



BCTS

BC Timber Sales



Species at Risk Awareness Training
BCTS 2023

Overview

- Introduction
- Legislation, Definitions, Certifications
- Potential Species in Your Area
- Documenting and Reporting Sightings
- Pileated Woodpecker Nests and Migratory Birds Regulation
- Questions and Discussion

This presentation was created by Madrone Environmental Services Ltd. For BC Timber Sales for their 2023 Species at Risk and AREC Awareness Training for the Strait of Georgia Business Area

Species At Risk

*Legislation, Definitions and
Certification Requirements*

What are Species at Risk?

A species designated by the federal or provincial government as an extirpated, endangered or threatened species or a species of special concern.

A designation of “at risk” identifies species that require immediate help from land managers, such as protection of habitat essential to the survival of the species.

Some of these species are naturally rare, or rare due to human impact such as loss of habitat, introduced species competition, and climate change.

A designation of Threatened or Endangered initiates provincial recovery planning and delineation of critical habitat.



Little Brown Bat



White-lipped Rein Orchid

In Canada, assessments and resulting designations are made at both ***federal*** and ***provincial*** government levels



Federal
Species at Risk Act (SARA)

Provincial
BC Wildlife Act

Legislation



These assessments are based on ***biological*** factors and use rigorous assessment criteria, followed by classification into categories based on level of risk

Federal Ranking



The Committee on the Status of Endangered Wildlife in Canada (COSEWIC)

Species are ranked as either:

- *Extinct*
- *Extirpated*
- *Endangered*
- *Threatened*
- *Special Concern*
- *Not at Risk*

Provincial Ranking



The British Columbia Conservation Data Centre (CDC)

Species and *ecosystems* are ranked by the CDC as:

- *red-listed*: extirpated, endangered or threatened in BC
- *blue-listed*: special concern in BC
- *yellow-listed*: not at risk in BC

Legislative Framework

Jurisdiction	Agency	Legislative Framework	Protection	Ranking
Global	NatureServe	Advisory		- Global (G) - Provincial (S)
Federal	Environment Canada	<i>Migratory Bird Convention Act</i>	Lists birds (and their nests) protected under the act	
	- Environment Canada - Parks Canada - Fisheries and Oceans Canada	<i>Species at Risk Act</i> (SARA)	- Status Reports - Recovery Strategies - Action Plans - Regional Implementation Groups (RIG)	- Extirpated - Endangered - Threatened - Special Concern
	COSEWIC	Advisory		
Provincial (British Columbia)	Conservation Data Centre	Advisory		- Red-listed - Blue-listed - Yellow-listed
	Conservation Framework	Advisory	Prioritizes species and ecosystems for conservation and set targets for retention of habitat	
	MoECCS	<i>Wildlife Act</i> <i>Wildlife Amendment Act</i> <i>Fish Protection Act</i> (Riparian Areas Protection Regulation)	- Protection from being killed, wounded, hunted or transported. - Provides increased protection for species at risk - can legally designate species	
	- MoFLNRORD - MoECCS	<i>Forest and Range Practices Act (FRPA)</i> <i>Section 7 Notices</i> <i>Government Action Reg.</i>	- Identified Wildlife Management Strategy (IWMS) - Wildlife Habitat Areas (WHA) - Ungulate Winter Ranges (UWR) - General Wildlife Measures (GWM) - Higher Level Plans (HLP)	

Why Protect Species at Risk?

Biological diversity is maintained through protection of all species and is a genetic resource for the planet

Many Species at Risk are indicators of ecosystem integrity and productivity

It is the law. BCTS is bound by federal and provincial legal requirements to protect species at risk and/or habitats

Professional due diligence and Code of Ethics

Due diligence under SFI Certification and Environmental Management System (EMS)



Townsend's Big-eared Bat



White-lipped Rein Orchid

Certification: Sustainable Forestry Initiative (SFI)

- One of the SFI Principles is The *Protection of Biological Diversity*
- Addressing SAR within BCTS operating areas is a requirement of SFI Certification
- Contractors working within SFI certification must have Basic Training in “Species at Risk Awareness”



SUSTAINABLE
FORESTRY
INITIATIVE

SFI-00001

What is SAR Awareness?

- ✓ Familiarity with the legislation and designations
- ✓ Knowing which Species at Risk have potential to occur in your area
- ✓ Knowing where to find resources to recognize and document rare species
- ✓ Ability to identify habitat types and features that may be suitable for rare species
- ✓ Knowing how to document observations of SAR



Species At Risk

Strait of Georgia Business Area



Habitat | Riparian



Western Water Shrew, brooksi subspecies

Blue-listed Provincially
(S2 imperiled/S3 special concern, vulnerable; 2018)

FRPA Species - IWMS

Not-assessed at Federal level

- Habitats include well-vegetated riparian areas along streams and lakes of all sizes and flow regimes. Prefer habitats with well-developed litter layer, decomposed CWD, and abundant rocks.
- Feed on terrestrial and aquatic invertebrates, slugs, and snails
- Susceptible to riparian habitat loss



Generalized Locations - *Sorex navigator brooksi* (Western Water Shrew, *brooksi* subspecies)





- Shaded rivers and streams
- Water temperatures below 18 °C
- Feed on aquatic invertebrates and terrestrial insects that fall into the water. Piscivorous
- Low turbidity (clear water) is important
- Susceptible to channel aggradation and dewatering
- Riparian function very important

Coastal Cutthroat Trout (*Oncorhynchus clarkii clarkii*)

Blue-listed Provincially
(S3/S4; 2004)

Not-assessed at Federal
level for *clarkii* subspecies
but *lewisi* subspecies is
listed as Special Concern
(1-SC, 2010) under the
Species At Risk Act



- Small stream specialists
- Able to exploit habitat that other salmonids cannot (often high gradient headwater systems)
- Susceptible to competition from other salmonids where natural separation barriers have been removed
- Impacts from hybridization where rainbow trout have been introduced ("cutbows")
- Often occur in perennial habitat above barriers





Habitat | Wetlands

large dark head
& stocky body



white
throat &
belly

dark
streaky
vest

white patch
sometimes
shows

relatively
short tail



Habitat: boreal forests

Olive-sided Flycatcher

Yellow-listed Provincially
(S4B; 2022)

Federally listed as Special
Concern under
Schedule 1 (1-SC 2023)
of the
Species At Risk Act

- Very distinct “Quick Three Beers” call
- Edge habitat/openings (e.g., around wetlands) in forest important
- Catches insects on the wing, usually stationed in a tall tree/snag on edge – will usually return to same perch after “feeding forays” over the adjacent open area



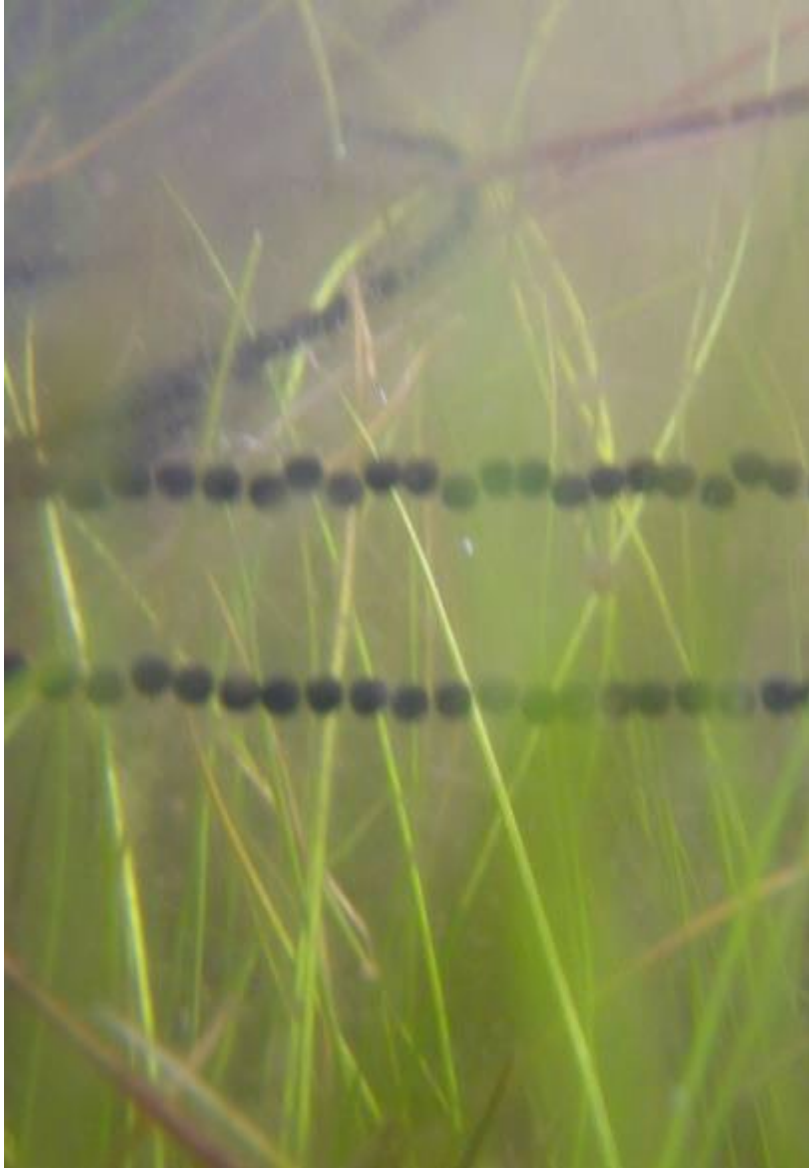


Western Toad

Yellow-listed Provincially
(S4, 2022)

Federally assessed as
species of Special Concern
on Schedule 1 (1-SC, 2018)
of the
Species At Risk Act

- Adults mainly use terrestrial habitat and can be found far from bodies of water
- Prefer damp conditions
- Burrow or take shelter in existing crevasses, including stumps
- Hibernates
- Lay long, ribbon-like egg masses





- Toadlets migrate from breeding sites “en masse” in mid summer – susceptible to significant road mortality during this time
- Adults migrate back to breeding sites in early spring and are also susceptible to road mortality





- Usually found near streams, ponds, or wetlands
- Terrestrial habitat also very important – can be found a long way from wetland areas
- Breeding habitat includes permanent and seasonal water bodies
- Egg masses of 200-1000 eggs

Northern Red-legged Frog

Blue-listed Provincially
(S3, 2022)

FRPA species - IWMS

Federally assessed as
species of Special Concern
(1-SC 2005) of the
Species at Risk Act







Habitat

Mature Forest



- Cavity nesters – Wildlife Trees/Snags with natural cavities (e.g., pileated woodpecker cavities) important habitat features
- Generally found at elevations less than 600m in mixed and coniferous forests, often near riparian zones

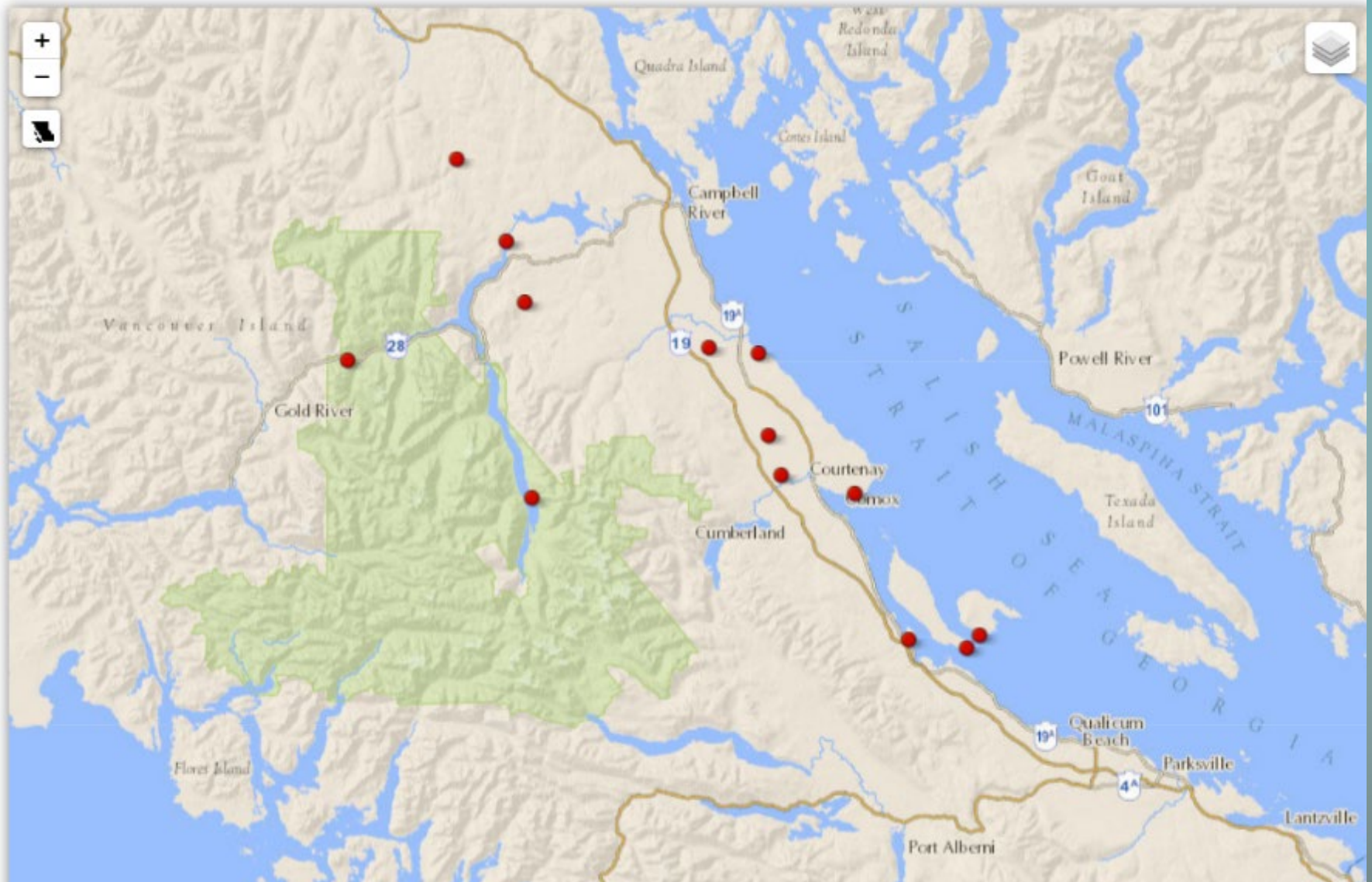
Western Screech-owl

Blue-listed Provincially
(S2S3 2017)

In process of being added to
FRPA and IWMS

Federally listed as
Threatened under
Schedule 1 (1-T 2005)
of the
Species At Risk Act

Generalized Locations - *Megascops kennicottii kennicottii* (Western Screech-owl, Kennicottii Subspecies)







Natural snags and cavities are important, but this species will use nest boxes



Band-tailed Pigeon

Blue-listed Provincially
(S3S4 2022)

Federally listed as Special
Concern (1-SC 2011)
of the
Species At Risk Act

- Commonly seen in coastal forests, often in large flocks
- Attracted to berry bushes and seeds
- Mineral sites are important during nesting season

***HELP TO DELIST ME –
DOCUMENT YOUR
SIGHTINGS***



Northern Goshawk laingi subspecies

Red-listed Provincially
(S2 2010)

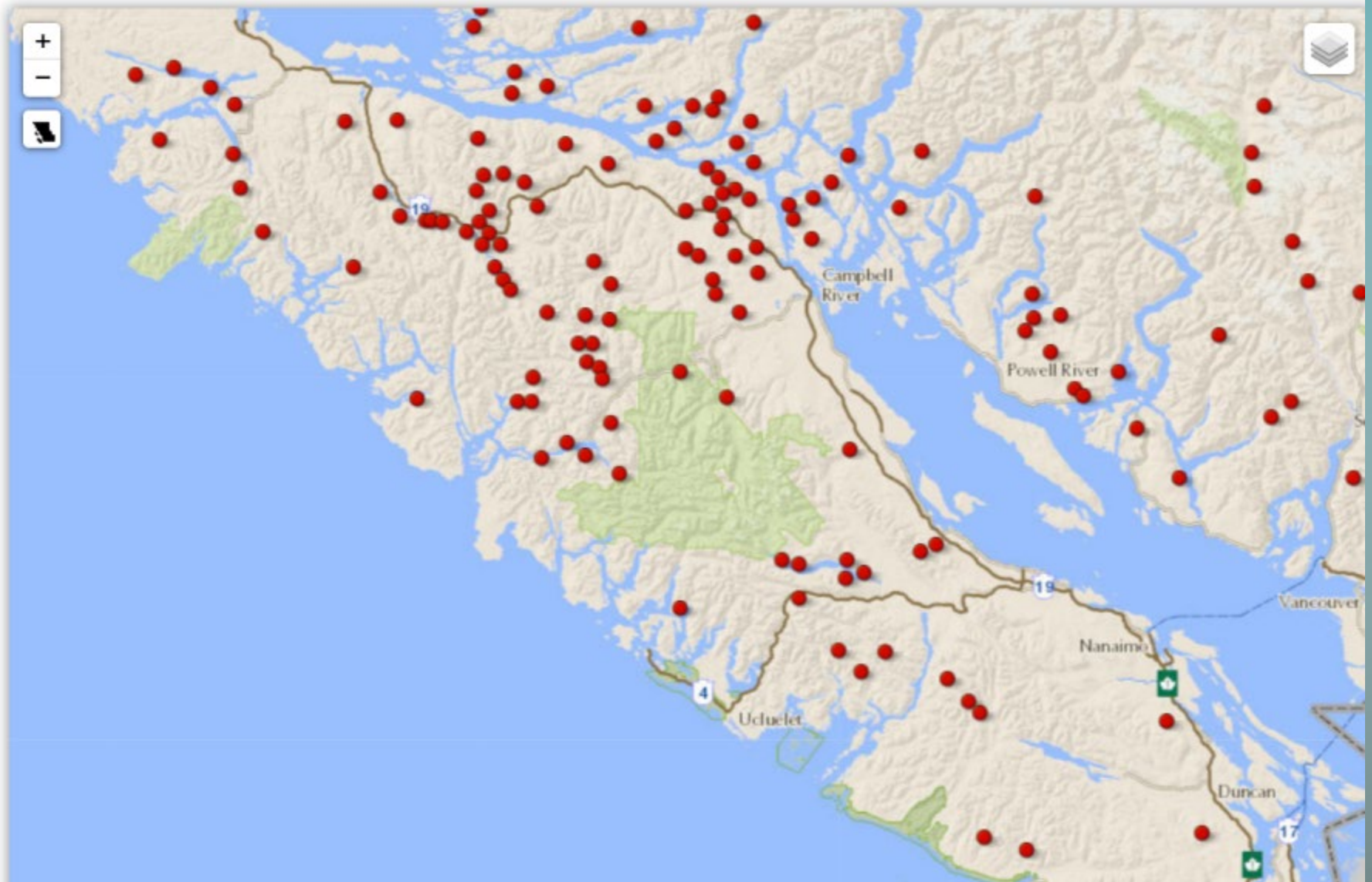
FRPA Species - IWMS

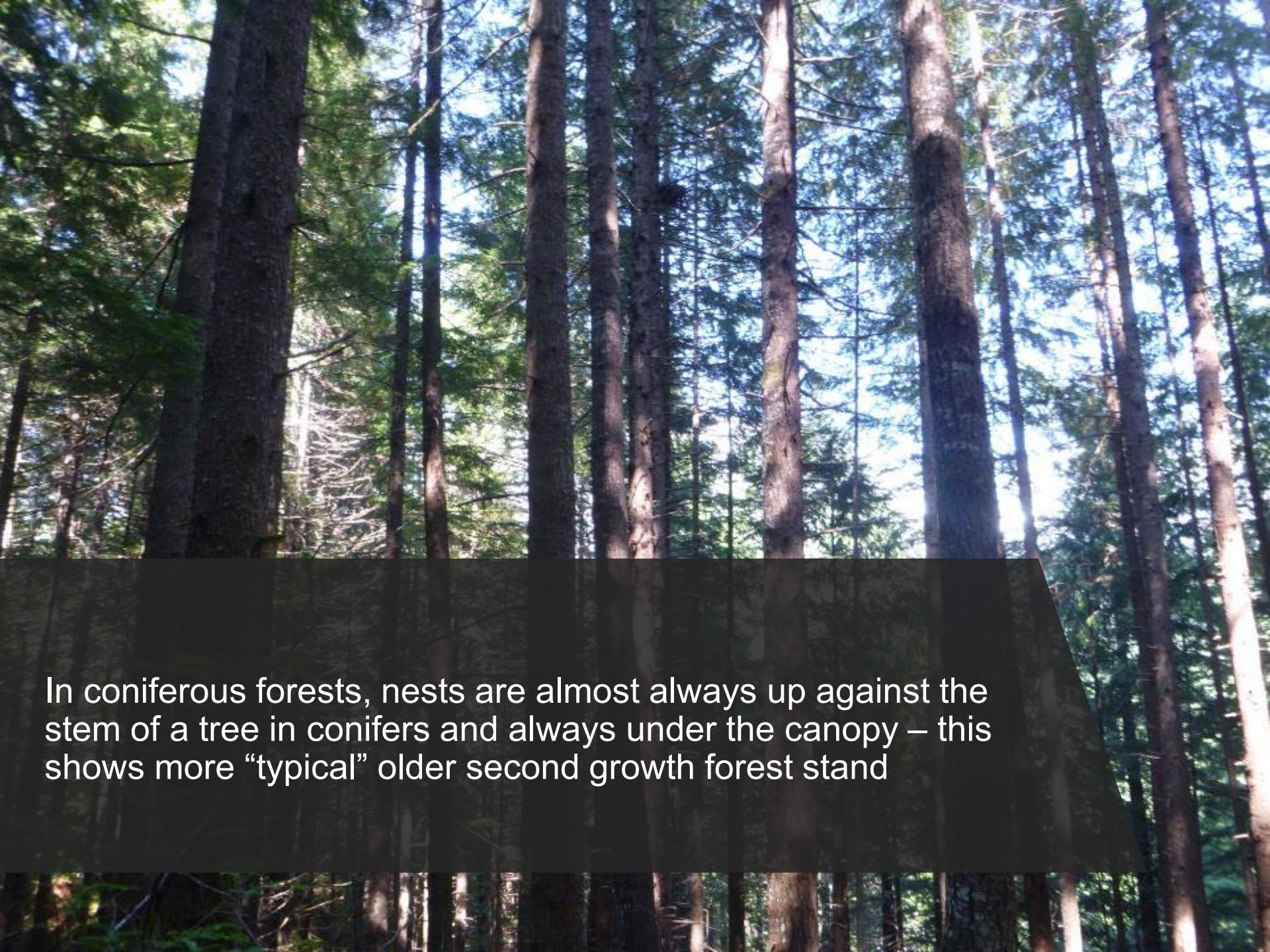
Federally listed as
Threatened under
Schedule 1 (1-T 2003)
of the
Species At Risk Act

- Habitat includes predominately conifer (Douglas-fir leading) forests mature enough to provide flyways and high canopy cover
- Stick nests are approximately 1 m diameter and lined with fresh sprigs of evergreen boughs
- Often territorial and aggressive around nest site



Generalized Locations - *Accipiter gentilis laingi* (Northern Goshawk, Laingi Subspecies)





In coniferous forests, nests are almost always up against the stem of a tree in conifers and always under the canopy – this shows more “typical” older second growth forest stand



In younger forests that lack adequate supporting limbs, goshawks tend to key in on deformed trees to provide an adequate platform

Habitat
sometimes
appears “sub-
optimal”,
compared to
“typical”
Northern
Goshawk habitat
requirements





- Younger , well spaced “hem-bal” stands can offer potential goshawk habitat:
- High canopy closure
- Open understorey
- Coarse Woody Debris for prey species



Old roads can be used as “flyways” – allow for easy access to nesting site and nearby hunting areas

On Vancouver Island, regenerating red alder is sometimes used for nesting



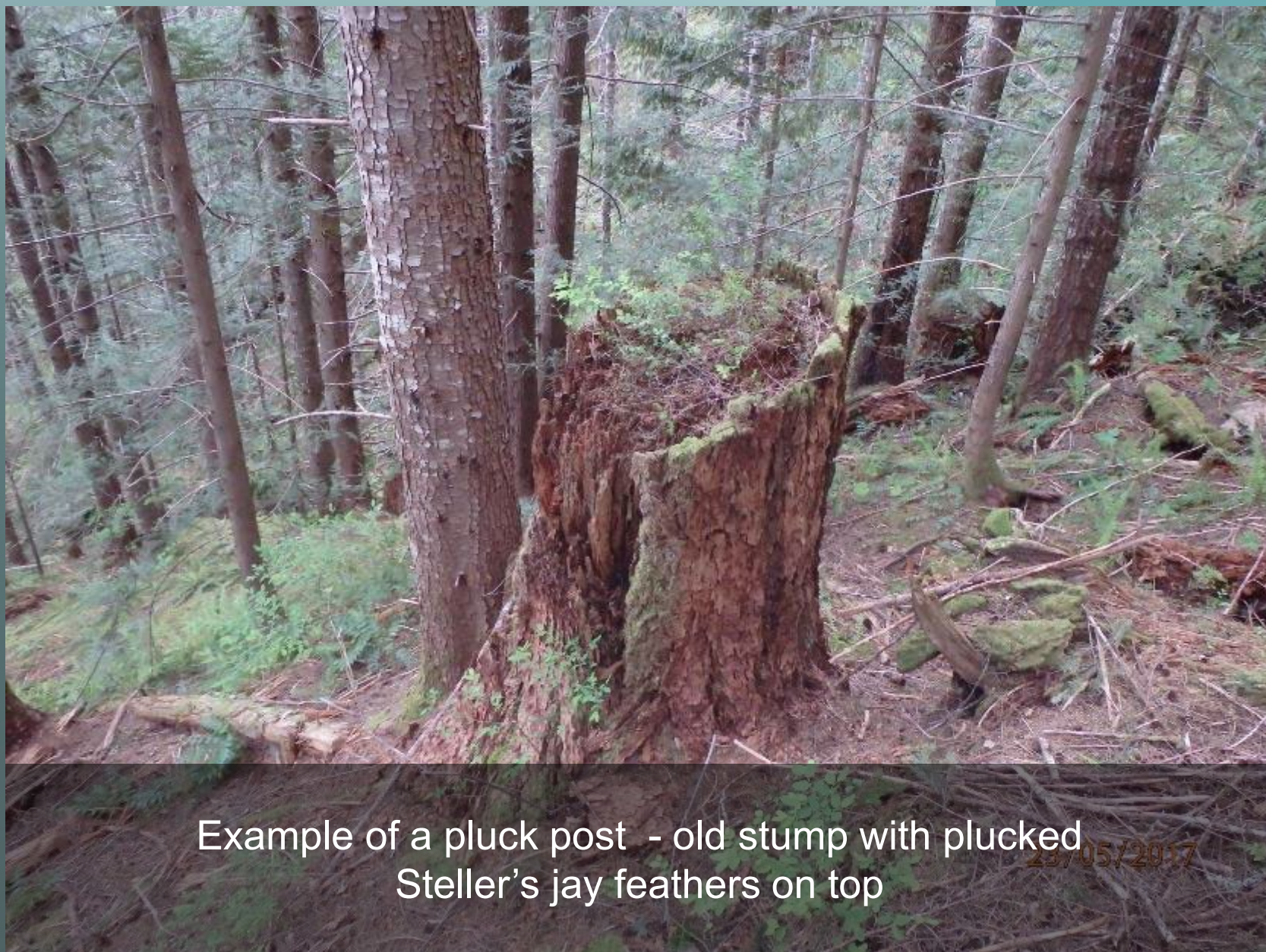
Example of nest in mature
red alder (confirmed active
nest) – located on old road

25/05/2018

Active nest with juveniles
and adult – second growth
amabilis fir







Example of a pluck post - old stump with plucked
Steller's jay feathers on top



Whitewash

- Usually obvious around nest site and “flyways” to and from nest
- Sometimes not obvious right under nest, especially early in the season



Typical prey species
remains found under nests:
grouse (ruffed and sooty),
band tailed pigeon, steller's
jay, northern flicker

Process Summary

Person(s) Responsible:

 BCTS field staff or contractors

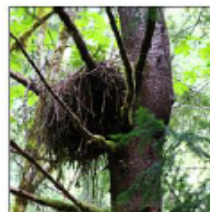
 BCTS planning forester

 QEP (R.P.Bio)

 BCTS planning forester and QEP



goshawk detected



nest detected

- Confirm identity/inhabitants
- Collect relevant data

Halt activity in area

Provide information to BCTS field team

Consult QEP

- Conduct extensive search for active and alternative nests
- Collect habitat data to inform reserve design

Report to and liaise with Regional Gov. Biologists to discuss mitigation and management strategies (WLRs)

Enact mitigation and management strategies

Ensure TSL holders receive relevant information

Submit observation to Wildlife Species Inventory



Great Blue Heron

Blue-listed Provincially
(S3B, S4N 2022)

FRPA Species - IWMS

Federally listed as
Special Concern under
Schedule 1 (1-SC 2010)
of the
Species At Risk Act

- Conspicuous nesting colonies with numerous large stick nests
- Nesting colonies are close to foraging areas (usually estuarine areas and extensive intertidal zones, but also near large lakes, rivers, and wetlands)

➤ C



- Susceptible to disturbance during breeding season, including predation from Bald Eagles
- Can become desensitized to disturbance if located in urban/suburban areas (e.g., Beacon Hill Park, Victoria, Stanley Park, Vancouver)
- Permanent and seasonal no disturbance buffers generally required to protect integrity of nesting colony
- Significant build-up of whitewash, eggs/eggshells etc. under active colonies





Habitat | Old Forest



- Old-growth specialists
- Require large-diameter mossy limbs for nesting (e.g., spruce/hemlock/cedar)
- Marine birds – fly long distances inland to nest
- Very unlikely to find “nest” – but can confirm presence in a stand via pre-dawn surveys

Marbled Murrelet

Blue-listed Provincially (S3 2022)

FRPA Species - IWMS

Federally listed as
Threatened under
Schedule 1 (1-T 2003)
of the
Species At Risk Act







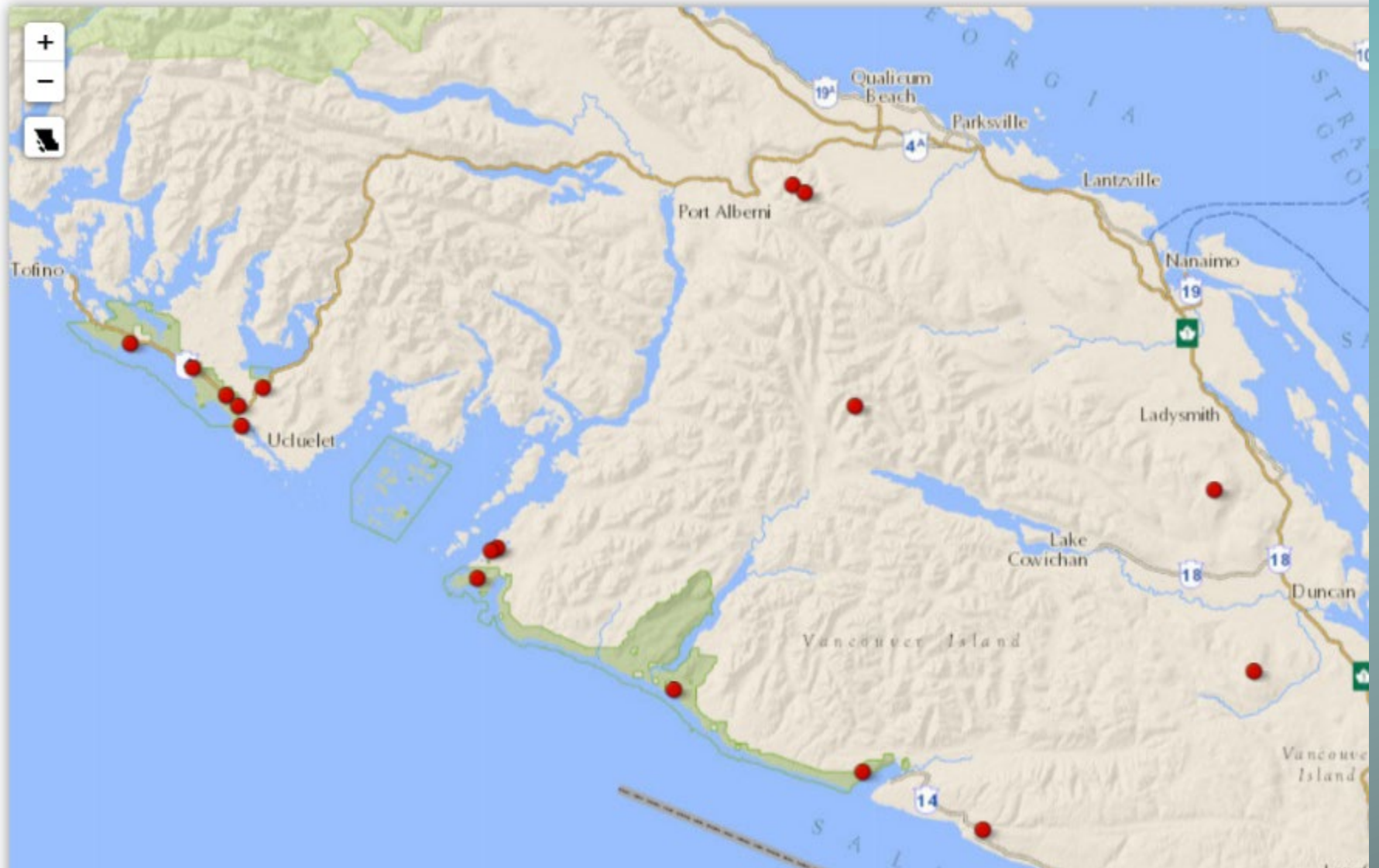
Dromedary Jumping Slug

Red-listed Provincially (S2 in
2015)

Federally listed as
Threatened under
Schedule 1 (1-T 2005)
of the
Species At Risk Act

- Large slug with a pronounced hump
- Susceptible to habitat loss as reliant on old-growth forest
- Species has patchy distribution and low number of known localities

Generalized Locations - *Hemphillia dromedarius* (Dromedary Jumping-slug)





Little Brown Myotis

Provincially Yellow-listed
(S3S4 2022)

Endangered under
Schedule 1 (1-E 2014)
of the
Species At Risk Act

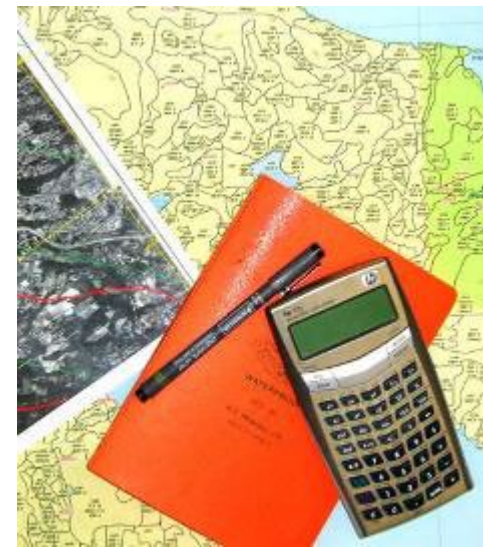
- Overwinter in hibernacula: caves, buildings, wells, and other structures
- Summer roosting/breeding under bridges, buildings or in natural structures like snags
- Bats are a natural source of insect control
- Concern over spread of white-nose syndrome

Species at Risk

EMS and Documentation

Environmental Management Systems (EMS)

- Know what aspects of job can affect SAR
- Know what measures to take to avoid impacting SAR
- Pre-works should cover SAR
- Commitment to implement coarse and fine filter management strategies for SAR



Report Sightings

- General description of the habitat:
leading tree species, age, structure
- Note any special features such as amount of and variety of coarse woody debris and wildlife trees
- Elevation
- Slope gradient (%) and aspect (degrees)
- Location on an air photo, map, GPS or iPad
- Take photos





SFI and EMS Requirements

Tracking of SAR information

- ✓ Occurrences of SAR, Invasive Plants (IP) and Invasive Species (IS) are to be stored and submitted to Planning
- ✓ Tracking is proof of due diligence
- ✓ Documentation of observations demonstrates awareness

Report Sightings- continued

- Email a picture/description to:
Bailey.Williams@gov.bc.ca
- Provincial Incidental Wildlife
Observation Form
<https://a100.gov.bc.ca/pub/wiof/locationForm.do>



De-listed species – success stories



Pileated Woodpecker

Yellow-listed Provincially
(S5 2015)

Included due to recent
changes to Migratory Birds
Convention Act and
Migratory Birds Regulation
based on nest importance

- Conspicuous, large woodpecker with distinctive call
- Habitat includes mature mixed or coniferous forests or in younger forests with numerous large, dead trees
- Nest trees usually > 40 cm DBH with heart rot

➤ C



Nest Cavities



- Nesting trees usually only contain one cavity. If a tree contains more than one nest, these cavities are usually located more than 1 m apart
- Nearby trees can contain “dummy” (unused) cavities
- Internal diameter of nest cavities are generally around 20 cm and can be up to 75 cm deep
- Entrances are usually circular or slightly oval with a vertical diameter of around 12 cm and horizontal diameter around 9 cm
- Entrances have smooth edges and surfaces and may appear dark from the outside because of the connected hollow chamber

Roost Cavities



- Nest cavities can be used for roosting at night, usually during the breeding season
- Trees used for roosting are often hollow and may have numerous entrance holes that may be less than 1 m apart, to help with predator avoidance (numerous potential exits)
- Nest cavities may become strictly roosting cavities as a tree ages
- Roosting cavities are excavated during all seasons
- Roosting cavities have an internal diameter of around 28 cm and average 4.3 m in length
- Entrances to roosting cavities are generally oval and between 7.5 to 10 cm wide and 10 to 12.5 cm high

Feeding Cavities



- Feeding cavities are usually found on larger diameter (> 40 cm DBH) decaying trees and Coarse Woody Debris, or in live trees with heart rot
- Usually an irregular shape, with rough edges and surfaces
- Feeding cavities only extend 5 – 20 cm into a tree and there is no connected chamber and appear lighter in colour

Summary of key differences between Pileated Woodpecker cavity types

Characteristics	Cavity type: nesting	Cavity type: roosting	Cavity type: feeding
Number of holes	1	> 1	> 1
Edge texture	smooth	smooth	rough
Hole shape	round or teardrop	oval	irregular
Hole size	~12 cm high ~9 cm wide	7.5 – 10 cm wide 10 – 12.5 cm high	variable
Cavity depth	0.75 m	4.3 m	0.05 to 0.2 m
Tree type	solid, with heart rot	hollow	dead and decaying

Why is it important to consider Pileated Woodpecker nests?

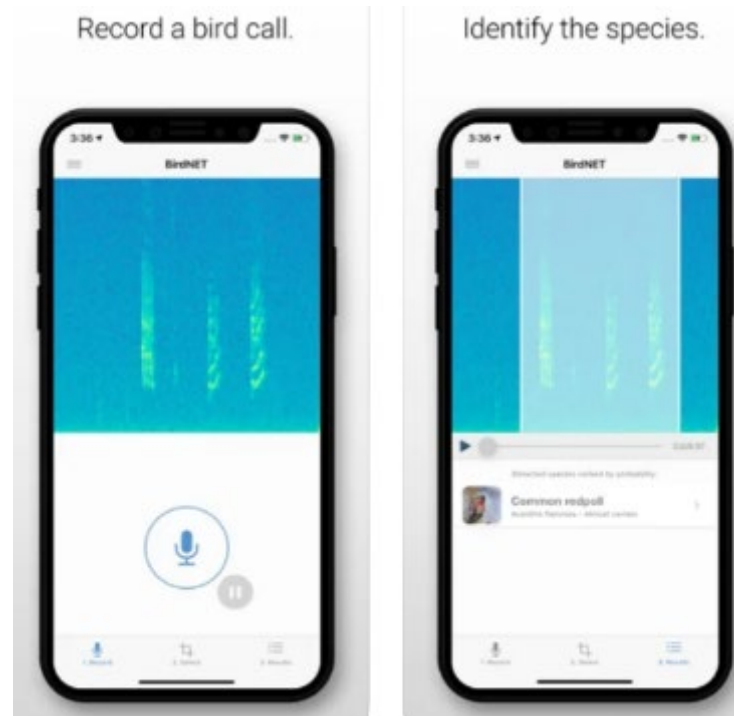
- **Migratory Birds Convention Act, implemented through the Migratory Birds Regulation (MBR) prohibits capturing, taking, injuring, or harassing a migratory bird (unless permitted to do so)**
- **MBR used to require protection of nests year-round. As of 2022, MBR provides protection to active nests and a subset of species nests to be protected year-round**
- **Schedule 1 species nests are protected year-round (including Pileated Woodpecker and Great Blue Heron). Pileated Woodpecker nests are crucial to other secondary cavity nesters and suitable cavities are often limited in the forest landscape (justification for protection)**
- **If destruction of a Schedule 1 nest is unavoidable, then a proponent must wait the designated time prior to removal to confirm the nest is inactive**
- **For Pileated Woodpecker, there is a 3 year wait period. Great Blue Heron wait time is 2 years, but the Wildlife Act also protects heron nests year-round whether active or not. Wait time begins when proponent files a Notification via the Government of Canada Migratory Birds website (Abandoned Nest Registry)**
- **Nest must be monitored during the wait time (onus on the proponent). If the nest remains abandoned, it may be removed if the nest has not been used since the Notification was submitted**

Resources

- BC CDC Species Explorer
- Environment Canada
- Migratory Birds Regulation
- Wildlife Tree Stewardship Atlas (WiTS)
- Community Mapping Network
- Identified Wildlife Management Strategy (IWMS) Species Accounts
- BCTS EMS Best Management Practice Documents

Phone and iPAD/Tablet Apps

- eBird by The Cornell Lab
- eFlora (BC)
- BirdNet by The Cornell Lab
- Merlin by The Cornell Lab
- Google Lens



Questions and Discussion

