

## BC's Coast Region: Species & Ecosystems of Conservation Concern

### Ancient Murrelet (*Synthliboramphus antiquus*)

Global: G4, Provincial: S2S3B,S4N, COSEWIC: SC, BC List: Blue Identified Wildlife



Non-breeding

**Notes on *Synthliboramphus antiquus*:** A member of the family Alcidae (“auks”), which includes species such as murres and puffins. Ancient Murrelet is most closely related to Japanese Murrelet found only near Japan. “Alcids” are often considered to fill similar ecological roles as penguins do in the southern hemisphere. While generally associated with marine environments they can actually fly long distances inland.

#### Description

*Sexes similar, Length: 24-26 cm.* Ancient Murrelet are a chubby, robin-sized seabird (actually a small auk) with short neck and tail. Body plumage is a distinct slate-grey with a white belly, throat and cheeks. The head is mainly black with a pale tipped bill (yellow to pink). In breeding plumage they have a distinctive line of white feathers extending back from the eye and fine black-and-white lines on the sides of the nape. Juvenile birds are similar in white and dark plumage patterning, however the body and head plumage is a drab brown rather than the grey and black of the adults.

#### Diet

Ancient Murrelet forage on a range of marine species from large zooplankton (krill) to forage fish (Pacific Sand Lance, Shiner Perch, Herring) and groundfish (Greenling). Preferences depend on the bird's life history phase, the season and availability of various fish species. In particular Pacific Sand Lance (also exploited by Marbled Murrelet) may play an important part in the diet, especially fledged and juvenile birds. Birds forage in small flocks over submerged rock shelves and near upwelling areas, diving to depths of 10-20 m propelling themselves using their short stubby wings as flippers.

#### Look's Like?

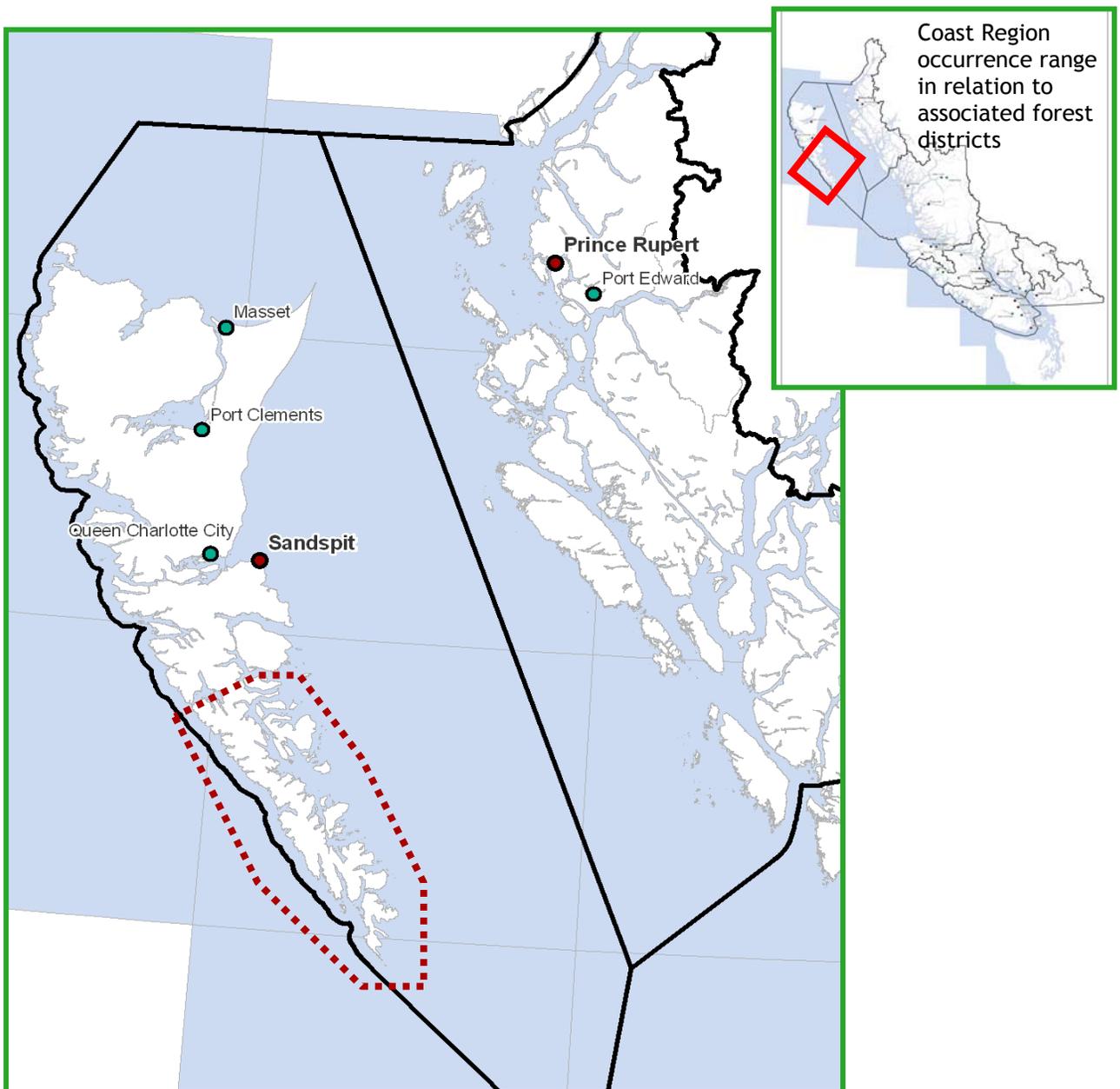
There are several species of murrelet along the Pacific Northwest coast, including Xantus's, Kittlitz's and Marbled Murrelet. Most species are similar in body shape, size, foraging and nesting characteristics. Xantus's Murrelet is more restricted to California and Mexico while Kittlitz's Murrelet occur almost exclusively in Alaska. From a distance Ancient Murrelet can be confused with Marbled Murrelet, especially juveniles birds as well as juveniles of other seabirds such as auklets and murres.



Marbled Murrelet

## Distribution

*Elevations: 0-450 m. Nesting colonies on small islands 300-400 m from shore.* While the species is distributed along coastal regions of the Pacific Rim (Russia with lesser known populations in Japan, China and Korea), known breeding colonies in Canada are mainly coastal areas and offshore islands in and around the Haida Gwaii Archipelago (northwest side of Graham Island east and northwest shores of Moresby Island). Observations of newly-hatched fledglings associated with adults off Vancouver Island (e.g., Triangle Island, Pacific Rim National Park, Strait of Juan de Fuca), suggest that localized pairs may nest south of Haida Gwaii; however, family groups have been documented moving very large distances immediately following hatching, and thus definitive proof of breeding outside of the Haida Gwaii is difficult without the documentation of an active nest. Terrestrial habitat use is limited to a short nesting period and much of the species distribution is focused on open-ocean foraging in and around Haida Gwaii and Vancouver Island for much of the year. Multi-aged 'flotillas' of foraging birds congregate in winter and can be observed around Queen Charlotte Strait, Strait of Juan de Fuca, Haro Strait and Active Pass. This species strays long distances inland compared to other murrelets and has been sighted on lakes in the interior of British Columbia.



Ancient Murrelet (*Synthliboramphus antiquus*), known occurrence range (breeding colonies only) for the Coast Region

### Habitat Preferences

Seasonal activities influence habitat preferences and can be divided between foraging/overwintering and nesting. Foraging habitat is mainly open-ocean though there is some marginal use of protected fjords and inlets. Transient birds have been observed in interior BC lakes, but the majority of Ancient Murrelet range is focused on marine, coastal foreshore and coastal upland habitats. Burrow location is usually on seaward slopes or flat terraces within the basal area of trees, stumps or large downed wood. Burrows are accessed by a tunnel up to 2 m long which the birds excavate themselves. They may use burrows created by other individuals from previous years. While the majority of burrows are located within mature coniferous stands, this species has been known to nest in rock crevices and well vegetated windswept sites with little or no tree canopy cover, although some level of shrub or grass cover is required.



In BC Ancient Murrelet nests almost exclusively in burrows dug into mossy ground (inset) in association with mature to old growth Sitka Spruce and Western Hemlock forests.

### Critical Features

This species requires suitable colonial nesting sites within 300 meters of adjacent open ocean forage areas preferably on seaward slopes of >30°. Birds will also nest on flatter slope areas where suitable burrow cover and camouflage is present. Birds usually arrive or depart under the cover of darkness making inventory difficult. Once abandoned many burrows are not reused. Veteran forest components and preferred nesting habitats are a priority for conservation and protection from disturbance, especially well protected seaward slopes supporting mature forest and downed wood features that maintain moist microclimate communities of mosses. Although forested sites at low elevations generally provide preferred habitat, in some areas sites with less mature canopy cover or large woody debris (e.g well vegetated seaward bluffs and slopes with crevices or other natural cavities) provide nesting habitat. The availability of coldwater upwelling zones especially over submerged continental shelf breaks that support high densities of forage fish and zooplankton is key to maintaining local populations of this species.

### Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Courtship Breeding Nesting									
				Eggs hatch	Fledglings, juveniles & adults move to forage and over-wintering areas at sea						
					Chicks fledge 2-3 days post hatching						

### Threats

- ◆ Introduced predators (rats and raccoons) represent one of the most immediate threats to this ground nesting species.
- ◆ Distribution coincides with areas which may be subject to long-term impacts to food resources from climate change (e.g. ocean warming and acidification) and marine industry pollution.
- ◆ Increased coastal windstorms, possibly linked to climate change may also impact nesting colony habitat.
- ◆ Mortality from fishing gear and oil spills.
- ◆ Human disturbance from logging, recreational activities and development of tourism destinations on and around historic nesting colonies.

### Conservation & Management Objectives

- ◆ Assess habitat suitability and apply management criteria as setout in “Accounts and Measures for Managing Identified Wildlife - Accounts V. 2004 Ancient Murrelet *Synthliboramphus antiquus*”.

- ◆ Inventory and monitor using standardized methods as set out in Resource Information Standards Committee # 13 draft protocol “Inventory Methods for Seabirds: Cormorants, Gulls, Murres, Storm-petrels, Ancient Murrelet, Auklets, Puffins, and Pigeon Guillemot.”

**Specific activities should include:**

- ◆ Survey adjacent offshore marine areas throughout the year if suitable nesting habitat is identified to assist in determination of extent of seasonal use.
- ◆ Further investigation of overall population trends, chick survival and seasonal food preferences is recommended as present data is limited.
- ◆ While there appears to be limited recovery response from eradication of introduced predators, resources should still be directed to continued eradication and control programs to protect remaining breeding colonies and provide opportunities for recolonization.
- ◆ Efforts should work to not only maintain but expand nesting colonies (the British Columbia population is concentrated within a relatively few large colonies). It is estimated BC supports 50% of the global Ancient Murrelet population. While still considered widespread and abundant this species is considered to be declining.
- ◆ Increase awareness about the sensitivity and value of the unique undisturbed coastal foreshore and mature forests ecosystems found on, in and around the Haida Gwaii Archipelago and Vancouver Island. Encourage resort lodges and foreshore landowners to create conservation covenants to buffer critical colonial nesting sites (existing and potential).
- ◆ Ensure proper maintenance of bilge and/or septic systems, fuel storage facilities and disposal of wastes from water craft and shoreline developments/businesses.

This species is listed under the Federal Species At Risk Act (SARA), is subject to protections and prohibitions under the Federal Migratory Birds Convention Act and BC Wildlife Act and is Identified Wildlife under the BC Forest and Range Practices Act. Habitat for this species may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

**Content for this Factsheet has been derived from the following sources**

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