

Snapshots Through Time

Population Changes in Northern Fur Seal Rookeries on St. Paul Island of the Pribilof Islands, Alaska

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Reef Rookery

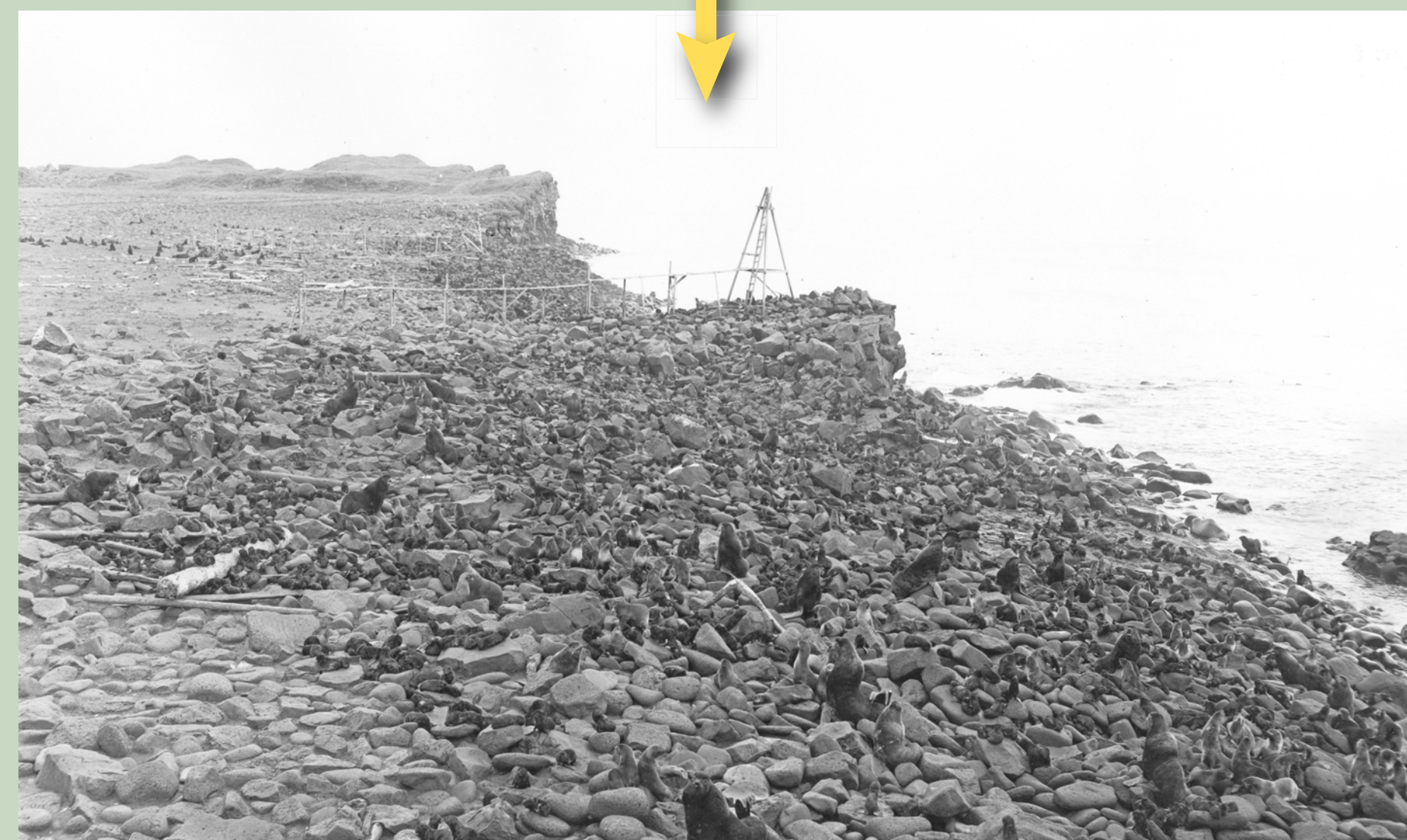
1948

Photo by E.C. Johnston
July 15, 1948



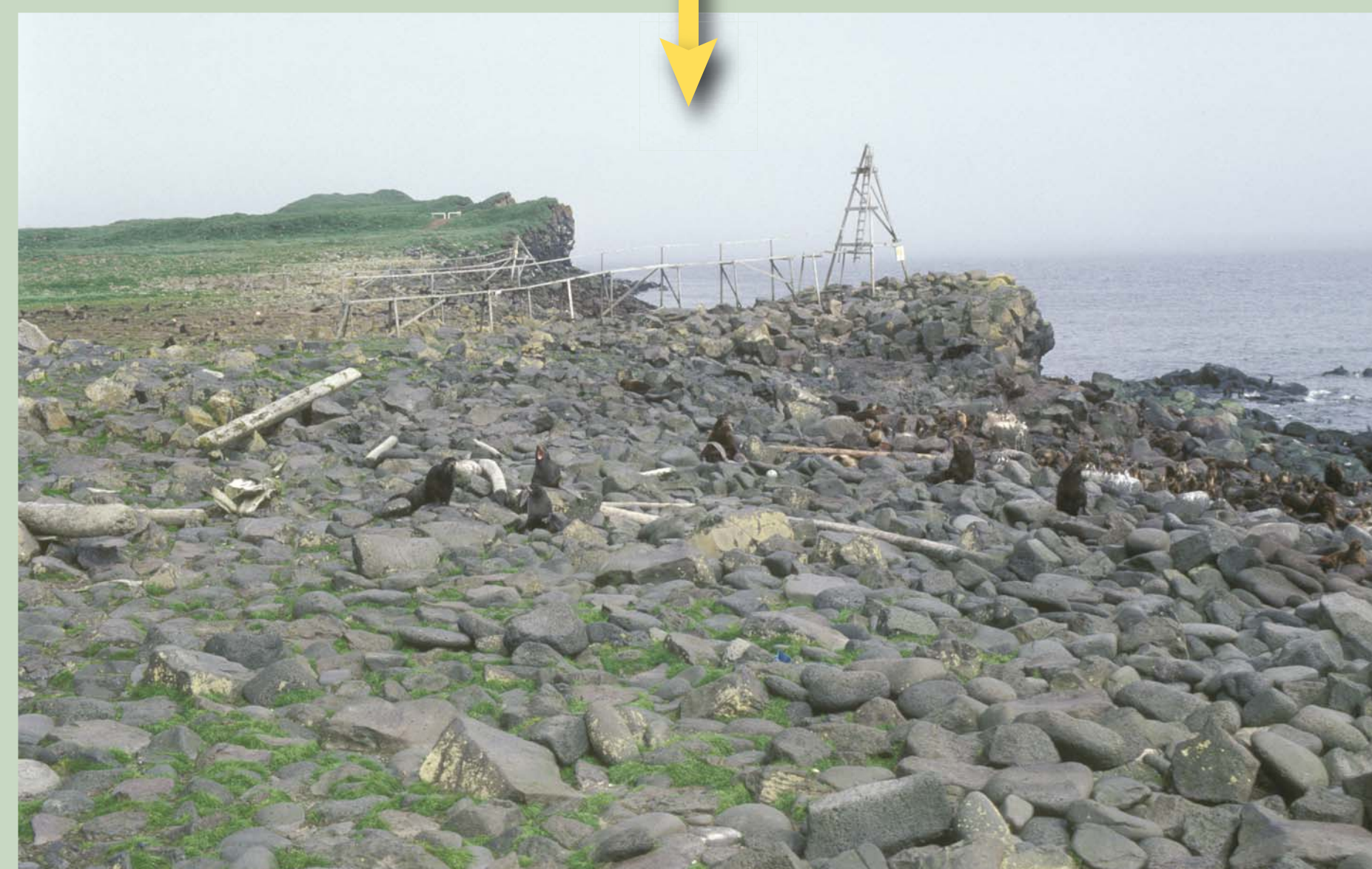
1960

Photo by Ford Wilke
July 25, 1960



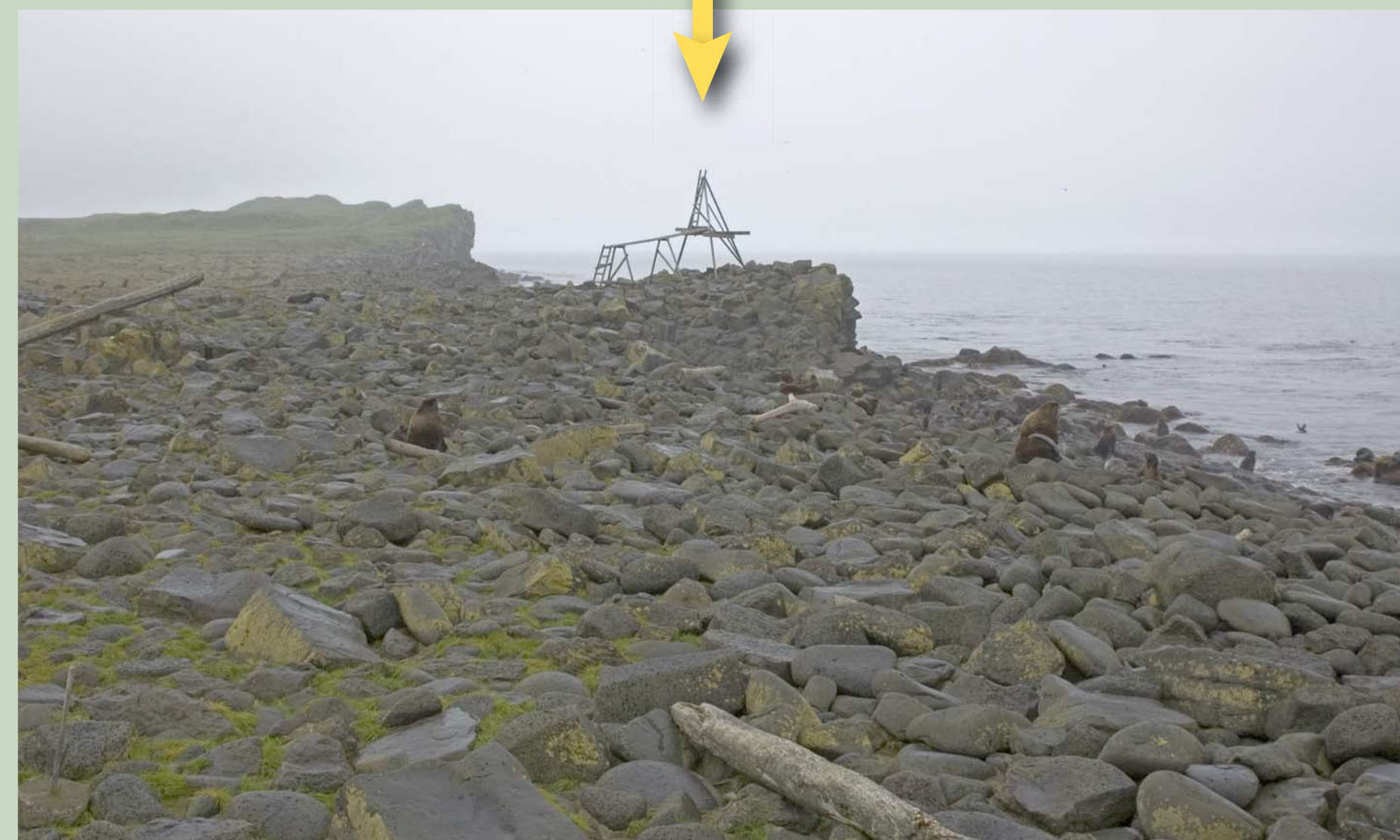
1988

Photo by
Charles W. Fowler
July 16, 1988



2005

Photo by
Charles W. Fowler
July 11, 2005



Polovina Cliffs Rookery

1948

Photo by E.C. Johnston
July 16, 1948



1960

Photo by Ford Wilke
July 25, 1960



1988

Photo by
Charles W. Fowler
July 12, 1988



2005

Photo by
Charles W. Fowler
July 10, 2005



An adult male northern fur seal at Gorbach Rookery.

Photo by Kymberly M. Yano, 2006

The northern fur seal (*Callorhinus ursinus*)

Northern fur seals are found in the North Pacific and Bering Sea. They forage on a variety of fish and squid, occasionally at depths exceeding 200 m (656 ft). Newborn fur seal pups weigh about 4.5-5.5 kg (10-12 lbs), adult females are approximately 30-50 kg (66-110 lbs), and the weight of mature males ranges from 185-271 kg (409-606 lbs). Their rich pelt led to the commercial harvest of this species, starting in the 1700s and ending in 1984. Historically, pelagic sealing and harvests of females have caused significant fluctuations in the world population of this species.

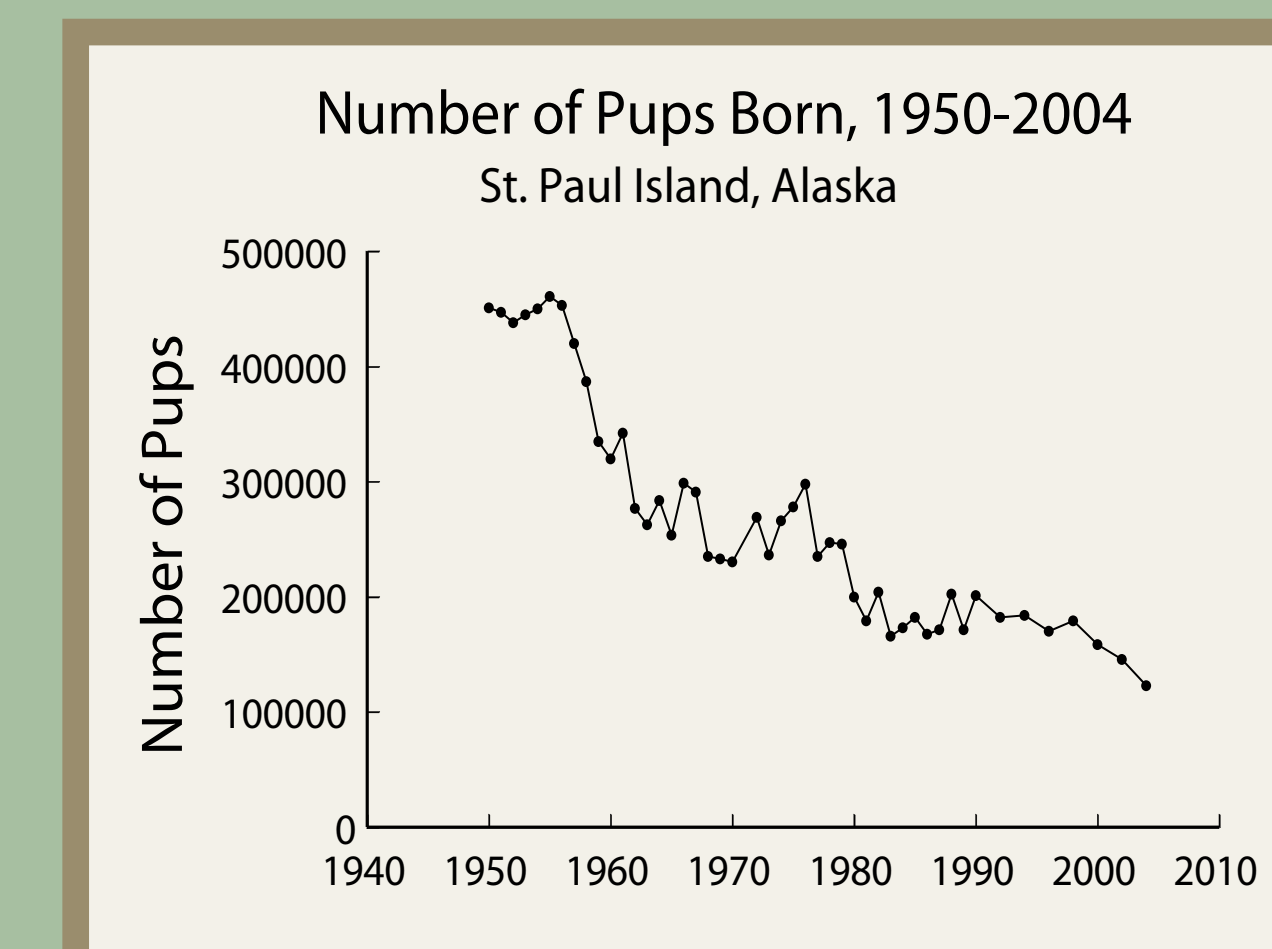


Figure 1.
The number of pups born during 1950-2004 based on estimates from St. Paul Island, Alaska. These changes are documented photographically in ground-level photos of the rookeries to the left.

Changes in population size

Owing largely to pelagic sealing, the population of fur seals dropped to an extreme low in the early 20th century. International protection allowed the population to increase and the Pribilof Islands population reached a peak, of approximately 2.2 million, lasting through the 1940s to the early 1950s. Following this peak, an overall decline has been observed (Fig. 1) only partially explained by a commercial harvest of females (1956-1968). In 1988, the northern fur seal was designated as "depleted" under the Marine Mammal Protection Act because population levels continued to decline and reached levels less than 50% of those observed in the late 1950s despite the absence of commercial harvesting. The decline appears to continue as the fur seals' ecosystem changes.

References

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A territorial, adult male (dark brown, far right) and harem of adult females (light brown) and newborn pups (black) at Vostochni Rookery.

Photo by Kymberly M. Yano, 2006

Rookeries (breeding grounds) on St. Paul Island, Alaska

Northern fur seals spend a majority of the year at sea. They occupy breeding colonies from May through November; most births occur in late June and early July. There are breeding colonies on islands in Russia and the United States. The largest portion of the worldwide population returns to the Pribilof Islands in the southern Bering Sea during the breeding season. There are 20 breeding grounds, or rookeries, found on the Pribilof Islands: 14 rookeries on St. Paul Island and 6 rookeries on St. George Island. After wintering at sea, seals show a strong tendency to return to the rookeries where they were born.

Two sets of ground-level photographs taken at Reef Rookery (left) and Polovina Cliffs Rookery (right) during July 1948, 1960, 1988, and 2005. Photographs show population and terrain changes of the same location over a 60-year time period. Tripods shown in each photograph are used by researchers to safely study the seals with minimal disturbance to the seals.

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