

**ANCIENT MURRELET** *Synthliboramphus antiquus*

**Conservation Status**

**ALASKA: Highly Imperiled**

**N. AMERICAN: High Risk**

**GLOBAL: Least Concern**

Breed	Eggs	Incubation	Fledge	Nest	Feeding Behavior	Diet
June-Aug	1-2	33-36+ d	1-4 d	burrow	surface dive	crustaceans, fish

**Life History and Distribution**

The Ancient Murrelet (*Synthliboramphus antiquus*) is unique among seabirds in rearing its chicks entirely at sea. Successful mating leads to two comparatively enormous eggs, each weighing approximately one-quarter of the female's weight. Only 2-4 days after hatching, without ever having been fed, the downy youngsters leave the nest and follow the adult birds to the sea. The chicks remain with their parents for at least one month after leaving the colony. This behavior and their nocturnal habits appear to be adaptations to reduce predation on adults. Ancient Murrelets have a relatively low adult annual mortality rate.

These murrelets normally breed in colonies on forested islands or those covered in grass or dense forbs. Nests are usually burrows dug in soft soil, but cavities under tree roots and shallow holes under grass tussocks are also used. Crevices in rocks or among boulders are less frequently occupied.

Ancient Murrelets are pigeon-sized birds with a black cap, gray back, cream-colored bill, and pale blue legs and feet. During the breeding season, they have a white stripe over the eye and a black throat patch. In winter, they lose the white stripe over the eye and the sides of the neck are white. Nonbreeding plumage is not maintained for long and many birds are in breeding plumage by December.

The Ancient Murrelet is the most widespread and abundant member of the genus *Synthliboramphus*. It is found around the northern Pacific Rim from China to British Columbia and is most numerous in the eastern part of its range. In Alaska, they are moderately common and widespread in the Aleutian Islands (at least 50 sites) and the Gulf of Alaska (Sandman Reefs, Shumagin and Semidi islands, and smaller islands in the vicinity of the Alaska Peninsula, Kodiak Island, and Shelikof Strait). They are also seen occasionally off the Pribilof Islands. In Southeast Alaska, they are abundant on St. Lazaria and Forrester islands.

In winter, there is a general southward dispersal of North American breeders as far as California. Some birds remain within their breeding range throughout the year, except for a postbreeding dispersal. Asian birds winter off Japan and Korea and are common in the Sea of Okhotsk, on the Kuril Islands, and off the Kamchatka Peninsula.



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**Alaska Seasonal Distribution**

AK Region	Sp	S	F	W
Southeastern *	U	U	U	U
Southcoastal *	U	U	U	U
Southwestern *	C	C	C	C
Central	-	-	-	-
Western	+	R	R	-
Northern	-	-	-	-

C= Common, U= Uncommon, R= Rare, + = Casual or accidental, - = Not known to occur, \* = Known or probable breeder, Sp= Mar-May, S= June and July, F= Aug-Nov, W= Dec-Feb. © Armstrong 1995.

**Population Estimates and Trends**

The world population is estimated at 1-2 million birds. Population numbers are poor for this species, except in British Columbia, where about 500,000 birds breed. In Alaska, there are approximately 90 colonies with ~300,000 individuals. Asia has several tens of thousands of birds.

Populations throughout the species' range have been significantly diminished by the introduction of mammalian predators.

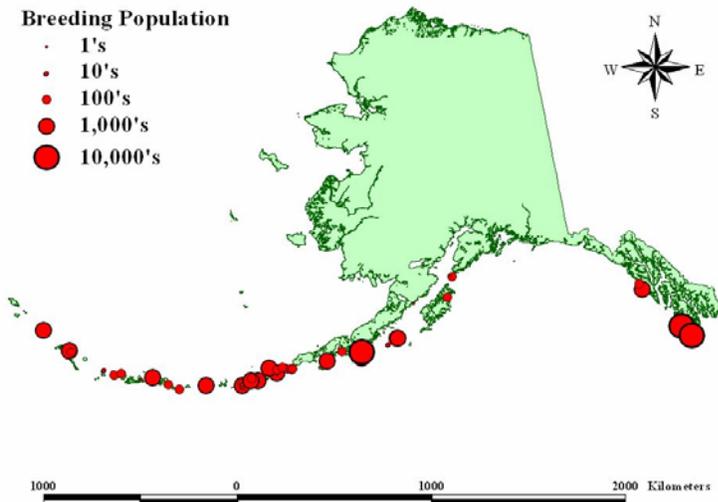
**Conservation Concerns and Actions**

The species is protected under the Migratory Bird Convention between the U.S. and Canada. It was also classified as a Designated Special Concern in Canada in 1993. The status of the species was re-examined and confirmed as Vulnerable in November 2004.

The main limiting factor for Ancient Murrelets has been the introduction of exotic predators. The Langara Island colony in the Queen Charlotte Islands, Canada probably numbered as many as 400,000 birds prior to the

### Ancient Murrelet Breeding Population

- 1's
- 10's
- 100's
- 1,000's
- 10,000's



Seabird breeding population maps created from data provided by the Beringian Seabird Colony Catalog Database. U.S. Fish and Wildlife Service, Anchorage, Alaska.

1960s. A sharp decrease seems to have coincided with the arrival of rats (*Rattus rattus*, *R. norvegicus*) on the island. By 1993, there were only about 30,000 birds remaining. The introduction of raccoons (*Procyon lotor*) to the Queen Charlotte Islands has also had severe impacts on murrelets. On Limestone Island, it was demonstrated that raccoons can cause as much as 80% of the predator-caused mortalities to adult Ancient Murrelets. Programs are underway in Alaska and British Columbia to remove foxes (*Alopex lagopus*, *Vulpes vulpes*), rats, and raccoons from colony islands. In the Queen Charlotte Islands, a cooperative effort was begun to remove raccoons. To date, the strategy appears to be working. In Alaska, where foxes have been removed, populations have recovered quickly.

Breeding birds are sometimes attracted to lighted fishing boats close to colonies. The presence and activities of a salmon-fishing fleet in the 1950s and 1960s may also be linked to the decline of the Ancient Murrelet population on Langara Island. This fishery is known to have caused heavy mortality through fatal light attraction and drowning in gillnets.

An oil spill could also have devastating effects if it occurred near a staging area during the breeding season or when chicks fledge and are flightless. In the Sea of Japan, Ancient Murrelets are one of the most common birds killed in oil spills.

Another concern for the species is their sensitivity to disturbance during incubation. Any intrusion into the burrow during this time usually leads to desertion by the incubating adult.

### Recommended Management Actions

- Restore Ancient Murrelet populations and distribution to pre-fox, pre-rat introduction conditions.
- Survey populations at key index locations and maintain a monitoring program in Alaska.
- Continue fox removal and rat prevention programs.

- Work with state and federal agencies and fisheries councils to minimize negative impacts such as light pollution, net entanglement, and bycatch.
  - Review plans for emerging fisheries, to identify potential problems and solutions.
  - Educate ship crews about light pollution.
- Support efforts to minimize the incidence of fuel spills near breeding and wintering areas and measure contaminants in Ancient Murrelet eggs.
- Evaluate human disturbance at key colonies.

### Regional Contact

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### References

Armstrong 1995; Bertram 1995; Gaston 1994; IUCN Internet Website (2005); Kushlan *et al.* 2002; Stephensen and Irons 2003; U.S. Fish and Wildlife Service 2006, 2002.

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