

in the center of the roof. After a little a ripping, tearing sound came from the sides of the building. They were prying off the planks in order that those outside might hear. When my voice faltered with long talking Tow-a-att and Kadishan took up the story, telling what they had learned of the white man's religion; or Muir told the eager natives wonderful things about what the great one God, whose name is Love, was doing for them. The all-day meeting was only interrupted for an hour or two in the afternoon, when we walked with the chiefs across the narrow isthmus between Pyramid Harbor and the eastern arm of Lynn Canal, and I selected the harbor, farm and townsite now occupied by Haines mission and town and Fort William H. Seward. This was the beginning of the large missions of Haines and Klukwan.

THE DISCOVERY,

MOONLIGHT IN GLACIER BAY

To heaven swells a mighty psalm of praise;
Its music-sheets are glaciers, vast and white.
Sky-piercing peaks the voiceless chorus raise,
To fill with ecstasy the wond'ring night.

Complete, with every part in sweet accord,
Th' adoring breezes waft it up, on wings
Of beauty-incense, giving to the Lord
The purest sacrifice glad Nature brings.

The list'ning stars with rapture beat and glow;
The moon forgets her high, eternal calm
To shout her gladness to the sea below,
Whose waves are silver tongues to join the psalm.

Those everlasting snow-fields are not cold;
This icy solitude no barren waste.
The crystal masses burn with love untold;
The glacier-table spreads a royal feast.

Fairweather! Crillon! Warders at Heaven's gate!
Hoar-headed priests of Nature's inmost shrine!
Strong seraph forms in robes immaculate!
Draw me from earth; enlighten, change, refine;

Till I, one little note in this great song,
Who seem a blot upon th' unsullied white,
No discord make—a note high, pure and strong—
Set in the silent music of the night.

IV

THE DISCOVERY

THE nature-study part of the voyage was woven in with the missionary trip as intimately as warp with woof. No island, rock, forest, mountain or glacier which we passed, near or far, was neglected. We went so at our own sweet will, without any set time or schedule, that we were constantly finding objects and points of surprise and interest. When we landed, the algæ, which sometimes filled the little harbors, the limpets and lichens of the rocks, the fucus pods that snapped beneath our feet, the grasses of the beach, the moss and shrubbery among the trees, and, more than all, the majestic forests, claimed atten-

tion and study. Muir was one of the most expert foresters this country has ever produced. He was never at a loss. The luxuriant vegetation of this wet coast filled him with admiration, and he never took a walk from camp but he had a whole volume of things to tell me, and he was constantly bringing in trophies of which he was prouder than any hunter of his antlers. Now it was a bunch of ferns as high as his head; now a cluster of minute and wonderfully beautiful moss blossoms; now a curious fungous growth; now a spruce branch heavy with cones; and again he would call me into the forest to see a strange and grotesque moss formation on a dead stump, looking like a tree standing upon its head. Thus, although his objective was the glaciers, his thorough knowledge of botany and his interest in that study made every

camp just the place he wished to be. He always claimed that there was more of pure ethics and even of moral evil and good to be learned in the wilderness than from any book or in any abode of man. He was fond of quoting Wordsworth's stanza:

"One impulse from a vernal wood
Will teach you more of man,
Of moral evil and of good,
Than all the sages can."

Muir was a devout theist. The Fatherhood of God and the Unity of God, the immanence of God in nature and His management of all the affairs of the universe, was his constantly reiterated belief. He saw design in many things which the ordinary naturalist overlooks, such as the symmetry of an island, the balancing branches of a tree, the harmony of colors in a group of flowers,

the completion of a fully rounded landscape. In his view, the Creator of it all saw every beautiful and sublime thing from every viewpoint, and had thus formed it, not merely for His own delight, but for the delectation and instruction of His human children.

"Look at that, now," he would say, when, on turning a point, a wonderful vista of island-studded sea between mountains, with one of Alaska's matchless sunsets at the end, would wheel into sight. "Why, it looks as if these giants of God's great army had just now marched into their stations; every one placed just right, just right! What landscape gardening! What a scheme of things! And to think that He should plan to bring us feckless creatures here at the right moment, and then flash such glories at us! Man, we're not worthy of such honor!"

Thus Muir was always discovering to me things which I would never have seen myself and opening up to me new avenues of knowledge, delight and adoration. There was something so intimate in his theism that it purified, elevated and broadened mine, even when I could not agree with him. His constant exclamation when a fine landscape would burst upon our view, or a shaft of light would pierce the clouds and glorify a mountain, was, "Praise God from whom all blessings flow!"

Two or three great adventures stand out prominently in this wonderful voyage of discovery. Two weeks from home brought us to Icy Straits and the homes of the Hoonah tribe. Here the knowledge of the way on the part of our crew ended. We put into the large Hoonah village on Chichagof Island. After the usual preaching and census-taking, we took

aboard a sub-chief of the Hoonahs, who was a noted seal hunter and, therefore, able to guide us among the ice-floes of the mysterious Glacier Bay of which we had heard. Vancouver's chart gave us no intimation of any inlet whatever; but the natives told of vast masses of floating ice, of a constant noise of thunder when they crashed from the glaciers into the sea; and also of fearsome bays and passages full of evil spirits which made them very perilous to navigate.

In one bay there was said to be a giant devil-fish with arms as long as a tree, lurking in malignant patience, awaiting the passage that way of an unwary canoe, when up would flash those terrible arms with their thousand suckers and, seizing their prey, would drag down the men to the bottom of the sea, there to be mangled and devoured by the

horrid beak. Another deep fiord was the abode of *Koosta-kah*, the Otterman, the mischievous Puck of Indian lore, who was waiting for voyagers to land and camp, when he would seize their sleeping forms and transport them a dozen miles in a moment, or cradle them on the tops of the highest trees. Again there was a most rapacious and ferocious killer-whale in a piece of swift water, whose delight it was to take into his great, tooth-rimmed jaws whole canoes with their crews of men, mangling them and gulping them down as a single mouthful. Many were these stories of fear told us at the Hoonah village the night before we started to explore the icy bay, and our credulous Stickeens gave us rather broad hints that it was time to turn back.

"There are no natives up in that region; there is nothing to hunt;

there is no gold there; why do you persist in this *cultus coly* (aimless journey)? You are likely to meet death and nothing else if you go into that dangerous region."

All these stories made us the more eager to explore the wonders beyond, and we hastened away from Hoonah with our guide aboard. A day's sail brought us to a little, heavily wooded island near the mouth of Glacier Bay. This we named Pleasant Island.

As we broke camp in the morning our guide said: "We must take on board a supply of dry wood here, as there is none beyond."

Leaving this last green island we steered northwest into the great bay, the country of ice and bare rocks. Muir's excitement was increasing every moment, and as the majestic arena opened before us and the Muir, Geicke, Pacific and other great glaciers (all nameless as yet)

began to appear, he could hardly contain himself. He was impatient of any delay, and was constantly calling to the crew to redouble their efforts and get close to these wonders. Now the marks of recent glaciation showed plainly. Here was a conical island of gray granite, whose rounded top and symmetrical shoulders were worn smooth as a Scotch monument by grinding glaciers. Here was a great mountain slashed sheer across its face, showing sharp edge and flat surface as if a slab of mountain size had been sawed from it. Yonder again loomed a granite range whose huge breasts were rounded and polished by the resistless sweep of that great ice mass which Vancouver saw filling the bay.

Soon the icebergs were charging down upon us with the receding tide and dressing up in compact phalanx

when the tide arose. First would come the advance guard of smaller bergs, with here and there a house-like mass of cobalt blue with streaks of white and deeper recesses of ultramarine; here we passed an eight-sided, solid figure of bottle-green ice; there towered an antlered formation like the horns of a stag. Now we must use all caution and give the larger icebergs a wide berth. They are treacherous creatures, these icebergs. You may be paddling along by a peaceful looking berg, sleeping on the water as mild and harmless as a lamb; when suddenly he will take a notion to turn over, and up under your canoe will come a spear of ice, impaling it and lifting it and its occupants skyward; then, turning over, down will go canoe and men to the depths.

Our progress up the sixty miles of Glacier Bay was very slow. Three

nights we camped on the bare granite rock before we reached the limit of the bay. All vegetation had disappeared; hardly a bunch of grass was seen. The only signs of former life were the sodden and splintered spruce and fir stumps that projected here and there from the bases of huge gravel heaps, the moraine matter of the mighty ice mass that had engulfed them. They told the story of great forests which had once covered this whole region, until the great sea of ice of the second glacial period overwhelmed and ground them down, and buried them deep under its moraine matter. When we landed there were no level spots on which to pitch our tent and no sandy beaches or gravel beds in which to sink our tent-poles. I learned from Muir the gentle art of sleeping on a rock, curled like a squirrel around a boulder.

We passed by Muir Glacier on the other side of the bay, seeking to attain the extreme end of the great fiord. We estimated the distance by the tide and our rate of rowing, tracing the shore-line and islands as we went along and getting the points of the compass from our little pocket instrument.

Rain was falling almost constantly during the week we spent in Glacier Bay. Now and then the clouds would lift, showing the twin peaks of La Perouse and the majestic summits of Mts. Fairweather and Crillon. These mighty summits, twelve thousand, fifteen thousand and sixteen thousand feet high, respectively, pierced the sky directly above us; sometimes they seemed to be hanging over us threateningly. Only once did the sky completely clear; and then was preached to us the wonderful Sermon of Glacier Bay.

Early that morning we quitted our camp on a barren rock, steering towards Mt. Fairweather. A night of sleepless discomfort had ushered in a bleak gray morning. Our Indians were sullen and silent, their scowling looks resenting our relentless purpose to attain to the head of the bay. The air was damp and raw, chilling us to the marrow. The forbidding granite mountains, showing here and there through the fog, seemed suddenly to push out threatening fists and shoulders at us. All night long the ice-guns had bombarded us from four or five directions, when the great masses of ice from living glaciers toppled into the sea, crashing and grinding with the noise of thunder. The granite walls hurled back the sound in reiterated peals, multiplying its volume a hundredfold.

There was no Love apparent on

that bleak, gray morning: Power was there in appalling force. Visions of those evergreen forests that had once clung trustingly to these mountain walls, but had been swept, one and all, by the relentless forces of the ice and buried deep under mountains of moraine matter, but added to the present desolation. We could not enjoy; we could only endure. Death from overturning icebergs, from charging tides, from mountain avalanche, threatened us.

Suddenly I heard Muir catch his breath with a fervent ejaculation. "God, Almighty!" he said. Following his gaze towards Mt. Crillon, I saw the summit highest of all crowned with glory indeed. It was not sunlight; there was no appearance of shining; it was as if the Great Artist with one sweep of His brush had laid upon the king-peak of all a crown of the most brilliant of all

colors—as if a pigment, perfectly made and thickly spread, too delicate for crimson, too intense for pink, had leaped in a moment upon the mountain top; "An awful rose of dawn." The summit nearest Heaven had caught a glimpse of its glory! It was a rose blooming in ice-fields, a love-song in the midst of a stern epic, a drop from the heart of Christ upon the icy desolation and barren affections of a sin-frozen world. It warmed and thrilled us in an instant. We who had been dull and apathetic a moment before, shivering in our wet blankets, were glowing and exultant now. Even the Indians ceased their paddling, gazing with faces of awe upon the wonder. Now, as we watched that kingly peak, we saw the color leap to one and another and another of the snowy summits around it. The monarch had a whole family of royal

princes about him to share his glory. Their radiant heads, ruby crowned, were above the clouds, which seemed to form their silken garments.

As we looked in ecstatic silence we saw the light creep down the mountains. It was changing now. The glowing crimson was suffused with soft, creamy light. If it was less divine, it was more warmly human. Heaven was coming down to man. The dark recesses of the mountains began to lighten. They stood forth as at the word of command from the Master of all; and as the changing mellow light moved downward that wonderful colosseum appeared clearly with its battlements and peaks and columns, until the whole majestic landscape was revealed.

Now we saw the design and purpose of it all. Now the text of this great sermon was emblazoned across the landscape—"God is Love"; and

we understood that these relentless forces that had pushed the molten mountains heavenward, cooled them into granite peaks, covered them with snow and ice, dumped the moraine matter into the sea, filling up the sea, preparing the world for a stronger and better race of men (who knows?), were all a part of that great "All things" that "work together for good."

Our minds cleared with the landscape; our courage rose; our Indians dipped their paddles silently, steering without fear amidst the dangerous masses of ice. But there was no profanity in Muir's exclamation, "We have met with God!" A life-long devoutness of gratitude filled us, to think that we were guided into this most wonderful room of God's great gallery, on perhaps the only day in the year when the skies were cleared and the sunrise, the atmos-

pheric conditions and the point of view all prepared for the matchless spectacle. The discomforts of the voyage, the toil, the cold and rain of the past weeks were a small price to pay for one glimpse of its surpassing loveliness. Again and again Muir would break out, after a long silence of blissful memory, with exclamations:

"We saw it; we saw it! He sent us to His most glorious exhibition. Praise God, from whom all blessings flow!"

Two or three inspiring days followed. Muir must climb the most accessible of the mountains. My weak shoulders forbade me to ascend more than two or three thousand feet, but Muir went more than twice as high. Upon two or three of the glaciers he climbed, although the speed of these icy streams was so great and their "frozen cataracts"

were so frequent, that it was difficult to ascend them.

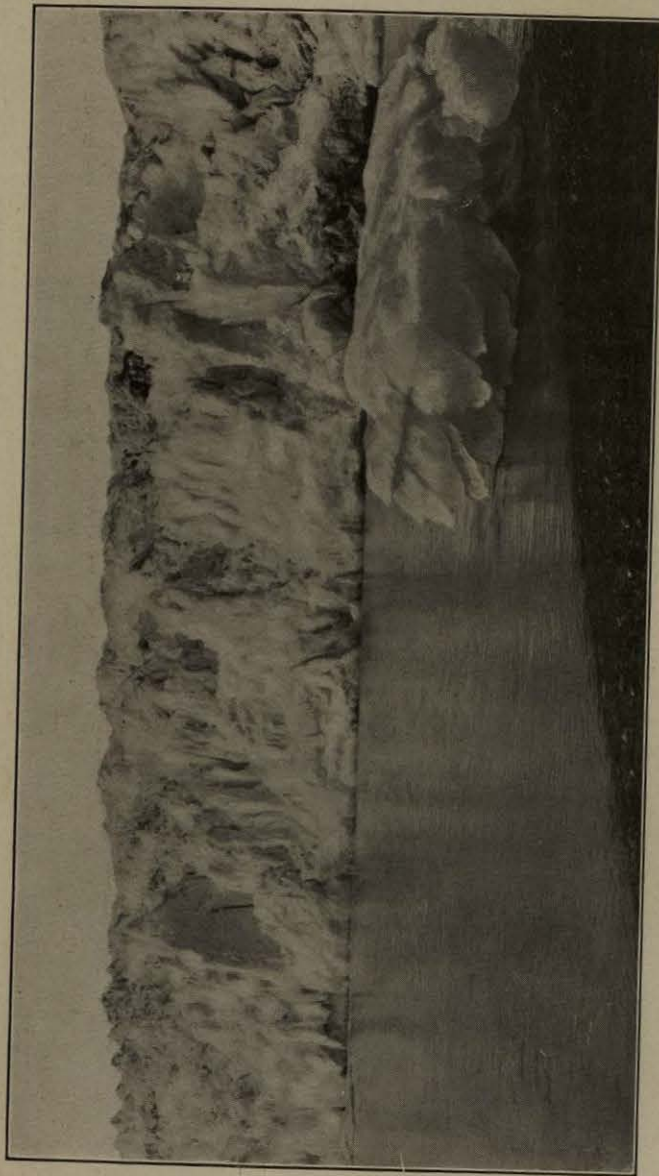
I began to understand Muir's whole new theory, which theory made Tyndall pronounce him the greatest authority on glacial action the world had seen. He pointed out to me the mechanical laws that governed those slow-moving, resistless streams; how they carved their own valleys; how the lower valley and glacier were often the resultant in size and velocity of the two or three glaciers that now formed the branches of the main glaciers; how the harder strata of rock resisted and turned the masses of ice; how the steely ploughshares were often inserted into softer leads and a whole mountain split apart as by a wedge.

Muir would explore all day long, often rising hours before daylight and disappearing among the moun-

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tains, not coming to camp until after night had fallen. Again and again the Indians said that he was lost; but I had no fears for him. When he would return to camp he was so full of his discoveries and of the new facts garnered that he would talk until long into the night, almost forgetting to eat.

Returning down the bay, we passed the largest glacier of all, which was to bear Muir's name. It was then fully a mile and a half in width, and the perpendicular face of it towered from four to seven hundred feet above the surface of the water. The ice masses were breaking off so fast that we were forced to put off far from the face of the glacier. The great waves threatened constantly to dash us against the sharp points of the icebergs. We wished to land and scale the glacier from the eastern side. We rowed



MUIR GLACIER

Returning down Glacier Bay, we visited the largest glacier of all, which was to bear Muir's name

our canoe about half a mile from the edge of the glacier, but, attempting to land, were forced hastily to put off again. A great wave, formed by the masses of ice breaking off into the water, threatened to dash our loaded canoe against the boulders on the beach. Rowing further away, we tried it again and again, with the same result. As soon as we neared the shore another huge wave would threaten destruction. We were fully a mile and a half from the edge of the glacier before we found it safe to land.

Muir spent a whole day alone on the glacier, walking over twenty miles across what he called the glacial lake between two mountains. A cold, penetrating, mist-like rain was falling, and dark clouds swept up the bay and clung about the shoulders of the mountains. When night approached and Muir had not re-

turned, I set the Indians to digging out from the bases of the gravel hills the frazzled stumps and logs that remained of the buried forests. These were full of resin and burned brightly. I made a great fire and cooked a good supper of venison, beans, biscuit and coffee. When pitchy darkness gathered, and still Muir did not come, Tow-a-att made some torches of fat spruce, and taking with him Charley, laden with more wood, he went up the beach a mile and a half, climbed the base of the mountain and kindled a beacon which flashed its cheering rays far over the glacier.

Muir came stumbling into camp with these two Indians a little before midnight, very tired but very happy. "Ah!" he sighed, "I'm glad to be in camp. The glacier almost got me this time. If it had not been for the beacon and old

Tow-a-att, I might have had to spend the night on the ice. The crevasses were so many and so bewildering in their mazy, crisscross windings that I was actually going farther into the glacier when I caught the flash of light."

I brought him to the tent and placed the hot viands before him. He attacked them ravenously, but presently was talking again:

"Man, man; you ought to have been with me. You'll never make up what you have lost to-day. I've been wandering through a thousand rooms of God's crystal temple. I've been a thousand feet down in the crevasses, with matchless domes and sculptured figures and carved ice-work all about me. Solomon's marble and ivory palaces were nothing to it. Such purity, such color, such delicate beauty! I was tempted to stay there and feast my soul, and

softly freeze, until I would become part of the glacier. What a great death that would be!"

Again and again I would have to remind Muir that he was eating his supper, but it was more than an hour before I could get him to finish the meal, and two or three hours longer before he stopped talking and went to sleep. I wish I had taken down his descriptions. What splendid reading they would make!

But scurries of snow warned us that winter was coming, and, much to the relief of our natives, we turned the prow of our canoe towards Chatham Strait again. Landing our Hoonah guide at his village, we took our route northward again up Lynn Canal. The beautiful Davison Glacier with its great snowy fan drew our gaze and excited our admiration for two days; then the visit to the Chilcats and the return trip com-

menced. Bowling down the canal before a strong north wind, we entered Stevens Passage, and visited the two villages of the Auk Indians, a squalid, miserable tribe. We camped at the site of what is now Juneau, the capital of Alaska, and no dream of the millions of gold that were to be taken from those mountains disturbed us. If we had known, I do not think that we would have halted a day or staked a claim. Our treasures were richer than gold and securely laid up in the vaults of our memories.

An excursion into Taku Bay, that miniature of Glacier Bay, with its then three living glaciers; a visit to two villages of the Taku Indians; past Ft. Snettisham, up whose arms we pushed, mapping them; then to Sumdum. Here the two arms of Holkham Bay, filled with ice, enticed us to exploration, but the con-

stant rains of the fall had made the ice of the glaciers more viscid and the glacier streams more rapid; hence the vast array of icebergs charging down upon us like an army, spreading out in loose formation and then gathering into a barrier when the tide turned, made exploration to the end of the bay impossible. Muir would not give up his quest of the mother glacier until the Indians frankly refused to go any further; and old Tow-a-att called our interpreter, Johnny, as for a counsel of state, and carefully set forth to Muir that if he persisted in his purpose of pushing forward up the bay he would have the blood of the whole party on his hands.

Said the old chief: "My life is of no account, and it does not matter whether I live or die; but you shall not sacrifice the life of my minister."

I laughed at Muir's discomfiture and gave the word to retreat. This one defeat of a victorious expedition so weighed upon Muir's mind that it brought him back from the California coast next year and from the arms of his bride to discover and climb upon that glacier.

On down now through Prince Frederick Sound, past the beautiful Norris Glacier, then into Le Conte Bay with its living glacier and icebergs, across the Stickeen flats, and so joyfully home again, Muir to take the November steamboat back to his sunland.

I have made many voyages in that great Alexandrian Archipelago since, traveling by canoe over fifteen thousand miles—not one of them a dull one—through its intricate passages; but none compared, in the number and intensity of its thrills, in the variety and excitement of its incidents and

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in its lasting impressions of beauty and grandeur, with this first voyage when we groped our way northward with only Vancouver's old chart as our guide.

THE LOST GLACIER