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SEA OTTER DISTRIBUTION AND ABUNDANCE IN ALASKA

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The following description of sea otter distribution and abundance is based on a variety of surveys and other information available as of January 5, 1973.

Most population estimates of sea otters have been based on aerial surveys made from fixed-wing aircraft. Kenyon (The sea otter in the eastern Pacific Ocean, 1969) made estimates based on the assumption that he saw 50 to 75 percent of the sea otters from the air. He used these estimates to provide a comparative picture of the status of sea otter populations throughout Alaska but recognized that the actual numbers might be low. Lensink (J. Mammalogy 41(2):172-182, 1960) made an estimate of the population of Amchitka Island, based on counts from shore, that were three to four times Kenyon's estimate based on aerial surveys. A recent series of comparative surveys and information gathered during harvests demonstrate that estimates based on aerial surveys are extremely low.

Many of the following estimates of sea otter abundance are based on aerial counts expanded to the level of shore counts with information collected by comparing survey technique. Because all of the sea otters are not seen even on shore counts, some of the following estimates may be somewhat low. The present estimate of sea otter in Alaska totals approximately 100,000 to 125,000.

Near Islands

Sea otters were completely exterminated in the Near Islands. In the late 1950's a few individuals appeared throughout the island group. The present population is perhaps 100. This number should increase and eventually the population may reach densities similar to that presently found in the Rat Islands.

Rat Islands and Delarof Islands

The Rat and Delarof Islands contain much excellent sea otter habitat. Russian exploitation reduced the population of these islands to a very low level, but small populations survived in both island groups. The first substantial recovery of the sea otter from early exploitation was noted in 1935. By 1947, the Amchitka population reached a peak and exceeded the carrying capacity of the habitat. Subsequently, the population declined, probably as a result of over-utilization of food species. A similar situation has occurred at most of the other islands in both groups.

The present total population of the Rat and Delarof Islands combined is estimated at between 23,000 and 32,000 sea otters. Extensive studies by the U.S. Fish and Wildlife Service and the Alaska Department of Fish and Game indicate that these islands are unlikely to support larger populations on a sustained basis, and it is unlikely that the pre-1742 population was significantly larger than the present population.

Andreanof Islands

The Andreanof Islands, which extend from Tanaga to Seguam Island, contain large areas of excellent sea otter habitat. Early exploitation reduced the population almost to the point of extinction in this group.

U.S. Fish and Wildlife Service and Alaska Department of Fish and Game surveys have provided an excellent record of the repopulation of this island group, and much of our knowledge of how sea otter populations expand is from this area. A population will usually build up to a very high density exceeding the carrying capacity in one area before animals will move into adjacent areas of vacant habitat, then a large number will move in a short period of time to the next island.

The Andreanof Islands are being repopulated in this stepwise manner. Tanaga probably was populated by excess animals from the Delarof Islands in the 1930's. When Tanaga's population reached a peak, large numbers moved to Kanaga. Kanaga's population peaked, then animals moved to Adak. In this way, each island from west to east has had a rapid increase, then a decline as animals move to the next island. At present, this spearhead of expansion has reached the west end of Atka Island. Smaller numbers have been found on the south side of Atka and Amlia Islands and around Seguam Island.

At present, the western Andreanofs, including Tanaga, Kanaga, Adak, and Kagalaska, have populations that probably equal or exceed the pre-1742 population. It is not likely that any of these islands are contributing to expansion to new areas. The islands between Kagalaska and Atka also have very high populations which are contributing to the repopulation of Atka. At the present rate of expansion, the island group should be completely repopulated within 10 to 15 years. The present population is around 36,000 to 38,000 and increasing.

Islands of Four Mountains

The Islands of Four Mountains consists of a number of small, steep-sided islands. There is a limited amount of habitat suitable for sea otters. The population was completely exterminated before 1911. In 1969 several otters were reportedly sighted there but subsequent surveys by air and boat have failed to locate any. As the populations in the eastern Andreanof Islands reach a peak, repopulation of the Islands of Four Mountains will probably occur and a small population may build up there. The lack of good habitat will probably limit the population to a few thousand animals.

Fox Islands

The islands from Samalga Island to Unimak Pass contain large areas of good sea otter habitat. At present, several small concentrations exist in this group of islands and increasing numbers of scattered individuals are being seen, however most of the habitat is not occupied. The present population probably totals about 300 animals. Large populations to the east are expanding and it is likely that significant repopulation of the Fox Islands will begin in the near future as these populations outgrow their present habitat.

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North of Unimak Island and the Alaska Peninsula

Vast areas of shallow water exist north of Unimak Island and into Bristol Bay. A large, unique population of sea otter lives in this area. The animals apparently seldom come ashore and have been seen as much as 26 miles offshore. Pods of up to 1,000 sea otters are seen from three to 10 miles offshore, particularly in the Amak Island area. The eastern limit of distribution of the population fluctuates depending on the severity of sea ice conditions. On the average, sea otters are abundant as far east as Port Moller and smaller numbers are found to Port Heiden. Scattered individuals may occur beyond that point. Because the population may be scattered over thousands of square miles, its size is difficult to estimate but it probably is in the neighborhood of 8,000 to 10,000 and has a potential to increase during periods of mild winters.

Pribilof Islands

The Pribilof Islands are near the edge of the sea ice in winter and probably are at the northern limits of potential sea otter range in the Bering Sea. Old records indicate that a population of at least 5,000-7,000 sea otters may have existed there when the islands were discovered by the Russians. Early exploitation completely exterminated this population and natural repopulation has not occurred. In 1959, seven otters were transplanted there but none had been seen since 1961. In 1968, 57 otters were released at St. George Island by the Alaska Department of Fish and Game. There is some evidence that a few individuals have reached St. Paul Island from the Alaska Peninsula, perhaps by traveling with the retreating ice pack. Reports indicate that at least small numbers still survive there. If this population persists, it should eventually increase to preexploitation levels.

Sanak Island - Sandman Reefs

This area includes many offshore rocks and shallow areas. The sea otter population has been expanding from a center near Sanak Island for many years. The present population extends from the south shore of Unimak Island to the Pavlov Islands, and includes all offshore islands and reefs. Only a rough estimate of 6,000 to 10,000 can be made at this time. There should be an increase in the numbers along the mainland shore over the next few years, and this population may contribute significantly to the repopulation of the Fox Islands.

Shumagin Islands

A large population has occurred in the southern Shumagin Islands for years. This population has been expanding northward and significant numbers have reached the northern islands in the last few years. The numbers should continue to increase around Unga, Popof, and Korovin Islands, and the adjacent mainland should, in turn, be repopulated. The total population of the Shumagins is around 8,000 to 10,000 at the present time.

South Side of the Alaska Peninsula

As mentioned above, otter from the Sandman Reefs are repopulating the south shore of the Alaska Peninsula to Pavlov Bay. Scattered animals

appear to have moved from the Shumagins into the area from Pavlof Bay to the Kupreanof Peninsula. From there to Castle Cape there are very few sea otters.

A large, rapidly expanding population exists between Castle Cape and Puale Bay. This population is extremely dense in the Kujulik Bay area. There is still room for an increase beyond Amber Bay. This population probably contains 8,000 to 10,000 animals.

From Puale Bay to Hallo Bay only scattered animals are found. The Kujulik Bay population should continue to expand in both directions for many years.

Another population is found around Augustine Island and Cape Douglas. It appears that significant numbers occasionally range down to Kaguyak and stray animals may get up Cook Inlet as far as Tuxedni Bay. This population can be expected to expand southwestward along the Alaska Peninsula. Further expansion up Cook Inlet is not likely. This population probably exceeds 1,000 and is increasing.

Kodiak

Portions of the Kodiak area, including the Barren Islands, Shuyak Island, Afognak Island, the Trinity Islands and Chirkof Island, have good sea otter habitat although some of the area is undoubtedly of poor quality. Kodiak was an important hunting area during the Russian exploitation, but the population was never completely wiped out. Today a relatively large population exists at the north end of the group around Afognak, Shuyak, and the Barren Islands. There is an indication that some expansion southward to Kodiak Island is occurring, but no large numbers occur there at this time.

Much of Kodiak Island contains only marginal sea otter habitat; however the population will increase as otters move into those areas that are suitable. A smaller population of unknown size occupies the shallow waters near the Trinity Islands and Chirikof Island. This population should continue to increase. The total population of the Kodiak-Afognak-Barren Island area probably exceeds 4,000.

Kenai Peninsula

Scattered sea otters have been found along the Kenai Peninsula from Homer to Seward for years, however no significant numbers were known to exist there prior to 1967, when several hundred appeared in the area from English Bay to Nuka Bay. These may have moved in from the Barren Islands. Increasing numbers are seen regularly from Nuka Bay to Prince William Sound and occasional individuals are seen in Kachemak Bay. There are probably at least 1,500 in the entire area and this number should continue to increase; however, the habitat will probably not support the high densities found in the Aleutian Islands.

Prince William Sound - Kayak Island

The most northerly sea otter population has been well established in this area for years. The population has continued to expand despite changes to the area caused by the 1964 earthquake. In the past, this population was centered around Hinchinbrook Entrance, particularly the Green Island-Port Chalmers and Port Etches areas. These are still the major areas of

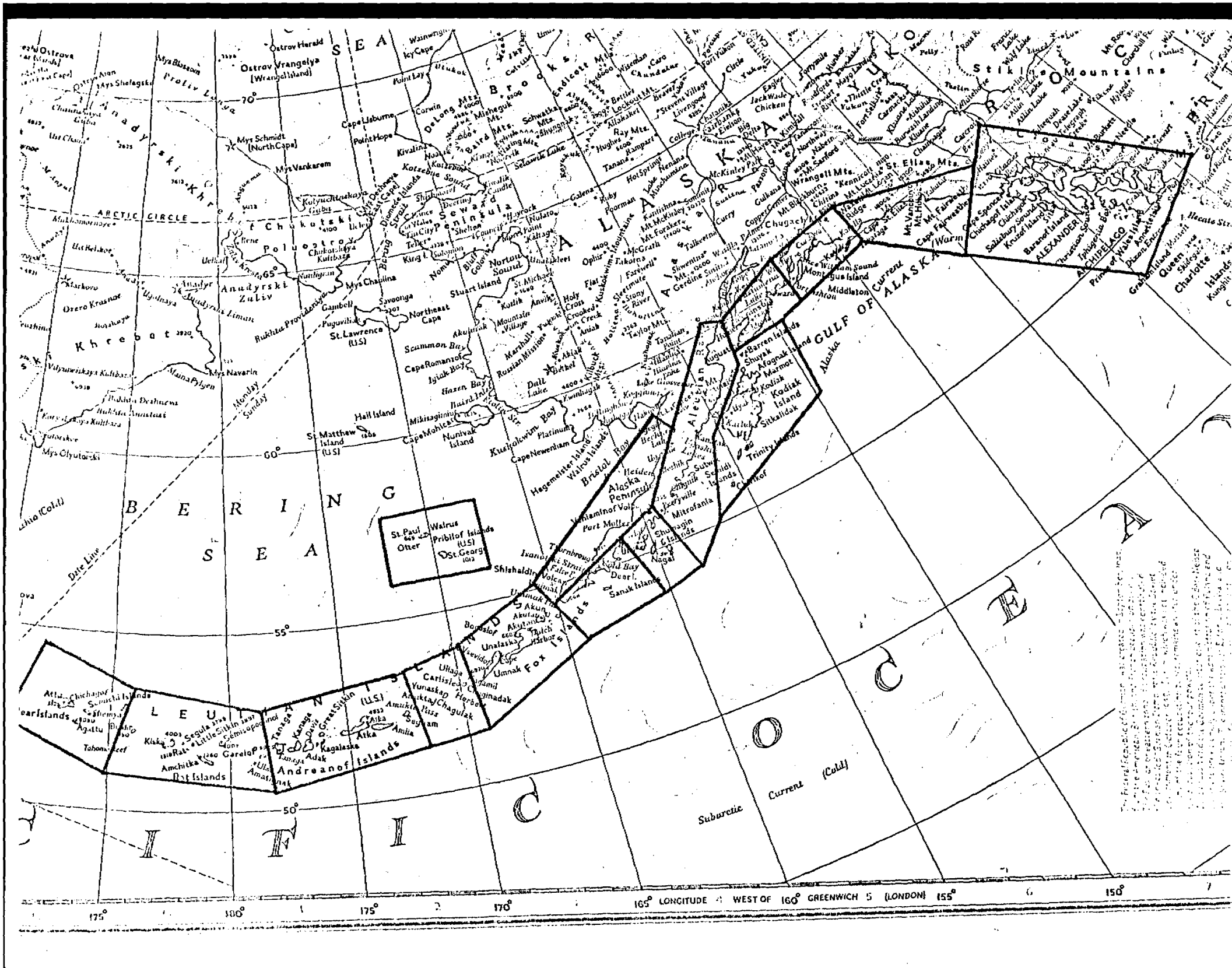
abundance; however, in recent years, the population has expanded further into the Sound, particularly around Knight Island and Port Gravina. Scattered animals are found in the deeper bays in the Sound, however this does not appear to be good habitat and large numbers are not likely to move into these areas. We may expect to see a continued increase on both sides of the Sound and otters from this area will spread to the Kenai Peninsula and toward Yakutat. The present population of the area is about 5,000.

Yakutat

The Kayak Island population appeared to be the furthest east population of sea otter in Alaska in recent times. In 1966, ten sea otters were transplanted to Yakutat Bay. Since then a number of sightings have been made and there appear to be at least 15 in the Bay. Other unconfirmed reports from Icy Bay and outside coast south of Yakutat raise the possibility that some animals may have migrated from the Kayak area.

Southeastern Alaska

Sea otter populations were wiped out in this area by 1900. A few reports indicate that occasional individuals may have strayed into the area; but it is unlikely that any established population existed. Between 1965 and 1969, 403 otter were transplanted to areas between Cape Spencer and Dixon Entrance by the Alaska Department of Fish and Game (see Table 2). Since then only the outside coast from Sitka to Cross Sound have been adequately surveyed. Two concentrations which show a high rate of reproduction have become established on the west sides of Chickagof and Yakobi Islands. Smaller numbers are periodically sighted along the entire coast south to the Necker Islands and in several spots west of Prince of Wales Island. Occasional individuals are sighted in the inside waters of the Alexander Archipelago.



This is a reproduction of a map of Alaska and the Aleutian Islands, showing the state's outline, major geographical features, and a coordinate grid. The map includes labels for the Bering Sea, Chukchi Sea, Gulf of Alaska, and various mountain ranges and islands. A coordinate grid is overlaid, with longitude marked at the bottom and latitude marked on the left. A dashed line represents the Arctic Circle. A box highlights the Pribilof Islands (St. Paul and Otter).