2023

B.C. Conservation Status Rank Review and Changes

Vascular Plants

Additions: 17 vascular plants were added to the B.C. flora. Only 6 were native species.

Of those native species, two are overlooked hybrids, Kostiuk's hybrid calypso (*Calypso bulbosa* x *kostiukiae*), a hybrid between *C. bulbosa* var. *americana* x *C. bulbosa* var. *occidentalis,* and spear-leaved poplar (*Populus x hastata*), a hybrid between *P. trichocarpa x P. balsamifera*. There was also a new native alpine species identified in the Elk Valley high elevation grasslands study in the Kootenay-Boundary region by Ken Marr (mountain catchfly).

Among the Exotics now included in the B.C. flora are beach wormwood (*Artemisia stelleriana)*, now known from Island View Beach and Saanichton spit, and European plum (*Prunus domestica)*, now established in Mount Doug Park and the Gorge waterway in greater Victoria.

Excluded: Ozette coralroot (*Corallorhiza maculata* var. *ozettensis*) was removed because the characters defining this entity are not consistent, and field mint (Mentha arvensis) was removed because there are no specimens identified as this species in B.C. in the herbaria.

Taxonomic/Name Changes: Twenty-nine changes in taxonomic classification, nomenclature or alternate spellings were made this year. Most of these were changes made to be consistent with Flora of North America or other reliable sources such as the Flora of Oregon, in our region. In addition, following molecular work in the sedge family (Cyperaceae), 4 generic name changes were made from *Kobresia* to *Carex* (3 changes) and *Lipocarpha micrantha* to *Cyperus subsquarrosus* (Global Carex Group 2015; Bauters et al. 2014).

Ten English name changes were also made this year.

Status Assessment: Six taxa had changes to their provincial conservation status ranks this year. These changes were due to new interpretation of the same information. They were changed to SU (Unknown) because of uncertainty regarding provenance, taxonomic issues and determining hybrid status. For example, since plants named balsam poplar (*P. balsamifera*) in B.C. are mainly an admixture of this species and black cottonwood (*Populus trichocarpa*) with few locations at least 80% balsam poplar, it is difficult to assign a rank. Much more sampling is needed to ascertain if there are pure trees but it is likely present, especially if you consider it balsam poplar if it is 80% admixture.

Bryophytes

Additions: 13 mosses and 5 liverworts were added to the B.C. flora as result of research done by contractors supporting the General Status of Wildlife in Canada 5-year reporting. From the work they did at UBC herbarium reviewing specimens and doing literature reviews and data mining, overlooked liverwort species like *Nardia insecta* (only known from Garibaldi Provincial Park) and *Hubertus hawaiiensis* (abundant along the North Coast in B.C.) and mosses such as *Pohlia melanodon* (known only from Yoho National Park) were added. In addition, inventory work on Vancouver Island has resulted in the discovery of a new liverwort, *Riccia huebeneriana* (R. Mindell, pers. comm.), and inventory in the Elk Valley on high elevation grasslands, has resulted in a new subtaxon for B.C.: *Stegonia latifolia* var. *pilifera*

(E. Cameron, T. McIntosh, S. Joya, pers. comms. 2022). Currently we only list *S. latifolia* var. *latifolia,* known from low to high elevations whereas var. *pilifera* is only known from moderate to high elevations.

Excluded: 14 mosses were removed from the B.C. flora because of lack of specimens or doubtful specimens at UBC herbarium, taxonomic work, and a new draft list of B.C. mosses (T. McIntosh, S. Joya, K. Golinski, pers. comms. 2023).

Taxonomic/Name Changes: 63 taxonomic and name changes were made to bryophytes (62 mosses and one liverwort) this year. Many were generic reassignments following Hodgetts et al. 2020 checklist, Jiménez et al. 2021 (*Didymodon* and allied genera (Pottiaceae)), Fedosov et al. 2023 (*Dicranella s.l.* and *Aongstroemia s.l.*) and others.

Status Assessment: Conservation Status Rank changes were made to 59 moss species, 41 liverworts, and 1 hornwort based on data compiled by contractors supporting the General Status of Wildlife in Canada 5-year reporting. The CDC was only able to do a partial review of the deliverables which focussed on species with increased knowledge based on inventory, reliable iNaturalist posts, and herbarium work. As a result, many species' ranks were downlisted, and some have become unrankable due to difficulties in identification and other challenges exposed by specimen review.

Fungi

Very little was done on this group this year, but the General Status contracts will support reviews in the coming year(s). Two macrofungal name changes were made (to *Fomitopsis mounceae and Sparassis radicata*) following the literature and advice from Jim Ginns (P. Kroeger, J. Ginns, pers. comms. 2023).

Lichens

Seven new lichens were added to the B.C. flora based on data gathered in support of the General Status of Wildlife in Canada reporting including a microlichen, *Pertusaria chiodectonoides,* from the southern Gulf Islands. Nine species were removed, including *Aspicilia fimbriata*, which is reported but unconfirmed. Other species were misreported for B.C., or in one case, the name has been misapplied to B.C. material. In addition, six taxonomic or nomenclatural changes as per recent primary literature were made to lichens this year including an expanded circumscription of *Gabura* (Magain et al. 2020) resulting in changes to two *Leptogium* species in B.C. (T. Goward, C. Bjork pers. comms. 2022/2023). Conservation Status Rank changes were also made to 26 lichen species.

Slime Molds

In 2020, the General Status of Wildlife in Canada supported the creation of a list and ranks for the slime molds of Canada. A reassessment was also done which will be incorporated into the upcoming 2025 reporting by Suzanne Béland (Béland 2022). Many years ago, Kent Brothers created a B.C. list which has been used extensively by those looking to document the slime molds in B.C. It is available on one of E-flora's species group pages (Brothers [2023]). The B.C. portion of this work, combined by the work of local experts (Tyson Ehlers, Pam Janszen, and Ryan Durand, pers. comms. 2023) resulted in the naming of 195 species. An additional 37+ species are yet to be added based on the field work in B.C. by the local experts. Of the 196 reported currently, 109 of these species have been ranked as SU (unrankable) as there are significant data gaps standing in the way of assigning a reasonable rank for these. 55 of these species have been ranked as apparently secure or secure and common in B.C. (Yellow-listed). Nine

species have been ranked as vulnerable (Blue-listed). Various sources of data have been used to document the presence in B.C. of the slime molds listed in the excel file, based on specimens from several herbaria: UBC (University of British Columbia University, Beaty Biodiversity Museum herbarium), DAVFP (The Forest Pathology Herbarium at the Pacific Forestry Centre, Victoria, B.C.), DAO (Dept. of Agriculture, Ottawa, ON), BPI (U.S. National Fungus Collections, USDA-ARS, Maryland, USA), UARK (University of Arkansas, Fayetteville, USA), FLAS (Florida Natural History Museum Gainesville, Fl.), CMM (Bradford Art Galleries and Museums, Bradford, U.K.), F (Field Museum of Natural History, Chicago, Ill.) and LE (Komarov Botanical Institute of RAS, St. Petersburg, Russia). Some species are well-represented on iNaturalist (espec. by B.C. experts) and others have been captured on Mushroom Observer. Where the species is documented by the source, "reported by Pam or P. Janszen", for instance, there is often a specimen and an iNaturalist post.

References listed below represent all the sources used to add or remove vascular plants, bryophytes, macrofungi, lichens, and slime molds in 2023, and apply nomenclatural and taxonomic changes. The references appear in this summary and in the excel files with detailed information about the changes.

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