

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

### Short-eared Owl (*Asio flammeus*)

Global: G5, Provincial: S3B,S2N, COSEWIC: SC, BC List: Blue Identified Wildlife



**Notes on *Asio flammeus*:** A member of the family Strigidae (“typical owls”), the genus *Asio* is known as the “eared owls”. Like Barn Owl, this species is one of the most globally widespread species of owl, absent only from Antarctica and Australia. The ear tufts are clumps of feathers and may or may not be visible depending on the owl’s ‘mood’.

#### Description

**Length:** 32-43 cm; **Wings:** 30 cm. This “crow-sized” owl is diurnal (active during the day). Females are slightly larger than males (typical of most raptors), and considerably heavier, averaging 411 grams compared to 350 grams for males. Plumage is tawny-brown on the body with streaking on the chest and belly. Wings and tail are dark brown blotched with white, primary flight feathers are tan with black stripes. A distinctive black patch on the underwing occurs near the bend (wrist). Feet are covered in short buff-coloured feathers. Dark eye orbits surround yellow eyes in a circular facial disc. Ear tufts are small and inconspicuous unless the owl is startled or defensive. Ear tufts may possibly aid in making birds more difficult to see in vegetation by breaking the line of the circular facial disc. The dark eye orbits with their distinct white edging may assist in cutting glare while hunting during the day. Juvenile owls are similar in colour to adults but retain more black on the facial disc until their first fall.

#### Diet

This owl preys on native and introduced rodents including rat, mice, mole and vole species, especially Townsend’s Vole which often determines local density of adult birds. Songbirds may be taken when small mammals are scarce. As with Barn Owl, this species is susceptible to starvation during prolonged periods of snow cover. In the winter, Short-eared Owls congregate at sites that provide abundant prey opportunities. Birds forage primarily by flying low, typically into the wind, and dropping down onto prey, sometimes after a brief hover.

#### Look’s Like?

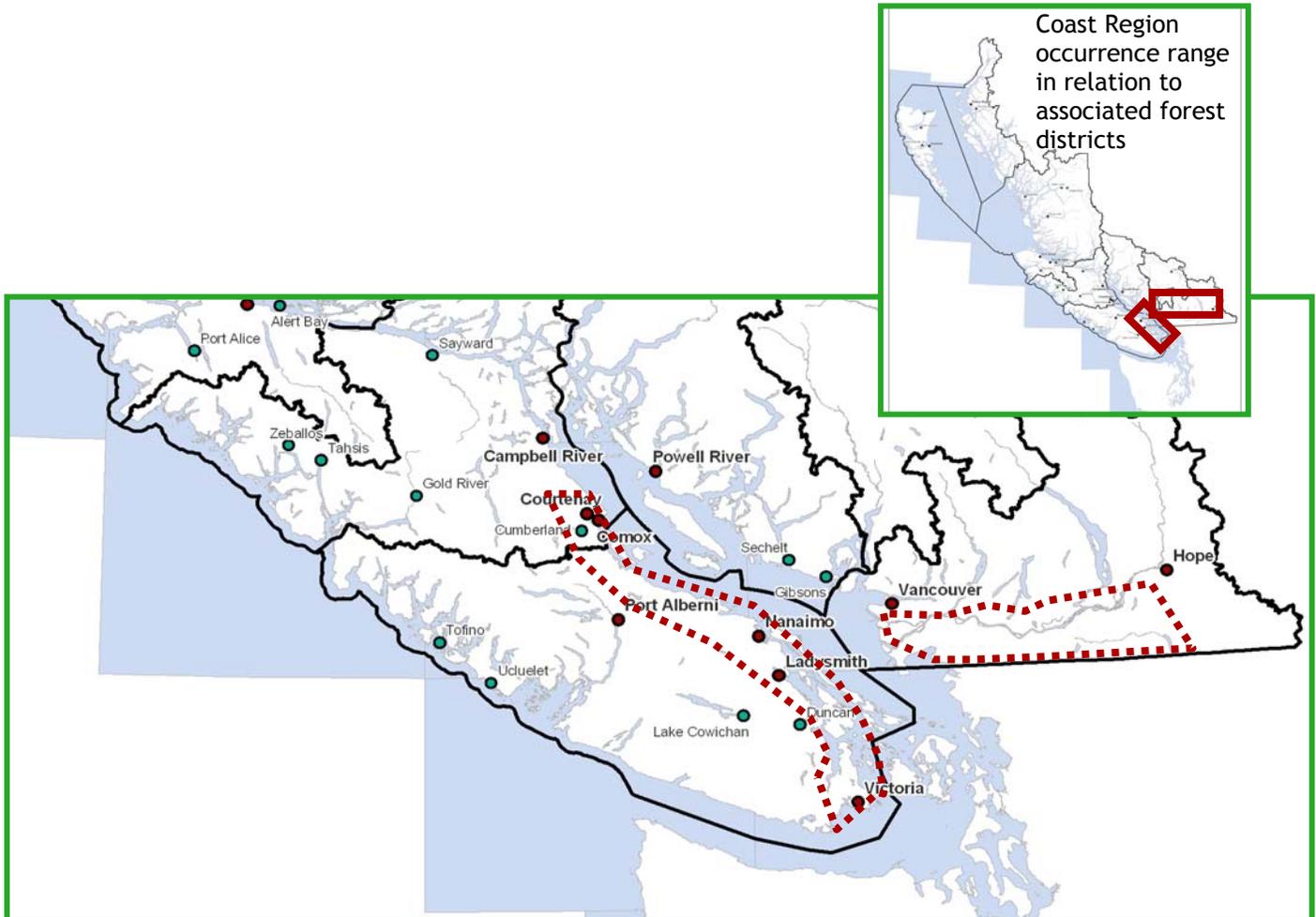
Short-eared Owl overlaps in distribution with several other owls, some of which use the same or adjacent habitats for roosting or foraging. Barn Owl, Barred Owl and Long-eared Owl are typically observed in areas where Short-eared Owl occurs. However the diurnal foraging pattern of Short-eared Owl, distinct facial pattern and short ear tufts make it unlikely to be confused with these other species.



Long-eared Owl

**Distribution**

A near-distance migrant, breeding and over-wintering for this species occurs between the BC interior and the Lower Mainland. Migration may be driven by prey availability. In particular, the Fraser Estuary, Deer Lake (Burnaby), Colony Farm Regional Park, Pitt River floodplain and the agricultural areas of the Fraser Lowlands provide the essential old-field habitat and estuarine/freshwater marshlands utilized by this species. Periodically individuals may overwinter on southern Vancouver Island.



Short-eared Owl (*Asio flammeus*), known occurrence range for the Coast Region

### Habitat Preferences

While this species is an old-field / open grassland and marshland specialist, it is occasionally spotted in suburban areas where large old-field or grassland features exist (e.g. Deer Lake Park in Burnaby, Colony Farm Regional Park in Coquitlam/Port Coquitlam). Winter roosts have been reported in abandoned dumps, quarries, gravel pits, storage yards, stump piles, old fields and dunes.



### Critical Features

Unlike most owls that nest in cavities or take over abandoned nests of other birds, Short-eared Owls build crude nests on the ground. Nests may be lined with grass, leaves, twigs or feathers. In general, any area that is large enough, has low vegetation cover (preferably 30-50 cm in height) with some dry upland areas for nesting that supports abundant, preferred prey may be considered potential breeding habitat. Nesting areas are often associated near waterbodies.

Short-eared Owl prefers open areas such as grasslands, meadows in early succession (some shrubs or trees), marshlands, sloughs, beaches, sedge fields and previously forested areas that have been cleared. Suitable winter habitat includes marine foreshores, grasslands, fallow fields, etc. with a sufficient prey base and adequate roost sites.



### Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
			Breeding / Nesting									
			Chick's in nest (nesting may be correlated with latitude and prey abundance)					Young of the year, Juveniles & adults over winter (resident or short distance migrants)				

### Threats

- ◆ The Fraser River delta supports the largest winter population of Short-eared Owls in the province. However, this area has been, and continues to be, modified through urbanization and increasingly intensive agricultural practices.
- ◆ Development and fragmentation of habitats inevitably results in lower population numbers which can be exacerbated from severe winters, a significant source of mortality for British Columbia populations.
- ◆ Vole species, a primary prey species, are also susceptible to large population fluctuations and vulnerable to land use changes and changes to grassland habitats from spread of invasive grasses.
- ◆ As a ground nesting species, hazards to nests and nestlings include fire, flooding of marsh or coastal habitat, farm machinery, and predators.
- ◆ Mortality in adults has also been attributed to shooting, collisions with cars, aircraft and entanglement with barbed wire.
- ◆ The use of pesticides to control plants and rodent pests in agricultural areas may result in direct or sub-lethal mortality as well as detrimental effects to prey abundance and breeding success.

### Conservation & Management Objectives

- ◆ Apply conservation and management objectives as set out in the "COSEWIC assessment and update status report on the Short-eared Owl *Asio flammeus* in Canada". Integrate complimentary measures identified in Accounts and Measures for Managing Identified Wildlife - Accounts V. 2004. Short-eared Owl *Asio flammeus flammeus* and Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia.

- ◆ Assess, inventory and monitor using methodology set out in the RISC standards # 11 Inventory Methods for Raptors (Version 2.0).

#### Specific activities should include:

- ◆ Inventory and assessment of actual distribution and numbers of breeding birds would be of significant value for conservation of this species.
- ◆ Establish core protection zones at traditional communal (>8 owls) roosting sites, traditional nest, or winter areas. Roost sites will generally be 5 ha and traditional nest sites or wintering sites will generally be 10 ha but will depend on site-specific factors.
- ◆ Maintain important structural features. For example, maintain a range of grass heights with adjacent hedgerows or shelterbelts for refuge. Increase percentage of fields left fallow within winter range.
- ◆ Determine impacts of active recreation and domestic pet (dog), disturbance and livestock grazing on nesting success. Critical periods to limit disturbance are April-May/December-February. Consider barrier fencing for high use areas or known nesting areas to reduce potential disturbance impacts. Mowing or similar harvesting activities should be restricted to after August 1<sup>st</sup> to protect nestlings.
- ◆ Public information and education products should continue to be developed to encourage landowners to conserve and enhance nesting and foraging habitats. Recent stewardship initiatives to manage for old-field communities in the Fraser Delta (e.g. Delta Farmland Wildlife Trust) should be of value as a model for conservation of this species.

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

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

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- B.C. Conservation Data Centre. 2010. [Internet] Species Summary: *Asio flammeus*. B.C. MoE.
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- Cooper, John M. and Suzanne M. Beauchesne. [Internet] Accounts and Measures for Managing Identified Wildlife - Accounts V. 2004. Short-eared Owl *Asio flammeus flammeus*
- 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.
- Ministry of Environment, Lands and Parks Resources Inventory Branch. [Internet]. 2001. RISC standards # 11 Inventory Methods for Raptors (Version 2.0).
- 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).

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Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: [info@sccp.ca](mailto:info@sccp.ca). Content updated August 2010.

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