thrusts forward until it overlooks the destructive cirque of Klickitat Glacier where we find "The heart of a mountain laid bare." On the lower end, east, is Little Mount Adams, a parasitic cone with a perfect crater, 6,815 feet high. Red Butte, passed at the north end, has

also a perfect crater rim, demonstrating again the multiple venting of the Mount Adams region.

A. H. Denman, an inspired amateur photographer of The Mountaineers, has given enthusiastic attention to the Ridge of Wonders. It was he who called attention to the "red cliffs that drop their sands like blood" upon the Klickitat. His final estimate of the Wonders perspective is as follows:

> "In some places the view is unbroken from the névé fields of the summit, where the (Klickitat) glacier breaks away in avalanches, down its less precipitous sweep and on to where it gathers its waters and sends them a turbulent stream roaring down the rocky canyon."

West of the Ridge of Wonders, bordering the Klickitat which is north, is the Mazama Glacier. It is upon the southeast flank of the mountain. It plunges off into Hell-Roaring Canyon. This canyon, despite its deserved name, is broad, with lakes, waterfalls, and park-lands. From Hell-Roaring Canyon to South Butte, above Happy Valley, are great, ridge-like moraines of the Mazama Glacier shutting off views of the massif of the mountain from dwellers within Happy Valley. Those who are not "doplicht" prefer this easiest ascent to the summit upon the radius from a Happy Valley camp, our fourth on the mountain circle.

On the fifth day, from Happy Valley, over Mazama Glacier, between Klickitat Glacier and Macdonald Ridge, should come the final feature of the traverse, the ascent to the summit fields of Mount Adams. After the climb, the few final miles through the forest, past Cold Spring camp, will complete the circle back to Morrison Creek. Allowing an extra day for exploration upon Battlement Ridge and a lazy day for rest you will have given to Mount Adams a week of your life—while to you, Mount Adams will have given memories that will endure to the end of your trail over that great traverse called life.

Mount Hood in Winter. *Everett A. Philpoe*

Part Nine
Mount Hood
(*Wiyeast*)

CHAPTER ONE

Early Mount Hood and the Oregon Trail

IN THE DAYS OF DISCOVERY in the Pacific Northwest the "Great River of the West" was hard to find. The earlier explorers left promises of its existence but no certainty that it actually would be found. The log of George Vancouver records his belief that no such river was extant. It is a monument to his rugged honesty that he did not change his entry after he found the real facts, for it would have been easy when he published his journal several years later, to have ignored his log and to have appeared all-wise.

Instead, after missing the mouth of the river at its once elusive Bar, he sailed north, hailed the ship of Robert Gray, and received definite information that the "Mighty Oregon" did cleave its eternal way to the waters of the Pacific. After this historic meeting Gray sailed back, entered the river, and named it Columbia. While he sailed some distance up stream he did not leave record of moment regarding the Cascade Range.

Vancouver explored Puget Sound, threaded his way north, found the passages to the Pacific, and sailed south to Nootka on the west coast of Vancouver Island where he met Quadra, the great and noble Spaniard who became his devoted friend. When he had finished his mission, remembering the river, he again sailed south to explore it.

He sent Lieutenant Broughton with the smaller boat of his squadron across the bar and up the Columbia. Broughton sailed beyond the limits of the Gray exploration into virgin water lanes. It is not fully determined by the historian how far Broughton did sail up the Columbia, but this is to us merely a minor, although an interesting, problem of research. We do know that Broughton approached the vicinity of the Cascades of the Columbia and that a noble mountain loomed up before him. He named it *Mount Hood* after Lord Samuel Hood of the British Admiralty.

Lieutenant Broughton had selected a worthy sponsor for this most historic, most visited Guardian of the Columbia. To

Broughton, Lord Hood, who had signed the orders for the world exploration of Vancouver, was the "Greatest of the Great," and of the mountain so honored, the enthusiastic Lieutenant waxed eloquent with words describing it as "rising beautifully conspicuous."

Some of those who have not appraised the career of Lord Hood have entered snap judgment that the name is not worthy of the mountain. It behooves us, then, to try to bring the merits of the man and the mountain together.

Lord Hood's career is one of England's most cherished memories. He was born December 12, 1724. At seventeen years of age he entered the British Navy as "Captain's Servant." He rose rapidly to the rank of Rear Admiral. As such, he trained Lord Nelson, who served under him as a captain in his fleet, and thus enabled Nelson to become the savior of England. In 1767, when England scotched the Indian menace to her colonies in America and took away the threat of a hostile Canada, Lord Hood was Commander in Chief in North America. He signed the original instructions for the Vancouver voyages. In this he served the Pacific Northwest right well, for Vancouver's exact, judicious work focused the attention of the whole world upon us and hastened the days of settlement. It is but fitting, then, that so noble a mountain in the Pacific Northwest should honor Hood forever.

In October, 1792, Mount Hood was named. Fourteen years later came Lewis and Clark. The journal of Lewis and Clark makes Thursday, April 3, 1806, an important date. The entries were made near the mouth of the Willamette River and they record many items of interest. St. Helens is mentioned; Mount Adams was discovered but not named; Mount Hood was placed as bearing due east; Mount Jefferson, a snowy volcano of the first magnitude, south of Mount Hood, was discovered and named. Thus, in 1806, the second group of white men in history saw the three "Guardians of the Columbia," St. Helens, Adams and Hood.

A few years ago T. Raymond Conway, one of the most enthusiastic explorers of the Mount Hood environs, showed me in the foothills a well-marked section of the "Old Oregon Trail." Never were landmarks more legible or more impressive. The trail

itself had been deeply rutted by running water and the ground marks left by those sturdy old-timers were gone. But there were worn grooves in trees where ropes had snubbed the ancient covered wagon, the "Prairie Schooner," over the cliff! To this day, searchers may discover a spoke from an old wagon wheel, or a discarded hub, or a bit of other gear, mute reminders of the tribulations so gallantly overcome by our resourceful forbears.

Mount Hood, then, is the most personal mountain in the Cascade Range. Vancouver sent his side expedition up the Columbia River toward it. Lewis and Clark passed down the Columbia River, thirty miles away, just beyond Hood's northern base. It is the central marker of the Cascade Range which sweeps north through Washington into Canada, and south through Oregon to California. Near Mount Hood are the Cascades of the Columbia, which gave the far-flung range its name. But most personal of all and most significant, the Oregon Trail flowed around this unique and most lovable mountain, both north of it down the Columbia River, and south of it by trail and road.

Any man who is coldly critical or unemotional toward the pioneer, is untaught in one of the finest things of life, gratitude and appreciation for those who have paved the way toward our days with their high opportunities of complete living. It is so natural, when we allow ourselves to give it attention and time, to dream back to those glorious old days of trackless, mapless solitudes; to those hours of courageous toil toward an unknown destination; to those problems of survival in spite of rude tools of travel and meagre equipment; to the exalted moments of discovery!

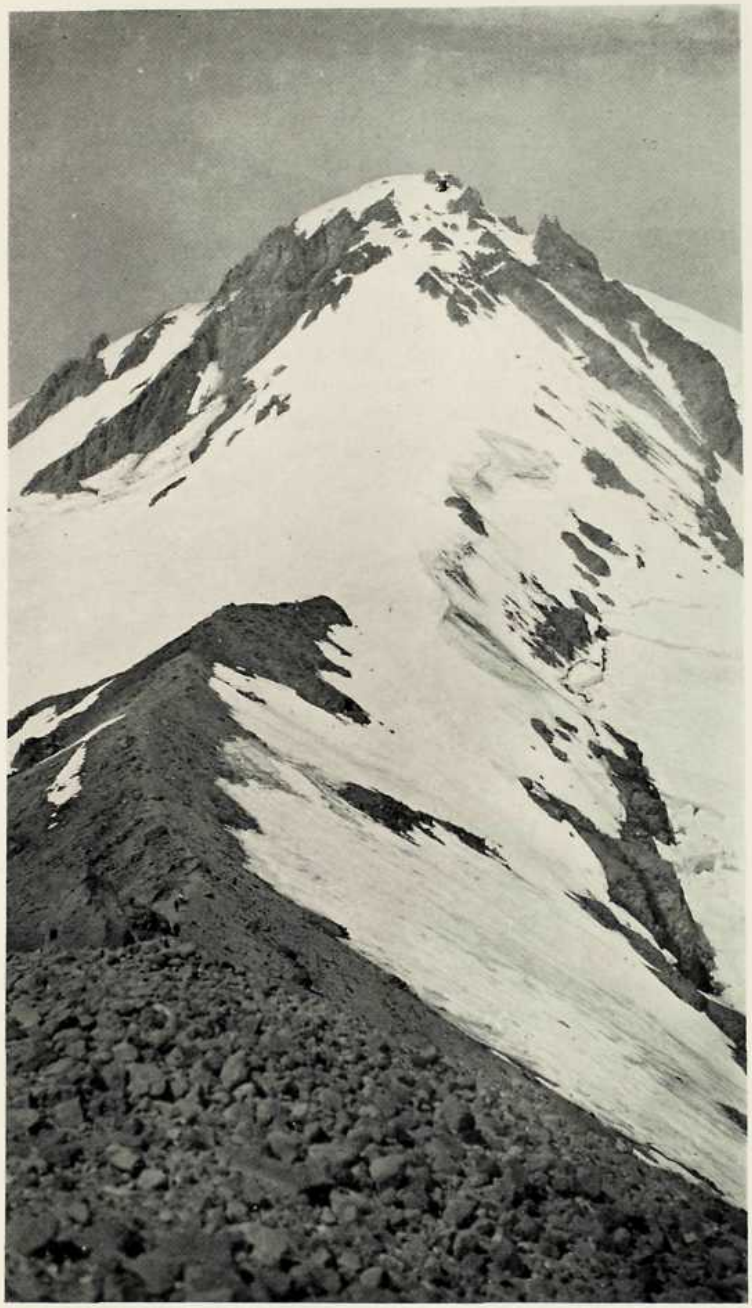
Quadra, the brave, warm-hearted Spaniard, who sailed the lonely Pacific past stormy Flattery to Nootka to meet George Vancouver in friendly negotiation, will illustrate the chances met and conquered by these grand old men of the romantic past. His stalwart "ship" was all of eight feet deep, twelve feet wide, and thirty-six feet long. We, the creatures of the effete present, would hardly chance a hard blow in Hood Canal in a craft of that size. But Quadra thought nothing of heading boldly toward the north Pacific, chancing all. And in those days, tales of cannibal Indians and of strange, gigantic animals, ferociously rampant on both land and sea, were rife, as incidental preparation for any venture

into unknown seas. A second journal of the Vancouver explorations by an unknown member of the expedition, published in 1916 by Doctor Edmond S. Meany, tells a gruesome story of a partly eaten white boy near Nootka, enumerating morbidly the parts eaten. The facts that such a painstaking effort was made to prove cannibalism by the early Indians of the Northwest, tends to prove just the opposite. If a thing so horrible needed so much agony about proving it, it was probably even more "exaggerated" than that historically premature death of Mark Twain. Vancouver, himself, the leader, believed the Nootka Indians "not altogether deserving such a character."* Still, all this goes to prove that a trip even to a majestic mountain in the days of long ago gave forebodings of a lot more than flowers and skis and the wild joys of glissading!

From 1806 until 1845 there is little recorded history of Mount Hood. Few of the nomads of pre-settlement days had time or inclination or literary ambition to halt and write something down. They were, if nothing else, entirely too busy just then to think about it. Even so, there must be personal letters, private essays, unheralded dramas stored away as priceless heirlooms, in family archives. It is a duty to the rest of us, who are not so blessed, that these monographs should come to light. The more unstudied they are, the better. Do not fear the seeming use of the hyperbole, for we do not see how "It micht 'a bin warse." Historians, historical societies, libraries will welcome originals, or even authentic copies of these unheeded treasures.

Now comes something startling. There were, even in 1845, ruthless profiteers as well as prophets. Joel Palmer, who had been a member of the Indiana legislature, arrived at The Dalles. He discovered that the "bateaux and other river boats" were in the hands of the "Intelligent Few" of those days, and that prices were prohibitive. He decided to find a pass over the Cascade Range to the Willamette Valley. From Palmer's first work came later, the next year, 1846, the Barlow Road. The provisional government, in 1848, chartered Barlow Road and authorized the collection of moderate tolls. Immigration increased, became a

*Mount Rainier, by Edmond S. Meany. The Macmillan Company, Page 5.



Margaret W. Hazard

Mount Hood. Cooper Spur is the rock ridge in the foreground.
The 2,200-foot rope is used from upper center to the summit.

migration, and the Willamette Valley was settled through this pioneer thoroughfare.

Joel Palmer was not merely the first crusader against the "Interests" in Oregon—he was Oregon's first mountain climber.

In 1920, The Mazamas published a choice little book entitled *Oregon Out of Doors*. Its contents were limited to Mount Hood, the home mountain of the organization. It was so closely edited that its findings are authentic. It is my source of information and my basis of judgment of fact wherever anything controversial is encountered. It happens that pioneers were as human as we moderns. There were those who were sticklers for fact and there were, alas, those who "Drew a long bow." Fortunately, the first Oregon mountain climber was strictly truthful, a man of "force and education," who had been honored in Indiana public life, and who, later, "rose to prominence in Oregon."

Joel Palmer, on October 12, 1845, was scouting ahead of a cattle and wagon train from The Dalles. He reached a spot near what is now Government Camp, the popular southern mountain headquarters. His decision to climb the mountain, made that day, was utilitarian as well as sporting. He wanted a birds-eye view of the passes and of the best routes west. Two men, who climbed with him, fell behind, and "quit altogether" when Palmer began to cut ice steps in ZigZag Glacier. He delayed not at all for his moccasins gave out and his feet were bare upon the icy glacier. Like a worthy pioneer he kept on until he did what he had started out to do. He made three-fourths of the distance to Illumination Rock on the upper fields, and caught the position of the pass between the Clackamas and the Big Sandy rivers. He made a rapid descent, "affrighted only by some crevasses," ate "whortleberries" (huckleberries), and made twenty-five miles back to camp. He told the truth about this first attempted ascent, and is rewarded by having had extended to him the friendly hand of history.

Later, Joel Palmer became His Excellency, General Palmer, the Superintendent of Indian Affairs for Oregon. If his trail finding and early ambition for high places are any criterion he fully deserved the position of trust, responsibility, and authority that fell to his lot.

On August 4, 1854, T. J. Dryer, who made the first ascent of

Mount St. Helens in 1853, the year before, left Portland to climb Mount Hood. He was not so fortunate on Hood as he had been on St. Helens. He picked the wrong route, one that could not have landed him higher than Steel Cliff. He followed a fantastic method of estimating the altitude. It is almost unbelievable today, but the fact remains that Dryer did these things:

First: He took "data" on the average thickness of snow on various volcanic peaks by seasons, elevations, and latitudes.

Second: He took the barometric height of his camp and the average thickness of the snow.

Third: With these facts, the latitude, the records of Baron von Humboldt, and a clinometer, he "calculated" Mount Hood to be 18,361 feet high (Its elevation is 11,225).

Still worse is yet to come!

In October, 1854, a man who was written into the accounts of the day as "Mr. Belden," tried to climb the mountain. He found Mount Hood to be 19,400 feet high! The account of the Belden alleged ascent, written by Richard Joseph Grace in *Oregon Out of Doors*, could not be improved. He gives us this account, quoted from the Belden write-up, with comment added:

" 'They ascended as high as they could travel, first with snow shoes, then with *ice-hooks* and *spikes*. When they had reached a point some 18,000 feet high, respiration became very difficult, owing to the rarity of the atmosphere. At length, the blood began to ooze through the pores of the skin like drops of sweat, their eyes began to bleed, then the blood rushed from their ears.' Mr. Will G. Steel's comment on the story of this gory ascent is sufficient, viz.: 'Mr. Beldon's first name is not given, but it probably was Ananias.' "

On July 11, 1857, Henry L. Pittock, W. Lyman Chittenden, James G. Deardorff, William Buckley, and Professor L. J. Powell, climbed successfully to the top of Mount Hood. They reported that Dryer had not made it. Dryer retaliated with "doggerel poetry" in his paper, *The Oregonian*, berating the Pittock party. Three years later, 1860, Dryer lost *The Oregonian* to Pittock in a settlement of debts. History has paid another debt to Henry L. Pittock by acclaiming him the leader of the first party ever to stand upon the highest point of this most faithful "Guardian of the Columbia." It may be repeated that Mount Hood

seems still to be our most human mountain—what with gory struggles, unsubstantiated claims, and final just rewards!

How many times have we heard of certain myths that have attached themselves to mountain climbing! Two of them, entirely unwarranted by facts, are "nosebleed" at altitude, and "so steep I had to crawl on my hands and knees." No one has nosebleed on a mountain who does not have it at sea level. Exertion at altitude is no more gory than corresponding exertion at low levels. And those who know climbing laugh at that "hands and knees" business. Just abandon your tripod support, your two boots with their calks, tricunis, or crampons, and your alpenstock or iceax, upon a steep slope of ice or snow, and try it! As soon as you go to your hands and knees, you will shoot off into space—or into a crevasse—like a bat from the inferno. Our mountains have been, long enough, the victims of buncombe and fanfaronade!

Scientific observers have contributed generously to the vital statistics of Mount Hood. In 1867 Colonel R. S. Williamson established its height at 11,225 feet. Professor G. H. Collier verified this altitude in 1870. His calculation showed a difference of seven feet only. In 1907, A. H. Sylvester, surveying for the United States Geological Survey, again checked it. It still remains at 11,225, a tribute to the scientific accuracy of Williamson in 1867. Sylvester also found that Hood stood at Latitude 45° 22′ 26″ and Longitude 121° 41′ 42″ West. He estimated that the run-off of water from Mount Hood was 450 second feet, or 337,500 gallons per minute. Botanists have listed and described the mountain's flowers; naturalists, its animals and birds; foresters, its trees. All these things have been contributed quietly, cheerfully, and without price or stinted measure.

CHAPTER TWO

The Mountain Goes Modern

THE AIRLINE DISTANCE from Portland, Oregon, to Mount Hood is a little less than fifty miles. Portland is less than one hundred feet above sea level, while Hood is 11,225. At no other place in this country is so big a snow mountain within fifty miles of a city of over 300,000 people. Portland has no snow—except every few years by a short slip of "unusual weather." Mount Hood has eternal snow. The paved highway from Portland stretches two-thirds of the way to Mount Hood, and the other third is wide, and beautifully surfaced. The highway is almost straight, 57.5 miles only to Government Camp at 4,000 feet upon the south shoulder of Mount Hood. It is kept open three hundred sixty-five days of the year. Do you wonder, then, that Mount Hood has gone modern?

The sharp, showy mountain looming up so high, almost ten thousand feet, above its foothills, is always a temptation toward the dramatic to the good people of Portland. It has become a patriotic duty, whenever the clouds permit, to illuminate the summit of Hood on the night of July 4. Perry A. Vickers tried it first in 1870. But he used a mere bonfire and it was not visible from Portland. In 1877 some folks from The Dalles attempted to use "light, inflammable material" and did not succeed. Portland experimenters tried it next in 1885 with a clock-trigger "infernal machine." The clock betrayed them and burned the red fire in the glare of afternoon. So far, all we can say is that the intentions were good.

July 4, 1887—success!

Will G. Steel, author and publisher of *Steel Points*, took one hundred pounds of red fire and six companions to the mountain. They picked out a part of the old crater rim of the summit, ever since called Illumination Rock, cached the potential beacon, and waited for night. Steel sent his friends down to a more comfortable place of waiting while he stayed up there with one companion to set things off. Night came upon the mountain and with

it came marrow-searching cold. Steel had kept Dr. J. M. Keene with him, either for company or for professional help. *Oregon Out of Doors* says that "the two men passed chilly, doleful hours such as only mountaineers can appreciate." At 9:30 p.m. they saw the glare of fireworks from Portland to Prinevelle and took heart. The night was right. At 11:30 p.m., the appointed time, they pulled the trigger. The ferocious glare lasted fifty-eight seconds, and was "seen everywhere." It even cast a news glow upon the *Oregonian*, the "country press," and "eastern papers and magazines."

The cliff opposite Illumination Rock, a southeast shoulder of the crater, is named Steel Cliff.

In the days following the Oregon Trail, Mount Hood had ceased being a wagon-train obstruction and had become a blessing. Still, there was no organized way to the mountain for those who were unskilled in mountain technique. Hood was too big to come to the men and women of Portland, so some way had to be devised to take these men and women to the mountain.

Discussion began in the winter time, the winter of 1893-1894. On March 12, 1894, a first meeting was held by five men, C. H. Sholes, J. Francis Drake, F. C. Little, M. W. Gorman, and Will G. Steel. Forty people attended the second meeting, and adopted a plan that is beyond doubt the most unique and original that ever has been followed in the formation of similar organizations. *The Oregonian*, of June 12, displayed this announcement:

> "It has been decided to meet on the summit of Mount Hood on the 19th of next month (July) * * *. A typical mountain banquet will be served * *. The list of charter members will be limited to such as are then and there present, and no one will be permitted to join thereafter unless he or she has climbed to the summit of a snow-capped mountain acceptable to the club."

On July 19, 1894, one hundred fifty-five men and thirty-eight women, one hundred ninety-three enthusiasts, stood on the top of Mount Hood and became charter members of "Mazama," a mountaineering organization that, ever since, has been one of outstanding accomplishment in America. Will G. Steel was elected as the first president of Mazama by the one hundred ninety-two friends and devotees who stood with him upon the summit.

The name Mazama is distinctive. It is the name of the Mountain Goat; the worthy American rival of the chamois of the Alps. Louis B. Akin suggested it, and M. W. Gorman was selected to write a report upon it. His report, exact and scientific, contained an approximate index of mountain grazers. Naturally, no predatory family was given consideration, for no mountain club is ever destructive of creatures or of the rights of others. Of the Haplocerus Montanus, the name Mazama was adjudged the most euphonious, and was adopted. Most critics agree that in the associated mountain clubs of the world, no name may be found that equals it. The value of the name, ever since, has been enhanced by the achievements of the passing thousands that have honored the Mazama organization.

Modern Mount Hood has not always allowed mere mortals to monopolize its fiery demonstrations. It is a volcano, subdued but smouldering:

1859, from *The Oregonian*, August 20:
"Wednesday last it became exceedingly hot about midday. * * In the evening occasional flashes of fire were seen, and on Thursday night fire was plainly visible. * * large mass on northwest side [Mount Hood] had disappeared and an immense quantity of snow on the south side was gone."

1859, September 18. W. F. Courtney drove cattle over the Barlow Road and reported that beginning at 1:30 a.m. he saw "intermittent column of fire issue from the crater for two hours."

1865, John Dever, Vancouver Barracks, wrote, on June 21: "Judge then of my surprise to see the top of Mount Hood enveloped in smoke and flames * * accompanied by discharges of what appeared to be fragments * * cast up at a considerable distance * * with a rumbling noise not unlike distant thunder."

1907, A. H. Sylvester, U. S. G. S., wrote an article, citing evidences, for the National Geographic Magazine entitled "Is Mount Hood Awakening?"

Mount Hood is awakening, but not as a volcano. There have been, in the last seventy-five years, some delayed operations, some finishing touches of vulcanism. Of course, it is always possible that a rearrangement of internal barriers and a concentra-

tion of forces in the plasma may bring a volcano back to life. If so, the chances are against a new vent occurring at the top of the present dome. The cooled plug is just that much thicker and stronger, so a release, if again forced, will have to come lower down, or in some entirely new place. The awakening of Mount Hood is the inevitable result of human geography. It is a grand peak, near a whole lot of interested human beings who have the good judgment to develop it as one of the outstanding playgrounds of benign mother earth.

Government Camp is nearly 4,000 feet high, on the south shoulder of the mountain. The highway has now been extended beyond Government Camp to timberline. Several hotels and resorts are maintained at the Camp, and a climbing camp is maintained above, at timberline. On every week-end, winter or summer, hundreds of visitors run out to Government Camp for rest or for observation of nature, or for mountain sports. There are snowshoes, skis, or toboggans, inversely in proportion to the age of the individual and the speed desired. In summer, where one party essayed the summit climb in the olden days, there is now just one after another.

Between Mount Hood and Portland, along the forest aisles of the highway, are hundreds of summer homes and shelters ranging from mansions to shacks. Withal, this "encumbering of the solitudes," this "making a roadhouse out of a mountain," so dreaded by the forerunner devotees, has left but a trace. The mountain is as serene as ever, and the forest as virgin. Less than a hundred-yard detour off trail or highway will erase every mark of the hand or foot of man. Nothing is spoiled or less primitive; while thousands are given thrilling entertainment, quickened physical and emotional life, and a breathless joy of living.

There have been several winter climbs of the mountain. It is, possibly, with most of those who revel in it, an indulgence in the spectacular and the sensational. Then, too, it is a ten-to-one bet against the weather—with the odds in favor of the weather. But, to be just, there are free souls who thrill to the bone-biting chill of a winter wind; to the stinging rebuke of a blizzard; to the pain and suffering of frost-blackened recoveries. Lives will be lost with an increase of winter mountain climbing. Let those who feel

impelled to indulge in it, measure the price and pay the penalties, as individuals.

This is no tirade against skiing at high altitudes by those who know how to use the ski. A skillful ski runner can beat a blizzard to camp any old day in the winter. That is not exposure climbing, where contact with base camp is deliberately abandoned. Skiing upon the side of a mountain is a legitimate sport, and one for the gods. The wise ski runner never takes chances with a storm. He turns down from its enveloping and bewildering blanket and swoops back to camp in minutes of running over the track of his hours of climbing. It should be remembered that all the doleful warnings of mountain dangers, summer or winter, are proferred to the ignorant, the reckless, and the over-confident; not to the sane, the skillful, and the truly self-sufficient disciples of strenuous sport.

Government Camp was known as Camp Creek as early as 1845. Joel Palmer climbed from a place near it. The Oregon Trail passed it. In 1849, Lieutenant William Frost took a regimental equipment train over the Cascades. He reached Mount Hood in October, and was forced to abandon several wagons until spring. Since then, Camp Creek has been Government Camp.

In recent winters there has been an introduction of tournaments at Government Camp. Ski contests are frequent, as there seldom is a day when conditions are not conducive to the sport of jumping. This combination of acrobatics and eagle soaring has passed in performance from C and B to Class A, as an attraction. The American public has awakened to it, and Oregon has discovered Mount Hood's peculiar qualifications for its highest expression. Perhaps the Paul Bunyans of the future will take off from the summit, jump at Government Camp, and telemark to a stop on the flat floor of the forest.

Cloud Cap Inn is on the opposite side of the mountain from Government Camp. It is also opposite in its attractions. Government Camp is open ground for the entertainment of the public. Cloud Cap Inn rests on a high shoulder, with the limited space for one hotel venture. The name Cloud Cap was a natural. The elevation, 5,500 feet, places that promontory in the middle path of the clouds. Sometimes they are high above the summit—which

Mount Hood from King's Heights, Portland, Oregon. *Ray Atkeson*

is so close over the Inn that it threatens to topple upon it. Again, they cap the top or cloak the slopes below. Frequently they engulf Cloud Cap Inn itself, and the rest of the world is made unreal, or is entirely blotted out by the thick mist blanket. The greatest cloud effects are, however, created when Cloud Cap Inn is above the clouds.

Such a scene may come at dawn. The level mist floor is roughened by wind currents that hurl cloud waves against Cloud Cap Ridge and dash surges against the mountain cliffs. Cloud castles, fashioned with weird architectural contortions, heave up and are dissolved into the engulfing sea. To the north, the cloud sea becomes quiet, with undulating billows that roll to horizon distance. Upon these horizons, floating in ethereal beauty, are Mount Adams, sixty miles, right; Mount Rainier, one hundred ten miles, right center; and Mount St. Helens, seventy miles, left. These three summits are entirely snow-covered, with erosions, scars, and blemishes erased by the concealment of flaring, canyoned base, and by the ennobling magic of distance.

Cloud Cap Inn was erected in 1889 by W. M. Ladd. It was necessary to complete a road to the hotel site, one that demanded skillful engineering. It never has been open in the winter time to full capacity, for Cloud Cap Inn is over fifteen hundred feet higher up the mountain than Government Camp, and is much farther from Portland. The highway distance from Portland to Hood River, on the Columbia River, is 68.4 miles; and from the city of Hood River to Cloud Cap, another twenty-five; ninety-three miles in all. The patronage, also, is more limited, for Cloud Cap Inn is not favorably situated for winter sports by large crowds, and the summit route is less suited to use by the general public. The big crowds will flock to Government Camp, for it is less than two hours from Portland, even in winter. Cloud Cap Inn will appeal to those who can ignore time and distance and who, by the same token, prefer the privacy of a more isolated resort home.

With all these differences, Cloud Cap Inn is a delight to all who visit it. No mountain inn is closer to the infinite detail of a steep mountain with glaciers. Four of these glaciers are within striking distance, and one of them, the Eliot, is right underfoot. Its blackened lower levels are between the Inn and the mountain

in a deep abyss. The higher, crevassed zone of the Eliot lifts to the level of the Inn across short, revealing distance. At the left, within easy reach, is Cooper Spur and the summit route. Perhaps one may give a clearer conception of the vantage of Cloud Cap Inn by comparing it to a magic carpet platform hovering over an active glacier, close in front of the 5,500-foot level of the steep, northern face of a high mountain. At no other mountain home in the Northwest is there such overpowering intimacy with a major mountain. If one becomes surfeited with this close-up, he has only to turn his attention west or north to substitute the sweep of the Columbia River Gorge, or the distant panoramas of Adams, St. Helens, and Rainier.

New structures have been added since the original one in 1889. In 1909, a Snow Shoe Club was incorporated and a Forest Service permit was secured. In 1910, Mark Weygandt, a mountain guide who represented the Club, erected a clubhouse forty feet long and twenty-four feet wide, "With a six-foot fireplace and a large, up-to-date cooking range." Since 1910, when this clubhouse was provided for a private club organization, the plan of use of Cloud Cap Inn has been expanded to include the general public. It is now an inn with a welcome for all.

Here is suggested a day's loop automobile trip from Portland. Your trip will cover less than two hundred miles. Starting in the early morning, the drive winds along the world-renowned Columbia River Gorge Highway to Hood River. Here it turns inland back of Mount Hood. At the northeast foothills a detour of a few miles will lead up a rugged ridge to its abrupt observation end, where you may have luncheon in the glass-encased dining room of Cloud Cap Inn, in full view of the mountain. The loop continues with vistas through the forest, south, past the east face of Hood. Finally you will arrive for an early dinner at one of several excellent dining rooms at Government Camp. After dinner you will drive to Portland down through the foothill forests, across the Sandy River, past a forest avenue of summer homes. You will reach Portland before dark; this amazing loop completed in a daylight day.

Gone are the days of Joel Palmer; of the Oregon Trail; of Barlow Road. You will have made, in part of a single day, a circuit that would have meant weeks of toil to the pathfinder.

Mount Hood has gone modern, but not completely. Plans are now rife for a "tram" from Cooper Spur to the top of the mountain. The time may come when we will tram up from Cloud Cap Inn and toboggan down to Government Camp. The mountain in all its glory, even then, will be as thrilling as in its days of silence.

CHAPTER THREE

Climbing Over the Mountain

In 1915, T. Raymond Conway led one large party of climbers to the summit of Mount Hood, from Government Camp, while at the same time Anne Dillinger led another ascent from Cooper Spur, near Cloud Cap Inn. Two hundred thirty-nine persons, that day, won the right to wear the "Summit Badge of Mazama."

The trip up one side of Mount Hood and down the other, gives about all the thrill one can absorb in a single day. The only thing it lacks in complete mountain experience is rock-cliff work. There is a chance of being introduced to plenty of individual rocks on the north side, if the date is after the middle of July, which is the danger line for large-party climbing from Cooper Spur. In the last half of July and all of August, loose rocks from summit cliffs and from crumbling cleavers may hurtle down at any moment during the melting hours of the day. Usually these rocks come a few at a time, and small parties of skillful climbers can dodge them. Dangers are multiplied, however, by an increase of numbers. But these rocks are not always just a few at a time. A rock barrage is mighty unpleasant, for it makes small difference whether you "zig" or "zag." Then, too, the slopes above Cooper Spur are steep enough to test the mettle of any climber. On the last half of the climb the snowfields steepen to a cornice. Any climber who has tried to dodge rocks on a forty-five or fifty-degree slope has had a beautiful opportunity to taste a throbbing heart.

On July 15, 1917, the Mazamas gave a mountain reception to the National Educational Association, which had just closed its annual meeting held that year at Portland, Oregon. A party of about one hundred people, from almost every state in the Union, boarded a special train for Hood River on July 14. Rail-autos took them to Parkdale. Motor trucks carried on—some of them by dint of much pushing by willing passengers—to the beginning of Sand Canyon Trail, two miles below a chosen camp-site. The ridge camp occupied that night was below Cooper Spur,

a mile and a half southeast of Cloud Cap Inn. The route to be followed was a direct one, with no loss of distance or of elevation.

The rising call, arousing many from their first bough-bed, was at 4 a.m. Breakfast was served in semi-darkness. Before starting, a brief lecture was given about eating snow, rolling rocks, and spoiling steps. Two are to this day cardinal sins upon a mountain, while the verdict regarding the other has been modified by later evidence.

Snow eating is not dangerous when practiced with restraint and good manners. Snow never should be gulped down or gobbled. Snow, melted in the mouth, warmed, and then swallowed, is a positive benefit in contrast with the punishment of thirst. The only drawback is that if snow eating is indulged to the limit, the mouth, inside, may be raw for many days, while the lips are almost certain to be painful and unsightly from fever blisters. After a few days of conditioning on mountain trails, thirst becomes a small problem; but until then, it is better to eat snow, properly, than to go without. People differ though. Some of us are super-heated climbers and eat snow always as an act of refrigeration. Others, who chill easily, do not react as favorably. At Camp Muir, after a climb of Mount Rainier, I can drink several cups of ice water with great gusto and with positive benefit, while others, equally experienced, would find such indulgence almost fatal. Each individual has his own chemical apparatus and his own reactions to food. Drinking cold water, or snow eating—which is by far the less precarious of the two—follows individual tastes and needs. Stefansson, in *The Friendly Arctic*, establishes the fact that there is no difficulty in quenching thirst by eating snow, once you have rid yourself of the curious superstition that snow-eating is dangerous. The English authority, Conway, in *Mountain Memories*, agrees with Stefansson.

Rolling rocks in a mountain region is a crime, if intentional, and a misdemeanor, if involuntary. Most people who chuck rocks over precipices to see them bound and gather momentum are either reckless or ignorant. They do not realize that there may be other people below, or that flowers, trees, or even animals may be destroyed, or that mountains tear themselves to pieces fast enough anyhow. The involuntary rock-hurlers should learn to be more careful. It is not so much a matter of weight as of skill

and attention. I have climbed Mount Rainier eighteen times with an average tonneau of two hundred twenty-five pounds, and I roll few rocks. One of the worst rock-rollers I have ever seen is a little, lean, lanky, and lugubrious person. He ought, by appearance, to lack the power to make a gravity impression upon a feather, but wherever he moves upon a rock slope, avalanches roar around him. Even upon level, gravelly footing, his feet brush and wobble. This awkwardness is unnecessary, too, for when you speak to him about it he does better.

Breaking steps upon a snow mountain destroys the trail for those immediately behind. In a line, climbing over snow, each person improves the step. Toward the end of the line, you lift yourself up a mountain as easily as though you were climbing a solid stairway. The best way to avoid breaking steps is to place the foot solidly in the step and then to lift with your weight equally distributed on all parts of the foot. Too much heel or toe pressure or back-swiping in leaving the step is the cause of most of the trouble. Breaking snow steps is not so serious a matter as is the rolling of rocks. Care is important though, for it means cooperation and consideration for the comfort of others.

The care taken of the eighty-three climbers, many of them on a mountain for the first time, on that 15th of July, 1917, by the Mazama leaders, has been an inspiration to me for years. There is many an unnoticed act of unselfish service, or deed of heroism in a mountain organization. Fortunately, because of the unselfish service of those Mazamas, there was no need that day of deeds of heroism. There were no accidents, for the day and the season were kindly, and everything was foreseen.

Recalling my experiences of July 15, 1917, as a Mazama guest, I am tempted to tell another Mazama story—the simple story of a rescue on Mount St. Helens.

In 1908, the members of a Mazama outing party were encamped at Spirit Lake. They were enjoying their evening campfire when a man staggered out of the forest. He told them that a companion with another companion watching over him, lay with a broken leg, at timberline on the opposite side of Mount St. Helens—the south side. Three loggers, the messenger and the other two, had climbed over the mountain the morning before. On the southern descent, a bounding rock had struck one of them

and had broken his leg. The two had dragged him down to timber and while one had watched the other had traversed the mountain to Spirit Lake for help.

Seven Mazamas started. They traveled all night and reached the injured worker before dawn. It was impossible to take the man out, south. The shortest, safest route lay over the summit of St. Helens. The Mazamas improvised a stretcher of canvas and alpenstocks. By 4 p.m. they had carried the injured man back to the summit. At 3 a.m., the next morning, they were relieved by a second rescue party. They reached camp at Spirit Lake after dawn. A surgeon and a trained nurse, both Mazamas, set the broken bones. The patient was sent out safely to Portland, where he fully recovered.

In leaving, the heroic victim of the accident, a true stoic, who had endured agony for two days without a whimper, gave as sincere a tribute as a man could utter. He hunched up from the floor of the wagon, slowly looked over the whole Mazama group, and said:

"I don't want ever to forget how you look—you who have done all this just for me."

Cooper Spur, named after Dave Cooper, a pioneer guide upon Mount Hood, points directly to the northeast snow cornice rim of the top, by an all-snow route. As stated before, this route is dangerous after July 15 because of falling rocks that come from the left, above. The last fifteen hundred feet averages a forty-five per cent slope, and is called sixty per cent by those who use their nerves for measurement purposes. A thick rope, two thousand two hundred feet long, was attached securely to a solid rock formation at the top, and remained all summer ready to be dropped into position for the use of climbers. Without this safeguard, the route would have been impossible for public use, for the Eliot Glacier breaks beside Cooper Spur in a series of crevasses and icefalls.

Near the top of the climb, on the steepest snow slope, we were introduced to T. Raymond Conway, a Mazama who has climbed Mount Hood more than one hundred times. He came down that precipitous snow, with a bucket of tea in one hand and a thermos bottle of tea in the other. All of us gasped at the ease, safety, and

audacity of his descent, and we were very receptive to the tea he brought with him.

We met, over the cornice rim, another party of forty that had climbed to meet us from Government Camp. Elijah Coalman, a forest ranger stationed at the lookout cabin, gave us the keys to the summit and a most hospitable reception.

"Lige" Coalman built that lookout cabin—completing it in 1916. He carried most of it up there on his back. He designed it himself, and it has been a standard in forestry service ever since. Coalman has saved many lives upon Mount Hood. Day or night, he always has appeared at the first sign of trouble. Some years ago a woman climber was injured by falling rock on the descent above Cooper Spur. Almost instantly Lige plumbed down from the summit and took charge of the first aid and rescue. One of the party described him afterward in these most graphic words: "Coalman—six feet two—two hundred ten pounds—straight as an Indian—moves like a panther."

The views from the top of Mount Hood are exceptional in their variety. To the east, the wooded hills stretch out to The Dalles and lose their verdure in semi-desert eastern Oregon. South is the backbone of the Cascade Range, with an elevation of 4,000 to 5,000 feet, running past slender Mount Jefferson, and Three Sisters. West are diminishing foothills, forest-covered, leading to Portland, plainly visible, less than fifty miles away. From Portland east is the Columbia River; a ribbon of water with canyoned banks that seem to widen as you trace them up-stream to the city of Hood River at your feet, twenty-two miles north. Beyond the Columbia, still farther north, is the panorama observed from Cloud Cap Inn, but from the vantage point of higher altitude. Mount Adams, right; Mount Rainier, right-center; and Mount St. Helens, left, tempt one to linger and to forget the ancient admonition that whatever goes up must come down, or, upon a mountain, freeze into a human icicle with the coming of darkness.

Up-to-the-minute information has just reached me from L. A. Nelson, President of Mazamas, on north-side climbing developments. He writes:

"The rope used from the summit of Hood on the north side climb is about 2,200 feet in length, and is not kept in position

at all times due to the dangerous nature of the climb. It is put up whenever there are any large parties going up.

* * *

"There is a new route up the north side of Mount Hood going up the Cooper Spur route a short distance, and then crossing Eliot Glacier, and diagonally across the north face of the mountain to the Northwest Spur, and then up to the summit. This is called the 'Sunshine Route.' "

The 1917 summit party returned to Cooper Spur, after some time upon a summit that was balmy rather than cold. Such things do happen. Two summit visits of my eighteen upon Mount Rainier found the top breezes as stimulating as those of a spring morning in the Middle West, and one seemed as sultry, if not so hot, as an August noon in Manila.

Descending to the south, if you complete your climb over and beyond, you navigate a steep snow and ice slope for some thousand feet to Crater Rock. This is a resistant volcanic plug with a fumarole. The whole south rim of the former crater has been worn away, leaving Steel Cliff as the east remnant, Illumination Rock as the west, and Crater Rock as a towering central plug half-way between. From Crater Rock down to timberline there are easy slopes over the unbroken surface of the Zigzag Glacier, while from timberline to Government Camp is an easy trail, or, if you choose, an auto road through trees that increase rapidly both in trunk thickness and in height. The Cooper Spur ascent has demanded real mountaineering, while the descent to Government Camp has been a late afternoon walk. Taken together, the two routes make the climb over Mount Hood, and beyond, one of the big days in our western mountains.

It is now winter at Government Camp, as I write these lines. Mount Hood, in the glory of a new cloak of ermine, is daily host to the devotees of winter sports. The climb over the mountain is closed for the season. Each week, until the first avalanche lily thrusts its nodding head through the thinning rim of a retreating snowbank, will appear items somewhat similar to this one, clipped from a Seattle paper:

"John Elvrum, slender, blond Norwegian, won the Portland ski-jumping contest with leaps of 174 and 175 feet. Hjalmar Hvam was second with a parabola of 167 feet. State police, who handled the traffic without a mishap, counted nine hundred twenty-six automobiles parked at Government Camp."

CHAPTER FOUR

Mount Hood and the Skyline Trail

MOUNT HOOD is the most central marker of the Cascade Range. North of it is the entire State of Washington, with the Cascade Trail planned and rapidly taking form. South is all but thirty miles of the State of Oregon, with the Skyline Trail, completed, winding along the high miles of the range to the Crater Lake National Park. When the Washington sector is completed, horses or humans or both may follow day trails along the crest of the Cascades and may sleep each night close to the stars, from Canada to California.

The Skyline Trail of Oregon offers its own array of attractions. In one section alone, at the McKenzie Pass, there are mountain surroundings that would exhaust the possibilities of a whole summer vacation. The Pass, itself, is surrounded by most recent lava flows. The high point of the highway shows lava and growing trees mixed together promiscuously, as though the flow had occurred last week and had just cooled. Near the McKenzie Pass are four mountains, snow-capped, with altitudes over 10,000 feet. The Pass has the high altitude of 5,200 feet.

This is the region of the "Three Sisters." In 1925, Edwin T. Hodge, Professor of Economic Geology, University of Oregon, published a splendid research volume entitled *Mount Multnomah, Ancient Ancestor of the Three Sisters*. With convincing logic, based upon accurate scientific detail, Professor Hodge has reconstructed Oregon's mightiest mountain, and has shown that it was blown apart in a great explosion in those intriguing days that are called pre-historic. These are some of the facts:

The Three Sisters rest upon the worn remnants of Mount Multnomah, a giant volcano that once towered a full mile above its caldera, which is one of the greatest in the world. The Three Sisters and many of the adjacent peaks are the result of more recent vulcanism and glacial activity. On this ancient field are many accumulations that will interest the observer. The new lava flood, mentioned in connection with McKenzie Pass, covered

eighty square miles, and is so recent that it seems but the act of yesterday. Nearby are fifty young volcanoes. A single cinder field is a mile long, half a mile wide, and five hundred feet deep. The South Sister, 10,352, bears a crater lake, 10,200 feet high, 1,000 feet in diameter; the largest crater lake at this high altitude in North America. Seventeen glaciers cover two thousand two hundren fifty-seven acres, and offer us our largest ice fields so far south on the North American Continent.

Mount Multnomah is published by the University of Oregon, and its entire one hundred fifty-eight pages should be read by those who see values in well-written, accurate, non-technical volumes of physiography, geology, and exploration. Copies may still be obtained from the University of Oregon, Eugene, Oregon.

From Mount Hood to Crater Lake, along the Cascades, there is a fine procession of mountains. They are, in order, from Hood, south: Mount Jefferson, 10,522 feet; Three-Fingered Jack, 7,-792 feet; Mount Washington, 7,769 feet; North Sister, 10,067 feet; Middle Sister, 10,038 feet; South Sister, 10,352 feet; Broken Top, 9,153 feet, east of the South Sister; Mount Thielsen, 9,178 feet; Mount Scott, 8,918 feet; Crater Lake.

Each of these mountains, except Middle Sister and South Sister, are topped by rock formations that are difficult. Three-Fingered Jack and Mount Washington will test the mettle of the most skillful rock climbers. In fact, all along the Skyline Trail, from Hood to Crater Lake, are rock climbs that demand skill and then more skill. When the Cascade Trail and the Skyline Trail connect Canada and California, there will be offered to the less rugged climbers an array of easy mountains, to be taken with calm contentment, and, to the more venturesome, other mountains with every degree of difficulty that their hearts may desire.

Between Mount Adams, north, and Mount Hood are certain poignant points of interest. The first one, following the proposed Cascade Trail from Mount Adams is the locale of the lava caves. The Indians have a legend that contradicts the findings of the materialistic geologists that have been quoted previously about the origin of these caves. The legend was recorded, in the Pacific Railroad Reports of 1853-1854, by George Gibbs. Briefly reviewed, the legend is this:

A long time ago a warrior of gigantic size married a squaw

who was as big. Becoming tired of her, he acquired a mouse who turned into another woman. The first wife, jealous, threatened to kill them. The warrior retreated and hid himself and his new wife high up the mountain (Mount Adams), at a lake with no outlet. The big wife suspected that they had hidden underground, and she began to burrow. She tore up a vaulted passage, miles long, and found the erring ones. From a hole beneath them, she saw them laughing down at her. Enraged anew, she tried to climb up, slipped, tried again and succeeded. The warrior begged off and asked her to kill the mouse-wife only. She did that, and the blood stained the rocks red around the lake. (This explains the riotous red of our Devil's Dooryard, off Macdonald Ridge.) Later, the big wife saw she had made a mistake, so she killed the warrior, too. Ever since, she has lived alone in the mountains. Edmond S. Meany says: "The place is called Hool-hool-se from the Indian word hool-hool, mouse."

Chequoss, an old mountain playground of the Klickitat Indians, is toward the Columbia River from the lava caves. There are, at Chequoss, two old straight-away racetracks used by the Indians in the days of George Gibbs, eighty years ago. This use has ceased for more than a generation. Gibbs again paints a picture of ancient Indian days by giving us the first racetrack betting pool in the Cascades. From the Gibbs accounts, white men of today will never go the Indians one better in wild chance-taking. Gibbs wrote:

> "A horse of proved reputation is a source of wealth or of ruin to its owner. On his speed he stakes his whole stud, his household goods, clothes, and finally his wives; and a single heat doubles his fortune, or sends him forth, an impoverished adventurer. [Here comes the pool.] The interest, however, is not confined to the individual directly concerned; the tribe share it with him, and a common pile of goods, of motley description, apportioned according to their ideas of value, is put up by either party, to be divided among the backers by the winner."

A skyline trail of several days will lead from Chequoss, down more than 3,500 feet in elevation to the Columbia River, at Stevenson, Washington. Near Stevenson is the Bridge of the Gods, the Cascades of the Columbia.

Sahale smote that bridge in vain. Spanning the same place, above the whitened and protesting rapids, is a white man's new,

shiny steel bridge to take us across Walt Whitman's "Mighty Oregon" (Columbia River) to Mount Hood.

We saw the Cascade Trail, first, as a panorama, from the summit of Mount Olympus. We followed it from picturesque Garibaldi to snowy Baker and past angry Shuksan. It led us into the Glacier Peak wilderness and on west of Mount Stuart to mighty Rainier, with its stupendous cirques and glaciers. It eased away south to mysterious Spirit Lake and graceful St. Helens. It passed the embattled bulk of Adams, crossed the broken Bridge of the Gods, and arrived, finally, at Hood, with the Old Oregon Trail and its history paths. We have visited eight snow sentinels that challenge our reflective memories of the dim past, and proffer the joys of today.

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