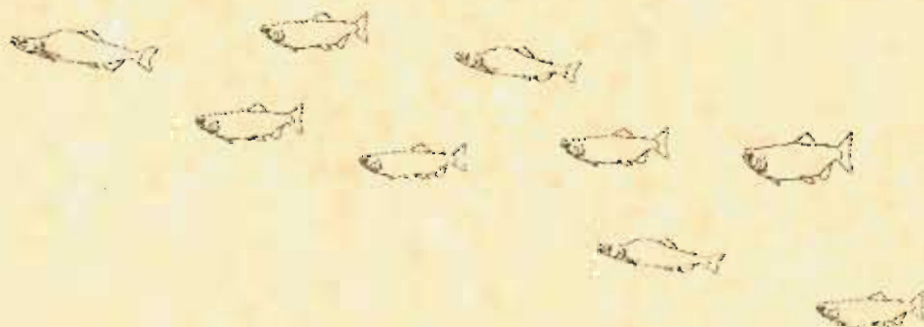


**GLACIER BAY NATIONAL PARK
AND PRESERVE
HISTORIC RESOURCE STUDY**



**By
Rick S. Kurtz**

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**National Park Service
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Cover photograph: The Dundas Bay salmon cannery was constructed in 1900. It operated continuously through 1931.

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A fish trap on the beach at Excursion Inlet.

INTRODUCTION

Glacier Bay National Park and Preserve is a 3.28 million acre unit located in Southeast Alaska. Designated as a national monument in 1925 by President Coolidge, the monument achieved park status in 1980 following the passage of the Alaska National Interest Lands Conservation Act. The 1980 legislation established an additional 57,000 acres as Glacier Bay National Preserve.

This historic resources study documents and evaluates historic events and resources associated with Glacier Bay and the surrounding region. The study provides information which can be utilized for park planning, interpretation, and resources management. The study likewise contributes to the development of a companion document containing multiple property nominations to the National Register. An acknowledged omission from this document, is an adequate discussion of the relationship between Glacier Bay and Native inhabitants. This topic shall be the focus of a forthcoming ethnographic history.

This historic resources study was made possible through the contribution of numerous individuals. The support of the staff at Glacier Bay National Park and Preserve was outstanding. In particular I would like to thank the park's resources manager Mary Beth Moss, and staffers Hank Lentfer and Louis Sharman for their contributions. Among my colleagues I would like to thank Sande Faulkner, Frank Norris, Timothy Cochrane, and Wendy Davis for lending their expertise to the study's development. Thank you to fellow field team members Dottie Theodoratus and Jennifer Sepez. Thanks must likewise be extended to former Glacier Bay superintendent Bob Howe, his wife Doris, and Wayne Howell for their contributions. Finally, thank you to historians William "Bill" Brown and Jim Mackojvak in their roles as peer reviewers.

CHAPTER 1

FROM PREHISTORY TO EUROPEAN CONTACT

NATURAL FORCES AND GLACIER HISTORY

Glacier Bay National Park and Preserve can best be understood as three rather distinct geographical regions. To the northwest lies the Fairweather Coast, a harsh, largely inhospitable coastal region running from Cross Sound to Dry Bay and beyond. With the exception of Lituya Bay, the Fairweather Coast offers little shelter from North Pacific storms. This outer coast, however, is by no means a region of utter desolation. The French explorer La Perouse, upon entering Lituya Bay for the first time in 1786, described it as a place of exceptional beauty. The Fairweather Mountains, only a few miles inland running parallel to the coast, have been described as some of the most breathtaking glaciated mountains on the planet.¹ Immediately north of Cross Sound and Icy Strait lies the park's second geographic region consisting of Taylor and Dundas Bays, and Excursion Inlet.^a These waterways feature spectacular old growth conifers and dense foliage typical of the Pacific Northwest rain forest.

For many people, however, the heart of the park is Glacier Bay. Located across Icy Strait from Chichagof Island, some 60 miles northwest of Juneau, Glacier Bay stretches 65 miles inland and 10 miles across at its widest point. A horseshoe rim of mountains--the Fairweather to the west, Chilkat to the east, and St. Elias, Alsek, and Takhinsha to the north--surround Glacier Bay. When the Ecological Society of America adopted a resolution recommending the establishment of Glacier Bay as a national park in 1923, their primary arguments focused on the natural processes of glacial advance and retreat which could be easily studied within the confines of the bay. The society described Glacier Bay as a natural laboratory offering unparalleled opportunities for scientific analysis. The ecological society further noted Glacier Bay's historical association with the British explorer George Vancouver and naturalist John Muir as contributing justification for the set aside.²

The role of Glacier Bay as a natural laboratory began tens of thousands of years ago. Investigations have indicated that during the Pleistocene period a large ice sheet, emanating from the Coast Mountains, covered most of the present day park. Only the tallest peaks of the Fairweather Range stood above the sheet.

The lower mountains were submerged in an icy tomb reaching to a maximum height of nearly 5,000 feet.³ About 10,000 years ago this sheet retreated leaving the region exposed.

^aThe terms park and park unit are interchangeably applied to present day Glacier Bay National Park and Preserve, as well as to the park's status as a national monument prior to 1980.

An interglacial period developed resulting in an ice-free bay and substantial reforestation. A subsequent Little Ice Age beginning some 3,500 years ago--and persisting until the late 18th century--caused Glacier Bay to once again become inundated with ice. During this period excessive snow accumulation, originating in the Fairweather Range, funneled down numerous troughs towards Glacier Bay. With each succeeding year this accumulation became more densely packed hardening into a massive ice sheet. This ice sheet, although less extensive than the previous one, succeeded in inundating Glacier Bay to a depth of 3,000 feet in some places. The sheet stretched at least to Bartlett Cove, with some estimates placing its maximum advance from three to six miles into Icy Strait.⁴

This most recent glacial advance was already beginning its retreat when Captain George Vancouver made his survey of the region in 1794. In fact, Vancouver's report notes the presence of numerous calved off bergs in Cross Sound. Subsequent descriptions from John Muir's rediscovery of Glacier Bay in 1879, and extensive field measurements beginning in the late 19th century and lasting through the present, indicate a progressively rapid retreat. It is this glacial ebb and flow which most fascinates scientists. The ice sheet's demise has left behind numerous isolated glaciers, which with a few exceptions continue to retreat up their respective valleys. Also left behind is an abundance of evidence--glacial moraines, stumps of ancient forests buried in the glacial outwash, and mountains bearing the plucking scars so typical of glacial activity--providing insights into the region's natural history.⁵ Finally, the glacial retreat has provided the opportunity to study, on a first hand basis, revegetation and wildlife repopulation processes. This has proven particularly valuable in scientific endeavors to understand the mechanisms of biological reintroduction which followed the retreat of the great ice sheets which once covered much of North America.

ABORIGINAL OCCUPATION

In general, the writing of human historical accounts begins at a point which commonly focuses on a noteworthy date or event from which to launch a historical investigation. Confusion arises when there is disagreement over what constitutes the beginning. Such is the case with the human occupancy of Glacier Bay. For many people the human history of Glacier Bay begins with the naturalist John Muir, and his famous voyage into these ice-choked waters in 1879. Muir's writings presented a picture of primordial wilderness newly emerged from nature's icy grip. Not surprisingly, Glacier Bay National Park has been perceived as a pristine wilderness, a place where nature has remained free from human impact. Such an interpretation, however, overlooks the region's rich and diverse human history predating Muir's arrival.

Long before 1741, when Russian explorers made their first voyage of discovery to Southeast Alaska, aboriginal peoples populated the area. On the outer Fairweather Coast, Eskimos from the west initially pushed into lands bordering on the park's northwest boundary. Athabascans later migrated from the interior headwaters of the Alsek River toward the river's mouth at Dry Bay. The Alsek eventually served as a transportation corridor, linking the

Athabascans with their neighbors the Tlingit Chilkat tribe. The Chilkats maintained a virtual monopoly on trade with the interior region, controlling the movement of hides and the much sought-after copper which the Tlingits utilized for a multitude of functions. The Alsek had further value because of the large annual runs of herring, eulachon, and salmon. These fish were often dried and saved for winter consumption. Much prized oil was also rendered from the herring and eulachon. The oil was packed in casks and saved for use as a condiment.⁶

The Tlingits established both seasonal and permanent settlements ranging along the park's outer coastline to within the confines of Glacier Bay. Of all the Native peoples associated with the park, the Tlingit have had the closest ties to the Glacier Bay vicinity. Archeological evidence and oral history place the Tlingit people and their predecessor's occupation of the region at some 9,000 years. Artifacts as old as 900 years have been discovered at former settlement sites. Hoonah Tlingit oral history is closely tied to Glacier Bay. The Hoonah people referred to Glacier Bay as the "Hoonah bread basket." Hoonah oral accounts describe a village site which existed at Bartlett Cove prior to the most recent glacial advance during the Little Ice Age. One commonly told sacred narrative relates how the Hoonah people fled the readvancing ice sheet to their present village site, Hoonah, on Chichagof Island.⁷

European explorers and visitors to the region, lasting from about 1741 to 1880, noted Hoonah settlements and proprietary rights to most of the region encompassing the present park boundaries. With their principal village at Hoonah, the tribe occupied permanent and seasonal sites at Excursion Inlet, Bartlett Cove, Berg Bay, Drake Island, Point Carolus, and Dundas Bay. Lituya Bay, for many years, was the most heavily populated Hoonah site on the Fairweather Coast. Unfortunately, glacial activity, dense foliage, weathering, and other natural processes inherent to the damp Southeast Alaska coast have destroyed or obscured much of the physical evidence associated with these sites. The entire region was rich and bountiful providing the Hoonah people with a variety of fish, berries, wild vegetables, marine life, and fur bearing animals. Heavy forests in the glacier free zones provided a ready supply of timber for canoe and home construction. So rich was the abundance that many other Tlingit clans sought to acquire hunting and fishing privileges from the Hoonah through outright purchase or marriage ties.⁸

The rich bounty of the area encompassing the present national park and other areas in southeastern Alaska was a primary contributing factor to the complex and elaborate culture of the Tlingit people. Abundant food, coupled with extensive trade routes and a temperate climate provided the Hoonah and neighboring Tlingit groups with significant amounts of leisure time. The Tlingits constructed large clan houses of cedar and hemlock. Artistic fancy resulted in elaborate carvings with rich human, animal, and mythological figures.⁹ In many respects the Tlingit lifestyle, with its bountiful richness and devotion to productive leisure pursuits, was the embodiment of the Utopia numerous 19th century Europeans and Americans sought.

EUROPEAN EXPANSION AND EXPLORATION

The expansion of European nations into Southeast Alaska was intricately linked to mercantilistic expansion plans and the international competition for dominance taking place in Europe during the 18th century. In 1741, an expedition under the leadership of the Danish explorer Vitus Bering embarked on a voyage of conquest on behalf of the Russian government. On July 26, 1741, Bering's second in command Alexei I. Chirikof, skipping *St. Paul*, spied the snowy peaks of the Fairweather Range.¹⁰ Though Chirikof failed to make a landfall, his discovery was the first European sighting of the Fairweather Coast. The expedition's return to mother Russia with valuable sea otter pelts--after much tragedy culminating in the death of Bering--assured the future expansion of commercial interests throughout the region.

It was not until 1778 that another European explorer would venture to the Fairweather Coast. On July 12, 1776 Captain James Cook--commanding the ships *Resolution* and *Discovery*--set sail from England on his third and final voyage of discovery. Cook's primary objective was to find the long sought Northwest Passage between the Atlantic and Pacific Oceans. The voyage would seek out potential territorial and economic opportunities for the crown as well as scientific discovery. In March 1778--after making the first European landing at the Hawaiian Islands--Cook reached the Northwest Coast. On May 3, Cook cruised the Fairweather Coast. About noon, while passing some 12 miles offshore beyond Cape Fairweather, an immense peak was spotted towering above the horizon. Calling the peak Mount Fairweather, Cook noted that it was one of a ridge of snow covered peaks running in a northwesterly direction parallel to the coast.¹¹ Continuing northwest along the coast, Cook came upon a bay which he named Berings Bay, known today as Dry Bay, lying at the park's northwest boundary.

Cook's voyage failed to find the Northwest Passage. However, he did secure a large quantity of sea otter pelts in trade with Alaska Natives. The pelts were sold at a significant profit in China. Word of the sale spread, spurring a rush of fur trading expeditions to the waters of Southeast Alaska. By the early 19th century British and American interests were fiercely competing with the Russians for territory and a share of the lucrative sea otter market. The coastal waters surrounding the ice-locked Glacier Bay were not immune to this international competition. In August of 1785 the French explorer Rear Admiral Jean-Francois de Galaup, Comte Le Perouse, commanding two ships, *Astrolabe* and *La Boussole*, departed from France on a voyage of scientific discovery and conquest. On July 7, 1786 the expedition sighted Lituya Bay while searching for a suitable spot to replenish their supply of water and wood. The bay was a welcome site on the inhospitable Fairweather Coast.¹²

With some difficulty La Perouse's ships managed, unscathed, to slip through the tricky entrance to the bay's protected harbor. Upon entering the bay they were amazed to find a large indigenous population of Tlingits. La Perouse noted three villages; one on a shallow cove on the southeast shore just inside the bay's entrance; a second site on a spit of land known today as Anchor Cove; and a third village located on a small bight of land on the

bay's north side.^b Another village was later discovered north of Lituya Bay near the mouth of Eagle River. Together these villages encompassed the largest concentration of Tlingits on the Fairweather Coast.¹³

A Tlingit account of this first encounter between the Natives of Lituya Bay and Europeans provides an interesting contrast to La Perouse's perspective.^c When the ships first entered the bay the villagers were busily engaged preparing wild game, salmon, and other foodstuffs for the winter. The sight of the ships caused a hush to fall over the village. Many folks began murmuring that the ships must be carrying Yeahlth, the principal divinity of Tlingit mythology. A village wise man, Yeahlth-kan, volunteered to go out and meet with Yeahlth and if necessary, sacrifice his life so that the village would be spared. Upon being escorted aboard the ship, Yeahlth-kan was brought before La Perouse. La Perouse offered Yeahlth-kan food and drink, who for his part refused thinking the items were food of the dead. It was only after La Perouse signalled his desire to trade that Yeahlth-kan realized he was not in the presence of a god but rather strangers--"People-Who-Come-From-The-Horizon."¹⁴

Le Perouse stayed in Lituya Bay for 26 days. During that period the expedition had the opportunity to engage in substantial trade with the Tlingits for pelts (principally sea otter), to collect botanical and zoological specimens, and observe the local inhabitants. One such observation resulted in what was perhaps the first European description of a Tlingit "fish trap."

...salmon endeavoring to ascend the river are obstructed by stakes, which being unable to pass, they return towards the sea, and, in their passage, meet with very narrow baskets closed at the end, and, placed in the angles of this causeway, when having once entered, they are unable to escape.¹⁵

La Perouse rightly surmised that the Tlingit population of some 300 hundred persons was largely seasonal. Dwellings consisted of shelters 25 feet long by 15 to 20 feet wide, each housing between 15 and 20 people. Bark or planks covered the shelters' windward side. An estimated 700 to 800 Natives (most likely Tlingit) also passed through Lituya Bay during La Perouse's stay. As the only safe haven for many miles, the bay was a natural spot to rest, visit, and trade during the busy summer season. La Perouse acknowledged the Tlingits' skill as traders, noting that several of the bay's visitors possessed brass, iron, and other goods which must have been secured in trades with Europeans or Americans.¹⁶

^bLituya Bay gold miners later constructed a high tide dock at the third village site which they call Big Rock Anchorage.

^cComplete reliability of this account cannot be vouchsafed. The original account may have experienced alterations in the course of translation or adapting the spoken word to written text.

Unfortunately, the stay at Lituya Bay was not without tragedy. On July 12, 21 sailors perished while conducting soundings near the bay's entrance. A strong ebb flow caught two boats and dashed them upon the breakers. Despite days of searching no survivors were found. Two years later, in 1788, a similar disaster occurred when ten Tlingit war canoes stopped to rest at Lituya Bay. Upon exiting the bay several canoes were caught in the tide and crashed against the breakers killing more than 80 men.¹⁷

A culminating point of the stay, from the French perspective, came when the Tlingits offered to sell the large island--known today as Cenotaph Island--lying in the middle of the bay to La Perouse. A deal was quickly struck and gifts exchanged to seal the trade. The French planted a cenotaph, a sepulchral monument on the island to remember their fallen comrades, along with a bottle containing a description of the land transaction.¹⁸

In 1788 the Russians, in a response to the perceived French encroachment, placed a copper possession plate at Lituya Bay.^d This Russian action was part of a much larger effort to seize territory and establish Russian hegemony over Alaska. This effort became much more aggressive in 1791 when Aleksandr Baranov took over as chief manager of the Shelikhov Fur Trading Company, later referred to as the Russian American Company. Baranov, working out of the company's base of operations at Kodiak, began implementing a campaign to gain control of the largely unexploited sea otter-rich coastal waters of Southcentral and Southeast Alaska.¹⁹ With his Koniag and Aleut hunters in tow, Baranov established key outposts at Yakutat and Sitka. From these outposts he sent out large hunting parties which systematically hunted down and harvested--to the point of extinction--the valuable sea otter.

In 1796 a Russian-led hunting party entered Lituya Bay. Within a few days they took in excess of 1800 sea otter. Russian led parties launched additional hunting expeditions to the area through 1799. The continuation of exploitation had two effects. First, it resulted in the near total depletion of sea otters in the region. Second, it created a great deal of resentment among the Tlingit people at Lituya Bay and throughout Southeast Alaska.

The Tlingit response to these intrusions was predictable. In 1802 the Tlingits destroyed the Russian post at Old Sitka. This was followed in 1805, with the destruction of the Russian outpost at Yakutat.²⁰ The Russians answered these Tlingit aggressions with reprisals resulting in the retaking of Sitka and a solidification of their hold on Southeast Alaska. Once again parties were sent to the Lituya Bay region, hunting along the Fairweather Coast as far north as Yakutat. The catches taken during these excursions were much smaller, to the degree that 1827 was the final year of large scale hunts in the area. Small parties visited Lituya Bay in 1832 and again in 1840-41 with minimal success. Thereafter, until the sale of Russian America to the United States in 1867, the Russians relied upon trade with the local

^dIt has been supposed that one of the giant waves which periodically swept across Lituya Bay obliterated the plate. It has also been rumored that the plate was located during the 1950s and ended up in a private collection.

Tlingits as the principal means of securing pelts. Frequent ports of call during these waning years included the south shores of Icy Strait and Cross Sound.²¹

The decline in sea otter harvests did not signify the cessation of hunting along the Fairweather Coast. In 1835 the whaling ship *Ganges* took the first right whale off Kodiak Island. Within a few years the waters of the Gulf of Alaska were teeming with whaling ships. One of the three principal harvest regions was the Fairweather grounds lying off the Fairweather Coast. During the height of whaling activities, between 1846 and 1851, nearly 400 ships plied the Fairweather Coast. It has been said that few of the crews from these ships actually ventured ashore. Thus their overall impact upon the mainland was most likely negligible.²²

VANCOUVER REACHES GLACIER BAY

On April 1, 1791 Captain George Vancouver set sail on a voyage of exploration and survey to the Northwest Coast of North America. Commanding the ships *Discovery* and *Chatham*, Vancouver embarked on his two-fold mission. His first task was to follow up on Cook's attempt to find the Northwest Passage. This would involve extensive surveying and charting of the coast as well as scientific data gathering. Vancouver's second mission was to secure for England undisputed claim to territory along the Northwest Coast, some of which had been recently transferred to England from Spain.²³

Arriving on the Pacific Northwest Coast in 1792, Vancouver set about establishing a method for systematically surveying the labyrinth of waterways making up the "Inside Passage."^e It quickly became apparent to Vancouver that his ships would be too unwieldy and time consuming to survey the multitude of waterways. He therefore devised a plan whereby the ships would anchor at a headquarters location, parties of 10 to 15 men equipped for several days travel, would embark from there in small boats to conduct the surveys. Vancouver did not participate in the small boat surveys. Racked with what appears to have been chronic kidney failure, Vancouver spent most of his time aboard ship.²⁴

Vancouver spent the winter of 1793-94 wintering in the Hawaiian Islands. In the spring he set sail for Alaskan coastal waters to complete his mission. The two ships became separated at sea, rendezvousing on May 7 at Cook Inlet. By June the ships had worked their way southeast arriving at Yakutat Bay on the 28th. Here they met Egor Purtov--one of Baranov's foremen--who with a fleet of canoes carrying some 900 Aleut hunters was in search of sea otter. During their visit, Purtov provided Vancouver with information on the coast to the southeast. Of particular interest was Purtov's description of a "ledianaia," a wall of ice extending into the water beyond the entrance to Cross Sound.²⁵

^eThe Inside Passage consists of a myriad of coastal islands running from British Columbia to Cross Sound. An established route for coastal travel, the Inside Passage offers unparalleled beauty and protection from the harsh weather of the Pacific Ocean.

On July 3 Vancouver set out from Yakutat Bay skirting the shoreline on a southeast heading. Cape Fairweather and Lituya Bay were passed on July 7, with the two ships reaching Cross Sound on the 8th and 9th of July. A party of Tlingits (most likely Hoonah) paddled out from Cape Spencer to trade with *Chatham*.^f In his description of the exchange, Vancouver noted the peculiar reluctance of the Tlingits to venture aboard, without a hostage being sent into the canoe. Once the hostage exchange was completed the headman immediately came aboard, trading a halibut for iron.²⁶

Vancouver decided to weigh anchor at Port Althorp, located on the south side of Cross Sound. He then assembled a crew under the command of Joseph Whidbey to survey the adjacent waterways beginning with Cape Spencer. Among the crew was Archibald Menzies, the ship's surgeon and a botanist, who was assigned to gather scientific specimens. Much of what we know about this first European encounter with Glacier Bay and the surrounding area comes from Menzies' journal. On July 10 the survey party set sail to Taylor Bay, traveling to within viewing distance of Brady Glacier. In his journal, Menzies notes their discovery of the remains of an obviously old and abandoned Native village, roughly five miles up the bay. The party was unable to travel any further beyond the village because of the abundance of floating glacier ice.

Upon exiting Taylor Bay the party passed north of the Inian Islands where "huge icebergs rushed by, carried by the outgoing tide."²⁷ Whidbey and his crew anchored near a point of land which Vancouver named for Henry Dundas, Treasurer of the Navy, and then proceeded up Dundas Bay to its head. On July 12 Whidbey attempted to enter the waters immediately adjacent to Glacier Bay. Along the way the party encountered a scattering of Native dwellings located on the mainland. It was surmised that the Natives with whom Whidbey's party had traded for sea otters in Dundas Bay lived here. Upon nearing Glacier Bay, Menzies noted the presence of enormous pinnacles of grounded ice. Icy Strait was described as being filled with ice and "the face of the glacier was right at the mouth (of Glacier Bay) and passed a pleasant island." In his account, Vancouver gave the following description: "The bay is terminated by compact and solid mountains of ice, rising perpendicular from the waters edge..."²⁸ The vast quantity of ice near Glacier Bay's entrance, coupled with the high velocity of the flowing tide, threatened to crush the party's small boats causing them to flee beyond the pack ice. Thus ended the first European reconnaissance of Glacier Bay.

^fCape Spencer was named in honor of Lord Earl John Spencer, First Lord of the Admiralty.

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CHAPTER 2

EXPLORATION, TOURISM AND SCIENTIFIC STUDY

GLACIER BAY REDISCOVERED

There are no known records of Russian exploration in and around the waters of Glacier Bay between 1795 and Alaska's sale to the United States (U.S.) in 1867. The Russians in their search for sea otter pelts took little interest in the tidewater glacier exiting from Glacier Bay.¹ If anything, the Russians regarded the glacier and its calving bergs as a nuisance, a potential disaster to be avoided and sailed around whenever possible.

Word of Glacier Bay's existence was first conveyed to the new American landlords in 1869 by Professor George Davidson of the U.S. Coastal Survey, following an exploration trip of the head of Lynn Canal. The Chilkat Chief, Kloh-Kutz, told Davidson about a great bay of breaking ice cliffs west of Lynn Canal. The chief said they could snowshoe to the great bay of tide-water glaciers in one day. Once there, they would be able to see the hair seals riding around on ice cakes and witness the spectacle of ice rumbling down like landslides into the water. Unfortunately, Davidson could not find the extra time to make the trip. Former Secretary of State William S. Seward was scheduled to meet Davidson and convey the professor back to Sitka aboard Seward's private steamer.²

The first Euro-American to actually reach Glacier Bay was Charles Wood. A West Point graduate and former frontier soldier, Wood had served with or counted among his friends such notables as Jim Bridger, General George Custer, Kit Carson, and Chief Joseph. In April 1877 Wood set out from Portland, Oregon aboard the steamer *California*. His official mission was to explore Southeast Alaska and the headwaters of the Yukon River. His primary goals, however, were to climb Mount St. Elias with Charles Taylor, and acquire information about unknown districts lying nearest the coast. Taylor had managed to get approval from the War Department in Washington, D.C. to secure military assistance for his attempt of the mountain. Plans began to go awry when the sealing schooner they were supposed to meet at Sitka left early to pick up a load of hides. The stranded group succeeded in securing a sturdy canoe and crew from a local Tlingit to continue their journey on April 27.³

When they reached Cross Sound, Wood's party met a group of Hoonah Tlingit who had come to dig spring potatoes. The Hoonahs told Wood they had received their first seed potatoes from Russian traders many years ago. Each spring they would gather the previous year's crop and sow the ground for the next spring crop. Wood's group spent the night camped on a small island near Cape Spencer. A young Hoonah man, Tsa-tate, headed a three family summer camp on the island. The Hoonahs slept in wooden huts. The inside walls were adorned with traps, nets, paddles, spears and the skins of several recently trapped furbearers. Of great interest to Wood were the baskets the Hoonah women wove. He

described the baskets as being of a variety of shapes and colors, made from the fiber of a long fine root which they soaked in water and then split into thread. Tsa-tate served his guests an evening meal of halibut and boiled porpoise.⁴ Afterward they reclined about the hut on several bear skins spread across the floor.

The following day Wood's party continued on their journey. Wood was confident that they would reach Yakutat within five days. When they reached Mount Fairweather their Tlingit steersman waved his hand saying "there is the mountain you are seeking." Wood explained that they were seeking the big mountain farther up the coast. The steersman replied that to venture farther up the coast would mean death to them all. Beyond this point were only stormy seas and open ocean with no landing places. When Wood pressed him the steersman replied "one mountain is as good as another... There is a very big one. Go climb that if you want to."^a Wood finally gave up the argument and the party landed at Cape Fairweather where they climbed Mount Fairweather.⁵ Wood became the first American military person to reach Fairweather's 15,300 foot summit.^b

After completing the climb the party returned to Sitka where Taylor booked passage on a steamer heading south. Not satisfied with the party's results, Wood who still had a couple months left to explore Alaska, decided to hire another canoe with a new Tlingit crew and explore a bay about 20 miles southeast of Mount Fairweather. Wood hoped to explore the bay, cross the Coast Range and reach the upper waters of the Chilkat River. The party also added two mineral prospectors, Big Levi and George Meyer.

Upon reaching Icy Strait, the party spent three days picking their way through the toppling icebergs of Glacier Bay. An impenetrable wall of calved glacier ice at Geikie Inlet prevented farther advancement. Here Wood's party came upon some Hoonah seal hunters. Wood spent several days with the Hoonah getting to know the people and their ways. Wood noted the importance that seal played in the Hoonah economy describing seal as the Natives' meat, drink (oil) and clothing source. One of the Hoonah, a young man who was both a shaman and hereditary chief, told Wood that within his own lifetime of thirty years the area where they now stood went from solid ice to ice free. The young shaman also obliged Wood's curiosity, explaining the role of the shaman in Tlingit society and showing Wood his

^aA contributing factor to the reluctance of Wood's Tlingit guides may have stemmed from traditional Tlingit boundary delineations. According to the Walter Goldschmidt and Theodore Haas 1946 publication, *Possessory Rights of the Natives of Southeastern Alaska*, the territorial boundary between the Yakutat tribe and their southern Tlingit neighbors was in the vicinity of Cape Fairweather. Tribes were generally unwilling to cross into a neighboring groups territory without permission. To do so could be perceived as an infringement upon the owner tribe's private property.

^bBased upon all available records, it appears that Wood's party was the first expedition, civilian or military, to successfully ascend Mount Fairweather.

sorcerer's kit. Wood was told that much of what a shaman did was directed towards warding off evil spirits which preyed upon the sick.⁶

Wood never had the opportunity to return to Southeast Alaska. His plans to further explore Glacier Bay and adjacent areas were never realized. Military obligations forced him to forgo an anticipated leave of absence and return stateside. And although Wood published an account of his expedition in the July 1882 edition of *Century Magazine*, his article was noteworthy for its vivid descriptions of Tlingit life rather than his brief discussion of Glacier Bay.⁷ In later years, whenever the subject was broached, Wood disclaimed any attempts to label him as the true Euro-American discoverer of Glacier Bay. This honor he believed rightly belonged to the man whose name has become synonymous with Glacier Bay, John Muir.

A naturalist and writer by trade, John Muir had already established a reputation in the emerging fields of natural science and wilderness preservation when he rediscovered Glacier Bay in 1879. His studies of glacial trace history at Yosemite in the 1870s, coupled with his enthusiasm for extolling wilderness values, had resulted in the publication of numerous books which became minor best sellers. Muir found an unadulterated joy in exploring God's natural temples.⁸ It was this need to experience pure nature as well as an abiding love of glaciers which drove Muir to explore the numerous waterways and inlets of Southeast Alaska.

In the summer of 1879 Muir arrived at Wrangell to renew his search for glaciers. Deciding to extend his brief stay, Muir booked passage on the steamer *Cassiar*, a small mail boat which served as the basic link between southeastern communities. Muir's fellow passengers were an interesting mix of tourists, traders, and missionaries. Among the latter were two notables: Sheldon Jackson, head of the Presbyterian Church in Alaska; and S. Hall Young, a man who despite Muir's dislike for organized religion, would become Muir's frequent traveling companion and life long friend. As they cruised the waters of Southeast Alaska Muir preached his glacier gospel to his fellow passengers, most of whom referred to him as "professor" or that "wild Muir" because of his great enthusiasm for the message he spoke.⁹

Muir stayed in Alaska for the remainder of the summer, thus postponing his return to the "defrauding duties of civilization." On October 9 Muir, along with Young, left Wrangell in a 35 foot red-cedar dugout canoe--outfitted with sails, oars, and paddles--to further explore the waters of Southeast Alaska. His ultimate goal was to reach "Sit-a-da-Kay," a bay of icy mountains Muir had heard about from some Natives at Wrangell. Four Tlingit men--Kadachan, Sitka Charley, Stikeen John, and Toyatte--served as crew. Toyatte, a much respected Tlingit chief who was well acquainted with the general region, would serve as guide. The party had also secured copies of Vancouver's charts. The charts were of limited use, given that many of the bays and inlets which existed in 1879 were shown as glaciated over on the charts. The trip, if successful, would result in Muir's discovery of some previously unidentified glaciers and Young's conversion of Natives to Christianity.

The potential for bad weather hampered prospects for a successful voyage. Fall storms had already begun to kick up, bringing with them cold drenching rain, fog, and choppy seas. Kadachan's mother pleaded with the men to give up their foolish notion. Finding this to no avail she told Muir that if anything happened to her son she would take Muir's first born as repayment.¹⁰

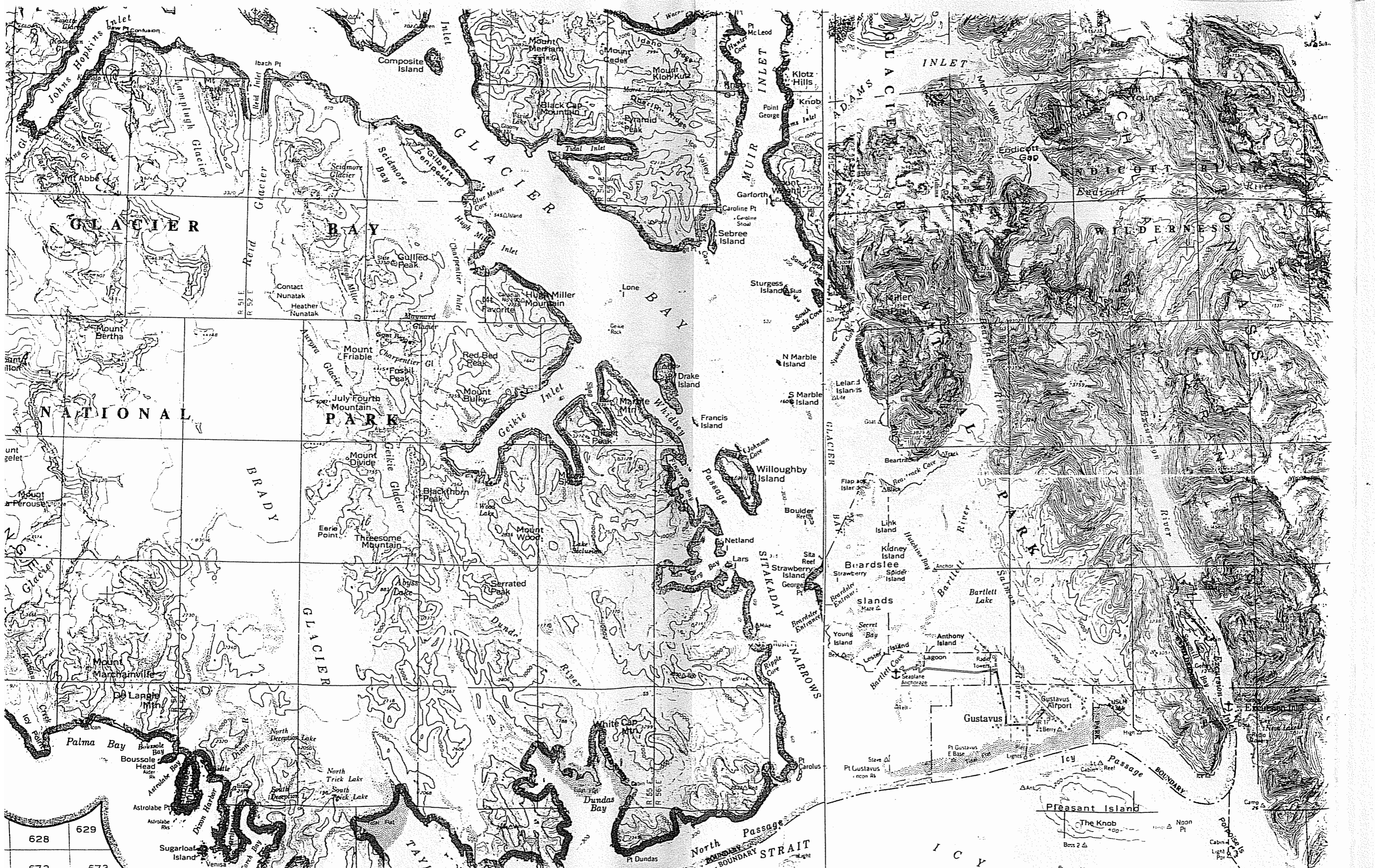
Sailing when the winds were favorable or paddling as needed, the group proceeded up the coast in a northwesterly direction. Camp was made at several sites well known to the Tlingit crew. Young noted how secure he felt, despite the weather, with their self sufficiency in the wilderness. The Tlingits were expert woodsmen, adept at making camp and supplementing meals with clams, mussels, crab, and fish. Young also credited Muir with being a man of the wilderness, someone who was as equally capable of setting up camp as he was at recognizing and explaining the wonders of nature.¹¹ As for Young, he took the opportunity whenever they stopped at villages to preach the "Great New Story." Muir would sometimes join in, proving himself to be an adept preacher.

On October 23 the party reached Hoonah, principal village of the Hoonah Tlingit. After ceremonial introductions, Young proceeded to give his Christian missionary speech, with Muir, Toyatte, and several Hoonah residents following up with their own speeches. Afterwards, while Young was busy taking a census, Muir explained his intention of going into the bay to examine the ice mountains. The Hoonah--according to Muir's account--said they knew the great bay lying across Icy Strait. The place was filled with the dangerous spirit of Kooshta-kah, the otter man. Furthermore, the bay contained no gold. Why, they asked, bother going into a place where the great masses of ice and rushing tides joined together to smash canoes?¹² Hoonah hunters only ventured to the face of the large glacier near the head of the bay to hunt the many seals hauled out on the ice pack.^c

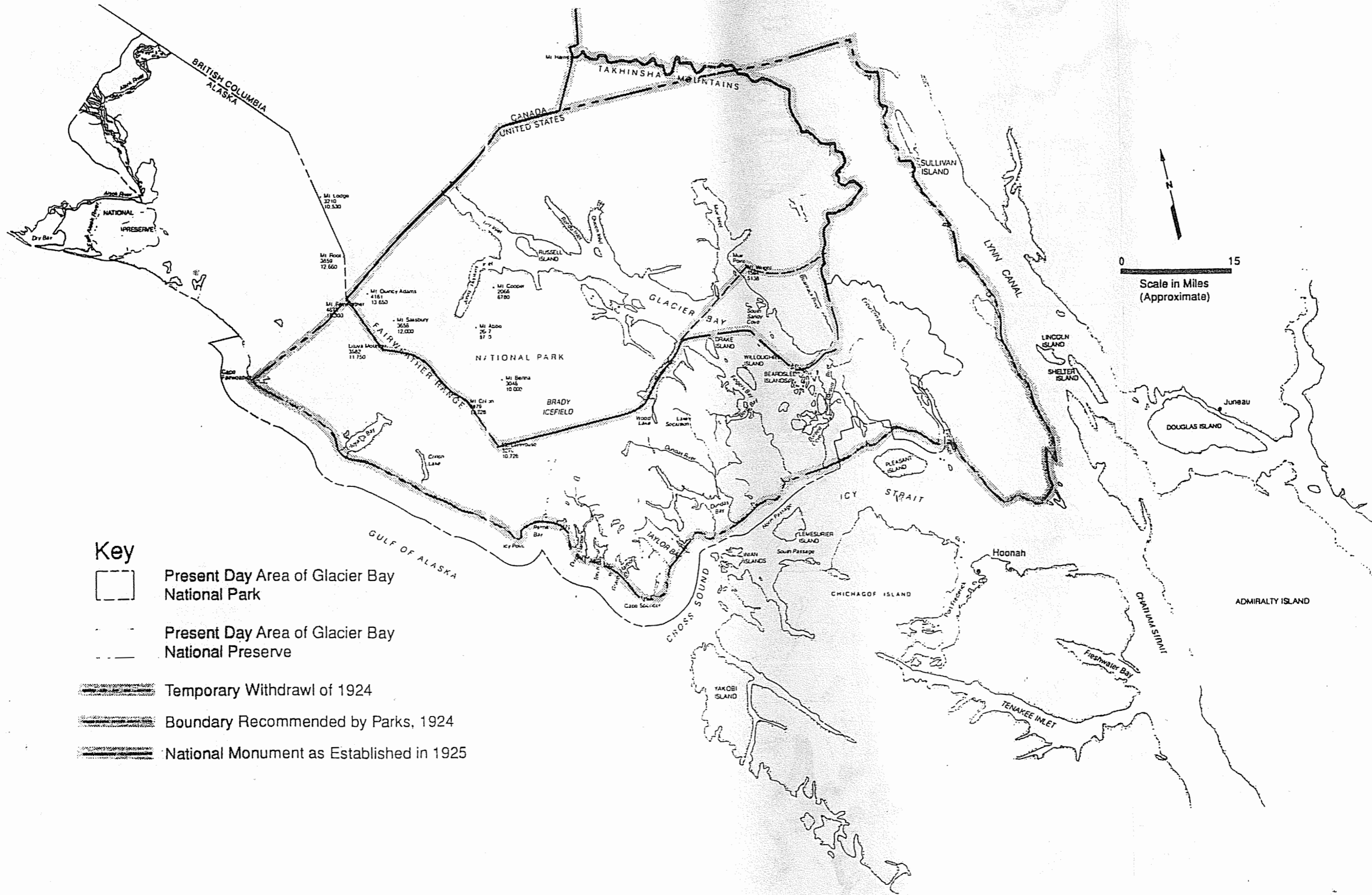
The following day Muir and his companions set out for Glacier Bay. Their first job was to stop at Pleasant Island and secure a supply of firewood as their Hoonah hosts had recommended. Here they spent the night determined to enter the bay on October 25. But Muir's Tlingit crew was beginning to have second thoughts. Sitka Charley, who knew these waters from trips to the region as a boy with his Hoonah father, was confused. The Tlingit crew expressed their willingness to continue because of their faith in Young's God and Muir's ability as the "Great Ice Chief" to ward off danger. Upon entering the bay the party was surprised to see smoke emitting from a hut at a place known today as Bartlett Cove. Here they met a group of 15 to 20 Hoonah. The hut was filled with seal hides, mountain goat pelts, and other furs. Muir succeeded in hiring a young seal hunter as guide. The guide's reluctant wife told Muir to "see that you bring him back."¹³

About mid-day the party passed their first tidewater glacier which Muir named Geikie, in deference to the Scottish geologist James Geikie. Soon after, their Hoonah guide had them

^cAt this time the head of Glacier Bay was in the vicinity of Russell Island.



628 629
672 673



Key

- Present Day Area of Glacier Bay National Park
- Present Day Area of Glacier Bay National Preserve
- Temporary Withdrawal of 1924
- Boundary Recommended by Parks, 1924
- National Monument as Established in 1925

pull into a suitable spot where they could make camp for the night. This stopping and making camp while daylight persisted became a source of irritation with Muir. In the days that followed Muir would insist that they go on, only to have their guide say that another suitable spot could not be reached before dark and to go on in the dark among the ice filled waters would be folly. On days following these confrontations, having seen the obstacles they would have encountered, Muir would reluctantly admit that their guide had been right. Their guide was also careful not to let Muir's enthusiasm lead them too closely to the snouts of the glaciers, a prudent decision given the 15 to 20 foot waves and masses of debris which the calving action often generated. The party experienced a particularly close call at Grand Pacific Glacier. A storm blew in, bringing snow and freezing temperatures and causing slush ice to gather between the floating icebergs. Despite the late hour, the group set about backtracking their way out before the slush could freeze and trap them among the frozen floes.¹⁴

Muir and Young spent much of their time mapping the shoreline, estimating heights, distances, and naming many of the glaciers, inlets, and other major formations they encountered. The deteriorating weather continued to hamper their efforts, causing the party to cut short their exploration, but not before the group glimpsed what Young called "the greatest of all the glaciers."¹⁵ It was this glacier which Muir hoped to revisit when he made plans for a followup expedition in 1880.^d

The five days which Muir spent at Glacier Bay during 1879 did little to satisfy his appetite for glaciers. Over the winter he made plans for a second Glacier Bay expedition, working the trip into a busy schedule which included marriage and lectures on his summer findings. On August 8, 1880 Muir once again disembarked from the dock at Wrangell. Waiting for him was Young who described Muir as bounding ashore to exclaim "When can you be ready?" "...have you forgotten? Don't you know we lost a glacier last fall? ...get your canoe and crew and let us be off."¹⁶

The two men secured the services of a canoe and a crew of three Tlingit--Lot Tyeen, Hunter Joe, and Smart Billy--for their anticipated six week journey. The group set out on August 16 going first to the region of Holkham Bay. They continued northwest through Icy Strait and Cross Sound arriving at Taylor Bay on August 29 after having weathered several days of rough seas. The party camped at the head of the bay, getting an up-close view of Brady Glacier, which Muir estimated to be roughly three miles wide. Several Tlingit Natives visited the encampment and gave Muir and his comrades some of the plentiful salmonberries and strawberries they had picked. A Hoonah Tlingit who Muir described as having a "house" a mile or two down bay presented Muir with some fresh porpoise meat.¹⁷

^dThis lost glacier at Glacier Bay, now known as Muir Glacier, was not the only lost glacier the party sought in 1880. Another glacier had been glimpsed at Holkham Bay during 1879. Today it bears the name Dawes Glacier.

While at Taylor Bay, Muir took the opportunity to scale the Brady Glacier and conduct a closer reconnaissance. It was during this exploration trip that Muir nearly lost his life. Finding several crevasses blocking his return route Muir, accompanied by Young's little dog Stickeen, was forced to leap across several of the bottomless chasms or inch his way across hazardous ice bridges to make his way back to camp. At one particularly large crevasse, Muir found himself--forced in the growing darkness--to choose between crossing a hazardous knife edged ice bridge or spending the night on the glacier in a state of near exhaustion and increasing cold. Muir successfully cut footholds across the bridge reaching the other side, only to have to climb a vertical face several feet high in order to exit the crevasse. Then through what Muir alluded to as blind loyalty, he was able to coax the little dog across the bridge and make the vertical leap into Muir's waiting arms. Muir arrived back at camp visibly shaken to his anxious comrades who thought him surely hurt or dead. The impact with which the whole experience and Stickeen's loyalty touched Muir, was reflected in his book entitled *Stickeen: The Story of a Dog*. This was the only one of Muir's Alaska books which made it into print while Muir was alive.¹⁸

The following day, after paying a visit to the Hoonah headman, the party put Brady Glacier and Muir's harrowing experience behind them and set course for Dundas Bay. A hard driving rain made the voyage extremely difficult. Upon arriving at Dundas, the party was delighted to see smoke rising from the hut of the Hoonah sub-chief, Ka-hood-oo-shough, who along with his family had been out gathering berries. The sub-chief offered to provide Muir with a guide to facilitate the party's exploration of the upper arms of Dundas Bay.¹⁹

After exploring Dundas Bay the party made their way into Glacier Bay in order to find the immense glacier they had spied the year before. When they finally reached what was to be later called Muir Glacier, the group was amazed at the size of the tidewater behemoth which lay before them. Muir described the glacier as resembling a broad undulating prairie. Several tributary glaciers flowed down from surrounding mountains creating dark streaks where medial moraines merged with the main trunk. Muir estimated the glacier to be 40 to 50 miles long and 25 miles across at the widest confluence of main tributaries.²⁰ The front he described as a thundering icewall which could be heard for two to three miles away from which giant waves erupted as calving bergs displaced the water at a rate of every five or six minutes.⁶

EXPLORATION MEETS ADVENTURE TOURISM

It is difficult to categorize Muir's early work of 1879 and 1880 at Glacier Bay. More exploration than science, his findings nevertheless were an important contribution to the

⁶Professor Harry F. Reid conducted extensive studies on the flow of Muir Glacier beginning in 1890. He estimated that the Glacier was being pushed ahead into the tidewater at a rate of five to 10 feet a day.

fields of geology, glaciology, and geomorphology. Likewise the observations which Muir and Young made regarding the Tlingit people, their customs and culture, provide valuable insights to Native life during the period which historian Ted Hinckley refers to as the "Americanization of Alaska." Still, their discoveries only scratched the surface regarding the rich scientific knowledge which the Glacier Bay region had to offer. Muir's actions had an additional impact. Ever the enthusiast to preach his glacier gospel, Muir took every opportunity possible to expound upon the virtues of wilderness, encouraging Americans to travel north, to as Muir put it, "Go... go and see."²¹ Muir's urgings had their effect. In the immediate years following his historic journey, a curious mix of scientists, explorers, and adventuresome tourists headed north to see Muir's bay of ice mountains.

In July 1880, a month prior to Muir's second venture into Glacier Bay, L.A. Beardslee, commanding the steamer *Favorite*, entered the bay's ice choked waters. Beardslee, under the auspices of the U.S. Navy, had recently been given the unenviable task of maintaining law and order in Alaska. The steamer advanced as far as a Tlingit encampment at Berg Bay. During discussions with the Natives, Beardslee learned that two white men had explored the bay the previous fall. From the description Beardslee easily recognized Muir, who had quickly become well known throughout Southeast Alaska. Beardslee marked the name "Glacier Bay" on the charts and through his own determination succeeded in getting the name officially adopted.^f

Beardslee, with assistance from Muir, produced the first official map of Glacier Bay. This map, incomplete as it was and supplemented with Beardslee's notes, served as guide for the cruise ships and scientific expeditions which soon followed.²² In July 1883 the Pacific Coast Steamship Company's *Idaho*, under the command of Captain James Carroll, entered into Glacier Bay on one leg of a trip which can best be described as adventure tourism. Carroll was an old salt with numerous years spent skippering mail steamers in Southeast Alaska. He was a strict disciplinarian, demanding proper shipboard etiquette among the crew, but proving himself to be a perfect host, gracious towards passengers and full of Alaskan anecdotes.

A description of Carroll's first venture into Glacier Bay provides an example of the adventure tourism experience. Starting from San Francisco or some other major west coast port, the steamer took on final provisions at Victoria, British Columbia before heading north through the Inside Passage. Company brochures promised an adventure complete with majestic mountains, inland seas, aurora borealis, and nightless days. Among the passengers were prospectors, missionaries, and traders simply booking passage north to some predetermined destination. But the trip also attracted young men and women, the occasional family, and various scientists all bent on reconnoitering and possibly encountering firsthand some previously undiscovered Alaskan treasure.²³

^fThroughout the winter of 1879-80, Muir used the term Fairweather glaciers to describe the unyet named Glacier Bay.

One notable individual among Carroll's 1883 passengers was Eliza Scidmore.^f Scidmore made consecutive excursions to Glacier Bay and other Southeastern Alaska waters in 1883 and 1884, writing a series of dispatches appearing in the *St. Louis Globe-Democrat* and the *New York Times*. Her writings on these trips served as the basis for her *Journeys in Alaska*, the first comprehensive travel guide to Southeast Alaska. These writings provide us with colorful descriptions of adventure tourism during the formative years, as well as the people and geographic features of the region.

After departing Pyramid Harbor *Idaho* headed south to Icy Strait and skirted the coast until reaching Glacier Bay. Here at the bay's mouth, Carroll began searching for a new trading station Dick Willoughby had opened in a nearby cove.^h This was later named Bartlett Cove in honor of a Port Townsend merchant who opened the first of several salmon packing operations at this site. Towards noon a canoe carrying two Tlingits and a white man were sighted paddling towards the ship. The threesome had been out on an unsuccessful seal hunt. Their canoe was hauled aboard and the three men guided the ship into Bartlett Cove. A canoe with a wildly gesticulating Dick Willoughby welcomed *Idaho* as it entered the cove.²⁴

Willoughby's trading post, located among the Hoonah Tlingit at Bartlett Cove, was only one of many enterprises upon which this early Alaskan entrepreneur embarked. Born in Virginia, Willoughby made his way to the northwest coast in 1858. He had traded and prospected throughout Southeast Alaska and as far north as Bering Strait. Over the course of his life, Willoughby made and frittered away several fortunes. In one of his more bizarre and amusing schemes concerning Glacier Bay, Willoughby, in 1888, produced a picture of an entire city which he said had appeared to him in a mirage suspended above Muir Glacier. Willoughby had supposedly been able to photograph this strange occurrence of which he had several thousand postcards made, selling them to tourists at fifty cents each. Two scientific expeditions were even organized to investigate Willoughby's "Silent City." The hoax was finally exposed after a Stanford University professor recognized the photo as the City of Bristol, England.²⁵

Willoughby's 1883 Bartlett Cove trading post consisted of a small log house and store. The store, a marvel to the tourists, was packed with Tlingit baskets, lumber, fishing nets, salt, barrel staves, and a variety of general merchandise. Alongside the store, Willoughby had planted a small vegetable garden and strawberry patch which seemed to be thriving in the damp southeastern climate. Several Hoonah dwellings, which Scidmore described as tents, dotted the shoreline. Scidmore noted that in every Hoonah tent stood boxes of seal oil, which the Hoonah mixed with salmon, herring roe, or as part of a seaweed salad. In one tent Scidmore spotted a seal flipper boiling in a kettle. The old man who was supervising

^fScidmore Bay, an offshoot of Hugh Miller Inlet was named in her honor.

^hWilloughby had accompanied Beardslee on the 1880 survey of Glacier Bay. It was during this trip that Willoughby Island was given its name.

the cooking said, "Seal! Seal all same as hog," signifying the seal's universal appeal on a level equivalent with pork. In another tent, a Hoonah silversmith was hard at work fashioning bracelets from half dollars. With a minimum of tools, he worked the metal into fine jewelry which the tourists eagerly bought.²⁶

During this and other encounters with the Tlingit, Scidmore and many of her fellow passengers were repeatedly amused and surprised to note the role women played in the Tlingits' matrilineal society. "Hen pecking is too small a word to describe the way in which they bully their lords..." noted Scidmore.²⁷ Many times bargains were struck with the male heads of family, only to have the women veto the transaction.

While the tourists were amusing themselves Willoughby told Carroll of "the great glacier" (Muir Glacier) some thirty miles upbay. Willoughby said that the repercussions from the falling ice at times could be heard and felt at his house. On one occasion a particularly large discharge generated a wave which washed high on the shore at Bartlett Cove. After hearing Willoughby's tale, Captain Carroll said the steamer would set out to see this site and dared Willoughby to come along and prove his story's validity. Willoughby accepted the challenge and the captain set about making ready to head upbay. As the steamer headed north, the limitations of the sketchy charts quickly became apparent. The combination of sediment-choked water, fog, and bergs the size of houses in conjunction with rushing tides, only served to make navigation still more challenging. With Willoughby assisting him, Carroll inched the steamer ahead, jockeying between the numerous ice flows. Soundings were constantly taken to assure adequate depth for passage.²⁸

Upon rounding Willoughby Island, the adventurers were rewarded with a breathtaking view of Muir Glacier. At this point the glacier actually had no name. It was Carroll who decided to name both glacier and inlet in honor of John Muir. When Scidmore later informed Muir that a glacier had been named in his honor, Muir's amused reply was, "Which one of the glaciers do they call mine?"²⁹

As *Idaho* drew near, the immense size of the glacier created a sense of awe in the passengers and crew. The glacier rumbled continuously, with immense chunks of ice calving free and crashing into the water from an estimated height of 400 feet. The steamer anchored an eighth of a mile from the glacier's front. Huge icebergs rising 40 feet above the water surrounded the ship. This created the illusion of being locked in an arctic waste. A photographer was quickly lowered in a rowboat to take advantage of this first of innumerable photo opportunities with which Glacier Bay has become synonymous. Lifeboats were then lowered from the steamer as eager tourists clamored aboard to be rowed ashore. Everyone making the pilgrimage ashore dressed in their oldest clothes, knowing full well--from visits to other glaciers during the cruise--that their clothes would look worse upon returning. Scidmore noted how mingled with this excitement was the realization that few individuals had witnessed the sight before them. They were like explorers, without the standard guide books telling the tourists which way to look and what emotions to feel.³⁰

Once ashore, standard decorum was temporarily set aside. If a boat failed to make it to solid ground, sailors would valiantly struggle to carry the women ashore, often slipping in the silty muck and dumping both into the freezing mess. In later years, boardwalks would be installed at Muir Point, thus allowing an opportunity for the more genteel traveler to go ashore. Tourists scrambled onto the moraine and glacial ice, everyone bent upon making the most of their limited time. Amateur photographers scampered up ravines to the top of surrounding points offering better photo opportunities. People marveled at the protruding stumps of ancient forests left behind after the advancing glacier had sheered off their tops. When the steamer's whistle sounded calling everyone back, it was a bedraggled but happy group that returned. Individuals were covered with mud, having sunk up to their knees in the sometimes treacherous glacial silt. The soles of many individuals shoes had been worn to tatters on the sharp ice and grinding silt. The ship's engine room became a temporary drying room, strewn with muddy boots and clothes hung from makeshift clotheslines.³¹ Suffice it to say, the tenor of these early cruises was radically different from today's luxury cruise of Glacier Bay.

Later, after the passengers had changed clothes and eaten a hot meal, the talk inevitably turned to the origins of the glacial wonders the adventurers had witnessed. The many theories and hypotheses which these scientific neophytes put forth would have struck panic in the heart of any glaciologist.³² These unscientific musings, however, did make a significant contribution to the world of science. They brought the traveling public face to face with the emerging disciplines of natural science, instilling them with a curiosity and appreciation which fueled Glacier Bay's role as a scientific laboratory. Many of the scientists who came to study Glacier Bay during the late 19th century, and beyond, read their first accounts of the region from the writings of Scidmore and other travel journalists. Likewise, much of the early charting and discovery at Glacier Bay was the direct result of Carroll and his fellow cruise operators. In 1892 Captain Carroll, accompanied by Professor Harry F. Reid, took the steamship *Queen* into the upper reaches of Glacier Bay where they encountered the Johns Hopkins Glacier and previously unknown Rendu and Carroll Glaciers. Finally, the cruise ships provided transport for most of the scientific expeditions which traversed Glacier Bay during the 1890s.³³

ESTABLISHING A SCIENTIFIC TRADITION

The scientific study which followed Muir's discovery began in earnest in August 1886 when the U.S. Geological Survey (USGS) sent Profession G. Frederick Wright to investigate the glaciers of Southeast Alaska. Wright devoted a month to the study of Muir Glacier, making some of the first early scientific estimates of the glacier's rate of movement. Today, 4,900 foot Mount Wright bears his name.

Wright's efforts were greatly expanded upon in 1890 when both John Muir and Professor Harry F. Reid led scientific expeditions to Glacier Bay. On June 18, 1890 Muir booked passage aboard the steamer *Queen* bound for Southeast Alaska and Glacier Bay. Much had

changed since Muir's 1880 trip. Glacier Bay had become a major tourist attraction on the Southeast Alaska cruise circuit. During the voyage north, Muir noted that he made many pleasant acquaintances among the 180 passengers but found most of them "strangely ignorant on the subject of earth sculpture and landscape making."³⁴ On June 23 the steamer entered the berg-crowded mouth of Glacier Bay. Muir feared that they would not be able to reach Muir Inlet, but found the inlet remarkably free of ice owing to the action of tides and wind. Most of *Queen's* passengers went ashore to scramble on the moraine for a better view or make the two mile hike to Muir Glacier. Muir and his companion, Henry Loomis, packed supplies to a rocky hollow in the moraine less than a mile from the glacier's terminal face. Their supplies included an ample supply of food, blankets, firewood, a tent, and lumber for constructing a permanent base camp.ⁱ The base camp's principal structure consisted of what was described as "a substantial cabin a half mile below the ice wall with a noble chimney of glacier-cut stones cemented with glacier mud..." Muir's plans called for making extended trips away from base camp in order to study Muir Glacier and its associated geology.³⁵

Muir's base camp, which Reid later dubbed "Camp Muir," was greatly expanded on July 1 when Reid's party disembarked from the steamer *George F. Elder*. The party included H.P. Cushing, R.L. Casement, H. McBride, J.F. Morse, and C.A. Adams. At the instigation of Muir, geographic features in the vicinity of Muir Inlet were later named to honor their scientific contributions. Reid's party brought with them several tons of supplies and measuring instruments. Reid's addition of a 16 foot rowboat and a small dugout Tlingit canoe greatly facilitated the logistics of getting around. Plans during the Reid party's extended stay included an ambitious surveying and mapping effort, meteorological and geological observations, and collecting samples of pioneer plants which had begun to repopulate the region.³⁶

Muir was delighted to have such congenial companions. The two parties pooled their resources and embarked upon several joint operations to make the best use of their limited time. One of Reid's primary goals was to get some hard measurements concerning the movement of Muir Glacier. Geologic trace evidence--in the form of rock scarring, erratics, and remnants of buried forests--suggested that the glacier had experienced numerous periods of advance and retreat.^j To begin this effort Reid had several flags planted on the glacier. These would be measured repeatedly from predetermined vantage points in order to get a firm fix on the glacier's movement. Cairns (stone markers) were constructed at many of the measuring points. In subsequent years, other scientific expeditions utilized these cairns as

ⁱThe need for bringing in lumber and firewood was a reflection of the total lack of timber at Muir Inlet during this period. Today the Muir cabin site of 1890 is inundated with tall spruce trees and thick underbrush.

^jContemporary Hoonah accounts stated that Muir Glacier had extended as far as Willoughby Island about 1860. Dick Willoughby noted that in a two year period during the 1880s, Muir Glacier had retreated close to half a mile.

points of reference for measuring glacial movement. Scattered accounts, some as recently as the mid-1980s, reported the continued presence of some of these markers. Numerous photographs were also taken. When compared with Wright's photos taken in 1886, it was determined that Muir Glacier had retreated nearly 1000 yards during the previous four years. Reid ultimately hoped to come back in future years and gauge the movement of Muir Glacier over an extended period.³⁷

While Reid was busy conducting his studies of the glacier's movement, Muir struck out on his own, spending several days atop Muir Glacier. To facilitate his journey, Muir rigged up a small one-man freight sled, capable of carrying enough gear and supplies to last him ten days. In retrospect, Muir noted that although his trip was bent on scientific fact finding, it was not without its share of adventure. Muir's assessment of his side trip greatly understated its several highlights. On July 14 Muir found a pack of wolves drawing uncomfortably close to his makeshift camp. Having no gun, Muir found it prudent to hole up at a large boulder until after the wolves had satisfied their curiosity and wandered off. Later, on July 19, Muir experienced a bout of snow blindness. He was forced to spend most of the day with a snow poultice across his inflamed eyes and was only able to travel after the sun had dropped down.³⁸

Muir returned from atop the glacier on July 21, just in time to catch passage aboard *Queen*. Reid's party remained until mid-September, taking the last steamer out of Glacier Bay. Throughout the summer of 1890, a continual flow of steamers carried tourists to Muir Inlet.^k Muir found most of the passengers curious and enthusiastic but shallow in their level of interest. Muir privately chastised the tourists for being more interested in poking around Camp Muir or in the call of the dinner whistle than they were in viewing glacial wonders. Several parties of Hoonah Tlingit seal hunters likewise visited Camp Muir. Some of the Hoonahs developed a lively cottage industry, manufacturing and selling a variety of trinkets to the tourists visiting Muir Inlet.³⁹

In years to come Camp Muir's primary significance remained linked to its role as a base camp for scientific expeditions. Reid headed a second expedition to Muir Glacier in 1892. After re-establishing a base at Camp Muir, Reid and his two assistants set about carrying on the efforts they had begun in 1890. Numerous bergs coupled with high winds greatly limited the party's ability to utilize a rowboat. Instead, they fashioned several one-man sleds, as Muir had done in 1890, and came to rely upon these for facilitating their studies. Reid determined that Muir Glacier's vertical front extended between 130 and 210 feet above the water's surface. In contrast, he estimated that the glacier's terminus extended roughly 720 feet below the water for a total glacier thickness exceeding 900 feet. Reid judged the glacier to be 9200 feet across at the face and 35 miles long.⁴⁰

^kBy this time the Pacific Coast Steamship Company was making weekly excursions to Glacier Bay. This provided the expedition with a ready source of new supplies and a convenient source for dispatching mail.

In late August Reid's party took their small rowboat and hitched a ride with Captain Carroll aboard the steamer *Queen*. This was the first time a steamer had ventured into the upper reaches of Glacier Bay. Reid was responsible for providing the name Queen Inlet and Carroll Glacier to one of the previously undiscovered glaciers they encountered. Reid planned to get dropped off, further explore the upper bay, row back to Muir Inlet, and board *Topeka*, the last steamer scheduled to visit Glacier Bay that season. Upon their return to Muir Inlet, however, Reid and his comrades were dismayed to find that *Topeka* had departed the previous day. The skipper had left extra food for the party along with a note saying he would notify the authorities upon arriving at Sitka. The authorities took quick action and dispatched the steamer *Pinta* from Sitka to Glacier Bay where it successfully located the Reid party and took them back to Sitka for passage home.⁴¹

The final and perhaps the grandest of 19th century expeditions to Glacier Bay occurred in 1899. In that year the railroad magnate Edward H. Harriman assembled a team of the nation's leading scientists to conduct an extensive survey of coastal Alaska. Harriman's "second age of discovery," as it has been termed, was distinctive in several respects. First, the scientists, artists, photographers, historians, and conservationists Harriman assembled formed a scientific elite. The "who's who" list of experts included such notables as William H. Dall, Henry Gannett, George Grinnell, C. Hart Merriam, and John Muir. This floating think tank dwarfed the teams Cook and his contemporaries had brought to Alaska's shores during the previous century. Harriman's team of scientists were unique in another respect. With the exception of Muir and perhaps John Burroughs, all of the scientists were specialists. The all-purpose naturalist had been replaced with disciplinary specialists, devoted to a narrow field of inquiry.⁴²

Coordinating and managing the efforts of such a high-handed group required a special touch. In this respect, Harriman proved himself to be a first rate manager. The ship's historian, Burroughs, noted that, "I soon saw that Mr. Harriman was uncommon... Scientific explorers are not easily managed... and are rather inflammable and explosive, especially when compressed on a ship. Nevertheless he kept us all in smooth working order..."⁴³ Even John Muir came to develop a high opinion of their sponsor. Recalling their first meeting, Muir referred to Harriman as a rather repelling and frigid man. Over the course of the trip, this attitude changed to a degree where Muir expressed a brotherly love for Harriman.

Never one to do things second rate, Harriman likewise secured first class accommodations to assure the comfort of his guests. He purchased *George W. Elder* and had the steamer refitted for the trip. On-board laboratories and related facilities were constructed. Committees were formed to plan a variety of informal social gatherings designed to enhance comradery, and to prevent professional sniping from developing among the many "experts."

The first scientific stop of the cruise was Muir's beloved Glacier Bay. During their five day stay the scientists hoped to study the bay in earnest. Plans called for extensive mapping and charting with the aid of measuring instruments, fauna and flora collecting, and glacial study. The expedition found Muir Inlet choked with ice but managed to edge the steamer up to

Muir Point abreast of Muir's former cabin. Muir noted the significant changes which had occurred, estimating that Muir Glacier had retreated nearly two miles since 1879. The immediate shore was interlaced with an extensive network of boardwalks, placed there for the benefit of the numerous tourists who had been coming to the site. Muir's cabin still remained in good repair and showed signs of obvious use during recent years.⁴⁴

With Muir Inlet serving as base camp, the various members of the expedition set out in the ship's steam launches or rowboats to carry out their studies. The ship's photographer Edward Curtis--widely known for his Native American photos, and nature photos which have been called the precursor to Ansel Adams--was nearly killed when his enthusiasm drew him too close to Muir Glacier's face. A particularly large berg calved free from the glacier, sending an enormous wave of water surging down on Curtis and his assistant. The two men paddled furiously trying to outrun the wave. Expert canoeists, the two men switched tactics at the last moment and paddled their canoe directly into the oncoming wave. In so doing, they were able to ride over the crest of the wave. Visibly shaken, they headed for shore, successfully avoiding a myriad of ice chunks. Unfortunately, much water had splashed into the canoe ruining several of the photo plates Curtis had just obtained.⁴⁵

A group of hunters who Muir sent off--on what was possibly an intentional fools errand--to pursue bears in a place he called Howling Dog Valley fared nearly as badly. While traversing the glacier, the party became trapped in a drenching sleet storm. They spent a miserable night on the glacier, only to limp back to camp emptyhanded late the following day.⁴⁶

These mishaps, however, were the exception. Muir and geologist G.K. Gilbert took a four day rowboat trip studying glacial activity at Reid and Geikie Inlets. A party under William Ritter encountered a hunting party of Hoonah Tlingit encamped at Berg Bay. The Hoonahs shared a meal of gull eggs, boiled marmot, and hair seal with their guests. Hoonah were also encountered near Point Gustavus, where a party under the direction of A.K. Fisher was busy collecting specimens of various birds. The Hoonahs taught the party the Tlingit names for several of the unfamiliar birds. Ritter's party also took extensive notes on revegetation. They noted how the revegetation followed a fairly consistent pattern; early pioneer plants, low growing grasses and shrubs, willow, alder, and finally spruce trees taking root.⁴⁷

Throughout the remainder of their stay, several other ad hoc parties traveled about in the ship's steam launches. They collected a wealth of data regarding the geology, coastline, and biology of Glacier Bay. At first glance, the data which the members of the Harriman Expedition obtained could be described as fairly inconsequential. With the exception of the discovery that Grand Pacific Glacier had divided into three separate glaciers, no new hidden discoveries were uncovered.¹ Nevertheless, the expedition was important. The scientific

¹Venturing into Prince William Sound, the expedition later discovered Harriman Arm and several associated glaciers.

specialization and systematic methods of data gathering, which characterized the expedition at Glacier Bay, were a harbinger of the methodology which has become a trademark of scientific inquiry. In sum, the expedition's methods set the tone for the type of scientific investigation employed at Glacier Bay today.

NEW DIRECTIONS AT GLACIER BAY

The year 1899 was a watershed year at Glacier Bay for a number of reasons. First, there was the Harriman Expedition, the bridge to 20th century scientific investigation at Glacier Bay. Then, on September 12, 1899, just a few months after the Harriman Expedition departed Glacier Bay, an enormous earthquake centered at Yakutat rocked the entire coast of Southeast Alaska. Numerous aftershocks followed. The impact to Glacier Bay was felt for several years. On July 29, 1900 O.H. Tittman, head of the U.S. International Boundary Commission, booked passage aboard the steamer *Queen* to Glacier Bay. Tittman was on a fact-finding mission to help settle the American and Canadian Southeast Alaska boundary dispute. The lower portion of the main bay was choked with pack ice. The ship managed to maneuver its way to Willoughby Island but was unable to venture closer than 10 miles to Muir Glacier. Subsequent cruise ship attempts to reach Muir Glacier during the next few years met with similar failure. It was surmised that the quake had caused a massive initial release from Muir Glacier, and had stressed the glacier's front to such a degree that abnormally large releases occurred in succeeding years.⁴⁸

Clarence Andrew's trip to Glacier Bay in 1903 confirmed these suspicions. Taking a small boat, his party was able to edge its way up the east side of Muir Inlet. There the party's photographer, William Case, managed to get several photos of Muir Glacier and the surrounding inlet. The inlet was filled from shore to shore with what appeared to be, a solid mass of bergs. Later, when his photos were compared to those of the Harriman Expedition, it was estimated that Muir Glacier had retreated 2.5 miles between 1899 and 1903.⁴⁹ The ramifications of this massive ice release were severe. The ice put a halt to Glacier Bay's growing tourist trade. Cruise ships abandoned Glacier Bay in lieu of Taku, Davidson, and other easily accessible tidewater glaciers. It would be many years before their return. Salmon processing operations, which had been taking place at Bartlett Cove since the mid-1880s, permanently ceased activities. Finally, ongoing scientific research ground to a temporary halt.

THE CANADIAN-ALASKA BOUNDARY DISPUTE

Tittman's 1900 boundary commission voyage to Glacier Bay was more than just another government pleasure junket. His trip was a step in an ongoing dispute which had begun in 1825 and culminated in an international treaty in 1903. This dispute, if ultimately settled in Canada's favor, would have placed nearly all of the present park unit in Canadian territory. The origins of the dispute stemmed from the 1825 Anglo-Russian Treaty. The treaty

stipulated that the southeast boundary between Canada and Russian-held Alaska would run along the crest of the Coast Mountain Range but not more than 30 miles inland from the coast. This stipulation was ambiguous in two respects. First, no clear crest for the Coast Mountains existed. Second, the U.S. after purchasing Alaska from Russia in 1867, contended that 30 miles from the coast meant 30 miles from the heads of all bays and inlets, not from the mouths of such waters as Canada asserted.⁵⁰

The controversy was heightened in 1887, when Canada established the Cameron Line as the legal boundary between Canada and Southeast Alaska. The Cameron Line would have placed the boundary near the mouth of Glacier Bay thus putting nearly all of the bay in Canadian territory. The Canadian decision outraged many Americans. Steamship cruise operators saw it as nothing more than a Canadian ploy to seize Glacier Bay and other lucrative tourist stops from American companies. The travel writer, Eliza Scidmore called the Cameron Line a Canadian attempt to gerrymander scenic Alaska away from the United States.⁵¹

The two nations fussed over the issue until 1892, when they agreed to conduct joint surveys of the region to "ascertain facts and data necessary to the permanent delimitation of the said boundary line."⁵² Still, the issue dragged on with both sides allocating trifling funds to conduct what was to be an extensive survey of the southeast coast. The issue became acute only after the discovery of gold in the Klondike. Key Alaskan ports and undiscovered gold fields could, depending upon the outcome of diplomatic negotiations, come under Canadian control.

A joint tribunal made up of American, Canadian, and British representatives, in 1903, ultimately decided in favor of the United States. The final outcome was due in large part to the "Big Stick" diplomacy of President Theodore Roosevelt, who said that the Canadians "did not have a leg to stand on and that they were dangerously close to blackmail."⁵³ Roosevelt coupled covert messages to the British representative, Lord Alverstone, with overt signs of military mobilization to secure British acquiescence to the American position. Thus, through these means, Roosevelt succeeded in keeping Glacier Bay as U.S. territory.

The exact whereabouts of the Canadian-American boundary in the Glacier Bay region was not finally settled until the 1930s. In 1936 the National Park Service appropriated funds to the International Boundary Commission to locate the boundary between the U.S. and Canada. In June the issue came to a close when a survey team marked the boundary at Grand Pacific Glacier. The park service's share of expenses totalled \$200.⁵⁴

A NEW GENERATION OF SCIENCE MAKES ITS CONTRIBUTION

It was not until the mid-teens that natural scientists of the caliber and enthusiasm of their late 19th century predecessors began studying Glacier Bay. One individual who stood at the forefront of this new generation of scientists was William S. Cooper. His contributions to

the future park would prove invaluable. With a writing style which has been described as reminiscent of John Muir, Cooper became a dominant figure in the advocacy of Glacier Bay National Park.⁵⁵

Cooper received his professional training as an ecologist, a field which at the time was still in its infancy. This training, in combination with his love for mountains, led Cooper to visit Alaska in 1914.^m Cooper's first visit had two objectives: he wanted to visit all the usual points of interests to tourists, and he was on the lookout for a research project involving plant succession. Superficial observations of revegetation processes in areas of recent glacial retreat provided Cooper with such an opportunity. Two years later, in 1916, Cooper embarked upon what was to become the first of many scientific expeditions to Glacier Bay.⁵⁶

Cooper and his assistant, John Hubbard, chartered a gas-powered launch to take them on a reconnaissance of the numerous tidewater glaciers in Glacier Bay. They were able to visit all the glaciers except for Johns Hopkins, where the inlet was completely choked with bergs. Cooper established several vegetation plots in spots where previous expeditions had established the known dates of glacial retreat. Cooper planned to return at five year intervals to chart the rate of revegetation at each of these plots. In actuality, Cooper made return trips in 1921, 1929, and 1935 to chart the progress of revegetation at Glacier Bay. He likewise conducted studies of interglacial forest remnants and took readings of basic weather conditions.⁵⁷

During the 1935 expedition, Cooper collaborated with fellow scientist William O. Field Jr. Field had made an initial trip to Glacier Bay in 1926 to make some general observations concerning the glacial movement which had occurred since the Reid and Harriman Expedition visits of 1892 and 1899, respectively. Updated information on Glacier Bay was sparse; except for an occasional adventurer or Tlingit seal hunter, few people visited the region during the period. Field later admitted that he did not imagine at the time that this was the beginning of an analysis project that would last for nearly 50 years.⁵⁸

Muir Inlet was readily accessible, the enormous flows spurred during the 1899 earthquake having receded back to normal levels. Field's party put ashore at Muir Point. The remnants of the boardwalks still remained as did a sign reading "To and "From" the glacier, placed there for the tourists' benefit. One of the party suggested saving the sign but later thought better of the idea, leaving it to deteriorate where it stood. All that remained of Muir's cabin was the chimney and a few floor boards. Vegetation at the site was sparse. A few scattered alders and hardy pioneer plants had begun to take root. (Within fifteen years the entire area would become choked with alder.) Muir Glacier, which had stood less than one mile from the cabin in 1890, was now nearly 10 miles away. The terminus was about 2,000 feet north

^mDuring his early professional career, Cooper conducted numerous vegetation studies at Isle Royale. Isle Royale came under National Park Service management during the 1930s.

of Sealers Island. The island had been uncovered only within the previous five years. When Field and a colleague rowed their skiff up to the island, they were surprised to find a Hoonah Tlingit seal blind. The blind consisted of rocks piled up to form a wall which sheltered the hunters from their quarry. It was the presence of this blind which later prompted Field to dub the spot Sealers Island.⁵⁹

Field's party made a survey of other major glaciers in Glacier Bay. Grand Pacific Glacier had retreated into Canadian territory and left behind a harbor nearly one mile long. This harbor, inside Canadian territory, would later be a source of alarm to park service officials. Canadian entrepreneurs envisioned the harbor as the future site of a major northern British Columbia port. The controversy was rendered moot when the glacier readvanced into American territory during the 1940s, where it remains today. Of equal significance was the continued remarkable rate of calving at Johns Hopkins Glacier, which Cooper had noted in 1916. Hiking to a vantage point above the glacier, Field was startled to note that the glacier had retreated nearly eight miles since its last position had been recorded in 1912.⁶⁰

The contributions of Cooper, Field, and their contemporaries, however, extended beyond their scientific endeavors. In December 1922 the Ecological Society of America met in Boston for their annual meeting. Cooper reported on the findings of his first two trips to Glacier Bay. An ensuing discussion focused upon the desirability of establishing the Glacier Bay region as a national park or monument for the purposes of protecting its unique scientific features and scenic beauty. Cooper was given the task of chairing a committee tasked with investigating the feasibility of establishing Glacier Bay as a national park. The committee members included Charles Adams, Barrington Moore, and Robert Griggs.^a The committee reported favorably at their annual meeting in December 1923. Acting upon the committee's recommendation, the society adopted a resolution urging the establishment of the Glacier Bay Region as a national park or monument.⁶¹

A fierce political battle ensued, pitting Southeast Alaska business interests and inholders--fox farmers, homesteaders, miners, and Hoonah Tlingit--against scientific and conservation organizations. On February 26, 1925, President Coolidge signed an executive order establishing Glacier Bay National Monument. The executive order cited the region's importance as a scientific laboratory, its scenic beauty, and historic importance tied to European explorers and scientists dating back to Vancouver. The monument, however, was a compromise. Perceived opposition within Congress caused supporters to push for national monument status which the President could proclaim through provisions of the 1906 Antiquities Act. Furthermore, the monument did not incorporate all of the Ecological Society recommended land parcels.⁶²

^aAdams, like Cooper before him, became closely associated with scientific research at Michigan's Isle Royale National Park. Griggs played an instrumental role in scientific investigations leading to the establishment of Alaska's Katmai region as a national monument.

The loss of the Fairweather Coast, incorporating a splendid mountain range and Lituya Bay, was a difficult blow for park proponents. Including these lands within park unit boundaries would be left to future battles.

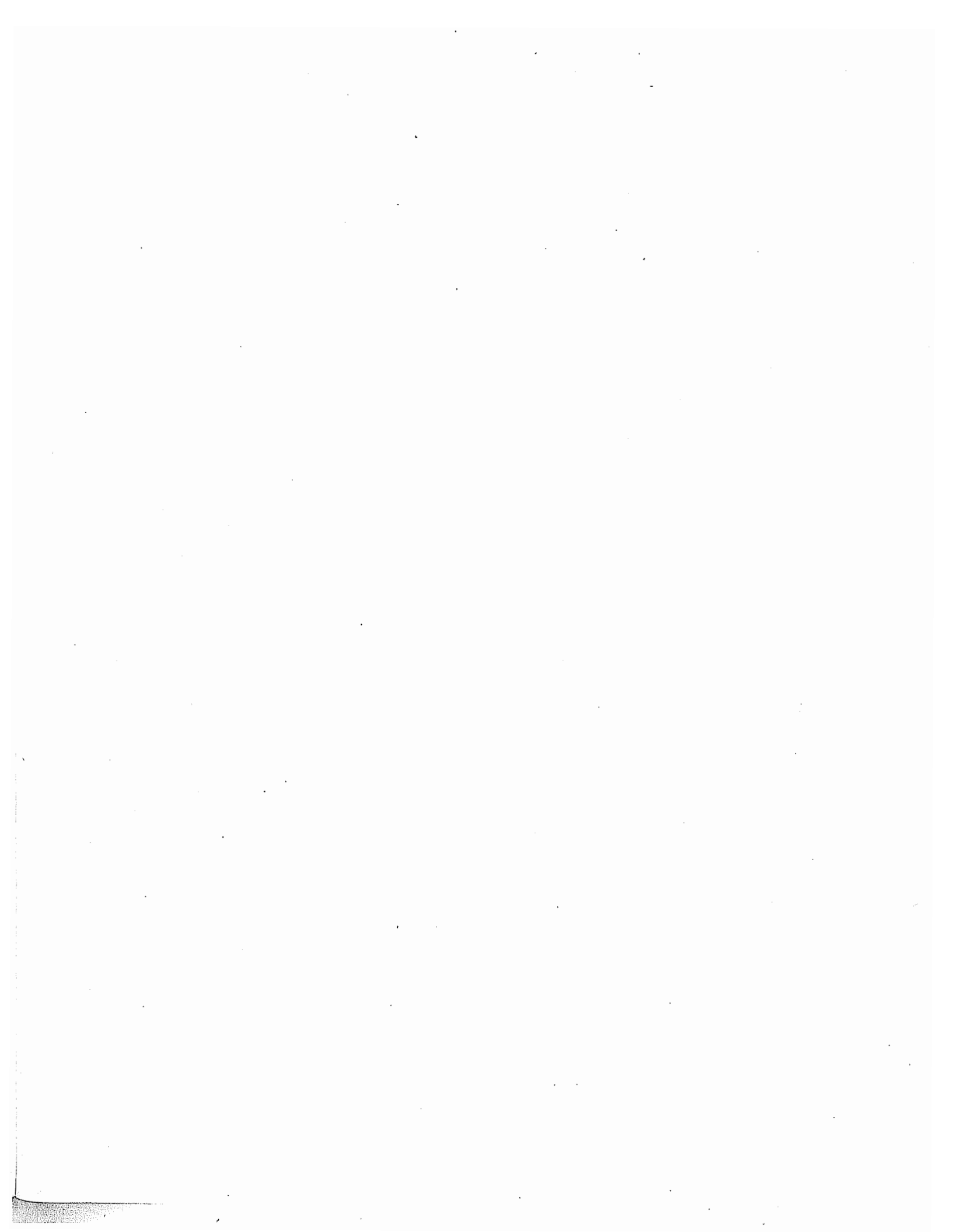
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CHAPTER 3

ENTREPRENEURSHIP AND EXPLOITATION

The controversy over Glacier Bay's establishment as a national monument thrust into the limelight a much-ignored aspect of activities within the region. During the interim years between Muir's rediscovery of Glacier Bay in 1879 and its status as a national monument in 1925, the region hosted a variety of entrepreneurs and pioneers bent upon extracting a living from the land.

The role of the Glacier Bay region as an economic contributor has a long tradition. The Hoonah Tlingit protected their control of the region's valuable resources against encroachment from other tribes. European powers likewise fought for control of the area's lucrative fur trade. The establishment of American ventures in the region, after the U.S. purchased Alaska in 1867, was merely an extension of previous patterns. The resources these new entrepreneurs sought to exploit differed in some respects from earlier takings, but their principal goal--profit of some sort--remained the same as many of their predecessors.

GOLD MINING AT LITUYA BAY

The history of mining at Glacier Bay National Park is linked to the larger history of westward expansion and development. The California gold strike of 1849 set up a progression that would sweep up the west coast enveloping British Columbia and, eventually, Southeast Alaska. The presence of gold in Southeast Alaska was known to the Russians. Russian records from the 19th century note the appearance of gold in several localities. The Russians, however, showed little interest in pursuing the yellow metal. They were content to continue their exploitation of the "soft gold" sea otter trade.

The former Russian capital of Sitka was the scene of the first American era gold strike in 1872 with the development of the Stewart Mine. In 1880, Joseph Juneau and his partner Richard Harris, made placer and quartz discoveries near present-day Juneau. John Muir was supposed to have been indirectly responsible for their discovery. In 1879, one of Muir's Alaska dispatches to the San Francisco *Daily Evening Bulletin* commented upon the possibility of gold near Windham Bay. Relying upon the strength of Muir's report, Mr. George Pilz grubstaked Juneau and Harris to prospect the area. Dissatisfied with their findings at Windham Bay, the two men proceeded up the coast. On a small creek near the future site of Juneau, the men discovered gold. The richness of the strike set off a stampede which assured the future life of the City of Juneau. The strike likewise assured that additional prospecting along the southeast coast would occur.¹

The Glacier Bay region, which lay northwest of the lucrative Juneau Gold Belt, seemed a logical place to search for gold. In 1880, initial prospecting efforts began along the Alsek River. Some color was discovered, but apparently, little else. During the same year, James

Hollywood and three partners headed out of Sitka to prospect the Fairweather Coast. The party ran into trouble while attempting to land at Lituya Bay. This had been the sight of misfortune during the La Perouse expedition a century before. One of the prospectors drowned while negotiating the heavy surf. This scenario was to be played out repeatedly in years to come. Two other members of the group were later murdered during an altercation with some Natives from Yakutat. The Hollywood disaster discouraged others from prospecting the Fairweather Coast for several years.²

One of several early entrepreneurs who led prospecting efforts in the Glacier Bay region, once they began in earnest during the late 1880s, was John Healy. Described as a "tough little Irishman," Healy arrived in Juneau in 1886. Healy was already a renowned frontiersman having established his reputation in Montana Territory as an Indian fighter, fur trader, and frontier sheriff. Healy established a trading post at Dyea. He then purchased a schooner and began a business transporting prospectors throughout Southeast Alaska, including Glacier Bay.

In 1890 Samuel Wheelock hired Healy to transport a party of seven to Lituya Bay. A *Juneau City Mining Record* from 1890 described the coast between Cape Spencer and Yakutat as "the gold coast of Alaska." Wheelock and his partners planned to stake claims in the potential gold bearing beach sands just outside the bay. Their prospecting efforts succeeded in locating some worthwhile samples. Each member of the group staked 20 acres. They then organized the Fairweather Mining District and pooled their claims into a single entity known as the Lituya Company. During their first season of operation, in 1891, the company netted \$13,000 worth of gold.³

The ruby sands of Lituya Bay--so named because of their red ruby color--proved to be a decisive challenge for the many miners who worked the area over its 40-year lifespan. The gold bearing sands, both red and black, lay wedged between thick layers of grey silt containing no gold. The gold was of a fine flour consistency, making it difficult to extract. The method of recovering this gold was placer mining. Late 19th century placer mining was a low-technology operation. Hand shovels, sluice boxes, and lots of water were the basic tools of the trade. The gold bearing material, either gravel or sand, was first hand excavated with a shovel. The material was then shoveled into a sluice box. Sluice boxes were constructed from boards or other convenient material. In the bottom of the box--or chute which the sluice more closely resembled--were grooves called riffles. The riffles would capture the heavier gold, separating it from the lighter waste material. Mercury was often placed in the riffles because of its ability to amalgamate with gold. Water, secured from a nearby stream and diverted through a ditch or flume to the head of the sluice box, propelled the gold bearing ore through the sluice. The final step in the process was cleanup. The heavy gold laden amalgam was scooped out of the riffles and replaced with fresh mercury. The gold laden amalgam was usually saved until the end of the season for retorting. Retorting involved placing the amalgam in the retort--a container resembling a pressure cooker--and fitting it with a tight lid from which a metal pipe emerged. Upon heating, the mercury would vaporize, thus separating itself from the gold. The mercury would flow

through the pipe and condense; it could then be captured at the other end of the pipe for eventual reuse.⁴

This was the tried and true method largely employed at Lituya Bay.^a As with most Alaska placer operations, the method employed at Lituya had to be modified to suit local conditions. A scarcity of salt-free water was a chronic problem. Long flumes had to be constructed to transport water from local streams to the various diggings along the beach. Large quantities of gray silt needed to be shoveled away to reach the layers of gold laden sands. This was a labor intensive process involving crews working around-the-clock during the short summer season.

Finally, there were the vagaries of nature. Boats of all types foundered in the treacherous tides and breakers of Lituya Bay. In the lucky cases, miners escaped with their lives and were able to salvage some of their supplies. Less fortunate were those individuals who lost their lives or found themselves stranded on the beach wet, cold, and without provisions. The year 1892 was especially disastrous. The schooner *Salmo*, carrying members of the Jeff Talbot party, crashed upon the rocks. The party barely escaped with their lives. On August 13, the schooner *Albatross* ran aground leaving two crew members and three miners, already on-site, stranded with only a few days provisions. Rather than wait to see if another ship might come, the group decided to hike overland, following the coast to Yakutat where they could catch transport on the mail steamer to Sitka. A combination of unfordable streams and glaciers forced the party inland seeking a better route. The party subsisted on six days of meager rations supplemented with salmon and an occasional duck. The men were forced to climb Grand Plateau Glacier, finally reaching Canoe Harbor, on the west side of Cape Fairweather, after cutting steps down a 100 foot wall of ice. Here they met a group of Hoonah Tlingit on a sea otter hunt. The Hoonah loaded the weary men into canoes and transported them to Yakutat, thus ending an 18- day ordeal.⁵

Mining at the Lituya Bay sand diggings peaked in 1896, with the number of miners running from a low of 75 to upwards of 200 men. W.M. Brook, owner of the Ruby Sand Mining Company, had the largest operation. In 1895 Brook had purchased claims from Wheelock and O.M. Cole, along with seven on-site cabins. Brook hired 14 men to commence round-the-clock operations. The crew constructed 2,000 feet of flume with a string of five sluice boxes. Over the course of the 135-day season the company recovered gold worth in excess of \$12,000. Workers earned an average of \$270 dollars each--two dollars a day--for their effort. Production slowed in 1897 because of a shortage of workers bound for the Klondike strike. In 1898, however, with the Klondike rush largely over, Brook redoubled his efforts, bringing in a crew of 21 men.⁶

^aIn 1895 W.M. Brook and his partners brought a technological innovation known as a "gold king" to Lituya Bay. The device was supposed to expedite the recovery process but proved to be a dismal failure.

From the general laborer's perspective, working the ruby sand digs was a good deal. Perry McBeth, a laborer at the Marion Shook operation in 1896 and 1897, noted that he received \$2 a day plus room and board. This was twice the wage he had been earning in California; and when coupled with the potential for adventure, Lituya Bay seemed like the ideal setting for a young man. When it came to adventure, the miners were not disappointed. McBeth noted how in one attempted landing their small dory was upended; he along with several chickens and a pig, wound up in the heavy surf. Fortunately, there were no fatalities. On their return trip to Juneau at the end of the 1896 season, McBeth's party encountered a terrible series of fall storms. The ship was forced to seek shelter for days at a time and wait the storm out. The ship's food nearly ran out, forcing the men to subsist on tea, rye flour, and salted salmon. There was likewise plenty of action ashore for the adventuresome miner. The streams around Lituya Bay abounded with trout and silver salmon. The miners made nets out of burlap and two-pronged gig spears to capture the tasty fish. The bay's large brown bears and occasional black bear offered plenty of hunting opportunities.⁷

Some of the more bizarre misadventures which occurred at the ruby sand digs centered around the Lituya Bay Gold Placer Mining Company. The company began operations in 1898, offering 100,000 shares of stock at \$100 each. The stock offering had all the trappings of a confidence game, although no charges were ever filed. The company did actually hire a crew and began working its claims in 1899, producing about \$16,000 worth of gold. Some infrastructure was also associated with the company. A high tide wharf was constructed at Big Rock Anchorage on the north side of Lituya Bay. Wooden piles were hand driven to support the wharf. A boom and chain extended over the wharf to facilitate the unloading of cargo. At the end of the wharf, a lean-to shed was built for storing freight.⁸

A series of mishaps, however, shut the company down in 1900. The great fall earthquake of 1899 created a succession of slides which covered up or washed away much of the gold laden sands. A later 1899 event occurred which eventually served as the impetus for *The Unexpected*, one of Jack London's most famous short stories. The event began in October when the company left its manager Hans Nelson, his wife Hannah, and three other men behind to conduct winter repairs and other work. On the evening of October 6, Hannah had just finished cooking dinner for the crew. After dinner one of the crew, Martin Severts, stepped outside. Severts returned shortly with a 45 Colt revolver in his hand. He levelled the gun at Fragnalia Stefano and shot the man dead.^b Severts then turned the gun on Sam Christianson and fired, grazing his neck. Severts next took aim at Hannah but Hans knocked him to the ground before Severts could get off another shot. The two men struggled for the

^bTwo theories have emerged to account for Severts' shooting spree. The first holds that Severts had gone mad in the isolation of Lituya Bay. The second suggests that Severts planned to murder and rob his co-workers of the several hundred dollars worth of gold cached away in the cabin.

gun; a shot went off striking Severts in the leg. The Nelsons tied Severts up and then treated the wounded.

The question then remained: what to do with Severts? The Nelsons tried to flag passing steamers without success. After several days, the around-the-clock shifts spent guarding Severts--who was deemed too dangerous to be left alone--began to take their toll on the survivors. Hans hired some local Tlingits to guard over Severts in a cabin four miles away. After a few weeks of guard duty, the Tlingits declined to continue the job. This left the survivors with two alternatives: continue to guard Severts or execute him themselves. On the morning of October 26, 1899 the remaining crew members convicted Severts of murder and hanged him. Once news of the incident leaked out, the press gave it wide coverage, sensationalizing the details of the event. An October 14, 1900 edition of the *San Francisco Examiner* read, "Woman Hangs a Man and the Law Upholds Her."⁹

Intermittent mining activities continued in the Lituya Bay area, after the Lituya Bay Gold Placer Mining Company debacle, until the mid-1930s. Placer claims staked along the beach some four to nine miles southeast of the bay yielded minor quantities of gold and platinum. A mining camp was constructed 16 miles northwest of Lituya Bay, near Cape Fairweather. The site consisted of 16 log cabins, horse sheds, and several equipment sheds. The camp was abandoned after harsh winter storms of 1918-19 reshaped the gold-laden beach and associated creek mouths making further mining impractical. The U.S. entry into the First World War, for all practical purposes, sealed the region's fate. Men went off to war or abandoned the coast for more lucrative war-related civilian jobs.¹⁰ During the 1930s, some half-hearted prospecting took place in the region, with negative results. Of interesting note was the Mallory party, which arrived at Lituya Bay in June 1933 after reading a story in the *Los Angeles Times* about a ghost town at the bay. The group brought along a model T Ford truck and constructed a road from Anchorage Cove to a creek placer. The prospectors' efforts never panned out. They sold the truck to some trappers and headed home. The trappers in turn abandoned the truck, which several other individuals then utilized.¹¹

One potential substitute for the exhausted placer operations at Lituya Bay was oil. In 1921 the federal government opened the region to oil prospecting. Hardy Trefzger, a small time entrepreneur from the Yakutat Bay region, and his partner John Jenkins decided to prospect some seepages they had encountered near Lituya Bay. Gold miners in the area had also told Trefzger about local shale deposits which could be easily burned. The partners chartered a boat and established their headquarters at one of the numerous beach cabins remaining from the ruby sands digs. They then proceeded to an area above the bay, in the vicinity of Eagle River. Trefzger and Jenkins collected oil and paraffin-like grease samples and proceeded to stake claim to a two square mile area. Testing confirmed their suspicions that their samples were a paraffin based petroleum. The partners immediately set about making arrangements to secure financial backers for sinking a test well at the claim. But before their plans could be finalized, Trefzger and Jenkins received word that the area incorporating their claim had been withdrawn into the Naval Petroleum Reserve. The partners considered taking legal action against the government and spoke to several attorneys who offered to take the case.

They ultimately decided against pursuing the matter in court, rationalizing that it would be years (if at all) before the matter was decided.¹² No subsequent development ever took place.

OTHER MINING EFFORTS

Most other mining which took place within the present park unit boundaries was confined to Glacier Bay. Like Lituya Bay, mining efforts at Glacier Bay focused predominately on gold. Glacier Bay mining operations, however, were generally hard rock. Hard rock or lode mining, as it is often called, requires different methods than placer mining. Hard rock gold is found wedged in fissures, often in the presence of quartz veins. The typical hard rock operation relied upon shafts and tunnels--or, when practical, a surface trench--to access and extract the gold. The tunnel had to be dug in a manner that best followed the gold-laden vein. This was often a matter of trial and error. Methods for ventilating the tunnel, bracing the tunnel to ensure the miners' safety, and hoisting the ore to the surface needed to be developed. Furthermore, because the Glacier Bay operations were often conducted high on the mountainside above the beach, some means of transporting the ore to the waterfront for shipment had to be devised. Once the ore was extracted, the gold needed to be separated from the gangue, or waste material. Milling--the physical crushing of the ore to help separate gold from waste--could generally be done on-site. After milling, liquid systems were used to further separate the concentrated gold bearing ore from the gangue. Smelting--the actual application of heat to separate minerals from the ore--required sending the refined ore to a facility on the west coast.¹³ Finally, the miners had to comply with an increasing number of federal regulations. At Glacier Bay this was because most hard rock operations came after monument designation in 1925.

One of the early miners to stake a claim at Glacier Bay was Joseph Ibach. Depending upon one's perspective, Ibach could be regarded either as a true "Alaskan sourdough" or a troublemaker bent upon exploiting pristine public lands for his personal gain. The novelist Rex Beach, who first met Ibach in 1905, described him as the "nearest to a free soul of anybody I ever knew and anything less than complete independence irked him like a shirt of nettles."¹⁴ Ibach's difficulties with mining in the national monument stemmed in large part from conflicting federal statutes. The 1872 mining law opened most public land to mineral entry. According to the law, individuals were allowed to enter public land and stake claim to specific parcels. Once approved, these valid mining claims gave individuals exclusive right of possession to all minerals and all surface areas lying within a claim's boundaries. In contrast, most of the enabling legislation associated with the formation of national park units prohibited mining within park unit boundaries.¹⁵ A prohibition on new mining claims was formally implemented in 1925 when the Glacier Bay area was declared a national monument under provisions of the 1906 Antiquities Act. Valid pre-existing claims, however, were protected.

Unfortunately for Ibach, it seems that he was too late to file his claim for two sites at Reid Inlet. In the summer of 1924, Ibach and his wife Muz left their home at Lemesurier Island in Icy Strait to prospect for gold in Reid Inlet. The Ibachs discovered what appeared to be two promising gold bearing veins. Later that summer, they registered their claims, Monarch and Incas, with the General Land Office. At the time, the land office personnel failed to tell the Ibachs that President Coolidge had issued an executive order temporarily withdrawing Glacier Bay from mineral entry on April 1, 1924.¹⁶ This incident turned out to be the catalyst to a larger mining controversy which, during the next decade, would reach to the highest levels of Washington, D.C. officialdom.

With his fox ranching operation at Lemesurier Island bankrupted because of poor prices, Joe Ibach set out in the mid-1930s to launch a campaign to regain access to his 1924 claims. Ibach began with a series of letters to Alaska's non-voting Congressional Delegate, Tony Dimond. Dimond, although sympathetic, carried insufficient political clout to assist Ibach and other Alaskan miners in securing access to Glacier Bay. In frustration, Ibach decided to contact his old friend Rex Beach, to see if the novelist could be of any help. Ibach told Beach he had finally got fed up. "Muz and I steal off up there when we can and bootleg the ore out, like a couple of burglars... It's an outrage!"¹⁷ Beach, who had made his reputation as a novelist writing Alaskan adventure stories, was the perfect choice to carry Ibach's cause. Beach liked nothing better than telling the story of a small-time Alaskan's struggle against the harsh elements and an uncaring government. Furthermore, unlike Dimond, Beach could muster significant political clout. His articles appeared in such widely read magazines as *Cosmopolitan*, and his political connections reached up to the White House.

Beach met with Ibach in the summer of 1935 to plan their campaign. It was during a meeting at Lemesurier Island that Beach hit upon the idea of promoting Glacier Bay as part of a much larger component in President Franklin Roosevelt's war against unemployment. Beach surmised that if Glacier Bay were opened up to prospecting, thousands of able-bodied young men would come north as miners. They, in turn, would mine the gold necessary to help jump start the nation's stagnant economy. Beach set his plans into motion with an article in *Cosmopolitan* arguing the virtues of mining at Glacier Bay. In 1936 he began a letter writing campaign which included Dimond, NPS Director Arno Cammerer, longtime friend and secretary to the President Colonel Mervin McIntyre, and finally President Roosevelt.¹⁸ Beach's campaign had an immediate effect. On January 15, 1936, the President sent a memo to Secretary of the Interior Ickes requesting a report on the feasibility of mining at Glacier Bay. In his memo, the President expounded upon Beach's argument and noted that he did not see how mining would jeopardize the region's scenic beauty.¹⁹

Roosevelt's memo sparked a flurry of exchange. William S. Cooper, who now served as President of the Ecological Society of America, headed up the opponents of opening Glacier Bay to mining. In a letter to Ickes, Cooper acknowledged that although mining posed no serious threats to the bay's glaciers, it could have long-term negative impact to pioneer plants and animal populations. Mining, by its very nature, threatened to seriously alter a fragile environment. Numerous other scientific societies and conservation organizations sent letters

to Ickes and Roosevelt echoing Cooper's sentiments.²⁰ Such arguments, however, were doomed to fail. The appeals to preservation based upon rather abstract scientific values, and scenic beauty, at a time when cruise ships full of tourists no longer visited Glacier Bay, appeared flimsy when stacked against the perceived advantages of opening the region to mining. Furthermore, it could be argued that Beach's argument--bolstered with letters from Ibach, Dimond, and other local Alaskan interests--touched a romantic chord with Roosevelt, thus helping to sway him. Finally, the NPS did not help its own cause. In 1935, during the opening phase of the controversy, the park service recommended the expansion of monument boundaries to include the entire Dundas Bay drainage basin. This area already had several existing mining claims and other inholdings. The proposal only served to feed the mining proponents' cause.²¹

The Interior Department, with Roosevelt's prodding, redrafted an earlier Dimond-sponsored bill that had died in Congressional committee. The redrafted bill was heard in mid-June during the closing days of the legislative session. The bill passed both houses of Congress with President Roosevelt signing it into law on June 22, 1936.²² The new statute opened Glacier Bay National Monument to all mining as stipulated under the 1872 Mining Act with some minor exceptions. Claim owners were not given title to the sites they mined within Glacier Bay. The Secretary of the Interior was given authority to regulate surface activities in order to prevent undue surface damage. This resulted in the superintendent's right to designate and control timber cutting at the various mining claims.²³

The flurry of mining activity which Rex Beach predicted never materialized. Most of the mining which occurred within the confines of Glacier Bay, in fact, was the work of local homesteaders from the nearby communities of Gustavus and Hoonah, and other isolated homesteads in the vicinity. Ibach, acting on behalf of himself and Beach, immediately set about staking claims. In total, he recorded 45 claims, with the most promising claims encompassing veins in the Highland Chief group. Other sites included the Rainbow, Sentinel, and Galena claims. Ibach collected a total of five tons of gold-bearing ore in 1936, which he hauled back for milling at his Lemesurier Island homestead.²⁴

The majority of Glacier Bay mining claims staked during the late 1930s and early 1940s were in the area lying between Reid Inlet and Lamplugh Glacier. Among these were the Rambler, Whirlaway, Hopalong, Sunrise, Lincoln, and LeRoy claims. In 1937, the Newmont Mining Company leased Ibach's Highland Chief and Rambler claims. The company spent several months sampling the veins. The veins turned out to be too small and inaccessible to profitably mine. This seemed to be the situation with most of the Reid Inlet claims. Subsequent U.S. Geological Survey sampling found the gold bearing rock content to be too low to warrant profitable mining. Despite this drawback local miners running low budget operations could realize some measure of success. Ibach, along with his new partner Tom Smith, a charter boat operator from Juneau, continued to work the claims. Smith even constructed a blacksmith shop at the Incas claim which the Ibachs converted into living

quarters.^c The partners extracted seven tons of ore from Rainbow in 1938 and 30 tons from Galena in 1939. The Galena ore was supposed to have garnered about \$1,800, although Smith later said their net profit amounted to \$13 each for the two year period.²⁵

In 1940 Ibach made improvements at his Reid Inlet operations. Principal among these improvements was the need for a better transportation network. The exposed slopes surrounding Reid Inlet, where Ibach had his claims, were covered in a mantle of glacial debris to a height of 1,000 feet. The area could be easily traversed on foot but was virtually inaccessible to wheeled vehicles. Heavy snows, remaining well into late spring, compounded these difficulties. Ibach's first step in solving his dilemma was the construction of an access road. During the early spring Ibach brought in a caterpillar via the Ptarmigan Creek drainage. He then dozed a road through the unconsolidated material to his Incas claim. Ibach next constructed a nearly mile-long cable tram running from the beach to Incas and on to his Rainbow site, which lay about 2,500 feet northeast of the mouth of Reid Inlet. At some point another tram was extended from the cat trail to the Monarch 1 site, where a 250 foot-tunnel accessed a promising vein. The trams were used to haul supplies up to the claims and ore down to the beach.²⁶ Ibach's other 1940 project involved the construction of a cabin and two outbuildings--a shed and what has been referred to as a salmon cabin--at the mouth of Reid Inlet.^d The Ibachs would remain at the cabin on a seasonal basis until the mid-1950s. Muz landscaped the ground surrounding the cabin, using rocks to create terraces. Dirt was hauled in from Lemesurier Island for planting a vegetable garden, which included strawberries and flowers.^e Three small spruce trees were also brought in to add some greenery to the treeless landscape. Today these trees are 10 to 12 inches in diameter and have sprouted several small seedlings.²⁷

The other noteworthy operation in the vicinity of Reid Inlet belonged to the Abraham Parker family from Gustavus. Parker was one of the original founders of Gustavus. A jack of all trades, Parker tried his hand at cattle ranching, farming, lumbering, and construction to make ends meet at his homestead. Over the winter of 1937-38 Parker, by then an old man, designed and built a two- stamp mill. The mill was dismantled, placed on a raft, and towed up Glacier Bay to Reid Inlet in anticipation of a significant find. About a mile east of Lamplugh Glacier, above Ptarmigan Creek, Parker and his son Leslie located what appeared to be a significant vein at about the 950 foot level. A favorable assay convinced the Parkers and their partners, the White family of Gustavus, to make a major investment in their LeRoy mining claim during the summer of 1939. The partners barged in a bulldozer and

^cA 1954 USGS survey at the Incas claim noted the remains of a blacksmith shop and cabin foundation, as well as signs of surface testing.

^dAccording to local historian Jim Mackovjak, the salmon cabin was a former watchman's shed which had been removed from a commercial fish trap.

^eStrawberry and rhubarb plants were still present at the sight during a 1994 field examination.

constructed a 2,400 foot road from the beach at the mouth of the creek to their claim. They then hauled over 3,000 feet of cable and constructed a 2,300 foot aerial tramway. The stamp mill was brought on-site from Reid Inlet and reassembled. A small cabin was constructed at the LeRoy claim. Later, a new mill was constructed below the mine at the 500 foot level. An aerial tram connected this mill to the mine. Some 3300 pounds of ore were shipped from the mine at the end of the 1939 season to the smelter in Tacoma, Washington.²⁸

Parker and his partners continued to work the claim until the end of 1940. The mine was then leased to some Fairbanks investors who worked the site for a couple of years. After 1945 the site reverted back to the Parker family. Records show that 1941 was the greatest year of production at the LeRoy mine. Over 250 tons of ore was mined, from which some \$45,000 worth of gold was recovered. In total, over 4,570 ounces of gold and 1,628 ounces of silver were extracted. USGS records from the 1950s indicate that all measurable quantities of gold appeared to have been removed.²⁹ Little in the way of physical evidence remains to mark the former LeRoy Mine. The processes of repeated snow avalanches and land-slides have either erased or destroyed much of the historic landscape. In 1994 the NPS completed the process of sealing up the mine shaft which was deemed a safety hazard.

There were other mining operations--some of which predated the monument--scattered around Glacier Bay. These were located on Willoughby and Francis Islands, at Blue Mouse Cove, and Sandy Cove to name a few. No evidence exists to suggest that these produced any measurable amounts of gold or other precious metals. At Dundas Bay, Doc Silvers (William Horseman) and his wife--operating out of their two room cabin--staked some 50 claims, extending over to Taylor Bay. The Silvers invested thousands of dollars in the operation but apparently never realized a profit from their efforts.³⁰ This was also the case with Ed Brekhus' attempts to extract wealth from his claim near Lake 285 about four miles from the north arm of Dundas Bay. Brekhus and a partner spent the winter of 1933-34 camped in a cave near the lake. Brekhus hiked to the Dundas Bay cannery to pickup mail and supplies. Brekhus worked his placer claim with a small sluice box during the spring of 1934 and again in 1937 and 1938. During the 1938 operation, he blasted a 40 foot channel at a stream on the northeast side of the lake, hoping to create an artificial riffle box in the stream bed. Brekhus also constructed a 10 by 12 foot log cabin with a canvas tent roof as living quarters. His operation was flooded out when a fall storm dropped 22 inches of rain over a 36 hour period. Brekhus realized little more than a few pans of promising color for his efforts.³¹

In sum, the history of mining in the Glacier Bay region mirrors that of the greater Alaska experience. Thousands of hours were spent toiling in remote locations under the harshest of conditions. In the end, only a few made a profit and fewer still struck it rich. What's left today are the remnants: rusted machinery, collapsing shacks, and piles of fractured rock. Such a landscape provides today's visitor with clues and insights. As historian Richard Francaviglia says the landscape is a "historic snapshot" of the lives of these hardy miners.

THE COMMERCIAL SALMON INDUSTRY - AN OVERVIEW

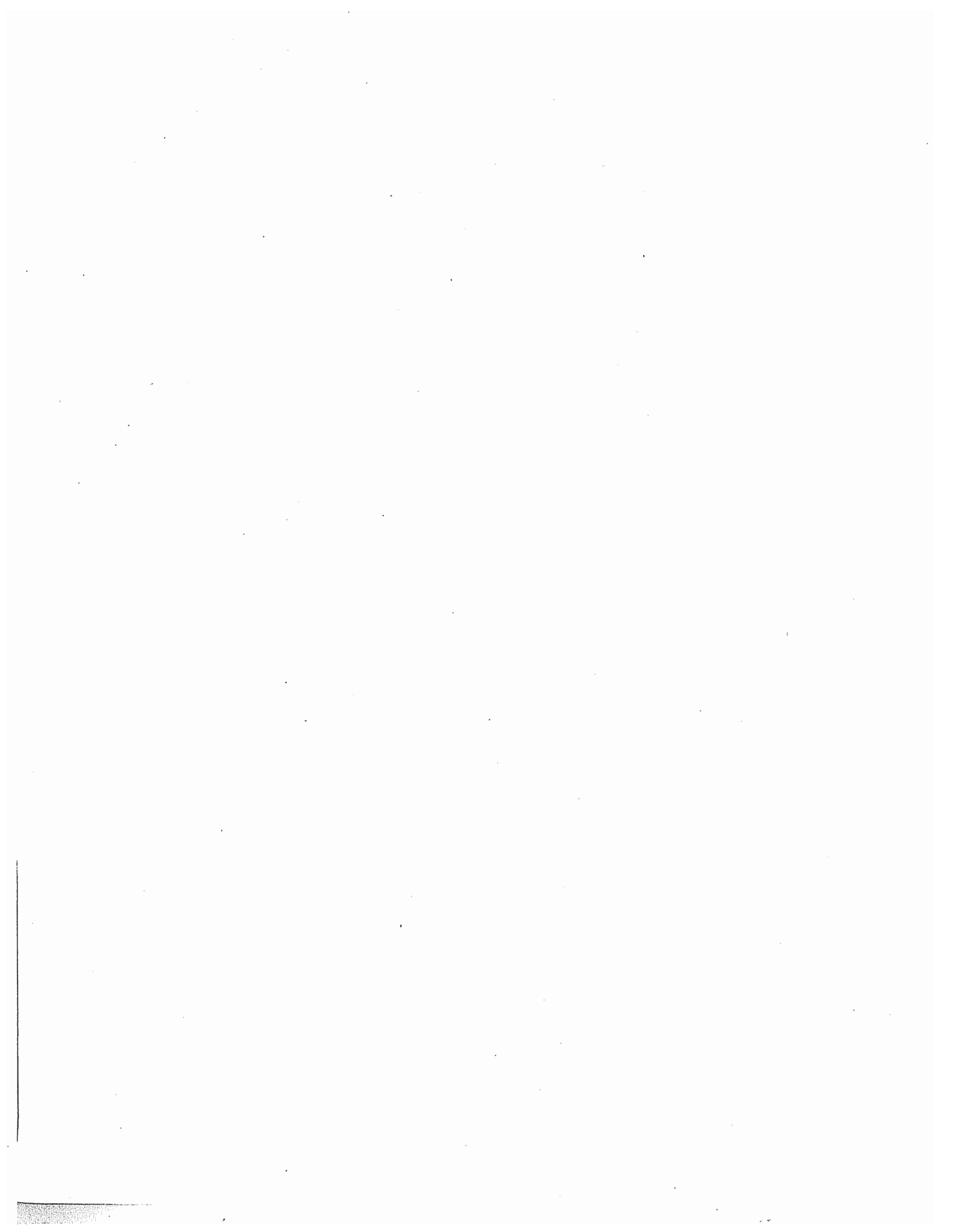
While miners struggled to extract gold, other entrepreneurs sought to reap the economic benefits of the Alaskan salmon. The role of salmon in the Southeast Alaska economy predated the coming of European explorers. Salmon constituted a major portion of the Tlingit diet because of its numerous benefits over other available food sources.^f The effort needed to capture salmon was quite low. The seasonal migrations of the five major species of Pacific salmon--kings, reds, silvers, pinks, and dogs--were generally predictable. Their concentration was such that a single individual utilizing simple gear--gaffs, dipnets, hooks, and various traps--could easily secure a year's supply. Salmon could be readily preserved and transported. The common method of preservation was to either sun dry or smoke the fish. In these forms it could be easily stored for winter use and transported with minimal risk of spoilage. Salmon had the added advantage of providing high nutritional value, particularly as a source of protein.³²

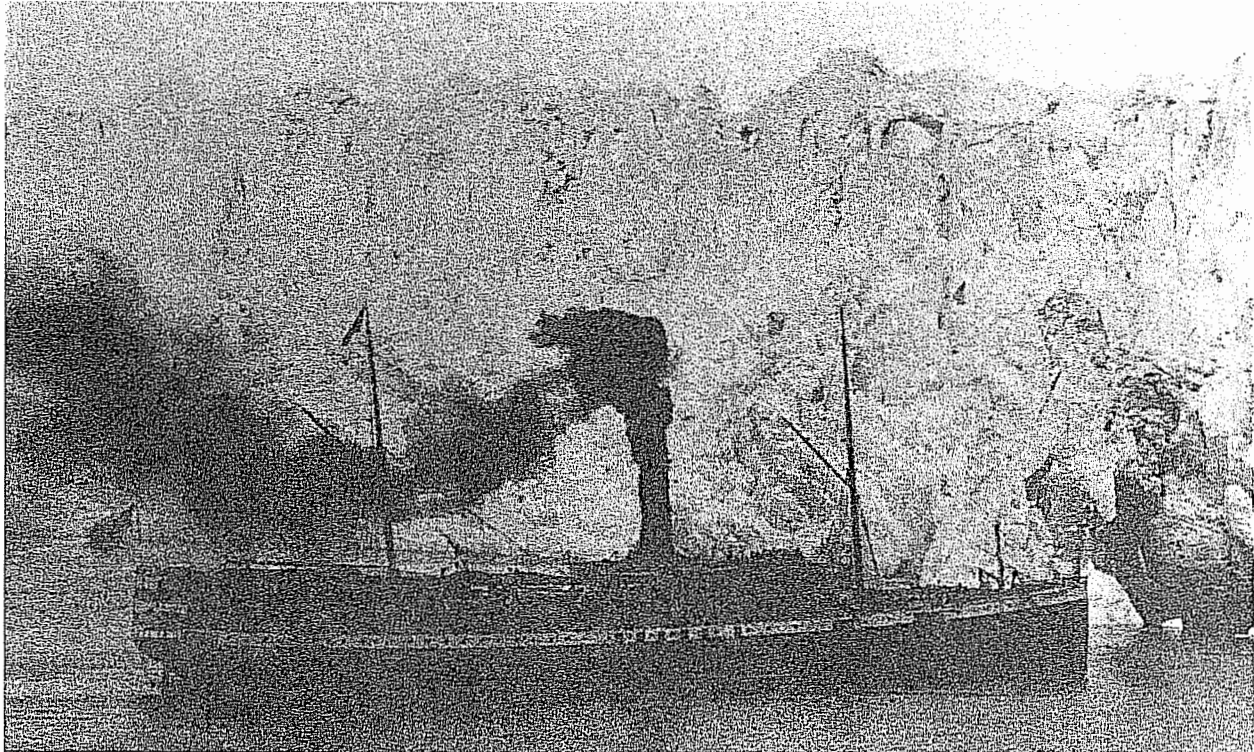
The ready abundance of salmon provided Southeast Alaska Natives with levels of leisure time usually found only in prehistoric agricultural societies. Leisure created opportunities to develop highly complex artistic, political, and religious institutions within the social structure. Thus it comes as no surprise that the various Tlingit clans and other Northwest Coast Indians jealously guarded their prize salmon streams. The salmon resource became a social institution in itself, treated as private property with recognized ownership belonging to specific clans and tribes. Temporary arrangements akin to modern day business transactions were often struck, with stream privileges being loaned out through trade. In some cases a tribute was paid whereby stream owners were given a percentage of the take as a form of rent.³³

During the Russian-American period--1741 to 1867--there were few changes within the salmon economy. The Russians dried and salted salmon for personal use. Some limited amounts were sold to passing schooners, and salted salmon found its way to the American west coast or was shipped back to St. Petersburg as a delicacy. This situation remained largely the same for the first several years after the U.S. purchase of Alaska. American entrepreneurs were initially interested in tapping into Alaska's fur resources and searching for gold. Sufficient quantities of salmon for commercial purposes were more readily available off the coast of Oregon and Washington.³⁴

As over-fishing and higher demand began to take their toll on Pacific Northwest stocks of salmon, the abundance of Alaska's salmon could no longer be ignored. In 1878, two small salmon canneries were constructed in Southeast Alaska. The combined take for the season

^fIn his book, *Politics and Conservation*, Richard A. Cooley noted that estimates place the average Southeast Alaska Native's annual consumption of salmon (at the time of European contact) in excess of 526 pounds.





This 1890 photo shows the steamer *Queen* as it maneuvers to provide passengers with a close-up view of Muir Glacier.
photo by Frank La Roche



Camp Muir in the summer of 1890. From left to right are John Muir, H.P. Cushing, C.A. Adams, H. McBride, Harry Reid, and R.L. Casement (on the roof).

photo by J.F. Morse, in Bohn, *Glacier Bay: The Land and the Silence*, 67.



William O. Field takes a reading at Carroll Glacier. The pyramid shaped cairn is one of many such reference markers which scientists erected throughout Glacier Bay.

photo by Bob Howe



Stanley "Buck" Harbeson's Dundas Bay cabin as it looked in 1976. Harbeson remained at the site from the 1930s until his death in 1964.

NPS Classified Structures File



A shelter cabin at the LeRoy mine site. Winter snow slides and avalanches have destroyed most physical remnants at the former hard rock operation.

photo by Bob Howe



Joe and Muz Ibach's Reid Inlet cabin site. The cabin served as their mining headquarters for more than 10 years.

photo by Bob Howe

REPORT OF ALASKA INVESTIGATIONS.

1



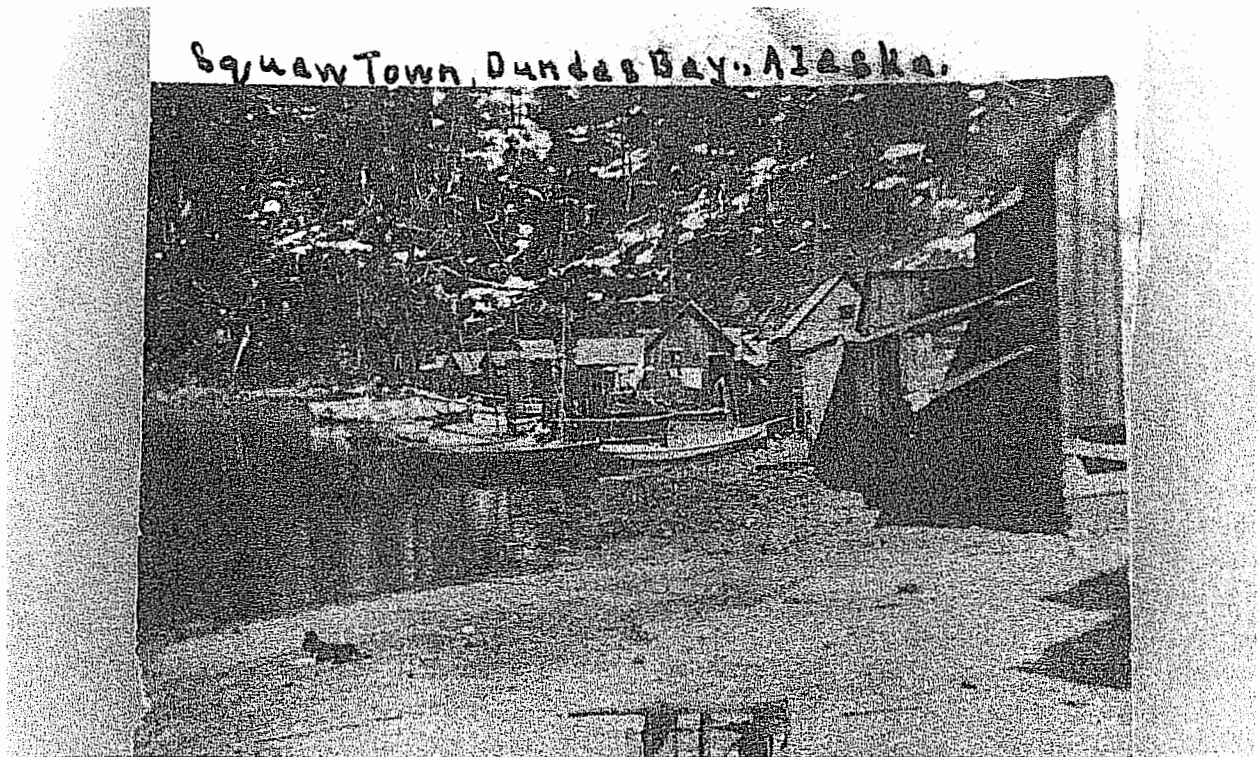
This early 20th century photo shows an ideal corral type fox farm operation in Southeast Alaska.

Bureau of Fisheries, *Report of Alaska Investigations*, 1914



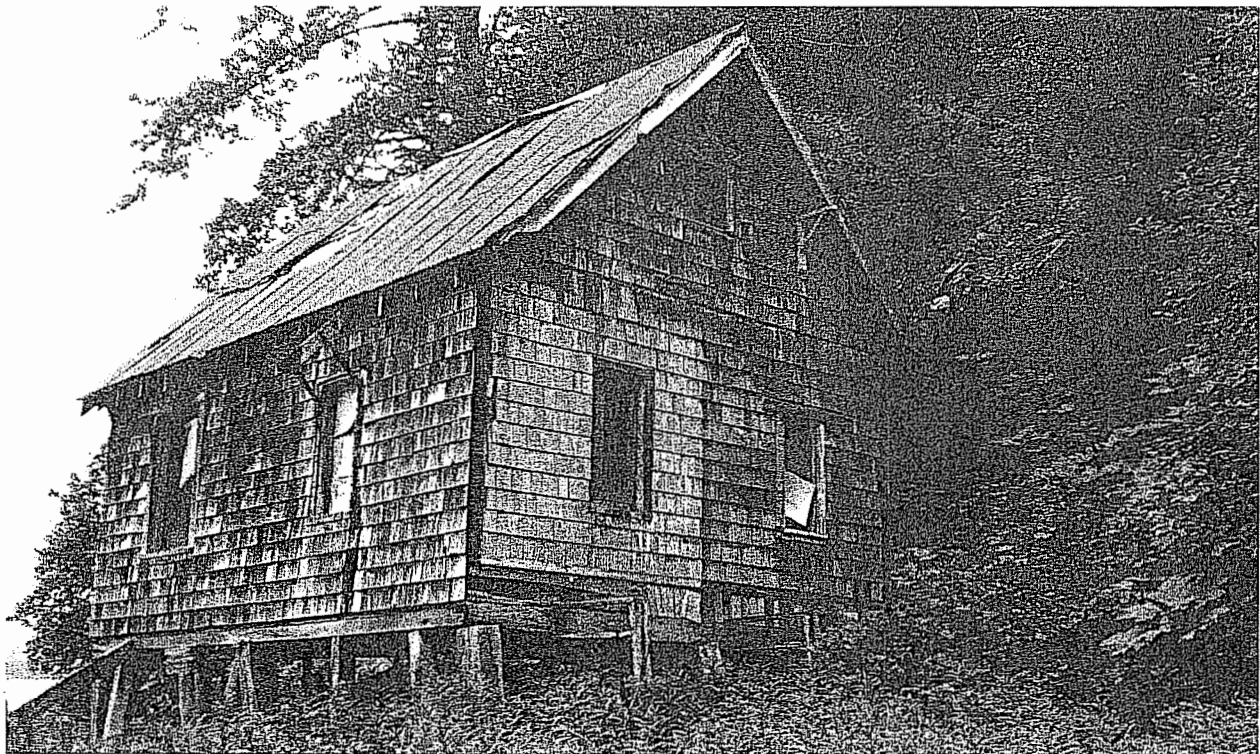
A 1994 photo reveals remnants of a corral operation at Strawberry Island.

photo by author



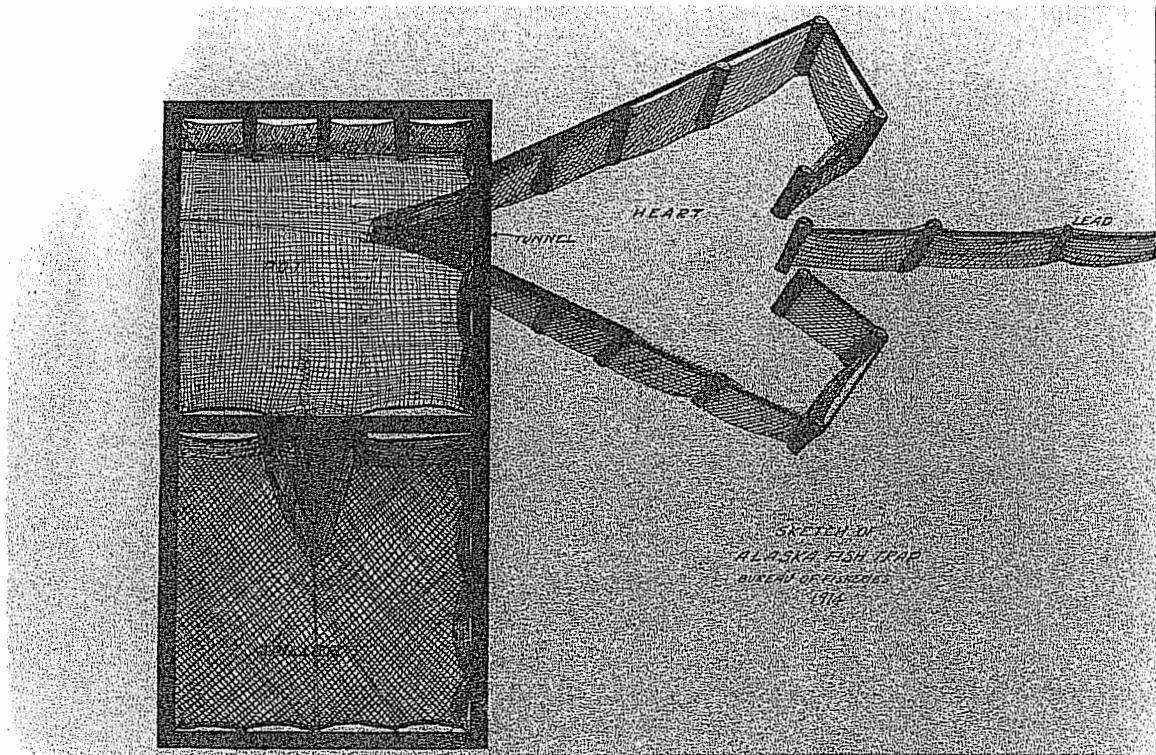
Squawtown served as the primary housing facility for Hoonah Tlingets employed at the Dundas Bay cannery. Bunkhouse accommodations were provided for an additional 40 Chinese cannery laborers.

GLBA Archives



This is the only structure which still remains standing at Dundas Bay. A multitude of artifacts littering the former cannery site provide clues to the vibrant operation which thrived here.

photo by author



This 1914 Bureau of Fisheries drawing is representative of the hundreds of fish traps which were scattered throughout Southeast Alaska.

Bureau of Fisheries, *Report of Alaska Investigations*, 1914



A fish trap on the beach at Exursion Inlet. The collapsed structure is the former watchman's shack.

was just over 425,000 pounds of salmon.⁵ This amount represented a mere fraction of the enormous quantities salmon canneries would soon be producing in Southeast Alaska. By 1923 the output of Alaskan salmon canneries exceeded 232 million pounds annually. This figure jumped to 322 million pounds in 1926.³⁵

The rapid expansion of the salmon canning industry had three consequences for Southeast Alaska. First, was the impact upon the Native peoples who traditionally relied upon salmon as a major food source. Second, were the innovations in capture methods which resulted from increased demand. Finally, there were the advancements and expansion in cannery operations throughout the region.

The early commercial salmon industry was at first a boon to the Tlingit who populated Glacier Bay and other Southeast areas. Commercial operators honored Tlingit ownership rights and paid a royalty for salmon taken. Local Native and non-Native fishermen provided most of the catch needed for canning. Natives, primarily women, likewise supplied much of the labor force at the canneries. These circumstances began to change with rapid expansion in the industry. Tlingit ownership claims were viewed as no longer valid. Salmon became common property, free for the taking. The number of local fishermen was insufficient to meet industry demand. This resulted in the importation of fishermen, recruited from major west coast ports. These company fishermen, with their cannery supplied gear, directly competed with and in some cases displaced local operators. The labor force at the canneries underwent a similar transition as outside labor, primarily Chinese, replaced local labor on the cannery floor.³⁶ Local Tlingit--and to varying degrees non-Natives--became infuriated over the importation of outside labor. In one account a Tlingit chief was reported as saying, "If an Indian can make a hoochinoo (moonshine) still he can make a can to hold a fish."³⁷ The Glacier Bay region became involved in the confrontations which erupted between largely Outside owners and Natives. As the demand for salmon increased, the waters within the present park boundaries became caught up in the exploitation. Salmon harvesting within the area focused on pink and silver salmon. Red salmon--the preferred fish of canners because of its appealing red color--were less abundant in the Glacier Bay region and throughout Southeast Alaska. Multiple methods were implemented to harvest the region's salmon. Traditional Tlingit equipment consisting of gaffs, spears, and various small traps quickly gave way to commercial devices. Principal among these were nets and traps.

Netting occurred in one of two ways. The first was gill netting, the oldest and least utilized means of capturing salmon in Southeast Alaska. The method involved setting nets across stretches of a river to capture spawning fish. In some cases, fishermen would tie the gill nets off to their boats and drift, capturing fish as they swam into streams during slack tides. Purse seining, however, was the favored means of netting salmon in the narrow fjords and inlets of the waters which typified the Glacier Bay region. Fish bunched up in the narrow

⁵Captured salmon were processed into canned case lots consisting of 48 one pound cans or 24 two pound cans.

headlands at a stream's mouth were easy to spot. Fishermen simply had to drag their nets through these schools entrapping the salmon in the purse shaped net. Purse seining had the added advantage of being inexpensive. Local fisherman possessing little capital could generally afford the basic equipment needed to begin operation.³⁸ There were, however, some drawbacks to purse seining. Salmon captured in purse seines were often damaged during haulout and unloading operations. The salmon sometimes remained in a boat's hold too long and became unfit for canning. Unscrupulous seiners sometimes took their small boats upstream to net salmon in their spawning grounds. Such fish were generally of inferior quality. More seriously, such seining techniques prevented salmon from spawning.³⁹ Cannery owners, finally concluded that seiners, locals and otherwise, jeopardized the industry. Both Native and non-Native locals were viewed as too unpredictable, often choosing to fish only when they needed cash. Independent locals often pushed up the contract price paid for salmon. This was offset in part through the introduction of contract fishermen from Outside. Still, the addition of outside fishermen was not enough to free cannery owners from local influence. This only came about after the introduction of the commercial fish trap.

The commercial fish trap had been utilized extensively on the U.S. west coast and in British Columbia before coming to Alaska. Its use proved so effective that fish traps were soon outlawed in these areas. Not so, in Alaska. Fish traps played a dominant role in Southeast Alaska's salmon industry until they were outlawed in the late 1950s. The general persistence of fish traps was a testimony to their effectiveness, as well as to the lobbying skills and political clout of commercial canners from outside Alaska. The early fish traps were a stationary apparatus consisting of webbing and wire mesh which was held in place with a series of piles driven into the underlying mud. Later models held the traps in place with cables and anchors rather than driven piles. These floating traps were easier to place and less expensive to construct. The outside frame of the trap was constructed of stringers; that is logs 20 to 26 inches in diameter. The webbing and wire mesh was nailed to the stringers, with the entire affair fashioned into a "v-shape" funnel--commonly referred to as the heart--at the end of which lay a large wire box or pot. Here the salmon would remain until needed when they could be scooped up and hauled out of the water into a waiting scow.⁴⁰

The initial capital outlay for a fish trap was beyond the means of most Alaskan fishermen. Only the large cannery owners could afford such an initial investment. However, once the trap was running, maintenance costs were quite low. The trap required minimal labor, just a watchman and occasional visits from the cannery scow. At the end of the season, traps were pulled onshore until the next season.

Trap placement was critical to a successful operation. Traps had to be placed where the salmon had a natural tendency to swim, generally near the mouth of a stream. In some cases, professional scouts were hired to seek out the best sites. Site placement became so important that trap owners began treating choice sites as private property, buying and selling perceived ownership rights gained through years of use. Such a concept was rather ironic considering the way cannery owners had treated Native ownership rights. The importance of

such sites, however, was not unjustified. Fish trap ownership gave cannery operators virtual control of the industry, accounting for nearly one-half of the annual salmon harvest. The all time high for Southeast Alaska peaked at 575 traps in 1927.⁴¹ Single haulouts amounted to several tons. This allowed cannery owners the luxury of controlling the market price for salmon, much to the chagrin of local fishermen.

The general expansion and success of improved salmon capture methods resulted in an expansion in the number of canneries in the Glacier Bay region and other parts of Southeast Alaska. Canneries were strategically located to be as near the source of salmon as possible, thus limiting the chance of product spoilage prior to canning. This often resulted in the presence of several canneries in a vicinity or in some cases on the same stream. The early canning industry was a rather haphazard affair. Many small-scale facilities were not canneries at all, but rather were salteries. Such facilities salted and packed salmon in large barrels for shipment to market.

Early cannery equipment was often cumbersome and labor intensive, requiring a steady reliable work force to maintain productivity. Industry owners did not generally perceive Tlingit labor as sufficiently reliable. The Natives were found to be good workers but could not be counted on to work the entire season. In other cases, canneries were located far from a local labor source. This resulted in the importation of Chinese workers from larger west coast cities as the primary source of cannery labor. The Chinese were found to be reliable and skilled workers, willing to labor long hours during the peak runs.⁴²

By the early 20th century, improved mechanization further advanced the cannery process. The seam sealed sanitary can replaced the older solder type can. This made for a more reliable seal. The labor intensive job of cleaning fish was soon replaced with the 1904 introduction of Smith Cannery Machine Company's "iron chink." The device automatically butchered, cleaned, and trimmed 3,000 salmon an hour, thus eliminating the need for upwards of 40 laborers. These and related labor saving devices turned the cannery line into a truly mechanized operation, allowing both small and large operators the realization of greater economies of scale. Despite these innovations--as shall be illustrated by discussion of specific operations in the Glacier Bay region--commercial canning remained a highly volatile business. Buyouts, bankruptcies, and consolidations were common within the industry. Market gluts and shortages resulted in repeated closures and reopenings of canneries. In sum, the cannery business was not meant for the faint of heart.

COMMERCIAL SALMON OPERATIONS IN THE GLACIER BAY REGION

In her 1883 visit to Bartlett Cove, travel writer Eliza Scidmore reported that a salmon cannery had just been completed in the vicinity of a Hoonah Tlingit salmon camp and Dick Willoughby's trading post. But, in her account, Scidmore noted that supplies off-loaded from the steamer *Idaho* included nets, salt, barrel-staves, and hoops, indicating that the operation started as a saltery.⁴³

The first indepth report of packing operations at Bartlett Cove appeared in an 1899 report written for the U.S. Fish Commission. The report's author, Jefferson F. Moser, visited canneries throughout Southeast Alaska in 1898 and again in 1900 and 1901. His reports provide a thorough description of cannery operations, conditions, prices, and the labor force at various operations throughout the region.

In 1888, the Bartlett Bay Packing Company began operating a cannery facility at Bartlett Cove. According to Moser, the 1888 operation was a saltery. It was not until 1889 that cans and cookers were brought in to produce a hand pack of 4,300 cases of red salmon. The salmon for this initial pack came from the Bartlett River which Moser described as a nine mile long red fish stream.^h During the following year, 1890, William, Brown & Company of San Francisco constructed an on-site cannery. Packs were made in 1890 and 1891 of 12,000 and 7,600 cases respectively. However, in 1892 the cannery became part of the Alaska Packing Association, which formally incorporated as the Alaska Packers' Association in 1893. The cannery was dismantled in 1894 and its equipment shipped to a facility at Pyramid Harbor near Haines.⁴⁴

Speculation regarding the cannery's closure, as depicted in past NPS correspondence, suggests that the cannery ceased operations because of a depletion in red salmon at Bartlett River. This conclusion appears to be incorrect. August Buschmann, operator of a saltery at Bartlett Cove in the late 1890s, estimated the annual red salmon run of the Bartlett River at somewhere between 75,000 and 100,000 fish.⁴⁵ More likely, the shutdown was the product of accessibility problems and reconsolidation within the industry. A U.S. Fisheries Bureau report noted that in 1891, operations at the Bartlett Cove cannery came to a virtual standstill because of an exceedingly heavy flow of glacier ice from the upper reaches of Glacier Bay. Then, in 1893, the Alaska Packers' Association decided to shutdown operations at several of its packing facilities in order to halt a growing glut on the salmon market and stabilize prices. The Bartlett Cove facility was part of this downsizing effort.⁴⁶

In 1898, packing operations were renewed at Bartlett Cove. Peter Buschmann, founder of Petersburg, Alaska, had purchased the former cannery site the previous year for the sum of \$1,200. Buschmann owned the Icy Strait, Quadra, and Chatham packing companies. All that remained of the original Bartlett Cove cannery at the time of purchase were a few cabins on Lester Island. Buschmann established a red salmon saltery at the site and enlisted his son August to run the operation.⁴⁷ Upon his arrival in 1899, the young Buschmann described the saltery as:

a string of small buildings and cabins strung along the beach above high water mark on the north side of the cove. There was not very much room between high water mark and where the steep incline up to the sand dunes started.

^hMoser's 1902 report noted evidence of a "v-shaped" runway in the stream in which traps were formerly used. There was no evidence of recent use of these devices at the site.

There was no dock out to deep water from the saltery so our pack had to be loaded by hand on scows and hoisted on board our cannery tender from Petersburg...⁴⁸

About 300 to 400 feet behind the saltery was a Hoonah Tlingit cemetery located on the sand dunes about 40 feet above the high tide line. The young Buschmann's crew consisted of some 40 to 50 Hoonah men and women. The men served as the fishermen, using beach seines to capture the spawning red salmon. The women and some men worked in the saltery. This employment of a nearly total Native work force was an exception to the trend towards the hiring of Chinese laborers.

The actual salting of the salmon was a fairly simple process. First, the salmon were cleaned. In some cases only the fillets or belly portion of the fish was preserved. The fish was next laid in a wooden barrel and liberally sprinkled with rock salt, thus forming a brine. When a barrel was full--about 45 red salmon to the barrel--it would be sealed up and ready for shipment. The facility salted 200 barrels of red salmon during 1899.⁴⁹

The 1899 season was interrupted when on September 12 the great Yakutat earthquake struck. The quake hit just as Buschmann was sitting down to lunch. The entire dining room shook violently, moving a large trunk across the room. The cook's helper--a lad of 12--ran into the room highly distressed thinking the people buried in the nearby cemetery had come to life. The quake caused building sized bergs to calve, jamming Glacier Bay and Icy Strait. The saltery's tender had to wait two weeks before attempting to reach Bartlett Cove. Even then, reaching Bartlett Cove proved to be extremely difficult.⁵⁰

The Buschmanns' establishment of a saltery at Bartlett Cove appears to have been a precursor to construction of a cannery. During 1900 salting operations continued at Bartlett Cove. Some 530 barrels of red salmon and another 120 barrels of silver salmon--most likely taken from Berg Bay--were prepared for market.⁵¹ During the same period construction began on a cannery building on an adjacent spit with plans for the installation of cannery equipment in 1901. Piling timbers were cut from the forest within the cove. The actual structure was described as "a simple cannery building, 150 feet long, projecting on piles over the water."⁵²

During the winter of 1900-1901, the Bartlett Cove operations were sold to the Pacific Packing and Navigation Company. The new owners did not operate the saltery in 1901, instead taking locally caught salmon to their new cannery at Sitkoh Bay for processing. The Bartlett cannery remained dormant. Whatever plans may have existed for its operation were aborted when Pacific Packing went bankrupt in 1903. The facility was later sold to Northwestern Fisheries Company of Seattle.⁵³

The demise of Bartlett Cove operations did not signal the end of commercial canning in the Glacier Bay area. In the spring of 1900, Western Fisheries Company of Portland Oregon

constructed a cannery at Dundas Bay.¹ A tribute paid to the Hoonah Tlingit, for use of the land and fishing rights on the Dundas River, was reportedly a part of the transaction. The initial facility was a small hand operation capable of producing upwards of 300 cases per day. A listing of employees from 1900 shows a diversity more typical of Southeast Alaska cannery operations. The plant supported nine white fishermen, 26 Native fishermen (presumably all Hoonah Tlingit), and 5 white cannery hands (as supervisors and maintenance support). In addition, there were 20 Native men, 6 Native women, and 30 Chinese men, all employed as cannery line workers. The white fishermen, most of whom owned their own gear, were paid between \$40 and \$60 a month plus board and a transportation stipend. The Native fishermen, who in general utilized company owned gear, were paid ten cents each for kings, six cents for silvers, five cents for reds, two cents for dogs, and one cent for pinks. Basic gear consisted of purse seines with gill nets being utilized in the murky water of the Dundas River. Key fishing spots included Dundas and Taylor Bays, Cape Spencer, Glacier Bay, the Alsek River delta, and Excursion Inlet.⁵⁴

Dundas cannery line workers were paid based upon the Chinese contract which was listed at 38 cents per case for one pound tall cans, 40 cents for half-pound flats, and 42 cents for one pound flats with "the usual conditions."⁵⁵ The usual conditions referred to the stipulations of the contract system which dictated the terms of employment for seasonal labor. The system as alluded to earlier stemmed from the need for a larger and, as some perceived, more dependable cannery work force. What industry managers wanted was an inexpensive work force, capable of mobilizing on short notice, who were willing to work long hours without complaint. Few whites or Natives were willing to work an entire season under these conditions. Chinese laborers, who made up the bulk of the early cannery work force, were therefore recruited through west coast labor firms. Chinese labor contractors owned most of these firms. The typical worker was a young single man, generally unskilled and oftentimes a recent immigrant. Labor contractors would negotiate with the canneries to provide a specific number of workers to pack a given amount of salmon for the season. If the number of cases packed exceeded the contract, the labor contractor would be paid an agreed-upon bonus per case. Labor contractors were likewise assessed a per-case penalty for shortages.⁵⁶

Chinese laborers were paid through the labor agency. Workers signed an agreement which stipulated pay scale, hours of work, lodging, transportation, and penalties for failure to fulfill the contract. More often than not, the worker ended up being short changed. Workers put in an 11 hour day. An overtime rate of 15 cents an hour was paid for anything over 11

¹In a 1976 GLBA Classified Structure Field Inventory Report, Harold LaFleur mentions the construction of a cannery facility at Dundas Bay in 1898, presumably at the present site. Known as the Tlingit Packing Company, the owner was listed as James Baron of Hunter Bay. Records from the Bureau of Fisheries list a Thlinket Packing Company of Funter Bay but make no mention of ownership at Dundas Bay. Little else is known about this supposed earlier facility.

hours. Salary for a season's labor--six to seven months--averaged about \$175. Labor agencies often extended credit for the purchase of special clothes workers would need, charging exorbitant interest rates on the purchase. Penalties which the canneries assessed upon a contractor were automatically passed on to workers regardless of blame. Living quarters--often described as primitive or squalid--and food were usually given short shrift to reduce overhead.⁵⁷ Such conditions did not begin to change until the late teens and early 1920s, when government called for better sanitation industry-wide. Later, the advent of labor unions further improved conditions. To what degree these exploitive conditions typified the Dundas Bay cannery is unknown. But likely this operation followed the norm.

The first year of production at Dundas Bay (1900) was successful. The cannery processed 60 cases of kings, 6,100 cases of reds, 977 cases of silvers, 1,800 cases of pinks, and 4,700 cases of dog salmon. In 1901 the facility was sold to Pacific Packing and Navigation Company. A single mechanized processing line was installed with an estimated capacity of 500 cases per day.⁵⁸ This was a considerably smaller operation than the large four-and-five line operations capable of processing some 2,000 cases per day. Still, the basic procedure was the same. Fish were loaded from boats to hand carts, wheeled up an inclined ramp to the processing house on the seaward end of the cannery. Once in the cutting room, the salmon were cleaned and dressed. Dressing gangs chopped off the heads, tails, fins, and gutted the salmon. In future years, an iron chink would perform this task. The waste was tossed in a chute landing in the water below the cannery where it was washed out with the tide. After rinsing, the salmon were processed through the cutting machine, where a series of gang knives cut the fish into suitable size chunks. The salmon pieces next passed into a plunger, which deposited a fixed amount of salmon into cans passing along a conveyor below (each prefilled with one-quarter ounce of salt). The cans were then sealed shut and cooked for an hour in a giant pressure cooker known as a retort. The cans were labelled and boxed in case lots for shipment to market.⁵⁹ Steam powered freighters made regular stops at Dundas Bay to pick up the final product.

In 1905 the Northwestern Fisheries Company assumed ownership of the Dundas Bay facility. Northwestern maintained continuous operations at the cannery through 1931. Pacific American Fisheries purchased the facility in 1932 but failed to reopen the plant. This failure was most likely a response to the general lower demand and prices paid for canned salmon as a result of the Great Depression. Anecdotal evidence suggests that the cannery, prior to the onset of the depression, had maintained a productive operation. The annual value of goods shipped to the facility during the early to mid-1920s grew from a low of \$50,000 to some \$82,000. Historic photos and site investigations portray a self-contained community complete with cannery, about 40 houses (referred to as "squawtown") with an adjacent boardwalk, docking facilities, and an on-site water storage system.⁶⁰

In addition, the Dundas owners invested heavily in the construction of fishtraps. According to Bureau of Fisheries records, the Dundas Bay cannery operated three floating traps between 1925 and 1931. Such a large investment indicates a productive and profitable operation. The impact of these and other traps upon local fishermen was so severe that trap robbing

began occurring. Fishermen sold the stolen salmon back to the canneries. In response the canneries hired armed guards to protect traps against theft.⁶¹ The remains of several traps have been documented in recent years at Dundas Bay.

Two events prevented any potential reopening of the Dundas Bay cannery. On April 18, 1939 President Roosevelt signed a proclamation expanding the borders of Glacier Bay National Monument. The expanded borders incorporated all of Dundas Bay. At some point during the late 1930s arrangements were made with Horace Ibach to dismantle the facility and its associated structures. Ibach remained on the property until the mid-1940s, dismantling all structures but the one he and his wife were occupying.⁶² Despite his work, a substantial amount of the infrastructure was left behind. Boilers, retorts, an immense water storage tank, processing equipment, dock pilings, house posts, as well as the structure the Ibach's occupied still remain. These remnants provide a glimpse into the vibrant operation which once thrived at Dundas Bay.

Other cannery operations, which lie just outside park boundaries, warrant mention because of their impact on adjacent park land. The first of these lay to the northwest of Dundas Bay at Dry Bay. The Alsek River runs from deep within Canadian territory, crosses into Alaska, and empties into Dry Bay. The Tlingit and Athabascan Natives utilized this corridor as a trade route. The river was likewise prized for its abundance of herring, eulachon, and red salmon. In his 1901 fisheries investigation of Southeast Alaska, Jefferson Moser noted the challenges which faced any processor attempting to establish operations at Dry Bay. The bay, measuring some 80 to 100 square miles, was actually a large delta formed from outwash of the Alsek River. Channels within the shallow bay were constantly shifting as a result of severe tidal flows.⁶³

Access with a small craft was possible but dangerous. In June 1901, the Western Fisheries Company sent their steamer *Beaver* and a small launch from Dundas Bay to fish the Alsek River. On its first trip, the launch successfully negotiated the Dry Bay breakers bringing back a haul of king salmon. On its second attempt the launch rolled in the surf, later however, it was refloated. Despite this mishap, and the 90 mile voyage to reach Dry Bay, the company planned to fish the bay the following year. The reason for this persistence became readily apparent. Prime red salmon streams in Southeast Alaska were becoming fished out. The Alsek River and adjacent streams emptying into Dry Bay contained what Moser described as a sufficient abundance of red salmon to supply several large canneries.⁶⁴

In 1910, construction of a cannery was begun on a 10 acre site on the northwest side of Dry Bay near Cannery Creek. The cannery infrastructure included a large plant facility, and a narrow gauge railway running from the cannery to the creek. The cannery work force consisted of Native women, Chinese men, and Japanese men. The utilization of Japanese and other recent immigrants as cannery help was a response to federal exclusionary legislation which curtailed the further immigration of Chinese nationals. The men and women shared common mess facilities and freely socialized, but they were housed in separate dormitories. The cannery was closed in 1913 after the owners went bankrupt. A

contributing factor to the failure may have been the loss of the larger part of a season's production when a barge overturned. An insufficient supply of salmon, apparently, was not a contributing factor. Fishermen reported good catches of reds, kings, and silver salmon throughout the inter-war years. A cannery tender from Yakutat, moreover, frequented Dry Bay until after the Second World War.⁶⁵

Shortly after the end of the First World War, Charlie Johnson was given the job of dismantling the cannery's infrastructure for reuse at a new operation. An NPS survey in 1977 noted that the principal structures had collapsed and all that still remained intact at the site was a railroad engine.⁶⁶

The presence of a narrow gauge railroad at Dry Bay--in conjunction with a similar cannery railroad at Yakutat Bay--may have served as the catalyst for one of the area's more bizarre proposals. Repeated prodding from Alaskan development interests prompted the federal government, in 1905, to give serious attention to the matter of constructing a major railroad linking the coast with the interior. In planning for construction, the government hoped to take advantage of any number of suitable private lines already serving cannery and mining operations. Therefore, in the summer of 1905, USGS geologist Alfred Brooks set out upon a mineral resources investigation which included the task of identifying potential routes for a major railroad. The investigation had the backing of both Congress and President Theodore Roosevelt.⁶⁷

Brooks' report confirmed the inadequacy of existing transportation routes to Alaska's interior. The report noted that the development of transportation routes had not kept pace with the demands of commercial interests. Brooks suggested that a railroad be constructed from an accessible harbor on the coast to the interior along one of four "natural highways." The potential routes were known as the Chilkat basin, Copper River basin, Susitna Basin, and Alsek Basin. The Alsek basin route would have its terminus at Yakutat Bay. A short narrow gauge railroad, the Yakutat and Southern constructed in 1903, ran from a cannery at Yakutat Bay to the Situk River, some 12 miles to the southeast. The railroad was used to haul salmon from scows along the river, as well as timber and the occasional passenger.

The new railroad would follow this existing route and then continue on to the mouth of the Alsek River, 50 miles away. From here the route would ascend Alsek Valley for 200 miles, tying into a proposed route running from Pyramid Harbor to Tanana. In his official report Brooks identified several shortcomings of the route. First, the Alsek Valley was largely unexplored.^j Neither Yakutat or Dry Bay were perceived as quality harbors. The proposed

^jDuring the Klondike Gold Rush several dozen miners attempted to cross the Hubbard Glacier and then ascend the Alsek Valley to reach the gold fields. Most either turned back or perished. The few that completed the ordeal found themselves back on the Alaska coast near the head of Lynn Canal. For further reading on the topic see Alfred H. Brooks' *Blazing Alaska's Trails*.

route did not open access to any known mining regions, and most importantly, the route would have to cross Canadian territory.⁶⁸ The eventual route adopted was the present day "all American" route running from Seward to Fairbanks.

The final commercial fishing operations of note occurred at Excursion Inlet at the park's southeastern boundary. In 1908, Pacific American dismantled its Chilkat Inlet plant and moved its operation to a new site at Excursion Inlet.^k The cannery ceased operations in 1935 after an agreement was reached with the inlet's other cannery operator, the Astoria Puget Sound Canning Company, to process Pacific's catch. Astoria had also constructed a facility at Excursion Inlet in 1908. Figures taken from the annual Customs and Commerce reports during the early to mid-1920s indicate that cannery operations at Excursion Inlet were quite active with the annual value of supplies brought in to support cannery operations ranging between \$170,000 and \$250,000. Likewise the abundance of fish trap remnants at Sawmill Bay--six, according to some estimates--suggest a successful operation.^l To this day a processing plant still remains in operation on the east side of Excursion Inlet. The current plant was adapted from a Second World War facility following a 1948 fire which destroyed the Astoria cannery.⁶⁹

THE KANE SAWMILL AT EXCURSION INLET

The mentioning of fish traps at Excursion Inlet's Sawmill Bay calls attention to another local entrepreneurial venture, namely sawmills. Sawmill operations played a rather minor but distinct role in the economy of the Glacier Bay region and Southeast Alaska. With its general proximity to the Tongass National Forest, substantial timbering and sawmill operations would have seemed a flourishing industry. Such, however, was not the case. Late 19th century federal law dictated that timber could only be cut on mineral claims for personal use. Sawmill operators could not purchase timber for commercial use from public land. This was altered with the 1898 Alaska "homestead act" which provided for cutting timber from unoccupied and unreserved public land.⁷⁰ Still, the industry did not grow beyond a local market. Inhospitable terrain and seasonal variances made cutting and hauling timber to local mills expensive. In addition, passage of the 1920 Jones Act requiring that shipment between Alaska and the lower 48 states occur on American flagged ships further raised costs.⁷¹ In sum, Alaskan timber could not compete on the open market with more easily accessible timber from the Pacific Northwest.

^kIn his 1939 report NPS employee Earl Trager misidentified Pacific American as Pacific Alaska Fisheries.

^lBureau of Fisheries records from the period 1925 through 1955 indicate that the Excursion Inlet plants operated, in total, an average of five traps annually. The number of traps peaked in 1939 at 13 traps. The two facilities utilized both floating and pile driven traps.

Despite these impediments, several local sawmills managed to successfully operate in the Glacier Bay region. Most of these mills served a local clientele, selling timber to local cannery operators for fish trap construction, and bridge and dock facilities. Later, during the 1930s, local lumber was used for Civilian Conservation Corps projects. Local operations included a Gustavus sawmill, constructed on the banks of the Goode River in 1921. The mill was a small family run operation belonging to Abraham Parker. Later, during the Second World War, the military constructed a sawmill at the head of Excursion Inlet.^m This mill supported a military base operating at Excursion Inlet.⁷² A third local sawmill, also in Excursion Inlet, was the Kane sawmill constructed near the head of Sawmill Bay.

The Kane brothers arrived in Southeast Alaska from Outside during the early 1890s. Frank Kane established a store at the village of Hoonah in 1893. A prospector at heart, he was not particularly good at business. Kane gave up the store and later perished during 1898 while on a prospecting trip near Whitehorse, Yukon Territory. Frank's widow Louise Kane, a Tlingit of mixed blood ancestry, then married Frank's brother, Stephen. The Kanes resettled in Hoonah, constructing a new store which also housed the local post office. The Kane family branched out into other entrepreneurial ventures. They took up small scale farming, commercial halibut processing, and the establishment of a sawmill.⁷³

The exact year in which the Kanes' sawmill was constructed is not clear. Records, however, show that the 24.75 acre trade and manufacturing site at Sawmill Bay was patented to Louise Kane on October 27, 1914. The mill ceased operations during the mid-1930s. Timber was supplied from the surrounding mountainsides, then under forest service management. At the height of operation, the mill produced annually between 15 million and 50 million board feet of lumber. Much of this lumber was sold to the two canneries operating at Excursion Inlet.⁷⁴ The mill consisted of a main building where the logs were sawn and several outbuildings. One of the outbuildings appears to have contained an edger--a double bladed machine used to cut boards to standard widths. A dock and a small water wheel were likewise on-site. The water wheel was used to power the operation. A six inch steel pipe gravity fed water from a lake above the mill to the water wheel.⁷⁵

By the time Excursion Inlet became a part of the monument in 1939, the mill had regressed into a state of disrepair. The buildings were collapsing, much of the machinery had been removed or was rusted beyond repair. When the Kane family inquired about the possibility of re-opening the sawmill, the NPS suggested that they start a new operation outside the monument. The mill was never re-opened with the property passing into park service hands. The park service planned to demolish the buildings and conduct a general site cleanup.⁷⁶ This was never implemented. Today, there still remains a hodgepodge of remnants marking the former sawmill site.

^mThe military sawmill is discussed within its larger Second World War context in chapter 6.

FOX FARMING--THE RETURN OF SOFT GOLD

Like the sea otter industry before it, fashion drove the burgeoning fox farming industry which engulfed Southeast Alaska and found its way to Glacier Bay. Fox furs were the rage among flappers (the fashionably dressed young women of Europe and America who flouted conventional behavior) during the 1920s. More was considered better, with most flappers sporting full length fox apparel. Among Europe's fashion trendsetters the blue fox--said to go well with any outfit--was the fur of choice. In the United States the preference was for silver fox. Those who could not afford the more expensive blue or silver furs draped themselves in red, white, and cross fox attire.⁷⁷

The process of Alaska fox farming had its origins in Russian America. The Russians took breeding pairs from indigenous populations of blue and arctic fox, transplanting them throughout the Aleutian Islands as a source of future revenue. However, the fox farming methods which emerged during the early 20th century owed their success to the pioneering efforts of Alaskan, James Judge, an assistant treasury agent. Judge established the process of constructing feeding stations to supplement a colonized island's natural food supply. The stations were nothing more than a series of wooden feeder boxes, roughly two foot square, placed at ground level. Common food included salmon and seal, sometimes mixed with various grain mashes.⁷⁸ More elaborate than the feeding stations were house traps. House traps provided a method for island fox farmers to easily harvest the free-ranging foxes. The typical house trap was a multi-roomed structure equipped with feeding tables. In this room entrances and egresses could be quickly blocked and foxes easily contained. During the winter the foxes were captured and sorted with the best specimens released for breeding. Foxes marked for harvesting were relegated to a special processing room.

By the turn of the century, two distinct methods of fox farming had emerged. In Southwest Alaska and on smaller Southeast islands, free range island ranching predominated. Islands were typically leased from the U.S. Forest Service for a period of five years. In Interior Alaska and Southeast areas where island ranching was not possible, the corral method or pen rearing was most prevalent. Corral farming involved a larger capital outlay than island ranching. A typical corral consisted of a small structure similar to a dog house. Attached to this was a run--generally 30 to 40 feet long--constructed of wire mesh. At one end a "man door" was placed to allow easy access for feeding and harvesting purposes. Each run contained a single pair of breeders. A supply of fresh drinking water, and sandy soil offering good drainage, were likewise needed.⁷⁹

The aspiring fox farmer had to spend a significant amount of money purchasing breeding pairs. A pair of blue or silver fox averaged about \$300. Most successful operators suggested purchasing at least six breeding pairs to assure an adequate return on an investment. A farmer could expect to annually harvest about five offspring from a single breeding pair. Despite initial outlays, sometimes running several thousand dollars, successful farmers could reap significant profits. During the 1920s silver and blue fox pelts fetched

\$75. It was this potential for profit which caused cash strapped entrepreneurs to establish operations throughout the Glacier Bay region.⁸⁰

One of the earliest fox farming operations in the region belonged to Joe and Muz Ibach. In 1911 Ibach established a farm on Middleton Island in Prince William Sound. By 1920, he had turned the venture into a successful operation, selling nearly \$17,000 worth of furs to a Cordova buyer. With the profits from his Middleton farm, Ibach established another farm on Lemesurier Island, just outside the entrance to Glacier Bay. It was from this base that Ibach later launched his many mineral prospecting expeditions to Reid Inlet. Other farming operations soon followed. Carl Swanson established farms on Beardslee and Strawberry Islands, and John Johnson on Willoughby Island during the 1920s.⁸¹

Between 1925 and 1935, permits for farming operations in the Beardslee Islands passed through several hands. Records from 1935 listed George Johnson and O.J. Anderson as the permit holders on nearly six acres of land for which they paid an annual \$50 fee.^a In total, the partners ran operations on eight small islands where they had constructed 18 trap houses. The structures were located near the beach to make feeding and harvesting easier. A 1939 NPS report described the trap houses as four to six feet long on each side and about seven feet high. Inside each structure was a pit about four feet deep, occupying most of the floor area. A small door at either end provided access. Seven of the trap houses were still being utilized in 1939 to feed between 100 and 150 foxes. During the summer the foxes were fed every two days. In the winter when feed kept longer they were fed weekly. The foxes' principal food consisted of salmon heads freely obtained from local canneries. Salmon was mixed with various grains and cod liver oil, and cooked up in large vats near the partners' headquarters on Beardslee Island. The headquarters consisted of a small cabin, dock, and nearby warehouse which burned in 1938. By 1940 dwindling market prices--attributed to changing fashions and the Great Depression--had resulted in the collapse of the Beardslee operation. Anderson informed the NPS that he was giving up the farm--Johnson had reportedly passed away--because it was not worth the struggle anymore.⁸²

A 1994 site survey noted the location of several historic structures and artifacts associated with the Beardslee Islands enterprise. Among these were the intact remains of a cabin, feeding stations, and a shed utilized for rendering seal fat. Alongside the shed were large 60 gallon barrels and concrete cookers used in preparing fox food. Other remnants included a wooden row boat, barrel stove, dock pilings, and numerous small miscellaneous items associated with the farm.⁸³

In contrast to the Beardslee Islands operation, Carl Swanson's nearby Strawberry Island fox farm was a corral farm. Originally headquartered at Beardslee Island, Swanson relocated to

^aEarl Trager's 1939 report stated that the owner of the Beardslee fox farm was Mr. L. Olstrom, a Juneau pool hall operator. Whether he was the actual owner or merely a financial backer is unclear. Johnson and Anderson still held the Beardslee permit.

Strawberry Island in 1929. Here he constructed a facility consisting of several fox runs about 35 feet long. The runs contained a man door at one end and a small fox house at the opposite end. Several feeding stations were located near the beach suggesting that some of the foxes ranged freely about the island.^o Swanson also constructed a warehouse and a storage shed, used for preparing fox food. For himself, Swanson constructed a small log cabin. A later two story house built next door to the cabin was never finished.^p

Swanson ceased operations at his Strawberry Island farm in 1938. Low fur prices made commercial fishing a more profitable venture. Swanson moved to Juneau but must have intended to return at some point to take up residence at Strawberry Island. NPS records from 1939 show that Swanson had filed for and received patent to the Strawberry Island site. The site eventually passed into NPS hands and became part of the monument.⁸⁴

The other noteworthy fox farm site within Glacier Bay was at Willoughby Island. In 1927, John A. Johnson and four partners--Sam Felton, Gunnar Bloomgreen, Alfred Singer, and Ernest Robinson--obtained a permit to begin fox farming at a place named Three Hill Island. The partnership eventually failed and the partners' permit was canceled. Johnson spent several months capturing four breeding pairs of blue fox which still remained and transported these to a new permit site he had secured at Willoughby Island. Johnson constructed a cabin and a warehouse at the site. He likewise established several feeding sites and constructed 12 trap houses to support his island enterprise.⁸⁵

By 1938 Johnson, like his Glacier Bay counterparts, realized the futility of fox farming. The industry had not been profitable for several years. Johnson secured a two year permit from the park service, planning to trap out his remaining foxes within that period. He would then take up mineral prospecting, hoping to find the financial means to continue living at Willoughby Island. If all else failed, Johnson hoped to seek compensation for his property from the federal government when the site passed into NPS hands.⁸⁶

The demise of this and other fox farming operations at Glacier Bay occurred throughout the industry. Most fox farmers were neophytes, with little understanding of the technical process. Insufficient business expertise contributed to their downfall. High pelt prices blinded them to realities. At best, fox farming was a risky business. Disease, predation, and poaching took a heavy toll. At its peak, during the 1920s, more than 600 farms were spread across Alaska. This glut of farms contributed to an oversupply which depressed pelt

^oPast accounts note that some fox farmers would only keep their breeding pairs in pens. Subsequent reports of feeder boxes on the island's north side likewise suggest that some foxes ranged freely.

^pAccording to former Glacier Bay Superintendent, Bob Howe, the two story house was on the verge of collapse when he left the park during the early 1970s. The NPS later razed the structure.

prices. The Great Depression, changing fashions, and the onset of the Second World War killed whatever chance most farmers had to recoup their investments.

In sum, the experience of Glacier Bay fox farmers was indicative of the outcomes which befell most of the region's entrepreneurs during the late 19th and early 20th centuries. Inadequate transportation networks, an inhospitable climate, and wildly fluctuating markets combined with human inexperience to spell failure. At best, most broke even or realized wages for their effort. Few got rich. Perhaps the greatest payoff for many of the would-be entrepreneurs was living the adventure.

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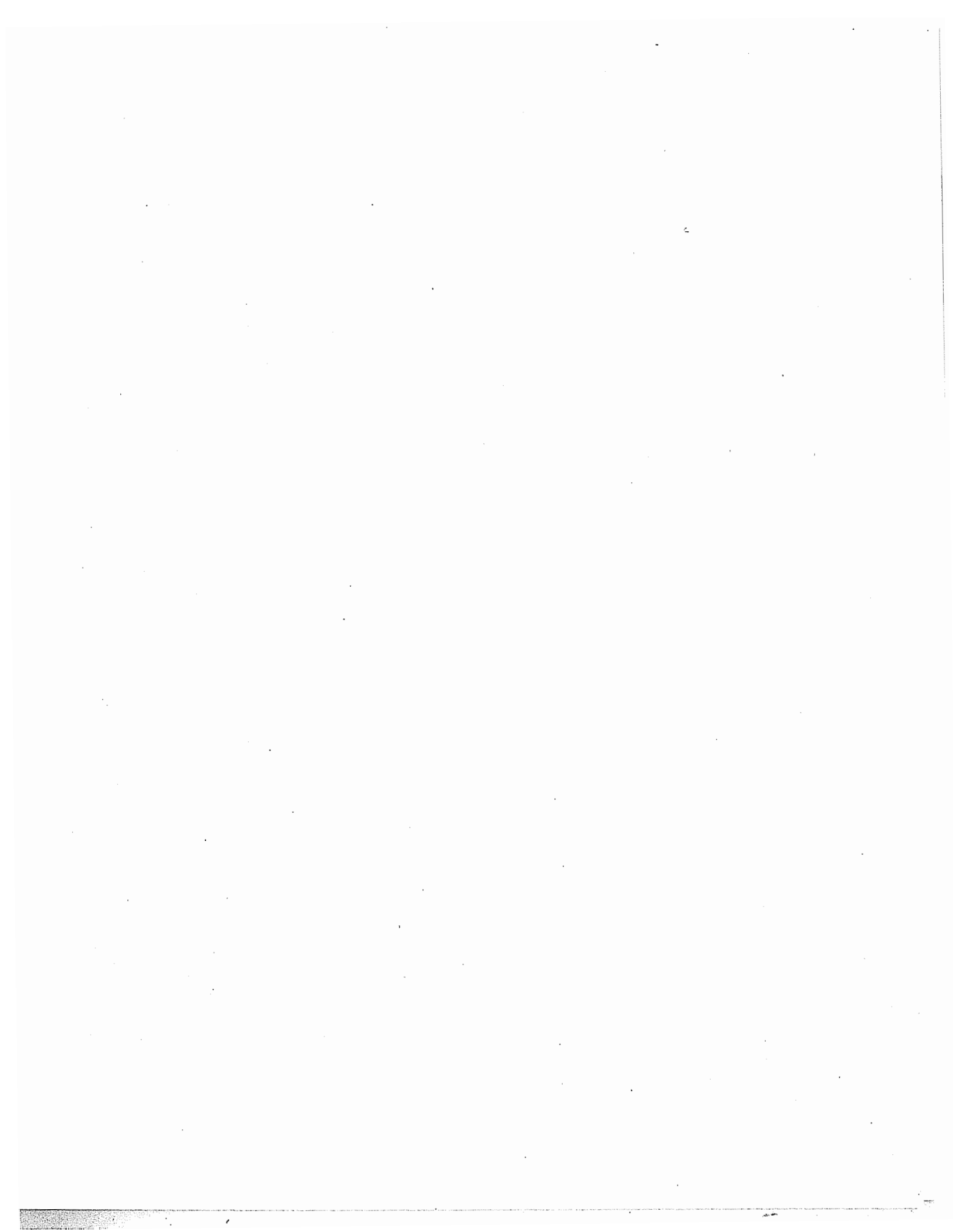
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CHAPTER 4

THE CAPE SPENCER LIGHTHOUSE

EARLY NAVIGATION AIDS IN SOUTHEAST ALASKA

The hazards of voyaging through Alaskan coastal waters were brutally apparent to the early European explorers. Vitus Bering's 1741 voyage of discovery to Alaska met with disaster after his ship ran aground during its return trip to Russia. Years later, in 1790, Aleksandr Baranov the recently appointed manager of the Russian American Company found himself in a similar plight. The ship he was on ran aground upon a forsaken piece of coast in the Aleutian Islands. Poorly drawn charts and rudimentary navigation skills caused more accidents in subsequent years as the Russians ventured into Southcentral and Southeast Alaska.¹ Between the years of 1796 and 1805, the Russian American Company lost some 845 hunters in the treacherous seas between Prince William Sound and Cape Spencer.

Despite these disasters, the Russians made only minimal efforts to install coastal navigational aids during their occupation of Alaska. For many years a few buoys were the only aids the Russian mariners had to warn them about coastal hazards. These buoys were augmented in 1834 when a light was constructed at Sitka in the cupola of Baranov's Castle. This early light was described as a "crude affair, consisting of seal or whale oil and wick in four copper cans, placed in front of a large reflector in a turret lantern."²

On July 27, 1868, shortly after the United States' purchase of Alaska, Congress extended the laws of "customs, commerce, and navigation" to the region. With its thinly spread budget, the federal Lighthouse Board was in no position to embark upon an extensive navigational aid program for Alaska's 30,000 miles of coastline. In 1869, the Senate authorized the President to identify public lands in Alaska suitable for the installation of permanent lighthouses. To the Lighthouse Board's credit, they had anticipated the eventuality of such actions. In 1867 the board (preempting the 1869 Senate authorization) had requested that an upcoming coastal survey expedition include an individual tasked with the job of identifying suitable lighthouse sites. Fortunately for the Lighthouse Board, the individual assigned this task was George Davidson head of the 1867 expedition. Davidson took extensive notes, identifying potential locations for lighthouses as well as navigation buoys and unlit beacons. These notes served as the basis for the President's 1869 report to Congress. The report was shelved, and no immediate action was taken. This was ironic considering that most of Davidson's recommendations were eventually adopted.³

By 1895, Congress had begrudgingly authorized limited funds for the establishment of navigation aids in Southeast Alaska, resulting in the installation of 57 buoys, 26 unlit beacons, and a lit beacon at Sitka. The money for these installations had come only after an increase in shipping traffic--associated with mining, commercial fishing and tourism--during the 1870s and 1880s. Accompanying this increased shipping was an escalation in the number

of shipwrecks along the southeast coast. At one point the Pacific Coast Steamship Company--after losing the steamer *Eureka* in Peril Strait--even offered to transport government buoys free of charge. Reacting to such pressure, the Lighthouse Board in 1884 arranged to have the Navy place 14 iron buoys along the Inside Passage.⁴ Still, Alaska took a back seat to more pressing navigational needs off the coasts of Oregon and Washington. This situation began to change only when an enormous influx of miners headed for the Klondike goldfields in 1897 and 1898.

The Klondike discovery brought over 100,000 stampedeers north. Most of these stampedeers came by way of the Inside Passage, landing in the Southeast Alaska towns of Skagway and Dyea. In the single month of February 1898, 48 vessels arrived at Skagway. Many of these ships were overloaded and unseaworthy. Coupled with poor charts, inexperienced navigators, and few navigational aids, this gold rush traffic constituted a recipe for disaster. Between 1898 and 1899, an estimated 46 ships went down in Southeast Alaska. Insurance rates for vessels plying the region soared, as did public outcry for safer ships and more navigational aids.⁵ Congresses' response to this pressure was not immediate. From 1897 to 1900 not a single new navigation aid was installed in coastal Alaska. Congress eventually acquiesced, appropriating \$100,000 for the construction of lighthouses in Alaska. Therefore, in 1902 two lighthouses were constructed in Southeast Alaska.

IMPETUS FOR THE CAPE SPENCER LIGHTHOUSE

During the years which followed the Klondike boom, attention began to shift from Southeast Alaska to Prince William Sound and to points farther west. Gold strikes in Nome and Interior Alaska meant greater traffic beyond Southeast. During a 1904 Senate hearing, railroad proponents anticipating the construction of a major railway linking coastal Alaska to the Interior called for increased navigational aids. These aids would be needed to support the increased shipping traffic which they believed would occur following the railroad's completion. The railroad proponents requested the construction of lighthouses at Resurrection Bay, Cape Decision, and Cape Spencer.

Additional pressure came from the Alaska Syndicate--the Morgan-Guggenheim conglomerate--because of the impending completion of their Copper River and Northwestern Railroad line between Cordova and Kennicott. In 1909 Charles E. Peabody, President of the syndicate's Alaska Steamship Company, pioneered a new shipping route from Cordova to Cross Sound, and onto Seattle via the Inside Passage. By entering the Inside Passage at Cross Sound, the company could avoid travel along the outer coast of the storm-wracked North Pacific Ocean. This route quickly became the preferred course for shippers bound for Southcentral Alaska.⁶

The Lighthouse Board was not in the financial position to fund these and a number of competing requests for Alaskan lighthouses. In fact, Congress had actually passed legislation in 1906 authorizing the construction of a "first-class light-house and fog signal" at Cape Spencer. President Theodore Roosevelt followed this with an executive order in 1907

creating a federal set-aside for the establishment of a lighthouse on one of the islands adjacent to Dick's Arm. (Dick's Arm is a small inlet at the tip of Cape Spencer.) Funding, however, was never allocated to begin construction, thus dooming the project.⁷ Such projects also had to contend with demands for more navigational buoys and unlit beacons. In addition, maintenance costs for existing facilities cut into the new construction budget. To help solve the dilemma Congress in 1910 designated Alaska as a separate lighthouse district. This meant that Alaska navigational operations would be administered and supplied from Alaska, not Seattle. It also meant that Alaska would have its own budget. Unfortunately, this budget amounted to only \$60,000 the first year. Alaskan shippers and promoters called this sum paltry considering the \$31 million in cargo and 50,000 passengers annually transported between Alaska and the contiguous states.⁸

Pressure to allocate additional funds for navigational aids continued to escalate. An article appearing in the Washington state publication *Railway and Marine News* noted that insurance underwriters had paid out millions of dollars for avoidable shipwrecks in Alaska. The impending construction of a federally funded Alaska railroad lent further impetus. Then in 1912, Alaska delegates to a political convention in Cordova resolved that "we demand that additional lights and beacons be installed along the coast of Alaska."⁹ The convention's resolution received wide coverage from the local press. It likewise coincided with Alaska Delegate James Wickersham's introduction of H.R. 16656, a Congressional proposal calling for funding to construct lighthouses at Resurrection Bay, Cape Saint Elias, and Cape Spencer. Reacting to all this pressure, the Lighthouse Board secured additional funds for the construction of new aids, one of which was an unattended lit beacon at Cape Spencer. The Cape Spencer light--costing about \$2,700 to erect--was a 90 foot acetylene fueled automated beacon.¹⁰ The light was located on a small, windswept rocky outcropping located one mile offshore from Dick's Arm. The new light was deemed an immediate success. But rather than satisfy navigation aid proponents, the light fueled their demands for a fully manned lighthouse facility at Cape Spencer.

By 1914 the Lighthouse Board had come under the direction of the Department of Commerce. Secretary of Commerce William C. Redfield, that year, assumed the task of securing funds for adequate navigation aids in Alaska. Redfield launched his campaign during a May 24 address to the San Francisco Chamber of Commerce. Redfield told his audience that railroad construction in Alaska was of little value unless the safety of shipboard passengers could be assured. This was the first step in a public opinion campaign to shame Congress into action.¹¹ Growing political pressure, coupled with a perception that the Lighthouse Board would be unduly embarrassed if increased traffic resulted in escalated tragedy, most likely spurred Redfield to this action. Congress responded to this public prodding, pouring funds into Alaskan transportation and navigation aids between 1915 and 1923. Much of this funding went towards the construction of the federally funded railroad running from Seward to Fairbanks. But substantial funds also went towards the upgrading of coastal navigation aids. By 1923, Alaska's coast boasted some 634 aids to navigation. Among these was approval and funding for the construction of a state-of-the-art lighthouse at Cape Spencer.¹²

THE CAPE SPENCER LIGHTHOUSE

With a Congressional authorization in hand, the Lighthouse Board immediately set about the task of soliciting bids. The Cape Spencer lighthouse would be constructed on the same rocky islet where the unmanned beacon had been erected. This island formed part of a 3840 acre reservation which was never incorporated into the Glacier Bay park unit. The facility would be set roughly 80 feet above the stormy waters of Cross Sound. In addition to the lighthouse, plans called for the construction of a boathouse, blacksmith shop, wharf, tram, and derrick. Construction began in the spring of 1924. Rather than bring a crew in from the Outside to such a remote location, a decision was made to rely upon local labor to construct the facility. The facility's remote location coupled with extreme seasonal fluctuations required that the lighthouse be constructed over a period of two seasons instead of the usual one year. On June 10, 1924 the tender *Ceder* left Ketchikan to begin excavation for the facility. Two other vessels followed carrying supplies and a construction crew.¹³

Facility construction proved to be a major challenge. A continuous swell off the North Pacific made offloading extremely difficult. Supplies were shifted from an offshore barge to small boats for transport ashore. Building materials had to be hand carried or wheelbarrowed up the rocky slope to the job site. Primary tasks included the construction of a stiff-legged derrick and a tram, and excavation of the foundation. The derrick consisted of a massive boom and hoist system rated for five tons. When completed, the derrick would provide the primary means of offloading material from waiting boats. The derrick would also be outfitted with a bucket for making crew transport on and off the island easier. The tram consisted of a four foot wide track running from the offloading site uphill to the lighthouse location. An electric motor powered eight foot long carts along the track. The foundation excavation was likewise a major undertaking. One of the first steps entailed blasting away rock to create a level building spot. When finished, the partially exposed basement of the lighthouse actually followed the contours of the exposed bedrock. By fall the lighthouse foundation was complete and all of the outbuildings had been erected.¹⁴

Construction resumed in the spring of 1925. The facility was scheduled to be completed in November. However, it was actually late December before sufficient work was completed to man the lighthouse.¹⁵ The 51 by 60 foot lighthouse was designed to accommodate a crew of four--three keepers and a radio operator--although there was a period when a crew of three maintained the station. Because of the site's remote location, families were not allowed to accompany crew members. The main floor contained four bedrooms, a bathroom, kitchen, and living room. A radio and fog signal room, generator, and fuel tanks were also located on the main floor. The basement contained a coal storage room--for fueling a hot water heating system--and cisterns capable of holding more than 30,000 gallons of water. Rain water siphoned off the roof supplied fresh water to the cisterns. A 14 by 14 foot tower rose above the main floor to a height of 25 feet.¹⁶ The tower housed a Helical Bar Lantern, a kerosene powered light which ran for periods upward of 16 hours a day. In 1926 a radio

beacon with a range of 200 miles was installed at the lighthouse--a first of its kind in Alaska. The completed facility was constructed for about \$175,000.

Duty at the Cape Spencer lighthouse was considered some of the loneliest and most isolated of any facility in Alaska. The four man crew spent upwards of a year on a one-acre island. The rocky shoreline made beach landings extremely difficult. Transport on and off the island was therefore accomplished through the use of a bucket hoist. The men would jump from the boat into the waiting bucket and then be hoisted 80 feet into the air to firm ground. In favorable weather, the crew would venture out in a small outboard-powered skiff to Pelican--and later Elfin Cove--some 20 miles away to pick up mail and groceries.^a In 1939, after the Coast Guard assumed responsibilities for navigation aids, a Coast Guard cutter augmented these supply trips. Bad weather sometimes prevented boats from coming to the island for two months or more. The lighthouse was stocked with a six month supply of food to accommodate such events. Still, some goods would inevitably run out before supplies arrived. Paul Reager, a station keeper at the lighthouse in 1946, recalled that he once substituted brass polish--which was high in citric acid--for lemon juice in a cream pie he was making. The men would likewise save their cigarette butts, and reroll them for later smoking.¹⁷

The lighthouse crew at Cape Spencer stood a six hour tower watch every 24 hours. In addition, the men performed basic maintenance duties and provided weather information to the community of Gustavus and to vessels plying the Fairweather Coast. In ensuing years the facility provided hourly weather reports to Juneau. Despite these chores, boredom loomed as a constant adversary. The men fished and when possible got out in the skiff. Even in later years Cape Spencer was too far out of range to pick up television or commercial radio stations. Books, fresh mail, and model building helped fill the void.¹⁸

The lighthouse complex still appears much as it did when first constructed. Some storm damage in 1936, required the replacement of the boat house, derrick hoist, and wharf. During the 1960s, a helicopter pad was added. In 1974, the lighthouse was fully automated.¹⁹ The facility continues to be under Coast Guard administration. The National Park Service, in cooperation with the Coast Guard and the State of Alaska, has taken an active role in the preservation of this historic structure. Today the Cape Spencer lighthouse's significance to Alaska and the nation is recognized through its placement on the National Register of Historic Places.

^aThe shortcomings of this transport system became particularly apparent during the early 1960s when the lighthouse crew received a tsunami warning (giant wave) during the middle of the night. Crew members were forced to abandon the station and grope their way through the darkness to the neighboring Fairweather Coast. A man in the bow equipped with a flashlight directed them through the hazardous "rock garden." Once ashore, the men climbed to higher ground spending a dismal night with rifles within arm's reach in case they should stumble upon one of the monument's numerous brown bears.

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CHAPTER 5

OF HOMESTEADERS AND MOUNTAIN CLIMBERS

HOMESTEADING AT STRAWBERRY POINT

The singlemindedness with which many entrepreneurs pursued profits in the Glacier Bay region and other parts of Alaska often allowed little room for putting down roots. Local folks complained that too many entrepreneurs only wanted to get in, take what they could, and then get out. The most egregious example of this mentality were probably the Outside cannery owners. The owners brought in most of their supplies from outside, hired outside employees who stayed in cannery housing and went home at season's end to spend their earnings. The owners fought every attempt to be taxed for the resources they exploited.

Alaska based promoters envisioned a core group of permanent citizens who would provide territorial stability and real growth. Many hoped that homesteaders would fill this role, as they had in the contiguous states. To many modern day Alaskans, the concept of establishing a traditional agrarian type homestead seems rather far-fetched. Geography and climate have proved formidable barriers to even the most modern farming methods. When placed within its historical context, however, the idea warranted consideration. Alaskan boosters anticipated that the territory would follow Thomas Jefferson's yeoman farmer thesis, developing permanent settlements based upon agrarian communities as had occurred elsewhere on the American frontier. The throngs of prospectors and the periodic food shortages which accompanied their influx during the late 19th century provided the initial justification for embarking upon such an agricultural experiment.¹

With its damp climate, perennially poor drainage, and mountainous landscape, Southeast Alaska was generally unsuitable for growing grain or many other commercial crops. A small garden of hardy vegetables, with a few bushels left over for sale to local markets, was the best most people could anticipate.² One of the few potential exceptions to this scenario was at Glacier Bay. The receding ice sheet and subsequent outwash plain left behind a broad expanse of glacial till and gently rolling topography in the lower bay region. Here was land from which agricultural dreams could be made. Thus a trickle of homesteaders, beginning in 1914, made their way to the Glacier Bay area to farm the land.

Most of the Glacier Bay homesteaders settled at one of two locations, Strawberry Point or Dundas Bay. Strawberry Point, known today as Gustavus, lies outside of the present park unit boundary. The community's development, however, was intricately linked to the park. The homesteaders were not the first group to utilize the advantages Strawberry point had to offer. For years prior to the coming of white settlers, Strawberry Point had supplied local Hoonah Tlingit with a portion of their subsistence needs. The Salmon River provided ample quantities of silver salmon. Strawberries and other berries were regularly gathered in the

area.^a Early homesteader accounts noted the presence of a Hoonah smokehouse on the Salmon River about a mile up from the present bridge. Likewise discussed was a former ceremonial house which was said to have been located near Point Gustavus within the present park unit.³

The early homesteaders at Strawberry Point staked, farmed, and if lucky, eventually received patent to 320 acres or less of land. By the mid-1920s, the community of Gustavus was alive, if not necessarily thriving.^b Rutabagas, turnips, and other hardy crops were sold to local canneries, in Juneau, or on a few occasions shipped to Seattle. The homesteaders also tried their hands at cattle raising and lumbering to make ends meet. In 1921 Abraham Parker constructed a small sawmill on the Goode River (see Chapter 3). Remains of the mill are still visible today. Parker sold lumber to the local canneries for fish traps and related construction. He also peddled beef to the local canneries and in Juneau.⁴

The presence of the homesteaders caused problems for proponents of a National Monument during the early 1920s. In his 1924 feasibility report, examiner (and future territorial governor) George W. Parks noted the presence of numerous homesteads at Strawberry Point. His report contained a letter from local settlers protesting the inclusion of their property within the monument's boundaries. Parks said the area included an estimated 90,000 acres of agricultural land. He recommended that all of this land be excluded from the proposed monument.⁵ Parks' recommendations were followed. This, however, did not eliminate future difficulties. Bears from within the adjacent monument were a repeated nuisance, preying upon the homesteaders' cattle. Homesteaders could not legally pursue and destroy the marauders. In frustration, the Parkers constructed an eight foot mesh fence which enclosed some 40 acres. This kept most bears out.⁶

President Franklin Roosevelt's 1939 expansion of the park boundaries incorporated the community of Gustavus, thereby reversing the 1924 decision. Local residents were thrown into a state of panic, uncertain if they would be allowed to continue farming or if the NPS would compensate them should it decide to condemn their land.^c Although the settlers were allowed to remain on their land, relations with the park service continued to be strained. Bert Parker, son of Abraham Parker, was unsuccessful in his attempts to lease grazing land within the newly expanded monument. Tensions were eased when the park service gave

^aSeveral Hoonahs filed for title to land in the area under provisions of the 1906 Forest Homestead Act and the Interior Department's Native allotment program. As a result of a shortage of survey money, few of these claims were ever conveyed.

^bResidents settling in the region and receiving homestead patents prior to the Second World War included the Chase, Parker, and White families; Lester Rink, Sam Bouy, Harry Hall, Ruth and Fred Matson Matson, and Hank Johnson.

^cThe impending establishment of a large military airstrip within the confines of Gustavus created further uncertainties. This item is discussed in detail in Chapter 6.

Parker permission to graze his cattle on park land until some future time when for "park service reasons" it was discontinued.⁷ Other complaints were not so easily resolved. By 1941, Gustavus residents were claiming that the park service had allowed the local infrastructure to fall into disrepair. The local dock, bridges, and road were in terrible condition. Furthermore, the community could not expand because of the NPS refusal to allow additional settlement within the monument's boundaries. The territorial government sympathized but could not act to make repairs within the monument. The park service was not particularly sympathetic to the settlers' complaints, stating that the facts of the case failed to provide "any liability by the government for their failure to prosper."⁸

Throughout the 1940s, Alaska Territorial Governor Ernest Gruening, and Congressional Delegate E.L. Bartlett petitioned to have Gustavus excluded from the monument. Success finally came in 1955, when Charlie Parker spearheaded a letter writing campaign which resulted in President Eisenhower signing an executive order removing the 14,741 acre Gustavus tract from the monument.⁹

OTHER HOMESTEADING ACTIVITIES

Much of the Fairweather coastal region, like Gustavus, was incorporated in the Glacier Bay National Monument as part of the 1939 boundary expansion. Existing homesites predating the expansion existed at Dundas Bay and Lituya Bay. None of the sites in these two areas could be referred to as traditional homesteads. Leased from the U.S. Forest Service, secured through mining claims, or merely the result of squatting, these homesites were not founded under homesteading provisions. Rather than focusing on farming as their principal means of livelihood, these individuals were involved in a variety of pursuits, ranging from mining to trapping to fishing and gardening to make ends meet. Still, their longtime permanent residency in the area qualified them as homesteaders in the Alaskan sense when compared against the exploit-and-run mentality of others.

In 1928 William Horseman, commonly known as Doc Silvers (a name he acquired during his career as a professional boxer) and his wife moved to Dundas Bay. With the backing of an Oklahoma City oil well driller and a Juneau merchant, the couple spent the next eleven years prospecting for gold throughout the area. During their occupancy at Dundas Bay, Silvers and his wife occupied three homesites on land leased from the forest service. Their last and most prominent structure was constructed during the mid-1930s on a lovely wooded site some three to four miles from the mouth of the bay. The house was described as "a neat, comfortable, two-room log and lumber bungalow with a lean-to shed."¹⁰ Next door was a large vegetable garden and a chicken coop housing several fowl. With little success in gold mining, Silvers became actively engaged in trapping and commercial fishing to help make ends meet. Silvers leased his boat out to the park service and hoped to become a seasonal ranger, a hope which never materialized. The couple also tinkered with the notion of establishing a guided tour business in the region. With their lease expiring and with no

possibility for park service or other local employment, the Horsemans left Dundas Bay during the early 1940s.

Another Dundas Bay resident, Stanley "Buck" Harbeson, joined Silvers and his wife at Dundas Bay in the early 1930s. Harbeson spent his first season working Silvers' claims. The two men had a falling out, and Harbeson soon constructed a cabin near the Dundas Bay cannery. The cabin burned down two years after construction. Harbeson then built a new "squatters" cabin at the north end of the bay. The new cabin was a one story, four room structure. It was made out of a combination of vertical log poles and 2 by 4 inch studs with an exterior of wood shingles. About 30 feet behind the cabin, Harbeson constructed a woodshed. A wooden boardwalk connected the two buildings.¹¹ Harbeson also constructed a small one room cabin a couple of miles upstream from the mouth of the Dundas River. The cabin served as his headquarters during winter trapping operations along the river. During the 1930s Harbeson ran joint operations with Horace Ibach, who was in the process of tearing down the former Dundas Bay cannery. The two men constructed a total of five small lean-to cabins along the east side of the Dundas River to facilitate their venture.¹²

Aside from his joint venture with Ibach, Harbeson avoided socializing with other people. On occasion the recluse would row 20 miles to Elfin Cove to pick up supplies. Harbeson was even known to row to Juneau--an eighty mile journey--a few times. A large vegetable garden and hunting supplemented his meager trapping income. Harbeson also toyed with marten ranching, one of many fur farming fads which sprung up during the 1920s and 1930s. Aside from a female marten which he kept as a pet, Harbeson's ranch never materialized. Still, Harbeson persisted in staying, remaining at Dundas Bay until his death in 1964.¹³

To the northwest of Dundas Bay, at Lituya Bay, lived another recluse, Jim Huscroft. Unlike Harbeson, Huscroft was known as a gregarious fellow who welcomed the occasional prospector or mountaineering party which came to the bay. Huscroft had reportedly been born in Steubenville, Ohio, and it was said that he had made and lost three fortunes before settling at Lituya Bay. Huscroft arrived at Lituya Bay about 1917, along with several other prospectors. When his partners left Huscroft decided to remain behind, constructing a cabin on the north side of Cenotaph Island. Later, during the 1920s, he constructed a new cabin on the west side of the island. Rather than continue with prospecting, Huscroft turned his attention to fox farming. Huscroft and his partner, a Norwegian fisherman named Ernie Rognan, tried their hand at fox farming for several years. In the early 1930s they finally gave it up as a lost cause.

In 1930 Huscroft and Rognan constructed a 26 by 16 foot bunkhouse next door to the cabin. The bunkhouse was constructed of square logs with a large window facing the entrance to the bay. An open-sided shed roof connected the bunkhouse to the cabin. Visitors referred to the bunkhouse as "Huscroft Hotel." Nearby was a large garden plot, and a root cellar where Huscroft kept his garden produce and canned goods. An abundant supply of wild berries and

salmon supplemented these stores. In addition, Huscroft had a trapping cabin about seven miles northwest of Lituya Bay, on a small lake near Echo Creek.¹⁴

A man of simple pleasures, Huscroft would make an annual trip to Juneau to pick up chewing tobacco, a tub of salted mackerel, and other basic supplies to augment his provisions. In addition, he would collect a year's worth of newspapers--saved for him at the local Elks Lodge--and pick up his mail. On one such trip Huscroft was surprised to find his mailbox brimming with letters from outside. Seven of the letters contained proposals for marriage. It seems that Brad Washburn, a member of a recent Fairweather mountaineering expedition, had mentioned Huscroft in a story he wrote for *National Geographic*.¹⁵

Little today remains of Huscroft's homesite. The demise began in 1936 when a severe fall storm created a giant breaker wave which hit Lituya Bay. Huscroft and a young friend, who was visiting, escaped to higher ground as the wave swept over Cenotaph Island. The wave destroyed some of Huscroft's outbuildings and his garden. Shortly thereafter Huscroft's health began to fail. He was never able to complete repairs. In 1939 Huscroft died.^d A subsequent earthquake-generated wave of even greater magnitude, in 1958, wiped-out most remaining evidence of the homesite.¹⁶ Recent surveys have turned up a few scattered remains of fox pens but little else.

MOUNTAIN CLIMBING MADNESS

During the 1920s and 1930s the Fairweather Mountain Range hosted numerous climbing expeditions. Part adventure tourism, part exploration, and part scientific inquiry, these expeditions--reminiscent of late 19th century Glacier Bay ventures--succeeded in conquering major peaks of the Fairweather Range. Among the peaks climbed or extensively investigated during this period were the 15,300 foot Mount Fairweather, 12,789 foot Mount Crillon, and 10,000 foot Mount Bertha. As the only suitable harbor on the outer Fairweather Coast, Lituya Bay played a prominent role in these efforts.

In June 1926, Dr. William S. Ladd led an expedition to Mount Fairweather. The expedition's goals were two-fold: first, to undertake a reconnaissance of the region, and second, to attempt if practicable, an ascent of the mountain. After spending the night at Lituya Bay, Paul Kegel of Juneau, owner of the power boat *Eurus*, ferried the Ladd expedition to the north side of Cape Fairweather for an assault on the mountain. With only limited information, to rely upon, Ladd and his comrades, A.M. Taylor and Allen Carpe, decided to attack from the northwest. Miles of dense brush had to be traversed before they could begin the actual ascent. This time-consuming endeavor limited the amount of supplies

^dIn 1940 Brad Washburn, on behalf of the Harvard-Dartmouth Alaskan Expeditions, received permission from the NPS to fix a brass plaque on Cenotaph Island commemorating Huscroft.

the expedition could transport. During their hike to the base of the mountain the men took notes on the topography, much of which corrected sketchy information found on their maps.¹⁷

On June 20 the party reached the 9500 foot level. Difficult terrain requiring the extensive use of ice axe and shovel work had slowed their progress. Deep snows coupled with continuous daytime melting further hampered their advance. The climbers had been forced to limit their climbing to the hours between 2 a.m. and 9 a.m.--after the freezing nights had hardened the snow enough to create a firm crust. This problem of overcoming the deep snows of the Fairweather Range would prove a continual hindrance to future expeditions. With their supplies running low and the route ahead seemingly as formidable as that which they had just climbed, the party decided against trying to reach the summit and headed down the slope.¹⁸

Despite not reaching the top, the 1926 expedition could not be called a failure. The party's notes on climbing conditions, required gear, weather, and the logistics of climbing in the remote Fairweather Range provided invaluable information to future expeditions. The Ladd party also took numerous photographs and gathered topographical information which the International Boundary Commission used in updating its maps.¹⁹

In 1931 Ladd led a followup to the 1926 attempt. The party once again included Taylor and Carpe, as well as Terris Moore. This time the expedition set out earlier than in 1926, reaching the mountain and establishing a base camp at the 5,000 foot level on May 24. Above them lay a fan of avalanched material beyond which rose a series of buttresses to an altitude of 11,000 feet. The party decided to travel light, leaving the bulk of their gear at base camp. Deep snow and the threat of continual avalanches forced the climbers to travel during the early morning hours.²⁰

The first day out of base camp went easily. The 20 degree weather had created a hard snow crust. Their luck changed drastically during the following days as fog, snow, and freezing rain storms beset the climbers. Wet gear and an increased threat of avalanches from new snow made the situation worse. On May 31, gale force winds forced the party to dig in at the 9,000 foot level. The group was holed up for two days amusing themselves with cribbage, gear repair, and readings from a pocket edition of Shakespeare. On the night of June 1 the storm broke with clear skies and cold temperatures at 9 degrees fahrenheit. Because their food had nearly run out the climbers decided that two members of the group would return to the 5,000 foot level leaving their food behind. On June 8, with temperatures near zero, the remaining climbers reached the summit.²¹

Members of the Harvard-Dartmouth Alaska Expedition also made a series of climbs in the Fairweather Range. Their first was in 1930, with follow ups in 1932, 1933, 1934, and 1940. The group became regular guests at the Huscroft Hotel which they utilized as their expedition headquarters.

In 1930, Bradford Washburn led a group 25 miles up Desolation Valley to scale Mount Fairweather. Poor weather and a shortage of supplies caused them to turn back at the 6500 foot level.²²

In 1932 Washburn led another expedition to Lituya Bay in hopes of pioneering a new route up Mount Fairweather. Bob Monahan was sent ahead to Juneau to make preparations for the 1932 climb. There he met Ray Taylor, a forest service employee who was conducting plant succession studies at Glacier Bay and would accompany Monahan to Lituya Bay. The two men chartered passage with Tom Smith, skipper of *Yakobi*. Smith timed their arrival at Lituya Bay to coincide with the high slack tide for an easier approach. Smith joked with the two men, telling them that the best way to secure safe passage through the bay's treacherous entrance was to "circle three times, have three drinks, aim for it, and hope for the best."²³

After safely entering the bay, the boat headed to Cenotaph Island with some fresh supplies for Jim Huscroft. Monahan and Taylor bivouacked at Huscroft's, making surveys of the surrounding beaches and uplands. Monahan's primary mission was to hike to a small lake near Mount Fairweather and determine whether it was free of ice. The expedition hoped to land a float plane on the lake and drop off their gear. Huscroft assured Monahan that the lake was by now ice free. Monahan therefore decided against the need to hike through the many miles of dense foliage up to the lake. Shortly thereafter, a plane arrived with the rest of the expedition. Washburn and the pilot took off to survey the lake. In less than an hour they arrived back at Huscroft's place. They reported in Taylor's words that, "The lake was frozen over and Bob and I were in the dog house."²⁴ The group had to change their plans and climb Mount Crillon instead. The 1932 attempt on Crillon was unsuccessful. The Harvard-Dartmouth party again met failure in 1933 but succeeded in reaching the summit of Crillon in 1934.

During their visits the group carried out a variety of mapping and glacial research studies, and participated in aerial photographic flights. The use of airplanes for glacier mapping work marked a significant technological advancement. Information equivalent to an entire summer's worth of work was accomplished in a matter of hours. Likewise of interest were the party's elevation sightings which reestimated the height of Mount Crillon and their measurements to establish the depths of the glacier carved Crillon Lake. In conjunction with this the party made a series of readings to determine the rate of movement of the South Crillon Glacier.²⁵ The results of their findings appeared in numerous geographical, scientific, and mountaineering publications.

The 1940 Harvard-Dartmouth expedition was noteworthy in several respects. It marked the group's final trip to the Fairweather Range. Rather than start from Lituya Bay, the trip originated from Glacier Bay's Hugh Miller Inlet. The party's goal was the 10,000 foot Mount Bertha. To reach their goal, some 30 miles away, the party relied upon the use of sled dogs for a portion of the journey. The use of the dogs proved quite successful. In addition to bringing still cameras, the party packed in a motion picture camera to film the

climb. A woman, Mrs. Barbara Washburn, accompanied the group. Climbing expeditions of this period included few women.²⁶

The party left Juneau in late June, establishing a base camp at the 3,800 foot level. Another camp was established at the 7,000 foot level. Three members of the party remained while Mrs. Washburn, her husband and another climber made the final ascent. The warm weather caused slow going, requiring the climbers to spend six days making the final assault before reaching the summit of Mount Bertha on July 30.

The contributions of the climbing expeditions in the Glacier Bay region extended beyond the personal gratification the climbers felt in successfully scaling the peaks. Their scientific observations contributed to the further understanding and more accurate mapping of the region. The climbers represented a new type of user constituency at the monument. Furthermore, the numerous articles which the climbers published about their exploits helped to renew general interest in the monument. This was at a time when the NPS was struggling to re-establish tourism levels equal to those enjoyed during the late 19th century.

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CHAPTER 6

THE SECOND WORLD WAR COMES TO GLACIER BAY

THE PRE-WAR SETTING

The year 1939 stands out as a time of change in the Glacier Bay region. President Roosevelt, on April 18, had signed an executive order expanding the boundaries of the monument to incorporate Excursion Inlet, Gustavus, and the Fairweather Coast. This made the 2.29 million acre monument the second largest park unit in the nation--after Alaska's Katmai National Monument. The nation was creeping out of the economic depression which had gripped it throughout the 1930s. Returning prosperity, coupled with growing fears over travel abroad, signalled a renewed interest in visiting national parks. Finally, nations in Europe and Asia were either preparing for or had already found themselves dragged into, the steadily escalating onslaught which became the Second World War. Its repercussions would soon be felt at Glacier Bay.

As discussed in previous chapters, the monument's 1939 expansion forced the NPS to deal with a host of new issues. Chief among these were homesteaders, fox farms, canneries, Native subsistence, and sawmills. While the park service was addressing these tasks it simultaneously began exploring the issue of tourism at the monument. The park service began to consider the prospect of cruise ships returning to Glacier Bay in 1937. An impetus for this consideration was a 1936 U.S. Geological Survey report stating that other readily accessible tidewater glaciers were melting back at a rate which would require cruise ships to seek out alternative glaciers. Now that it was once again an accessible route, Glacier Bay could figure prominently in future cruise operations.¹

In 1939 the NPS launched a plan for meeting the anticipated resurgence in visitations to the monument. By now passenger ships belonging to the Alaska Steamship Company, Pacific Steamship Company, Canadian Pacific, and the Canadian National Railways regularly steamed past Glacier Bay. One plan (in which the soon to be Territorial Governor Ernest Gruening seems to have played a role) called for acquiring the cruise ship *American Legion*. The ship had recently come into the possession of the federal Maritime Commission and could be transferred to the NPS at no cost. NPS would simply be required to pay for upkeep and maintenance of the vessel. With its modern plumbing, dining facility, and fully furnished staterooms, the ship seemed ideally suited for park service needs as a floating hotel. The vessel could accommodate 170 passengers in first class style, and would eliminate the need for constructing land-based administrative facilities.

Proponents of the plan solicited support from Interior Secretary Ickes arguing that the ship would serve as a catalyst for priming the pump of Alaska tourism development. They further argued that the "current" advisability against travel abroad created an unparalleled

opportunity for "bringing tourists to regions under the American flag."² The proposal, however, was never implemented. This may have had to do with the short time frame in which the Department had to act. *American Legion*, unless saved quickly, was scheduled to be hauled away for salvaging. To prevent this the President would have had to request that the Maritime Commission direct otherwise. Congressional approval may have also been required to consummate the deal.³

Failing in this endeavor, tourism proponents set about making other plans for accommodating anticipated visitors. In the fall of 1939 an NPS study recommended the establishment of a land based facility at Sandy Cove within the confines of Glacier Bay. It was suggested that Civilian Conservation Corps labor be used to construct a series of cabins at Sandy Cove. Hiking trails leading to nearby Mount Wright and bear viewing grounds would be constructed. Docking facilities at both Sandy Cove and Muir Inlet would also be erected. Tourists would have the luxury of cruising the bay's wonders in concessionaire boats. For local flavor, Hoonah Tlingits would be hired to serve as guides and provide some boat service.⁴

Other developments heightened the likelihood that Glacier Bay would soon be seeing an increase in visitors. Cruise line officials were expressing interest in offering passengers an extended stopover at Glacier Bay. Augmenting this was the U.S. Coast and Geodetic Survey's efforts to complete navigation charts of Glacier Bay. This would make it possible for large ocean liners to sail into Sandy Cove. The NPS viewpoint was expressed in superintendent Frank Been's 1940 trip report in which he said:

The trip should not be the momentary one now given travelers by a fleeting view... but a stop-over for two days or more. I am sure, if travelers could experience the contacts with glaciers and learn the story revealed to them in Glacier Bay, they would return to their homes with a more complete appreciation...⁵

Finally, there was the anticipation that it was only a matter of time before a major airfield was constructed at Gustavus, bringing with it a new traveling public.

GUSTAVUS POINT FIELD

Large airfields were generally not constructed within the confines of a national park unit. The circumstances unfolding in 1939 and 1940, however, were anything but ordinary. In Europe Adolf Hitler was gobbling up his neighbors, precipitating confrontation with France and England. Across the Pacific, Japan's military-led government was carving out spheres of influence in Asia. With growing unease the American military began to assess the situation, acknowledging that most of coastal Alaska lay vulnerable to enemy attack and possible occupation. A decision was made to make Alaska more defensible. Primary among

these efforts was the construction of a string of airfields under the auspices of the Civil Aeronautics Board which could serve civilian and, if need be, military purposes.

In 1938 Congress had passed the Civil Aeronautics Act. The act made possible the establishment of airports and radio range stations in Alaska. Many of the proposed sites targeted military needs. However, Alaska's economic boosters were also aware of the potential civilian benefits to be derived from a string of airfields. In particular, boosters focused on Alaska's strategic position along the so called "Great Circle Route" to the Orient. From the U.S. west coast, the shortest route to Japan and Southeast Asia was along an arc which passed directly through Southeast Alaska. Airplanes would be required to stop and refuel in Alaska on a regularly scheduled basis.⁶ This could prove a boon to the tourist industry, augmenting and providing feeder routes to locations which steamships could not reach.

The ramifications of the construction program were soon felt at Glacier Bay. An army engineering report had identified the flat 25 square mile tract of land surrounding Gustavus as the "best location for an air base between Juneau and Nome."⁷ The implications of this report were not lost on the Gustavus community or the NPS. Several of the homesteaders had given up hope of continuing to live at Gustavus after the monument's 1939 boundary expansion. The likelihood of an airfield presented new economic opportunities catering to the traveling public. For others, the prospect of an airfield provided a chance to profitably dispose of their land.⁸ From an NPS perspective, the advent of an airfield within the monument was less satisfactory. Any benefits gained from greater tourist accessibility had to be weighed against a host of nagging management concerns. NPS Director Newton B. Drury went on record saying the park service was opposed to the policy of constructing airfields in national park units. However, the Director said the NPS would not obstruct the construction of an airfield at Gustavus. Drury stressed that the park service was cooperating in the spirit of national defense, recognizing that Gustavus was the only suitable site in the region for a heavy bomber base.

Drury urged the government to adopt a policy prohibiting similar construction in other park units, fearing that airfields would destroy visitor's rustic wilderness experience. Drury further asserted that one of the best uses of park units during wartime would be as recreation sites for war-weary civilians and armed services members on leave. The park service would, however, take steps to inventory its resources and make them available in the event of dire wartime necessity.⁹

Both Drury and Southeast Alaska boosters anticipated that the airfield would become a major hub for commercial aircraft traveling between the Orient and the lower 48 states. It could likewise serve as a transfer hub for local commercial lines. Drury feared the possibility of bad weather grounding flights at Gustavus for days at a time. He stressed the need for the government to construct adequate facilities to house and feed stranded passengers.¹⁰

In the spring of 1940, a series of events occurred which seemed to assure the construction of the Gustavus airfield. On May 27, Representative Jennings Randolph (W. Va.) spoke to the opening session of the National Aviation Forum. In his speech, Randolph stressed the need for developing an air transport network in Alaska to meet civilian transportation and cargo needs. The establishment of airfields would likewise serve as a vital link in the nation's defense network. Following Randolph's speech was a June 5 announcement saying that the Civil Aeronautics Authority (CAA) had approved the establishment of an air route between Juneau and Seattle. It was anticipated that Gustavus would serve as an alternate landing sight during those frequent occurrences when Juneau was weathered in. Coinciding with the CAA's announcement was an announcement from Governor Gruening saying that the construction of Alaska airfields was now assured. The military would be providing funding to construct the new airfields as well as to upgrade several existing sites.¹¹

Much of the impetus for making this funding a reality had come at the repeated prodding of General Simon B. Buckner, the officer in charge of Alaska's military defense. The result was that by the fall of 1941 a string of CAA airfields was nearing completion at several locations, including Gustavus. The Gustavus Point Field consisted of two paved and lit runways--one 7,500 feet long, the other one mile long. Maintenance shops, housing facilities, radio control towers, and a service road were constructed to support the operation. The field never saw the heavy bomber use as anticipated when first constructed. Flying heavy bombers from Gustavus to the military confrontation with Japan in the weather-plagued Aleutian Islands was not practical. However, the field was used for a variety of military support roles.¹²

As the military theater moved across the Pacific, the Gustavus Point Field came under increasing civilian use. By 1944, Pan American was already utilizing the strip and was pursuing the idea of building a hotel to accommodate customers. The park service and local residents were likewise considering the future use of the airfield. The airfield complex was supposed to come under park service management, once the war ended.

On October 2, 1944, William C. White, owner of a 160 acre Gustavus homestead, visited the NPS Regional Director, O.A. Tomlinson, in San Francisco to discuss the construction of facilities to serve future tourists. The two men agreed that Glacier Bay's scientific and scenic aspects, in combination with a quality airfield, would make the monument a prime destination for tourists. There was likewise an anticipation that Gustavus would become Southeast Alaska's major airport, eclipsing the weather-plagued Juneau facility.¹³ These possibilities placed the park service in a dilemma. Increased use would mean more flights, more congestion, and more facilities, all to the detriment of a wilderness experience. The presence of the airfield at Gustavus, it was feared, would serve as a catalyst for the establishment of airfields inside other remote park units. The issue was resolved when the CAA took over the airfield after the war.

The Gustavus Point Field never developed into a major transportation hub. Visitor use likewise languished for several years after the war, thereby placing minimal demands on the

airfield. A road was constructed in 1955 linking the airfield to Bartlett Cove. The establishment of the Glacier Bay Lodge at Bartlett Cove during the mid-1960s was a result of this new accessibility. The airfield remains much as it did in 1945. Some scattered CAA structures still remain. Local commercial operators have since erected a few small terminal offices. Today, the airfield plays a significant role in providing visitor access to Glacier Bay.

THE EXCURSION INLET MARINE TERMINAL

In August 1942 the U.S. Army embarked upon a massive but highly secret construction project on the east shore of Excursion Inlet. Before the war was over the facility, known as the Alaska Barge Terminal, would employ 3,000 workers and cost nearly \$18 million.¹⁴ The impetus for constructing the barge terminal was two-fold. On the morning of June 3, 1942, a Japanese fleet steaming off the Aleutian Islands launched an attack upon the military base at Dutch Harbor. The action was part of a diversionary feint designed to lure the American Pacific fleet away from Midway Island, Japan's primary objective. Having received and deciphered Japanese radio traffic concerning the operation, the U.S. Pacific Commander Admiral Chester W. Nimitz, chose to concentrate his forces at Midway. The ensuing battle was a Japanese defeat and proved to be a major turning point in the war.¹⁵ To coverup the defeat, the Japanese military embarked upon an elaborate propaganda campaign asserting that the Aleutian Islands and not Midway had been their primary objective. In order to fully sell the coverup the Japanese military felt it imperative to occupy and remain in the Aleutians.¹⁶ The original Japanese plan had called for temporary occupation of the Aleutian chain as an additional diversionary device. It was this change in strategy which ultimately led to the construction of a supply terminal at Excursion Inlet.

Lieutenant General John DeWitt, head of the U.S. Army Western Defense Command in San Francisco immediately set about the task of ousting the Japanese from the occupied Aleutian islands of Kiska and Attu. The Japanese takeover was viewed as a blow to American morale and had to be dealt with quickly and effectively. To support the retaking of the islands, Dewitt embarked upon a plan for a major amphibious assault.^a Such a plan, to be successfully implemented, would require extensive amounts of supplies. The supplies needed to support the operation would have to be transported north on ships. Unfortunately, ocean going cargo ships were in critically short supply as were military escort vessels. To overcome these impediments, the military devised a plan to ship supplies north on barges. The barges would sail up the Inside Passage from Seattle and Prince Rupert, British Columbia. The numerous offshore islands would help screen the barges from enemy attack and provide protection against seasonal storms. Upon reaching Southeast Alaska, the cargo

^aThe amphibious operation to retake the Aleutians served as a shakedown for the many Pacific Island hopping assaults which would soon follow.

would be conveyed to ocean going vessels to complete the final leg of the trip across the turbulent Gulf of Alaska.¹⁷

The only problem which still remained was the construction of an adequate deep water staging facility in Southeast Alaska. Under ordinary circumstances, Juneau would have been the obvious choice. However, military strategists perceived Juneau as being vulnerable to enemy attack. A March 1942 army engineering report suggested Cape Spencer, lying on the outer Fairweather Coast, as a suitable terminal site. The site was rejected as being too open to storms from the Gulf of Alaska. Excursion Inlet, with its well-protected deep water harbor, abundance of timber, and closeness to the Gustavus Point Field seemed a logical alternative. Thus on August 12, 1942, the military began sawing down trees at Excursion Inlet for what was to be a massive and secretly built barge terminal.¹⁸

The NPS was largely kept in the dark about the project. NPS Superintendent Frank Been heard of the ongoing construction from forest service personnel during a visit to Juneau.^b Upon further inquiry, Been was told that the project would be immense requiring some 20,000 to 30,000 log pilings cut from Excursion Inlet. In addition, the park service would need to transfer land in the inlet to the War Department. The park service saw little chance of mitigating these potential threats to the monument, and resigned itself to accepting such urgent military necessities.¹⁹

Terminal construction was completed in November 1943. The base covered some 638 acres of land located on the inlet's east side just south of the park unit boundary. Over 800 buildings were erected including warehouses, cold storage buildings, a 200 bed hospital, and quarters for nearly 4,000 officers and enlisted troops. A fresh water stream was diverted to supply a reservoir blasted from the nearby mountain. In total, nearly a million cubic yards of rock were excavated to provide fill material and facility space. Facilities included over 500,000 square feet of open storage area, a 1.5 million gallon tank farm, and three docks some 1,000 feet each. The port could accommodate nine ships, six barges, two ammunition ships, and two tankers at one time.²⁰

A sawmill and equipment shed were constructed at the head of the inlet to provide a ready supply of timber. Tractors hauled the timber down to the water for transport to the construction site. On the west side of the inlet, the military constructed a powder magazine. The army also established a salmon fish camp consisting of a smokehouse and tent platforms, on a small stream west of the inlet on Icy Strait. At one point the military contemplated the construction of a road from Gustavus to Excursion Inlet as well as a road to the newly developed Alaska Highway. Although neither road was completed, the military did construct about 20 miles of road at Excursion Inlet.²¹

^bBeen was superintendent of Mount McKinley National Park. His responsibilities, however, included supervision of the unstaffed Glacier Bay National Monument.

The Alaska Barge Terminal served for only a few months in the capacity intended. By the time the facility was completed in November 1943, Kiska and Attu had been retaken and the main theater of operations had moved beyond Alaska. Any potential Japanese threats to shipping had largely vanished and there was once again an abundance of cargo ships. During its short lifespan, some 2,000 black troops from the 483rd Port Battalion were shipped in to operate the facility.²² This use of black troops at Excursion Inlet and for construction of the Alaska Highway, in "non-traditional roles," was a significant step towards the 1948 integration of the military services.^c

The military decided to mothball the terminal leaving only a small caretaker crew, of a few hundred troops, to maintain the facility. Word of the terminal's construction and apparent abandonment finally leaked out to the press in 1945. On March 7, the *San Francisco News* carried a story entitled "Army Unveils White Elephant." The story described how the military, under a veil of secrecy, had constructed a \$17.3 million terminal only to abandon it shortly after completion. Constructed on a "cost plus fixed fee basis," the article called the terminal an extravagant white elephant foisted upon the American taxpayer. With no apparent post-war value, the military decided to tear the facility down rather than call further embarrassment upon itself. The military estimated that nearly 12 million board feet of lumber could be salvaged plus another \$3 million worth of other critical supplies.²³

To save money the army decided to enlist German prisoners of war (POWs) for the task of dismantling the terminal. In 1945 nearly 400,000 German POWs were being held in facilities throughout the country. Many of them were put to work, in accordance with the Geneva Convention, performing general labor tasks to augment the civilian labor shortage. Therefore, in June, 700 German POWs were shipped north to Excursion Inlet to dismantle the barge terminal.^d Many of these Germans had served under General Rommel in North Africa and been POWs since 1943. Some minimal modifications were made to the terminal to accommodate the POWs' arrival. A huge repair shop was converted to barracks. Facilities were also made available for use as a barber shop, clothing shop, and post exchange. A large fence topped with barbed wire encircled the compound. The primary barrier against escape, however, was the terminal's remote location. Prisoners were shown on a map where they were and warned about the ferocious bears and unfriendly Natives living in the area. These deterrents proved quite satisfactory. Attempted escapes were made

^cBlack troops had generally been limited to performing labor intensive non-mechanized assignments at stateside locations. The use of black troops in Alaska for more complex support roles helped break down traditionally held stereotypes.

^dWith the surrender of Germany in May 1945, the U.S. government found itself saddled with the immense task of repatriating POWs. This job would take more than a year. The dismantling of the Excursion Inlet facility was just one of numerous tasks that kept the POWs busy while awaiting their repatriation.

on only two occasions and in both cases the prisoners returned within a few days, glad to be free from the dense mountainous forests and unrelenting mosquitos.²⁴

The demolition was completed in November. By January 1946 the POWs had been shipped stateside for passage home. Thirteen million board feet of lumber was salvaged plus some 10,000 tons of building materials and equipment. Some of this material went to rebuild the nearby village of Hoonah which had suffered a terrible fire in June 1944. The local residents were furnished with temporary living quarters at the marine terminal. At one point the military offered to give Hoonah residents the entire terminal as a new village site. The villagers declined the offer but did accept an offer from the War Housing Authority to help rebuild the village. In total, some 80 houses were constructed at Hoonah for a cost of \$3,500 each.

Not all of the Excursion Inlet terminal facilities were destroyed. On November 29, 1946 the government announced a sale of the remaining structures which included 15 buildings, the reservoir, the docks, and a large cold storage warehouse. The cold storage warehouse and associated outbuildings were eventually purchased for use as a salmon processing plant to replace a nearby cannery which had burnt down. This facility still remains in operation today. The officers' quarters was purchased and remodeled for use as a hunting and fishing lodge. Other remnants left behind included the sawmill, powder magazine, and fish camp.²⁵

In order to protect the monument's integrity the park service decided to relinquish administration of all NPS land lying on the east side of Excursion Inlet. This land was handed over to the forest service after the war.

CONCLUSION

Military operations in the Glacier Bay region were little more than a microcosm of a much larger event. Likewise, in retrospect, their contribution to the success of the war effort was negligible. This does not, however, lessen the historical importance of these projects. At the time of their construction, the Second World War undertakings at Glacier Bay were viewed as a valuable component of an overall U.S. military strategy. That the facilities were never utilized for their intended purpose could be viewed as the product of poor wartime planning. However, their limited usage could also be interpreted as a by-product of the American military's fighting capabilities. U.S. forces operating in the Pacific theater made a series of advances which quickly made many frontline support facilities obsolete. Thus, Glacier Bay military facilities stand as a testimony the American soldier rather than simply poor planning.

Endnotes to Chapter 6

1. Earl A. Trager memo to Dr. Bryant of 18 May 1937, GLBA.
2. Ernest Gruening memo to the Secretary of the Interior of 6 March 1939, National Archives, NPS Central Classified File, RG 79, Box 2226, GLBA File 201.
3. Ibid.
4. NPS Acting Supervisor of Research and Information memo to the Director of 13 October 1939, National Archives, NPS Central Classified File, RG 79 Box 2226, GLBA File 201.
5. Frank Been memo to the Director of 5 September 1940, Mt. McKinley National Park.
6. Ernest Gruening, *The State of Alaska* (New York: Random House, 1968), 436.
7. DOI, NPS, *Glacier Bay Expedition 1939*, by Earl A. Trager (Mt. McKinley National Park: NPS, 1939), 8.
8. Ibid., 16.
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13. Tomlinson memo.
14. Lyman Woodman, "German Prisoners: The POW Camp at Excursion Inlet," *The Alaska Journal* 14:4, 1984, 16-17.
15. Brian Garfield, *The Thousand Mile War* (New York: Bantam Books, 1982), 12, 24-25.

16. Ibid., 102.
17. "German Prisoners," 16, 18.
18. Ibid., 18; Donald Guimary, *Salmon Canneries in Southeast Alaska: A Documentation of Selected Historic Salmon Canneries and Cannery Sites* (Anchorage: 1983), 7; Lyman Woodman, *700 German Prisoners of War in Alaska* (GLBA: NPS), 1.
19. Frank T. Been memo to O.A. Tomlinson of 8 September 1942, NAPSR, RG 79, Central Classified Files, RG 79, Box 90, GLBA File; O.A. Tomlinson memo to Newton B. Drury of 9 September 1942, NAPSR, RG 79, Central Classified Files, General Records, Box 90, GLBA File.
20. "German Prisoners," 18; *700 Prisoners*, 2; Guimary, 7.
21. *700 Prisoners*, 2; Robert E. Ackerman, *Archeological Survey GLBA, Southeastern Alaska Part II* (Pullman, Wa: Washington State University Laboratory of Anthropology Report of Investigations No. 36, 1965), 3; Theodore Catton, *Land Reborn: A History of Administration and Visitor Use in GLBA* (Anchorage: NPS, 1995), 92-93.
22. *700 Prisoners*, 2, 8.
23. "German Prisoners," 20.
24. "German Prisoners," 20; *700 Germans*, 5-6.
25. Alaska History Class, *Hoonah History* (Hoonah, Alaska: Hoonah Public School, 1973), 52; *700 Germans*, 9; Ackerman, 2-3.

CONCLUSION

Preceding chapters have underscored the rich and diverse human occupancy of the Glacier Bay region. In essence, the historic resources study describes an occupancy which was, in large part, limited through the forces of topography and climate. However, offsetting these influences was a bountiful supply of natural resources which contributed to human settlement and exploitation of the region.

The Tlingit people--and other Alaska Natives--developed a lifestyle which adapted to and drew advantageously upon the region's natural bounty. Food, clothing, and shelter were extracted from within the confines of Glacier Bay and along the outer coast. Unfortunately, glacial advance and other physical processes destroyed much of the evidence of this early occupation.

The arrival of the first Europeans upon the Fairweather Coast, during the 18th century, marked a period of transition for the Tlingit people and the region. Russian, English, French, Spanish, and American vessels scoured the coast in search of sea otter and territorial conquest. This competition culminated in the establishment of permanent Russian outposts in Southeast Alaska. It likewise contributed to the decimation of the sea otter population and armed conflict with the Tlingits.

Russian dominance in the region came to end in 1867 following the United States' purchase of Alaska. The immediate impact of this transaction upon Glacier Bay was negligible. It was not until John Muir's 1879 reconnaissance and the publication of his Glacier Bay discoveries that the area began to experience the full impact of "Americanization." Building upon the glacier gospel of John Muir, a variety of scientists and adventuresome tourists came to study and experience the natural wonders of Glacier Bay. It was through the efforts of such enthusiastic proponents that Glacier Bay was declared a national monument in 1925.

The late 19th and early 20th centuries also saw the influx of numerous entrepreneurs to the Glacier Bay region. Commercial fishing, mining, fox farming, homesteading, and logging all took place within the confines of the monument. Such measures, rather than preserving the region as a natural set aside, sought to exploit the region's economic potential. In retrospect, these efforts may be interpreted as an extension of the American frontier experience. This experience urged Euro-Americans to continue their manifest destiny through the development and exploitation of Alaska. The physical evidence of such activities in the Glacier Bay vicinity remain a visible reminder of these efforts.

The final phase of the Glacier Bay National Park and Preserve historic experience, as outlined in this study, addressed the park's role during the Second World War. Perceived Japanese overtures of aggression culminated in the bombing of Pearl Harbor and subsequent occupation of the Aleutian Islands in 1942. Glacier Bay's strategically favorable position and natural resource assets made it an ideal location for establishing military air and seaborne

support facilities. Although they never played a pivotal role in the war effort, these facilities were a contributing part of the U.S. military's wartime strategy. Remnants of these activities remain today.

In sum, this study provides park unit managers with a guide which should assist in interpreting Glacier Bay's historic properties and managing these properties for the enjoyment of future visitors. The study likewise provides readers with a framework for understanding the inseparable linkages between nature and human activity in the Glacier Bay region.

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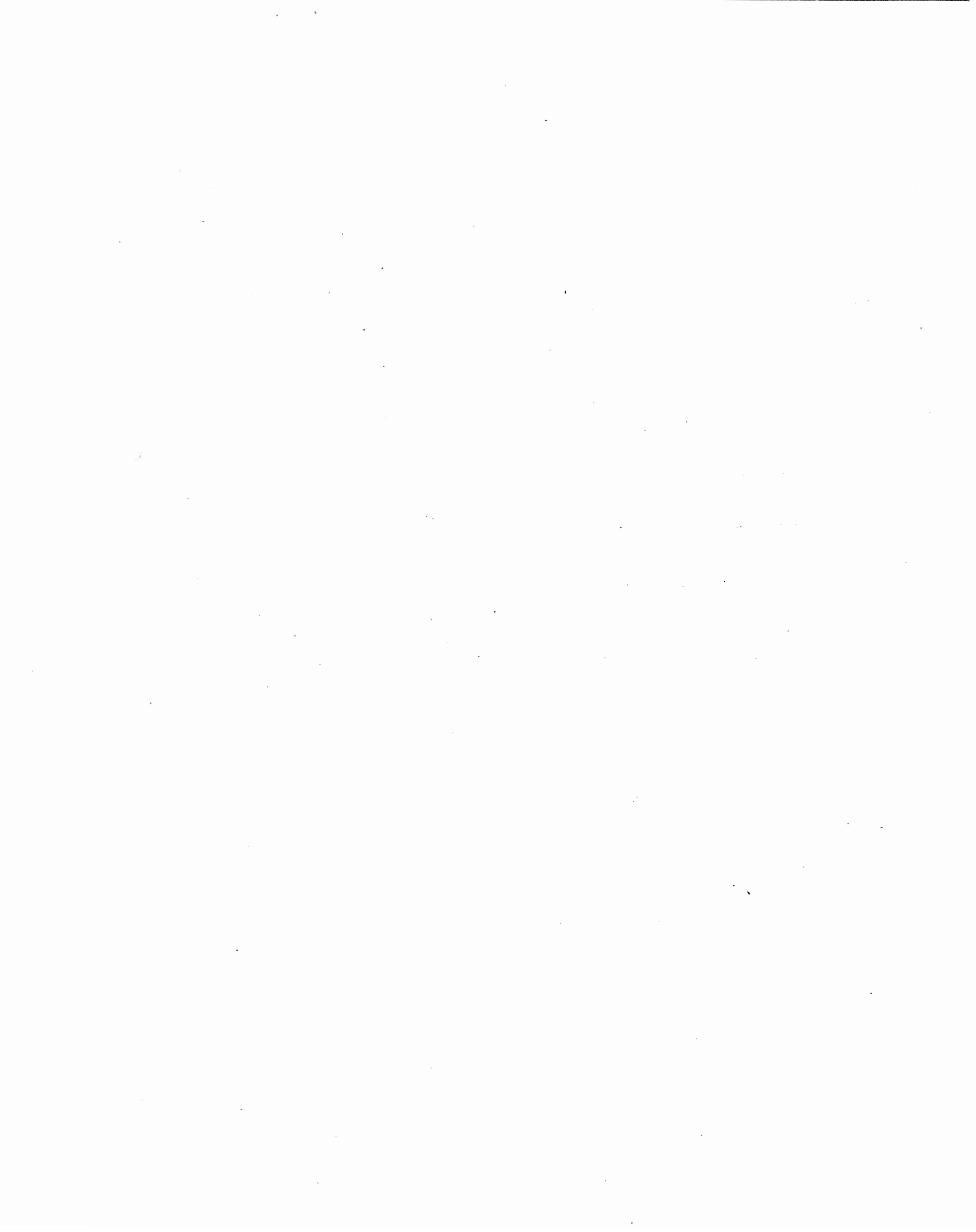
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