One of the oldest and rarest bumblebees rediscovered

By Dr Paul Williams, Natural History Museum London

Current research on high mountain bumblebees has highlighted the bumblebee, Bombus superbus, as a candidate for one of the oldest surviving and least-known bumblebee species on Earth. Mystery surrounds where it lives in the vast empty northern region of the Tibetan plateau. This is an area one third the size of Europe, where visitors can face both frostbite and sunburn on the same day.



Tanggula mountains of central Tibet (photo: Z.-Y. Miao).

The first known individual of B. superbus was probably collected on the north Tibetan plateau at the end of the nineteenth century by one of the Russian explorers, Vladimir Roborovsky or Pyotr Kozlov. It wasn't until a century later, in 1990, that a Chinese expedition found just four more of these bees. Since then there have been many thousands of individual bumblebees identified from Tibet, including more alpine species than all of the bumblebee species of the USA and Canada combined. But no other B. superbus were found.

Then in the summer of 2014, the scientist Zhengying Miao visited Lhasa, working as part of a project to document the bumblebees of China. China has nearly half of the world's bumblebee species, although until recently they had not been systematically surveyed or mapped, and the true diversity was masked by the enormous variability of many species. Near the centre of the Tibetan plateau, at an elevation of over 5200m in the Tanggula mountains, he stopped near a stream with a patch of green and a few flowers. There, feeding on white gentians, he found what are now the first individuals of the elusive B. superbus for which the habitat can be documented.

Bombus superbus

For all we know at present, B. superbus may occur widely across Tibet at higher elevations, where it might seem little affected by people. The landscape in this region is already semi-arid, with scattered bumblebee flowers near the more reliable streams. However, climate warming is now known to be causing the landscape to become even more arid. The IUCN Bumblebee Specialist Group is working to assess the threats and needs of bumblebee conservation in even these most remote corners of the world. For more information, visit iucn.org/bumblebees

Buzzword



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