



The Alaska Trip

By
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"The Mountains of California."

WITH PICTURES BY JOHN A. FRASER.¹



TO the lover of wildness Alaska offers a glorious field for either work or rest: landscape beauty in a thousand forms, things great and small, novel and familiar, as wild and pure as paradise. Wander where you may, wildness ever fresh and ever beautiful meets you in endless variety: ice-laden mountains, hundreds of miles of them peaked and pinnacled and crowded together like trees in groves, and so high and so divinely clad in clouds and air that they seem to belong more to heaven than to earth; inland plains grassy and flowery, dotted with groves and extending like seas all around to the rim of the sky; lakes and streams shining and singing, outspread in sheets of mazy embroidery in untraceable, measureless abundance, brightening every landscape, and keeping the ground fresh and fruitful forever; forests of evergreens growing close together like leaves of grass, girdling a thousand islands

and mountains in glorious array; mountains that are monuments of the work of ice, mountains monuments of volcanic fires; gardens filled with the fairest flowers, giving their fragrance to every wandering wind; and far to the north thousands of miles of ocean ice, now wrapped in fog, now glowing in sunshine through nightless days, and again shining in wintry splendor beneath the beams of the aurora—sea, land, and sky one mass of white radiance like a star. Storms, too, are here as wild and sublime in size and scenery as the landscapes beneath them, displaying the glorious pomp of clouds on the march over mountain and plain, the flight of the snow when all the sky is in bloom, trailing rain-floods, and the booming plunge of avalanches and icebergs and rivers in their rocky glens; while multitudes of wild animals and wild people, clad in feathers and furs, fighting, loving, getting a living, make all the wildness wilder.

¹ With the exception of the pictures on pages 523 and 525, the drawings are based on sketches from nature by the author.

W. J. Frasier
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All this, and unspeakably more, lies in wait for those who love it, sufficient in kind and quantity for gods and men. And notwithstanding that this vast wilderness with its wealth is in great part inaccessible to the streams of careworn people called «tourists,» who go forth on ships and railroads to seek rest with nature once a year, some of the most interesting scenery in the territory has lately been brought within easy reach even of such travelers as these, especially in southeastern Alaska, where are to be found the finest of the forests, the highest mountains, and the largest glaciers.

During the summer season good steamships carrying passengers leave Tacoma on Puget Sound for Alaska about once a week. After touching at Seattle, Port Townsend, Victoria, and Nanaimo, they go through a wilderness of islands to Wrangel, where the first stop in Alaska is made. Thence a charming, wavering course is pursued still northward through the grandest scenery to Tahkou, Juneau, Chilcat, Glacier Bay, and Sitka, affording fine glimpses of the innumerable evergreen islands, the icy mountain-ranges of the coast, the forests, glaciers, etc. The round trip of two thousand miles is made in about twelve days, and costs about a hundred dollars; and though on ocean waters, there is no seasickness, for all the way lies through a network of sheltered inland channels and sounds that are about as free from heaving waves as rivers are.

No other excursion that I know of can be made into any of the wild portions of America where so much fine and grand and novel scenery is brought to view at so cheap and easy a price. Anybody may make this trip and be blest by it—old or young, sick or well, soft, succulent people whose limbs have never ripened, as well as sinewy mountaineers; for the climate is kindly, and one has only to breathe the exhilarating air and gaze and listen while being carried smoothly onward over the glassy waters. Even the blind may be benefited by laving and bathing in the balmy, velvety atmosphere, and the unjust as well as the just; for I fancy that even sins must be washed away in such a climate, and at the feet of such altars as the Alaska mountains are.

Between Tacoma and Port Townsend you gain a general view of the famous Puget Sound, for you sail down the middle of it. It is an arm and many-fingered hand of the sea reaching a hundred miles into the heart of one of the richest forest-regions on the globe. The scenery in fine weather is en-

chanting, the water as smooth and blue as a mountain lake, sweeping in beautiful curves around bays and capes and jutting promontories innumerable, and islands with soft, wavering outlines passing and overlapping one another, richly feathered with tall, spiry spruces, many of the trees 300 feet in height, their beauty doubled in reflections on the shiny waters. The Cascade Mountains bound the view on the right, the Olympic Range on the left, both ranges covered nearly to their summits with dense coniferous woods.

Doubling cape after cape, and passing uncounted islands that stud the shores, so many new and charming views are offered that one begins to feel there is no need of going farther. Sometimes clouds come down, blotting out all the land; then, lifting a little, perhaps a single island will be given back to the landscape, the tops of its trees dipping out of sight in trailing fringes of mist. Then the long ranks of spruce and cedar along the mainland are set free; and when at length the cloud-mantle vanishes, the colossal cone of Mount Rainier, 14,000 feet high, appears in spotless white, looking down over the dark woods like the very god of the landscape. A fine beginning is this for the Alaska trip! Crossing the Strait of Juan de Fuca from Port Townsend, in a few hours you are in Victoria and a foreign land. Victoria is a handsome little town, a section of old England set down nearly unchanged in the western American wilderness. It is situated on the south end of Vancouver Island, which is 280 miles long, the largest and southernmost of the wonderful archipelago that stretches northward along the margin of the continent for nearly a thousand miles. The steamer usually stops a few hours here, and most of the tourists go up town to the stores of the famous Hudson Bay Company to purchase fur or some wild Indian trinket as a memento. At certain seasons of the year, when the hairy harvests from the North have been gathered, immense bales of skins may be seen in the unsavory warehouses, the clothing of bears, wolves, beavers, otters, fishers, martens, lynxes, panthers, wolverenes, reindeer, moose, elk, wild sheep, foxes, seals, muskrats, and many others of «our poor earth-born companions and fellow-mortals.»

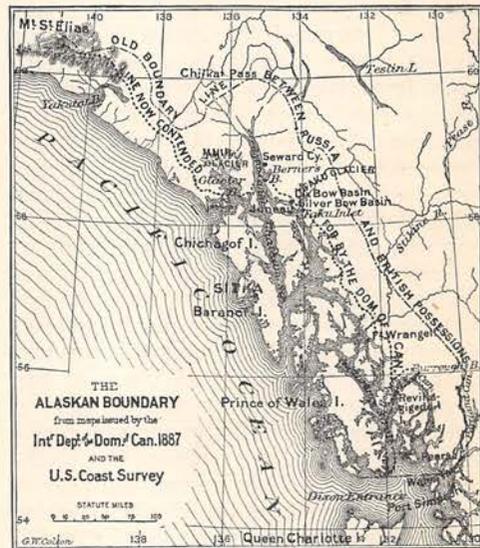
The wilderness presses close up to the town, and it is wonderfully rich and luxuriant. The forests almost rival those of Puget Sound; wild roses are three inches in diameter, and ferns ten feet high. And strange to say, all this exuberant vegetation is growing

on moraine material that has been scarcely moved or modified in any way by postglacial agents. Rounded masses of hard, resisting rocks rise everywhere along the shore and in the woods, their scored and polished surfaces still unwasted, telling of a time, so lately gone, when the whole region lay in darkness beneath an all-embracing mantle of ice. Even in the streets of the town glaciated bosses are exposed, the telling inscriptions of which have not been effaced by the wear of either weather or travel. And in the orchards fruitful boughs shade the edges of glacial pavements, and drop apples and peaches on them. Nowhere, as far as I have seen, are the beneficent influences of glaciers made manifest in plainer terms or with more striking contrasts. No tale of enchantment is so marvelous, so exciting to the imagination, as the story of the works and ways of snow-flowers banded together as glaciers, and marching forth from their encampments on the mountains to develop the beauty of landscapes and make them fruitful.

Leaving Victoria, instead of going to sea we go into a shady wilderness that looks as though it might be in the heart of the continent. Most of the channels through which we glide are narrow as compared with their length and with the height of the mountain walls of the islands which bound their shores. But however sheer the walls, they are almost everywhere densely forested from the water's edge to a height of two thousand feet; and almost every tree may be seen as they rise above one another like an audience on a gallery—the blue-green, sharply spired Menzies spruce; the warm, yellow-green Merten spruce, with finger-like tops all pointing in the same direction or gracefully drooping; and the airy, feathery, brownish Alaska cedar. Most of the way we seem to be tracing a majestic river with lake-like expansions, the tide-currents, the fresh driftwood brought down by avalanches, the inflowing torrents, and the luxuriant foliage of the shores making the likeness complete. The steamer is often so near the shore that we can see the purple cones on the top branches of the trees, and the ferns and bushes at their feet. Then, rounding some bossy cape, the eye perchance is called away into a far-reaching vista, headlands on each side in charming array, one dipping gracefully beyond the other and growing finer in the distance, while the channel, like a strip of silver, stretches between, stirred here and there by leaping salmon and flocks of gulls and ducks that float like lilies among the sun-spangles.

While we may be gazing into the depths of this leafy ocean lane, the ship, turning suddenly to right or left, enters an open space, a sound decorated with small islands, sprinkled or clustered in forms and compositions such as nature alone can invent. The smallest of the islands are mere dots, but how beautiful they are! The trees growing on them seem like handfuls that have been culled from the neighboring woods, nicely sorted and arranged, and then set in the water to keep them fresh, the fringing trees leaning out like flowers against the rim of a vase.

The variety we find, both as to the contours and collocation of the islands, whether great or small, is chiefly due to differences in the composition and physical structure of the rocks out of which they are made, and the unequal amount of glaciation to which they



have been subjected. All the islands of the archipelago, as well as the headlands and promontories of the mainland, have a rounded, over-rubbed, sandpapered appearance, a finish free from angles, which is produced by the grinding of an oversweeping, ponderous flood of ice.

FORT WRANGEL.

SEVEN hundred miles of this scenery, and we arrive at Fort Wrangel, on Wrangel Island, near the mouth of the Stickeen River. It is a quiet, rugged, dreamy place of no particular number of inhabitants—a few hundreds of whites and Indians, more or less, sleeping in a bog in the midst of the purest and most delightful scenery on the continent. Baron

Wrangel established a trading-post here about a hundred years ago, and the fort, a quadrangular stockade, was built by the United States shortly after the purchase of the territory; but in a few years it was abandoned and sold to private parties. Indians, mostly of the Stickeen tribe, occupy the two long, draggled ends of the town along the shore; the whites, numbering about fifty, the middle portion. Stumps and logs roughen its two crooked streets, each of these picturesque obstructions mossy and tufted with grass and bushes on account of the dampness of the climate.

On the arrival of the steamer, most of the passengers make haste to go ashore to see the curious totem-poles in front of the massive timber houses of the Indians, and to buy curiosities, chiefly silver bracelets hammered from dollars and half-dollars and tastefully engraved by Indian workmen; blankets better than those of civilization, woven from the wool of wild goats and sheep; carved spoons from the horns of these animals; Shaman rattles, miniature totem-poles, canoes, paddles, stone hatchets, pipes, baskets, etc. The traders in these curious wares are mostly women and children, who gather on the front platforms of the half-dozen stores, sitting in their blankets, seemingly careless whether they sell anything or not, every other face blackened hideously, a naked circle about the eyes and on the tip of the nose, where the smut has been weathered off. The larger girls and the young women are brilliantly arrayed in ribbons and calico, and shine among the blackened and blanketed old crones like scarlet tanagers in a flock of blackbirds. Besides curiosities, most of them have berries to sell, red, yellow and blue, fresh and dewy, and looking wondrous clean as compared with the people. These Indians are proud and intelligent, nevertheless, and maintain an air of self-respect which no amount of raggedness and squalor can wholly subdue.

Many canoes may be seen along the shore, all fashioned alike, with long, beak-like sterns and prows, the largest carrying twenty or thirty persons. What the mustang is to the Mexican vaquero the canoe is to the Indian of the Alaska coast. They skim over the glassy, sheltered waters far and near to fish and hunt and trade, or merely to visit their neighbors. Yonder goes a whole family, grandparents and all, the prow of their canoe blithely decorated with handfuls of the purple epilobium. They are going to gather berries, as the baskets show. No-

where else in my travels, north or south, have I seen so many berries. The woods and meadows and open spaces along the shores are full of them—huckleberries of many species, salmon-berries, raspberries, blackberries, currants, and gooseberries, with fragrant strawberries and service-berries on the drier grounds, and cranberries in the bogs, sufficient for every worm, bird, and human being in the territory, and thousands of tons to spare. The Indians at certain seasons, roving in merry bands, gather large quantities, beat them into paste, and then press the paste into square cakes and dry them for winter use, to be eaten as a kind of bread with their oily salmon. Berries alone, with the lavish bloom that belongs to them, are enough to show how fine and rich this Northern wilderness must be.

ALASKA WEATHER.

THE climate of all that portion of the coast that is bathed by the Japan current, extending from the southern boundary of the territory northward and westward to the island of Atoot, a distance of nearly twenty-five hundred miles, is remarkably bland, and free from extremes of heat and cold throughout the year. It is rainy, however; but the rain is of good quality, gentle in its fall, filling the fountains of the streams, and keeping the whole land fresh and fruitful, while anything more delightful than the shining weather after the rain—the great, round sun-days of June, July, and August—can hardly be found elsewhere. An Alaska mid-summer day is a day without night. In the extreme northern portion of the territory the sun does not set for weeks, and even as far south as Sitka and Fort Wrangel it sinks only a few degrees below the horizon, so that the rosy colors of the evening blend with those of the morning, leaving no gap of darkness between. Nevertheless, the full day opens slowly. At midnight, from the middle point between the gloaming and the dawn, a low arc of light is seen stealing along the horizon, with gradual increase of height and span and intensity of tone, accompanied usually by red clouds, which make a striking advertisement of the sun's progress long before he appears above the mountain-tops. For several hours after sunrise everything in the landscape seems dull and uncommunicative. The clouds fade, the islands and the mountains, with ruffs of mist about them, cast ill-defined shadows, and the whole firmament changes to pale pearl-gray with

just a trace of purple in it. But toward noon there is a glorious awakening. The cool haziness of the air vanishes, and the richer sunbeams, pouring from on high, make all the bays and channels shine. Brightly now play the round-topped ripples about the edges of the islands, and over many a plume-shaped streak between them, where the water is stirred by some passing breeze. On the mountains of the mainland, and in the high-walled fiords that fringe the coast, still finer is the work of the sunshine. The broad white bosoms of the glaciers glow like silver, and their crystal fronts, and the multitude of icebergs that linger about them, drifting, swirling, turning their myriad angles to the sun, are kindled into a perfect blaze of irised light. The warm air throbs and wavers, and makes itself felt as a life-giving, energizing ocean embracing all the earth. Filled with ozone, our pulses bound, and we are warmed and quickened into sympathy with everything, taken back into the heart of nature, whence we came. We feel the life and motion about us, and the universal beauty; the tides marching back and forth with weariless industry, laving the beautiful shores, and swaying the purple dulse of the broad meadows of the sea where the fishes are fed; the wild streams in rows white with waterfalls, ever in bloom and ever in song, spreading their branches over a thousand mountains; the vast forests feeding on the drenching sunbeams, every cell in a whirl of enjoyment; misty flocks of insects stirring all the air; the wild sheep and goats on the grassy ridges above the woods, bears in the berry-tangles, mink and beaver and otter far back on many a river and lake; Indians and adventurers pursuing their lonely ways; birds tending their young—everywhere, everywhere, beauty and life, and glad, rejoicing action.

Through the afternoon all the way down to the west the air seems to thicken and become soft, without losing its fineness. The breeze dies away, and everything settles into a deep, conscious repose. Then comes the sunset with its purple and gold—not a narrow arch of color, but oftentimes filling more than half the sky. The horizontal clouds that usually bar the horizon are fired on the edges, and the spaces of clear sky between them are filled in with greenish yellow and amber; while the flocks of thin, overlapping cloudlets are mostly touched with crimson, like the outleaving sprays of a maple-grove in the beginning of Indian summer; and a little later a smooth, mellow purple flushes the sky

to the zenith, and fills the air, fairly steeping and transfiguring the islands and mountains, and changing all the water to wine.

According to my own observations, in the year 1879 about one third of the summer weather at Wrangel was cloudy, one third rainy, and one third clear. Rain fell on eighteen days in June, eight in July, and twenty in September. But on some of these days only a light shower fell, scarce enough to count, and even the darkest and most bedraggled of them all had a dash of late or early color to cheer them, or some white illumination about the noon hours, while the lowest temperature was about 50°, and the highest 75°.

It is only in late autumn and winter that grand, roaring storms come down and solidly fill all the hours of day and night. Most of them are steady, all-day rains with high winds. Snow on the lowlands is not uncommon, but it never falls to a great depth, or lies long, and the temperature is seldom more than a few degrees below the freezing-point. On the mountains, however, and back in the interior, the winter months are intensely cold—so cold that mercury may at times be used for bullets by the hunters, instead of lead.

EXCURSIONS ABOUT WRANGEL.

By stopping over a few weeks at Fort Wrangel, and making excursions into the adjacent region, many near and telling views may be had of the noble forests, glaciers, streams, lakes, wild gardens, Indian villages, etc.; and as the Alaska steamers call here about once a week, you can go on northward and complete your round trip when you like.

THE FORESTS:

GOING into the woods almost anywhere, you have first to force a way through an outer tangle of *Rubus*, huckleberry, dogwood, and elder-bushes, and a strange woody plant, about six feet high, with limber, rope-like stems beset with thorns, and a head of broad, translucent leaves like the crown of a palm. This is the *Echino panax horrida*, or devil's-club. It is used by the Indians for thrashing witches, and, I fear, deserves both of its bad names. Back in the shady deeps of the forest the walking is comparatively free, and you will be charmed with the majestic beauty and grandeur of the trees, as well as with the solemn stillness and the beauty of the elastic carpet of golden mosses flecked

and barred with the sunbeams that sift through the leafy ceiling.

The bulk of the forests of southeastern Alaska is made up of three species of conifers—the Menzies and Merten spruces, and the yellow cedar. These trees cover nearly every rod of the thousand islands, and the coast and the slopes of the mountains of the mainland to a height of about 2000 feet above the sea.

The Menzies spruce, or Sitka pine (*Picea Sitchensis*), is the commonest species. In the heaviest portions of the forest it grows to a height of 175 feet or more, with a diameter of from three to six feet, and in habit and general appearance resembles the Douglas spruce, so abundant about Puget Sound. The timber is tough, close-grained, white, and looks like pine. A specimen that I examined back of Fort Wrangel was a little over six feet in diameter inside the bark four feet above the ground, and at the time it was felled was about 500 years old. Another specimen, four feet in diameter, was 385 years old; and a third, a little less than five feet thick, had attained the good old age of 764 years without showing any trace of decay. I saw a raft of this spruce that had been brought to Wrangel from one of the neighboring islands, three of the logs of which were one hundred feet in length, and nearly two feet in diameter at the small ends. Perhaps half of all the trees in southeastern Alaska are of this species. Menzies, whose name is associated with this grand tree, was a Scotch botanist who accompanied Vancouver in his voyage of discovery to this coast a hundred years ago.

The beautiful hemlock-spruce (*Tsuga Mertensiana*) is more slender than its companion, but nearly as tall, and the young trees are more graceful and picturesque in habit. Large numbers of this species used to be cut down by the Indians for the astringent bark, which they pounded into meal for bread to be eaten with oily fish.

The third species of this notable group, *Chamaecyparis Nutkaensis*, called yellow cedar or Alaska cedar, attains a height of 150 feet and a diameter of from three to five feet. The branches are pinnate, drooping, and form beautiful light-green sprays like those of *Libocedrus*, but the foliage is finer and the plumes are more delicate. The wood of this noble tree is the best the country affords, and one of the most valuable of the entire Pacific coast. It is pale yellow, close-grained, tough, durable, and takes a fine polish. The Indians make their paddles and totem-poles of it, and

weave matting and coarse cloth from the inner bark. It is also the favorite fire-wood. A yellow-cedar fire is worth going a long way to see. The flames rush up in a multitude of quivering, jagged-edged lances, displaying admirable enthusiasm, while the burning surfaces of the wood snap and crackle and explode and throw off showers of coals with such noise that conversation at such firesides is well-nigh impossible.

The durability of this timber is forcibly illustrated by fallen trunks that are perfectly sound after lying in the damp woods for centuries. Soon after these trees fall they are overgrown with moss, in which seeds lodge and germinate and grow up into vigorous saplings, which stand in a row on the backs of their dead ancestors. Of this company of young trees perhaps three or four will grow to full stature, sending down straddling roots on each side, and establishing themselves in the soil; and after they have reached an age of two or three hundred years, the down-trodden trunk on which they are standing, when cut into, is found as fresh in the heart as when it fell.

The species is found as far south as Oregon, and is sparsely distributed along the coast and through the islands as far north as Chilcat (latitude 59°). The most noteworthy of the other trees found in the southern portion of these forests, but forming only a small portion of the whole, is the giant arbor-vitæ (*Thuja gigantea*). It is distributed all the way up the coast from California to about latitude 56°. It is from this tree that the Indians make their best canoes, some of them being large enough to carry fifty or sixty men. Of pine I have seen only one species (*Pinus contorta*), a few specimens of which, about fifty feet high, may be found on the margins of lakes and bogs. In the interior beyond the mountains it forms extensive forests. So also does *Picea alba*, a slender, spiry tree which attains a height of one hundred feet or more. I saw this species growing bravely on frozen ground on the banks of streams that flow into Kotzebue Sound, forming there the margin of the arctic forest.

In the cool cañons and fiords, and along the banks of the glaciers, a species of silver fir and the beautiful Paton spruce abound. The only hard-wood trees I have found in Alaska are birch, alder, maple, and wild apple, one species of each. They grow mostly about the margins of the main forests and back in the mountain cañons. The lively yellow-green of the birch gives pleasing

variety to the colors of the conifers, especially on slopes of river-cañons with a southern exposure. In general views all the coast forests look dark in the middle ground and blue in the distance, while the foreground shows a rich series of gray and brown and yellow trees. In great part these colors are due to lichens which hang in long tresses from the limbs, and to mosses which grow in broad, nest-like beds on the horizontal palmate branches of the Menzies and Merten spruces. Upon these moss-bed gardens high in the air ferns and grasses grow luxuriantly, and even seedling trees five or six feet in height, presenting the curious spectacle of old, venerable trees holding hundreds of their children in their arms.

Seward expected Alaska to become the ship-yard of the world, and so perhaps it may. In the meantime, as good or better timber for every use still abounds in California, Oregon, Washington, and British Columbia; and let us hope that under better management the waste and destruction that have hitherto prevailed in our forests will cease, and the time be long before our Northern reserves need to be touched. In the hands of nature these Alaska tribes of conifers are increasing from century to century as the glaciers are withdrawn. May they be saved until wanted for worthy use—so worthy that we may imagine the trees themselves willing to come down the mountains to their fate!

THE RIVERS.

THE most interesting of the excursions that may be made from Fort Wrangel is the one up the Stickeen River. Perhaps twenty or thirty of the Alaska streams may be called rivers, but not one of them all, from the mighty Yukon, 2000 miles long, to the shortest of the mountain torrents pouring white from the glaciers, has been fully explored. From St. Elias the coast mountains extend in a broad, lofty chain beyond the southern boundary of the territory, gashed by stupendous cañons, each of which carries a stream deep enough and broad enough to be called a river, though comparatively short, as the highest sources of most of them lie in the icy solitudes of the range within forty or fifty miles of the coast. A few, however, of this foaming brotherhood—the Chilcat, Chilcoot, Tahkou, Stickeen, and perhaps others—come from beyond the range, heading with the Mackenzie and Yukon.

The tributary cañons of the main-trunk cañons of all these streams are still occupied

by glaciers which descend in glorious ranks, their massy, bulging snouts lying back a little distance in the shadows, or pushed grandly forward among the cottonwoods that line the banks of the rivers, or all the way across the main cañons, compelling the rivers to find a way beneath them through long, arching tunnels.

The Stickeen is perhaps better known than any other river in Alaska, because it is the way to the Cassiar gold-mines. It is about 350 miles long, and is navigable for small steamers 150 miles to Glenora. It first pursues a westerly course through grassy plains darkened here and there with patches of evergreens; then, curving southward, and receiving numerous tributaries from the north, it enters the Coast Range, and sweeps across it to the sea, through a Yosemite that is more than a hundred miles long, one to three miles wide, and from 5000 to 8000 feet deep, and marvelously beautiful from end to end. To the appreciative tourist sailing up the river, the cañon is a gallery of sublime pictures, an unbroken series of majestic mountains, glaciers, waterfalls, cascades, groves, gardens, grassy meadows, etc., in endless variety of form and composition; while back of the walls, and thousands of feet above them, innumerable peaks and spires and domes of ice and snow tower grandly into the sky.

Gliding along the swift-flowing river, the views change with bewildering rapidity. Wonderful, too, are the changes dependent on the seasons and the weather. In winter avalanches from the snow-laden heights boom and reverberate from side to side like majestic waterfalls; storm-winds from the arctic highlands, sweeping the cañon like a flood, choke the air with ice-dust; while the rocks, glaciers, and groves are in spotless white. In spring you enjoy the chanting of countless waterfalls; the gentle breathing of warm winds; the opening of leaves and flowers; the humming of bees over beds of honey-bloom; birds building their nests; clouds of fragrance drifting hither and thither from miles of wild roses, clover, and honeysuckle, and tangles of sweet chaparral; swaths of birch and willow on the lower slopes following the melting snow-banks; bossy cumuli swelling in white and purple piles above the highest peaks; gray rain-clouds wreathing the outstanding brows and battlements of the walls; then the breaking forth of the sun after the rain, the shining of the wet leaves and the river and the crystal architecture of the glaciers; the rising of fresh fragrance,

the song of the happy birds, the looming of the white domes in the azure, and the serene color-grandeur of the morning and evening. In summer you find the groves and gardens in full dress; glaciers melting rapidly under warm sunshine and rain; waterfalls in all their glory; the river rejoicing in its strength; butterflies wavering and drifting about like ripe flower-bloom in springtime; young birds trying their wings; bears enjoying salmon and berries; all the life of the cañon brimming full like the streams. In autumn comes rest, as if the year's work were done; sunshine, streaming over the cliffs in rich, hazy beams, calls forth the last of the gentians and goldenrods; the groves and tangles and meadows bloom again, every leaf changing to a petal, scarlet and yellow; the rocks also bloom, and the glaciers, in the mellow golden light. And so goes the song, change succeeding change in glorious harmony through all the seasons and years.

Leaving Wrangel, you go up the coast to Juneau. After passing through the picturesque Wrangel Narrows into Souchoi Channel and Prince Frederick Sound, a few icebergs come in sight, the first you have seen on the trip. They are derived from a large, showy glacier, the Leconte, which discharges into a wild fiord near the mouth of the Sticken River, which the Indians call *Hutli*, or Thunder Bay, on account of the noise made by the discharge of the icebergs. This, so far as I know, is the southernmost of the glaciers that flow into the sea. Gliding northward, you have the mountains of the mainland on one hand, Kuprianof and countless smaller islands on the other. The views extend far into the wilderness, all of them as wild and clean as the sky; but your attention will chiefly be turned to the mountains, now for the first time appreciably near. As the steamer crawls along the coast, the cañons are opened to view and closed again in regular succession, like the leaves of a book, allowing the attentive observer to see far back into their icy depths. About halfway between Wrangel Narrows and Cape Fanshaw, you are opposite a noble group of glaciers which come sweeping down through the woods from their white fountains nearly to the level of the sea, swaying in graceful, river-like curves around the feet of lofty granite mountains and precipices like those of the Yosemite valley. It was at the largest of these, the Paterson glacier, that the ships of the Alaska Ice Company were loaded for San Francisco and the Sandwich Islands.

An hour or two farther north another fleet

of icebergs come in sight, which have their sources in Sum Dum or Holkam Bay. This magnificent inlet, with its long, icy arms reaching deep into the mountains, is one of the most interesting of all the Alaska fiords; but the icebergs in it are too closely compacted to allow a passage for any of the excursion-steamers.

About five miles from the mouth the bay divides into two main arms, about eighteen and twenty miles long, in the farthest-hidden recesses of which there are four large glaciers which discharge bergs. Of the smaller glaciers of the second and third class that melt before reaching tide-water, a hundred or more may be seen along the walls from a canoe, and about as many snowy cataracts, which, with the plunging bergs from the main glaciers, keep all the fiord in a roar. The scenery in both of the long arms and their side branches is of the wildest description, especially in their upper reaches, where the granite walls rise in sheer, massive precipices, like those of the Yosemite valley, to a height of from 3000 to 5000 feet. About forty miles farther up the coast another fleet of icebergs come in sight, through the midst of which the steamer passes into the Tahkou Inlet. It is about eighteen miles long, from three to five wide, and extends into the heart of the Coast Mountains, draining many glaciers, great and small, all of which were once tributary branches of one grand glacier that formed and occupied the inlet as its channel. This inlet more plainly than any other that I have examined illustrates the mode of formation of the wonderful system of deep channels extending northward from Puget Sound; for it is a marked portion of that system, a branch of Stephen's Passage still in process of formation at the head; while its trends and sculpture are as distinctly glacial as those of the smaller fiords.

Sailing up the middle of it, you may count some forty-five glaciers. Three of these reach the level of the sea, descending from a group of lofty mountains at the head of the inlet, and making a grand show. Only one, however, the beautiful Tahkou glacier, discharges bergs. It comes sweeping forward in majestic curves, and discharges its bergs through a western branch of the inlet next the one occupied by the Tahkou River. Thus we see here a river of ice and a river of water flowing into the sea side by side, both of them abounding in cascades and rapids; yet how different in their rate of motion, and in the songs they sing, and in their influence on the landscape! A rare object-lesson this, worth coming round the world to see.

Once, while I sat sketching among the icebergs here, two Tahkou Indians, father and son, came gliding toward us in an exceedingly small cottonwood canoe. Coming alongside with a good-natured «Sahgaya,» they inquired who we were, what we were doing, etc., while they in turn gave information concerning the river, their village, and two other large glaciers a few miles up the river-cañon. They were hunting hair-seals, and as they slipped softly away in pursuit of their prey, crouching in their tiny shell of a boat among the bergs, with barbed spear in place, they

ered with glaciers, forests, or a thick blanket of moss. Nevertheless, thousands of hardy miners from the gulches and ledges of California and Arizona are rapidly overrunning the territory in every direction, and making it tell its wealth. And though perhaps not one vein or placer in a hundred has yet been touched, enough has been discovered to warrant the opinion that this icy country holds at least a fair share of the gold of the world. After time has been given for a visit to the mines and a saunter through the streets of Juneau, the steamer passes between Doug-



DAVIDSON GLACIER, FROM LYNN CANAL.

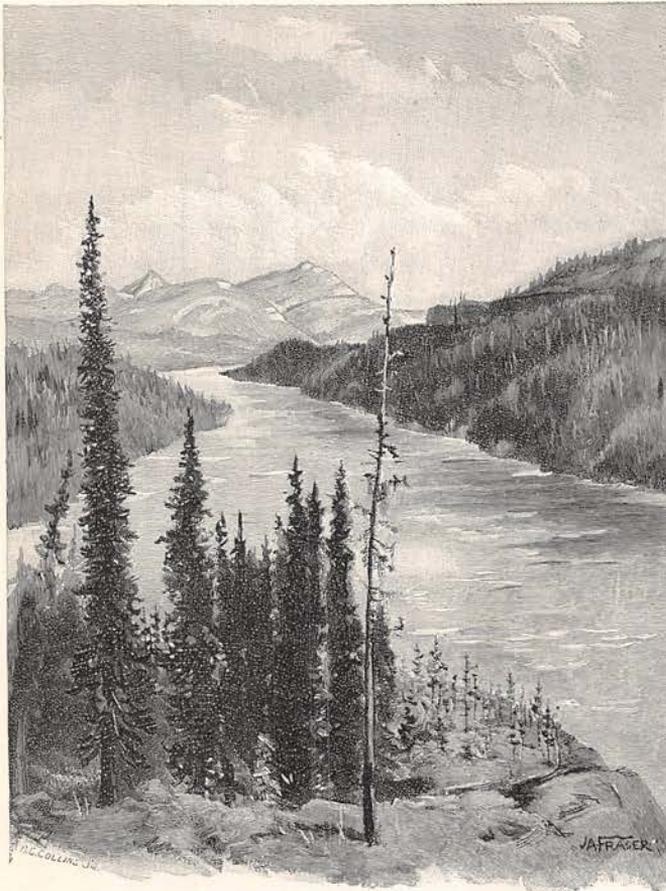
ENGRAVED BY H. DAVIDSON.

formed a picture of icy wildness as telling as any to be found amid the drifts and floes of Greenland.

After allowing the passengers a little time—half an hour or so—to admire the crystal wall of the great glacier and the huge bergs that plunge and rise from it, the steamer goes down the inlet to Juneau. This young town is the mining-center, and, so far as business is concerned, the chief place in the territory. Here, it is claimed, you may see the largest quartz-mill in the world, the two hundred and forty stamps of which keep up a «steady, industrious growl that may be heard a mile away.»

Alaska, generally speaking, is a hard country for the prospector, because most of the ground is either permanently frozen or cov-

ered with glaciers, forests, or a thick blanket of moss. Nevertheless, thousands of hardy miners from the gulches and ledges of California and Arizona are rapidly overrunning the territory in every direction, and making it tell its wealth. And though perhaps not one vein or placer in a hundred has yet been touched, enough has been discovered to warrant the opinion that this icy country holds at least a fair share of the gold of the world. After time has been given for a visit to the mines and a saunter through the streets of Juneau, the steamer passes between Doug-



DEASE LAKE, ON THE DIVIDE BETWEEN THE MACKENZIE
AND STICKEEN RIVERS.

ENGRAVED BY R. C. COLLINS.

by the terminal moraine. This is one of the most notable of the large glaciers that are in the first stage of decadence, reaching nearly to tide-water, but failing to enter it and send off bergs. Excepting the Tahkou, all the great glaciers you have yet seen on the trip belong to this class; but this one is perhaps the most beautiful of its kind, and you will not be likely to forget the picture it makes, however icy your after-travels may be. Shortly after passing the Davidson glacier the northernmost point of the trip is reached at the head of the canal, a little above latitude 59° . At the canning-establishments here you may learn something of the inhabitants of these beautiful waters. Whatever may be said of other resources of the territory,—furs, minerals, timber, etc.,—it is hardly possible to overestimate the importance of the fisheries. Besides whales in the far North, and the cod, herring, halibut, and other food fishes that swarm over immense

areas along the shores and inlets, there are probably not fewer than a thousand salmon streams in Alaska that are crowded with fine salmon for months every year. Their numbers are beyond conception. Oftentimes there seem to be more fish than water in the rapid portions of the streams. On one occasion one of my men waded out into the middle of a crowded run, and amused himself by picking up the fish and throwing them over his head. In a single hour these Indians may capture enough to last a year. Surely in no part of the world may one's daily bread be more easily obtained. Sailing into these streams on dark nights, when the waters are phosphorescent and the salmon are running, is a very beautiful and exciting experience; the myriad fins of the onrushing multitude crowding against one another churn all the water from bank to bank into silver fire, making a glorious glow in the darkness.

From Chilcat we now go down Lynn Canal, through

Icy Strait, and into the famous Glacier Bay. All the voyage thus far after leaving Wrangel has been icy, and you have seen hundreds of glaciers great and small; but this bay, and the region about it and beyond it toward Mount St. Elias, are preëminently the Iceland of Alaska, and of all the west coast of the continent.

GLACIERS OF THE PACIFIC COAST.

GLANCING for a moment at the results of a general exploration of the mountain-ranges of the Pacific coast, we find that there are between sixty and seventy small residual glaciers in the California Sierra. Northward through Oregon and Washington, glaciers, some of them of considerable extent, still exist on all the higher volcanic mountains of the Cascade Range,—the Three Sisters, Mounts Jefferson, Hood, St. Helen's, Adams, Rainier, Baker, and others,—though none of

them approach the sea. Through British Columbia and southeastern Alaska the broad, sustained chain of coast mountains is generally glacier-bearing. The upper branches of nearly every one of its cañons are still occupied by glaciers, which gradually increase in size and descend lower until the lofty region between Glacier Bay and Mount St. Elias is reached, where a considerable number discharge into the sea. About Prince William's Sound and Cook's Inlet many grand glaciers are displayed; but farther to the west, along the Alaska peninsula and the chain of the Aleutian Islands, though a large number of glaciers occur on the highest peaks, they are mostly small, and melt far above sea-level, while to the north of latitude 62° few, if any, remain in existence, the ground being comparatively low and the snowfall light.

ON THE MUIR GLACIER.

THE largest of the seven glaciers that discharge into Glacier Bay is the Muir; and being also the most accessible, it is the one to which tourists are taken and allowed to go ashore for a few hours, to climb about its crystal cliffs and watch the huge icebergs as with tremendous, thundering roar they plunge and rise from the majestic frontal sea-wall in which the glacier terminates. The front, or snout, of the glacier is about

three miles wide, but the central berg-discharging portion, which stretches across from side to side of the inlet like a huge jagged white-and-blue barrier, is only about half as wide. The height of the ice-wall above the water is from 250 to 300 feet, but soundings made by Captain Carroll show that 720 feet of the wall is below the surface, while still a third unmeasured portion is buried beneath the moraine material that is being constantly deposited at the foot of it. Therefore, were the water and rocky detritus removed, there would be presented a sheer precipice of ice a mile and a half wide and more than a thousand feet in height. Seen from the inlet as you approach it, at a distance of a mile or two it seems massive and comparatively regular in form, but it is far from being smooth. Deep rifts and hollows alternate with broad, plain bastions, which are ever changing as the icebergs are discharged, while it is roughened along the top with innumerable spires and pyramids and sharp, hacked blades, leaning and toppling, or cutting straight into the sky.

THE BIRTH OF THE ICEBERGS.

THE number of bergs given off varies somewhat with the weather and the tides. For twelve consecutive hours I counted the number discharged that were large enough to make themselves heard like thunder at a dis-



AFTER A PHOTOGRAPH.

ENGRAVED BY K. C. ATWOOD.

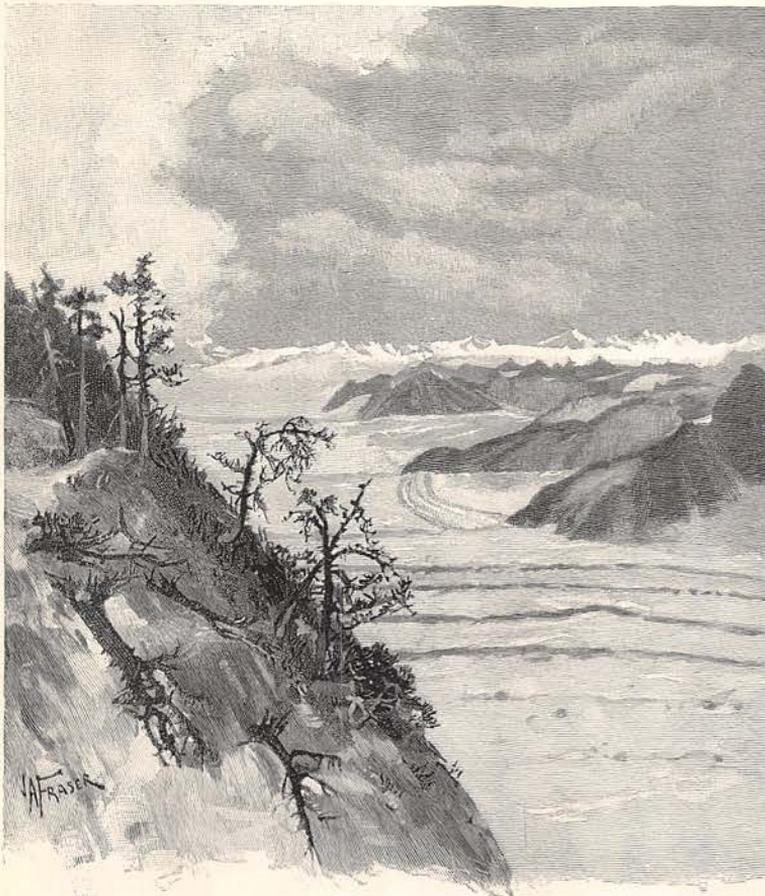
GENERAL VIEW OF MUIR GLACIER, FROM THE EAST SIDE NEAR THE FRONT, LOOKING NORTH.

tance of a mile or two, and found the average rate to be one in five or six minutes. The thunder of the largest may be heard, under favorable circumstances, ten miles or more. When a large mass sinks from the upper fissured portion of the wall, there is first a keen, piercing crash, then a deep, deliberate, long-drawn-out, thundering roar, which slowly subsides into a comparatively low, far-reaching, muttering growl; then come a crowd of grating, clashing sounds from the agitated bergs that dance in the waves about the newcomer as if in welcome; and these, again, are followed by the swash and roar of the berg-waves as they reach the shore and break among the boulders. But the largest and most beautiful of the bergs, instead of falling from the exposed weathered portion of the wall, rise from the submerged portion with a still grander commotion, heaving aloft nearly to the top of the wall with awful roaring, tons of water streaming like hair down their

sides, while they heave and plunge again and again before they settle in poise and sail away as blue crystal islands, free at last after being held fast as part of a slow-crawling glacier for centuries. And how wonderful it seems that ice formed from pressed snow on the mountains two or three hundred years ago should, after all its toil and travel in grinding down and fashioning the face of the landscape, still remain pure and fresh and lovely in color! When the sunshine is pouring and sifting in iris colors through the midst of all this wilderness of angular crystal ice, and through the grand, flame-shaped jets and sheets of radiant spray ever rising from the blows of the falling bergs, the effect is indescribably glorious.

GLACIAL NIGHTS.

GLORIOUS, too, are the nights along these crystal cliffs, when the moon and the stars are shining; the projecting buttresses and battlements, seemingly far higher than by day, standing forward in the moonlight, relieved by the shadows of the hollows; the new-born bergs keeping up a perpetual storm of thunder, and the lunar bows displaying faint iris colors in the up-dashing spray. But it is in the darkest nights, when storms are blowing and the waters of the inlet are phosphorescent, that the most terribly impressive show is displayed. Then the long range of crystal bluffs, faintly illumined, is seen stretching away in the stormy gloom in awful, unearthly grandeur, luminous waves dashing beneath in a glowing, seething, wavering fringe of foam, while the



ENGRAVED BY PETER AITKEN.

VIEW OF PART OF MUIR GLACIER, LOOKING NORTHWEST FROM TREE MOUNTAIN, SHOWING MEDIAL MORAINES.



ENGRAVED BY C. SCHWARZBURGER.

A MORAINÉ—STREAKED PORTION OF MUIR GLACIER ON THE EAST SIDE, LOOKING TOWARD HOWLING VALLEY.

new-born bergs, rejoicing in their freedom, plunging, heaving, grating one against another, seem like living creatures of some other world, dancing and roaring with the roaring storm and the glorious surges of auroral light.

CHARACTERISTICS OF THE MUIR GLACIER.

If you go ashore as soon as the steamer drops anchor, you will have time to push back across the terminal moraine on the east side, and over a mile or so of the margin of the glacier, climb a yellow ridge that comes forward there and is easy of access, and gain a good, comprehensive, telling view of the greater portion of the glacier and its principal tributaries—that is, if you are so fortunate as to have clear weather. Instead of a river of ice winding down a narrow, mountain-walled valley, like the largest of the Swiss glaciers, you will see here a grand lake or sea of ice twenty-five or thirty miles wide, more than two hundred times as large as the celebrated Mer de Glace of the Alps, a broad, gently undulating prairie surrounded by a forest of mountains from the shadowy cañons and amphitheatres of which uncounted tributary glaciers flow into the grand central reservoir. There are seven main tributaries, from two to six miles wide where they enter the trunk, and from twenty to thirty miles long; each of these has many secondary tributaries, so that the whole number, great and small,

pouring from the mountain fountains into the grand central trunk must number at least two hundred, not counting the smallest. The views up the main tributaries in bright weather are exceedingly rich and beautiful; though far off from your standpoint, the broad white floods of ice are clearly seen issuing in graceful lines from the depths of the mysterious solitudes. The area drained by this one grand glacier and its branches can hardly be less than a thousand square miles, and it probably contains more ice than all the eleven hundred glaciers of the Swiss Alps combined. The distance back from the front to the head of the farthest fountain is about fifty miles, and the width of the trunk below the confluence of the tributaries is about twenty-five miles. Though apparently as motionless as the mountains about its basin, the whole glacier flows on like a river, unhalting, unresting, through all the seasons from century to century, with a motion varying in every part with the depth of the current and the declivity, smoothness, and directness of different portions of the channel. The rate of motion in the central cascading portion of the current near the front, as determined by Professor Reid, is from two and a half to five inches an hour, or from five to ten feet a day.

Along the eastern margin of the main trunk the ice is so little broken that a hundred horsemen might ride abreast for miles without encountering much difficulty. But

far the greater portion of the vast expanse is torn and crumpled into a bewildering network of ridges and blades, and rough, broken hummocks, separated by yawning gulfs and crevasses unspeakably beautiful and awful. Here and there the adventurous explorer, picking a way in long, patient zigzags through the shining wilderness, comes to spacious hollows, some of them miles in extent, where the ice, closely pressed and welded, presents beautiful blue lakes fed by bands of streams that sing and ring and gurgle, and make sheets of melody as sweet as ever were made by larks in springtime over their nests in the meadows.

Besides the Muir there are here six other noble glaciers which send off fleets of icebergs, and keep the whole bay in a roar. These are the Geikie, Hugh Miller, Pacific, Reid, Carroll, and Hoona glaciers. Of the second class of grand size descending to the level of the sea, but separated from it by mud floats and flood-washed terminal moraines,

there are eight, and the smaller ones are innumerable.

With these views of the ice-world the duty-laden tourist is gladly content, knowing that nowhere else could he have sailed in a comfortable steamer into new-born landscapes and witnessed the birth of icebergs. Returning down the bay in a zigzag course, dodging the drifting bergs, you may see the lofty summits of the Fairweather Range—Mounts Fairweather, Lituya, Crillon, and La Pérouse. Then, leaving Icy Strait, you enter Chatham Strait, and thence pass through the picturesque Peril Strait to Sitka, the capital of the territory. Here the steamer usually stops for a day, giving time to see the interesting old Russian town and its grand surroundings. After leaving Sitka the steamer touches again at Wrangel for the mails. Then, gliding through the green archipelago by the same way that you came, you speedily arrive in civilization, rich in wilderness forevermore.

John Muir.



AFTER A PHOTOGRAPH BY REID.

ENGRAVED BY C. A. POWELL.

WHITE GLACIER, A SMALL EASTERN TRIBUTARY OF THE MUIR GLACIER.

HIS LANGUAGE.

THE wise men ask, «What language did Christ speak?»
 They cavil, argue, search, and little prove.
 O sages, leave your Syriac and your Greek!
 Each heart contains the knowledge that you seek:
 Christ spoke the universal language—Love.

Ella Wheeler Wilcox.