

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

### Barn Owl (*Tyto alba*)

Global: G5 Provincial: S3 COSEWIC: T BC List: Blue



**Notes on *Tyto alba*:** The only member in BC of the family Tytonidae (“barn owls”) and genus *Tyto*, this species is one of the most widely distributed globally but has limited distribution in BC. The scientific name literally means “white owl”. Of all the owl species it may have the greatest number of common name variations including Demon Owl, Monkey-faced Owl, Hissing Owl, Hobgoblin or Hobby Owl.

#### Description

Length 30-37 cm, Wingspan 104-120 cm. A slender owl with tawny to golden-brown dorsal plumage with varying amounts of gray. Breast and belly plumage ranges from white to buff and is sparsely to heavily speckled with small black spots. The head lacks ear tufts and has relatively small dark eyes and a distinctive heart-shaped, white to buff facial disk. The legs are long and sparsely feathered, wings long and rounded with a short rounded tail. As with many raptors, sexes differ with females being larger and heavier. As well females are darker, and more heavily speckled than males. Owlets are covered in fluffy snow-white down which becomes similar to adult plumage as they mature.

#### Diet

Barn Owl is an effective predator on introduced and native rodents especially Townsend’s Vole (63-85% of diet). In urban areas introduced species such as Norwegian and Black Rat and House Mouse may provide a surrogate food source. Bird species are taken when small mammals are scarce. This species is dependent on access and availability of key prey sources making them susceptible to starvation during prolonged periods of snow cover.

#### Look’s Like?

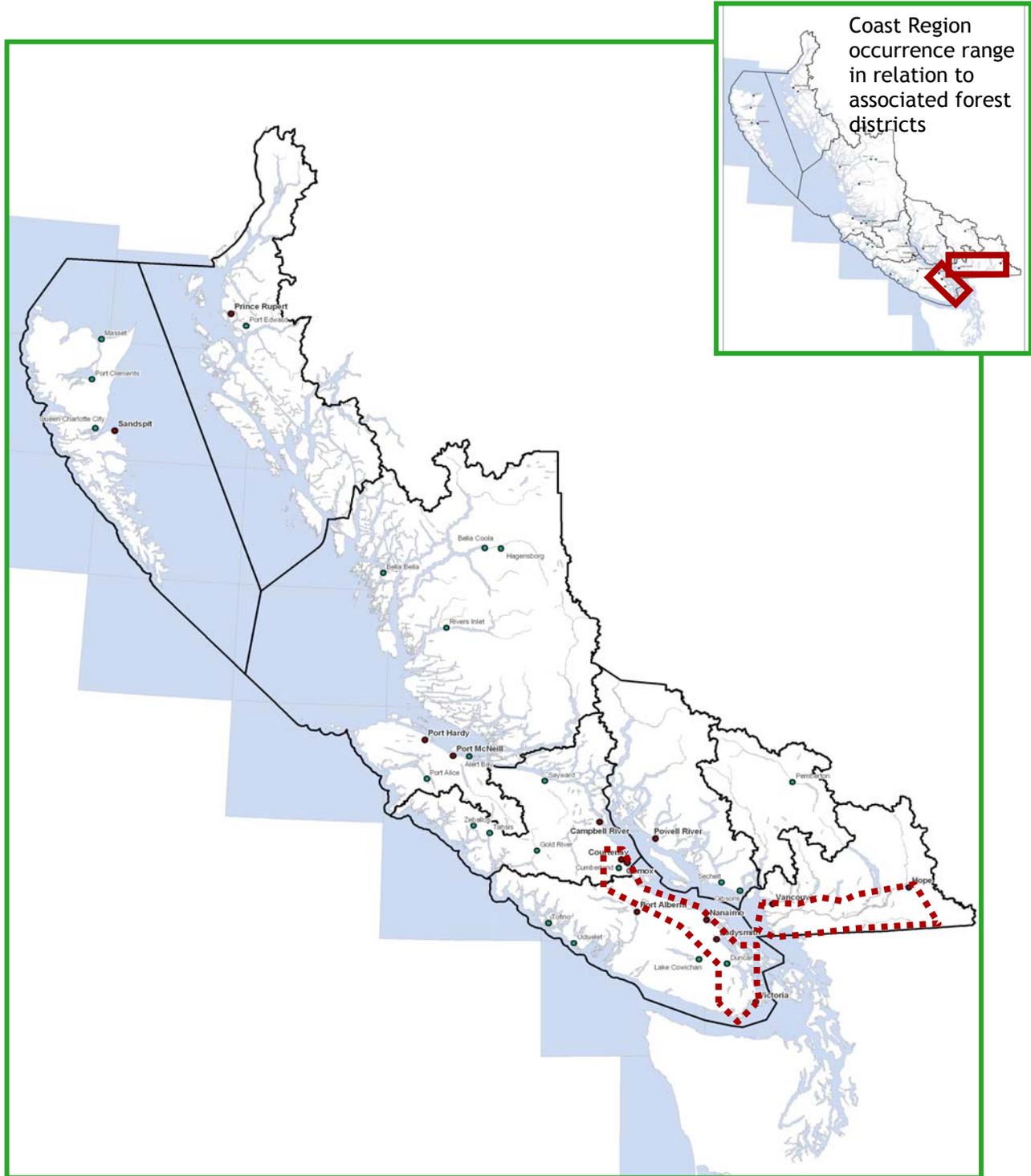
Barn Owl overlaps in distribution and habitat preferences with several other owls including Short-eared Owl and Barred Owl. However the overall pale, buff coloured plumage with little or no dark spotting or barring and heart shaped facial disk distinguish Barn Owl from these other species.



Barred Owl

**Distribution**

Barn Owls occur at the lowest elevations available within their range in British Columbia. On the Coast Region this species is thought to have originated from a central colonization point in the Fraser estuary in the early 1900's. Mild winters and expanding agricultural land use contributed to its spread through the Fraser Lowlands to Hope from the 1940's to the 1980's.



Barn Owl (*Tyto alba*), known occurrence range for the Coast Region

### Habitat Preferences

Preferred breeding, foraging and over-wintering areas include fields of dense grass, marsh, lightly grazed pasture and hayfields, often around human habitation. Nesting occurs in buildings (church steeples, attics, platforms in silos and barns, wooden water tanks) as well as caves, crevices on cliffs, burrows, and hollow trees (though rarely in trees with dense foliage). This species will readily exploit nest boxes. Reproductive success generally is higher in a properly placed and maintained nest box than in a natural nest cavity. Intensively cultivated habitats are of less value in general because of low prey populations.



Barn Owl expansion into BC is somewhat related to the expansion and clearing of agricultural lands in the early part of the 20<sup>th</sup> century. This species earns its name from its adaptability to man-made structures associated with these land uses.

### Critical Features

Quantity and quality of dense grass habitats are significantly correlated with nest activity. Nests are most often located in man-made structures. The most common nests are on platforms high in old wooden barns. Loss of these features combined with conversion of adjacent foraging areas to greenhouses or urban land uses effects population viability and recovery.

### Seasonal Life Cycle

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		Breeding / Nesting									
			Chick's in nest					Young of the year, Juveniles & adults over winter			
[Blue bar]											

### Threats

- ◆ Distribution coincides with areas undergoing significant urbanization and natural habitat loss including draining and infilling of wetlands and industrialization/conversion of limited farmland foraging habitats.
- ◆ Development and fragmentation of habitats inevitably results in lower population numbers which can be exacerbated by 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 grass species (e.g. non-native reed canary grass species).
- ◆ Accidental killing of Barn Owls by collision with vehicles is significant factor and will likely increase with expanded road and highway development.
- ◆ The use of pesticides to control weeds as well as rats and mice in agricultural and urban areas has resulted in direct mortality as well as sub-lethal effects and impacts to prey abundance.

### Conservation & Management Objectives

- ◆ Apply conservation and management objectives as set out in “Best Management Practices for Raptor Conservation during Urban and Rural Land Development in British Columbia”. Complimentary conservation measures as recommended in the “Draft Recovery Strategy for the Barn Owl (*Tyto alba*) in Ontario” should be investigated and integrated into activities for the protection of this species in BC.
- ◆ Assess, inventory and monitor using methodology set out in the RISC standards # 11 Inventory Methods for Raptors (Version 2.0).

### Specific activities should include:

- ◆ Protect large tracts of suitable foraging habitat from development through acquisition or long-term stewardship agreements (e.g. set-asides, annual fallow areas) with landowners, especially key habitats such as marshlands, meadows, old-field and grasslands which also enhance Townsend's Vole and other native rodent habitat.
- ◆ Crop harvesting should be timed wherever possible to occur post nesting season.
- ◆ Integrated pest management practices which reduce the need for toxic pesticides should be employed and alternatives to control rodent pests applied, to reduce lethal and sub-lethal impacts.
- ◆ Protect known nest sites from human disturbance. In areas of suitable foraging habitat, nest box programs should be initiated or continued to increase nesting opportunities. There have been some successful attempts to enhance barn owl numbers through this practice. Current and historical nest sites should be monitored regularly to determine long-term population trends.
- ◆ 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 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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- 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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