Species At Risk within Nuu-chah-nulth Territories

Compiled for the

Uu-a-thluk Council of Ha’wiih
and
Nuu-chah-nulth Nations

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Introduction

Why did we put together this guide?
Nuu-chah-nulth are engaged with Federal, Provincial and Local governments in managing the use of resources through an integrated ecosystem approach. As well, many Nuu-chah-nulth communities are expanding or poised for expansion to accommodate their growing populations. To ensure that ecosystems and species in Nuu-chah-nulth Ha-houlthee are healthy and resilient to change, particularly as new development gets underway, it is important to consider marine and terrestrial species protected by the Species at Risk Act. This project aims to provide information about how to identify species-at-risk and their habitats within Nuu-chah-nulth territories.

What species are protected under the Species at Risk Act?
The Species at Risk Act is meant to prevent wildlife, including mammals, birds, reptiles, amphibians, fish, moths, butterflies, molluscs, vascular plants, lichens, and mosses, from becoming extinct. It applies to all wildlife species that are determined to be at risk nationally. It protects wildlife and their critical habitats on federal lands and all aquatic species and migratory birds. It also includes “safety net provisions” that enable it to protect species and habitats on provincial and private lands.

How are species determined to be at risk?
The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was founded in 1977 to determine whether species are considered to be at risk in Canada. COSEWIC includes members from each provincial and territorial government wildlife agency, four federal agencies (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government members and the co-chairs of the species specialist and the Aboriginal Traditional Knowledge subcommittees. They meet several times a year to consider adding new species and to re-evaluate already listed species at risk. COSEWIC has seven categories of species:

- **Extinct**  
  No longer exists anywhere in the world.

- **Extirpated**  
  No longer exists in the wild in Canada, but occurs elsewhere.

- **Endangered**  
  Facing imminent extirpation or extinction.

- **Threatened**  
  Likely to become endangered if limiting factors are not reversed.

- **Special Concern**  
  Has characteristics that may lead it to become one of the above.

- **Not at Risk**  
  Has been evaluated and found to be not at risk.

- **Data Deficient**  
  Inadequate information to make an assessment of its risk.

This guidebook includes species currently (November 2007) protected by the Federal Species at Risk Act as well as species that are considered potential candidates for future listing. Many of the candidate species are already considered to be threatened (red-listed) or of special concern (blue-listed) within the Province of British Columbia.
Marine Mammals

Offshore Whales

1. Blue Whale

Nuu-chah-nulth Name: ?iihtuup (whale)

Latin Name: Balaenoptera musculus

Status: Endangered (May 2002) by COSEWIC.

Description:
- Largest animal known to have lived on Earth.
- Maximum length of 33.6m (110ft).
- Blue-grey and mottled body has a tiny, stubby dorsal fin set far back.
- Yellowish-coloured algae often grow on the underside.

Natural History:
- Occurs all around the world in both coastal and offshore waters. Summer range of NE Pacific population is between California and Alaska.
- Feeds at the continental shelf edge where upwelling produces abundant krill. They feed by taking large gulps of tiny prey and forcing water through the baleen (sieve-like device) by the muscular action of the mouth and tongue.
- After breathing 6-20 times at the surface over a 1 to 5 minute period, dives last 5 to 15 min; rare dives, as long as 36 min, have been recorded.
- Blue whales mate and calve from late fall to mid-winter and give birth to a single calf every 2-3 years after a 10-11 month gestation. Live for 70 to 80 years.

Human Use/Significance:
- Between 1910 and 1965, commercial whalers took 9500 blue whales from the NE Pacific. Some were processed by shore-based whaling stations in B.C.

History of Decline:
- Hunted close to extinction until protected in 1966. Currently about 2000 animals, the eastern North Pacific population appears to be stable or recovering.

Threats / Development Activities that Pose a Risk:
- Ship strikes, entanglement in fishing gear, and pollution.
- Vulnerable to long-term changes in climate that affect availability of prey.

Recovery Actions & More Information:
- Shipping lanes have been moved and early warning systems reduce ship strikes.
- Contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org
2. Fin Whale

Nuu-chah-nulth Name: ʔiihtuup (whale)

Latin Name: *Balaenoptera physalus*

Status: Threatened (May 2005) by COSEWIC.

Description:
- Second largest animal on earth (after the Blue Whale), reaching 22 to 27 m and 88 tonnes.
- White markings on the lip and head on the right side only.
- Grey to brown-black back, longitudinal ridge on the back, throat grooves and a small dorsal fin set well back. Not mottled.
- Fast swimming, streamlined body, easily confused with sei whales.

Natural History:
- Found in all oceans of the world. Seen in B.C. coastal waters year round, with highest numbers in summer. Seasonal migrations from low-latitude winter breeding areas (poorly known) to high-latitude summer feeding grounds.
- Offshore feeding habitat rich in krill, copepods, small schooling fish and squid.
- Reach sexual maturity at 5-15 years of age, and physical maturity at 25. After a pregnancy of 11 to 12 months, calves (6 m long) are born and weaned after 6 months, making the breeding cycle about 2 years long. Live 50 to 100 years.
- Not all individuals migrate every year; some stay on the feeding grounds.

Human Use/Significance:
- Harvested by commercial whalers, especially in the 1950s and 60s.

History of Decline:
- Coastal whaling in BC took at least 7,600 animals between 1905 and 1967, and thousands were taken by pelagic whalers through the 1970s.
- Present population is estimated to be below 50% of its level, 60-90 years ago. The population estimate for Washington to California is 3,000 and is distinct from the population in Alaska.
- Currently sighted infrequently on former whaling grounds off British Columbia.

Threats / Development Activities that Pose a Risk:
- Collisions with ships injure animals, military and industrial underwater noise may degrade habitat and impair communication, and chemical pollution and climate change could alter habitats.

Recovery Actions & More Information: Need to learn more about abundance, distribution and habitat. Contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org
3. Sei Whale

Nuu-chah-nulth Name: ʔihtuup (Whale)

Latin Name: *Balaenoptera borealis*

Status: Endangered (May 2003) by COSEWIC.

Description:
- Long, slender, bluish-grey to black body with a longitudinal ridge on the head, throat grooves and a small sickle-shaped dorsal fin.
- Average size for adults is 15 m and 19 tonnes. Smaller, but easy to confuse with Fin Whales.

Natural History:
- Offshore from the Gulf of Alaska to Baja California; off the BC coast in summer.
- Found in small groups of 2 to 5, occasionally up to 30 at good feeding grounds.
- Capable of burst speeds of 25 knots.
- Feed in areas rich in plankton. In Norway, feed mainly on pollock fish.
- Reach sexual maturity in 5 and 15 years. Pregnancy lasts 10 - 12 months, lactation is 6 months. Calving occurs at lower latitudes. After 2-3 years, calves are weaned on the feeding grounds prior to the fall migration. Live 50 to 100 years.

Human Use/Significance:
- Hunted commercially but they were elusive and fast.

History of Decline:
- This was one of the most abundant species sought by whalers off the British Columbia coast (with over 4000 individuals killed). Sei whales have not been reported in British Columbia since whaling ended in the 1970s.

Threats / Development Activities that Pose a Risk:
- Noise from industrial and military activities, pollution and shifts in the physical and biological structure of the ocean.
- While very few ship strikes have been reported, they may go undetected because of the offshore nature of the species. Similarly, while there are no reports of fisheries-related mortality, entanglement or injury on either coast, offshore drift net fisheries pose a potential threat.

Recovery Actions & More Information:
- If you see a Sei Whale contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; Fax 604-659-3599; P.O. Box 3232, Vancouver, V6B 3X8; website: www.wildwhales.org.
4. Northern Pacific Right Whale

Nuu-chah-nulth Name: ʔiihtuup (Whale)

Latin Name: *Eubalaena japonica*

Status: Endangered (November 2004) by COSEWIC.

Description:
- Black body is stout, large head with white bumps or patches, and a broad back with no dorsal fin.
- No pleats on throat.
- Reaches a length of 18 m and a weight of 90 tonnes.

Natural History:
- Occur in offshore waters but little is known about their current distribution.
- Uses baleen (sieve-like plates) to filter zooplankton.
- Spend summers at higher latitudes. Females go to warmer sub-tropical waters for winter calving.

Human Use/Significance:
- Heavily hunted for oil, meat and whalebone. The common name originates from whaling – these were the “right” whales to kill. They were slow, easy to approach and kill and they floated when they were dead.

History of Decline:
- Although there have not been sightings of this species in the last 50 years in Canadian waters, there have been sightings both south and north of B.C. Therefore it is not appropriate to classify the species as extirpated. The total population in the eastern North Pacific likely numbers a few tens of animals.
- Only a few hundred remain throughout the world, reduced from an original population of tens of thousands.

Threats / Development Activities that Pose a Risk:
- Potential threats include ship strikes, entanglement in fishing gear, human-generated underwater noise, chemical pollution and climate change.

Recovery Actions & More Information:
- If you see a Northern Pacific Right Whale contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; Fax 604-659-3599; P.O. Box 3232, Vancouver, V6B 3X8; website: www.wildwhales.org
Offshore Marine Mammals

5. Northern Fur Seal

Nuu-chah-nulth Name: tukuuk (Sea Lion)

Latin Name: Callorhinus ursinus
[="beautiful skin" + “bear”].

Status: Threatened (April 2006) by COSEWIC.

Description:
- Small head with sharp pointed nose, very large flippers.
- Female size is 1.2 m and 110 lbs, males are 1.8 m and 600 lbs.
- Males are black to reddish brown, females are grey-brown.

Natural History:
- Ranges throughout the North Pacific Ocean and Bering Sea.
- Breeds in Russia and Alaska. About 75% of the species breed on the Pribilof Islands during May to October. Males arrive first and set up territories to attract a harem of females.
- Migrate south along the coast as far as California. Feed mostly offshore in areas along the continental slope and at shelf break, canyons, valleys and seamounts.
- Individuals are usually seen feeding alone off the coast of B.C. in March to April. They can dive for up to 7 minutes to depths of 200 m.

Human Use/Significance:
- Nuu-chah-nulth hunted them in offshore waters and used the skin, meat, and oil. Found in several archeological sites within Nuu-chah-nulth territories.
- Hunted commercially for fur from the late 1700s to the 1980s. Today they are only taken for subsistence.

History of Decline:
- Hunted close to extinction. Population on the Pribolof Islands declined to a low of 300,000 animals by early 1900s and then returned to 2.1 million in 1950s after hunting was restricted to males. Unexplained declines have occurred in the last 50 years. The population dropped from 1 million in 1998 to 629,000 in 2004.

Threats / Development Activities that Pose a Risk:
- Entanglement in marine debris, disturbance, pollution and environmental changes that affect prey availability.

Recovery Actions & More Information:
- Continuing research on interactions between fisheries and other human activities and fur seals.
- Keep nets, plastics and pollutants out of the ocean.
Nearshore Marine Mammals

6. Humpback Whale

Nuu-chah-nulth Name: ?iihtuup (Whale)

Latin Name: *Megaptera novaeangliae* [= “large wing or fin, of New England”]

Status: Threatened (May 2003) by COSEWIC.

Description:
- Adult males are 13 m long; females reach 14 m; newborns are 5 m.
- Dark back and extremely long pectoral flippers (to nearly one-third of the body length).

Natural History:
- Found in tropical, temperate and sub-polar waters world-wide. Migrate from B.C. and Alaska in summer to calving areas in Hawaii, Mexico and Japan in winter.
- Faithful in returning to the same feeding areas in B.C. and Alaska each year.
- A group of whales produce bubbles, forming a bubble-net that forces small fish and crustaceans to the surface for easier capture by lunge feeding.
- Pregnancy is 11 to 12 months. A single calf is born every one to three years.
- Births happen between December and April. Age of sexual maturity for females is around 5 years and maximum lifespan is at least 48 years.
- Frequent aerial behaviour and often raise their tail flukes above the surface when they dive.

Human Use/Significance:
- Over 5,700 were harvested by commercial whalers in BC waters alone.

History of Decline:
- Declined because of commercial whaling. Currently, only a few hundred use B.C. waters, but there is evidence that populations are increasing.

Threats / Development Activities that Pose a Risk:
- Entangled in fishing gear, loss of prey due to overfishing and changes in ocean conditions, collisions with ships, and disturbance from vessel traffic and high-intensity underwater sounds.
- Faithful to distinct feeding grounds so if animals are lost from a particular area, it is unlikely that the area will be rapidly repopulated.

Recovery Actions & More Information: Contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org; Fax 604-659-3599; P.O. Box 3232, Vancouver, V6B 3X8.
7. Grey Whale

**Nuu-chah-nulth Name:** cîtqîhtî (Grey Whale)

**Latin Name:** *Eschrichtius robustus*

**Status:** Special Concern (May 2004) by COSEWIC.

**Description:**
- Medium to large (11-15 m) baleen whale.
- Dark grey with white mottling and barnacle patches. Low hump instead of dorsal fin.
- Two to four throat grooves allow the throat to extend during feeding.

**Natural History:**
- Occur only in the Pacific. Migrate from calving grounds in Baja California to Arctic feeding areas. Up to 100 “resident” whales spend summer off Vancouver Island.
- Feed on marine worms and crustaceans by scooping up sediment and straining it through their baleen (sieve-like device). Also feed on herring eggs and larvae, mysid shrimps, and crab larvae in the water column in shallow (<60 m) areas.
- Travel at 2-5 knots, up to 10 knots. Quick shallow dives at 30-second intervals are often followed by a dive with the tail raised that lasts 3 to 20 minutes.
- Reach sexual maturity at approximately 8 years. Pregnancy lasts 13-14 months. Females give birth to a single calf in late winter. Calf joins mother on her northward migration and is weaned in late summer on the feeding grounds.
- May live up to 70 years.

**Human Use/Significance:**
- Historically of economic importance for the subsistence of Nuu-chah-nulth.
- Focus of growing whale-watching industry in coastal B.C.

**History of Decline:**
- Commercial whaling reduced population to approximately 4,000 individuals.
- Protected internationally in 1937, the population increased steadily to 26,000 (close to the historic abundance) in 1998. Subsequently declined to around 18,000 in 2002 (possibly due to a lack of food in Alaska). Stable since 2002.

**Threats / Development Activities that Pose a Risk:**
- Industrial development of shallow marine areas (e.g. oil exploration and offshore mining) and the associated noise pollution (e.g. seismic exploration).
- Killed by entanglement in fishing gear and in collisions with ships.
- Harassment by boaters who come too close to watch them.

**Recovery Actions & More Information:** Contact the B.C. Cetacean Sightings Network: sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org
8. Killer Whale

**Nuu-chah-nulth Name:** kakawin (Killer Whale)

**Latin Name:** *Orcinus Orca* [Latin name = “demon from hell”]

**Status:**
- NE Pacific Southern Resident Population - Endangered (November 2001) by COSEWIC.
- NE Pacific Northern Resident Population - Threatened (November 2001) by COSEWIC.
- NE Pacific Transient Population - Threatened (November 2001) by COSEWIC.
- NE Pacific Offshore Population - Special Concern (November 2001) by COSEWIC.

**Description:**
- Black back and grey saddle patch
- Chin, elliptical patch behind each eye, side patches, and underside of tail fluke are white.
- Male has tall dorsal fin (1.8 m). Female’s shorter (1m) and curved.
- Females up to 7 m long (7.2 tonnes); males to 9 m (10 tonnes); newborns to 2.5 m and (180 kg).
- Often seen breaching, tail-slapping, fin-slapping, spyhopping.

**Natural History:**
- Occur in all oceans, tropics to polar ice packs.
- 725 killer whales inhabit the coastal waters of Alaska, BC and Washington. Of these, 305 are fish-eating “residents”, living in large stable family groups or pods. The rest are “transient” and “offshore” whales, traveling in smaller groups and feeding on marine mammals including seals, sea lions, and other whales.
- Life span is 50 years for males and 80 years for females. They cruise at 2-4 knots and can reach speeds of 17 knots or more. Resident pods can be distinguished by vocalizations. Transient killer whales are much quieter.

**Human Use/Significance:**
- Historically harvested, often when hunting other whales for meat and oil.
- Resident whales are important for whale watching industry.

**History of Decline:**
- Southern resident population declined 20% from 1995 to 2001.
- Northern resident population declined 7% from 1997 to 2001.

**Threats / Development Activities that Pose a Risk:**
- Threatened by high levels of human interaction, such as boat traffic, and vulnerable to declines in salmon and pollutants, especially organochlorines.

**Recovery Actions & More Information:** Contact the B.C. Cetacean Sightings Network, sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org
9. Harbour Porpoise

Nuu-chah-nulth Name: hicwin (Porpoise)

Latin Name: *Phocoena phocoena*

Status: Special Concern (November 2003) by COSEWIC.

Description:
- Dark grey to black backs, white to grey sides and white or speckled bellies. Dorsal fin is low and triangular and 1 to 3 dark lines run from the jawline to the flippers.
- Males and females look the same. Born at 80-90 cm and only occasionally reaching lengths of close to 2 m. Lifespan is 10 to 13 years of age.

Natural History:
- Found throughout temperate and subarctic coastal waters. In BC they inhabit waters less than 200 m in depth (usually within 6 miles of land) year-round.
- Births occur from May through September. Sexual maturity for females is thought to be 3 or 4 years of age.
- Feed on small fish and squid. Typically alone or in small groups of 2 to 5.
- Avoid vessels and do not bowride (unlike Dall's Porpoise). When traveling they surface repeatedly up to 8 times at 1-minute intervals.

Human Use/Significance:
- Recommended as a potential indicator species for monitoring the health of the marine environment because it is most consistently found in shallow near-shore habitats where it is exposed to human influences.

History of Decline:
- Anecdotal evidence suggests a decline in southern B.C. between the 1940s-50s and the 1980s. No province-wide abundance estimate is available, though a 1996 estimate for the Strait of Juan de Fuca and Strait of Georgia indicates there are likely several thousand animals.
- Most common beached animal in B.C.

Threats / Development Activities that Pose a Risk:
- Sensitive to human activities, and prone to becoming entrapped and killed in fishing nets, especially gillnets.
- Rarely seen at the highly developed areas of Victoria and Haro Strait. Continued development and use of prime habitat by humans are some of the main threats. Displaced by underwater noise, such as acoustic harassment devices associated with aquaculture operations, and affected by contaminants in their food chain.

Recovery Actions & More Information: Contact the B.C. Cetacean Sightings Network, sightings@vanaqua.org; toll free 1-866-I-SAWONE; www.wildwhales.org
10. Steller Sea Lion

Nuu-chah-nulth Name: tukuuk (Sea Lion)

Latin Name: *Eumetopias jubatus* [= broad forehead with mane]

Status: Special Concern (May 2003) by COSEWIC.

Description:
- Males are tan above, reddish-brown below (2.7-3.1 m; 400-800 kg)
- Females are uniformly brown, (2.1-2.4 m; 200-300 kg)
- Both sexes have a low forehead.
- Pups are born from late May to early July and weigh 16-23 kg at birth.
- Deep roars and growls distinguish Steller from barking California sea lion.

Natural History:
- Occur from southern California, north to the Bering Strait, and south along the Asian coast to Japan. Stay within 60 km of shore in depths less than 400 m during summer, and range over 200 km off the continental shelf in winter.
- Preferred prey in BC includes herring, hake, sand lance, salmon, dogfish, eulachon, sardines, rockfish, flounder, skate, squid and octopus.
- Regularly haul out in large social groups on flat rocky shorelines.
- Closest breeding area is off the northeastern tip of Vancouver Island (rookeries on Maggot, Sartine and Triangle Islands). Males have more than one mate. Females give birth to a single pup and nurse for just under a year, occasionally up to 2-3 years. Lifespan is about 14 years for males and 22 years for females.

Human Use/Significance:
- Contribute to the eco-tourism industry in coastal communities.
- Potential indicator of healthy ecosystems given their widespread distribution, long lifespan, and position near the top of the marine food chain.

History of Decline:
- Populations have increased 3.2% annually in BC to 19,000 individuals (including non-breeding animals) since they were protected in 1970. About 3,400 pups born in BC in 2002.

Threats / Development Activities that Pose a Risk:
- Shooting because they are considered a nuisance by some commercial fishers.
- Accidentally caught in fishing gear, entanglement in debris, environmental contaminants, and displacement or degradation of their habitat.
- Susceptible to fluctuating prey populations due to changing ocean conditions.

Recovery Actions & More Information:
11. Sea Otter

Nuu-chah-nulth Name: kəⱡəⱡə (Sea Otter)

Latin Name: *Enhydra lutris*

Status: Special Concern (down-listed April 2007) by COSEWIC.

Description:
- Large flat head, blunt nose with long and stiff whiskers, black eyes and very small ears.
- Dense soft fur varies between rust, dark brown and black; lighter on the head, throat and chest. Stout tail.
- Males weigh about 45 kg (150 cm long). Females are slightly smaller.

Natural History:
- Historically ranged from northern Japan to Baja California, Mexico.
- Inhabits shallow (30 m), coastal waters in areas with kelp canopies. Moves offshore during extended calm periods and back inshore during storms.
- Females are sexually mature at three years, males at five to six years of age.
- Females bear a single pup (rarely two) at one-year intervals, usually between April and July. Pups depend on mothers for one year.
- Males and females live in different areas.
- Bald Eagles, Killer Whales, and sharks are their main predators.
- Feeds mainly on shellfish and sea urchins. Rolls onto back and places food on chest to eat bit by bit. It twists around in seaweed to keep from drifting away.

Human Use/Significance:
- Traditionally hunted for their fur by Nuu-chah-nulth for ceremonial robes, dowry gifts, and then traded with the Europeans in the 18th and 19th centuries.

History of Decline:
- The fur trade caused extirpation of the species from B.C. by the early 1900s.
- Protective measures taken in 1911 saved a small California population and larger Alaskan one.
- Otters were reintroduced to British Columbia from 1969 to 1972; this population has grown 18.6 % per year, and now exceeds 3000 otters and occupies 25 to 33% of its historic range.

Threats / Development Activities that Pose a Risk:
- Oil spills are the greatest threat. Other threats include environmental contamination, conflict with commercial fisheries and incidental takes.

Seabirds

Offshore Birds

12. Pink-footed Shearwater

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: Puffinus creatopus

Status: Threatened (May 2004) by COSEWIC.

Description:

- Stocky, broad-winged seabird that flies with slow wingbeats.
- Greyish-brown upperparts, pale grey underneath, mottled underwings, and a dusky head.
- Iris is brown, pinkish-yellow bill with a dusky tip, and the legs and feet are pink.
- Large size, pale bill and pale grey underparts differentiate it from other northern Pacific shearwaters. Juveniles and adults are alike in plumage, as are the sexes. The Flesh-footed Shearwater (Puffinus carneipes) is very closely related but has an entirely dark plumage.

Natural History:

- Breeds in burrows on islands off Chile during our winter. Migrates north offshore along the Pacific coast. Most records in B.C. occur from July through September.
- Stays well offshore (beyond the 70 to 90 m depth contour) and is rarely seen from land. Can be solitary or associated with sooty shearwaters. It congregates in good feeding areas, like La Perouse Bank, in flocks of up to 300 birds.
- Feeds on small fish; often follows fishing boats.

Human Use/Significance: Chicks are harvested for food from Chilean breeding sites.

History of Decline:

- The breeding population is estimated at about 60,000 individuals. Some populations are believed to have declined severely in the past. Although there is no direct evidence, populations on Isla Mocha are believed to be declining due to the effects of chick harvesting, introduced predators and habitat destruction.

Threats / Development Activities that Pose a Risk:

- Primary threats are on the breeding grounds in Chile.
- In B.C., some birds are accidentally caught by longline fishery.
- Vulnerable to the effects of oil pollution from illegal dumping of oily bilges as well as from oil spills.

Recovery Actions & More Information:

- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies; keeping plastic out of the sea.
13. Short-tailed Albatross

Nuu-chah-nulth Name: Ḫisan (Albatross)

Latin Name: Phoebastria albatrus

Status: Threatened (November 2003) by COSEWIC.

Description:
• Large-body with long narrow wings adapted for soaring above the water surface. Adults are white and black, with a pale yellow head, pale legs and feet. First year birds are brown.
• All ages have large pink bill.
• Full adult plumage is attained after 12 to 20 years. Sexes are alike.

Natural History:
• Breeds on Torishima Island off Japan and ranges at sea through the north Pacific Ocean to the Hawaiian Islands.

Human Use/Significance:
• Archaeological excavation of the Yuquot midden at Nootka Sound found 2000 Short-tailed Albatross bones. Carbon dating showed that 40% of the bones were from the period A.D. 800 to 1789 and 27% were from after 1789.

History of Decline:
• In late 1800s, common off the BC coast. By the 1930s, populations were reduced almost to extinction due to the activities of feather hunters and possibly by volcanic eruptions on its breeding grounds. There was a gradual increase in the world population to 1830 individuals in 2006. The most recent record in B.C. was of an immature associating with Black-footed Albatrosses, 64 km west of Vancouver Island in 1960.

Threats / Development Activities that Pose a Risk:
• Killed in commercial halibut and rockfish longline fisheries.
• Oil spills are also a threat. Feathers do not provide insulation if they are oiled.
• Ingestion of plastics at sea, presumably mistaking them for food items, can cause mortality because of internal injuries from sharp pieces of plastic, or through a reduction in ingested food volumes and dehydration.

Recovery Actions & More Information:
• Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
• Oil spill prevention and response strategies; keeping plastic out of the sea.
14. Black-footed Albatross

Nuu-chah-nulth Name: ʔisən (Albatross)

Latin Name: Phoebastria nigripes

Status: Special Concern (April 2007) by COSEWIC.

Description:
• Large seabird with long narrow wings spanning over 2 meters.
• Dark bill and black legs and feet.
• Dusky brown all over, except for a whitish area around the base of the bill and under the eye, and white feathers over the base of the tail.

Natural History:
• Mostly breeds on Hawaiian Islands and some on Torishima, off Japan.
• Young birds leave the breeding grounds in July and wander the ocean for 7 to 8 years before returning to breed in mid-October. Some return as non-breeders when 3 to 4 years old. Live up to 40 years.
• Regularly seen off the west coast, from the 140 m depth contour to the edge of the continental shelf, in waters rich in nutrients and low temperatures.
• Squid forms 30% of their diet. Scavenge discarded fish from fishing boats.

History of Decline:
• Poaching by feather and egg hunters caused losses of up to 300,000 birds per year between the late 1800s and early 1900s.
• More recently, breeding habitats have been altered by military operations, invasive vegetation, volcanic eruptions, and will likely be affected by rising sea levels from climate change. Breeding populations declined in the 1990s.
• Populations are expected to decline by 20 to 60% in three generations (56 years).

Threats / Development Activities that Pose a Risk:
• Most commonly reported seabird caught as bycatch in longline and driftnet fisheries in Canada (55 to 250 birds were likely killed each year from 2000-2002).
• Suffer from ingesting floating plastic and accumulate high levels of pollutants.
• Vulnerable to oil pollution from illegal dumping of oily bilges and from oil spills.

Recovery Actions & More Information:
• Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
• Oil spill prevention and response strategies; keeping plastic out of the sea.
15. Flesh-footed Shearwater

**Nuu-chah-nulth Name:** maamaati (Bird)

**Latin Name:** *Puffinus carneipes*

**Status:** On blue list in British Columbia. Not yet listed by COSEWIC. Some consider it to be the same species as the Pink-footed Shearwater.

**Description:**
- Gull-sized seabird with longer wings than a gull.
- Dark above and below except for paler flight feathers, distinctive pale pink base of bill.
- Rapid wing beats alternate with stiff wing glides as these birds skim the waves looking for food.

**Natural History:**
- Breeds on islands off Australia and New Zealand and part of the population winters in the North Pacific Ocean.
- An uncommon but regular visitor to offshore waters, coming no closer than the 90-180 m depth contours. Mainly seen in mid summer but can be seen from May to October. One or two birds usually seen but flocks up to 60 have been seen in the Goose Group banks off northern Vancouver Island.
- Readily follows commercial fishing vessels and may even dive for offal thrown overboard. Seldom comes close to boats.

**History of Decline:**
- Little is known about population sizes over time. Breeding habitat on Lord Howe Island, Australia, declined by 35% between 1978 and 2002 causing a 19% decline in nesting burrows.

**Threats / Development Activities that Pose a Risk:**
- Similar to the threats for Pink-footed Shearwaters: it is caught by longline fisheries and is vulnerable to the effects of oil pollution from illegal dumping of oily bilges and from oil spills.
- Also ingests floating plastic. It can clog the digestive tract and cause death.

**Recovery Actions & More Information:**
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies; keeping plastic out of the sea.
Nearshore Birds

16. Marbled Murrelet

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: Brachyramphus marmoratus

Status: Threatened (November 2000) by COSEWIC.

Description:
- Breeding adult is dark above, heavily mottled below, 25 cm long (10 inches).
- Winter plumage is white below with white patches on the wing.
- Call is a series of loud high "keer" notes.
- Flies with rapid shallow wing beats up to speeds of 120 km/h.

Natural History:
- Distributed along the Pacific coast from the Aleutian Islands to Santa Cruz.
- Color, body form and behaviour are adapted to life in the water, as well as the forest. As a diving bird, murrelets use their wings to “fly” underwater in pursuit of small fish, especially sand lance, juvenile herring and euphasiids/krill.
- Nests far inland (up to 80 km) on broad mossy limbs high above the ground in large trees and occasionally on mossy ledges on cliffs.
- A single egg is laid and raised between mid-May and July. Long-lived, females lay only one egg per year. Male and female take turns incubating and feeding young.
- Crows, ravens, jays, eagles, other raptors, squirrels and mice are predators.

History of Decline:
- A large proportion of old-growth forest has been removed within this species’ range over the last 150 years, especially in California, Oregon and Washington. Clayoquot and Barkley Sounds have the highest densities of birds at-sea in B.C.

Threats / Development Activities that Pose a Risk:
- Loss of nesting habitat through logging and fragmentation of old-growth forest, susceptibility to oil spills, and entanglement in fishing gear.

Recovery Actions & More Information:
- Monitored extensively in Carmanah-Walbran and Clayoquot and Barkley Sounds. Habitats are protected by the Identified Wildlife Management Strategy in B.C.

17. Ancient Murrelet

**Nuu-chah-nulth Name:** maamaati (Bird)

**Latin Name:** Synthliboramphus antiquus

**Status:** Special Concern (November 2004) by COSEWIC.

**Description:**
- Seabird in the auk family, the penguins of the North; 25 cm long.
- Grey-bodied with a white throat and cheek, black chin and crown, and a yellow-tipped bill.
- Distinctive line of white feathers extending back from the eye and fine black-and-white lines on the back of the head during breeding.

**Natural History:**
- Breeds in burrows on small islands (300 to 400 m from shore) from the Sea of Japan to northern B.C. in an arc around the north Pacific Rim. About 50% of the world’s population breeds in Haida Gwaii. No other breeding sites occur in B.C.
- Spends most of the year at sea in areas of upwelling or strong tidal currents. Sightings off Vancouver Island occur from September through February.
- Dives and “flies” under water to feed on zooplankton and fish.
- Breeds at 3 to 4 years of age, laying 2 eggs in April. Chicks leave the nest with their parents when they are a few days old without ever having been fed. They spend the next month at sea, where their parents feed them until they are full-grown. They do not always return to the same colony where they were born.

**History of Decline:**
- Approximately 256,000 pairs (about half the world population) nest on 31 colonies in Haida Gwaii. Between 1993 and 2004: three colonies showed an increase in number of birds, two appeared stable, three have decreased, and one is now believed to be extirpated. Populations on islands with introduced mammalian predators are decreasing dramatically (up to 23% annually). Overall, the total population has declined 18% between 1980s and 1990s.

**Threats / Development Activities that Pose a Risk:**
- Rats and raccoons introduced to breeding islands.
- Other risks include disturbance, oil exploration, oceanographic changes and commercial fisheries, entanglement in fishing gear.

**Recovery Actions & More Information:**
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
18. Tufted Puffin

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: *Fratercula cirrhata*

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
- Stocky, with thick neck, large head, massive bill and bright orange feet.
- Breeding adult’s face is white, bill rightly coloured; pale yellow head tufts droop over back of neck.
- Winter adult has darker face, duller bill, and no tufts.
- Juveniles are smaller and duskier. Large bill develops over many years.

Natural History:
- Breeds along the west coast from Alaska to California.
- Nests in large colonies, small groups and solitarily on offshore islands, including Seabird Rocks (Pachena Bay), Florencia Island, Cleland Island (Clayoquot Sound), McQuarrie Islets, Clark Island, Volcanic Island, Moss Islet and Thornton Island (all Kyuquot Sound), and Solander Island (N of Checlesaht). Nests in burrows, often on slopes.
- Egg laying occurs from May to June and fledging usually happens before mid-September. From October to April, they disperse to offshore waters.

History of Decline:
- About 38,365 pairs breed in B.C., mainly on Triangle Island. Mass starvation of nestlings happens in years when Pacific sand lance are in short supply.
- In addition, 18,000 to 40,000 birds drowned in drift nets in the Gulf of Alaska in the 1970s.

Threats / Development Activities that Pose a Risk:
- Drowning in commercial fishing nets, and oil spills.
- Easily disturbed by boat traffic and wildlife watching at breeding sites.

Recovery Actions & More Information:
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
19. Common Murre

**Nuu-chah-nulth Name**: waac\'iš (Murre)

**Latin Name**: *Uria aalge*

**Status**: On the red list in BC. Not yet listed by COSEWIC.

**Description**:
- Large (45 cm, 17.5 inches) seabird with a long slender, pointed bill.
- Dark sooty-grey back, head brown, and white under body.
- In winter plumage a dark stripe extends across white cheek.

**Natural History**:
- Breeds from Aleutian Islands to California and along the north Atlantic coast.
- Nests on offshore islands, usually in large colonies but a few nests have been found on Starlight Reef, Florencia Island, and Cleland Island.
- Eggs are laid on bare rock or soil, usually on cliff ledges or on the slopes and tops of low rocky islands. Females lay a single egg starting in late May.
- Young leave the nest with their fathers who feed and care for them for up to three weeks at sea. From mid-July through September, there is an influx of moulting adults and young, often in family groups of males and fledglings. Large numbers are seen from Barkley Sound to Checleset Bay.

**History of Decline**:
- About 2800 pairs breed in BC, most are on the Scott Islands off northwestern Vancouver Island. The Nestucca oil spill off Washington State in December 1988 resulted in 12,877 dead birds, most of which were Common Murres (80% in Washington and 42% in BC).

**Threats / Development Activities that Pose a Risk**:
- Vulnerable to oil spills.
- Every August, dozens of dead Common Murres wash ashore with clear lesions on their bodies resulting from being caught in fishing nets.

**Recovery Actions & More Information**:
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
20. Cassin’s Auklet

**Nuu-chah-nulth Name:** maamaati (Bird)

**Latin Name:** *Ptychoramphus aleuticus*

**Status:** On the Blue List in BC. Not yet listed by COSEWIC.

**Description:**
- One of the smallest of the “penguins of the north”. Small, plump, dark grey bird (23 cm, 9 inches) with rounded wings, a short stout bill with a light spot at the base of the lower beak, and pale eyes. Upper parts are dark gray, shading to paler grey below, with whitish belly.
- Prominent white crescents above and below eye. Call is a weak croaking heard only near breeding sites.

**Natural History:**
- Breeds from the Aleutian Islands to Baja California. Winters offshore.
- Nests in colonies on islands and on isolated coastal cliffs and headlands. Sites include Seabird Rocks (Pachena Bay), Cleland Island (Clayoquot), and Solander Island (north of Checleset Bay).
- Nests in burrows. Female lays a single egg in early April. Young leave the nest in late July – early August. Once young leave the burrow they are on their own.
- From fall to spring, they occur farther from shore than most other penguin-like birds.
- Feed where upwelling and oceanic currents carry food close to the surface.

**History of Decline:**
- About 1,177,000 pairs, 80% of the world’s breeding population, occur in BC.
- Poor breeding success in some years.

**Threats / Development Activities that Pose a Risk:**
- Oil spills and starvation in years when fish prey are scarce.

**Recovery Actions & More Information:**
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
21. Thick-billed Murre

**Nuu-chah-nulth Name:** waac̓ič (Murre)

**Latin Name:** *Uria lomvia*

**Status:** On the Red List in BC. Not yet listed by COSEWIC.

**Description:**
- Large (46 cm, 18 inches) and stocky, with a thick, fairly short bill, arched at tip to form a blunt hook. Upperparts and throat of adult are darker than Common Murre;
- White of underparts usually rises to a sharp point on the foreneck. A distinct white line on cutting edge of upper bill.

**Natural History:**
- Breeds on the Pacific and Atlantic coasts. A small colony breeds on the rocky cliffs of Triangle Island, off the northwest tip of Vancouver Island.
- Eggs are laid on bare ground on exposed narrow ledges of steep, rocky cliffs, or on level open areas near the cliff top.
- The few records of non-breeding birds have been off the west coast near Lennard Island and Pachena Point.

**History of Decline**
- Only one breeding site in B.C. on Triangle Island at the North end of Vancouver Island. Poor breeding success in some years.

**Threats / Development Activities that Pose a Risk:**
- Oil spills, especially near Triangle Island, the only breeding site in B.C.

**Recovery Actions & More Information:**
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
22. Double-crested Cormorant

Nuu-chah-nulth Name: ?aťčac (Cormorant)

Latin Name: Phalacrocorax auritus

Status: On the Red List in BC. Not yet listed by COSEWIC.

Description:
- Dark bird with a long hooked bill and yellow-orange bare facial skin and throat pouch. Breeding adult has large white tufts curving back from eyes on each side of its head.
- First-year birds are brown above and pale below especially on neck and breast.

Natural History:
- Found near shore in bays, inlets, harbours, lagoons and estuaries.
- Dives from the surface for fish. Primarily a bottom feeder, it eats penpoint and crescent gunnels, shiner perch, snake prickleback and Pacific sand lance.
- Often perches on pilings or navigational posts to dry wings. Frequently roosts with Pelagic and Brandt’s cormorants on islets, wharves, log booms, pilings, jetties, and dead trees.
- Birds wintering off the west coast likely migrate to Alaska to breed.

Human Use/Significance:
- Bones of Double-crested Cormorants are abundant at archaeological sites throughout the Strait of Georgia.

History of Decline:
- Archaeological records indicate that they were abundant over 5000 years ago. Became re-established as a breeding species in B.C. within the last 60 years. The first colonies were reported in 1927. By 1987, there were 13 colonies and about 2000 pairs, all within the Strait of Georgia.
- Some smaller colonies are being abandoned due to human disturbance but new sites continue to be established.

Threats / Development Activities that Pose a Risk:
- Oil spills on the west coast of the island.

Recovery Actions & More Information:
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
23. Brandt’s Cormorant

**Nuu-chah-nulth Name**: k’ipuus (Cormorant)

**Latin Name**: *Phalacrocorax penicillatus*

**Status**: On the Red List in BC. Not yet listed by COSEWIC.

**Description**:
- A band of pale buffy feathers bordering the throat pouch identifies all ages.
- Throat pouch becomes bright blue and head, neck and shoulders acquire fine white plumes in breeding plumage.

**Natural History**:
- Common and social along the coast. Often fishes in large flocks.
- Breeds in colonies on Starlight Reef and Sea Lion Rocks (near Ucluelet).
- Breeding colonies are shared with Pelagic Cormorants (smaller) and Glaucous-winged Gulls. Nests are built close together on bare rock on the lee side of islands, usually on the shoulder top of slopes. Nests are compact, circular structures built almost entirely by surf-grass. Nests become covered by bird droppings as the breeding season progresses.
- Females lay 1 to 6 eggs starting in late June. Most young fledge by September.

**History of Decline**:
- Breeding population decreased gradually from a peak of 150 pairs in 1970 to about 60 pairs in 1982. Numbers fluctuate greatly from year to year.

**Threats / Development Activities that Pose a Risk**:
- Oil spills on the west coast of the island.

**Recovery Actions & More Information**:
- Innovative fishing gear to reduce bycatch of seabirds: www.smartgear.org
- Oil spill prevention and response strategies.
24. Great Blue Heron

Nuu-chah-nulth Name: ʕənəs (Heron)

Latin Name: Ardea herodias fannini

Status: Special Concern (Data Deficient) by COSEWIC in 1997.

Description:
- Large (1 m) grey wading bird with long legs, long neck and long bill.
- Coastal subspecies is resident from southeastern Alaska through coastal BC to Washington.
- Flies with slow deep wing beats and neck folded in S-shape.

Natural History:
- Found in a variety of salt, brackish and freshwater bodies, including sheltered and shallow bays, tidal mud flats, sloughs, marshes, rivers, and irrigation ditches.
- Feed on fish and small mammals. Solitary birds and small groups often roost in coniferous trees.
- Breeding colonies are usually in mature forests, relatively free from disturbance and near suitable foraging areas. Very few breeding records documented from western Vancouver Island – Bamfield and Tahsis are two sites with <10 nesting pairs. Estimate that 84% of the population breeds in the Strait of Georgia.
- Nests are large stick platforms built in trees, often red alder, beginning in March. Females lay 1 to 8 eggs and incubate for one month. Young fledge after 2 months.

History of Decline:
- High levels of toxins (organochlorine residues and dioxins) have been found in egg contents from heronries on the south coast and Vancouver Island.
- Decline in breeding colonies; 84% of the subspecies breeds at 4 colonies.

Threats / Development Activities that Pose a Risk:
- Environmental contaminants and oil spills.
- Logging and land conversion without retention of nest trees.
- Human disturbance of shoreline by land development and housing construction.

Recovery Actions & More Information:
- Mapping and protecting breeding colonies and roost sites. Report found nests to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
Shorebirds

25. Red Knot

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: Calidris canutus

Status:
Calidris canutus roselaari type assessed as Threatened (April 2007)
Calidris canutus rufa subspecies assessed as Endangered (April 2007)

Description:
• Medium-sized (27 cm) chunky shorebird with black bill. Juveniles have olive-green legs.
• Breeding adults are chestnut red on face, neck, breast and upper belly. Adults have black legs.
• In winter, all ages are pale grey with white underneath (as shown in photo).

Natural History:
• Many roselaari breed in northwest Alaska and on Wrangel island and winter in California and Mexico; rufa breeds in Arctic Canada and winters in Argentina.
• Mostly roselaari and some rufa are seen in small numbers, often within flocks of other shorebirds, during migration, in spring and summer, along the coast of B.C.
• Migrating birds stopover to feed at mudflats, hard-packed sandy beaches, offshore rocks, sand dunes, and freshwater sloughs. Feed on clams and other invertebrates. Often seen at the Tofino Mudflats.
• Pairs lay 4 eggs in June and eggs hatch in mid-July. Females migrate south first, then adult males, followed by the young, one to two weeks later.
• May live up to 25 years but most reach 7-8 years of age.

History of Decline:
• Pacific coast population of roselaari declined 47% from 1991 to 2005. There are 2000 to 4000 left. Canadian population of rufa declined 70% in last 10 years.

Human Use/Significance:
• Can be economically important in attracting eco-tourists and birders.

Threats / Development Activities that Pose a Risk:
• Disturbance by walkers, joggers, dogs, boats at stopover feeding sites.
• Deterioration of food resources and habitat loss.

Recovery Actions & More Information:
• Help protect habitats and minimize disturbance at beaches during shorebird migration.
Marine Fish

26. Bocaccio

Nuu-chah-nulth Name: Ḵ̱̱ẖu̱p̱i̱ḻi̱h (Red Snapper)

Latin Name: Sebastes paucispinis
[="magnificent"+"few spines" on head; bocaccio = "big mouth"] Also called Pacific red snapper and rock salmon.

Status: Threatened (November 2002) by COSEWIC.

Description:
- Long bodies (up to 91 cm) with few or no spines on the head and very large mouths. Lower jaw extends beyond the upper. Nob on the end of the chin.
- Body is reddish or olive brown. Maximum size is 6.8 kg.

Natural History:
- Occurs from the Gulf of Alaska to Baja California. In B.C., most catches are from the edge of the continental shelf at depths of 60 to 340 m.
- Eat other rockfish, hake, sablefish, northern anchovies, lanternfish and squid.
- Live to be 40 years or more. Females mature at 36 cm in 4 to 5 years.
- After internal fertilization of eggs (20,000 to 2,298,000) females bear live young. Larvae (4 –5 mm long) are released into water column in winter and feed on plankton, then settle near shore at depths of 30-120 m. Seabirds prey on young.
- Marine mammals take adults. Dorsal and pelvic spines produce mild venom.

Human Use/Significance:
- Have always been a part of the aboriginal fisheries on the west coast of Vancouver Island. Taken by gillnet, hook and line, and trawls.

History of Decline:
- Severe decline (>90%) in the United States during the 1980s and 1990s.
- Abundance in B.C. waters is poorly known.

Threats / Development Activities that Pose a Risk:
- Overharvested and discarded as bycatch in commercial fisheries.
- Poor oceanographic conditions may play a role in keeping numbers low.
- Experiments with an airgun, of the type used in oil exploration, led to the conclusion that hook and line catches decrease after exposure to this sound.

Recovery Actions & More Information:
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs). www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
27. Yelloweye Rockfish

**Nuu-chah-nulth Name:** ƛ̓ ixapiih (Red Snapper)

**Latin Name:** *Sebastes ruberrimus*  
[="magnificent"+"very red"], also called "red snapper".

**Status:** Candidate species to be reviewed by COSEWIC in the future.

**Description:**
- One of the largest of the rockfish (maximum size is 91 cm, 11.3 kg).
- Bright yellow eyes and red-orange colour. Juveniles have two horizontal white stripes on either side of the lateral line.

**Natural History:**
- Distributed from the Aleutian Islands to Baja California, Mexico. Adults are most common from 91 to 180 m depths but live in shallower water in the North.
- Found in rocky areas near overhangs, crevices, caves and boulder piles.
- Spend most of their time resting on the bottom.
- Females are slightly larger than males. Females become sexually mature at 19; males at 22. Females produce 1,200,000 to 2,700,000 eggs per season. Peak time for releasing larvae is May and June. Live to be 118 years old.
- Feed on rockfish, herring, sandlance, flatfishes, shrimps crabs, and lingcod eggs.
- Predators include salmon and orcas. As with most rockfish, some dorsal and pelvic spines produce mild venom.

**Human Use/Significance:**
- Commercial hook-and-line and bottom fish fisheries, as well as recreational fisheries. Primary species caught in the Pacific halibut fishery.

**History of Decline:**
- One of the principal food-fishes from San Francisco northward since the late 1800s. At the turn of the 21st century, stocks off northern California and Oregon were 7-12% of unfished levels.

**Threats / Development Activities that Pose a Risk:**
- Declared overfished by the National Marine Fisheries Service in the U.S.

**Recovery Actions & More Information:**
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs).  
  www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
28. Canary Rockfish

Nuu-chah-nulth Name: Xisuuh (Rock Cod)

Latin Name: Sebastes pinniger
[="magnificent"+"I bear a large fin"].

Status: Candidate species to be reviewed by COSEWIC in the future.

Description:
• Orange mottling over white body.
• Lateral line within a grey or white zone. Fins are bright orange.
• Three bright orange diagonal stripes across the head.
• Anal fin is pointed and slanted forward, tail fin is indented.
• Maximum size 76 cm.

Natural History:
• Distributed from the Gulf of Alaska to Baja California, Mexico.
• Adults are most common in 80 to 200 m deep water. Young fish are shallower.
• Gather around pinnacles and other rocky areas, often where currents are strong.
• Spend most of their time near, but not on, the bottom.
• Females are slightly larger than males. Females become sexually mature at 7-9 years; males at 7-12 years. Females produce 260,000 to 1,900,000 eggs per season. Peak time for releasing larvae is February. Live to be 84 years old.
• Feed on krill and small fishes, such as lanternfishes, anchovies, and sanddabs.
• Predators include salmon, birds and mammals. Spines produce mild venom.

Human Use/Significance:
• Important commercial species, especially for trawl and hook-and-line fisheries.
• Also important for recreational fishing.

History of Decline:
• Declines in population biomass, spawning output, and size over the past several decades. Total biomass of 3-year-olds off Oregon and Washington in 1999 is estimated to be 8-18% of peak biomass that occurred in the 1960s.

Threats / Development Activities that Pose a Risk:
• Direct overharvesting and bycatch.

Recovery Actions & More Information:
• Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs).
www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
29. Quillback Rockfish

**Nuu-chah-nulth Name:** ḕisuuḥ (Rock Cod)

**Latin Name:** *Sebastes maliger*  
["magnificent"+"I bear a mast" referring to the high dorsal fin]; also called rock cod.

**Status:** Candidate species to be reviewed by COSEWIC in the future.

**Description:**
- Brown with yellow to orange blotches at front end.
- Dorsal fin spines are very long with a yellow band; deep notches between them.
- Maximum size is 61 cm.

**Natural History:**
- Distributed from the Gulf of Alaska to southern California.
- Adults common in 80 to 200 m deep water on bottom. Young fish are shallower.
- Live on the same rock outcrop (<10 m²), near kelp, for extended periods.
- Females are slightly larger than males. Become sexually mature at 5-22 years.
- Peak time for releasing larvae is March to June.
- Live to be 76 years old.
- Feed on crabs, shrimps, and other crustaceans from the bottom, as well as herring and fishes as much as 12 m above the bottom. Feed in morning and early evening.
- As with most rockfish, some dorsal and pelvic spines produce a mild venom to deter predators, such as other fish, marine mammals, and seabirds.

**Human Use/Significance:**
- Commercially fished, especially by hand line and long line. Fish are kept alive in pens for market. A live quillback is worth five times that of a “fresh” dead one.
- Big component of recreational fishery.

**History of Decline:**
- Catch rates in some areas of B.C. have declined over the last decade.

**Threats / Development Activities that Pose a Risk:**
- Direct overharvesting and bycatch.

**Recovery Actions & More Information:**
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs). www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
30. Roughey Rockfish

Nuu-chah-nulth Name: Ḵisuuḥ (Rock Cod)

Latin Name: *Sebastes aleutianus* [=“magnificent”+”Aleutian Islands”].

Status: Special Concern (April 2007) by COSEWIC.

Description:
- Have 2-10 spines along lower rim of eyes.
- Pink, tan or brown with bronze blotches under water; pink or bright red with black or grey blotches after being caught.
- Can grow to 90 cm.

Natural History:
- Found across the North Pacific from Japan to Alaska and southward to California.
- Adults are most common in 150 to 450 m deep water. Young fish are shallower.
- Live near steeply sloped boulder fields surrounded by soft bottom.
- Females are slightly larger than males. Peak time for releasing larvae is February to June.
- One of the longest lived fishes on earth, up to 200 years old!
- Feed on shrimps, mysids, crabs, amphipods and fishes.
- Predators include salmon, marine birds and mammals. As with most rockfish, some dorsal and pelvic spines produce a mild venom.

Human Use/Significance:
- Important commercial species, taken by bottom trawl and longline.
- Occasionally taken by recreational fishers.

History of Decline:
- Changes in age distribution indicate that fewer fish make it to spawning size.
- Expect populations to stay low because of low productivity of this long-lived fish.

Threats / Development Activities that Pose a Risk:
- Direct overharvesting and bycatch in the Alaska sablefish and Pacific halibut longline fisheries.

Recovery Actions & More Information:
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs).
  www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
31. Longspine Thornyhead

Nuu-chah-nulth Name:

Latin Name: *Sebastolobus altivelis* [="magnificent lobe" + "high sail", referring to the tall dorsal fin]; also called “idiots”.

Status: Special Concern (April 2007) by COSEWIC.

Description:
- Have a spiny ridge across their cheeks and 15 dorsal spines.
- Orange-red bodies, often with large white patches and dark stippling. Fins have black on them.
- Can grow to 39 cm.

Natural History:
- Found from the Aleutian Islands southward to Baja California, Mexico.
- Adults are most common in 500 to 1300 m deep water. Young settle in deep water as well. Tolerant of low oxygen levels.
- Live on mud bottoms, near small rocks and sponges.
- Females are slightly larger than males. Females mature between 6 and 23 years. Females produce gelatinous egg masses that drift in upper water. Produce 2-4 batches of eggs per season, a total of 2,000 to 50,000 eggs. Peak time for spawning is April-May.
- Time from spawning until young settle on bottom is 18 to 20 months.
- Live up to 50 years old. Very slow growth.

Human Use/Significance:
- Important commercial species, taken by the deepwater bottom trawl fishery.
- Rarely taken by recreational fishers.

History of Decline:
- Coast-wide trawl catch has increased 10-fold since mid 1980s.
- Recent declines (50% in 8 years) in catch per unit effort and in biomass indices in the U.S.

Threats / Development Activities that Pose a Risk:
- Direct overharvesting and bycatch.

Recovery Actions & More Information:
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs). www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
32. Shortspine Thornyhead

Nuu-chah-nulth Name:

Latin Name: *Sebastolobus alascanus* [=“magnificent lobe”+“of Alaska”]; also called idiot.

Status: Candidate species to be reviewed by COSEWIC in the future.

Description:
- Orange-red with white patches on cheeks, backs, sides and spines. Dark blotches after being caught.
- Spiny ridge across the cheek; 16 dorsal spines; pectoral fins have black bars.
- Can grow to 80 cm.

Natural History:
- Found from Japan to Alaska and southward to Baja California, Mexico.
- Adults are most common in 150 to 450 m deep water. Can occur at 1500 m.
- Live over mud bottoms near cobblestones, pebbles and sponges; occasionally on rocky bottoms. Often along steep banks.
- Females are slightly larger than males. Mature at 22 cm, between 5 and 16 years. Produce gelatinous egg masses that drift in the upper water column. Larvae can be found 560 km offshore. Young settle on bottom 14 to 15 months after spawning. They migrate to deeper water as they grow.
- Feed on shrimps, amphipods, fishes, crabs and other bottom invertebrates.
- Predators include marine mammals.

Human Use/Significance:
- Commercially fished by the deepwater bottom trawl and longline.
- Occasionally taken by recreational fishers.

History of Decline:
- Declines in catches between 1996 and 1997, maybe a result of new quota system, or because earlier harvest levels were too high.

Threats / Development Activities that Pose a Risk:
- Direct overharvesting and bycatch.

Recovery Actions & More Information:
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs).
  [www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm](http://www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm)
33. Yellowtail Rockfish

Nuu-chah-nulth Name: Ḵisuuḥ (Rock Cod)

Latin Name: *Sebastes flavidus* [="magnificent"+"yellow"].

Status: Candidate species to be reviewed by COSEWIC in the future.

Description:
- Sleek, long body with few head spines.
- Olive green with pale blotches below dorsal fin. Blotches darken after capture.
- Can grow to 66 cm.

Natural History:
- Occur from Aleutian Islands to southern California.
- Adults are most common in 90 to 180 m deep water. Young fish are shallower.
- Found over boulders and rock walls, usually in large schools (up to 1000) off the bottom.
- Females are slightly larger than males. Mature at 36 to 45 cm. Females produce 56,900 to 1,993,000 eggs per season. They are fertilized in winter. Peak time for releasing larvae is January to April. Larvae can occur 266 km from shore. Larvae live at sea for 3.5 months before settling in rocky areas with kelp.
- Live up to 64 years.
- Feed on krill and other fishes.
- Predators include salmon, marine birds and mammals.

Human Use/Significance:
- Major commercial species, taken by mid water and bottom trawls.
- Also important part of recreational fishery.

History of Decline:
- By late 1990s, declined substantially throughout its range. Spawning output was 33% of its maximum; biomass of 4 + year olds was 43% of 1967 historic high.

Threats / Development Activities that Pose a Risk:
- Overharvesting.
- Body condition declined during the 1993 El Ninos.

Recovery Actions & More Information:
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs). [www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm](http://www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm)
34. Silvergray Rockfish

**Nuu-chah-nulth Name:** ƛisuuḥ (Rock Cod)

**Latin Name:** *Sebastes brevispinis*  
[="magnificent"+"short spine"]. Also called “rock salmon” or “grouper”.

**Status:** Candidate species to be reviewed by COSEWIC in the future.

**Description:**
- Slim species with reduced head spines.
- Dark grey, green or brown back, silvery or tan sides, and a white or cream belly. Underside of lower fins and head are pink.
- Can grow to 73 cm.

**Natural History:**
- Found from Bering Sea to Baja California, Mexico.
- Adults are most common in 100 to 300 m deep water. Young fish are shallower.
- Found over various rocky-bottom habitats. Young are often in kelp beds.
- Females are slightly larger than males. Mature at 37-46 cm (8 to 15 years of age). Extended time for releasing larvae is April to August, peaking in July.
- Feed on krill and small fish.
- Live up to 82 years old.

**Human Use/Significance:**
- Important commercial species, taken by bottom trawl and hook-and-line.
- Important for recreational fishers.

**History of Decline:**
- Many are part of the bycatch in trawl and longline fisheries.
- Status of stocks is poorly known. Recent recorded landings were lower than historical averages either because of reduced stocks, or possibly because of new quota system.

**Threats / Development Activities that Pose a Risk:**
- Direct overharvesting and bycatch.

**Recovery Actions & More Information:**
- Rockfish conservation strategy includes: catch monitoring, harvest reduction, stock assessment and the establishment of rockfish conservation areas (RCAs).  
  www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/Rockfish_Maps_2004/default_e.htm
35. Spiny Dogfish

Nuu-chah-nulth Name: yačaa (Dogfish)

Latin Name: *Squalus acanthias* [=“shark”+“spines”].

Status: Candidate species to be reviewed by COSEWIC in the future.

Description:
- Two dorsal fins with a spine on the leading edge of each. No anal fin.
- Grey or brown with white spots on sides of body.
- Maximum size of 160 cm, 9.1 kg. Females larger than males.

Natural History:
- Occur in temperate and subtropical waters in the Atlantic and Pacific Oceans. Found from Japan to Alaska, south to Baja California and off Chile.
- Common in near shore waters over sandy bottoms out to 900 m depths.
- Feeds on smaller fish such as herring, sardines, and crabs.
- Females mature at 23 years of age. After 18-24 month pregnancy, 3 to 14 young are born in alternate years.
- Long-lived (35 to 40 years).

Human Use/Significance:
- Sandpaper and lubricating oil from skin; Vitamin A produced from liver.
- Commercial longline fishery. Most sold as food to Asian markets.

History of Decline:
- Historically, they were purposefully killed just because they were sharks.
- Stocks have been severely depleted in Atlantic Canada, but not yet in the Pacific.

Threats / Development Activities that Pose a Risk:
- Slow-growing and long-lived therefore over-fishing leads to long-lasting depletion.
- Reproductive females are often more easily caught than males.
- If released, bycatch can likely recover.

Recovery Actions & More Information:
- Assessment of the number and distribution of B.C. populations.
- Development of aging techniques.
36. Bluntnose Sixgill Shark

Nuu-chah-nulth Name: mamasayiïih (Shark)

Latin Name: *Hexanchus griseus* [=“six bends (gills)”+“grey”].

Status: Special Concern (April 2007) by COSEWIC.

Description:
- Distinguished by having six gill slits and its large size.
- Single dorsal fin is at the tail end of the body.
- Head is large with a broad rounded snout and large oval eyes.
- Maximum size of 8 m, largest in the Pacific is 4.7 m, 590 kg.

Natural History:
- Throughout the world’s temperate seas and along the Pacific coast from the Gulf of Alaska to northern Baja California.
- Usually found at 90 m depths, ranges from 0 – 2500 m.
- Sluggish and normally docile, usually below SCUBA limits but occasionally seen by divers. Juveniles tend to be at shallower depths.
- Feeds primarily on crustaceans, and fish, including other sharks.
- Females do not reproduce until they are 18 to 35 years of age.
- Produce many young, 108 embryos found in a 4.5 m female.

Human Use/Significance:
- Used to produce oil and meal, particularly important fishery before the Second World War.

History of Decline:
- Population trends are unknown, except that there has been a 90% decrease in the rate of encounters with juveniles at a dive site in the Strait of Georgia over the last five years.

Threats / Development Activities that Pose a Risk:
- Fisheries and bycatch. Worldwide estimates of population decline are so severe that this is considered an internationally threatened species.

Recovery Actions & More Information:
- Assessment of the number and distribution of B.C. populations.
37. Basking Shark

**Nuu-chah-nulth Name:** nutku? (Basking Shark)

**Latin Name:** Cetorhinus maximus [="whale shark"+"largest"].

**Status:** Endangered (April 2007) by COSEWIC.

**Description:**
- Largest fish in Canada. Maximum length is 13 m (almost as long as a school bus).
- A 9.2 m shark in California weighed 3900 kg.
- Five very long gill slits, horny gill rakers, and a raised keel or ridge on each side of the tail.

**Natural History:**
- Occur in the temperate and boreal parts of the world’s oceans. Throughout the Pacific found from the Gulf of Alaska to Baja California, off Peru and Ecuador, off Japan and China, and off southern Australia and New Zealand.
- Sluggish, gets its name from lying quietly on the surface, often with its dorsal fin exposed.
- Feeds on small crustaceans (shrimp and krill) screened from the water by the gill rakers.
- Young are born at approximately 1.5 m (5 ft) in length. Reach sexual maturity at 16 years of age when they are 4.6 m. Females are pregnant for up to 3.5 years!

**Human Use/Significance:**
- Fished heavily in the 1940s. Oil from the large liver formerly used for lamps but has no valuable vitamin content.

**History of Decline:**
- From 1950 to 1970, they were purposefully killed for being a nuisance interfering with nets and trollers fishing for salmon. More than 90% decline in 2 generations.
- There were rare sightings near Flores Island and Sydney Inlet in Clayoquot Sound during the 1990s. Only 6 individuals have been seen since 1996.

**Threats / Development Activities that Pose a Risk:**
- Very small population size with such long generation time may not recover.
- Susceptible to entanglement in fishing gear and collision with boats.

**Recovery Actions & More Information:**
- Scott Wallace and Brian Gisborne wrote “Basking Sharks” describing their biology and a history of their decline on the west coast of Vancouver Island.
38. Blue Shark

**Nuu-chah-nulth Name**: mamasayiilh (Shark)

**Latin Name**: *Prionace glauca* [="saw point"+"blue"].

**Status**: Data Deficient by COSEWIC in 2006.

**Description**:
- Notable long sabre-like pectoral fins and dark indigo blue back.
- Slender body with a well-developed snout. Eyes almost circular.
- Maximum size of 160 cm, 9.1 kg. Females larger than males.

**Natural History**:
- Found worldwide in temperate and tropical oceans. Widespread throughout Canada’s Pacific waters with peak occurrences in the late summer and fall.
- Most common offshore between the surface and 350 m. Water temperature influences their depth and distribution.
- Canada’s waters provide habitat for primarily immature individuals and a few adults.
- Feeds on bony fishes, squids, birds and marine mammal carrion. Adult blue sharks have no known predators; however, juveniles are taken by shortfin makos, white sharks and sea lions.
- Maximum age 16-20 years, mature at 4-6 years, generation time 8 years, 25-50 pups every two years.

**Human Use/Significance**:
- Meat is rarely marketable due to rapid breakdown of urea in the muscle tissue into ammonia. Fins are of low value but contribute to 50-70% of fin market traded through Hong Kong.

**History of Decline**:
- Stocks may be stable or declining in Atlantic Canada as pelagic fishing bycatch has likely increased since the mid-1950s. There is too little information to assess populations in the Pacific.

**Threats / Development Activities that Pose a Risk**:
- Blue sharks are the most heavily fished species of sharks in the world and fishing is the single largest source of adult mortality. Pelagic fisheries regularly catch blue sharks as bycatch.

**Recovery Actions & More Information**:
- Blue sharks cannot be landed in the hook and line fishery.
39. (Great) White Shark

Nuu-chah-nulth Name: mamasəyiłh (Shark)

Latin Name: *Charcharodon carcharias* [="rough tooth"+"man-eater"].

Status: Data deficient by COSEWIC in 2006.

Description:
- Sharp contrast between dark grey/black back and white underside.
- Moon-shaped tail.
- Record sizes in Australia are 11 m and 13 metric tons.

Natural History:
- Widely distributed in sub-polar to tropical seas of both hemispheres, but it is most frequently observed and captured in mid-latitude temperate waters.
- White shark records from Pacific Canada consist almost exclusively of strandings on the leeward shores of the Queen Charlotte Islands (Haida Gwaii) during late autumn and early winter months. Only 14 records since 1961.
- Occurs in both inshore and offshore waters from just below the surface to just above the bottom down to a depth of at least 1,280 m. It occurs in the breakers off sandy beaches, off rocky shores, and in enclosed bays, lagoons, harbours, and estuaries.
- Feeds on fish, sharks, marine mammals, birds, sea turtles, crabs and octopuses.
- Females mature at 12 to 18 years of age. After approximately a 14-month pregnancy, 2 to 10 young are born. Females likely have young every 3 years.
- Long-lived (23 to 60 years).

Human Use/Significance:
- The quintessential shark species due to its large size, predatory nature and reputation for occasionally attacking humans.
- Its celebrated status makes its jaws and teeth valuable on the black market.
- Fins are used for Asian delicacies and traditional medicines.

Threats / Development Activities that Pose a Risk:
- Humans are the most significant predators, taking them as sport fish, commercial bycatch, and for international trade of their valuable body parts.

Recovery Actions & More Information:
- On Canada’s Pacific coast, hook and line fisheries are prohibited from keeping any species of shark except dogfish.
40. Brown Catshark

Nuu-chah-nulth Name: mamasayih (Shark)

Latin Name: *Apristurus brunneus* [="without hard file"+"brown"].

Status: Data Deficient by COSEWIC in 2007.

Description:
- Long straight body.
- Broad rounded fins.
- Tail fin is entirely below the body.
- Uniform brown colour.
- Smallest shark in Canadian Pacific. Maximum size of 68 cm.

Natural History:
- Occurs from southeastern Alaska to southern California, and maybe Panama.
- Found at 33 to 360 m over muddy or sandy bottoms.
- Common in near shore waters over sandy bottoms out to 900 m depths.
- Feeds on shrimps and small fishes.
- Several months after mating a female deposits several horny egg cases slightly over 5 cm long, with string-like tendrils at each corner. The tendrils anchor the egg cases to the bottom debris. After a year, miniature sharks emerge.

Human Use/Significance:
- A soft fleshed fish of no commercial value.

History of Decline:
- Minimum population estimate of about 25,000 individuals of all ages widespread within deep waters (>500m) of the continental slope, however, data have not been collected over a long enough time to assess whether populations are stable.

Threats / Development Activities that Pose a Risk:
- Caught as bycatch by longline fishing gear and deep water trawlers.

Recovery Actions & More Information:
- On Canada’s Pacific coast, hook and line fisheries are prohibited from keeping any species of shark except dogfish.
41. Soupfin Shark (Tope)

Nuu-chah-nulth Name: mamasayilh (Shark)

Latin Name: Galeorhinus galeus
[="shark nose"]

Status: Special Concern by COSEWIC in April 2007.

Description:
- Unique tail fin with a long lobe in the upper portion.
- Two dorsal fins, one forward, one back.
- Long slender body and pointed snout.
- Dark bluish to grey on back, pale underparts.
- Maximum size of 2 m.

Natural History:
- Ranges from northern BC to Baja California at depths of up to 550 m.
- Northern movements in summer. Some move up to 56 km per day.
- Feeds pilchard, anchovy, salmon, rockfish, perch, sculpins and squid.
- Female gives birth to 6 to 52 (average 35) live young, each about 35 cm long. Gestation is one year.

Human Use/Significance:
- Livers are rich in vitamin A, more than any other species in the north-east Pacific. There was a fishery for livers during World War II, also used fresh fillets and dried fins.

History of Decline:
- More than 800,000 individuals, primarily large adults, were killed for their livers between 1937 and 1949. Rarely seen today in Canadian waters.

Threats / Development Activities that Pose a Risk:
- Caught as bycatch by longline fishing gear and deep water trawlers.
- Long generation time and low reproductive rate make it difficult for this species to rebound from population decline.

Recovery Actions & More Information:
- On Canada's Pacific coast, hook and line fisheries are prohibited from keeping any species of shark except dogfish.
42. Eulachon

Nuu-chah-nulth Name: Ḵii ḳi (Oolichan)

Latin Name: Thaleichthys pacificus [="rich fish"+"of the Pacific"].

Status: Candidate species to be reviewed by COSEWIC in the future.

Description:
- Dorsal fin begins behind where pelvic fins begin. Adipose fin.
- Large mouth.
- Repeated lines on gill cover.
- Can grow to 23 cm, 40-60 g.

Natural History:
- Occurs from southern Bering Sea to northern California. There may be as few as 30-40 runs in the world and 15 occur in coastal B.C.
- In the 1950s, eulachon spawned in the Somass River but this was unusual. Currently, there are no spawning populations on Vancouver Island. Large spawning populations are in Fraser, Columbia, Skeena and Nass Rivers.
- Migrate into rivers to spawn. Fertilized eggs develop and hatch after 3 to 5 weeks, then tiny, weak-swimming transparent larvae are swept downstream to sea where they begin to feed and grow rapidly. Move offshore to the open water.
- Mature at sea in 2 and 5 years and migrate back to reproduce in rivers.
- Females attach small eggs (30,000 per female) to sand and pebbles. Most adults die after spawning.

Human Use/Significance:
- Vital to traditional aboriginal economy because of the high oil content. Bartered along the "grease trail" to the Interior. Eulachon are still culturally important.
- Small commercial fishery in the Fraser River.
- Several aboriginal fisheries in B.C.

History of Decline:
- Runs have declined in a number of rivers, particularly in southern areas.

Threats / Development Activities that Pose a Risk:
- Over harvesting and bycatch in offshore trawl fisheries.
- Changes in the water flow of spawning streams.
- Industrial pollution.
- Climate change which causes warming of coastal waters.

Recovery Actions & More Information:
- Fraser River was closed to commercial fishing in 1998 and since then has been regulated according to information from assessments and catch-monitoring.
- Restriction of dredging activities during spawning season.
- www.pac.dfo-mpo.gc.ca/comm/publications/speciesbook/Pelagics/eulachon.html
43. Green Sturgeon

Nuu-chah-nulth Name:

Latin Name: *Acipenser medirostris* [="sturgeon"+""].

Status: Special Concern by COSEWIC in November 2004.

Description:
- Body armoured with five rows of bony plates along their back and sides.
- Long snout with four whiskers on the underside in front of the mouth.
- Upper lobe of tail is larger than lower lobe, like a shark's tail.
- Dark olive-green with a white belly. Single dorsal fin.
- Reaches a maximum size of 2.3 m and 159 kg.

Natural History:
- Long-lived, slow growing fish reach maturity at 15 to 17 years of age. Every 3 to 5 years adults spawn in freshwater (in only three known rivers in the U.S. – Sacramento, Klamath and Rogue Rivers) from March to July.
- Young spend first 1 to 4 years in freshwater. As sub-adults they move into estuaries, feeding on invertebrates from the bottom, such as crabs, worms, isopods and fish.
- Migrate northward, and are found in estuaries and marine habitats as far as Alaska.
- Large marine catches have historically occurred off the west coast of Vancouver Island. For example, 75 fish weighing a total of 952 kg were reported in a one-day catch off Kyuquot Sound in 1954.

Human Use/Significance:
- Low commercial value because of rarity and disagreeable taste.
- One of the world’s most ancient species, having remained unchanged since they appeared in the fossil record over 200 million years ago.

History of Decline:
- Rare in Canada and population trends have been poorly documented. Catches may have declined since the early 1960s but evidence is sketchy.

Threats / Development Activities that Pose a Risk:
- Vulnerable to accumulation of pollutants and contaminants in their bodies over the course of their long life span.
- Changes to estuarine habitats and prey species caused by industrial activities.

Recovery Actions & More Information:
http://www.dfo-mpo.gc.ca/species-especes/species/species_green_sturgeon_e.asp
Marine Reptiles

44. Leatherback Seaturtle

Nuu-chah-nulth Name: Ḵ̱ʼič̱ʼič̱ʼiya’n (Turtle)

Latin Name: Dermochelys coriacea

Status: Endangered (confirmed May 2001) by COSEWIC.

Description:
- Grow up to 2 m long and have an average weight of 500 kg.
- Back cover is leathery and cartilagenous with no scales.
- Paddle shaped front flippers about half the body length.
- Black or dark blue backs with white and pink blotches and a white belly.
- Individuals identified by the size and shape of the "pink spot" on top of head.

Natural History:
- Occurs in the Pacific, Atlantic and Indian Oceans. The Western Pacific population, which nests primarily in Indonesia and Papua New Guinea, is the most likely source of adults foraging off coastal B.C. The Eastern Pacific population nests mainly in Mexico, and adults may also reach our waters.
- Females lay 50-166 eggs in nests dug on sandy beaches. Young hatchlings crawl to the water and grow up in warm tropical waters.
- Adults are highly migratory, swimming up to 15,000 km annually. They spend the majority of their lives in the open sea feeding on jellyfish and soft-bodied animals.
- Their main predators are sharks and killer whales.

History of Decline:
- Global population estimates, based on the number of nesting females, were 115,000 in 1982 compared to 34,500 in 1995.

Threats / Development Activities that Pose a Risk:
- Collision with boats, accidental capture and entanglement in fishing gear.
- Adults often mistake floating garbage such as plastic bags, as jellyfish. Ingestion of plastic results in death.
- Egg harvest and development on nesting grounds are most serious threats.

Recovery Actions & More Information:
- Some of the critical nesting beaches have been protected as parks or reserves.
- Devices to prevent turtles from drowning in fishing gear have been mandated for use in several countries. For innovative ideas go to www.smartgear.org.
- Keep plastic out of the ocean.
Marine Invertebrates

45. Northern Abalone

Nuu-chah-nulth Name: ʷapəqʷin (Abalone)

Latin Name: Haliotis kamtschakana

Status: Threatened (May 2000) by COSEWIC.

Description:
• Thin, oval-elongated shell with irregular surface shaped in a broad whorl. A row of holes with raised edges lie close to the outer edge.
• Inside shell is pearly white with a faint iridescence of pink and green.

Natural History:
• Found from Alaska to Baja California in the lower intertidal zone to 100 m depth on rock along exposed or semi-exposed coasts. Feeds on algae.
• Females and males release eggs and sperm into the water. Fertilization is maximized when abalone concentrate in high densities during spawning.
• Larval period is short (<10 days), and larval dispersal is limited to 10-100 m.
• Adults likely move over a range of only 200 m during their lifetimes and normally live about 15 years.

Human Use/Significance:
• Traditionally harvested for food, and shells are used for art and regalia.

History of Decline:
• Export fisheries began in B.C. in 1975 and peaked in 1977-78, before a quota was set in 1979. The fishery was closed in 1990 but poaching continues today.
• Continuous decline of abalone densities on the central coast of B.C. since 1979. Density declined 43.75% between the 1993 and 1997 surveys.

Threats / Development Activities that Pose a Risk:
• Poaching is a major problem. Mature individuals accumulate in shallow water where they are easily accessible to harvesters. Enforcement is difficult.
• Vulnerable to over-exploitation because it has a short larval period, is slow growing, matures late, is sedentary and has low or sporadic recruitment.
• Reintroduction of the sea otter will keep densities low.

Recovery Actions & More Information:
• The only invertebrate species for which all fishing is totally banned.
• Local "Coast Watch Program" monitors populations and reports illegal activities.
• Pilot hatchery at Bamfield has raised juveniles to be out-planted: oceanlink.island.net/oinfo/Abalone/abaloneupdate.html
46. Olympia Oyster

**Nuu-chah-nulth Name:** ᖃעים몃 (Oyster)

**Latin Name:** *Ostrea conchaphila*

**Status:** Special Concern (November 2000) by COSEWIC.

**Description:**
- Small elliptical or circular shell (up to 90 mm in diameter).
- Upper shell is flat and fits inside cupped lower shell attached to hard substrate or loose.
- White to purplish-black outside and white to iridescent green/purple inside.

**Natural History:**
- Found only on the west coast of North America, between Sitka, Alaska and Panama. B.C.'s only native oyster.
- Occurs in the lower intertidal and shallow subtidal zones of saltwater lagoons and estuaries, as well as on tidal flats, tidal channels, bays and sounds, in splash pools, near freshwater seepage, or attached to pilings or the undersides of floats.
- Feeds on a variety of plankton, including tiny algae, by filtering water.
- Matures as males at the age of one. Then alternate between male and female for the rest of their lives (up to 10 years).
- Sperm is collected in the female's respiratory current and fertilizes 250,000 to 300,000 eggs in the mantle cavity. After 14-17 days, larvae are released.
- Larvae drift and develop for two to three weeks before settling on hard substrate.
- Prey for crabs, snails, sea stars and birds.

**Human Use/Significance:**
- Its use has taken a back seat to the Pacific Oyster that was introduced from Japan in the early 1900s and is an important economic aquaculture species.

**History of Decline:**
- Major declines due to fisheries exploitation between the 1800s and 1930 but currently populations are stable at low levels in Barkley and Clayoquot Sounds.

**Threats / Development Activities that Pose a Risk:**
- B.C. population is at the northern limit of its range. Vulnerable to cold winters.
- Disease and pollution, and an introduced predator, the Japanese Oyster Drill.
- Human alteration of sensitive estuarine habitats could also be a threat.

Terrestrial Mammals

Bats

47. Keen’s Long-eared Myotis

Nuu-chah-nulth Name: mappiis (Bat)

Latin Name: Myotis keenii

Status: Special Concern - Data Deficient (November 2003) by COSEWIC.

Description:
- Dark brown back and buffy front.
- Outer edge of tail membrane has a tiny fringe of hairs. Long ears (usually >16 mm), short, broad wings (span is 24 cm).
- Weighs 3.8-6.7 grams.

Natural History:
- Recorded at only 25 locations in Canada, including Simcoe Lake, Hell’s Deep Lake and Cow Bay in Clayoquot Sound.
- Feeds on insects in coastal forest, estuaries, riparian habitats, and around towns.
- Predators include cats, raccoons, marten, squirrels, owls, rats and deer mice. Rodents take bats during hibernation and when roosting.
- Roost in rock crevices, under boulders, in trees and buildings, and under bridges.
- One of the two known maternity colonies was in a tree located in a low elevation, southwest-facing cliff at Knoll Hill near Tahsis. The other is in Haida Gwaii.
- Females give birth near the end of May, and young are weaned in early July. Young can fly by early August but use the nursery roosts into early September.
- The oldest recaptured individual was almost 13 years old.

History of Decline:
- Populations seem to be small but stable. Very little information is available.

Threats / Development Activities that Pose a Risk:
- Habitat loss from logging old growth forest. Fallen debris could block access to caves and blasting from road construction could arouse hibernating bats.
- Disturbance from recreational caving in winter could exhaust a bat’s fat reserves.

Recovery Actions & More Information:
- Knoll Hill Cave, near Tahsis, is protected as a Wildlife Habitat Area under the Forest and Range Practices Act.
- Report roosting or hibernation sites you find to the B.C. Ministry of Environment.
48. Townsend’s big-eared bat

**Nuu-chah-nulth Name:** ?e?ihi?im? mappiis (Bat with big ears)

**Latin Name:** Corynorhinus townsendii

**Status:** On the Blue List in BC. Not yet listed by COSEWIC.

**Description:**
- Medium-sized bat about 10 cm long, 7 to 12 g, 29 cm wingspan.
- Greyish-brown body and exceptionally long narrow ears.
- Upper side of snout, in front of eyes, has a pair of prominent bumps.

**Natural History:**
- Forages in open forests with meadows. Prefers dry forest types, like Douglas-fir forests in Port Alberni.
- Uses caves and old mine shafts as roosting and hibernating places.
- Females produce a single baby in mid-July. Birth occurs in a maternity colony.
- Males are more solitary.
- Hibernate in tight clusters, large ears are “rolled up” and laid back against the animal’s neck. May lose more than half its weight over winter.
- Highly maneuverable fliers, feed on moths, flies, and other insects.
- Average lifespan is 16 years, may live up to 30 years.

**Human Use/Significance:**
- Helps keep insect populations under control.

**History of Decline:**
- Small population size and low reproductive rate make them susceptible to decline.

**Threats / Development Activities that Pose a Risk:**
- Sensitive to human contact when roosting or hibernating.
- Sealing mine shafts reduces roost sites.
- Extensive land development in riparian areas degrades foraging sites.

**Recovery Actions & More Information:**
- Avoid use of pesticides; protect forest, wetland and riparian areas, refrain from entering caves or mine shafts when bats occupy them, especially in winter.
- Report roosting or hibernation sites you find to the B.C. Ministry of Environment.
Insect Eaters

49. Vancouver Island Water Shrew

Nuu-chah-nulth Name: Ḵ̓ii̓caũkw̓ (shrew)

Latin Name: Sorex palustris brooksi

Status: On the Red List in BC. Not yet listed by COSEWIC.

Description:
- Tiny bundles of energy, mouse-size with bead-like eyes.
- Ears are concealed by soft fur.
- All feet have 5 toes (mice have 4 on front feet), and are narrow, without long claws.
- Back fur black, feet and belly grey or silver-grey, tail distinctly darker on top and paler on underside.
- Total body length (including tail) is greater than 13 cm, hind foot greater than 18 mm, and hind foot has a fringe of stiff hairs.

Natural History:
- Found only on Vancouver Island. Officially documented at only seven locations between 1897 and 1984, including Sand Creek and China Creek.
- Usually found at low elevations. It lives in riparian areas and uses habitats that resemble coho salmon spawning and rearing habitat.
- Feeds on slugs, snails, spiders and small fish.
- Traps air bubbles under its hairy feet, allowing it to run on water.

Human Use/Significance:
- Eats many insects and does no harm.

History of Decline:
- Very little known about their population sizes. Rarely encountered. One researcher spent over 3,000 hours trapping and caught only one.

Threats / Development Activities that Pose a Risk:
- Urbanization, forestry activities and hydroelectric activities.
- Occasionally caught in fisheries minnow traps.

Recovery Actions & More Information:
- Surveys to determine distribution patterns and learn more about its biology.
Rodents

50. Vancouver Island Marmot

Nuu-chah-nulth Name: t’it’il’u’u’a

Latin Name: Marmota vancouverensis

Status: Endangered (May 2000) by COSEWIC.

Description:
- Small, burrow-dwelling mammal.
- Eats vegetation and hibernates during the winter.
- Chocolate brown with white muzzle and black rump.
- Males up to 71 cm long and 3.5 kg.

Natural History:
- Occurs only on Vancouver Island, mostly in the southern central mountains.
- Inhabits alpine and sub-alpine areas with steep slopes, loose rock and meadows.
- Family groups consist of one adult male, one or more adult females, several sub-adults, yearlings and young. The size and number of families varies between colonies and years.
- Adults use the same burrows for several years to hibernate, bear young, hide from predators, and avoid environmental extremes.
- Females begin breeding at 3 to 4 years of age and produce young every second year. Mating occurs in May; females give birth to 3 to 5 young in June.
- Two-year-old marmots disperse to other colonies on adjacent mountains.
- Feeds on grasses in spring, and lupines and other leafy plants in summer.
- Predators include golden eagles, cougars and wolves.

History of Decline:
- Over 20 years, the species has disappeared from 60% of its historical range.
- From 235 animals in 1984, to 57 in 1999, to 36 in 2000, and continued decline.

Threats / Development Activities that Pose a Risk:
- Dispersing animals colonize closer clear cuts, created by ski run development, mining and logging, instead of more widely distributed historical habitat patches. This concentrates the population in a smaller geographic area and makes it more vulnerable to predators, disease, and changes in vegetation and climate.
- Logged clearcuts become unsuitable after the forest regrows.

Recovery Actions & More Information:
- Captive breeding programs and re-introduction to former sites.
- Vancouver Island Marmot Recovery Foundation website: www.marmots.org
Ungulates

51. Roosevelt Elk

Nuu-chah-nulth Name: Ḵuunum (Elk)

Latin Name: Cervus canadensis roosevelti

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
• Brown coat with a dark mane and a white rump patch, large forked antlers (110 – 160 cm long) on the bulls, and large rounded upper canine teeth (tusks) on both sexes.
• Adult bull shoulder height is 140 cm, 410 kg; cow’s 130 cm, 270 kg.

Natural History:
• Originally from southwest B.C. and Vancouver Island to central California.
• Small scattered herds live in river valleys and feed on sedges, grasses, ferns, willows, elderberry, blueberries, cedar and hemlock in winter-spring. In summer, most move to subalpine meadows and avalanche tracks.
• Groups of cows, calves and yearlings live separately from bulls, except during autumn rutting period when males bugle and fight to dominate harems.
• After 8 months gestation, cows produce a spotted calf (13 kg). Twins are rare. Cow and calf spend 2 – 3 weeks, often hidden, before rejoining the herd.
• Females first breed when they are two years old and produce a calf each year. Bulls often do not get a chance to mate until they are four or five years old.
• Elk live 10-12 years; 20 years maximum. Wolves and cougars are predators.

Human Use/Significance:
• Traditionally, elk provided food, clothing, weapons, implements, decoration and a currency for exchange. Today, elk are used for food and ceremonial purposes.

History of Decline:
• Development and heavy hunting removed populations from original range.
• Remaining population is 3000 between Strathcona Park and Brooks Peninsula.

Threats / Development Activities that Pose a Risk:
• Logging creates good forage for 10 –15 years until the canopy closes in. It also increases snow depth that impedes travel and covers low-growing forage.
• Poaching and deaths on highways are additional threats.

Recovery Actions & More Information:
• Regulated hunting and reintroductions on the lower mainland.
wlapwww.gov.bc.ca/wld/documents/spsum/AMALC01013.pdf
**Carnivores**

52. Vancouver Island Wolverine

**Nuu-chah-nulth Name:**

**Latin Name:** *Gulo gulo vancouverensis*

**Status:** On the Red List in BC. Entire population in western Canada is of Special Concern (May 2003) by COSEWIC.

**Description:**
- Powerful animal with short snout and legs, long curved claws, and short bushy tail; up to 1 m long 12 - 18 kg; females smaller than males.
- Long, thick fur is dark brown with pale stripes on the sides.
- Dark underneath with white or orange markings at the throat.

**Natural History:**
- Lives in wooded and mountainous areas. In summer, it ranges high in the subalpine forest, foraging along the trees and on slopes with loose rock.
- Scavenges from wolf kills. Also hunts birds and small mammals and eats berries.
- Travels up to 40 km for daily hunting activities. A male’s home range can be over 1500 km$^2$; a female’s home range is 100 km$^2$.
- One to five young are born from April to June after 60 days pregnancy. Young are born in cave dens, rockslides or under the roots of trees or windfalls.
- Young males disperse up to 300 km from birthplace. Females settle nearby.

**Human Use/Significance:**
- Strikingly beautiful pelts are high in value.

**History of Decline:**
- Early trappers killed many that were considered a nuisance on trap lines.
- Populations stay small because of low densities and slow reproduction.
- Only four sightings from 1980 to 1992, including one near Nitnat River.

**Threats / Development Activities that Pose a Risk:**
- Breaking up of habitat by forestry, mining, road building and human settlement.
- Reduction of deer and elk as prey due to reduced winter range habitat.
- Denning females are especially sensitive to the presence of humans.

**Recovery Actions & More Information:**
- Forest management that provides connected habitat over the landscape.
- Restricted trapping and recreational use, road deactivation to limit access.
53. Vancouver Island Ermine

Nuu-chah-nulth Name: 겏ఴహేయ్యేకి (Weasel)

Latin Name: Mustela erminea anguinae

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
- Small, slender, short-legged weasel with a long, cylindrical body.
- Tail is short (usually < 4.5 inches) and tipped with black. Head is small with a short snout and inconspicuous rounded ears. Fur is short, dense and fine.
- Fur is brown above and white underneath. Males are 12 inches long, females are slightly shorter.

Natural History:
- Ermine range across northern Eurasia and North America. This subspecies is restricted to Vancouver Island and Salt Spring Island.
- Found in a variety of habitats, usually at lower elevations. Rock-slides, forest edges, grasslands, sea-beach debris, banks of streams and lakes.
- Feed on small birds and mammals, mainly voles and mice.
- Home range is estimated to be between 12 and 25 ha.
- Breeds at 1 year of age and has 4-8 young in spring after pregnancy of 10 months.

Human Use/Significance:
- In general, ermine, like mink, is valued for its fur.

History of Decline:
- Very rare; fewer than 20 known occurrences reported on Vancouver Island, including one in Port Alberni in 1940. Most recent reports were in the 1990s.
- No population trend information is available.

Threats / Development Activities that Pose a Risk:
- Habitat loss and human disturbance could pose a risk but no specific information is available.
- It is such a rare sub-species that the loss of a few individuals might have serious consequences.

Recovery Actions & More Information:
Terrestrial Birds

Hawks and Owls

54. Peregrine Falcon

Nuu-chah-nulth Name: č'isahim

Latin Name: Falco peregrinus pealei

Status: Special Concern (April 2007) by COSEWIC.

Description:
- Distinctive black “helmet” with a wedge that extends below the eye.
- Heavy spotting on a whitish breast, underparts are dark.
- Long, narrow, pointed wings are bent back at the wrist. Fast fliers.
- Up to 51 cm long; 1 m wing span.
- Notched beaks sever the spinal column at the neck of prey.

Natural History:
- Subspecies found on the islands and headlands of the Pacific coast from Oregon through the Aleutian Islands to the Commander and Kurile Islands of Asia.
- Habitats are beaches, tidal flats, reefs, islands, marshes, estuaries and lagoons.
- Feed on shorebirds, waterfowl, and other small to medium-size birds.
- Breeds on island cliffs and trees off northwestern Vancouver Island and Haida Gwaii. Females lay 3-4 eggs in late April. Young leave nests by the end of June.

Human Use/Significance:
- Captive bred birds are used for falconry. Wild birds are protected.

History of Decline:
- DDT had less effect on coastal birds than on Peregrine anatum subspecies, which declined seriously in the 1960s. Very small population is increasing.

Threats / Development Activities that Pose a Risk:
- Limited by availability of seabird prey which have been devastated by the introduction of mammalian predators to their nesting islands. Seabirds are also declining as a result of the impact of ocean warming on their fish prey species, and from direct mortality due to oil spills (both accidental and chronic).

Recovery Actions & More Information:
- Protect habitats, such as estuaries and offshore islands, used by their prey species: seabirds, shorebirds, ducks and geese.
55. Northern Goshawk

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: Accipiter gentilis laingi

Status: Threatened (November 2000) by COSEWIC.

Description:
- Long tails and short, rounded wings make these hawks agile in the woods. Flight is several quick wingbeats and a glide.
- Dark crown and blue-grey back separated by a light flecked eyebrow that flares behind the eye. Underparts are white with dense grey barring.

Natural History:
- Subspecies of the Pacific coast from southeastern Alaska to the Olympic Peninsula of Washington. In B.C. it occurs on Vancouver Island, Haida Gwaii and other large coastal islands.
- Nest in forest stands with large amounts of mature or old-growth trees.
- Feed on squirrels, songbirds, marbled murrelets and bats.
- Tree cover provides protection from predators and open spaces under the canopy allows clear flight paths for striking prey.
- Breeding season home ranges are up to 4,000 ha. Set up territories in February, females lay two to four eggs in late April – early May. Young leave the nest by the end of July. Lifespan unknown but likely up to 20 years.

History of Decline:
- Population trends are unknown in BC. It is estimated that habitat, for 1150 pairs, has been logged in southeast Alaska and coastal BC so populations will decline.
- Estimate 300 breeding pairs on Vancouver Island; 41 nests found 1991-1999.

Threats / Development Activities that Pose a Risk:
- Continued logging of low elevation, old-growth coniferous forest and suitable mature second-growth forest (60-80 years).
- Sensitive to disturbance at or near the nest, and may abandon a nest during incubation or the nestling period.

Recovery Actions & More Information:
- Wildlife Habitat Areas of 200 to 2,400 ha are being established to protect selected breeding sites and associated foraging areas on B.C. lands. Report nest trees to the B.C. Ministry of Environment www.env.gov.bc.ca/cdc/contribute.html
56. Western Screech-owl

Nuu-chah-nulth Name: luuxuskwin (Owl)

Latin Name: Otus kennicottii kennicottii

Status: Special Concern (May 2002) by COSEWIC.

Description:
- Small streaked owl, with 'ear tufts' and yellow eyes.
- Adults are 19 to 25.5 cm long; 120 to 305 g. Females are larger and heavier than males.
- Territorial call is a series of quick hoots on one pitch that gradually speed up throughout the call.

Natural History:
- Subspecies found along the coast of B.C., except not in Haida Gwaii.
- Occurs at lower elevations in forested riparian (creek-side) areas, at the edge of forests close to open wetlands and fields, and in treed urban/suburban areas.
- Territorial year-round. Pair formation begins in January – February. Females lay 3 or 4 eggs in April and young leave the nest in May.
- Nests in tree cavities (trees > 25cm in diameter) made by woodpeckers.
- Hunts small mammals, birds, fish, and insects.
- Predators include great-horned owls, barred owls, and raccoons.
- Can live up to 11 years in the wild.

Human Use/Significance:
- Good indicator species for healthy riparian ecosystems because it depends on older trees for nesting and is near the top of the food chain.

History of Decline:
- Relatively common in suitable habitat over unsettled regions of Vancouver Island. In Clayoquot Sound, Western Screech-owls were the most common of five owl species found in breeding season surveys in 1999.
- Populations have declined in southern Vancouver Island and the Lower Mainland concurrently with the recent arrival of the Barred Owl, a new predator.

Threats / Development Activities that Pose a Risk:
- Logging creates dense young forests with very few suitable nesting snags.
- Introduced rabbits, in urban areas, have increased Barred Owl predators.
- Often injured and killed by flying into cars or buildings at night.

Recovery Actions & More Information:
- Report nest trees to the B.C. Ministry of Environment or the Conservation Data Centre at www.env.gov.bc.ca/cdc/contribute.html
57. Northern Pygmy Owl

**Nuu-chah-nulth Name:** ḥux̂-suk̕-ìn (Owl)

**Latin Name:** *Glaucidium gnomonia swarthi*

**Status:** On the Blue List in BC. Not yet listed by COSEWIC.

**Description:**
- Small (17 cm) owl with a long dark tail with pale bars.
- Upper parts are brown and underparts are white with dark streaks.
- Spotted head, yellow eyes and black “eye spots” on back of head.
- Call is a mellow whistled “hoo” or “hoo hoo” repeated in a series; can be confused with the Northern Saw-whet owl’s call, which is slightly lower pitched and more repetitious.

**Natural History:**
- Northern Pygmy owls occur from southeastern Alaska to Guatemala but the *swarthi* subspecies is restricted to Vancouver Island.
- Inhabits the edges of open coniferous forests or mixed woodlands from sea level to 1700 m. It has also been recorded in logged areas, riparian thickets, meadows, and residential areas.
- Most active at dawn and dusk.
- An aggressive predator, sometimes catching birds larger than itself. Often mobbed by songbirds.
- Very few nests found, most on the east side of Vancouver Island where more searching has occurred. Nests in tree cavities usually excavated by woodpeckers. Female lays up to 7 eggs in April. Young leave the nest in July or August.

**History of Decline:**
- Very few nests reported and population records are limited.

**Threats / Development Activities that Pose a Risk:**
- Loss of nesting and foraging habitats due to logging or residential development.
- Increased Barred Owl populations increase predation pressure.
- Injured or killed by flying into cars or buildings at night.

**Recovery Actions & More Information:**
- Report nest trees to the B.C. Ministry of Environment or the Conservation Data Centre at www.env.gov.bc.ca/cdc/contribute.html
58. Common Nighthawk

Nuu-chah-nulth Name: maamaati (Bird)

Latin Name: *Chordeiles minor*

Status: Assessed as Threatened by COSEWIC in April 2007.

Description:
- Medium-sized (24 cm) brown mottled bird with long, pointed wings and long, slightly forked tail.
- Bold white bar across wings and white throat.
- Wide mouths and tiny bills.
- Call is a nasal “peent” and males wings make a hollow booming sound during courtship flights.

Natural History:
- Winters in South America, especially Peru, Ecuador and Brazil.
- Breeds in open habitats, devoid of vegetation, such as beaches, burned-over areas, cleared forests, peat bogs, rocky outcrops, and on buildings with flat gravel roofs.
- Most active at dusk and dawn, catching insects while flying.
- Female lays 2 eggs on the ground and incubates them for nearly 3 weeks. Young stay near the nest for 1.5 to 2 months. Males help care for young.
- Breed at 1 year of age. Lifespan is 4 to 5 years.

History of Decline:
- Breeding populations (approximately 400,000 adults) in Canada have declined 49% in the last three generations (approximately between 1995 and 2005).

Threats / Development Activities that Pose a Risk:
- Pesticide use across Canada has reduced insect prey on a national scale.
- Habitat has been lost as logged and burned-over areas become reforested.
- An increase in predators, such as domestic cats, raccoons, crows and ravens.

Recovery Actions & More Information:
- Report nests to the B.C. Ministry of Environment or the Conservation Data Centre at www.env.gov.bc.ca/cdc/contribute.html
**59. White-tailed Ptarmigan**

_Nuu-chah-nulth Name:_ maamaati (Bird)

_Latin Name:_ *Lagopus leucurus*

.STATUS: On the Blue List in BC. Not yet listed by COSEWIC.

**Description:**
- Ground-dwelling bird (32 cm long) with a short strong bill, short rounded wings, feathered feet, white tail and red eye combs.
- Flight is a strong, brief burst.
- Molts plumage 3 times a year to match seasonal changes in habitat: white in winter, mottled brown in summer, patchy in spring/fall.
- Calls include a henlike clucking and soft, low hoots.

**Natural History:**
- Ranges from south-central Alaska and Yukon to northern New Mexico. Occurs at Mount Arrowsmith, Clayoquot Plateau and Strathcona Park on Vancouver Island.
- Residents of subalpine and alpine habitats including rockslides, alpine meadows, logged and burned subalpine forests, lake and stream shores as low as 900 m.
- Requires food plants that produce seeds and berries, summer water (a good amount of snow cover) and large rocks for security cover.
- Nests are shallow depressions on the ground lined with dried grasses and a mixture of leaves, needles, mosses, sedges and feathers. Females lay 3 to 8 eggs between mid May and July. Young leave the nest 10 days after hatching.

**Human Use/Significance:**
- Hunted for food.

**History of Decline:**
- In 1980 there was concern about the Vancouver Island subspecies, *saxatilis*, because they were reported infrequently.

**Threats / Development Activities that Pose a Risk:**
- Loss of habitat and human disturbance.

**Recovery Actions & More Information:**
- Report sightings to the B.C. Ministry of Environment or www.env.gov.bc.ca/cdc
Pigeons

60. Band-tailed Pigeon

Nuu-chah-nulth Name: xaʔuumin (Pigeon)

Latin Name: *Columbia fasciata*

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
- A large pigeon (37 cm) with a purplish head and breast; dark-tipped yellow bill, yellow legs; broad grey tail band; and a narrow white band on the back of neck. Neck band is absent on juveniles.
- Flocks in flight are uniform in colour and lack the contrasting white rump and black band at the end of the tail seen on rock pigeons.
- Call is a low "whoo-whoo".

Natural History:
- Breeds in southeastern Alaska and from southwestern BC to South America.
- Winters from southwestern BC to South America.
- Feeds on grains and ingests mineral gravel from mineral springs and intertidal flats to get calcium for egg production.
- Prefers habitats along shorelines or open areas beside tall conifer trees. Also found in residential yards, parks, and golf courses.
- Moves to breeding areas when fruits become available.
- Nests are small frail shallow platforms of loose twigs near the end of horizontal branches in cedar, spuce, lodgepole pine and hemlock. Female lays 1 –2 eggs from March to August. Young leave the nest after 5 – 6 weeks.
- Large flocks have been seen at Kennedy Lake in summer, and smaller flocks in Bamfield and at Long Beach in the fall.

Human Use/Significance:
- Hunted for food.

History of Decline:
- A 2.5% decline per year from 1966 to 2001 in the U.S. and Canada.

Threats / Development Activities that Pose a Risk:
- Habitat loss and possibly, over-hunted in Oregon, California and further south.

Recovery Actions & More Information:
- Help organizations involved in conserving bird habitat.
- Report sightings to the B.C. Ministry of Environment or www.env.gov.bc.ca/cdc
Amphibians

61. Red-legged Frog

**Nuu-chah-nulth Name:** ƛ’iƛ’ihta waa̕it (Frog with red legs)

**Latin Name:** *Rana aurora* (=“frog” + “dawn”)

**Status:** Special Concern (November 2004) by COSEWIC.

**Description:**
- Reddish brown body (up to 10 cm long) with black specks, gold eyes, and red underneath legs.
- Folds run down the sides of the back. Yellowish edges on lip.
- Call is quiet muffled “uh-uh-uh-uh-uh”, made underwater.

**Natural History:**
- Found from southwest BC through Washington and Oregon into northern California. 50% of the BC range occurs on Vancouver Island.
- When not breeding, adults live in moist forests and adjacent to streams.
- Spend winter under downed wood, roots and inside burrows.
- Egg laying begins in January or February. Breeds in bogs, small lakes, and marshes. Females lay 750 to 1300 eggs in a large (20-30 cm) gelatinous cluster attached to the stem of vegetation. Tadpoles grow over four to five months and then change into hopping, terrestrial froglets, approximately 17-21 mm long.
- Reach sexual maturity in 3-4 years. Longest living captive frog was 15 years old.

**Human Use/Significance:**
- Frogs feature in the mythology and art of coastal First Nations.
- Feed on flying insects and can be important for mosquito control.

**History of Decline:**
- Population declines have occurred in urban and agricultural areas and where bullfrogs have been introduced on southern Vancouver Island. The west coast is an important area because, to date, it remains free of Bullfrogs.

**Threats / Development Activities that Pose a Risk:**
- Draining and polluting wetlands, and extensive logging of riparian habitats.
- Bullfrogs and Green Frogs displace native frogs and carry disease.
- Highway traffic kills migrating frogs.

**Recovery Actions & More Information:**
62. Western Toad

**Nuu-chah-nulth Name:** waačit (Frog)

**Latin Name:** *Bufo boreas*

**Status:** Special Concern (November 2002) by COSEWIC.

**Description:**
- Stocky bodies up to 12 cm long. Females are bigger than males.
- Dry warty skin varies from pale olive green to dark brown, red or black; light stripe down back; pale bellies mottled with black.
- Short legs often walk as well as hop; hind feet dig.

**Natural History:**
- Found west of the Rocky Mountains, from southeast Alaska to Baja California.
- Breed in water with shallow sandy bottoms; often along edges of lakes, including Frederick Lake in Bamfield, Kennedy Lake, and Ray Lake near Hesquiat.
- Females lay 5,000 to 15,000 eggs in long ribbons; tadpoles hatch after 3 to 12 days and swarm in huge groups. They change into toads after 6 to 8 weeks.
- Tadpoles feed on aquatic plants and algae, and scavenge on dead animals.
- Males mature in their third year, and females start to breed at four or five years.
- Spend 90% of their time in forests, wet shrublands, avalanche slopes, meadows, and clearcuts. Overwinter in burrows, beneath logs and in rock crevices.
- Adults eat flying insects, ants, beetles, sowbugs, crayfish, spiders, centipedes, slugs, and earthworms.
- Predators include ducks, raccoons, ravens and other amphibians. Tadpoles are toxic to fish and newts.
- Life expectancy is 9 to 11 years.

**History of Decline:**
- Declines in southern and central Vancouver Island, and in the Lower Mainland where 75% of the wetlands have been drained and developed.
- U.S. populations that were abundant have become extinct in only a few years.

**Threats / Development Activities that Pose a Risk:**
- Development in and around wetlands can destroy or isolate populations.
- Migrating toads are killed by traffic on roads.
- Pollution and diseases spread by introduced fish and bullfrogs are harmful.

**Recovery Actions & More Information:**
- Learn about toads and share your knowledge with others. Protect toads and their habitat in your neighbourhood. Contribute sighting information to the BC Frogwatch program [www.env.gov.bc.ca/wld/frogwatch/index.htm](http://www.env.gov.bc.ca/wld/frogwatch/index.htm).
Slugs and Snails

63. Dromedary Jumping-slug

Nuu-chah-nulth Name: čanmi (Slug or Snail)

Latin Name: Hemphillia dromedarius

Status: Threatened (May 2003) by COSEWIC.

Description:
- Grey slug (60 mm long) with darker mottling; sole of foot is yellow or orange.
- Hump on back with the internal shell visible through a slit.
- Tail is laterally flat with a keel and a horn-like tip.

Natural History:
- Occurs from Vancouver Island to the Cascade Range and Olympic Peninsula in western Washington. Found in mature and old forests including sites along the West Coast Trail, Bamfield, and the Kennedy Lake Flats.
- Individuals have both male and female reproductive parts. Clutch size is 50-60 eggs, which are deposited in moist, rotting wood.
- Escape from predators by curling their tails around to the side of the body, thrashing it from side to side, and flipping themselves away.
- Scattered distribution suggests that they do not disperse very far from birthplace.
- Individuals live more than 1 year.

Human Use/Significance:
- Distinct appearance and interesting escape behaviour may help promote awareness and conservation of forest floor invertebrates and their habitats. Soil quality and productivity depend on healthy invertebrate populations.

History of Decline:
- Unknown population sizes. Its presence in Canada was confirmed in 1999.
- Known at less than 14 scattered locations on southern and western Vancouver Island, where it exists at very low densities.

Threats / Development Activities that Pose a Risk:
- Vulnerable to habitat change by logging, droughts or wildfires.
- Fragmented habitats are difficult to move between.

Recovery Actions & More Information:
- Surveys are being conducted across Vancouver Island. Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
64. Warty Jumping-Slug

Nuu-chah-nulth Name: ʕanmi (Slug or Snail)

Latin Name: Hemphillia glandulosa

Status: Special Concern (May 2003) by COSEWIC.

Description:
- Small slug (30 mm long).
- Light brown with a bluish grey head and tentacles.
- Mantle, covered by tiny bumps, lies over half, or more, of the body length.

Natural History:
- Occurs from central Vancouver Island through Washington to west-central Oregon. Known from less than 20 locations all in southern Vancouver Island, including Carmanah Valley, Port Renfrew, and Bamfield. No known records from the British Columbia mainland.
- Lives in moist, forests (young and old) from low to middle elevations.
- Found under decaying logs, other woody debris, leaf litter and at the bases of sword ferns. Commonly found adjacent to streams.
- Each individual has both male and female reproductive parts and lays eggs.
- Mature within first year and seldom live more than one year.
- Escape from predators by curling their tails around to the side of their body, thrashing from side to side and flipping themselves away.

Human Use/Significance:
- Distinct appearance and interesting escape behaviour may help promote awareness and conservation of forest floor invertebrates and their habitats. Soil quality and productivity depend on healthy invertebrate populations.

History of Decline:
- Occurs at low densities with pockets of higher abundance at the northern extent of its range.
- The first two accounts of the species in Canada (1900 and 1914) implied that it was uncommon at that time as well. Population trends are unknown.

Threats / Development Activities that Pose a Risk:
- Logging can restrict dispersal and alter coarse woody debris and other habitat.

Recovery Actions & More Information:
- Surveys are being conducted across Vancouver Island. Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
65. Broad-whorl Tightcoil

Nuu-chah-nulth Name: ʕanmi (Slug or Snail)

Latin Name: Pristiloma johnsoni

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
• Tiny snail (2.8 mm wide) with a flattened shell that is nearly smooth and translucent or waxy-white.
• About three and a half whorls that increase in size, spire is flat.
• Animal, inside shell, is white with black eye spots.

Natural History:
• Known to occur from Kyuquot Sound to Oregon.
• Lives in leaf litter of deciduous, coniferous and mixed forests. Also in vegetated rockslide habitats.
• Occurs from sea level to over 1300 m in sub alpine.

History of Decline:
• Widespread but seldom encountered in large numbers.

Threats / Development Activities that Pose a Risk:
• Logging can restrict dispersal movements and alter the quantity and quality of coarse woody debris and other habitat.

Recovery Actions & More Information:
• Surveys are being conducted across Vancouver Island. Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
Butterflies

66. Dun Skipper

Nuu-chah-nulth Name: Ḵaaykw̱ak̓am̓in (butterfly)

Latin Name: Euphyes vestris

Status: Threatened (November 2000) by COSEWIC.

Description:
- Small purplish butterfly.
- Hairy body and triangular-shaped wings.
- Tips of the antennae are shaped like clubs with tiny hooks at the ends.

Natural History:
- Found from southern B.C. to California. Within Nuu-chah-nulth territories it is known to occur at only one site near Port Alberni.
- Lives in moist open areas that have sedges that provide food for young caterpillars. Logged areas are used as well as undisturbed sites.
- Lives for one year only. The adult stage occurs from June to August. Adults lay their eggs on sedges. The eggs hatch into caterpillars that feed on sedges until they transform into butterflies in June.

History of Decline:
- Population sizes are unknown but there have been a general decrease in the number of sightings.

Threats / Development Activities that Pose a Risk:
- Loss of habitat to land development, drainage activities and introduced plant species, especially scotch broom.

Recovery Actions & More Information:
- Surveys are being conducted across Vancouver Island. Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html

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Plants

67. Pink Sand-verbena

Nuu-chah-nulth Name: xiihčiip (Flower)

Latin Name: Abronia umbellate (="graceful" or "delicate")

Status: Endangered (May 2004) by COSEWIC.

Description:
- Glandular-hairy plant with a thick, heavy taproot; stems (1 m long) trail along sand.
- Thick, fleshy leaves (1.5 to 6 cm) opposite each other on stem.
- Pink flowers on stout stalks are tubular at the base, 8-10 mm long, and flare into 5 lobes.
- Groups of several to many flowers are clumped in rounded heads.

Natural History:
- Occurs on sandy sea beaches and dunes in western Washington to California.
- Found at only one site in Canada, near the mouth of the Nitnat River, on the west coast of Vancouver Island.
- Lives in the high tide zone and plants are frequently washed away during storms.
- Fruits are tough and must be worn down by sand before they will germinate.

Human Use/Significance:
- A rare unique plant that lives in a unique ecosystem in Canada.

History of Decline:
- Occurred in Pachena Bay at Bamfield and Ahousaht prior to 1927. In 2000 and 2001 it was observed at Clo-ooose Bay but disappeared in 2002.

Threats / Development Activities that Pose a Risk:
- Invasion and stabilization of the upper beach and sand dunes by the introduced European beach grass is the greatest threat.
- Only one population known in Canada. It could be accidentally trampled if the site were not marked and protected.

Recovery Actions & More Information:
- Pacific Rim National Park Reserve staff monitor the single known site where this species occurs in Canada.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc
68. White Meconella

Nuu-chah-nulth Name: Ḵ̕iihčiip (Flower)

Latin Name: Meconella oregana

Status: Endangered (May 2005) by COSEWIC.

Description:
- Small annual plant (2-16 cm tall) with stems that are either single or branched near the base.
- Tiny, spoon-shaped leaves around base of plant.
- Single flowers on long stalks have six white petals.

Natural History:
- Occurs from B.C. to California. Found in low-elevation coastal areas mainly on the southeast corner of Vancouver Island, and in Port Alberni.
- Grows in meadows and grassy openings on south-facing hillsides, in areas that get wet from spring seepage. Often with Garry Oak, but not always.
- Flowers from early March to mid-April.

History of Decline:
- Some of the 15 known populations have declined.
- Rare for as long as it has been identified at sites in Canada and the U.S.

Threats / Development Activities that Pose a Risk:
- Habitat loss through residential development on attractive open hillsides.
- Habitat alteration through recreational hiking and biking, grazing, disruption of seepage patterns, and increasing colonization by non-native plant species.

Recovery Actions & More Information:
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
69. White-top Aster

Nuu-chah-nulth Name: ƛ̕ɨhčɨip (Flower)

Latin Name: Sericocarpus rigidus

Status: Threatened (May 2000) by COSEWIC.

Description:
- Small perennial (10 - 30 cm tall).
- Long (3 cm) skinny leaves alternate along the stem.
- Each plant has lots of flower heads with short white inconspicuous petals.

Natural History:
- Occurs in southeastern Vancouver Island, west-central Washington and northwestern Oregon. The only site within Nuu-chah-nulth territories is near Port Alberni.
- Usually found with Garry oak on dry sites with shallow soils.
- Flowering happens in August.

History of Decline:
- Lost from 7 sites since 1887, and declining at some of the existing 21 sites due to invasive broom.
- Rare for as long as it has been identified at sites in Canada and the U.S.

Threats / Development Activities that Pose a Risk:
- Habitat loss through residential development.
- Out-competed by non-native plant species.

Recovery Actions & More Information:
- The known population in Port Alberni has been doing well for over 20 years. It occurs on private property and is protected by the property owners.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
70. Scouler’s Corydalis

**Nuu-chah-nulth Name:** Ḵ̕ii̓ł̕ichick (Flower)

**Latin Name:** Corydalis scouleri [=“crested lark”, a bird that resembles the flowers]

**Status:** Not At Risk (November 2006) downlisted from Threatened by COSEWIC.

**Description:**
- 60-120 cm tall, perennial
- Large, blue-green, dissected leaves covered in a white waxy powder
- 15-20 rosy-pink, showy flowers lined up along a spike at the top of the stem.

**Natural History:**
- Occurs west of the Cascade Mountains, from northwestern Oregon to western Vancouver Island.
- Entire Canadian population is in the Nitnat, Klanawa and Carmanah river basins and at a site west of Cowichan Lake.
- Grows in cool, wet habitats in fine sediments near streams and rivers at an elevation of 5 to 200 m.
- Along the Nitnat River, it flowers during May and June after plants are four or more years old.

**History of Decline:**
- More abundant than previously thought. In B.C. it occurs at 20 known sites (Nitnat, Klanawa and Carmanah watersheds) varying from 16 plants over a 60m² area, to an estimated 100,000 plants covering 6 hectares.

**Threats / Development Activities that Pose a Risk:**
- Logging, stream enhancement, trail building and recreation in riparian habitats.
- Construction of roads and bridges that provide public access to riverbanks.
- Damage from flooding and erosion caused by upslope logging.

**Recovery Actions & More Information:**
- Protected in 8 Wildlife Habitat Areas under the Forest and Range Practices Act, as well as in an Ecological Reserve and provincial park.
- Occurs in riparian zones where logging is restricted.
- First Nations were represented on the Recovery Team for this species.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc/contribute.html
71. Vancouver Island Beggarticks

Nuu-chah-nulth Name: Ḵ̓ix̓iip (Flower)

Latin Name: Bidens amplissima

Status: Special Concern (November 2001) by COSEWIC.

Description:
• Stems grow to heights of 50-100 cm and have multiple branches.
• Bur-like flower heads are large, with yellow ray petals.
• Stems and flowers are smooth or slightly hairy.
• Leaves are deeply three-lobed.

Natural History:
• Occurs in Washington State, Oregon and very few locations in southwestern B.C., including the Somass River Delta in Port Alberni.
• Grows in a narrow band of wetland habitat around the edges of ponds, lakes and streams, where water levels fluctuate seasonally and soil is silty.
• Also occurs in tidal zones where it is under water twice a day, and dries out between tides. Often near areas with ducks and geese.
• Sun-loving, annual, reproduces mainly by self-pollination.
• Seeds dispersed by clinging to fur, feathers and clothing.

History of Decline:
• Abundance each year depends on winter and spring precipitation levels, with low numbers following drier winters.
• There can be as few as one plant to more than four thousand at the same site in different years.

Threats / Development Activities that Pose a Risk:
• Limited by the availability of suitable wetland habitat
• Threatened by subdivision development and proposed horticultural use.
• Public use of recreational parks may impact directly on the species.

Recovery Actions & More Information:
• Seventeen of the sites where the Vancouver Island Beggarticks is found are in parks, sanctuaries or ecological reserves.
• Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc
72. Redwood Sorrel

Nuu-chah-nulth Name: x̱iḥčiip (Flower)
Latin Name: Oxalis oregana

Status: On the Blue List in BC (2007). Not yet listed by COSEWIC.

Description:
- Heart-shaped clover-like leaves attached to 5 to 20 cm long stalks that are brown and hairy.
- White to pale-pink flowers with red veins on each of the 5 petals.
- Seeds are almond-shaped and corrugated.

Natural History:
- Common in Washington and Oregon, rare on western Vancouver Island and Haida Gwaii.
- Grows in moist forests at low to middle elevations, usually along streamsides, including the Klanawa River.
- Perennial plant with rhizomes.
- Leaflets fold in the rain, at night and at times in direct sunlight.

Human Use/Significance:
- Coastal groups of western Washington were known to eat the leaves. They contain oxalic acid, which tastes sour and tangy and is potentially harmful.

History of Decline:
- Not as rare as once thought although there is still uncertainty about the extent of the populations. At the northern extent of its range.
- Rare for as long as it has been identified at sites in Canada.

Threats / Development Activities that Pose a Risk:
- Logging and development in riparian areas in old and mature forest.
- Public access if people try to collect it for their own gardens.

Recovery Actions & More Information:
- Known sites are identified and mapped by the B.C. Conservation Data Centre.
- Forest companies need to recognize and protect patches of this species.
- Report sightings to www.env.gov.bc.ca/cdc/contribute.html
73. Dwarf Trillium

Nuu-chah-nulth Name: Ḵ̓ích̓čiip (Flower)

Latin Name: *Trillium hibbersonii* [= “in threes”]

Status: On the Red List in BC. Not yet listed by COSEWIC.

Description:
- Small form (up to 10 cm tall) of the western trillium.
- Pale-pink flowers with 3 petals at the end of each stalk.
- Leaves are in whorls of 3 to 5.

Natural History:
- Found at a few sites on western Vancouver Island and nowhere else in the world. One of those sites is within Hesquiaht territory.
- Grows on mossy cliffs and rock outcrops at low to medium elevations.
- Ants disperse some of the seeds.

Human Use/Significance:
- Trilliums bloom in March to May and serve as a sign of spring.

History of Decline:
- Very rare; occurs at only a few locations. Rare for as long as it has been identified at sites in Canada.

Threats / Development Activities that Pose a Risk:
- Logging and road building needs to be carefully planned away from known sites.
- People may try to collect it for their own gardens.

Recovery Actions & More Information:
- Known sites are identified and mapped by the B.C. Conservation Data Centre.
- Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
74. Graceful Arrow-grass

**Nuu-chah-nulth Name:** ᖐagmāpt (grass)

**Latin Name:** *Triglochin concinna*

**Status:** On the Red List in BC. Not yet listed by COSEWIC.

**Description:**
- Grass-like stalk up to 30 cm tall.
- Half round to flat hairless leaves.
- Small greenish flowers in narrow spike-like clusters.

**Natural History:**
- Found from coastal B.C. to northwestern Mexico and South America.
- Rare in B.C. Records include Prince Rupert, Haida Gwaii, the east side of Vancouver Island and Barkley Sound.
- Grows in saline or brackish marshes.

**Human Use/Significance:**
- The more common species of sea arrow-grass was eaten as a spring-time vegetable by several coastal peoples. It produces cyanide-producing glycoside, a chemical that can be poisonous to livestock.

**History of Decline:**
- Very rare; occurs at only a few locations. Rare for as long as it has been identified at sites in Canada.

**Threats / Development Activities that Pose a Risk:**
- Development of coastal estuaries and marshes.
- Pollution and changes to water flow into estuaries due to upland logging or development.

**Recovery Actions & More Information:**
- Known sites are identified and mapped by the B.C. Conservation Data Centre.
- Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
75. Oregon Selaginella

Nuu-chah-nulth Name: ḵu’?up (Moss or Lichen)

Latin Name: Selaginella oregana

Status: On the Red List in BC. Not yet listed by COSEWIC.

Description:
• A spike moss with small, narrow evergreen leaves along creeping stems.
• Sprawls over branches of bigleaf maple trees, as well as on shaded rocks and banks.
• Tiny cones develop at the ends of branches.

Natural History:
• Found on the west coast of Vancouver Island, including the Broken Group Islands, as well as, Washington and Oregon.
• There is also one record from Haida Gwaii.
• Curtains of mosses hanging from bigleaf maples are made up of this species along with other mosses.
• Grows at low elevations.

Human Use/Significance:
• The one record in Haida Gwaii is believed to have been transported from Vancouver Island by Haida warriors using it as kneepads in their canoes.

History of Decline:
• Rare for as long as it has been identified at sites in Canada.

Threats / Development Activities that Pose a Risk:
• Logging and road building needs to be carefully planned away from known sites.
• People may try to collect it for their own gardens.

Recovery Actions & More Information:
• Known sites are identified and mapped by the B.C. Conservation Data Centre.
• Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
76. Paintbrush Owl Clover

Nuu-chah-nulth Name: ƛ̓ix̣ičiip (Flower)

Latin Name: *Castilleja ambigua*

**Status:** On the Red List in BC. Not yet listed by COSEWIC.

**Description:**
- Slender stems are up to 8 cm tall
- Narrow lance-shaped leaves.
- Yellow flowers (14-22 mm long) with purple markings partially covered by showy petal-like bracts.

**Natural History:**
- Found on the southern half of Vancouver Island, including a tidal flat in Alberni Inlet and the Somass River Delta, south to California.
- Grows in moist to wet tidal salt marshes or open grassy brackish sites at low elevation.

**History of Decline:**
- Rare for as long as it has been identified at sites in Canada.

**Threats / Development Activities that Pose a Risk:**
- Development along coastal estuaries.
- Pollution and changes in water flow due to development or logging upland areas.

**Recovery Actions & More Information:**
- Known sites are identified and mapped by the B.C. Conservation Data Centre.
- Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
77. Corrupt Spleenwort

**Nuu-chah-nulth Name:** ḱicmapt (fern)

**Latin Name:** *Asplenium adulterinum*

**Status:** On the Red List in BC. Not yet listed by COSEWIC.

**Description:**
- Small fern (approx. 10 cm tall) growing from rhizomes.
- Leaflets are oval to round.
- Sausage-like lines along veins on the underside of leaflets produce reproductive spores.

**Natural History:**
- Rare on the west coast of Vancouver Island; not known anywhere else in North America. Also found in Europe and southwest Asia.
- Grows on dry talus slopes and the walls of limestone cracks in alpine and subalpine areas.
- Found on Tahsis Mountain and the Clayoquot Plateau.

**Human Use/Significance:**
- In Europe, a related species was used as a treatment for diseases of the spleen.

**History of Decline:**
- Rare for as long as it has been identified at sites in Canada.

**Threats / Development Activities that Pose a Risk:**
- Recreational use of alpine and subalpine areas.

**Recovery Actions & More Information:**
- Known sites are identified and mapped by the B.C. Conservation Data Centre.
- Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
78. California Wax Myrtle

Nuu-chah-nulth Name:

Latin Name: Myrica californica

Status: On the Blue List in BC. Not yet listed by COSEWIC.

Description:
• Large shrub, 2 to 6 m tall
• Lance-shaped evergreen leaves (5 to 8 cm long) have black dots.

Natural History:
• Found near the coast from Gray’s Harbour, Washington to southern California, with isolated populations between Ucluelet and Tofino, including Vargas Island.

History of Decline:
• Rare for as long as it has been identified at sites in Canada.

Threats / Development Activities that Pose a Risk:
• Development that results in clearing vegetation along the coast.

Recovery Actions & More Information:
• Known sites are identified and mapped by the B.C. Conservation Data Centre.
• Report sightings to: www.env.gov.bc.ca/cdc/contribute.html
Lichens

79. Seaside Centipede

Nuu-chah-nulth Name: Ḫuʔup (Moss or Lichen)

Latin Name: *Heterodermia sitchensis*

Status: Endangered (May 2000) by COSEWIC.

Description:
- Tiny leafy lichen, 2 cm across.
- Thin stiff lobes (0.5 to 2 mm wide) are irregularly branched.
- Upper surface is pale greenish-white to bluish black. Looks like a dull smooth cup, with scattered warts and whitish spots.
- Lower surface is white and cottony with urn-shaped outgrowths and tiny hair-like structures on its edges.

Natural History:
- Found in 20 locations on the west coast of Vancouver Island including, the Broken Group Islands, Deer Group Islands, Florencia Island, Schooner Cove, Lawrence Islets in Clayoquot Sound and around Spring Island, in Kyuquot.
- Found on Sitka Spruce twigs in the lower canopy of old, slow-growing trees.
- All sites have been beside the ocean and experience continuous high humidity, good air circulation, moderate temperatures, shelter from strong winds, and fertilization by perching birds and sea lion haul-outs.
- Lichens are plant-like organisms composed of a fungus and an alga. The fungus provides shelter and the alga provides food through photosynthesis. The fungus reproduces separately from the alga. Overall, the species is a poor disperser.
- Short-lived (10 to 15 years) and out-competed by other species.

History of Decline:
- One of the first sites where the species was found has been logged for a subdivision. The populations at several sites have declined between 2001 and 2004.
- Although rare, it appears to be holding its own.
- A new population on the Broken Group Islands was discovered in a 1999 survey.

Threats / Development Activities that Pose a Risk:
- Logging of host trees for waterfront development.
- Gathering of firewood for beach fires.

Recovery Actions & More Information:
- Encourage people to watch out for it and retain coastal Sitka Spruce habitat.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc
80. Oldgrowth Specklebelly

Nuu-chah-nulth Name: Ḵuʔup (Moss or Lichen)

Latin Name: *Pseudocyphellaria rainierensis*

Status: Special Concern (April 1996) by COSEWIC.

Description:
- Leafy lobes measuring 0.5 – 3 cm across. Upper surface is grey or pale greenish grey, often with a bluish tinge, smooth or wrinkled.
- Lower surface is whitish to light brown, fuzzy and with white spots.

Natural History:
- Ranges from southern B.C. to Oregon, west of the Cascade Mountains.
- Known from a few locations on the west coast of Vancouver Island including the forest along the shoreline of Pachena Beach.
- Grows on the bark and wood of conifers, often overgrowing moss mats.
- Found in moist old forests dominated by western hemlock and Douglas fir.
- Lichens are plant-like organisms composed of a fungus and an alga in a cooperative association. The fungus provides shelter and the alga provides food through photosynthesis. The fungus reproduces separately from the alga.
- Oldgrowth Specklebelly’s distribution is patchy, even in suitable habitat, suggesting that dispersal is limited.

History of Decline:
- Rare for as long as it has been identified at sites in Canada.

Threats / Development Activities that Pose a Risk:
- Logging and development of old growth forests reduces habitat.
- Probably sensitive to air pollution.

Recovery Actions & More Information:
- Encourage people to watch out for it and retain old growth habitat.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc
81. Seaside Bone

**Nuu-chah-nulth Name:** Ḵ̓uʔup (Moss or Lichen)

**Latin Name:** *Hypogymnia heterophylla*

**Status:** Special Concern (April 1996) by COSEWIC.

**Description:**
- Leafy lichen, 3 to 10 cm in total size.
- Branching lobes are shaped like hollow tubes, 1 to 3 mm wide, whitish grey to greenish grey, and some stick straight upwards.
- Hollow lobes are dark inside.
- Lower surface is black.

**Natural History:**
- Ranges from BC to California, seldom more than a few kilometers from the ocean.
- Found on bark and wood, most often on Sitka spruce and shore pine.
- Most abundant in open forests somewhat sheltered from the open coast.

**History of Decline:**
- Rare for as long as it has been identified at sites in Canada.

**Threats / Development Activities that Pose a Risk:**
- Logging and development of forests along the coast.

**Recovery Actions & More Information:**
- Building awareness of the species and encouraging people to watch out for it.
- Report sightings to the B.C. Conservation Data Centre: www.env.gov.bc.ca/cdc
Appendix 1: How species at risk are chosen as candidates for listing.

Candidate species are chosen based on expert recommendation, results from ongoing monitoring efforts in Canada, and international assessment processes.

COSEWIC uses scientific, Aboriginal traditional knowledge and local or community knowledge provided by many experts to assess the status of species. The following steps are used to decide whether a species is at risk:

1. **Determining the Population "Unit":**
   A review of the population structure, range, and the distribution of distinct stocks or sub-populations.

2. **Assessing Changes in Abundance:**
   An analysis of trends in population abundance, including:
   - A summary of overall trends in population size (both number of sexually mature individuals and total numbers in the population) over as long a period as possible, at least the past three generations.
   - Where declines have occurred over the past three generations, a summary of the degree to which the causes of the declines are understood, and the evidence that the declines are a result of natural variability, habitat loss, harvesting, or other human activity.
   - Where declines have occurred over the past three generations, a summary of the evidence that the declines have ceased, are reversible, and the time scales for reversibility.

3. **Assessing Changes in Distribution:**
   An analysis of trends or changes in the spatial distribution of the population or sub-population. Under this criterion, it is necessary to summarize the:
   - current area of occupancy
   - changes in area of occupancy over as long a time as possible, and in particular, over the past three generations.
   - any evidence for changes in the degree of fragmentation of the overall population, or a reduction in the number of sub-populations.

4. **Estimating population Size:**
   An estimate of the total current population size, including:
   - The best estimates of the number of mature individuals, and
   - If there are fewer than 10,000, a summary of trends over the past 10 years or three generations, and the causes for the trends.

**Legal Listing**

*The Species at Risk Act* (SARA) establishes COSEWIC as an advisory body to the federal Minister of the Environment. COSEWIC meets at least once a year to consider status reports on candidate species. Since 2004, COSEWIC submits its annual report to the federal Minister of the Environment in late summer. The annual report includes all species that COSEWIC wishes to have considered for legal listing.
Species assessed by COSEWIC as Extirpated, Endangered, Threatened or Special Concern will be considered for legal protection and recovery (or management) under the Species at Risk Act (SARA). Based in part on COSEWIC’s status assessment, the government may decide to add a species to SARA’s List of Wildlife Species at Risk (Legal List), to not add a species to the Legal List, or to refer the matter back to COSEWIC for further information or consideration.

More information on the SARA listing process may be found on the COSEWIC web site (www.COSEWIC.gc.ca) or on the SARA Public Registry (www.sararegistry.gc.ca).
Appendix 2: British Columbia’s legislation for protecting species at risk

The National Accord for the Protection of Species at Risk is an agreement between the federal and provincial governments to develop complementary programs and legislation for the protection of species at risk and their habitat.

The B.C. Wildlife Act protects vertebrate animals from direct harm, except as allowed by regulation (e.g., hunting or trapping). If a species is at risk, it may receive additional protection. For example, Section 34 of the Wildlife Act protects birds and their eggs, nestlings and nests when they are occupied. Subsection 34 (b) provides year round protection to the nests and nest trees of eagles, peregrine falcons, gyrfalcons, ospreys, herons and burrowing owls, regardless of whether the nests are active or not.

The Forest and Range Practices Act of B.C. may designate red-listed (and sometimes blue-listed) species that are negatively impacted by forest practices as Identified Wildlife. Special management guidelines and reserve areas called Wildlife Habitat Areas (WHAs) are established to protect Identified Wildlife. WHAs are usually small areas of habitat (i.e., typically less than 50 hectare) that have been mapped and approved by the Chief Forester and Deputy Minister of the Environment. Larger areas (hundreds of hectares) are designated for some species, such as the Northern Goshawk or Marbled Murrelet. WHAs are designed to minimize disturbance or alteration to a species’ habitat or a rare plant community.

The Ecological Reserve Act, Protected Areas of B.C. Act and Park Act serve to create and protect significantly important ecological sites that are located on Crown land (terrestrial or marine). Significantly important sites include: areas suitable for scientific research and educational purposes; areas that are representative examples of natural or recovering ecosystems in B.C.; areas with rare or endangered native plants and animals; and areas that contain unique and rare examples of botanical, zoological or geological phenomena.

The Environmental and Land Use Act is used to formally designate areas where the desired management objectives do not neatly fit into any of the other designations available.

More information about B.C.’s wildlife stewardship programs can be found at www.env.gov.bc.ca/wld/.
Appendix 3: Nuu-chah-nulth Pronunciations

- c - has a ts sound as in cats - glottalized c has a ts sound plus and uh sound
- č - glottalized c has a ts sound plus an uh sound
- č - wedged c has a ch sound
- č - glottalized wedged c has a ch plus an uh sound
- h - back h sound has a sound of one breathing on glass to clean it
- k - glottalized k has a k sound plus an uh
- kʷ - glottalized k” sound of a k plus w and an uh
- t - barred L – place your tongue behind front teeth and let air flow out through the side of tongue
- m - glottalized m has the sound of m plus uh
- n - glottalized n has the sound of an n plus uh
- p - glottalized p has the sound of p plus uh
- q – has the sound of k made deep in the throat
- s - wedged s has a sh sound
- t - glottalized t has the sound of t plus an uh
- w - glottalized w has a w sound as in wow plus uh
- x - has a sound of a cat’s hiss
- x - back x has a sound of clearing the throat of an object
- y - has a sound of y as in yellow plus an uh
- ñ - barred lambda has the sound of tla
- ? - the glottal stop has the sound of the stop uh-uh
- ŋ - pharyngeal has the sound of “I” made deep in the throat

The “Species At Risk within Nuu-chah-nulth Territories” guidebook uses mainly Central Region dialect for the Nuu-chah-nulth names of the species. However, if we could not locate a Central Region word documented then we have used the Southern Region dialect. Many of the words are general to the kind of species rather than being specific, for example, we gave the Nuu-chah-nulth word for bird, rather than the specific one for a Pink-footed Shearwater. Please contact us if you know the specific Nuu-chah-nulth words for any of these species.

Sources for Nuu-chah-nulth words:

Nuu-chah-nulth Central Language Group. Special thanks to Barb Touchie and Gale Johnsen


www.firstvoices.ca
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