

# Tugidak Island--

## Harbor Seal Rookery

By Carl Divinyi

TUGIDAK ISLAND, located 20 miles southwest of Kodiak Island, is part of the Trinity Islands. These islands have a rich history dating back to the voyages of Bering and Cook in the 18th century. Vitus Bering's expedition passed by the Trinity Islands in 1741 and Captain Cook reached them in 1778 after sailing down the east coast of Kodiak Island.

The name Tugidak (pronounced To-ge-dik) was published by Vice Admiral Gavril Sarichev, a Russian hydrographer, in 1852. Of Aleut origin, "Tugidak" means "moon" or "mouth." This description is probably derived from the long, sandy beach that forms a lagoon at the north end of the island.

Tugidak Island is approximately 19 miles long and varies from 3½ to 7 miles wide. Along its western shore are high bluffs and flat sandy beaches. The eastern side of the island is relatively flat and shoals surrounding the island extend several miles off shore.

Shallow waters, flat beaches and remoteness make Tugidak a favored pupping area for one of Alaska's most abundant marine mammals, the harbor seal (*Phoca vitulina*). Herds estimated at more than 7,000 animals have been recorded there in recent years. During the

regular hunting season, personnel of the Department of Fish and Game carefully monitor the commercial harvest of harbor seal pups. Aerial and ground surveys of pupping productivity conducted prior to and during the hunting season enable department personnel to determine the maximum allowable harvest.

Department of Fish and Game biologists started a seal pup tagging program on Tugidak Island in 1965 with the objective of determining where seals are found during different seasons.

Motor scooters were used in the efforts to catch seals that were hauled out on the beach, but many of the pups won the race and escaped into the water. Biologists still managed to tag more than 5,000 pups during a 5-year period.

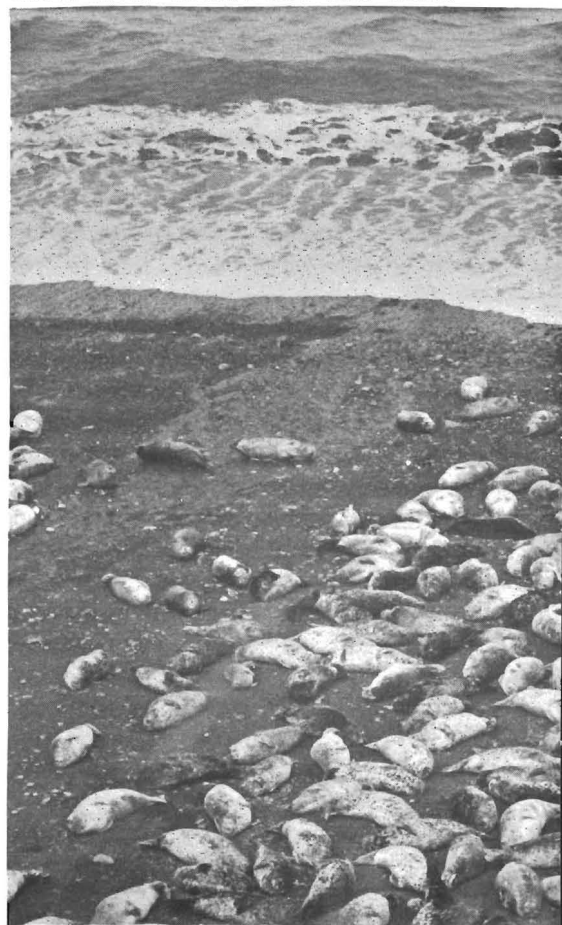
Four tagged seals have been recovered away from Tugidak Island. All were found in the Kodiak Island area. Recoveries on Tugidak include a female seal collected in June, 1970 that had been tagged in 1967. Among the tagged seal observations made on Tugidak during 1971 were one seal that was tagged in 1967, two that were tagged in 1968 and one that was tagged in 1969.

Future recoveries of tagged seals

will play an important part in understanding the complex life history of these unique animals.

Another department project on Tugidak Island was the development of a technique for photo-censusing seal populations.

Flights were made at various altitudes over hauled-out seal herds



and photographs were taken with a hand-held 35 mm camera using a 105 mm telephoto lens. Tentative results indicate that in areas such as Tugidak's flat beaches, the ideal altitude for photography is 600 feet. At 800 feet, the seals are more difficult to count when grouped close together. At altitudes lower than 600 feet, the seals were easily spooked by the noise of the aircraft.

A long-range study on pup mortality in an undisturbed seal population was recently started on Tugidak. This study is designed to determine why some females abandon their pups.

Information on pupping mortality, age, productivity and other aspects of population dynamics is necessary as a basis for future management of harbor seal populations. The Tugidak Island rookery can supply this information.■

photo by Jack Alexander



*TAGGED SEAL—Numbered tag attached to seal tail enables biologists to trace movements and develop life history information. Seals tagged on Tugidak Island have been recovered in Kodiak area.*



*HAUL OUT—Flat beaches of Tugidak Island are important pupping and resting areas for harbor seals. Department of Fish and Game management and research projects help safeguard seal populations.*

photo by Ed Klinkhart

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