

Species at Risk in the Classroom

*A Guidebook for Educators
on the South Coast of British Columbia*





South Coast Conservation Program

*Conserving and Restoring at Risk Species and
Ecosystems on the BC South Coast*

www.sccp.ca

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Species at Risk in the Classroom

A Guidebook for Educators



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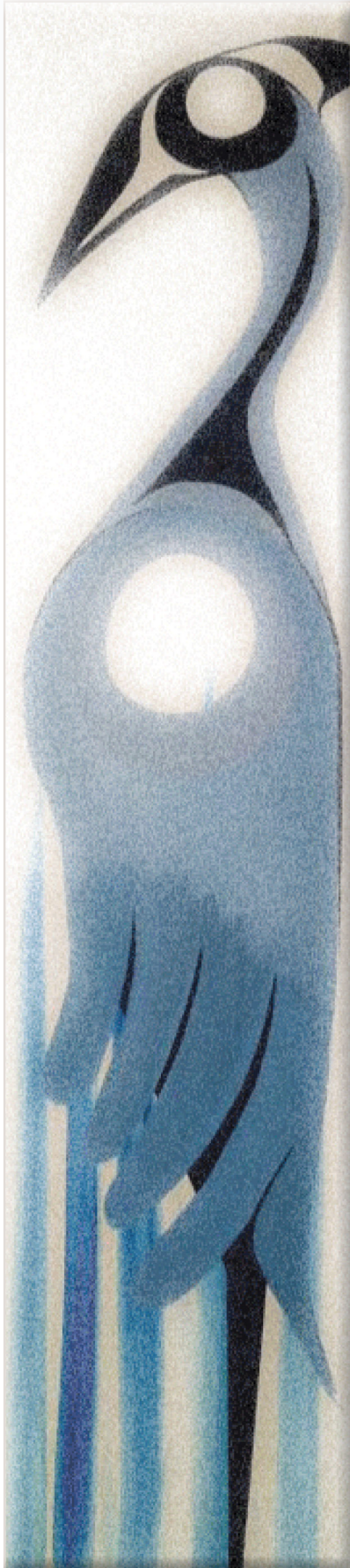
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Modules in the ‘*Species at Risk in the Classroom*’
Series:

Module 1: Amphibians and Reptiles



The South Coast Conservation Program (SCCP)

The SCCP was established in 2005 by government and non-government organizations to fill coordination gaps between various levels of government, conservation groups, land use interests and local communities to conserve species and ecological communities at risk. The SCCP plays a vital role in assisting various stakeholders in navigating the complexities around species at risk. This is accomplished through a range of activities, including: workshops, development of guidelines and stewardship practices, networking through social media and supporting on-the-ground applied science on priority species and their habitats. For further information about the SCCP go to www.sccp.ca



Photo: Lorraine Andrusiak

Introduction

The South Coast of British Columbia is one of the most beautiful and diverse places in Canada. The many wonderful features it supports continue to attract more and more residents every year. As human population increases however, plants and animals are faced with increased competition for shrinking habitats, and increased threats from invasive species and pollution.



Photo: Winnu Flickr

The South Coast Conservation Program (SCCP) is working to raise awareness of and reduce the conflicts between human activity and the growing number of endangered species found in the region.

As part of this the SCCP identified a need for increased education of youth about species at risk and the issues affecting them. There is currently a limited amount of educational resources about local endangered species, particularly resources that are British Columbia based. This guidebook is designed to address that gap by providing curriculum guidance and activities for both formal and informal educators focused on local species and the ecosystems they depend upon.

The South Coast Landscape

The South Coast of British Columbia is home to over 2 million people and growing. It is an ecologically varied landscape supporting freshwater and marine habitats, wetlands, floodplains, alpine tundra, upland forests and grasslands.

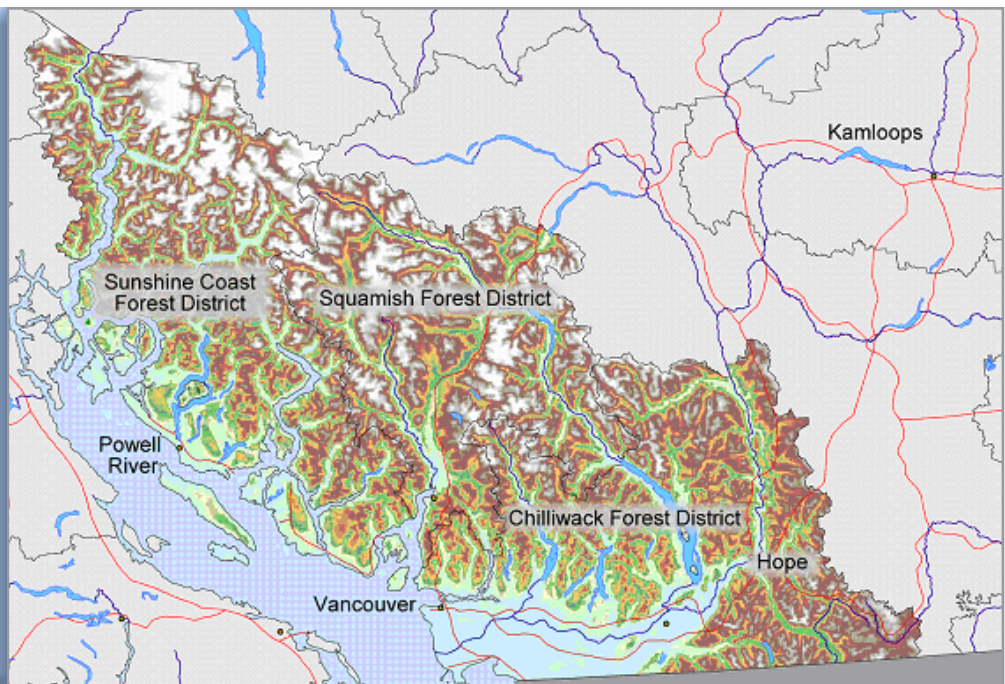


The South Coast area encompasses five Regional Districts:

- Fraser Valley
- Metro Vancouver
- Powell River
- Squamish - Lillooet
- Sunshine Coast

The South Coast supports three large Forest Districts:

- Chilliwack
- Squamish
- Sunshine Coast



What are Species at Risk?

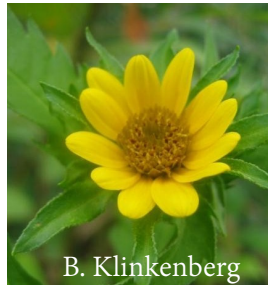
A “species at risk” is any plant or animal native to an area that is in danger of becoming extinct or extirpated (disappearing from its range).



Photos: R. Durand



Winnu Flickr



B. Klinkenberg

Who protects species at risk?

At risk species are recognized by Canada’s Federal government under the Species at Risk Act also known as SARA. An independent regulatory body known as COSEWIC, or the Committee on the Status of Endangered Wildlife in Canada, identifies risks to species and reports their findings to the Federal Government. The species identified by COSEWIC may then be eligible for protection and recovery under SARA.

BC’s Ministry of Environment uses a similar process as the Federal government to determine which species are considered at risk. The Ministry of Environment consults NatureServe, a non-profit organization, with similar goals as COSEWIC. The Ministry of Environment then provides its own detailed species at risk ranking. Species may then also be protected under the BC Wildlife Act and/or BC’s Forest and Range Practices Act which designates species as Identified Wildlife.

BC Species at Risk Rankings *

EXTINCT: A species that no longer exists

EXTIRPATED: A species that no longer exists in its native BC habitat, but may occur elsewhere

ENDANGERED: A species facing imminent extinction or extirpation

THREATENED: A species that is likely to become endangered if limiting factors, such as diminishing population sizes, isolated geographic distribution, and habitat threats are not reversed

RED-LISTED: Any BC species being considered for designation as Extirpated, Endangered or Threatened under the Wildlife Act

BLUE-LISTED: Any BC species not immediately threatened, but of special concern due to their sensitivity to human activities or natural events.

* Provincial rankings do not automatically result in legislative protection.

Why we Need to be Concerned: Biodiversity and You!

British Columbia is Canada's most biologically diverse province. With ecosystems ranging from the marine waters of the Pacific Coast to the snow-capped peaks of the Cascades and Rockies, and the semi-arid grasslands of the Okanagan, to the old-growth temperate rain forests of the Great Bear Rainforest it is easy to see how a variety of different organisms call BC home.

Biodiversity

- Supplies us with food, building materials, energy, and medicines
- Moderates our climate
- Filters our water and air
- Conserves soil and nutrients
- Controls pests
- Provides us with a source of inspiration and beauty

Biodiversity supports a complex interconnected web of life that has many benefits to human populations.



Photos: R. Durand, Nial Williams, Matthias Kabel, Pamela Zevit, Chris Lee, Roger W. Barbour

The South Coast area of British Columbia, which includes Metro Vancouver and the Fraser Valley is one of BC's top five biodiversity hotspots. Increasing demands for limited resources, particularly space, are placing more pressure on species at risk and biodiversity every day.

Stewardship: How can we Help?

There are many simple actions that people of all ages can do everyday to **help protect species at risk**. Here are a few ideas:

- **Reduce, Reuse, Recycle!**
- Use **environmentally friendly cleaning products** around the house to reduce waste, pollution and toxins that can harm wildlife and their habitat.
- **Try** making this simple recipe for use around the home and in the classroom:

Greener Cleaner

(recipe courtesy of Langley Environmental Partners Society)

1 tsp. glycerine soap (or eco-friendly dish soap)

1/2 tsp. essential oil of your choice (try lemon or lavender)

1 cup water

1/2 cup white vinegar

Mix ingredients together in a spray bottle and use for cleaning hard surfaces.

Another great way to help protect species at risk is to **provide wildlife and pollinator-friendly habitat**. Consider turning your backyard into a biodiversity wonderland by planting native plants, providing a fresh water source for birds and other wildlife, and reducing or eliminating pesticide and chemical fertilizer use.

First Nations Perspectives

Species at Risk, and Oral Traditions Building Bridges Between Cultures

Oral traditions have been instrumental in forming and maintaining the foundation of Stó:lō /Coast Salish society. There has always been value in acknowledging the connection that elders have with their children and grandchildren, to experience the sharing of historical understanding through story, uniting past and present. Sharing history through oral society means expressing one's world view, which is a comprehensive, diverse perspective that balances the physical, spiritual and intellectual worlds. World view translates to a living knowledge of resources that reflects thousands of years of observation and connection.

Ancestors of the Coast Salish people were either sky-born "tel swayel" or transformed into their current forms by Xe:xá:ls in the time when the world was 'being set right'. Xe:xá:ls (Transformers – three sons and one daughter of Red headed woodpecker and Black bear) traveled through the land, up and down the river, transforming beings into certain plants, rocks, mountains, animals and geographic places within S'ólh Téméxw long long ago, creating the world as it exists today.

Family connections that date back to the origins of the Coast Salish people still exist. Those connections are alive in the ancestral names, ceremonies and hereditary use and passing of specific sites around the territory.



Some of the Stó:lō origin species include:

Ts'elxwéyeqw *Chilliwack tribe:
Black bear with white spot

Pelho'lhwxw *Pilalt tribe:
Mountain Goat, Rush, Sandhill crane

Máthezwi *Matsqui: Beaver

Some species that have sacred value to all Stó:lō :
Sockeye Salmon, Western Red Cedar tree, giant frog, salamander, blue jay

As eras come and go, so do the indigenous creatures of the lands and waters. Creation teaches us to be humble about how we make our footprints in the world, always being sure to only take what we need and honor all living things.

The creatures featured in these 'Species are Sacred' stories provide us with insight as to which winged, four legged, finned and two legged creatures were alive at the time the story was created. In carrying on with oral traditions, giving the creatures humanistic traits offers respect and helps our human hearts and minds better understand them by relating to their circumstances.

History through story provides opportunity to seize a moment, and offer the passing of relevant wisdom. Not everyone is a story-teller. Those who carry the history are responsible for keeping & maintaining the knowledge and passing it on in order to preserve the historical record.

Some stories and teachings are shared only with specific people and at very specific times in one's life, for example: coming of age teachings for girls would not be shared with boys.

There are still people who believe that oral traditions should remain unwritten, and continue on as oral traditions. This is partially based on the fluidity and evolution that oral traditions allow, where written and static forms of history are to be taken as solid fact and remain that way. The 'Species Are Sacred' pages are designed to share Stó:lō world view, history and artwork as well as provide awareness about local indigenous species at risk in the lower Fraser Basin.

Stories and history adapted by Carrielynn Victor (Xemontalot) Village of Cheam, Pilalt Tribe.

Artwork designed and provided by Carrielynn Victor.

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