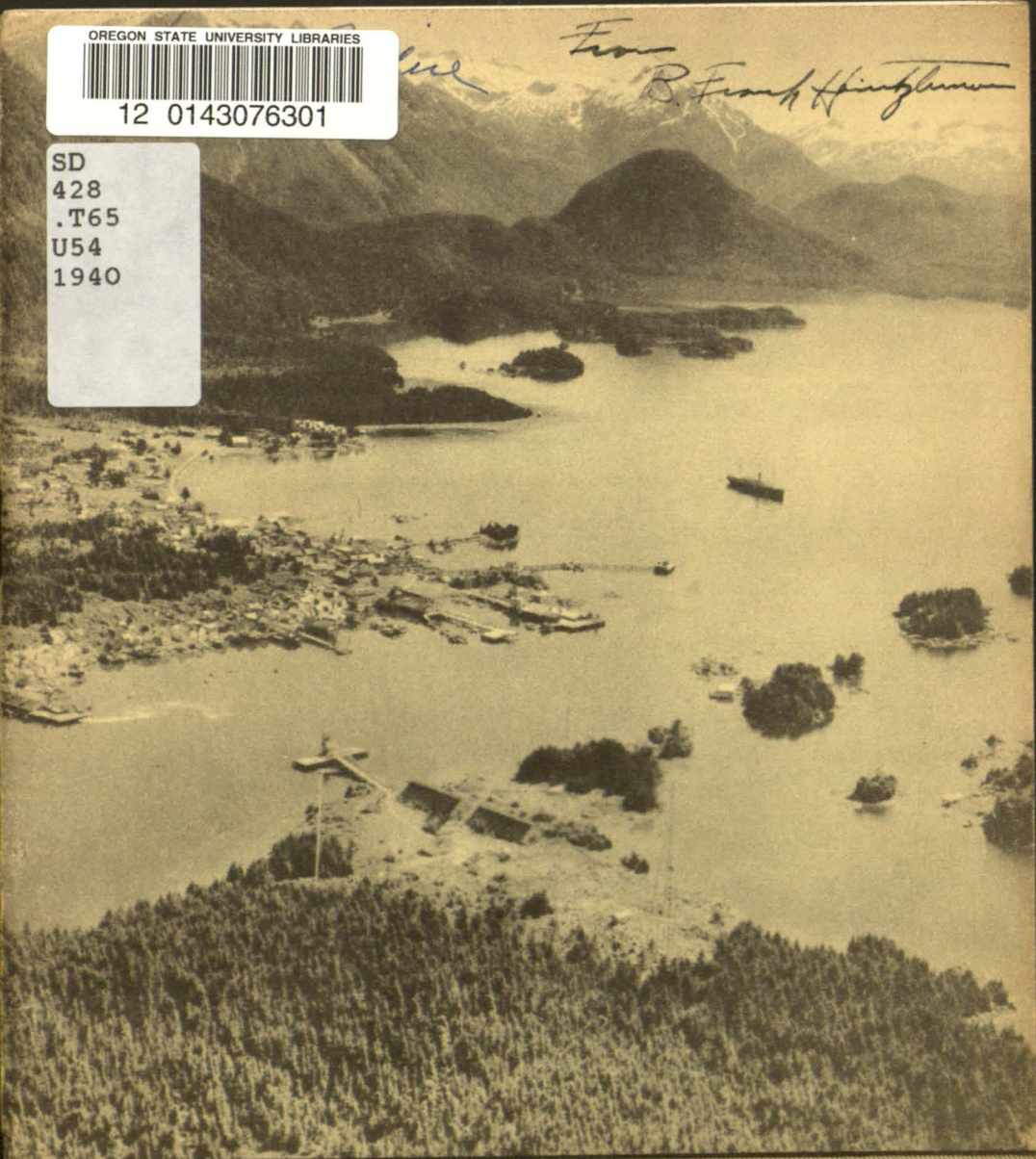


OREGON STATE UNIVERSITY LIBRARIES



12 0143076301

SD  
428  
.T65  
U54  
1940



# **TONGASS**

## **NATIONAL FOREST**

### **ALASKA**

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

# **TONGASS**

## ***National Forest***

### **ALASKA**



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE • ALASKA REGION

COVER PHOTO—*Baranof Island, City of Sitka, Tongass National Forest, Alaska.—Photographed by Alaska Aerial Survey Expedition of the Navy Department conjointly with the Forest Service and Geological Survey.*

FS-VII

UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON  
1940



*Auke Lake, in front of Mendenhall Glacier, Tongass National Forest, near Juneau, Alaska.*

---

---

## *A Region of Fiords and Forests—Nature Unchanged*

---

---

### **Foreword**

THE FRONTIER holds an inherent appeal to the people of America whose forebears spread over this new continent. They respond to mention of Alaska with visions of silent expanses, northern lights, midnight sun, feverish gold rushes, herds of big game, and the outdoor life.

The stirring days of colorful incidents and characters may be gone, and the lure of gold may no longer tempt people to migrate to the Territory in search of adventure and a stake, but it retains other more permanent attractions. Alaska still has the charm and crispness of a vast wilderness. Despite its many primitive features, however, in many ways it has kept step with modern progress.

On the map in this booklet, the panhandle, or southeastern Alaska region, small as it seems in comparison with the Territory's 586,000 square miles, may be seen to have respectable dimensions. It is some 350 miles long and 120 miles wide, with a land area of about 22,738,000 acres (35,527 square miles). Nearly all the region is owned by the United States Government. At various times between 1902 and 1909 President Theodore Roosevelt set aside lands from this public domain for conservation purposes. Now more than 16,000,000 acres, with all resources thereon, are under planned management as the Tongass National Forest. The principal lands excluded are municipalities, Glacier Bay National Monument, and Annette Island Indian Reservation. Alaska also has another national forest, the Chugach, which has an area of nearly 4,800,000 acres and includes the timber belt on the shores of Prince William Sound.

Because of the warming Japan Current, the region of the Tongass Forest may be reached readily the year round. The mean winter temperatures at the various towns lie between 23.5° and 35° F. The January mean at Sitka is 4.2° higher than at Boston, Mass., and only 1.5° lower than at Washington, D. C. At Sitka on only 16 days during 40 years of record has the temperature fallen to zero or lower. The mean summer temperature is between 50° and 57°. The



heavy precipitation, the yearly mean being 84 inches at Juneau, 87 inches at Sitka, and 152 inches at Ketchikan, contributes to the luxuriant growth of timber and other vegetation. The driest months are May, June, and July. Much of the winter precipitation at sea level comes as rain.

The national forests of Alaska are being developed by the Forest Service under policies and methods that will insure their continuous productivity in order that they may support and help to build well-rounded, stable communities. All of their resources are available for conservative use. Stumpage may be purchased for the development and support of timber-using industries; lands valuable for agriculture, mining, industrial plants, and town sites may be patented under the public-land laws; and areas needed for water-power development, canneries, fur farms, residences, and other special purposes may be leased. The forests are managed by resident officers, and only questions of general policy are referred to Washington, D. C. The chief officer in Alaska is the regional forester, with headquarters in Juneau. Forest-ranger headquarters are at Ketchikan, Petersburg, and Juneau. Seven launches are maintained for field work along the coast.

Almost 1,000 miles of trails have been constructed by the Forest Service throughout the Tongass Forest for use by recreation seekers, hunters, fishermen, and prospectors. Numerous shelter cabins have been placed at important points along the travel routes.

## ***Timber Resources and Water Power***

EVERYWHERE in this region of Alaska trees and underbrush grow in almost tropical density. The forest cover extends from tidewater to about 2,000 feet altitude.

Because of the sinuous coast the timber is readily available, 75 percent of that having commercial value estimated to be within  $2\frac{1}{2}$  miles of tidewater. The average volume per acre of the commercial timber is around 26,000 board feet; some sawlog tracts average 40,000 to 50,000. On the Tongass Forest the total estimated stand of commercial timber is 78 billion board feet, consisting of about three-fourths western hemlock and one-fourth Sitka spruce, with some western red cedar and Alaska cedar. Most of the merchantable trees are 2 to 4 feet in diameter and 90 to 140 feet high.

Sitka spruce is the most valuable tree of all Alaska and one of the most useful in the United States for general utility purposes. Its fiber is unequaled by that of any other Pacific coast tree for the manufacture of wood pulp. The national forest supplies spruce to meet most of the present sawmill requirements of southeastern Alaska. Western hemlock is used as piling in building wharves and fish traps. It also makes excellent mechanical and sulphite pulps. The cedars, little used at present, are valuable chiefly for shingles, telephone poles, and specialized forms of lumber.

Timber on the Tongass will be of greatest use when mills are established in the region to manufacture newsprint paper, for which the timber is well-suited. The Forest Service estimates that, under proper management, forests of the region would produce  $1\frac{1}{2}$  million or more cords of pulpwood annually in perpetuity; that is the equivalent of a million tons of newsprint, or more than one-fourth the present yearly consumption of the United States. At the present time, however, the timber output is very small.

Second in importance only to timber in development of a newsprint industry is cheap and abundant power, and water power is available on the Tongass in units suitable for single industrial plants. The best sites have capacities of 5,000 to 30,000 horsepower and can be developed economically for year-round use. A typical power site has a high "hanging lake" a short distance inland where water can be stored. Only a short conduit is needed to carry the water

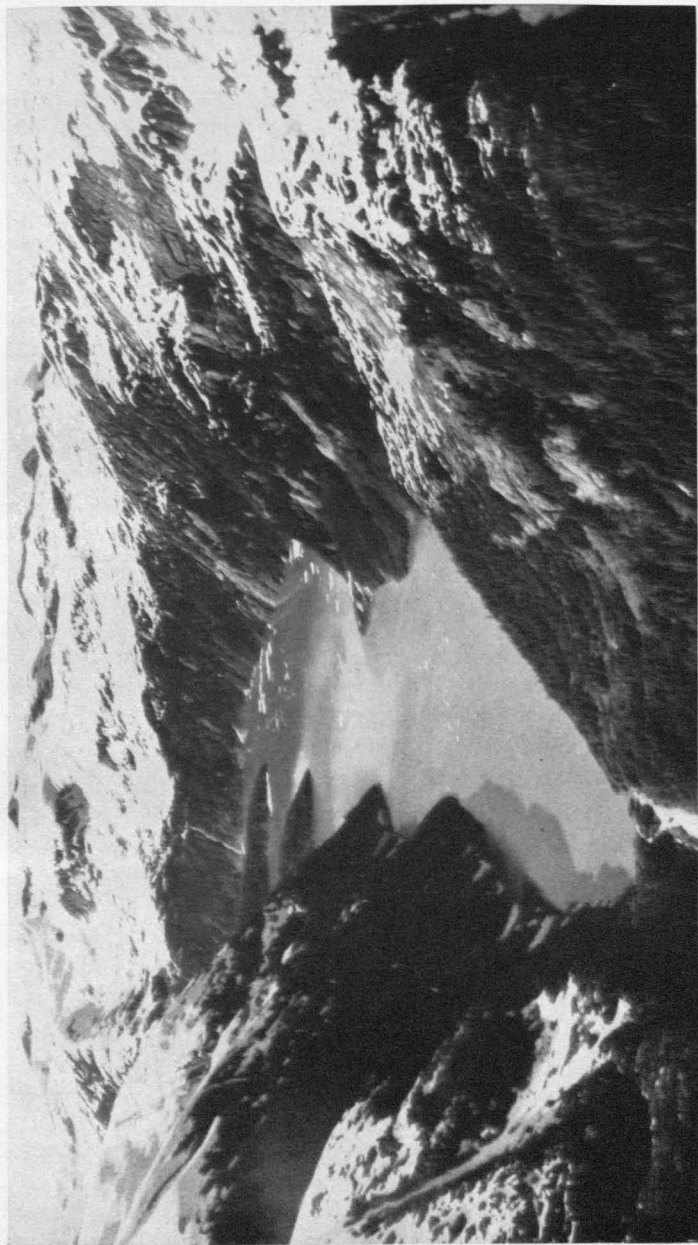
to a powerhouse at tidewater, where the power can be used in manufacturing paper, making transmission lines unnecessary. By the use of short transmission lines, power from a number of sites could be concentrated readily at one industrial plant, if so desired.

A survey of the principal known power sites of this region has been made by the Forest Service, Geological Survey, and Federal Power Commission. The year-round capacity of all the sites covered is about 800,000 horsepower. Fifty power sites with an aggregate capacity of 22,000 horsepower are now in use. All water-power sites are publicly owned and may be leased under the Federal Power Act for periods of as long as 50 years.

*Mixed spruce and hemlock stand at Polk Inlet, Tongass National Forest, Alaska.*

F-253188





FS-224

Long Lake, Tongass National Forest, south of Juneau, Alaska. Area, 1,180 acres; elevation, 803 feet; distance from tidewater, 2 miles; potential horsepower, 32,000.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.



## ***Recreation Opportunities***

**PLEASURE BOATING ON THE FIORDS.**—Each year more and more boats of all sizes and descriptions cruise the Tongass waters. But for full enjoyment of the back country—the out-of-the-way places where the sights, sounds, and smells of man-made environment disappear and there is restful silence, the soft calls of wild fowl, the pleasant woodsy odor of virgin forests, and grand views of winding fiords and lofty mountains—take a small boat and a small party.

Ketchikan, first port of entry in Alaska, offers a scenic trip around Revillagigedo Island, upon which the city is located. Prominent features along the eastern or mainland shore of Behm Canal are New Eddystone Rock, Rudyerd Bay, and Walker Cove. The first named is a pinnacle which rises like a vine-clad tower for 250 feet above the water in the main sea channel. George Vancouver named it after breakfasting on the sandy beach surrounding its narrow base. Rudyerd Bay and Walker Cove are long, narrow, winding arms of the sea cut into the rugged granite mountain mass of the mainland. Here the shores rise almost sheer, in some places as high as 2,000 feet, beribboned with sparkling streams and waterfalls which have their origin in the perpetual snowfields above. Another trip which may be taken from Ketchikan disclosing similar features of quiet, rugged beauty leads through Portland Canal, a long, narrow body of water extending almost 100 miles inland and constituting the southern boundary between Canada and Alaska.

A cruise of the west coast of Prince of Wales Island reveals a region of less rugged topography than the mainland with its lofty Coast Range. There are hundreds of curiously shaped islands of intricate land detail, separated by quiet, winding channels with many splendid harbors—a delight to yachtsmen and motorboat enthusiasts.

Adjacent to Petersburg is the famous Wrangell Narrows, some 21 miles long and in places not more than 100 yards wide. In the course of its windings, this waterway presents a fascinating land and seascape. It is an ocean bottle-neck traversed by nearly all the vessels that ply Alaska waters.

Le Conte Glacier, set in a deep canyon at the head of Le Conte Bay east of Petersburg, is the most southerly tidewater glacier on the coast. During periods

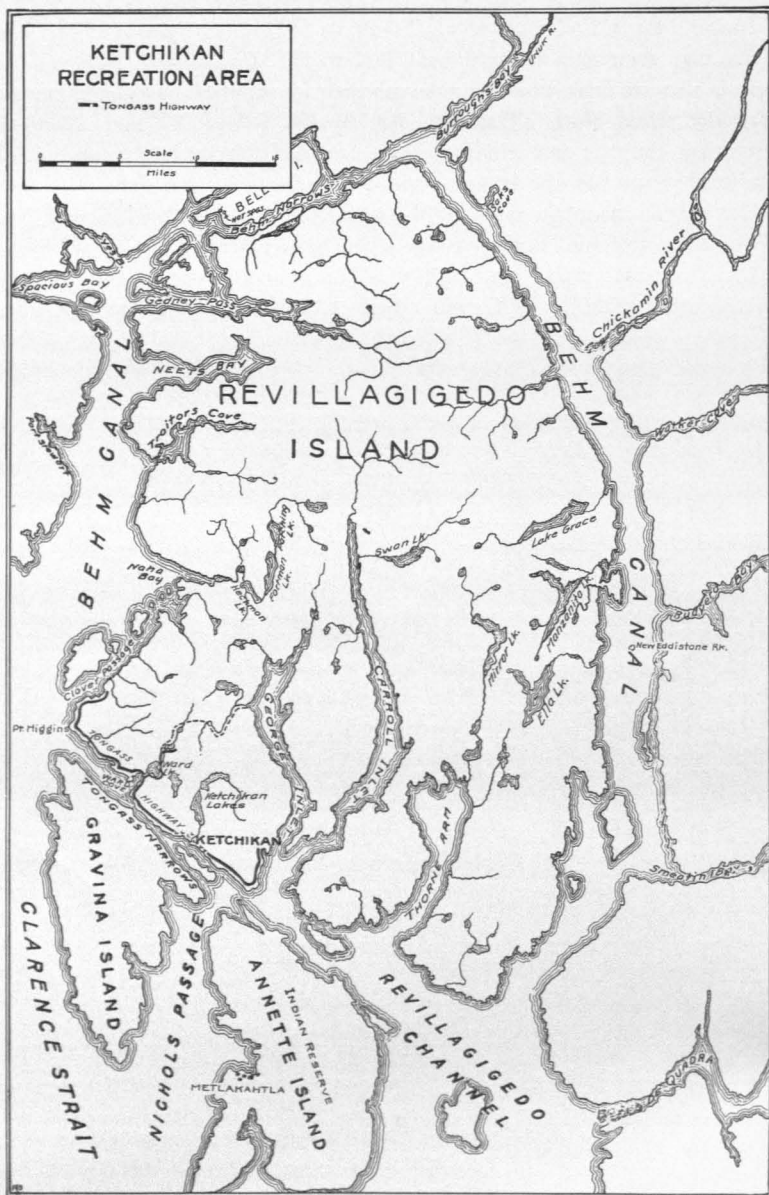
of spring tides and off-shore winds, hundreds of bergs discharged by this river of ice may sometimes be seen near Petersburg. Commercial fishermen use them as a source from which to replenish their ice supplies. Le Conte Bay was originally called Hutli (Thunder) Bay by the Stikine Indians. North of Petersburg, the face and winding course of Baird Glacier may be seen at the head of Thomas Bay, the latter a beautiful feature in its own right.

The rugged mountain range of the mainland along Frederick Sound from Stikine River to Cape Fanshaw forms a panorama described by Captain Meade of the Vancouver expedition in 1794 as "uncommonly awful" and "horribly magnificent." The Devils Thumb, a peak 9,077 feet high with an almost per-

*This sheer monolithic cliff, rugged but beautiful, rises abruptly from the shores in the Punch Bowl Area of Rudyerd Bay, Behm Canal, Tongass National Forest. Important water-power resources are located at the head of this bay.*

F-368244





Map of Revillagigedo Island and vicinity of Ketchikan, Tongass National Forest, Alaska.

pendicular shaft rising 1,662 feet above the crest of the mountain range, is most impressive.

The 160-mile trip up the Stikine River to Telegraph Creek, in interior British Columbia, is a trip many Tongass Forest visitors take. During the summer months comfortable, shallow-draft river steamers leave Wrangell weekly to travel along the broad lower valley of this stream and through the narrow canyons of its upper reaches.

Boat trips may be made out of Juneau in all directions. To the southeast is Taku Inlet with famous Taku Glacier at its head. This is an active glacier more than a mile wide with a face of 200 to 300 feet high. Summer tourist steamers regularly run close to the face of Taku Glacier where atmospheric vibration from a blast on the whistle is sometimes sufficient to cause a mighty iceberg to crash into the sea. A number of other active glaciers in their characteristic settings may be seen by using a small boat to travel up Taku River.

On the mainland farther south is Tracy Arm, 20 miles of narrow fiord with high, precipitous sides, containing floating icebergs of all sizes discharged by the two glaciers at its head. Boats should not attempt to stay overnight at Tracy Arm because there is no safe anchorage and floating ice constitutes a real danger. A similar fiord, but not as long, is Fords Terror in Endicott Arm. People who have traveled extensively rate these two fiords unsurpassed in rugged grandeur.

Lynn Canal runs northward from Juneau toward Chilkoot Barracks, Haines, and Skagway, the latter about 100 miles distant. Along both sides of this stretch of water are scenic glaciers, high mountains, and steep valleys.

Glacier Bay National Monument, under administration of the National Park Service and adjacent to the Tongass National Forest on the north, is easily the most accessible of the large glacier areas of the world. Little known at present, this bay should be one of the show places of the Western Hemisphere. Here mighty glacial remnants of the ice age still grind steadily on the massive buttresses of the Coast Range, topped by Mt. Fairweather which rises 15,300 feet from tidewater.

Yachtsmen who do not mind leaving Cross Sound for some open water toward the northwest may visit Lituya and Yakutat Bays, the northernmost limits of the Tongass National Forest. To enter Lituya (first visited by the French explorer La Perouse in 1786) it is necessary to sail through a narrow turbulent "Skookum Chuck" which is passable only at slack tide and in calm weather. The combination of narrow, deep seaways indented in the base of the lofty Fairweather Range, moving glaciers, heavily forested shores, and crescent-shaped sandy beaches presents a picture which La Perouse described as perhaps the most spectacular in the world.



GS-YTC

*Rugged grandeur of Glacier Bay—Grand Pacific Glacier. The Glacier Bay National Monument, adjacent to the Tongass National Forest on the north is administered by the National Park Service.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.*



Three well-forested, rugged islands, between 876,000 and 1,346,000 acres in area, are located at the northern end of the Tongass Forest. They are Admiralty, Baranof, and Chichagof. A boat trip around any one of them carries the voyager into back country and reveals hundreds of sinuous quiet waterways.

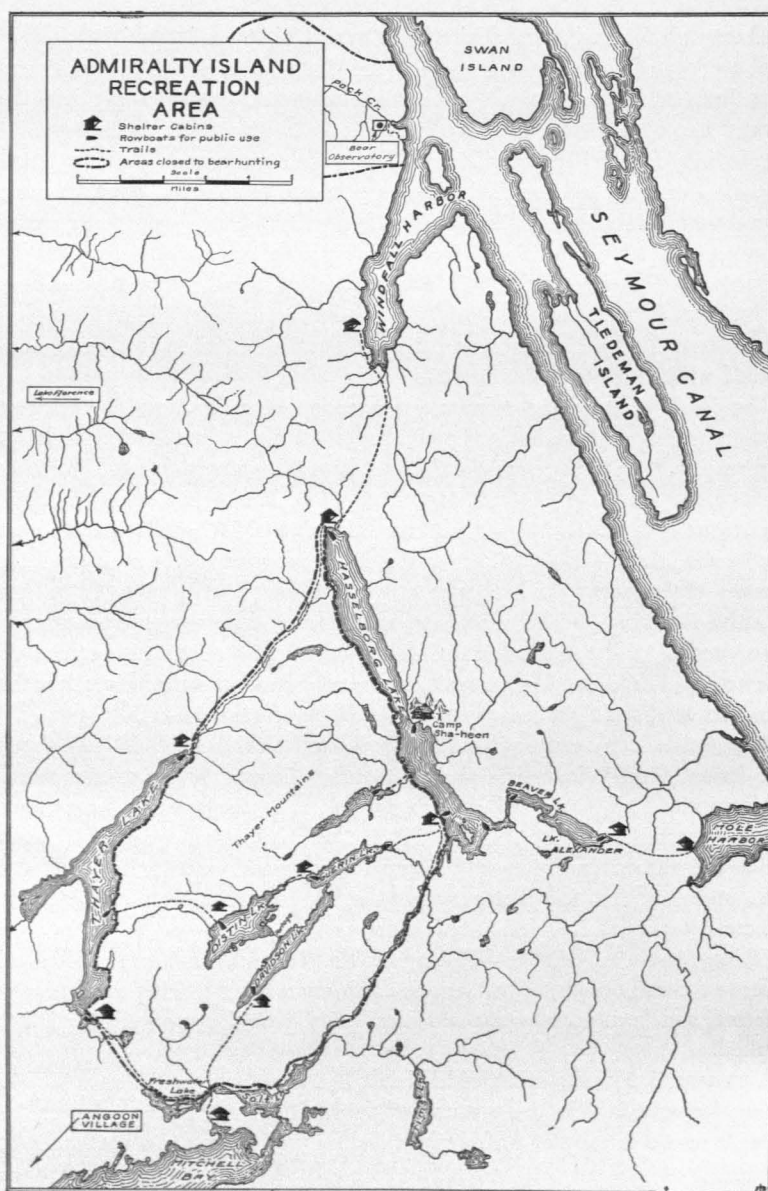
*Admiralty Island Recreation Area.*—The middle section of Admiralty Island contains a number of scenic lakes ranging in size from small ponds to areas several square miles in extent. The area is a well-rounded, back-country recreation unit on which the Forest Service has placed a system of simple trails, portages, and shelter cabins. It offers excellent fishing, hunting, boating, hiking, picture taking, nature study, and mountain climbing. Here are typical southeastern Alaska conditions, and an outing can be restful and mild or strenuous and wild.

The focal point of the Admiralty Recreation Area is Camp Sha-heen on Hasselborg Lake, 12 miles in length, largest of the Admiralty Island lakes. (See map, p. 12.) Three main trails lead from tidewater to this and the other lakes of the group. One trail starts from Mole Harbor on Seymour Canal, another from Windfall Harbor, and the third from Mitchell Bay on the west side of the island. Most visitors to Sha-heen, however, go by seaplane from Juneau; the one-way trip requires only 25 minutes. Sha-heen Camp has attractive log cabins, which contain all such essential heavy camp equipment as stove, utensils, and bunks. The cabins are open to the public without charge. Thirteen open-front log shelter cabins are located at appropriate points over the recreation area, and light cedar skiffs are available on all the lakes.

A brown bear observatory has been built on the south bank of Pack Creek near its outlet on Windfall Harbor in Seymour Canal. It is a strong, secure platform with roof, guard rail, and seats built around the bole of a large spruce tree and reached by an iron ladder. Pack Creek is much frequented by bears during the salmon spawning season, and the observatory was built to afford a safe, concealed place for photographing the bears while they are catching fish. The creek watershed is closed to bear shooting.

*Fishing in Forest Waters.*—Fishing on the Tongass can best be described under two classifications, salt-water and fresh-water fishing. They are distinctly different, and both are popular activities. A license for sport fishing is not required.

A comparatively new sport which has taken firm hold in the area is strip fishing for salmon. In this method of fishing the line is dropped over the gunwale of a stationary or drifting boat and allowed to sink to a varied depth, 100 feet or so, for the deep-swimming king salmon and nearer the surface for the coho salmon. The line is then "stripped" in short arm lengths over the hand holding the pole as the hook is being brought to the surface. The lure



*Map of Admiralty Island Recreation Area, Tongass National Forest, Alaska.*

generally used is a strip cut from the side of a herring. As is the way with fishermen the world over, experiments with new variations of lure, such as plugs, spoons, whole herring, and flies, are constantly being made, but the most popular equipment at present is a rod weighing 6 ounces or more, with agate, porcelain, or rust-proofed metal guides, 600 feet of raw silk line on a heavy reel, landing net or gaff hook, a supply of 1-, 2-, or 3-ounce sinkers, and small spinning hooks of sizes 3-0 to 5-0. Lines of 35-pound test with 15-pound leaders are most popular.

Fishing is good in almost any channel where salmon run. The main seasonal runs of the king vary according to location but usually continue from April to September. The coho run begins in July or August and continues through September. Kings and cohos are practically the only salmon that will take a lure. With a 20- to 40-pound salmon on a light line, or a smaller but more vicious and spectacular fighting coho, a fisherman needs both strength and experience to bring his quarry to gaff, a task requiring at least 20 minutes.

*Strip fishing for salmon in the Tongass National Forest, Alaska.*



Frequently the salmon fisherman pulls up a small halibut, not a fighting fish but a prize for the dinner table. Black sea bass are also caught.

Some fishermen prefer to troll. Instead of pulling the bait straight up through various levels of swimming salmon, as in stripping, the troller trails his lure, usually a large spoon or a herring, behind his slowly moving boat. Commercial fishermen in the area also use this method, but the sport fisherman uses a light rod and line to provide a sporting touch.

*Douglas Ski Valley, near Juneau, Tongass National Forest, Alaska.*

F-37677



The important fresh-water species are cutthroat, rainbow, dolly varden, steelhead (in season), and eastern brook trout, the latter an introduced species. Whether it be in a slowly moving creek, a rushing mountain stream, or a cold mountain lake, there are fighting trout in Tongass waters in the abundance to be expected in a primitive region. The Forest Service has built trails and shelter cabins at many of the favored locations, and has made light cedar skiffs available on many of the lakes.

Information about the best fishing spots and how to get there may be obtained by local inquiry. Excellent new fishing streams are being discovered every year. Certain lakes on Baranof and Revillagigedo Islands known to be barren were recently stocked with cutthroat and rainbow trout by the Forest Service.

*Winter Sports.*—In addition to the skiing and skating facilities near the various communities, now used mainly by local residents, vast unexplored fields of good skiing snow await the skier during at least 6 months of the year. In some of the highest country of the mainland, as in the vicinity of Mt. Fairweather and Mt. Crillon, powder snow is known to exist year-long. The varied terrain presents opportunities for all types of skiing, from the wooded trail to the high open slopes where there are "schusses" several miles long.

Mountain climbing is another sport, usually associated with the winter season, that summer visitors in the Tongass National Forest may enjoy, particularly on the mainland where the mountain bases are more accessible from the various communities. Hundreds of peaks have been unscaled by man.

THE FOREST YIELDS HEALTH—WEALTH—  
SECURITY



EVERYBODY LOSES WHEN TIMBER BURNS  
BE SURE YOUR FIRE IS OUT—DEAD OUT



## ***Wildlife of the Forest***

HUNTERS WITH GUN AND CAMERA from all over the world visit the Tongass National Forest to hunt or view the wild game, principally the Alaska brown bear, the largest of the carnivorous land animals, and his close kinsman and rival in popular interest, the grizzly. Wildlife of great abundance and variety populates the hills, valleys, and waters of this land of beauty. The animals inhabit areas readily accessible, but game management, now being started, guarantees to the American people the perpetuation in large numbers of the game and fur bearers of the region. Nonresidents coming into the Territory are advised to obtain a copy of the Alaska Game Laws from the Alaska Game Commission, and familiarize themselves with the laws and regulations relating to game, land fur bearers, and game birds. The laws and regulations are strictly enforced.

*Alaska Brown Bear.*—Strangely enough, bear hunting as a sport has few local followers, but "outside" game enthusiasts visit the Tongass Forest in increasing numbers from year to year to try their skill against this premier animal in his native habitat. The annual kill is fully controlled, however, to keep it well below the net increase so there is no danger of annihilating the species. The regulations limit the kill by licensed nonresidents during the open season, September 1 to June 20, to one large brown or grizzly bear a season on Admiralty Island and two, in the aggregate, a season in the rest of the Territory. Pelts are not permitted to be sold, but licensed hunters may transport trophies out of the Territory under certain regulations. A pelt 9 feet square, taken from a bear weighing about 1,000 pounds, is usually considered a good prize; but a good movie of these animals taken in their native habitat is rapidly becoming the most popular "trophy" of all.

"Brownies," in the southeastern Alaska portion of their range, inhabit the mainland as far north as Yakutat Bay and the three large islands, Admiralty, Baranof, and Chichagof, together with adjacent small islands such as Yakobi and Kruzof. The animals may be seen in the months of May and June when they frequent the grasslands at the heads of tide flats shortly after they emerge from hibernation. They may be seen later in great numbers when they congregate along the fish streams. A regulation of the Alaska Game Commission

requires that a nonresident seeking game animals, whether as hunter or photographer, shall employ and be accompanied by a registered guide. Although the natural instinct of a bear is to avoid mankind whenever possible, situations sometimes arise in which a brown or grizzly bear is a distinct menace. Alaska brown bears are wilderness animals and not "park bears" in any sense.

*Grizzly Bear.*—Smaller than the brown bear, but also fierce and aggressive, the grizzly generally frequents the Coast Range of the mainland. Often it may be seen on the principal drainages such as the Unuk, Chickamin, Stikine, and

*Alaska brown bear, Admiralty Island, Tongass National Forest, Alaska.*

F-376796



Taku. Its perpetuation is assured by the same regulations which govern the hunting of the Alaska brown bear. Like the brown bear in habits, the grizzly may be observed in the spring on grasslands, on the fish streams when the salmon are running in summer, and on the hill slopes shortly before hibernating in the fall.

*Black Bear.*—Not regarded by Alaskans as outstanding game, this smaller species so common in continental United States is well distributed throughout the Tongass Forest, although it does not inhabit the islands with the large brown bear. The glacier bear is a rare smoky-color strain of the black and inhabits the great glacier section from Glacier Bay to Yakutat.

Black bears are particularly good camera subjects, and may be seen along easily accessible tidal grassland, on salmon streams, or on the high mountain meadows and slides. Anan Creek, located on the south entrance to Bradfield Canal on the mainland southeast of Wrangell, is a good spot for observing black bears. A trail with observation points along the lower sections of this beautiful stream draws many visitors in the early fall when the bears are attracted by the thousands of salmon which enter the stream to spawn.

*Moose.*—Occasionally a moose may be seen in the lower Stikine and Taku drainages, probably drifters from upstream in British Columbia, but the real habitat of this animal in Alaska is farther north than the Tongass Forest.

*Mountain Goat.*—This game animal's natural habitat in the high mountain country above timber line is his best protection against man, for only the most hardy and vigorous hunters or camera enthusiasts attempt to invade his domain. The animals are distributed throughout the high sections of the mainland and are especially plentiful at the head of Texas Creek near Hyder, around Rudyerd Bay and Walker Cove, in the drainage of the Unuk and Chickamin Rivers; also in the vicinity of Muddy River and Le Conte Glacier. Farther north many goat ranges are quite accessible from tidewater; Port Houghton, Tracy Arm, and Fords Terror in Endicott Arm; Speel River and Whiting River in Port Snettisham; Taku River drainage; Berners Bay; and Endicott River. The Forest Service has built trails in many places which lead toward the high goat country. Baranof Island was stocked with goats some years ago by the Alaska Game Commission, and, under protection the year-round, the animals have shown a very satisfactory increase.

*Deer.*—The local Sitkan deer are a subspecies of the Columbia black tail of the Pacific Northwest. They are ideal local-hunting animals, averaging around 100 pounds dressed, and have finely flavored meat. They are very plentiful and are of considerable economic importance in southeastern Alaska, where they range as far north as Glacier Bay. In the summer and early fall the deer are well back on the high slopes, but in the late fall and winter they descend to the

level sections near tidewater. Deer hunting is good on most of the islands. The mainland has few deer. The number of these animals in the Tongass Forest is not controlled by the intensity of hunting but by the amount of feed available during winters of heavy snowfall.

*Predators.*—Among the predators are wolves, coyotes, and wolverines. Wolves and coyotes do not inhabit the main brown bear islands—Admiralty, Baranof, and Chichagof—but are known to exist on practically all the other islands and the mainland. Coyotes have recently spread into southeastern

*Mountains near mouth of Unuk River at Burrows Bay, Behm Canal, near Ketchikan, Tongass National Forest, Alaska.*

F-368233



Alaska, but are not plentiful and range only on parts of the mainland, principally in the few broad river valleys. The wolverine is found over the entire mainland area. All these predators appear to be very destructive to game animals, but the hunted are somehow able to maintain themselves in large numbers.

*Fur Bearers.*—In the wild state, the fur bearers of the Tongass Forest include the beaver, mink, marten, land otter, weasel (ermine), muskrat, and marmot. Also there are a few blue foxes, not native to the country but escaped from commercial fox ranches.

*Native Game Birds.*—The upland game birds include the sooty and ruffed grouse, the rare Richardson grouse, and three varieties of ptarmigan. Grouse are never plentiful, but the greatest numbers are on the mainland. The ptarmigan, which as a protective measure changes its plumage from pure white in winter to a speckled brown in summer, is fairly plentiful along timber line and on the mountaintops.

*Migratory Birds.*—Many ducks and geese nest and breed in the Tongass area and do not migrate south except during severe winters. The largest percentage of those which fall to the hunter are local waterfowl. However, the total of all migratory birds killed on the Tongass Forest is quite small and has little relation to their scarcity or abundance. Among the ducks are the mallard, widgeon, green-winged teal, pintail, and gadwalls. The white-cheeked Canadian goose and the lesser snow goose are popular fowl with local hunters. Rarer are the whistling swan and little brown crane. Migratory game birds may be found in the fall of the year in practically all bays, tide flats, and deltas of the region, while in some favored sections, such as the Stikine River flats, Keku Strait, Big John, Hamilton, Neka, and Sumdum Bays, they are especially plentiful.

*Other Birds and Waterfowl.*—Other species of birds observed in the region include the merganser (three varieties); harlequin; two varieties each of the scoter, scaup, and goldeneye; loons (four varieties); the tufted and horned puffin; five kinds of auklets; Wilson snipe; turnstone; three varieties of the murrelet; six kinds or more of gulls; Arctic tern; ravens, crows, and the bald eagle. In addition, there are many species of song birds.

PRESERVE NATURAL BEAUTY  
HELP PREVENT FIRES



## ***Industries of Interest***

COMMERCIAL FISHING.—The most important industry of the region which includes the Tongass National Forest, and one of feverish, thrilling activity, is salmon canning. Active preparations begin in the spring when fishermen overhaul their gear and boats, and canneries ship in supplies and men for the season's work. In this industry there is a large element of chance, for no one knows in advance exactly when or where the salmon will appear or how large the run will be. The greater portion of a salmon's life, which according to species is 2, 3, or 4 years, is spent in the ocean, but the fish is spawned and spends its young or "fingerling" days in a fresh-water stream, and returns to the particular stream of its early days to spawn and die. Varieties caught in Alaska waters are the king salmon (chinook on the Columbia River and spring on Puget Sound) weighing as much as 80 pounds, but averaging about 22 pounds; the Alaska red salmon, known elsewhere as the sockeye and blueback, averaging about 7 pounds; the coho, silver, or medium red salmon, averaging about 8 pounds; the pink or humpback salmon, smallest and most numerous of the species, averaging about 4 pounds; and the chum or keta, usually averaging about 9 pounds.

During the fishing season the various activities of this industry may be observed on the waters surrounding the Tongass Forest. Fish traps are placed at strategic points in shoal waters along the shores where salmon have been known to run, and are visited by cannery tenders every few days for the purpose of brailing (dipping out) the trapped fish. Among the hundreds of busy fishermen are the hand troller in his rowboat; the power troller with four long poles extending from the sides of his gas boat; the purse seiner who uses a net or seine several hundred feet in length, weighted at the bottom and supported at the top by floats, and which is circled around a school of fish; beach seiners who loop their nets out from the shore to enclose a school of salmon; and gill netters who use weighted nets suspended like a curtain across the path of the migrating fish which are caught by their gills in the large mesh of the nets. Rigid Federal supervision insures perpetuation of the fish resource.

Usually located in a picturesque inlet, the salmon canneries are models of

efficiency and fascinating in their appeal. At the canneries the salmon are sorted according to species; dressed and cleaned by the Iron Chink, a machine of remarkable mechanical ingenuity; placed in cans which are sealed by a vacuum process; and finally cooked in a huge retort for 1 hour and 20 minutes at 240°. The cans are labeled and packed in cases at the cannery before they leave for world markets.

Halibut fishing is another important industry in the region. A few halibut banks are located in inshore waters, but the majority are in open waters. Many people find it interesting to watch a halibut boat lay out its "skate" of gear, often dropping it into 300 fathoms of water, each hook baited with a herring. Halibut as large as 300 pounds are not unusual. The fish are not canned but are shipped fresh in ice, or after being frozen solid in the cold-storage plants of the fishing towns. A few salteries and herring packing plants also operate in the Tongass region.

*Fur Farming.*—The hundreds of small islands on the Tongass Forest possess natural barriers in the form of water boundaries, within which fur-bearing animals can be raised cheaply and safely, and with little change from their wild environment. Consequently, the raising of blue foxes has become an extensive industry. Although fox farming has not been so successful as originally expected, 91 islands are still used in this industry. A few areas on the mainland are also in use for pen raising of the blue fox, silver fox, and mink. As a rule, fur farmers discourage visitors because the sight of strangers disturbs the wild

### ***Be Careful With Fire***

THE USUAL precautions and safety rules against fire on national forests are enforced in the Tongass National Forest. Wet weather is common in southeastern Alaska, but during the summer months there are warm and dry periods during which fire will run freely. Fires in this section are hard and costly to fight and difficult to extinguish.

It must be borne in mind constantly that one bad fire will destroy timber and shelter for wildlife besides converting a beautiful woodland into a dreary waste that will take a lifetime to replace. Ever advocate and practice the outdoor code: "BE CAREFUL WITH FIRE—IT PAYS."