

The Fisheries of Glacier Bay National Park and Preserve



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Introduction

The Glacier Bay area was settled in the mid to late 1800s by European immigrants and native-born Americans who explored, prospected, mined, homesteaded, fished, trapped, or lived off the land. By the early 20th century, a salmon cannery in Dundas Bay, and another near the present park headquarters at Bartlett Cove supported commercial fishermen who settled in nearby communities and developed commercial fishing economies. These commercial fishermen included many Tlingit Indians, some born and raised within Glacier Bay itself. The journals of early visitors to the area, including those of John Muir, described fishing as an early historical use of Glacier Bay.

Commercial fisheries have occurred in the Glacier Bay area since the turn of the century. Commercial Dungeness crab fishing occurs during two seasons each year. A pot shrimp fishery occurs in limited areas. Netting and trolling for salmon is closely regulated by the State of Alaska, and halibut salmon is tightly controlled by the International Pacific Halibut Commission. These fisheries utilize gear that is highly specific to targeted species, therefore allowing for very conservative management.

Most fisheries take place in areas that are seldom seen by park visitors. The volume of commercial fishing use has been relatively stable over the years. The State of Alaska has managed the fisheries through closely monitored, regulated, and enforced area-specific seasons. Fish and shellfish populations are healthy and abundant in and around Glacier Bay, following three decades of careful state management, coordinated with federal and international management of the fishery resources.

Today, eight area communities greatly depend upon continued commercial fishing in waters adjacent to the park: Hoonah, Elfin Cove, Pelican, Angoon, Tenakee, Funter Bay, Yakutat and Gustavus. Other communities of the region, such as Juneau and Sitka, have economies in which commercial fisheries and support services are a significant component.

Glacier Bay National Monument was created in 1925, expanded in 1939, and designated a National Park in 1980. Subsistence and commercial fisheries existed in, and around, the bay at the time of the earliest legislation and continue to this day under the state's management. And, while the area appears both wild and relatively untouched, commercial and subsistence uses have been occurring since prior to creation of the park. In the 33 years since statehood, Alaska has effectively managed the fishery resources so they are as abundant and healthy as ever.

The Fisheries¹

The major commercial fisheries which operate within GBNP waters are salmon trolling, halibut longlining, and Dungeness and Tanner crab pot fishing. Other fisheries include a purse seine fishery for chum salmon in Excursion Inlet, a pot fishery for shrimp in Lituya Bay, and a setnet fishery in the Dry Bay area. Trolling and longlining for rockfish and other groundfish also takes place on a small scale in park waters.

¹From: Anjanette Perry. 1987. Commercial Fishing in Glacier Bay National Park, GBNP, Resource Management Division, and ADF&G sources.

The Alaska Department of Fish and Game regulates most fishing activities within park waters in accordance with regionwide state and federal laws. The International Pacific Halibut Commission and the North Pacific Fisheries Management Council (NPFMC) regulate the halibut fishery.

The Salmon Troll Fishery

The majority of salmon harvested in park waters is taken by trollers. Trollers fish using long poles equipped with several lines. Power trollers haul in their lines using hydraulically operated reels called gurdies; hand trollers use manually operated gurdies or sport rods. Power trollers are usually larger vessels, 25 to 50 feet in length, that are better equipped to move operations from calm, inside waters to rough outside waters when fish stocks move or areas are closed by regulation. Although hand trollers may operate from vessels of any size, many are "weekend" fishermen, and operate with sport gear from small skiffs.

Troll-caught salmon are carefully handled and fetch high prices in the fresh and frozen markets. The primary species targeted by the fishery are chinook (king) and coho (silver) salmon. Although pink and chum salmon are also harvested, the proportion of the total pink and chum harvest taken by trollers is low.

Approximately 75% of all chinook salmon harvested in Southeast Alaska are taken in the troll fishery. Although the numbers of chinook available to the fishery are low (annual catches for Southeast Alaska are regulated via the U.S./Canada Pacific salmon Treaty of 1985 and average about 300,000 fish), their large size and the higher price they command makes them very attractive to local fishermen. Ocean residency of chinook can last two to four years, and several age classes are taken by trollers during the winter and summer seasons. Most of the chinook harvested in the Southeast troll fishery are produced from spawning streams and hatcheries in Canada and Pacific Northwest; hence, these fisheries are harvesting fish bound for streams outside the park. Chinook range widely between open ocean and inland waterways, moving into inside waters as they follow schools of baitfish. The summer troll fishery in the park, though executed within some areas of the Glacier Bay, occurs primarily in the park's coastal waters. Glacier Bay proper is an important winter fishing area, particularly for smaller boats.

The Southeast Alaska region's coho salmon resource has been quite healthy in recent years. Trolling accounts for 61% of the total coho harvest. The majority of coho caught in the park are fish migrating along the coast and up Icy Strait toward their spawning streams east of park waters.

The Salmon Purse Seine Fishery

Within Southeast Alaska, purse seining accounts for over 90% of the pink, over 60% of the chum, and over 40% of the sockeye salmon harvested by all gear types. Within park waters, however, the only purse seine fishery allowed under state law is in Excursion Inlet, and its primary target species is chum, rather than pink salmon. Chum salmon are late summer spawners in most areas, but the Excursion River stock spawns in the fall (October). Fish on their way to the river begin massing in the inlet in late August. This fishery is attractive to seine fishermen because the run occurs after most of the pink salmon fishing is over.

Purse seine vessels are restricted in length to 58 feet. Most of the vessels which fish Excursion Inlet are ported nearby in Hoonah, Sitka, and Juneau. Twenty to 35 vessels commonly fish the area.

The park boundary runs down the middle of Excursion Inlet, so half of the total catch can be estimated to come from park waters. Annual catches of chum salmon from park waters in this fishery range from 200,000 to 400,000 lbs.

The Halibut Fishery

Halibut are demersal fish, living close to the bottom along the continental shelf in winter, and moving into shallower coastal waters in summer. Most halibut are caught during the summer when they are in 15-150 fathoms by longline vessels that use a groundline to which short leaders with baited hooks are attached.

The halibut fishery operates on a catch-quota system. It is managed by the International Pacific Halibut Commission (IPHC), which was established by agreement between the United States and Canada in 1923, and the NPFMC, which is the federal regulatory body in Alaska. The commission licenses fishermen, carries out research, and sets harvest quotas and openings within large regulatory areas. Within Alaska, ADF&G enforces the commission's regulations. Generally, three openings are planned during early, middle, and late summer, though in recent years, only two openings of 24 to 48 hours usually occur. Fish must be harvested using only hook and line gear, and fish less than 32 inches total length may not be retained. Halibut may be taken using sport gear, and many people who do not regularly fish commercially will participate in the halibut openings using skiffs or other small boats. There is currently no limited entry system in place for Alaska, but the NPFMC is in the process of instituting an individual fishery quota (IFQ) program with an anticipated start-up date of 1995.

The IPHC estimates that 25% of the parks' catch is taken from Glacier Bay proper, and 10% from the remainder of the park's inside waters. The outer coast harvest is about 3% of the area's total. Although the number of vessels fishing in particular park waters varies from season to season, the IPHC feels these percentages provide good estimates for recent years. The combined annual catch has averaged about 500,000 lbs and has provided an important economic bonus for local fishermen.

The Dungeness Crab Fishery

The Dungeness crab fishery is primarily a shallow-water bay fishery. Within the park, crab are harvested throughout the coves of lower Glacier Bay, near the surfline on sandy bottoms along the outer coast, and in Dundas Bay. Crabbers use pots baited with herring or other fresh bait that are left to "soak" for several days. Only male crab over 6 1/2" are legally retained. Dungeness crabbing in Southeast Alaska has been primarily a local fishery, with smaller vessels participating. Several of the fishermen from Gustavus and other local communities work their pots only in summer and early fall, as their small, open boats are not suitable for operating in winter conditions.

The "wilderness" waters of Dundas Bay and the Beardslee Islands are heavily fished by Dungeness crab fishermen.

The harvest season extends from June 15 to August 15, and from October 1 to November 30. It is closed through mid-June because early summer is believed to be an important molting period, and during late summer because qualitative information has suggested that this period is important for reproduction.

There are no definitive estimates for harvests within the park, though annual catches are estimated to range from 300,000 to 400,000 lbs.

The Tanner Crab Fishery

The Tanner crab fishery takes place during the winter, utilizing baited pots. It begins around February 15 and usually lasts for 10 days. Only male crab over 5 1/2" are legally retained.

In past years, harvest levels were roughly equal in Glacier Bay proper and the park's Icy Strait waters. Some Tanner crab are occasionally taken in Lituya Bay, but the fishery has not been reported from other outer coast waters. Within Glacier Bay, Tanners are harvested in the same coves and nearshore areas as Dungeness, particularly in the Beardslee Islands area, and in Dundas Bay, but they are found at greater depths. It is a relatively small, but lucrative fishery.

The King Crab Fishery

Three species of king crab, red, blue and brown, were harvested traditionally in Glacier Bay. This fishery is also executed with baited pots, and only large males (over 7" for red and brown king crabs, 6 1/2" for blues) may be retained. Reds and blues occur in protected bays and inlets at depths less than 100 fathoms, browns are found in the deeper waters of the more exposed portions of straits and sounds. In recent years, the fishery for red king crab has been closed; however, because stock abundance has been increasing renewed commercial fishing is likely. The king crab fishery usually begins in mid-November.

In most areas of Southeast Alaska, blue king crab stocks have never sufficiently large to warrant a directed fishery, and blues were taken incidentally to the red king crab harvest. Glacier Bay proper is one of only three small areas where the blue king crab is a targeted species.

The Shrimp Fishery

Two species of shrimp, the coonstripe and the spot, are taken in pots by two to three vessels fishing Lituya Bay each season. As many as 100 shrimp pots have been counted in the bay by park rangers every year.

In the 1970s some exploratory trawling for pink shrimp may have been conducted in Glacier Bay, but shrimp harvests are currently not allowed in the bay.

The Salmon Set Gillnet Fishery

Set gillnet fisheries are conducted along the ocean shore adjacent to the Alsek and East River mouths and inland along the rivers' banks. The Alsek River fishery occurs upstream approximately 12 miles, and the East River fishery occurs within the first two miles of the river from its mouth.

On the Alsek River, up to 30 permit holders fish primarily for sockeye salmon on the large glacial transboundary river beginning in early June. On average, the Alsek commercial fishery harvests 16,000 sockeye and 5,000 coho salmon annually. After the sockeye season, run effort drops during the fall season in August and September to less than 12 fishermen.

On the East River, up to 100 fisherman target sockeye beginning in late July through early August. On an average year 100,000 sockeye, 8,000 coho, and 9,000 chum are harvested by the fishery. In late August and September, the East River effort declines to less than 30 fisherman who target coho salmon.

The Groundfish Fishery

Within Glacier Bay proper, there are generally 1/2 dozen to 1 dozen vessels that fish groundfish. The predominant species is Pacific cod, with reported landings totaling to 10,000 lbs. There are most likely some unreported landings of cod, as well, since crab fishermen take it for bait and these catches are often not reported. Other species landed in the park include demersal shelf rockfish (in 1989 the reported catch was 2,122 lbs), and black rockfish. A very limited amount of lingcod and sablefish (black cod) is also landed. In the outer coastal areas, within park boundaries, there is more effort. Since 1987, an average of one dozen boats have made sablefish landings averaging an annual total of 6,000 lbs.

Many groundfish and other fishing vessels also depend on the outer coastal park waters for anchorage.

The Subsistence Fishery

In historic and prehistoric times subsistence fishing in the waters of Glacier Bay by Tlingit Indians of the Huna and Yakutat kwaans has taken place in virtually all ice-free waters. In the early twentieth century the Huna Tlingit maintained fish processing camps in Dundas Bay, Point Carolus, Bartlett Cove, Point Gustavus (Strawberry Point), Excursion Inlet and at other locations. Salmon, halibut and other species harvested in Glacier Bay waters have also been brought to Hoonah and other neighboring communities for processing.

In recent years fishing with subsistence nets has been restricted by regulation. The State of Alaska has issued permits for subsistence salmon fishing with nets in Berg Bay and Excursion Inlet; subsistence fishing with nets may occur in other parts of Glacier Bay as well. Fish and shellfish caught by rod and reel, longlines, and pots from Glacier Bay waters also are important sources of food for residents of Hoonah and other neighboring communities. These important food fish, however, are either caught under sport fishing regulations or retained from commercial fish harvests.

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