



COSEWIC
Committee on the Status of
Endangered Wildlife in Canada

COSEPAC
Comité sur la situation des
espèces en péril au Canada

Canada's rich, but troubled biodiversity: COSEWIC assesses another round of species at risk

A central aspect of the work required to protect Canada's diverse flora and fauna involves assessing the status of species at risk of extinction. The federal *Species at Risk Act* (SARA) mandates the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) with this task. This group of wildlife experts regularly provides the Minister of the Environment with status assessments based on the best available scientific, community, and Aboriginal Traditional Knowledge. During its meeting at the Hôtel-Musée Premières Nations in Wendake, Quebec from April 26 to May 1st, COSEWIC examined the status of 20 species ranging from lichens to whales.

Diverse species, diverse challenges

Even though the species just assessed by COSEWIC represent a small subset of the more than 70,000 described species in Canada, they vary tremendously. For example, the lifespans of species assessed at this meeting ranged from the Ottoe Skipper, a rare prairie butterfly whose life cycle from egg to adult takes only one year, to more than 60 years for the Shortnose Sturgeon, a member of an ancient group of fishes. The skipper, which has not been seen in its southwestern Manitoba range since the 1980s, was assessed as Endangered. Although the number of sturgeon seems to be stable, it has only one known Canadian spawning location in the Saint John River, New Brunswick, and was assessed as Special Concern.

Canada's vast expanse and range of ecological conditions yields remarkable diversity, even within a species. In Canada, the Winter Skate is concentrated in three discrete and widely separated areas in the northwestern Atlantic Ocean. In two of these, this skate has declined by as much as 99% since the early 1980s as a result of historical overfishing, and more recently from unexplained mortality; fish in both areas were assessed as Endangered. By contrast, in the waters off southwest Nova Scotia the population of this fish has remained stable; this population was assessed as Not at Risk.

Typically, the five salmon species living in Canada's Pacific and western Arctic watersheds leave their natal rivers or lakes and migrate to the ocean, before returning later in life to spawn in the same places. This homing behaviour has resulted in the evolution of irreplaceable combinations of behavioural and physical features which reflect adaptations to the unique conditions of their habitats. COSEWIC examined this phenomenon for Chinook and Sockeye Salmon of southern and central British Columbia to determine how to best assess such diversity in future meetings. An understanding of their diversity is essential for species assessment and recovery.

Many people think of the wolf as a single species with a global distribution. Yet there is increasing evidence that a smaller species of wolf, the Eastern Wolf, once ranged over much of eastern North America. After over a decade of extensive genetic study, scientists have a much better understanding of the remaining population of this wolf, which now largely persists in a few protected areas in Ontario and Quebec. COSEWIC assessed the Eastern Wolf as Threatened, due to threats from hybridization with Eastern Coyote and mortality from hunting and trapping outside protected areas.

Better data, better assessments

For many species, COSEWIC status assessments promote expanded efforts to search for more individuals. This is particularly important as species are reassessed every ten years. For example a plant, the Spiked Saxifrage, was previously assessed as Threatened. It is known only from historically unglaciated areas in Alaska and western Yukon. Surveys of this remote habitat over the past few years, however, have increased the number of known occurrences from 6 to 12. Using this new information, the Spiked Saxifrage was reassessed at the lower-risk status of Special Concern.



Spiked Saxifrage © Syd Cannings

The Haida Ermine was assessed in 2001, also prompting an increase in survey attention for this distinct weasel known only from Haida Gwaii. These efforts confirmed its rarity and showed that introduced deer have had a negative impact on its habitat, which is likely the cause of its decline. COSEWIC retained a status of Threatened for this species.

The North Pacific Right Whale was assessed as Endangered in 2004, with the last confirmed record in British Columbia waters in 1951. Survey efforts over the past decade across the Canadian North Pacific Ocean recently resulted in sightings of two new individuals. This is good news, but the population remains extremely small so the status of Endangered was retained.

Similar patterns, similar threats



Yellow-banded Bumble Bee © Leif Richardson

Bee species have been prominent in the news lately, due to population collapses and consequences for pollination of important crops and wild plants. The COSEWIC meeting examined the status of another of Canada's approximately 800 bee species, seven of which have been assessed in the past five years. The Yellow-banded Bumble Bee is widespread across Canada, and was once relatively common. It has now declined in both numbers and distribution in southern Canada, and was therefore assessed as Special Concern.

COSEWIC also examined the Black Swift, which like other aerial insect-eating birds, has been seen in fewer numbers in Canada over the past 40 years. The Black Swift numbers have declined by over 50% since the early 1970s, prompting an assessment of this species as Endangered. Two snakes, the Western and Prairie Rattlesnakes, face a common suite of threats, including road networks and vehicle traffic. They were assessed as Threatened and Special Concern, respectively.

Great benefit, great responsibility

Every day Canadians benefit economically and socially from Canada's diverse and abundant species and ecosystems. The growing list of species at risk in Canada is a worrying indication that many of these benefits are in jeopardy.

Next meeting

COSEWIC's next scheduled wildlife species assessment meeting will be held in Ottawa in November 2015.

About COSEWIC

COSEWIC assesses the status of wild species, subspecies, varieties, or other important units of biological diversity, considered to be at risk in Canada. To do so, COSEWIC uses scientific, Aboriginal traditional and community knowledge provided by experts from governments, academia and other organizations. Summaries of assessments are currently available to the public on the COSEWIC website (www.cosewic.gc.ca) and will be submitted to the Federal Minister of the Environment in fall 2015 for listing consideration under the *Species at Risk Act* (SARA). At this time, the status reports and status appraisal summaries will be publicly available on the Species at Risk Public Registry (www.sararegistry.gc.ca).

At its most recent meeting, COSEWIC assessed 20 wildlife species in various COSEWIC risk categories, including 7 Endangered, 5 Threatened, and 7 Special Concern. In addition to these wildlife species that are in COSEWIC risk categories, COSEWIC assessed 1 wildlife species as Not at Risk.

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Fisheries and Oceans Canada, and the Canadian Museum of Nature), three Non-government Science Members, and the Co-chairs of the Species Specialist and the Aboriginal Traditional Knowledge Subcommittees.

Definition of COSEWIC terms and status categories:

Wildlife Species: A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.

Extinct (X): A wildlife species that no longer exists.

Extirpated (XT): A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.

Endangered (E): A wildlife species facing imminent extirpation or extinction.

Threatened (T): A wildlife species that is likely to become Endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

Special Concern (SC): A wildlife species that may become Threatened or Endangered because of a combination of biological characteristics and identified threats.

Not at Risk (NAR): A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.

Data Deficient (DD): A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

Species at Risk: A wildlife species that has been assessed as Extirpated, Endangered, Threatened or Special Concern.

<p>Dr. Eric B. (Rick) Taylor Chair, COSEWIC Department of Zoology University of British Columbia Telephone: (604) 822-9152 etaylor@zoology.ubc.ca</p>	<p>For general inquiries: COSEWIC Secretariat Canadian Wildlife Service Environment Canada 351 St. Joseph Blvd, 16th floor Gatineau QC K1A 0H3 Telephone: (819) 938-4125 Fax: (819) 938-3984 cosewic/cosepac@ec.gc.ca www.cosewic.gc.ca</p>
<p>For inquiries on terrestrial mammals: (Eastern Wolf, Ermine <i>haidarum</i> subspecies)</p> <p>Dr. Graham Forbes University of New Brunswick Telephone: (506) 455-5923 Fax: (506) 453-3538 forbes@unb.ca</p>	<p>For inquiries on marine mammals: (North Pacific Right Whale)</p> <p>Dr. David S. Lee Telephone: (514) 754-8524 david.lee@mail.mcgill.ca</p>
<p>For inquiries on birds: (Black Swift)</p> <p>Jon McCracken Bird Studies Canada Telephone: (519) 586-3531 (ext. 115) Fax: (519) 586-3532 jmccracken@bsc-eoc.org</p>	<p>For inquiries on amphibians and reptiles: (Eastern Yellow-bellied Racer, Northern Red-legged Frog, Prairie Rattlesnake, Western Rattlesnake, Western Yellow-bellied Racer)</p> <p>Dr. Kristiina Ovaska Biolinx Environmental Research Ltd. Telephone: (250) 727-9708 kovaska@shaw.ca</p>
<p>For inquiries on freshwater fishes: (Black Redhorse, Shortnose Sturgeon, Warmouth)</p> <p>Dr. John R. Post University of Calgary Telephone: (403) 220-6937 Fax: (403) 289-9311 jrpost@ucalgary.ca</p>	<p>For inquiries on marine fishes: (Winter Skate)</p> <p>Alan F. Sinclair Telephone: (250) 714-5690 alanfsinclair@me.com</p>

<p>For inquiries on arthropods (insects and related taxa): (Ottoe Skipper, Verna's Flower Moth, Vivid Dancer, Yellow-banded Bumble Bee)</p> <p>Jennifer M. Heron BC Ministry of Environment Telephone: (604) 828-2542 jenniferheron@gmail.com</p>	<p>For inquiries on molluscs: (Proud Globelet)</p> <p>Dr. Dwayne Lepitzki Telephone: (403) 762-0864 lepitzki@telusplanet.net</p>
<p>For inquiries on plants: (Spiked Saxifrage)</p> <p>Bruce Bennett Yukon Conservation Data Centre Telephone: (867) 667-5331 Fax: (867) 393-6263 brbennett@klondiker.com</p>	<p>For inquiries on mosses and lichens: (Banded Cord-moss, Black-foam Lichen)</p> <p>Dr. David H. S. Richardson Saint Mary's University Telephone: (902) 496-8174 Fax: (902) 420-5261 david.richardson@smu.ca</p>
<p>For inquiries on Aboriginal Traditional Knowledge:</p> <p>Dr. Donna Hurlburt Telephone: (902) 532-1341 donna.hurlburt@ns.sympatico.ca</p>	

Further details on all wildlife species assessed can be found on the COSEWIC website at:
www.cosewic.gc.ca