CUFFY AND TUFFY HELP (?) MR. FINLEY WITH HIS WORK
These two active members of the Association's expedition were natural-born investigators with a curiosity that never flagged and delight in all that was new.

NATURE MAGAZINE

Vol. IX FEBRUARY, 1927 No. 2

All the highways lead to cities,
To the traffic and the mart;
But the byways lead to Nature,
With her warmly pulsing heart.
EMMA PEIRCE

CAMERA HUNTING IN THE NORTHLAND

By WILLIAM L. FINLEY
(Photographs by the Author)

OUT into the North Pacific Ocean and the Bering Sea, Alaska stretches an arm and seems, with some ancient gesture, to have flung a spattering of islands toward Kamchatka and the Asiatic mainland. Barren lands, the Aleutians, born of Nature's volcanic whims, thrusting their rocky headlands into the seas and rearing craggy peaks, monuments to some past upheaval. Host to no trees and with scant vegetation, girt by striving waters, buffeted by winds and rift one from the other by watery passes whose hidden rocks and shifting bars defy the chart-maker, these islands and those to the north toward the Arctic Circle seem to offer little attraction to mankind.

These outposts have been but partly explored and are practically unknown to tourists, but to him who would seek out that which is different and difficult and, therefore, fascinating they offer much. Such a man is Campbell Church, whose avocation is to explore wild places, to know the thrill of cruising swift rivers and dangerous waters, and to reap the joy of seeking little-known animals of the wild. It is to him that the success of the American Nature Association expedition to the treeless islands of the Bering Sea is largely due.

This expedition was, of course, to be a hunting trip—with cameras for weapons and film for ammunition. But first there must be a yacht, sea-wise and worthy, boasting some of the conveniences necessary for a long trip. Such is the *Westward*. Wide of beam and deep of hull, rough-hewn and sturdy, eighty-six feet from stem to stern, full Diesel-powered with auxiliary sails, she is capable of going anywhere, any time. Outside she bears little resemblance to the floating palaces one may see anchored off a well known yacht club, but within are three large double cabins, roomy cupboards, electric lights, hot-water heat, and even an open fireplace. A large living room and dining saloon on deck are among her many other conveniences. Outboard motor boats, rowing skiff, power canoe, and two light river canoes complete the equipment.

Knowing the de-

With this article we go into the northland with the Finley-Church Expedition to the treeless islands of the Bering Sea under the auspices of the American Nature Association. In announcing this first article on the Expedition, the Association wishes particularly to express its appreciation of the courtesy of the Bureau of Fisheries of the United States Department of Commerce for its cooperation in placing its facilities always at the disposal of the party. The second article on the Expedition will appear in the March issue.

SEEN ALONG THE INNER PASSAGE
The beautiful scenery and alluring bays and forests of the British Columbia coast are ever there.

mands of roughing it in and about Alaska, summer or winter, Mr. Church and Campbell Church, Jr., took entire charge of equipment, crew, guides, and packers. It was left to Mrs. Finley and me to take care only of our personal equipment and the various and bulky weapons of the hunter in the way of cameras, both still and motion. For those who may be inspired to rough it in these northern lands let me say that we took light silk parkas*, knee-length; light Bristol waders to be worn over two pairs of woolen and one pair of light socks; shoe-packs for tundra tramping, with rubber soles that extend to the ankles; heavy woolen trousers, jacket, and sweaters. Lightness and warmth are the best measures of outfit.

With the details of the cruise generally mapped out, the *Westward,* bearing Mr. and Mrs. Church, with Campbell Church, Jr., and the youngsters, went on ahead to cruise leisurely up the island-bordered coast to Ikatan, where we would join them in early June. Then, on June 1, the *"Catherine D."* of the Pacific American Fisheries Company left South Bellingham, Washington, and bore us toward the beckoning arm of the south Alaskan mainland and its out-flung islands.

CAMPBELL CHURCH SERVING
Mess time aboard the *Westward* was the happiest time for Cuffy and Tuffy.

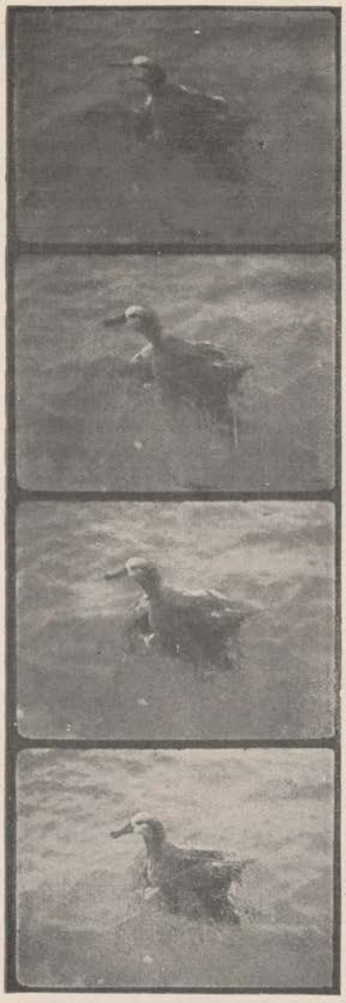
To attempt to describe the glorious panorama and primitive beauty of the Inner Passage up the British Columbia coast would be to retrace the steps of the Association's expedition of 1924. Suffice it to say that June 4 found us at Ketchikan, busy center of the southeastern coast of Alaska, and the next day we came to Icy Straits and Glacier Bay, from which we turned out of the protected passage and straight across the Gulf of Alaska to Kodiak Island.

A blue sky flecked with clouds moved with the roll of the waves. A light wind came from the west, and the glaucous-winged gulls that

* Editor's Note: Parka is an Eskimo term. It was originally a sleeved and hooded cape of sealskin or other available fur, waterproof and windproof. Parkas are now made for campers and explorers, utilizing oiled silk instead of the rare and expensive fur.

PHOTOGRAPH CAMPBELL CHURCH, JR.

THE *WESTWARD,* ROUGH-HEWN AND STURDY
She was ready to go anywhere, any time, and seemed to delight in battling the winds and waters of the Bering Sea.



ALBATROSS OR "GOONIE"
They trailed the boat like silent shadows, at a distance.

had dogged our wake up the passage sought the open sea. Early in the morning the black-footed albatross — the "goonie" of the sailor man — took up vigil, swinging back and forth beyond the stern. Trailing like silent shadows, keeping ever at a greater distance than had the clacking, screaming, sociable gulls, these long-winged, dark gray birds played continuously at their game of skimming the crest of the water without touching it. Some were sooty black save for the white patch on the front of the head; others, perhaps older birds, showed the white rump patch and white at the base of the tail underneath.

There was another bird much like the albatross in color, shape, and mastery of flight, though smaller. This was one of the shearwaters, accustomed to hunt the northern seas in summer, but, like the albatross, nesting and rearing its young in winter on islands of the Pacific, far to the south. Though we were two hundred miles off shore, there was always bird life in sight. Several pairs of puffins or sea parrots passed us, acting a bit mystified and lost. Often there were sandpipers or plovers flitting along close over the surface of the water, and now and then a small, black bird with long wings and darting flight like the petrel.

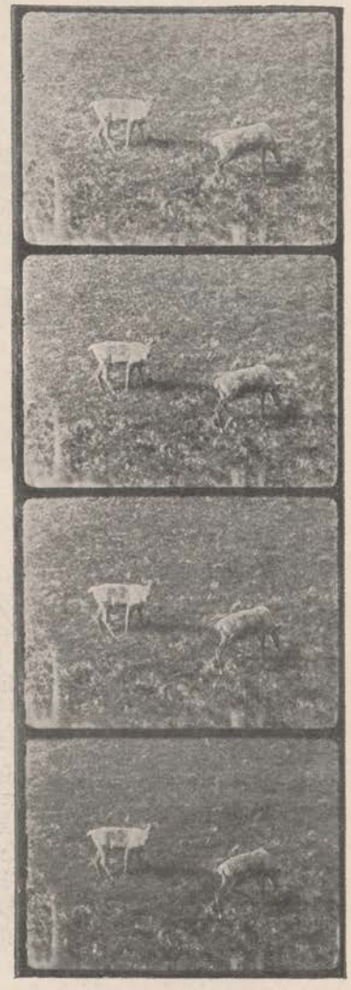
Finally we sighted the scattering islands between Kenai Peninsula and Afognak Island, and the "*Catherine D.*" entered the more protected waters of Shelikof Strait. The gold of the evening sky outlined a rugged rim of mountains off to the northwest, one a live volcano from which the smoke trailed off as from the stack of a passing steamer. Uyak Bay on the north side of Kodiak Island was reached on June 8, and the next day brought us to Chignik Bay and thence to Squaw Harbor, successful salmon fishing port on the north side of Unga Island.

It was dusk as we rounded this side of the

A SOCIABLE GULL
They followed, all clacking and screaming and always hungry.

THE ALASKA LONGSPUR
They seemed to sing continuously, chanting from the wing for lack of trees on which to perch.

THE BEARS' CABIN
Their forest home never humped and bumped like this one.



CARIBOU WERE THERE
They proved elusive animals to stalk on Unimak Island.

BABY ALEUTIAN SANDPIPER
There are many birds to be found in the northland and all of them are interesting.

island and we sighted a small boat busily exploring Pavlof Bay. It was the *Westward,* true to the agreed schedule. The next day, June 11, we boarded her at Ikatan, leaving that same afternoon for a short run to False Pass, site of a big salmon cannery. The expedition was now officially under way and the following morning we pulled away from the cannery dock to tackle the Pass itself. The northern passage between Unimak and Alaska Peninsula is wide and shallow, and there the waters of the North Pacific and the Bering Sea are in endless strife.

"Keep toward the west shore," was all the advice the captain of a cannery tender could give our skipper, Captain Albert Grove, for False Pass boasts poor charts. For a while all went well, and we were nearing the Bering Sea. Then, suddenly, came that dubious bump of a boat on hard bottom, and the *Westward* was drawn into the tide rips. Backing only swung her into shallower water, and the sand eddied about her hull. Was this to be a disastrous beginning, before we had hardly gotten under way? No, fortune was with us, for in two hours the northwest rush of tide ceased, the bar sank from under us, and we were through. Before us lay the Bering Sea!

Before we proceed further we must introduce two new members of the party, who appeared on the passenger list as Cuffy and Tuffy, and whose cabin was on the after deck in a covered box. They had joined the *Westward* at Copper River and if, indeed, Campbell Church had shanghaied them aboard, at least they were natural born members of such an expedition because of their curiosity and love of adventure. Cuffy and Tuffy were two black bear cubs, not long out of the winter den. They were not good sailors but quick to learn the ways of the sea, particularly after a rough and tumble romp had sent Cuffy overboard and made him a sadder and a wiser bear. Nevertheless, they had to be watched, for there was no mischief of which these two rascals were incapable. Their genius for exploration was limitless.

Our plan was to cruise during the day and put in to some harbor at night, anchoring on whichever side was most nearly protected from the wind. We turned in on our bunks one night with a moderate sea running, expecting to anchor about one in the morning. Soon afterward, however, the *Westward* rounded a cape, and a gale—we learned afterward that it was a sixty-miler—hit us square in the face. Everything movable aboard began hopping about and playing hide and seek under the bed. The cameras, in a solemn row along the wall, threatened disaster, and I rolled out to rescue them. The carpet seemed obligingly to rise and meet me and the ceiling threatened to thump me on the head. I thought of the many rocks outside, hidden and not, and our nearness to shore. One glance out on deck showed our craft dripping fore and aft with the spume and spindrift of the sea. New to the *Westward* then, I confess I doubted her, but after a few hours of battling and buffeting, we were again on a lee shore and the anchor slithered out.

Chapter II—Unimak Island

There is a difference between waking in the morning to gaze out at a field of clover with a cow grazing contentedly, and looking out of a porthole to see a mild-eyed, round-headed seal peering inquisitively out of the waves, or a whale blowing spray. So we awoke to an air brimming with the tang of the sea, and looked out upon the sparkling cone of Shishaldin, on whose slopes the barren-ground caribou were grazing.

The north shore of Unimak Island, uninhabited as it is from tip to tip, did not look specially inviting for our first shore camp. Several small streams wandered down

SEASICK OR CURIOUS?
Cuffy looks suspicious leaning over the side. He couldn't understand why the ground was unsteady.

from the mountains, but the forests were missing. After the manner of the Marines, however, we sent a scouting party ashore, and it brought back assurance that we could camp back from the beach under the protection of the high bank of the river. Provisions for ten days or two weeks were gathered and the next morning we made landing, set up two light tents, made beds of the thick moss, gathered considerable sea-battered driftwood, and settled down in our temporary tundra home.

In the stream by which we camped were many Dolly Varden trout, marked with red or orange spots on their sides—predatory fish, feeding on the eggs and young of salmon. They were good sport for the rod and reel, these grayhounds of the water—long, slender, and swift fighters.

Near the camp to the west lay the ruins of an old Aleut village—unoccupied, perhaps, for centuries. Its old sod houses, some round, some square, were grassed over. It might have yielded much to the ethnologist or archæologist, but our concern was with the living, not the dead.

THERE WAS SPORT FOR FISHERMEN
The Dolly Varden trout found in the stream by the camp were good fighters when hooked.

No doubt the happiest members of the party at being ashore were Cuffy and Tuffy. They spent the days rolling in the soft moss, digging up roots, and trying to keep one another from getting to the top of a sloping pole which we had put up for them, to compensate for the complete lack of trees, climbable or otherwise. They seemed to depend upon our companionship and seldom roamed far from camp. At mealtime their food was given them in two pans, but to put these dishes near together was to incite a riot which ended with food well smeared all over both wrestlers. A bath would then be in order, but the cold stream held no charms for the cubs. Strategy was necessary, and I recalled their weakness for strawberry jam. We drove a stake in the middle of the little river where the water was about a foot deep, and surmounted this makeshift goal post with a can of that delectable confection. Ice cold or not, what was mere water when the scent of jam was in the air? In went the cubs as one bear, around the can they fought and tumbled, and, lo, by the time the little can was empty the little bears were clean once more. To see or hear them fighting one would suppose that death alone could satisfy their vengeful jealousy, but those thick black coats always prevented serious damage.

Unimak, unlike the islands farther west, is the home of the barren-ground caribou and the Alaskan brown bear. We saw caribou tracks as soon as we landed, and the next morning Mrs. Finley and I set off across the tundra, hoping that, thanks to the lack of hunting of the caribou on the island, the animals would be curious rather than suspicious. From the stream bed the land sloped upward to the west for about four miles, culminating in a mountain top. To the east the tundra sloped up to a high ridge, while the head of the river valley ended in high mountains to the south. Wide meadows in places along the streams made it a typical caribou country.

Upstream from camp we sighted a herd of fifteen caribou, all bulls, some grazing and some lying down. This seemed to be the gentlemen's valley, while that to the east was occupied by cows and calves. A half-mile away they had not seen us, so down on our knees we went to work closer. Slowly we wormed our way to three hundred yards—two hundred yards—then out flared the light-colored rump patch of one of the bulls. His tail flashed into the air and he was off, the rest following, to a safe vantage point a mile away. Maneuver as we would, seeking to gain a place where the wind would carry away our scent from their keen nostrils, they were ever alert, flaring away all that day and all the next, as though to say, "You are not bears, you are of the tribe that carry guns."

CAMP WAS MADE ON UNIMAK ISLAND
The expedition landed here for its first long stop to photograph caribou and Alaska brown bears.

Camera hunting, however, requires one thing—persistence; and so we set out another morning along the old caribou trail from our camp for the marsh and lake land to the east. We gained the ridge that broke off

down to the swamp land, spotting twenty caribou on the slope. As we worked our way along, we passed some little sandpipers courting with tinkling notes of love. As we approached the caribou they separated, but we got a few long range shots with the special distance lens. Then we lay in the grass to rest, hoping that they might later feed toward us. Suddenly a big Alaska brown bear appeared, quartering down the ridge toward the lake. Caribou were forgotten, and off we started, via hands and knees, intent on photographing his brown majesty. He kept stopping to investigate the relative merits of the under sides of rocks. Each time we slipped a little nearer.

The principal advice I had had on stalking Alaska brown bear without a gun was, "Don't do it, it's bad business." But here I was, and the only equipment I had was a camera, a knapsack, and a hope that the bear had the usual natural fear of man. I wanted to get closer, and crept forward. When about seventy-five yards from the bear, I rose, and—relying on the commonly reported poor eyesight of these fellows—made a run for a nearer rock. His eyes were apparently brighter than they are credited with being, for he saw me and reared up to get a better look. Then he turned, coming back up hill and making amazingly quick time. I watched him through the finder, clicking off pictures, but when one is out of breath and a bit excited as well, it's hard to keep a hand camera steady. Bruin must have taken the long lens for a gun, because he kept on up the hill, away from me; and the camera on my knee recorded only his departure.

Like many people whom one cannot judge by first appearances, Unimak is not so forbidding as it looks at first. Its green slopes are carpeted with many wild flowers. It is summer host to many joyous song birds. Here we first met the Alaska longspur, bobolink of the northern meadows, race of the Lapland longspur which circles the world of the north wherever the barrens of the polar regions are found. Wherever we went over the tundra, these birds, rising for their aerial song, chanted on the wing for lack of trees on which to perch. We found a nest of thick grasses lined with feathers, just behind our tent. Four eggs, heavily blotched with brown, were guarded by the brown-clad mother until we came too close. The father, striking in his raiment of jet black on head and breast with a white stripe back of the eyes, his upper neck a bright reddish-brown and back streaked black and brownish, seemed constantly in ecstasy of song.

Our camp at Unimak was treated to a continuous concert, almost all day and night, for the light in the northern country gives vigor to life and inspiration to the songs of birds. Little Savannah sparrows, snowflakes, rosy finches, and other songsters of the north are at home in the fields of wonderfully-colored Arctic flowers. Food is abundant, and the days joyously long. As adventure piled upon adventure with the progress of the expedition, we were often wont to forget the treelessness of the tundras amid the beauties of northland summer.

New Zealand's Most Unique Bird

By J. C. McGill-Nutt

In a unique bird life covering some two hundred native species, including some of the most remarkable flightless birds extant, and others of unusual characteristics, the New Zealand Huia, *(Heteralocha acutirostris)*, stands out prominently as probably the most remarkable bird in the world.

The oddest thing about this strange bird is the difference in the bills of the sexes. In the male bird the bill is 2.4 inches long and remarkably hard and sharp. It is well adapted for chiselling out partly decayed wood or attacking hard barks of trees, in which the grubs forming their food supply are found. In the female the bill is more than twice as long, being nearly five inches in length, and is quite soft and pliant towards the tip. The male chisels out the dry wood, thus exposing the grub holes. When this job is finished, then the female bird, inserting her long pliant bill into the hole, takes a grip on the horny headed "huhu" and drags it carefully into the light, where the male immediately attacks it with his sharp bill, removing the harder portion of the head. The female then takes the grub in her bill, and raising it skywards swallows it whole.

THE MALE HUIA IS A VAIN BIRD
Apparently these birds mate for life, nest in exposed tree tops and live altogether on boring insects.

HEAD OF THE FEMALE HUIA
Little is known about these birds and since they are almost extinct much will remain a mystery.

CAMERA HUNTING IN THE NORTHLAND

By William L. Finley

The second article in the story of the American Nature Association Expedition to the treeless islands of the Bering Sea.

PHOTOS BY FINLEYS

BUFFY JOINED THE PARTY
Mr. Finley, with the sea gull pet, and two views of the bird that "went civilized."

Chapter III—The Shadow of Shishaldin

"WELL, we haven't a steam shovel and we can't pile any more sand out here, so I quess we had better quit."

Now some seven feet under ground and about thirty feet from where we started, that burrow still sloped toward China. It was like a question mark; we had hopefully set to work at the period and were now perspiringly almost back to it again. It all had come about because Cuffy had sniffed so persistently at the mouth of a fox den in the sand. As clearly as a black bear could, Cuffy had said, "There are some small live cubs down there somewhere, and I want them to play with." What fun it would be, we thought, to add to the expedition's menagerie a couple of baby red foxes, for red foxes we knew them to be, as we had frequently seen on the dunes and tundras of Unimak Island those swift red shadows which were now near and now gone. The Captain of the *Westward* labored almost out of sight in the excavation. It was he who passed some remark about digging down to China, but I hastily advised him that China was not on the other side of the world from Alaska, and more likely he would come out somewhere in South Africa.

It was evident that the Captain preferred navigating to excavating; and, as I was also completely worn out from my share in the digging, there seemed nothing else to do but give up the venture.

"Those baby bears can surely smell farther than we can dig," sighed the relieved man with the shovel. "By the way, where are those little cusses, anyhow? Haven't seen 'em around here in a long time."

Even as he spoke, there appeared across the tundra a bounding, gamboling, bellowing thing, and into camp dashed Cuffy, searching his innermost soul for sounds to tell us how scared he was. It was hardly conceivable that one small bear could produce such a tremendous disturbance. Tuffy was not at his heels. Where was Tuffy? Something must be wrong, and we organized a relief party forthwith. We ranged the tundra for a mile all around, but no Tuffy. We swept the horizon with field glasses, but still no Tuffy. All this time Tuffy's playmate gave vent to those heart-rending yells, and refused to be comforted. Had one of those foxes stolen up like a shadow behind the baby bear and jerked him down into the depths of the earth? A grown fox might have been strong enough to do so, had he pounced upon the cub unawares, but there was no sign.

"Perhaps," said one of the party, "some big bad-tempered brown bear came along and batted Tuffy into the middle of next week, just as a method of self-expression." If so, there wasn't even a smear to remind us where Tuffy had landed.

Even as we stood discussing what might have happened, a possible answer came from the sky. It was the hoarse scream of one of the two eagles which had been circling around all day. The other eagle had gone; his mate was apparently following him with all haste. Was

that the true answer? We never knew, but several weeks later, when I climbed to the eyrie of a great bald-headed eagle's family, we found in the nest the hind quarters of a caribou calf. The eagle which had carried off this booty might well have managed a ten-pound baby bear. Cuffy alone knew the real tragedy, and he could not tell.

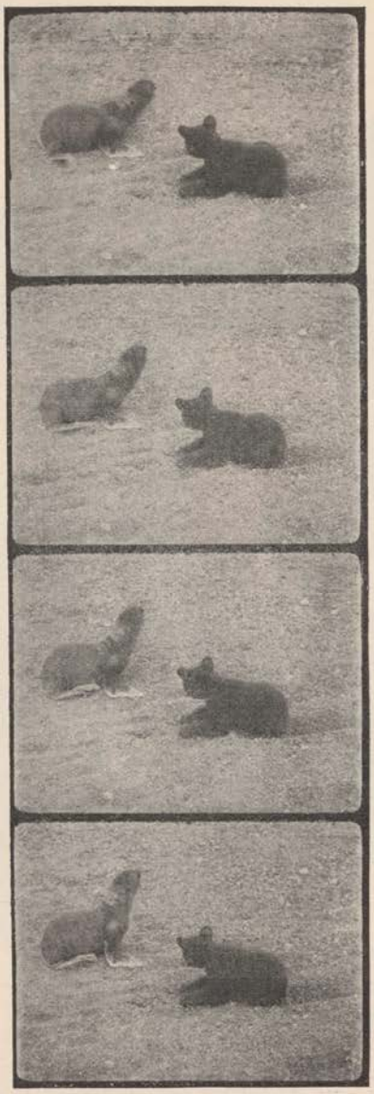
That night, as Cuffy lay close to us about the camp fire on the tundra, seeking human companionship in exchange for that of the wild brother he had lost, Mount Shishaldin in all its volcanic beauty looked down upon us. Snow-mantled, the graceful sloping sides shone coolly through the twilight night, and now and then a glow, as from some far distant blast furnace, burst through a cleft near the peak. Shishaldin was warm at heart where the lava churned within. Cuffy's heart was empty and lonely.

As I sat gazing at the great volcanic peak, something in its cold beauty and fierce inexorable ruggedness awoke within me that desire which every mountain climber knows. In that feeling there was both a call and a threat, but somehow the threat made the call seem stronger than ever.

We decided to travel by water along the shore, and then up the river toward the base of Shishaldin. Campbell, the Captain, and the engineer, took the motor canoe; and the rest of us fitted in between the piles of equipment in the rowboat and light Old Town canoe. A strong pull on the starting cord and the motor began to pop. The tow lines snapped taut and our procession of little boats leaped forward through the waves. By the time we reached the mouth of the river, the old Bering Sea looked decidedly woolly, and the wind had risen. Suddenly a cross current caught us. Quick as a flash the Captain, in the motorboat, lunged to cast off the tow ropes.

"Every boat for itself!" he yelled; but he was a moment too late. We had a glimpse of a great wave breaking over the bow of the motor canoe. Another one seemed to slap in from the side. There was a scurrying of men, a splashing of spray.

When we could see clearly again it was to view an upturned hull with three men some distance away in the water. The next roller caught them and swept them still farther from the upturned bottom. They tried their best to regain the boat, and one of them seemed to do so. The others were caught in a rip of the tide and



"WOOF," SAID CUFFY (Right)
The sea lion pup, however, made no evident reply to these advances.

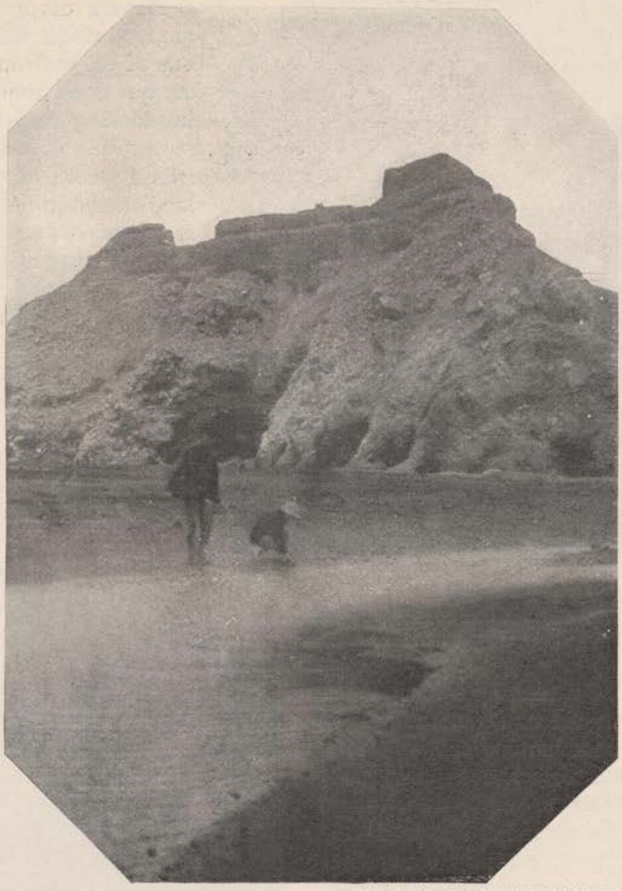
PHOTOGRAPH BY THE FINLEYS

MURRES CAME AND WENT (Below)
They loosened rock and shale that showered down on their comrades.

PHOTOGRAPH ROWE DYKEMAN

swept ever farther down the coast. What could we do? In our overloaded boats we were powerless. We must make for the shore, unload one of them, and then rush back as fast as we were able to the rescue. It seemed hours before we got the light canoe headed outward again through the surf, and Campbell and the engineer managed to catch hold of the sides of our craft. It was impossible to draw them in. The Captain was still clinging to the hull, and, although nearly exhausted, managed to hang on until we got back to him.

Meanwhile, those in the rowboat had also managed to make a safe landing on the shore through the surf. Wet through themselves, they fully realized that warmth alone would save the lives of our rescued, but half-frozen, comrades; and they had built a huge fire of driftwood for the purpose. An hour later, as we sat steaming and smoking about the welcome blaze, I looked up for the first time to see Shishaldin again towering over those tiny human beings clustered in its shadow. A mighty symbol of inexorable Nature, the mountain rose, unmindful alike of the tragedy of yesterday and the nearly triple tragedy of to-day.



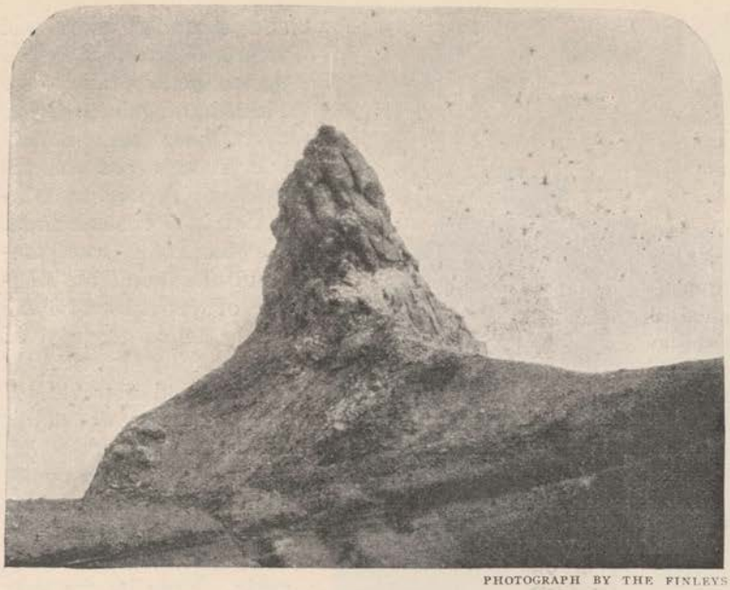
PHOTOGRAPH BY THE FINLEYS

A VIEW OF NEW BOGOSLOF
It looked as though a giant had built it of huge blocks of granite.

The wind now shifted toward the north, and it behooved us to get out to the *Westward* soon or not at all, abandoning all idea of further acquaintance with Shishaldin from this angle. Even by the time we had broken camp, the breakers were pounding in and we had to wade into the surf like members of a lifeboat crew to get off at all. Cuffy had had enough of waves, even though he was not one of those actually shipwrecked on the previous day. The moment the first roller hit him he streaked off down the shoreline with Cam after him. In-

PHOTOGRAPH BY THE FINLEYS

INVESTIGATING THE POSSIBLE NEW PLAYMATE
Shorn by an unkind fate of his buddy, Cuffy, the bear cub considers the sea lion pup as a companion.



PHOTOGRAPH BY THE FINLEYS

A PEAK OF OLD BOGOSLOF
The island held a continuous threat of volcanic action and erupted soon after the expedition left.

stead of the orthodox pursuit of a man by a bear, here was a case in the reverse. Cam did two hundred yards in record time and reclaimed our remaining cub, so all of us finally arrived on the *Westward,* wet through and ready for hot baths and warm food to revive us. Using the heavy dory, we collected the stranded boats of the day before, and then headed west, cruising along the north shore of Unimak and dropping anchor that night in Dublin Bay.

Snow-covered Pogromni Volcano glittered in the sun the next morning as we passed by it on our way to the end of Unimak Island. Passing lonely Sarachef Lighthouse, we crossed Unimak Pass to Akun Head and sighted Akutan Island; then, soon after, the village of Akutan. Across the bay from the village was the headquarters of the North Pacific Sea Products Company, a whaling station.

Having dropped anchor here for a bit, the next morning Campbell, Cam, and I shipped one of the outboard motors on the rowboat and set out down the bay to explore some interesting-looking cliffs with bird inhabitants. The strong tide defeated every attempt to reach an island where many birds were nesting, so we landed in a little cove where a pair of Aleutian song sparrows sent a beautiful carol of welcome echoing along the cliffs. While we were watching these fellows, larger and with fluffier and warmer plumage than the song sparrows of the States, the tide whisked our boat away. It was headed for the passage and a long, lonely trip somewhere in the Bering Sea. For us its loss meant a hike of several miles over mountains. Off came all but my woolen underwear, and I finally retrieved the boat. The tide got only one of my socks in exchange. A drift

PHOTOGRAPH BY THE FINLEYS

BULL SEA LIONS WERE FEROCIOUS
They resented the intrusion of the expedition into the serenity of their harem.

PHOTOGRAPH BY THE FINLEYS

MOTHER SEA LION NURSES HER PUP
These strange mammals of the sea scarcely set flipper on land save for the purpose of breeding.

fire was burning to thaw me out, and a climb up the mountain finished the job.

From the top of the mountain, impressive itself in its ruggedness, we looked down on Akutan Bay and out over the Pacific Ocean. Willow ptarmigans and titlarks we found on the summit and not far below several leucosticte or rosy finches were busily flying about. Snow still hung in sheltered nooks, and great cliffs broke off hundreds of feet to the water's edge. The sun set over a scene of noble isolation and indescribable grandeur.

Nearby we found an island literally covered with glaucous-winged gulls. The nests of these sea rovers held two or three eggs, gray or brown and spotted dark brown. A pair of black oyster catchers flew

anxiously about as we photographed a couple of their youngsters. The older birds were a little smaller than a tame pigeon, black and with long red beaks. Then there was a quiet inlet off Udagak Strait. Its green flower-covered slopes stretched up and up until they touched patches of snow; a stream meandered down to the bay from a lake two miles inland. Cam took Cuffy ashore, where he had a field-day digging roots and racing his small legs into fatigue. If Cuffy missed his late playmate, he now showed no sign, for Nature quickly heals the wounds of the soul. Two whalers joined us in the hospitable inlet for the night and the next day we spent dogging their wake in fruitless search of whales, returning to Volcan Cove again for the night.

A day's trip brought us to Dutch Harbor on the Island of Unalaska, a village of note in the gold-rush days when boats sought its shelter to await the break-up of the Bering Sea ice. The village of Unalaska, headquarters of the Coast Guard Service and the Alaska Commercial Company, has now outstripped Dutch Harbor as a business center.

Chapter IV—Bogoslof Island

The two rugged volcanic mounds that are Bogoslof Island greeted us the following afternoon. To the south was the part known as Old Bogoslof, two jagged peaks rising several hundred feet from the shore line. A mile to the north is another high rock, flat on top and called New Bogoslof because it appeared after the eruption of 1883. A long flat table-land shelves off to the north from the old island, breaking off into a region of hot sand, pitted with steam-spouting fumeroles. A wide flat, whose floor is of cinders, burnt rock, and sand, and whose one edge is a hot lagoon, extends on to New Bogoslof.

Bogoslof has "acted up" on several occasions, the first offense known to man being in 1796. It has "come to life" since, in 1906 showering the town of Unalaska with ash and cinders. Three years later it again trembled and the next year new peaks with two summits appeared in the center of the island. It was because of these visible upheavals that we suspected hidden reefs and took careful soundings as we cruised around the island to the west. A line of sandy beach whitened as the waters of the Bering lapped it. Glaucous-winged gulls circled the boats inquisitively. Squadrons of Pallas murres winged past, homeward bound from fishing grounds. About our hull the water was sulphur-colored, breaking sharply into blue where the waters of the bay joined the ocean. Along the shore line, warm currents ran.

New Bogoslof, looking as though some giant had built it of huge blocks of granite, was host to vast colonies of Pallas murres. To and from their nests in every conceivable cranny which the cliffs of the table-land afforded, these birds flew, loosening rocks and shale to the dire

PHOTOGRAPH BY THE FINLEYS

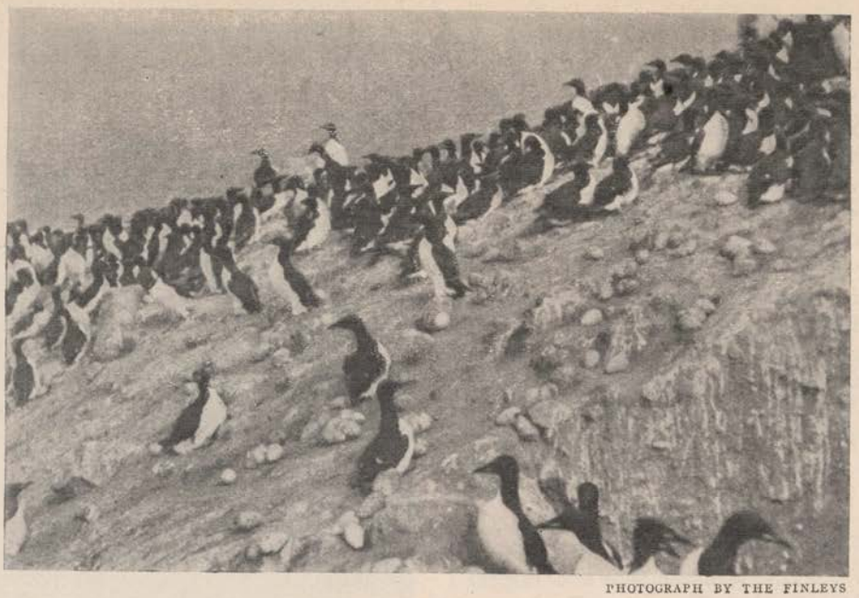
PALLAS MURRES NESTED ON BOGOSLOF
The high, crumbling pinnacles were like beehives, so massed with the bird colonies were they.

PHOTOGRAPH BY IRENE FINLEY

BOGOSLOF STEAMED IN MANY PLACES
Cuffy investigated a few hot holes and quit, but the rest of the party explored.

danger of their fellows below. Puffins had homes in the crumbling cliffs, and to the north nested Kittiwake gulls and cormorants.

Both of the high, crumbling pinnacles of Old Bogoslof were like beehives, so massed were they with murre colonies. The beautiful seal-brown backs of these birds and their snow-white breasts made a striking picture as each sat erect on its own home site, guarding its lone egg. A wise Nature made these eggs pear-shaped after the manner of the weighted salt shaker that will not upset, thus staying their fall from the nests.



PHOTOGRAPH BY THE FINLEYS

PALLAS MURRES AND THEIR EGGS
In the foreground are the eggs, which, vari-colored, were scattered like a garden of tints.

The murres are squatters, not home-builders. They ask no more than standing room, building no nests, but seeming unerringly to find their rightful eggs, which, vari-colored and different, look like a rock-strewn garden of tints.

"Is that driftwood on the shore?" called Cam, as we approached the shore line of Bogoslof. Our question was answered when one of the "logs" reared its head to bellow and roll over—a sure-enough bull sea lion basking in the sun. These mammals of the sea hardly set flipper on land save to breed. In the spring the bulls, big fellows weighing half a ton, come to the breeding place to select a site for their respective harems. This spot the bull guards viciously and with his life, jealous of his harem of cows and his litter of twenty to twenty-five-pound "pups."

We anchored in a quiet little bay and during most of the night the creatures kept up an intermittent roaring. The next morning Cuffy led the party ashore. Eagerly he started his explorations, but ground that was considerably hotter than good ground should be, sapped his enthusiasm. He poked his nose into one strange-smelling hole, and then, with a wild yelp, announced that he had had enough of volcanoes. As between constantly tilting decks or red-hot holes, he for one preferred the former, and suited his action to the thought. Cam caught him, a flurry of ungainly legs and yelps, only at the very edge of the surf. After some persuasion, Cuffy consented to follow carefully in Cam's footsteps, but he was certainly a much subdued bear cub.

Shorn of his twin by an unkind fate, Cuffy next investigated the possibility of a sea lion pup as a playmate. As we approached, the cows took to the water, leaving their offspring scattered about. Several business-like bulls warned us off, but Cuffy found a lone pup snoozing by himself and stepped up to talk things over.

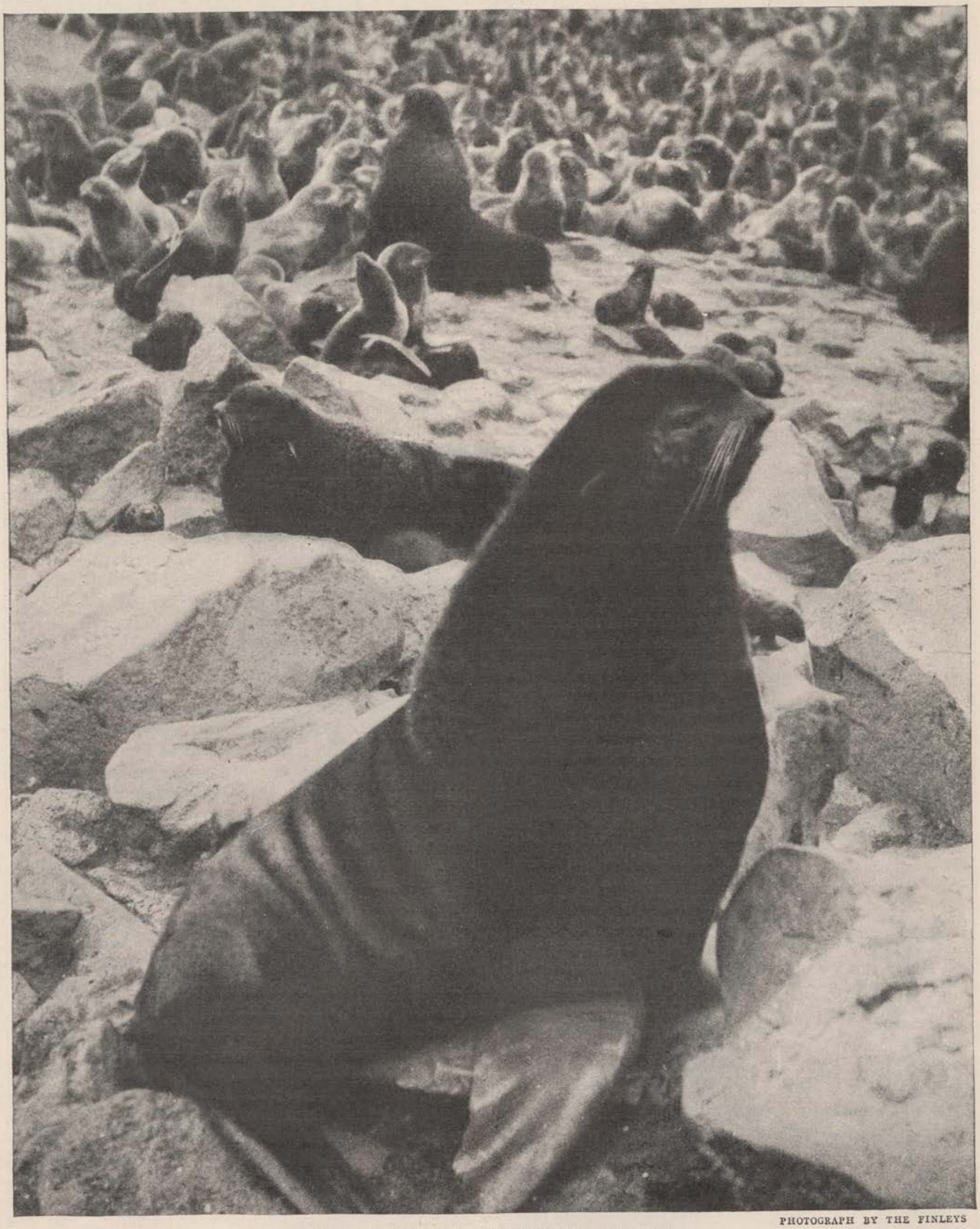
"Woof," said Cuffy. "I never saw a bear cub like you." The sea lion pup raised his head and looked with shining, curious eyes, but made no evident reply.

"Woof," repeated Cuffy. "What do you want to go humping along like that for? Why don't you walk like a self-respecting bear?" and like a suspicious policeman Cuffy sniffed inquiringly of this strange creature's breath.

"Mind your own business," snarled the young sea lion, and he opened a threatening mouth so suddenly that Cuffy leaped back in dismay. It was plain to our little mascot that this rude beast was no proper companion for a well brought-up bear, and he retreated somewhat stiffly. Perhaps it was just in time, for an indignant father with a very wicked-looking expression came humping and bounding up the beach. The bull's temper was not of the best, for he had been alternately charging the Captain and Mrs. Finley for the last ten minutes, not being in the least pleased at posing for a movie close-up. Cuffy remembered that he had pressing business elsewhere.

But if Cuffy did not care for a sea lion as a playmate, we at least added a new member to the *Westward's* zoo. Over beyond a shattered lava ridge in gull-land a bullying party was in progress. One speckled ungainly mite was being most cruelly picked on by an elder brother. Small Betty Church sped to the rescue and returned presently with the baby gull fearfully cuddling in her cupped hands. "This," she announced, "is Buffy, and he's going to sail with us." Of course, that settled it. Thereafter Buffy lived luxuriously on table scraps, his daily meal lasting from daylight to dark. A salt-water bird, he developed and indulged a strange taste for fresh water, and became a constant source of wonder to the gulls that flew about the ship, circling to get a closer view of one of their own kind "gone civilized."

We went on to explore the mysteries of Bogoslof, which gave us an impression of an ancient and romantic past. It was bereft of anything green, inhospitable and yet host to varied animal life. It held a continuous threat of action. We stayed two nights in the little bay, hoping that something would happen, but it didn't. Two weeks after we had gone Bogoslof set to changing its topography again. When we heard of the new eruption we thought of those millions of eggs and murrelets, those marvelous rookeries of life, and wondered. Were they all destroyed? Time would not then permit us to return to Bogoslof, and I do not know.



PHOTOGRAPH BY THE FINLEYS

THE BULL SEAL GUARDS HIS HAREM AND PUPS
He invites no intimacy from the visitor and the better part of wisdom is not to tempt his anger.

NATURE MAGAZINE

Vol. IX APRIL, 1927 No. 4

"Sure, afther all the winter,
An' afther all the snow,
'Tis fine to see the sunshine,
'Tis fine to feel its glow."
DENIS A. MCCARTHY

CAMERA HUNTING IN THE NORTHLAND

By WILLIAM L. FINLEY

(The Third Article on the American Nature Association's Expedition to the Treeless Islands of the Bering Sea.)

CHAPTER V—FORBIDDEN ISLANDS

"MEET St. Paul of the Pribilofs," drawled the Captain from the door of the galley, as I came on deck and was greeted by green slopes and a little village peeping out from under cover of that high fog which always shields these northern outposts from the summer sun. I expected the fog, for I knew this was a reason the fur seals had long ago taken the Pribilofs for a home.

Bobbing out from the shore to meet us, came something that soon took the form of a large lifeboat manned by native Aleuts and piloted by Mr. Christoffers, Superintendent of the island. He had come to take us ashore. In truth, we were to be guests of honor, for only those who have special permit from the Bureau of Fisheries of the United States Department of Commerce are allowed to land on the island. Once a year the supply boat furnished by the Navy Department carries a year's store of provisions to the Pribilofs and departs. Aside from this contact with the world, the *Eider,* a small boat belonging to the Department, occasionally goes from Unalaska to St. George and St. Paul, the two largest islands of the group, and sometimes a cutter from the Coast Guard Service glances across at these fog-bedecked islands, as it passes in the patrol of the Bering Sea.

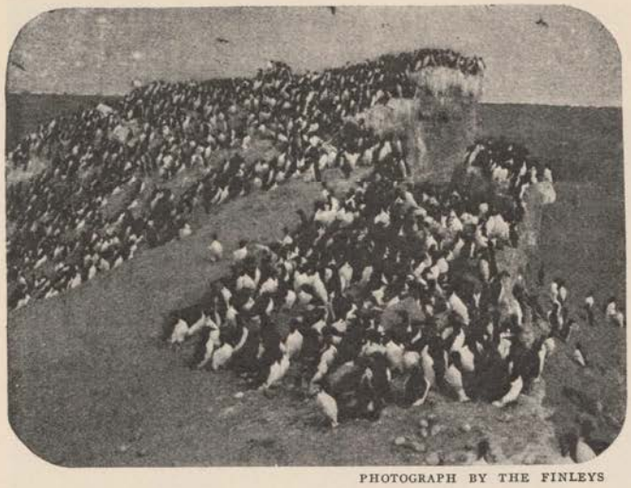
In October or early November the northern winds, laden with snow and ice, blow a cover of complete isolation over these outpost islands; and from that time until the breath of the south breaks the frozen blockade, they are as far off as Mars, except for the naval radio and its crew of men who hold converse with other outpost stations across the sea. On St. Paul and St. George live two or three hundred native Aleuts, each island being supplied with a government physician, school teacher, store keeper, and a superintendent in charge. It seemed to me that the few white men and women with their families who pioneer on these far-off outposts require courage and endurance, for during the long winters their island homes are swept by the continuous icy blasts of the north.

PHOTOGRAPH BY THE FINLEYS

THE ALEUTIAN ROSY FINCH
He plays the part of the sparrow of the North, nesting in the cliffs.

Camera equipment and a few personal articles were tossed into the boat, which was soon pushing through a mat of kelp and nosing toward a shoreline covered with huge, round boulders. With a westerly wind, we could land from this side; with an easterly wind, an approach could be made only from the other side. Willing natives carried our equipment to the government house where we were lodged in comfortable rooms.

Accustomed to living on a farm, I quickly noticed a large barn stored with hay and feed. I thought that the wild grass that grew abundantly on the



PHOTOGRAPH BY THE FINLEYS

MURRES NESTED IN CLOSE FORMATION
These strange birds are one of the most fascinating studies in northern bird life.

island had been cut and stored for winter, but I learned later that the season is too short for hay to cure, and it must be imported with the other provisions.

As we topped the ridge, the sight of seals met our eyes. Crowded along above the wave-washed shore line, the whole slope seemed to be covered with brown-looking rocks that came to life and wobbled. In my eagerness for a picture, I approached an old bull perched on a rock, and started cranking my camera. Suddenly there came a sound like the muffled chugging of a gas engine, and Mr. Seal, puffed up in rage, flopped humping toward me like a fellow in a sack race with his feet tied. Widely opened mouth, lined with sharp teeth, backed by energy that meant business, forced me to a hasty retreat.

"Don't go too near. He'll bite your leg off," yelled the guardian of the seal colonies. "An old bull seal selects his home site and his harem, and guards it with his life. Anyone that approaches is to him just a rival bull who wants to steal his wives."

The aim of the government is to protect the seals on the island during the breeding season, for here on the Pribilofs is the greatest colony of fur-bearing animals in the world. In the old days of Russian dominion, the fur seals of the Pribilofs were a most valuable resource. After the United States bought Alaska with its many outlying islands, it was the custom of hunters to pursue and kill seals—males, females, and young—in the open ocean, so that after years of such indiscriminate killing, these animals were reduced to the point of final disappearance. Then, after a long delay, our country, England, and Japan entered into a treaty abolishing seal hunting and entrusting the United States with the guardianship of the fur seals. Since that time, the seal rookeries have been handled very much as an intelligent farmer cares for the domestic stock on his land.

PHOTOGRAPH BY THE FINLEYS

A PAIR OF PAROQUET AUKLETS
The largest of the three species of auklets found on the Pribilof Islands of St. Paul and St. George.

The guard who was standing by my side explained how each bull had gathered about him cows, ranging in number from five to a hundred according to his favorable location on the beach and to his fighting prowess. Anything that might stampede the rookery would cause destruction among the little black baby seals, called pups, that were scattered helter-skelter among the rocks. As a rule, people are not allowed to disturb the animals at this season, but I was given special permission to edge up close enough to get intimate views. I soon discovered, however, that it was I that needed a guard, not the seals.

A LEAST AUKLET
They are always in danger from the foxes.

Down the rocky slope at the edge of the rookery a mother seal fanned her pup with a ludicrously swaying flipper. While keeping a sharp eye on the old bull, half asleep in the sun, I had not noticed another monster behind a rock farther up. Suddenly he charged and cut me off from retreat. I left the camera standing and dodged behind a huge boulder, only to find myself literally between the devil and the deep sea. Just as I was wondering how I was going to get out with both legs whole, the master of the lady I was photographing discovered the rival bull in his own harem. With a roar he galloped to the fray and a terrific

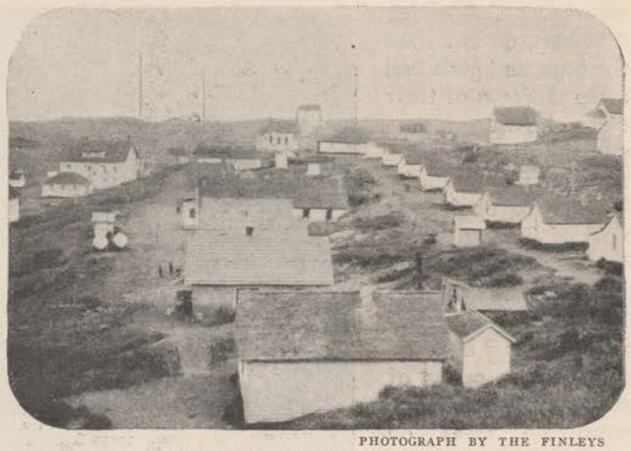
PHOTOGRAPH BY THE FINLEYS

THE GULLS WERE EVERYWHERE FOUND
They were the constant companions of the expedition wherever it wandered.

PRIBILOF SANDPIPER
Out on exploration but always on guard.

fight followed. My camera was in imminent danger, but the guard grabbed it and we escaped together in the melée.

Safe once more, I sat down on a big boulder above the rookery, listening to the continuous bleating of pups and bawling of cows. I could have closed my eyes and imagined I was in the midst of a big herd of sheep, but the puffing or huffing of the bulls and the warning roars were as foreign to any domestic flock as were the rush and pound of the Bering Sea breakers on that rugged northern shore to a meadow scene at home. I thought of the marvelous ingenuity that Nature uses among her many kinds of animals. Here below me were the fur seals, gathered from the four corners of the wide Pacific Ocean. They set flipper on these islands only during the summer time, for the purpose of breeding. The bulls arrive first from the southern waters and take their places some thirty to fifty feet apart. The females come later and select their own masters. Once a lady seal has taken unto herself a husband, she is under his power and dominion for the season. With little sleep night and day for two months, and without a bite of food or water during this time he charges to tear at the throat of any rival bull who chances to come too near. If any wife shows the least quality of fickleness and seems too inclined to waddle away, he lurches at her with a roar to strike terror in her soul. If the threat is not sufficient to curb her, he seizes her by the scruff of the neck and hurls her bodily back among his consorts. In size he is five times the weight of any one of his wives, and he has a strength and power to prove that might is right.



PHOTOGRAPH BY THE FINLEYS

A VILLAGE IN THE FAR CORNER
These far-away Pribilofs are home to a few hardy Americans and a few hundred Aleut natives.

PHOTOGRAPH BY THE FINLEYS

YOUTHFUL CITIZENS OF THE PRIBILOFS
A group of Aleut boys to whom the coming of the Americans has given many advantages.

The bull fur seal does not come to breeding age until about six years. The female is mature the second year and gives birth to a jet-black pup by the end of the third year. Nature has equipped the mother seal with two reproductive organs. In this way she starts having another baby almost as soon as she gives birth to her first. I know of no case of a seal having twins, however, and have not heard of one.

Returning to the village in a drizzling rain late one afternoon, I rounded the corner of an old building and bumped squarely into Santa Claus. His rotund figure showed a six-inch gap between the bottom of his gray sweater and the top of his trousers, and it was plain to see that no feathered pillow rounded out his form. A long, gray beard, a tousled gray head topped with a little narrow-rimmed hat, and the most genial smile in the world made me feel that surely this was the famous gentleman in person.

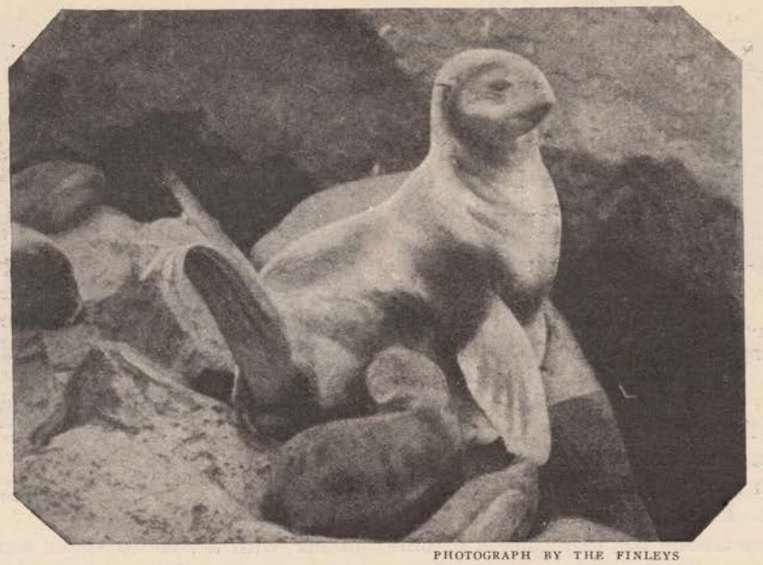
"Hello, do you live here?" I gasped, resting the tripod on the ground. He gave a genial grunt and with a sweep of his right hand said something I couldn't understand. "Do you speak English?" I continued, rather embarrassed at the thought of asking Santa Claus such a question. The conversation that followed was a rapid movement of arms and hands, interspersed with broad smiles which all the world can comprehend. Here we stood beside the old Russian church. He was not Santa Claus after all, but the priest stationed there to administer to the native Aleuts; and shouldering my tripod I went

PHOTOGRAPH BY THE FINLEYS

THE BLUE FOX EYED US BOLDLY
After much care in not scaring it with the camera, the fox refused to be startled.

on my way, rejoicing that here on St. Paul the boys and girls had a Santa Claus of their own who wore a perpetual Christmas look and spirit.

Bursting up from a field of flowers, like a blossom suddenly taking wings, flitted a black and white Pribilof snow bunting, scattering a series of rollicking notes. There were no trees on which he might alight, but he trembled aloft above his home and perched as if on an invisible bough, with spreading wings, pouring out his notes. Wavering earthward like a snowflake, his song ended thirty feet up, his wings closed, and he shot down to the cover of the Arctic poppies. An Alaskan longspur, another songster, took up the strain; and then another in a chorus I shall hear as long as I live. Songs, like smiles and laughter, take these avian people from the flowery feasts of summer through the dry crusts of winter, so closely does the joy of summer tread upon the heels of the winter's sorrow.



PHOTOGRAPH BY THE FINLEYS

THE BABY SEAL PHOTOGRAPHED AT LUNCH
The mother seal devotes herself to her pup at the expense of herself until it is strong.

CHAPTER VI—THE FOXES OF ST. GEORGE

The wind had veered to the east; the *Westward* had been compelled to change her anchorage. We couldn't see her, but she was perhaps off the west side of the peninsula. We bundled ourselves into the big bidarrah or skin boat of the natives; and, as the oars rattled steadily back and forth, St. Paul gradually disappeared into the fog. Presently, however, the *Westward* came

PHOTOGRAPH BY THE FINLEYS

A BULL SEAL AND THE SEAL COLONY
They were carefully guarded to prevent stampeding lest some of the pups be injured in the rush for safety.

rolling up out of the ocean. We clambered aboard against the pitch of the waves and just before dusk, the fog lifted a bit and showed the dark outline of another rocky shore, St. George.

PHOTOGRAPH E. C. JOHNSTON

THE FOX PUP SHOWS HIS ANCESTRY
Now and then the white fur of his forbears is mingled with or dominates his blue coat.

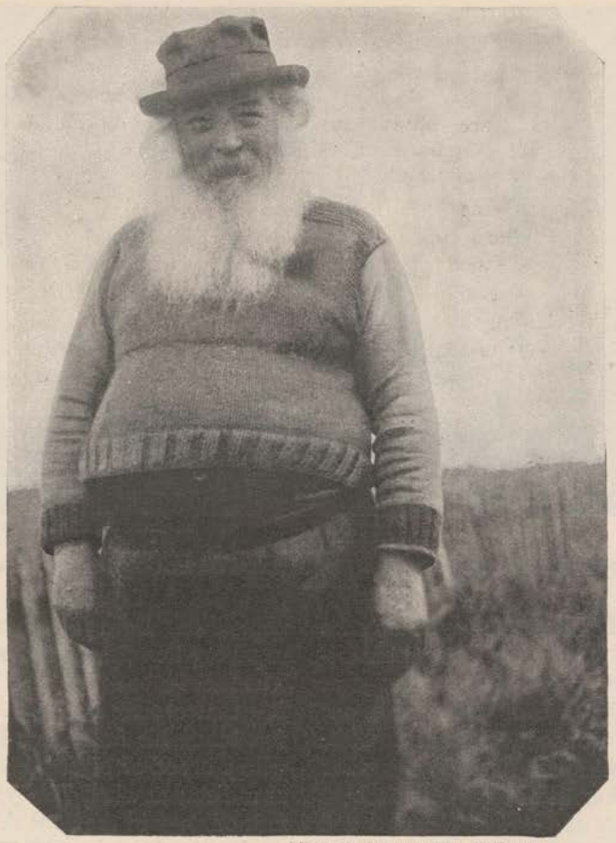
The gateway to this second forbidden island could not have been better designed by Nature to discourage the faint-hearted. A jagged reef lies low along the front where, even in calm weather, the rollers from the Arctic gain their momentum over many hundred miles to tear in white rage at this rocky approach. Straight toward destruction our bidarrah rowed, but stopped just short of the reef, while the biggest breaker of them all spent itself in a shower of spray. Then, with straining backs, the Aleuts bent to the task and we slipped past the end of the reef and into smooth water behind this barrier.

We were soon as pleasantly located in the government house as we had been on St. Paul, and I wasn't long in discovering that rare blue foxes wander about the back yards and along the village walks at St. George like town dogs at home. No real dogs are allowed on the Pribilofs, and this rule is strictly enforced to prevent disease and contamination of the pure-bred, royal fox strain on the island. This is a sad blow at the youthful Aleuts' love of pets, but St. George is not totally without a pet, for one black and white cat makes up the entire feline population. Poor pussy, one might say, with foxes surrounding her village and with but one flag-pole to climb. The fact is, however, that Tabby is a nightmare to every fox that crosses her path. At her near approach, every fox hunts his hole; and I noticed that even the mother with a brood of eight pups under the school house ranged at a distance when Tabby sat on the steps. Perhaps the lack of dogs in the little Aleuts' life was more than made up by the bumping of little heads against the wooden supports under their school room, as the young foxes played. I noticed that the other buildings in the village had wire netting about the foundations to keep foxes from burrowing underneath and setting up their homes.

PHOTOGRAPH E. C. JOHNSTON

A YOUNG HAIR SEAL
These interesting mammals are also to be found on the forbidden islands of the Bering.

The blue fox of the Pribilofs that ranges over both these large islands is of a different race from the common red fox; his face is more dog-like. They were rather ragged-looking animals just at that time, on account of being occupied in a change of clothes, shedding their old worn fur and getting on a new winter coat. The white fox of the Arctic has a winter coat of white which changes in summer to dark brown on the back and shoulders and tawny below. Many years ago it is very likely that this was the appearance of most of the foxes living on the Pribilofs, but being isolated for generations on these far-off islands, the white strain has been largely eliminated, and they have been described as a separate race. Practically all these foxes change from sooty-gray in summer to a bluish-gray in winter, thus earning the common name of blue foxes. Occasionally, however, one sees a pup of mottled color in a litter, showing that his coat harkens back to the more typical coat of his ancestors. White and blue foxes are not different species, therefore, but merely represent two color-phases of the same animal, just as a black bear may sometimes come into the world with a brown coat.



PHOTOGRAPH BY THE FINLEYS

AND THERE WE FOUND SANTA CLAUS
But he spoke only Russian and presided over the Aleut church on St. Paul Island.

Back of the village the land sloped away toward a high rocky hill with the summit nearly a thousand feet above the ocean. The slope was strewn with rocks, between and over which spread a mass of moss and rank vegetation. We had not gone a hundred yards from the village before we came upon two fox dens. A mother watching at the door disappeared within the depths. I stooped to look in and a trail of feathers met my gaze. I picked up two wings that told of least auklets she had caught, while from back under the rocks came the gutteral, warning bark of a mother fox telling her pups to lie low in the face of danger. There were half a dozen entrances, showing that tunnels ran helter-skelter under the big rocks. We had no blind to hide the camera, so I set it up in the open thirty feet from the den, and slipped on the six inch lens. Then I lay in the grass to wait. Perhaps the parent foxes would go out and bring in a bird or better still the pups might come out to play. Alas, foxes have an exasperating way of sleeping in the den or lazying around out of range during the day, waking up to hunt and play only when evening comes and the light is too poor for pictures.

Even so, I fooled an old fox one day. I saw her lying on guard at the front door of her home. I didn't go toward her, but stalked along over the boulders with all my attention apparently centered on taking a photograph of a rock fifty feet away. I worked hard on that rock for half an hour. Then I hunted for another rock that was nearer. Not once did I look at the fox or let my eyes turn in her direction, although with a little mirror I could watch her eyeing every move I made. At last, when I was near enough, I kept my back toward her, but focused the camera and took her picture while she thought I was still photographing a rock. And yet, perhaps I was the one fooled, after all. When I had used most of my film-taking pictures at thirty feet, I looked her in the eye and moved the camera ten feet nearer. She merely sat up boldly and watched me, and finally yawned, as if waiting for her picture had really been a tiresome matter.

PHOTOGRAPH E. C. JOHNSTON

BLUE FOXES IN WINTER
They are as common in the villages of St. Paul and St. George as dogs are at home.

Toward evening a strong

wind sent a drift of fog from the south. We sat on the edge of a high cliff facing north to watch the return of the least auklets that live in a great colony among the boulders. These little sea fowls, called by the Aleuts "choochkies" (pronounced chewtskie), are plump in body, but not much larger than an English sparrow. You see them sitting on the rocks of the boulder beaches, bowing and chattering. Having their legs at the end of their bodies, they prop themselves upright on their little webbed feet and walk around like little old men. During the day they feed off at sea, and now we were watching the flocks returning home. Out at sea a band of from fifty to two or three hundred would beat along into sight, driving low over the water against the wind. When near the island under the lea of a cliff, they rose just high enough to clear the top, and swished past our ears like the sound of a whip drawn quickly through the air. For an hour I lay low in the grass with watch in hand and counted flock after flock in rapid succession passing at the rate of six hundred to several thousand birds a minute. At times I could have reached up and grabbed birds out of the air. Occasionally, as a flock—perhaps tired after the long flight—lifted just over the rim of the cliff, a strong gust would hold them as against an invisible wall. Down the flock would sink again in the protection of the cliff and swing along to storm the barrier at another point on their homeward flight. We were not the only watchers, for at the edge of the cliff the keen eyes of a fox were only half hidden among the grass.

The birds that live on these northern islands are always on the firing line. There are three species of auklets, of which the choochkie is the most abundant. The paroquet auklet—a little larger than the least auklet—is called "Baillie Brushkie" by the Aleuts. The crested auklet—called "canooskie" ("little captain")—is well named, because he has a queer little crest of feathers that sticks out of his forehead and curves around toward his nose. All of the auklets find homes in the crevices of the rocks where foxes find most difficulty in reaching them, but in going to and from their homes the birds must ever be alert. Little sandpipers ply the shore lines, probing for food—Pribilof sandpipers. The snow bunting and the Alaska longspur sing above the flowering slopes and the meadows.

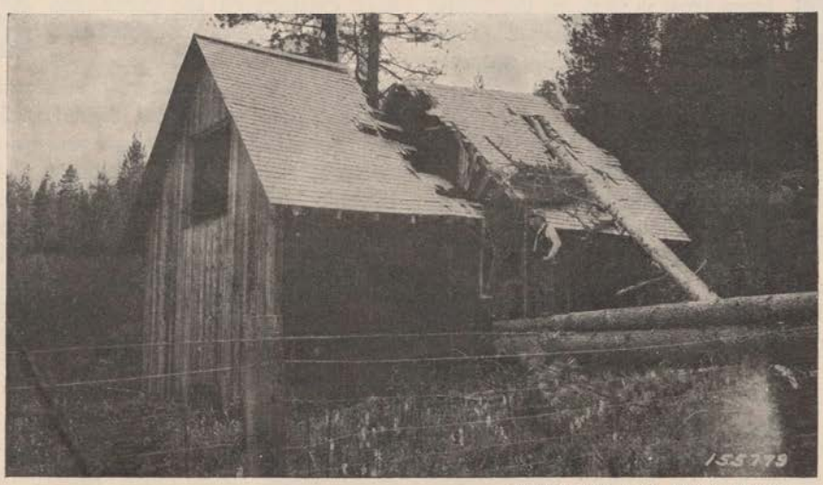
The beautiful Aleutian leucosticte or rosy finch plays almost the part of an English sparrow in the villages on St. George and St. Paul. He chatters from the roofs and lives about the barn and the back doors, but he takes himself off to a crack in the cliff to nest. Last and least is the little Alaska wren, tiny like our winter wren at home, in size and song perhaps the most striking bird character of the North. He, too, must find a home in a crevice of a cliff. With the heart of a Viking, he braves the northern winter and is affectionately called "Limmershin" (chew of tobacco) by the natives.

With all the birds on the island, it is a case of the survival of the fittest. A fox may be crouched behind every brown rock or green tussock of grass. The village hen yard is well guarded with a six-foot wire netting, but I saw a fox just outside watching with eagle eye the doings within. Biddy's wings do not have to be clipped to keep her from flying over, even in spring time. She inherits no desire to scratch in neighboring gardens. One evening at feeding time the gate of the henyard was accidentally left unlocked. The next morning St. George had not a single chicken left, and the foxes looked surprisingly plump.

Leaving St. George was harder than leaving St. Paul. The winds were veering. I hoped that they would drive hard from the north and make it impossible to pass the reef barrier, so we would have to stay ten days or two weeks longer, for St. George fairly bristled in interest every way I turned. However, the natives manned the life boat. A huge breaker shattered across the reef. We shot across the rip, off for other adventures.

The Barn Couldn't Dodge

HOUSES and ships are often cut in two by the ingenuity of man, but it is seldom that Nature, unassisted, performs a clean-cut job of this character. This farmer built his barn too close to heavy timber and a gale uprooting two large trees sent them crashing through the structure, the second tree following the first through the gap in the roof of the barn and completing the work of destruction. The farmer, seen standing on the tree trunks, is evidently trying to figure out whether it would be best to repair the old barn or build a new one in some safer and unwooded location.



PHOTOGRAPH U. S. FOREST SERVICE

Camera Hunting In The Northland

By William L. Finley

CHAPTER VII—AFOGNAK AND KODIAK

RETURNING from the Pribilofs and cruising along the south shore of the Alaska Peninsula, we met a patrol boat and one of the Federal fish and game wardens.

"Why don't you go to the head of Seal Bay on the north side of Afognak if you want bears?" said he. "Last August we had a job there of blowing out some rocks at the falls so the salmon could get above to the spawning beds. We hired a man that reckoned he was an expert with blasting powder, put him ashore with provisions and helped him make camp by the falls a mile up the stream. We were to return in a week, but had a break-down that kept us tied up at Kodiak, and it was nearly three weeks before we returned. The fellow was camped on the beach and walking the shore line when we came in sight, and he certainly was all 'het up.'

" 'How can you expect a man to work at them falls!' he shouted as we approached the shore. 'This place is alive with bears, the kind that weigh a ton and eat men. They don't want any rocks blown out. They ganged up on me. I'm through.'

"And that's why the job ain't done yet," said the warden. "If you want bears, that's the place to go."

That night I sat in the pilot house listening to our captain, the skipper of the patrol boat, and the warden trying to agree as to the location of Seal Bay. Each put it in a different place. The two latter insisted that the maps were all wrong.

THE PORCUPINES WERE FRIENDLY FELLOWS
They ambled about the camp and they were always handy for a stray shot with the camera.

"That may well be," returned our captain, "for the dotted outline on the coast chart indicates that this part of the island is unsurveyed."

That day the whole coast line looked as if it were indented with bays. We saw many rocks that lifted their heads above tide line. Others were just on the surface, where the water whitened, and some must have been just below. But the *Westward* nosed her way around islands from bay to bay and safely dropped anchor toward evening in a place that answered the warden's description.

While some of the members of our party reconnoitered the river in a canoe, I wandered along the bank hatless and hunting wild flowers. Striking a trail, I pushed on through the grass and alder clumps to a place where the grass had been flattened down. Just beyond this the grass and sand had been scooped out, making a big, round bed, a comfortable place for a *bear*. Suddenly, a movement beyond attracted my attention and a big, shaggy, brown-face appeared through the leaves. I was face to face with the fellow I had been hunting for days and weeks. My camera was safe on board the yacht. I stood hatless and gunless with a little bouquet of flowers in my hand. In a flash it occurred to me that perhaps the little bouquet of flowers was singularly appropriate for my prompt demise, for an Alaska brown bear has a reputation for aggressiveness. For a moment we stood facing each other. Then perhaps the comedy of the situation appealed to the big fellow. He dropped down out of sight in the bushes, and I quickly dropped out of sight in the other direction. The question as to whether the Alaska brown bear is dangerous has been settled in my own mind. It depends upon the individual bear.

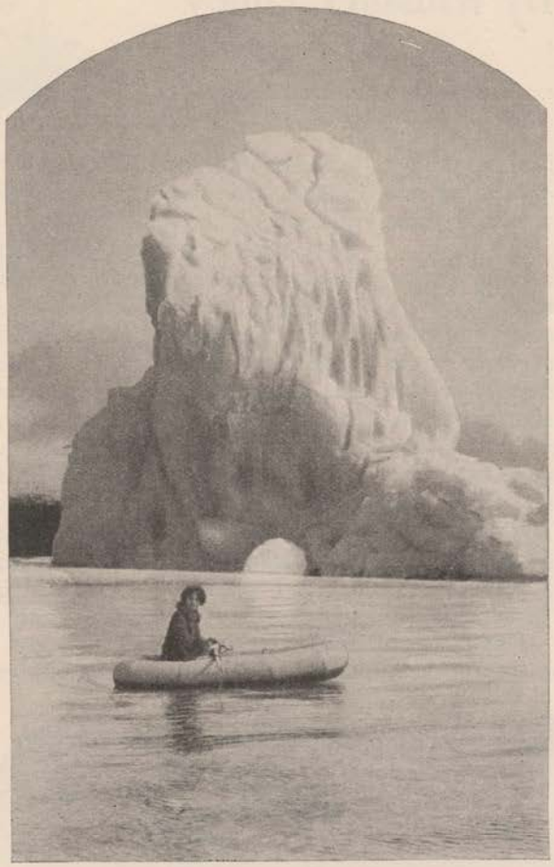
We camped at the still undynamited falls a mile up stream, but no bears came to fish. Cam and I packed on up, taking in addition to provisions a light rubber boat or air-raft which weighed eleven pounds and could be carried in a pack sack. This was one of the handiest pieces of equipment we had, for with this we explored five different lakes higher in the mountains. We saw where bears had been catching and eating salmon, but they had gone farther back in the mountains for salmon berries, luscious fruit that was now ripe and abundant.

Returning to the mouth of the river, we found fresh tracks of an old mother bear and her cubs, and were in high hopes of getting some photographs, when suddenly four natives or Aleuts appeared on the beach, walking up the opposite side near the river's mouth. They had come into Seal Bay to seine for salmon, and now toward evening were intent on bagging a bear. Each carried

a rifle. They advanced slowly with guns ready for action.

"Our chance for pictures has gone glimmering," I whispered to Cam in disgust. "Let's show them we were on the ground first."

Suiting the action to the word, I boldly arose, followed by Cam, and walked toward two of the natives who were coming up the river bank. The other two had gone to the top of a little rise and were looking away from us, watching intently a trail that came out of the woods. One of the Aleuts along the river spied us walking in the tall grass, threw up his gun and took aim. I expected to hear the bang of the gun and the whiz of the bullet, but we didn't look exactly bear-like so he lowered his gun. Saying nothing, we walked down toward the river and sat in the grass about a hundred yards away. The Aleuts got together for a powwow, all standing on a little knoll watching the edge of the woods some little distance up the slope.



THE RUBBER BOAT WAS VERY HANDY
Deflated it took up little space and inflated it was a safe and sturdy craft.

We had all been waiting quietly for about fifteen minutes when off at the edge of the woods above the Aleuts came the unmistakable bawl of a bear cub. Each of the natives faced that direction with guns ready for action. Cam and I tried to wade the stream, but it was too deep. Then another wail from the cub, that seemed to come from some bushes across the river. One of the Aleuts ran down to the river bank where he could see if the bear came on down out of the bushes. Just then a cub weighing about thirty pounds appeared, and, not seeing the Aleut, started on up the beach. The hunter jumped to get a better view and was aiming to shoot when I leaped to my feet with a loud yell.

"Don't kill him! He's a pet!," and the force and volume of my voice were as of one speaking with authority, for the native lowered his gun and the others looked surprised. The cub sat down in the grass and looked around to see where the noise came from. He really acted like a tame cub, for then he ambled along through the grass as if hunting for amusement. Soon he disappeared into the bushes again. The Aleut joined his three companions for another powwow as to the plans of action.

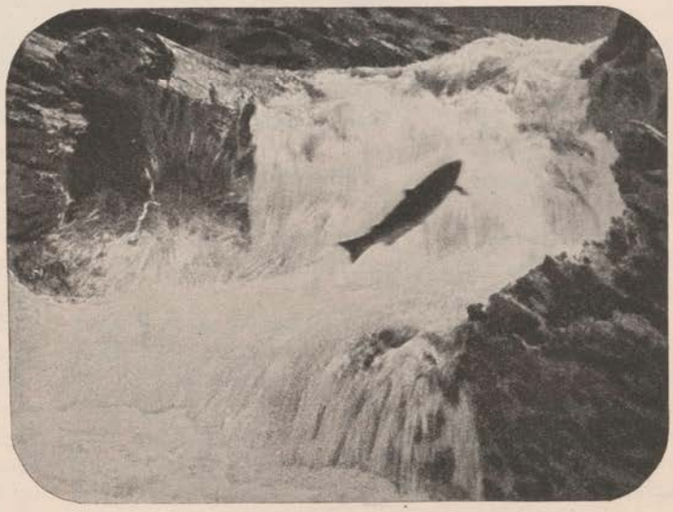
A few minutes later the oldest native in the bunch stood up and shouted across to us. "What you say? Yours?," pointing in the direction where the cub had been.

"Yes, my pet cub," I replied.

"The mother may be there in the bushes or in the woods above," whispered Cam, "and there may be some action yet," and he unlimbered his camera, although it was a little dark for pictures. The Aleuts, however, were suspicious, holding their guns ready for action but they were afraid to approach the place where the cub had disappeared. Darkness was creeping over the meadow. A flock of mallards whirled up the river and dropped into a marshy place. Schools of salmon flapped on the shallows above, as the tide retreated; and the four Aleut hunters filed off around the point toward the bay.

The old mother bear and cub had been on their way down to the river when she scented the hunters. A cub is obstreperous at times, and his bawling may have been the result of a spanking the mother gave for not keeping close in a time of danger. He would have lost his life if I had not come to his rescue. He must have joined his mother a little later, for we heard no more of him that night, nor did we see the bears the next morning, although we were on watch at daylight.

Both Afognak and Kodiak Islands are indented with numerous bays, at the head of which are many fine rivers yet unnamed. One morning Cam and I were up at two-thirty and set out in one of the motor canoes, towing the Old Town Canoe. We took sleepingbags and cameras, hard-tack, canned goods and other provisions to last several days.



THE LIFE STORY OF THE SALMON IS EPIC
It fights a mighty struggle, buffeted by rocks and churning currents, to win through to spawn and to die.

We motored up stream, past picturesque cliffs and through a series of rapids, until we reached the shallows and had to leave the heavy canoe. Packing our provisions in the light canoe, we towed and paddled on up to a big eddy, above which the water ripped between rock walls. The eddy was filled with salmon, sockeyes or reds and humpbacks known as pink salmon. The canoe frightened the fish until the water boiled and we were spattered from stem to stern. The sockeye or red is the main commercial fish of Alaska. When it comes in from the ocean it has a bluish tint. As it works on up to fresh water, the color of the body gradually changes as it nears spawning time. The body is a bright red, plainly visible in the water below. As male and female struggle on up the stream, the reds are easy to follow because of their color. The name "humpback" comes from a peculiar hump that develops on the back of the male. It would look very much like the centerboard of a boat, if it were on the under side. In shallower waters one may see the humps projecting above the surface, as the fish struggle on over the riffles.

We waded on up shallow places where salmon bumped against our boots, struggled betwen our legs and had to be kicked out of the way. The whole bottom of the river was ploughed and furrowed by spawning fish, wallowing out their beds or nests in the sand and gravel. It was uneven wading, and one had to watch when he stepped lest he drop unexpectedly over his boot tops. Crevices in the rocks were filled with salmon eggs. These fish die after spawning, and salmon lay on the banks and hung from the bushes and trees. The river smelled of salmon. The water tasted of salmon. Yet, for lunch we ate canned salmon. One interested in natural history can not tire of a fish that so stirs the imagination with its romantic life and remains a teaser to the palate after hours of bodily exertion. Mystery hides the travels of the salmon in its four years of life in the sea. How instinct guides the race! From the unknown depths of the ocean the fish return to the parent stream. Under the spell of the spawning instinct the salmon buffets rocks, leaps rapids on to the cool gravel bars of birth. Why such a mighty struggle when death is the only result?

ANEMONES BLOSSOMED HERE AND THERE
The beauty of the northern flowers in summer was a source of constant delight.

From beginning to end, the salmon is always on the firing line. In the open ocean he is pursued by seals and by other animals of the sea. Gulls and crows gather at the feast on the tide-flats. Bald eagles perch above the gravel bars, and magpies flock in the bushes along the banks. Brown bears watch the shallows. Cormorants or shags live along the coast line at points strategic to the salmon streams. Unending is the pursuit of mergansers or shelldrakes that hunt the clear water where the salmon fry live. Terns and kingfishers glide along the shores to spear fingerlings that play too near the surface. Last, but not least, are men with inventive genius, who snare and catch the salmon by many methods. One might wonder how the numbers hold up when a wise Nature has furnished a fish so palatable for many species. Out of a thousand or more pink eggs that the mother salmon has packed closely in her sac, if more than four or five came through from egghood to maturity, the streams would be so overcrowded that the end and aim of Nature would be thwarted.

SOME ELUSIVE MOUNTAIN SHEEP
They proved to be difficult fellows to shoot with a camera although a man with a gun could have gotten them easily.

Chapter VIII—Moose of Kenai

Nearly a century and a half ago Captain Cook sailed the coast of Alaska around Kenai Peninsula, in his search for a northeast passage to Hudson Bay. From Alaska Peninsula extending for almost twelve hundred miles along the Aleutian chain, is one of the longest

and straightest lines of volcanic action on the globe. In 1912 Katmai erupted with such terrific force that it is recorded as one of the greatest volcanic upheavals in history. If Katmai had been located where New York now stands, the column of steam that burst from the volcano could have been seen as far north as Albany. The rumble and roar of the eruption could have been heard as far west as Chicago. Sulphuric acid fumes would have swept across the states as far as the Rocky Mountain region. Philadelphia would have been deluged in ashes a foot deep, and her people would have groped in total darkness for sixty hours.

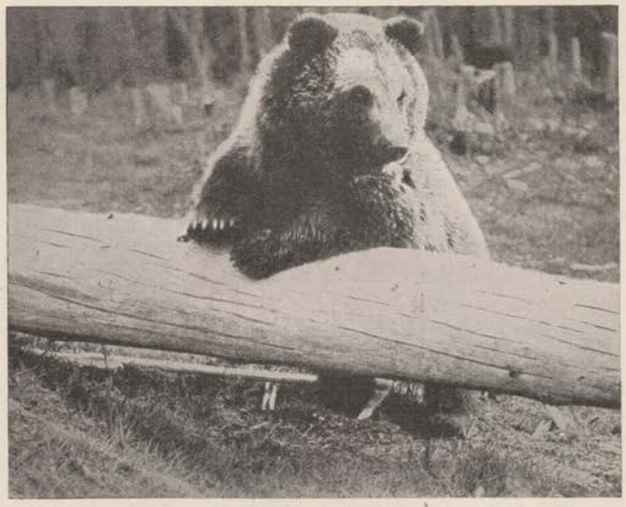
THE SALMON LEAPS

It fights its way to the spawning ground in answer to the insistent demand of instinct.

One day when we were making camp on Kodiak Island, I reached up to pull some bunches of moss from the limbs for a bed. I was showered with white volcanic ash. Years ago that moss had been matted over by the ash from Katmai and this layer still remained under the new growth. The tops of the mountains were still white with drifts that had swept across from Katmai.

After picking up two guides by the names of Tony Martin and Al Peel, we set off for the head of Kachemak Bay at the west end of Kenai Peninsula. In a light cruising canoe we worked up Sheep River and packed up above timber line to the high divide between Sheep and Fox Rivers.

After a long hard climb, we made camp that evening at the side of a little lake high in the mountains, where we found a few straggling willows for fire wood. The next morning we were up at four o'clock to hunt mountain sheep. Cam, Al Peel, and I swung off to the right to get above where the sheep were. Campbell and Tony started below. The game was to keep the sheep from sighting or scenting us. We were given time to get lo-



MEET THE ALASKAN BROWN BEAR

He is a big fellow but his dangerous habits vary with the disposition of each individual bear.

cated above where the band was. Then coming up from below and keeping behind boulders, Campbell had a chance to see two lambs at play. Each rose up on his hind legs and then ran at the other, butting and pushing. The ewe was lying down watching them with interest. A little later, when she arose and started feeding, the lambs followed. One swung off to the left and at an unexpected moment caught his mother amidships. She meted out no punishment, because it was her fault for being off guard.

We tried hunting mountain sheep several times after this. We could have brought them down easily with a rifle, but it was most difficult to bag them with a camera.

AN UNUSUALLY CURIOUS MOUNTAINEER

Most of them were of no disposition to linger around and investigate these beings with cameras.

I had no way of telling these sheep how harmless I was. Perhaps it is just as well, for the next man may carry a gun instead of a camera. When we couldn't shoot sheep we could always picture porcupines. They ambled about our camp in a friendly manner. There is some-

thing very deceptive in estimating size and distance in these mountains of Alaska. Several times we saw porcupines off on the slopes and mistook them for black bears. Below where we were camped was a little mountain valley where the grass grew tall. In places where the water seeped out, hellebore with its tall stalk and wide-ribbed leaves reminded one of giant patches of skunk cabbages. Wild parsnip flourished nearly as high as a man's head, and along the slope were patches of alder scrub ten or twelve feet high, a fine place for moose, but a difficult country to hunt in the raining spells that are born among the mountains. We had played hide-and-seek with moose for several days, and we were "it" all the time. The Kenai moose is the largest of its kind in the world, a grotesque creature with great antlers, huge body and long legs. It looks like a strange survival of some remote, geological period.

One day, watching through our field glasses, we saw a big bull moose lying on a little knoll a long way down the mountain. Cam and I set out down the canyon to get around to the windward. The others were to watch from above and perhaps head the animal off if he came their way. Crawling on our hands and knees, we finally approached the spot and heard him eating just beyond in a patch of alders. Once or twice he gave a snort or cough that struck us tense with expectation. Half an hour passed before the moose moved out of the alders. The instant our cameras clicked he stopped, turned to look, and was away into another alder thicket. Down the mountain we ran at top speed, circling around to get ahead of him. We tried the same trick again of creeping up close and catching him in the open. At times we could see his antlers through the alders. He had not been scared very badly, for he kept feeding on down the slope.

The men up the mountain had been watching our movements. The old bull was somewhere in a patch between us. We didn't know which way he would come out, so Cam and I maneuvered for positions to get a shot. Cam followed up a well travelled moose trail through a patch of alders into an open space, and there stood the moose fifty feet away facing him. He stepped over beside a half dead tree and began taking pictures. At that moment the ungainly animal lowered his antlers and shook himself from head to tail, the long hair of his neck bristling straight up as the fur of a cat does when she sees a dog.

"Stay behind the tree!" yelled Tony Martin, who sensed this challenge of the moose. But Cam was busy taking pictures.

The only chance a man has with a charging moose is to get behind a good tree, but there were no trees of any

PHOTOGRAPH BY SCHALLERER

A SUNSET ON THE KENAI PENINSULA

With such glorious sights as these it was hard always to keep the camera on the alert for wild life alone.

size in this part of the country; and a moose can go five yards to a man's one. The moose stepped slowly forward with his right foot, then took a slow step with his left. Away went Cam down the trail, disappearing in the alders, the big animal gaining rapidly, with lowered antlers, a few feet behind.

"He's a dead boy!" yelled Tony, jerking his gun from its holster, as he jumped over a rim of rocks to the alders twenty feet below and hurried to the scene. The rest of us rushed in. Both the moose and Cam were gone. Cam had plunged down the steep trail through the alders, dodged sharply to the left as the moose tore by, hitting him a glancing blow on the arm. Fearing a return charge, Cam, the instant he was struck, whirled back up the trail, then into the alders, and there he was a hundred yards up the mountain side. He is perhaps the only boy who has foot-raced with a mad moose. I had not expected the moose to charge, as his antlers were still in the velvet. Tony, however, had noticed that the tips were bare and worn off. Some people are lucky. Cam was. I was unlucky. The moose didn't come my way and so I had missed the picture of a life time.

Squirrel Aviators

By Ernst Keil

OF all the squirrels inhabiting the United States, the flying squirrels are least known. They are nocturnal in their habits, venturing out of their hiding places in hollow trees and old logs only at dusk to frolic and play when most of the other wild creatures are asleep. Their name, flying squirrels, is somewhat misleading because they do not fly in the sense that birds do, but parachute-like folds of skin connect their fore and hind legs, enabling them to glide gracefully over considerable distances. The body and tail are shaped quite flat; the latter, being nearly as long as the whole body of the animal, serves as a sort of rudder when executing aerial gymnastics. Big, dark-colored eyes guide them in their nightly excursions. Our southern ones are much smaller than their red or gray cousins, measuring only from eight to nine inches from tip to tip. Clad in rich soft fur, brownish above and pure white below, they are indeed beautiful creatures as they play about woodland homes.

PHOTOGRAPH BY THE AUTHOR

FEASTING ON SOME PEANUT BUTTER
Some such bait was necessary to keep the squirrel in one place long enough for a time exposure at night.

The chief diet of flying squirrels consists of small nuts and seeds, many night-flying insects, and they are particularly fond of the larger moths.

Like most wild creatures flying squirrels are susceptible to kindness and respond readily to good treatment, and make exquisite pets. A friend of mine had six. At night they would take to the trees to romp and forage. At daybreak they would return to their cage, curl up among the dry leaves and take a well deserved nap. When sleeping they assume a most remarkable pose with their body bent in a circle, the head resting at the base of the tail, which, in turn, covers face, neck and back so that they resemble tiny puff-balls of fur. They seem to like company and are usually found in small bands.

My own observations indicate that flying squirrels hibernate, at least in southern Ohio. For several years I have had a band under observation. There were about twelve in the troop and they had a den in the hollow trunk of a large oak tree. Every night from early spring until late in autumn they would come to our food-board for birds to enjoy the peanuts and other titbits they knew were waiting there for them. As soon as the first cold weather ushered in the winter they would den up in their quarters in the old oak tree, interrupting hibernation only when the weather was mild to take a swing through the bare woods. I have seen and heard them as late as December but never from then on until early next spring were they in evidence.

Among their enemies the owls are, perhaps, the most formidable, with their skill in hunting when night covers the earth. However, the uncanny swiftness of the flying squirrels gives them an even chance, and although I have never witnessed the capture of a flying squirrel by an owl, I have found a lone tail of one as silent evidence.