

BC's Coast Region: Species & Ecosystems of Conservation Concern
Northern Goshawk including *atricapillus* & *laingi* subspecies (*Accipiter gentilis*, *A. g. atricapillus* & *A. g. laingi*) *Accipiter gentilis*: Global: G5 Provincial: S4B, S4N COSEWIC: N/A BC List: Yellow / *A.g. atricapillus*: Global: G5T5, Provincial: N/A, COSEWIC: NAR, BC List: Not listed / *Accipiter gentilis laingi*: Global: G5T2, Provincial: S2B, COSEWIC: T, BC List: Red Identified Wildlife



Adult



Juvenile

Notes on *Accipiter gentilis atricapillus* & *laingi*: A member of the family Accipitridae (often referred to as “forest hawks. There are two other members of the genus *Accipiter* in BC - Cooper’s and Sharp-shinned Hawk. “Queen Charlotte” Goshawk (*A. g. laingi*). Some differences occur in size and plumage patterns between the island and mainland (*atricapillus*) form. While island and mainland populations may overlap along some areas of the Coast Region, *A.g. laingi* is considered genetically distinct. Information about subspecies biology is derived from the species as a whole.

Description

Height: 51-66 cm Wingspan: 1.1 m. A large and long-legged hawk, this species has a long narrow tail and relatively short rounded wings, which allow it to move easily in the interior of forests. On adults the head has a black crown, white eyebrow streak and eyes are red. Adults typically have blue-grey dorsal plumage with grey barring on the chest and belly. Both sexes are similar, though as with other raptors the females are larger. Juveniles are very similar to the juveniles of other *Accipiter* species, with brown dorsal plumage and a dirty-white, heavily streaked belly and yellow eyes which change colour as the bird matures. The *laingi* subspecies is smaller and somewhat darker than the typical mainland (*atricapillus*) form.

Diet

Northern Goshawk forage during the day and prey on medium-sized forest birds (including upland game birds and songbirds), and periodically small mammals (e.g. Snowshoe Hare, Northern Flying Squirrel, Red Squirrel, ground squirrels). Prey preferences and related abundance factor highly into goshawk distribution and may effect local populations and breeding success in years of low availability.

Look's Like?

The largest of BC's Accipiters, both subspecies of Northern Goshawk have ranges that overlap with the related, but smaller and more slender Cooper's Hawk. Cooper's Hawk and the smallest Accipiter, Sharp-shinned Hawk, adapt more easily to forests in urban and rural areas, and thus are more likely to be observed in and around human habitation. Cooper's Hawk lacks a white stripe above the eye, and the chest and belly of adults is densely barred with rufous (rather than grey), plumage. Juvenile Cooper's Hawks are hard to distinguish from those of Northern Goshawk, other than by their size - with Cooper's being smaller.

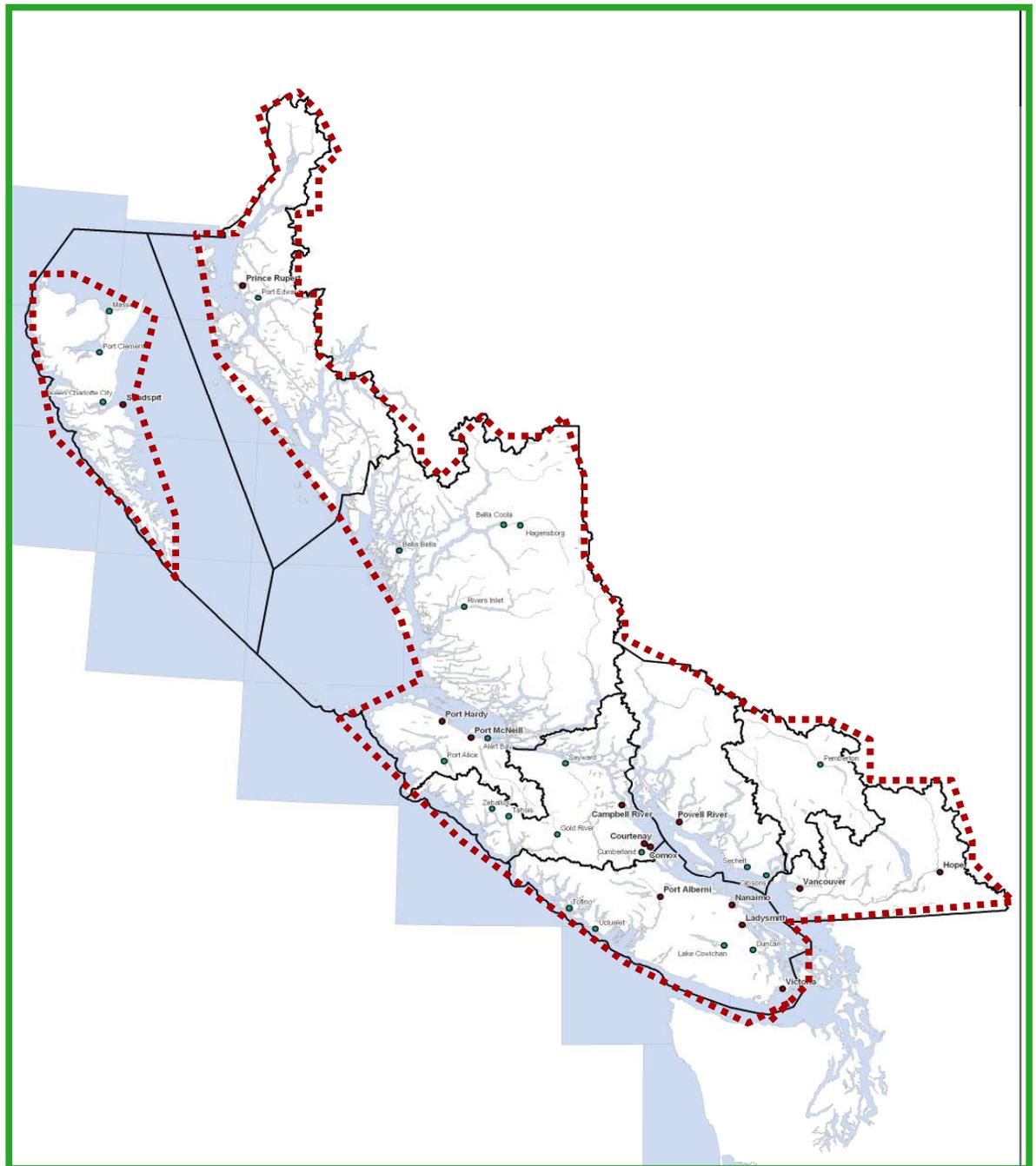


Cooper's Hawk (adult)

Distribution

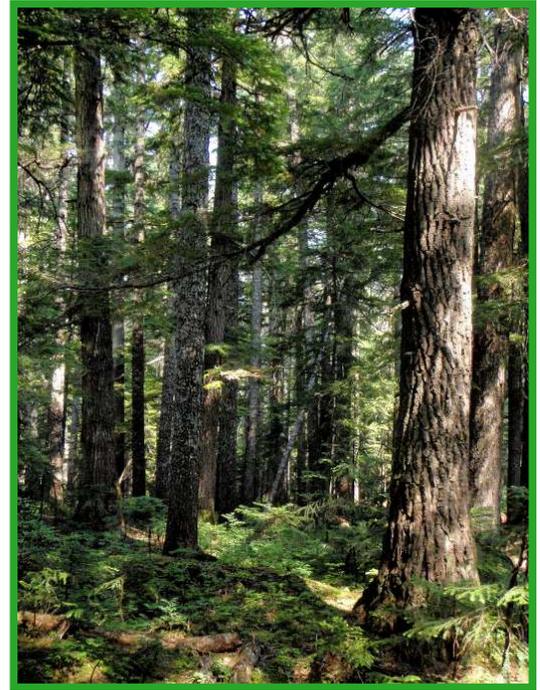
Northern Goshawks occur in forest dominated landscapes throughout BC and are a year-round resident species. Northern Goshawks have large territory sizes and corresponding low population densities.

Territory sizes vary among regions, likely due to long term prey availability: Haida Gwaii - ~9400 ha, Vancouver Island and southern coast - ~3800 ha, interior BC mainland - ~2400 ha. Large territories are distinctly associated with the availability of mature-to-old forest. The subspecies overlap in range throughout the Coast Region though it is not known if interbreeding occurs, or which form is more dominant where they do overlap.



Northern Goshawk (including *atricapillus* & *laingi* subspecies) occurrence range for the Coast Region

Habitat Preferences Northern Goshawk is a mature forest and old-growth forest specialist, preferring late seral conifer forests with open forest understory and high canopy cover for both nesting and foraging. In coastal ecosystems preferred nesting habitat is in Douglas-fir, western hemlock and Sitka spruce stands in lower to mid elevations. Goshawks require relatively large contiguous stands and avoid building nests within 100-200 m of a forest edge. Goshawks can nest in “Young Forest” (DEITF structural stage term) that has advanced through the self-thinning stage, but prefer Mature and Old Growth stages which offer better structural attributes for nesting. Goshawks will forage in a variety of structural stages, depending on prey availability, but show a strong preference for foraging in mature and old forest. Generally, goshawks require 40-60% of their territory in mature or old forest in order to breed successfully. While not typically found in disturbed areas, Northern Goshawk will utilize maturing second growth stands (i.e. 100+ years old) and even agricultural areas (at least during the winter months).



Dense young second growth is avoided because prey availability is usually low and the birds larger size requires more evenly spaced stands to maneuver through.

Critical Features Breeding activities occur within a 50-200 ha nest area that usually contains multiple (2-9) nests. Once established, nest areas are often used repeatedly for many years and new goshawks will move into nest areas that become vacant. Nest areas are recognized as a key ecological unit for protection under IWMS. Nests are usually on slopes <60% and are composed of a large platform of sticks approximately 1m in diameter and 0.4m deep. Nests are usually located on lateral branches against the tree trunk in the lower portion of the main canopy. Goshawks build multiple (3-9) nests and alternate amongst these nests in successive years. The presence of coarse woody debris, windthrow and downed snags, stumps, large and low thick-limbed trees are important structural features as they support main prey species.

Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Courtship				Nesting/ chicks in the nest		Fledging/post fledging. Juveniles & adults begin over-wintering in the fall				

Threats

- ◆ Habitat loss and fragmentation through the reduction of mature forest amount by industrial timber harvesting is considered the most significant threat
- ◆ Disturbance (especially due to industrial resource activities like road building, mining and logging) can lead to nest abandonment.
- ◆ Predation on chicks (e.g. great horned owl, black bears)
- ◆ Competition from more open-country species, such as Red-tailed Hawks, in response to logging
- ◆ Reduction in prey base due to loss of habitat and stand structural diversity.

Conservation & Management Objectives

- ◆ Apply conservation and management objectives for the species and other subspecies as a whole as set out in the “Recovery Strategy for the Northern Goshawk, *laingi* subspecies (*Accipiter gentilis laingi*) in British Columbia. Integrate complimentary measures found in resource tools such as “Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia”, “Accounts and Measures for Managing Identified Wildlife - Accounts V. 2004. Queen Charlotte Goshawk *Accipiter gentilis laing*”, “Managing For Goshawks on the North Coast” and the newly developed “Best Management Practices for Northern Goshawk Breeding Areas in the Interior of British Columbia.”
- ◆ Assess, inventory and monitor using methodology setout in the RISC standards # 11 Inventory Methods for Raptors (Version 2.0).

Specific activities should include:

- ◆ Be aware of known nest locations and established WHAs
- ◆ For nests without WHA's: Conduct a thorough nest search by qualified biologist to locate alternative nests to define extent of nest area, maintain 50-200 ha mature forest patch around nests (probability of long term use increases with size), maintain 100-200 m forest buffer around all nests
- ◆ Avoid mechanized activity within 800m of active nest Feb 1 - Aug 15¹
- ◆ Incorporate mature and forest targets into land use and other larger scale land use plans to ensure adequate foraging habitat
- ◆ Update occurrence, distribution and habitat suitability information to adequately identify and protect key habitat features at the landscape level.
- ◆ Avoid activities that result in a reduction in stem density, canopy volume and habitat quality in forested stands (e.g. under storey brushing, patch cutting and clear-cutting)
- ◆ Maintain the hierarchical structure of core zones and home range zones e.g. nest sites, nest areas, post-fledging area and foraging areas.
- ◆ Use all available landscape level tools to maintain appropriate levels of non-fragmented habitat for this species (e.g. protected areas, riparian reserves and to some extent riparian management zones, any special management areas).
- ◆ Maintain abundance of the habitat attributes critical for goshawk prey (snags, coarse woody debris, forest openings), and extensive canopy cover, which provides protection to fledglings while learning to hunt.

The *A. g. laingi* subspecies is listed under the Federal Species at Risk Act (SARA) and is Identified Wildlife in BC. The species and subspecies are subject to protections and prohibitions under the BC Wildlife Act. Habitat for this species may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

Content for this Factsheet has been derived from the following sources

- B.C. Conservation Data Centre. 2010 . [Internet] [Updated August 8 2005]. Conservation Status Report: *Accipiter gentilis laingi* B.C. MoE. Canadian Wildlife Service. 2010. [Internet] Hinterlands Whose Who. Bird Fact Sheets: Sharp-shinned Hawk, Cooper's Hawk, and Northern Goshawk.
- Cooper, J.M., and V. Stevens. 2000. A review of the ecology, management and conservation of the Northern Goshawk in British Columbia. B.C. Minist. Environ., Lands and Parks, Wildl. Branch, Victoria, BC. Wildl. Bull. No. B-101. 31pp.
- COSEWIC 2000. COSEWIC assessment and update status report on the Northern Goshawk *Laingi* subspecies *Accipiter gentilis laingi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.
- Demarchi, M.W. and M.D. Bently. 2005. [Internet]. Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia. B.C. Minist. of Environ., Victoria, B.C. MoE BMP Series.
- Doyle, Frank. 2006. [Internet] Managing For Goshawks on the North Coast. Prepared For: Anne Hetherington, Ministry of Water, Land and Air Protection, Smithers, B.C.
- Horn, H.L. et al. 2009. [Internet]. Parts 1-3 EBM Working Group Focal Species Project. Reports 1-3: of the EBM Working Group Focal Species Project. Integrated Land Management Bureau, Nanaimo, B.C.
- Interior BC Goshawk Science Team. 2011. [Internet] Best Management Practices for Northern Goshawk Breeding Areas in the Interior of British Columbia
- McLaren, Erica. 2004. [Internet] Accounts and Measures for Managing Identified Wildlife - Accounts V. 2004. "QUEEN CHARLOTTE" GOSHAWK" *Accipiter gentilis laingi*
- Ministry of Environment, Lands and Parks Resources Inventory Branch. 2001. [Internet] RISC Standards # 11 Inventory Methods for Raptors Version 2.0.
- Northern Goshawk *Accipiter gentilis laingi* Recovery Team. 2008. Recovery strategy for the Northern Goshawk, *laingi* subspecies (*Accipiter gentilis laingi*) in British Columbia. Prepared for the B.C. Ministry of Environment, Victoria, BC. 56 pp.
- Proulx, Gilbert et al. 2003. A Field Guide to Species at Risk in the Coast Forest Region of British Columbia. Published by International Forest Products and BC Ministry of Environment. Victoria (BC).

Prepared by: Pamela Zevit of Adamah Consultants and Jamie Fenneman, updated with Todd Mahon for the South Coast Conservation Program (SCCP) in partnership with: International Forest Products (Interfor), Capacity Forestry (CapFor) and the BC Ministry of Environment (BC MoE), E-Flora and E-Fauna the Electronic Atlas of the Flora and Fauna of BC, Species at Risk & Local Government: A Primer for BC. Funding for this factsheet was made possible through the Sustainable Forestry Initiative (SFI): <http://www.sfiprogram.org/>

Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: info@sccp.ca. Content updated March 2012

Image Credits: Northern Goshawk: Norbert Kenntner Wikimedia, Northern Goshawk (juvenile): Thermos (Wikipedia), Cooper's Hawk: Len Blumin (Flickr), Habitat: Pamela Zevit. Only images sourced from "creative commons" sources (e.g. Wikipedia, Flickr, U.S. Government) can be used without permission and for non-commercial purposes only. All other images have been contributed for use by the SCCP and its partners/funders only.

¹ Assume active until assessed by a qualified professional e.g. biologist