

2019

BC Conservation Status Rank Review and Changes

Animals Summary

A major focus of the year was reviewing the Conservation Status Ranks for many freshwater fish. For several fish this was the first time that the rank calculator had been used for assessment.

The [General Status of Species in Canada](#) program provided many new taxonomic groups that were reviewed and incorporated into the CDC data.

The conservation status rank of 11 birds was reviewed and did not result in a rank change. There were two “accidental” birds added to BC avifauna - Eastern Bluebird and Guadeloupe Murrelet.

There were assorted taxonomic updates throughout different groups, including confirming non-native, extirpated and extinct designations.

Fish

Eighty-six of BC’s freshwater fish species and population units were assessed this year, resulting in conservation status rank changes for twenty-seven.

There was new information for several species since the last assessment, including range, number of occurrences, population numbers and threats. In many cases, this caused a slight rank change, which did not change the red/blue/yellow listing; however that was not the case for all. Green Sturgeon and Speckled Dace moved from the red list to the blue list, Chiselmouth, Northern Redbelly Dace and Pearl Dace moved from the blue list to the yellow list and Longfin Smelt moved from the yellow list to the blue list.

For many species, this was the first time the rank calculator had been used for assessment. As a result, there were two cases where species moved from the blue to the red list (final rank of S2) - Broad Whitefish and Rocky Mountain Sculpin.

Several new populations were added to BC’s list of freshwater fish this year. These populations align with COSEWIC designatable units (DUs), which are based on geographic distribution, life history, timing of spawning and genetic research (COSEWIC 2017d):

- Lake Chub (*Couesius plumbeus*): Liard Hot Springs and Atlin Warm Springs Populations
- Sockeye Salmon (*Oncorhynchus nerka*): 24 Fraser River Drainage populations (these DUs will be assessed provincially in 2020)

- Steelhead Trout (*Oncorhynchus mykiss*): Chilcotin and Thompson River populations
- Pygmy Whitefish (*Prosopium coulterii*): Pacific and Southwestern Yukon Beringian Populations

Invertebrates

Haplocampa wagnelli, a cave-dwelling, two-pronged bristletail (Diplura), was recently discovered in two limestone caves on Vancouver Island. These are the only known locations, giving BC a new endemic species (Sendra and Wagnell 2019).

<https://www.cbc.ca/news/technology/insect-ice-age-1.5013875> from

Costate Vallonia, *Vallonia costata*: this species has been added to the list of terrestrial molluscs for the province. It is distributed within Western Europe, eastern Canada and the USA. It was recorded for the first time in Kamloops and is suspected to be introduced (Nicolai and Forsyth 2019). <https://bit.ly/2JEXCgz>

Taxonomic Lists added to BC

The federal General Status program steadily provides species lists for many taxonomic groups within BC. These have provisional conservation status ranks that were provided by people working in the field. The CDC zoologists are reviewing these ranks as they are able and exporting them to BC Species and Ecosystems Explorer. For many of these groups or species there is little known and have been assessed "SU" (unknown) for now. On the ground inventory as well as thorough review of collections and the literature is needed to get a better handle on factors used to determine a conservation status rank including range extent, habitats, number of occurrences and threats.

We feel that it is important to get the lists out even without ranks as these updated taxonomic lists can be used as a reference for further inventory, biodiversity studies and a motivation to find out more! It is also important to include the exotic species.

The following are groups that we were able to add in this release and there are always more to come!

Marine Invertebrates:

- **Sea Cucumbers:** 50 species reviewed and ranked
- **Sea Urchins:** 19 species reviewed and ranked
- **Corals:** 77 species reviewed and ranked
- **Decapods:** 203 species added as SNR (not ranked); 20 added as SNA (exotic)
- **Sponges:** 152 species added as SNR (not ranked); 2 added as SNA (exotic).

Earthworms

There are 22 species of earthworms in BC of which only four are native.

Flies (Order Diptera)

Of the nearly 1000 species we received there were two groups that were reviewed and are being exported at this time.

- **Robber Flies (Family Asilidae):** 109 species reviewed and ranked
- **Stiletto Flies (Family Therevidae):** 31 species reviewed and ranked

Class Arachnida

Within this class we had several groups added or updated.

- **Spiders (Order Araneae):** There were 87 species added to the list that we had in BC Species and Ecosystems Explorer. These are the result of new discoveries, re-identifications and taxonomic changes.
- **Ticks (Subclass Acari):** 24 species were reviewed and ranked. Three are introduced.
- **Pseudoscorpions (Order Pseudoscorpiones):** 8 species were reviewed and ranked; only one had enough information to have a rank other than SU
- **Harvestmen (Order Opiliones):** 17 species were reviewed and ranked, 4 of which are introduced.
- **Wind Scorpions (Order Solfugae):** 2 species were reviewed and ranked

References

COSEWIC. 2017d. COSEWIC assessment and status report on the Sockeye Salmon *Oncorhynchus nerka*, 24 Designatable Units in the Fraser River Drainage Basin, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xli + 179 pp.

Nicolai A. and Forsyth, R.G. 2019. First record of *Vallonia costata* (O. F. Müller, 1774) (Gastropoda, Eupulmonata, Valloniidae) from British Columbia, Canada, confirmed by partial-COI gene sequence. Check List 15 (2): 287–293.

Sendra A and C. Wagnell. 2019. The cave-dwelling dipluran (Diplura, Campodeidae) on the edge of the last glacial maximum in Vancouver Island caves, North America (Canada). Subterranean Biology 29: 59-77. (<https://doi.org/10.3897/subtbiol.29.31467>)