



B.C. Conservation Data Centre – Data Update 2017

Taxonomy, Classification and Rank Updates

As part of standard business, the BC Conservation Data Centre annually releases updates to document changes to Conservation Status Ranks of selected species and ecological communities, additions of new species and ecological communities in B.C., and changes in species taxonomy and ecological community classification.

The 2017 CDC changes to taxonomy and Provincial Conservation Status Ranks for species, and changes in classification and Provincial Conservation Status Ranks for ecological communities are now available through [BC Species and Ecosystems Explorer](#) (BCSEE). BCSEE is the provincial standard (Resource Inventory Standards Committee - RISC) for scientific names, English names and species codes (RISC codes) for animals (vertebrates and invertebrates).

Details of the 2017 taxonomic, classification, and rank changes can be found on the Conservation Data Centre [Recent Data Changes](#) web page.

Archive files of previous year's taxonomic, classification, and rank updates are available for download from our [Archive of Changes](#) web page.

The following is a brief summary of this year's changes:

Ecological Community Data

- One ecological community was assigned a new rank that more accurately reflects the uncertainty in the available data.
- One ecological community English name was changed to be consistent with the scientific name.
- Two hundred and five new element occurrences were published for 10 ecological communities.
- Twenty three Conservation Status reports were updated with rank and threat comments.

Plant Data

- There were 37 vascular plants added to the BC Flora, including 19 Exotic species. Some additions were the result of new collections, while others were non-native species that have become established (including two varieties of the cultivated garden strawberry) or previously unrecognized taxa noted for BC in the Flora of North America. Three new mosses were added to the BC Flora.
- There were 13 vascular plant taxa (and two liverworts) removed from the BC Flora. Most of these have been reported for BC, but have not been verified with a specimen.
- A total of 126 scientific names were changed. Changes included taxonomic splits and lumps, genus transfers (e.g. *Dodecatheon* to *Primula*), and relocations of infraspecific ranks (i.e. from variety to subspecies or subspecies to variety).
- Provincial conservation status ranks for 80 vascular and 4 non-vascular taxa were reviewed and adjusted.

Animal Data

A highlight this year is the inclusion of several new invertebrate groups!

This is a result of the federal General Status program which has a mandate to identify and assess the state of all of the species that occur in Canada. In all cases we have updated the provincial list. For select species and groups where data were sufficient we also have assigned Provincial Conservation Status Ranks (S-Ranks). The level of confidence in the assigned Conservation Status Rank for each of the groups varies widely and the CDC has provided comments within the downloadable pdf document with regards to this. These lists and ranks will provide the basis for further refinement and research. For taxonomic references please download the full Recent Data Changes documents online.

Most of the amphibians and some populations or subspecies of birds and mammals were reviewed this year.

Invertebrates:

Ants, Bees and Wasps (Hymenoptera)

- There are 104 known ant species in BC, seven of those are introduced. For most of these there is either enough data to know that they are fairly widespread in a variety of habitats and therefore not at risk, or there is so little known that they have been assigned an "SU", or an unknown rank.
- There were a total of 429 bees added to the database. The ranks that are associated with most of the bees were determined via the General Status program and have not been fully reviewed by the CDC. The bees in the genera *Bombus* have had a thorough internal review and as such occur on the red, blue and yellow lists where appropriate. There are two species on the red list. Six species are on the blue list. There is one introduced species of *Bombus*.
- Sixty-six species of wasps from the Family Vespidae were added. These are the paper, mason, pollen and potter wasps, as well as the hornets. The General Status ranks that have been assigned have not been reviewed by the CDC. Most are likely less at risk than indicated, however their prevalence relative to each other appear accurate.

Beetles (Coleoptera)

- We had previously listed just the tiger beetles, being relatively a well-known and a manageable group at 17 species. We now have all of the known B.C. beetles—a whopping 3887 species! The ranks that are associated with the beetles were determined via the General Status program and have not been fully reviewed by the CDC. Spot checking indicated that they should be correct, or at least accurate relative to each other. The tiger beetles which include the genera *Cicindela*, *Omus* and *Coccinella*, have had a thorough review and as such occur on the red and blue list where appropriate.

Butterflies (Lepidoptera)

- **Silver -spotted Skipper, *Epargyreus clarus californicus*:** this subspecies had not been recorded in its range on the B.C. coast for at least 50 years; however, it was recently identified from a photograph taken on Cortes Island in 2014 (C. Guppy, pers. comm. 2017). The rank changed from SH to S1. This will be a priority for inventory to determine its extent.

Caddisflies (Trichoptera)

- The ranks as given by the General Status Program reflect our state of knowledge about this group. The ones that have been well collected or are found across a broad range are S4S5 and if there have been few collections and no information about the habitat, the rank is unknown (SU), with a few exceptions.

Lacewings (Neuroptera)

- We have 79 known species of Lacewings in B.C. There are five that are introduced (SNA). Most have not been ranked (SNR) at this point with a few exceptions where the data made it clear that they were widespread and common.

Mayflies (Ephemeroptera)

- There are 98 known species of mayfly in B.C. The majority of ranks are unknown. SNR (not ranked) has been given to species where there appears to be adequate data but not yet the time to provide a rank.

Stoneflies (Plecoptera)

- Just under half of the province's 146 species of stoneflies had enough data to be able to assess them as not at risk. The rest are either unknown or they have not been ranked yet.

True Flies (a selection of Diptera)

- **Bee Flies (Bombyliidae):** There are 70 species of Bee Flies known in B.C. Many are pollinators and are often bee mimics. Many of the ranks reflect the lack of survey effort for this group.
- **Blackflies (Simuliidae):** The Blackflies are important economically and have had a number of researchers working on them over the years. This provides a greater degree of confidence in the S ranks. Of the 81 species in B.C., 58 have been ranked as secure or likely secure and 13 are unknown. The remainder have a range rank or are known to only occur in habitats that are at risk.
- **Mosquitos (Culicidae):** There are 46 species of mosquitoes in B.C. and, like the Blackflies, are relatively well known compared to other insect groups. There is one introduced species, *Aedes togoi* from Japan.
- **Horse Flies and Deer Flies (Tabanidae):** These are another of the "biting fly" groups. There are 64 species found in B.C.

Vertebrates:

Amphibians

- Twenty amphibians were reviewed this year resulting in rank changes for 10 species. Most rank changes were the result of more information becoming available via COSEWIC reports and expert threats assessments.

Birds

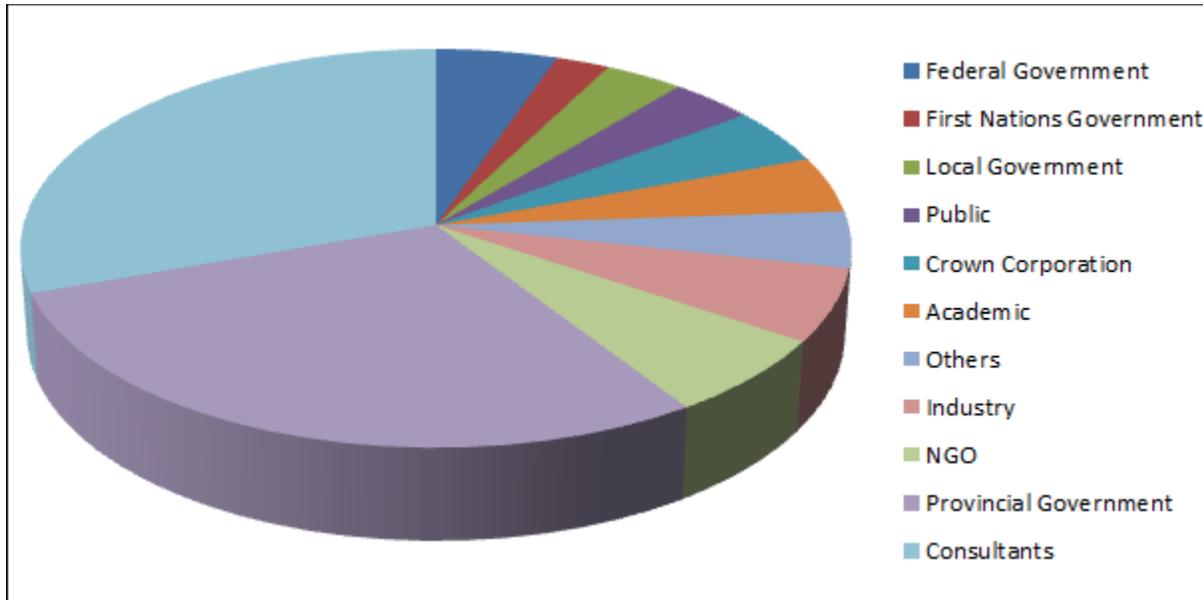
- There were changes to four subspecies of birds: Northern Goshawk *atricapillus* ssp., Western Screech-owl, *macfarlanei* and *kennicotti* subspecies, Horned Lark, *merrilli* ssp.

Mammals

- **Caribou:** The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) did a re-evaluation of the designated units of Caribou in Canada. Up to now we have considered there to be three ecotypes. We are now assessing four populations: Central Mountain, Boreal, Northern Mountain and Southern Mountain.
- **Stone's Sheep** was an S4 and is now S3S4 (blue listed) due to a thorough review of threats to the species.

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Did you know? The BC Conservation Data Centre responds to over 800 custom data requests annually? Questions from clients include how to use our online tools, requests for secure data and information and our methodology for ranking and mapping species and ecosystems. This year's breakdown of clients included:



Please make use of our web tools to access information on species and ecosystems at risk!

[BC Species and Ecosystems Explorer](#) - Through this application you can generate lists of provincial species and ecological communities; conduct searches based on a number of criteria options, including conservation or legal status, and spatial distribution; print your results, or download them to Excel; and access related reports and documents.

[CDC iMap Theme](#) - Use our customised iMap Theme to view mapped known locations (occurrences) of species and ecosystems at risk and print occurrence records.

[DataBC](#) - Download shapefiles of CDC mapped occurrences through the Data Distribution Service.

[Species and Ecosystems Information Portal](#) - This site guides you to search for or submit information relating to B.C.'s **animals, plants and ecosystems**.

For more information on the above tools, and more, please visit our [Explore Data](#) web page.

If you have any questions, please don't hesitate to contact us. cdcdata@gov.bc.ca

