

2015 Animals

Conservation Status Rank Review and Changes Summary

It was a busy year for zoology and Conservation Status Rank assessments! Included here are some of the highlights from the reviews of the freshwater molluscs, birds, mammals and dragonflies and damselflies.

In addition to these groups that we regularly review we received for reviewing preliminary ranks from almost 8000 other invertebrate species that had assessments completed via the federal General Status program. This has been a great opportunity to get updated lists of a number of groups for British Columbia, including beetles, and ants. There is a ways to go before we report out on these other invertebrate groups, and there are many assessed as “unknown”, but it is a great start.

Freshwater molluscs (excluding mussels)

The CDC reviewed 103 freshwater molluscs and updated the provincial conservation status ranks where needed. Unfortunately the province has had very little freshwater mollusc inventory in recent years; this would be very helpful to refine many of the ranks.

Seventy-five per cent of the 56 Provincial rank changes were due to re-assessment of the original information using current ranking methodology. Most did not result in a colour listing change; however, seven moved from the yellow list to the blue list (*Galba bulimoides* (Prairie Fossaria), *Lymnaea atkaensis* (Frigid Lymnaea), *Stagnicola caperata* (Wrinkled Marshsnail), *Physella propinqua* (Rocky Mountain Physa), *Physella virginea* (Sunset Physa), *Gyraulus crista* (Star Gyro) and *Planorbula campestris* (Umbilicate Sprite).

The most recent surveys were in south east B.C. by Lepitzki and Lepitzky (2013 unpubl. data; 2014). The exciting news from this survey was the discovery of four species that were formerly ranked as historic. **Note** that freshwater snails can be very difficult to identify; the species below have been tentatively identified by mollusc experts and are in the process of further confirmation. Voucher specimens will be deposited in the Royal British Columbia Museum (Lepitzki and Lepitzki 2014). In all cases more inventories are needed!

- Ashy Pebblesnail, *Fluminicola fuscus*, had not been recorded in BC since 1863 (Wigwam and Kootenay Rivers); however this snail was discovered in 2014 in the Columbia River, near Trail (Lepitzki and Lepitzki 2014). The rank is now S1S2.
- Glossy Valvata, *Valvata humeralis*, had not been recorded since 1883 (upper Columbia Lake); however, it has recently (2012/2013) been identified from the Flathead in south east BC (Lepitzki and Lepitzki 2013, unpubl. data). The rank changed from SH to S1S3.
- Threeridge Valvata, *Valvata tricarinata*, had not been recorded since 1969 (Kootenay Lake); however, in 2014 it was identified from Wasa Lake and the Columbia River in south east BC (Lepitzki and Lepitzki 2014). The rank changed from SH to S1S2.
- Dusky Fossaria, *Galba dalli*, had only historical records known (Flathead River Valley (1883) and Lower Fraser Valley (1960)); however, it was discovered in 2013 by

Lepitzki and Lepitzki from the Flathead River Valley (2013 unpubl. data). This species was added to the BC list and assigned S3S4.

Another species that was thought to be historic was recently re-discovered in BC. The Swamp Fingernailclam, *Musculium partumeium*, had not been recorded since 1969 (Kootenay Lake); however, in 2014 was identified from Cusheon Lake, Saltspring Island (Klinkenberg 2013). The rank changed from SU to S2S4. Inventory is definitely needed. <http://linnet.geog.ubc.ca/efauna/Atlas/Atlas.aspx?sciname=Sphaerium%20partumeium&noTransfer=0>

Stagnicola traski (Widelip Pondsail) was not on the BC list until Lepitzki (pers. comm. 2014) let us know of records in the southern part of the province. The conservation status rank is S3S4.

Galba obrussa (Golden Fossaria) was also added to the provincial list, based on records from Tudy Lake Provincial Park (north of Prince George) south to Skaha Lake. This species was assigned a rank of S2S3.

And then there were changes based on taxonomy-

We removed *Ferrissia parallela* from the BC list and added it as a synonym to *F. rivularis* (Creeping Ancyloid) based on Walther et al. (2010). Combining the records of both species resulted in a rank change from S4 to S5?

The ranks of four species were changed to SU due to uncertainty in taxonomy. These included *Juga hemphilli* (Barren Juga), *Physa acuta* (Pewter Physa), *Planorbella binneyi* (Coarse Rams-horn) and *Planorbella trivolvis* (Marsh Rams-horn). The ranks will be refined once taxonomy is sorted out.

Physella concolor (Haldeman's Physa) was added to the provincial list and ranked SU. Only two records are known (Burns Lake and Creston); however, there are taxonomic as well as identification issues and collections should be re-examined. This is a COSEWIC low priority candidate.

Birds

All of the birds were reviewed at the species level this year (354). There were 127 changes, the majority being the result of small adjustments to the final rank based on a refinement of the criteria. For example there may be a better idea of the numbers or the area that the species is found in, therefore a reduced range of values may now be used in the criteria.

Some changes were the result of the first time that the species was assessed using the rank calculator and others were due to new information or a combination of both. Eight species changed rank due to an increased risk. The most dramatic of these was **Black Swift**, which went from S4B to S2S3B. There have been significant declines in BC and nationally for this species.

There were 14 species that had changes due to an increasing trend in either numbers or range that was not a result of increased knowledge. One fun change in this category was for

Brandt's Cormorant. They had not been found breeding for a number of years and the experts had assumed that they should be considered as a "historical breeder". Then over the past two years very small numbers have been found breeding with other cormorants at a former colony. **Laysan Albatross**, a non-breeder in BC has increased in numbers here and on their breeding grounds, a good news story.

The results of the B.C. Breeding Bird Atlas that ran from 2008-2012 helped provide new information for a number of ranks. In some cases the intensive inventory effort resulted in more locations for a breeding species and them being found over a larger area (e.g. **Lark Sparrow** and **Cape May Warbler**). In these cases the change is attributed to "more information", and is not considered a true change in status.

Forty-nine rank adjustments were the result of assessing the species for the first time with the rank calculator or reassessing the ranks with the help of experts that either confirmed that there were other data that could be used; or that we don't know enough to apply as much certainty as there had been. Due to the latter, a number of species that are either found as a migrant or non-breeders had their ranks changed to "unknown" or "U".

Mammals

There were 108 mammals reviewed at the species level. This did not include marine dwellers. There were 38 changes, half which were attributed to the first time that they were assessed using the rank calculator and underwent a very small change (e.g. **Yellow-bellied Marmot** went from S5 to S5?). For others there were refinements to a rank, mostly based on new knowledge. For example, **Western Harvest Mouse** was S2S3 (could either be an S2 or an S3) and the 2015 rank has narrowed it down to an S3.

Mountain Goat is now an S3, from an S4. This main driver in this change was a thorough review of the threats and pulling together information on declines.

There has been a taxonomic revision within the water shrews resulting in initial ranks for what is now *Sorex palustris* (**American Water Shrew**) which is found in the northeast corner of the province and *Sorex navigator* (**Western Water Shrew**) which is found through the rest of B.C.. This division is based on (Hope et. al 2014).

Dragonflies and Damselflies

All 87 species that are found in B.C. were reviewed with a whopping 24 changes. They had not been done since 2004 and during that time there has been some more inventory and assessment methodology change. Again, most changes were relatively small tweaks; however there were a few interesting changes.

The **River Jewelwing** (*Calopteryx aequabilis*) was first found in the province in 1999 in one location, Christine Creek. Since then it has been found in two other widely disparate locations, east of Fort Nelson and in Bridge River at 100-Mile House! The rank is now S3 based on the huge range extent. The **Sinuuous Snaketail** (*Ophiogomphus occidentis*) went from S4 to S3 (now Blue listed), the change precipitated by the new method and more importantly, it has not been found where one would expect it during inventories within range.

Tiger Beetles

All species were reviewed and all of the changes that were made (seven) were changes that reflected more closely the uncertainty that there is in these ranks!

Audouin's Night-stalking Tiger Beetle (*Omus audouini*) changed from S1 to S2?. There were a few more individuals found within range.

References

Hope, A. G., N. Panter, J. A. Cook, S. L. Talbot and D. W. Nagorsen. (2014). Multilocus phylogeography and systematic revision of North American water shrews (genus: *Sorex*). *Journal of Mammalogy* 95(4): 722-738.

Klinkenberg, Brian (Editor). 2013. E-Fauna BC: Electronic Atlas of the Fauna of British Columbia. Avail: <http://ibis.geog.ubc.ca/biodiversity/efauna/> (accessed May 2015)

Lepitzki, D.A.W., and B.M. Lepitzki. 2014. Freshwater and terrestrial mollusc searches in British Columbia Provincial Parks from Banff, Alberta to Trail, British Columbia and return, 6-11 October 2014. Unpublished report submitted to BC Ministry of Environment, Vancouver, BC. 10 pp.

Walther, A.C., J.B. Burch, and D.O. Foighil. 2010. Molecular phylogenetic revision of the freshwater limpet genus *Ferrissia* (Planorbidae: Ancyliinae) in North America yields two species: *Ferrissia (Ferrissia) rivularis* and *Ferrissia (Kincaidilla) fragilis*. *Malacologia* 53(1):25-45.