

Tarantula IUCN Red List Assessment



Tarantula IUCN Red List Assessment

The International Union for Conservation of Nature's Red List of Threatened Species, commonly referred as IUCN Red List, is the world's most comprehensive repository of conservation assessments. The list contains a growing number of plant, animal, fungi and protist species living throughout the world and has become widely used as a tool to support planning, management, monitoring and decision-making on biodiversity conservation (IUCN 2019; Rodrigues et al. 2006).

To date, the Red List provides information on over 96,500 different species (IUCN 2019). There are only 274 species of spiders red-listed (IUCN 2019), despite spiders' composing the most diverse group of predators (Wise 1993), with almost 50,000 described species, and being crucial to the health of terrestrial ecosystems.

Unsustainable harvesting of wildlife has been identified as one of the key threats to biodiversity globally and is a concerning challenge to conservation biology (Joppa et al. 2016). Large tarantula spiders, often docile, brightly-colored and easy to keep in captivity (Rojo 2004; West 2005), have been depleted in the wild through illegal trade to meet demand in the live-pet market, and are among the most traded invertebrate groups. Tarantula species of the *Brachypelma* genus are a particularly sad example. They are mostly native to Mexico and nearby countries (NHMB 2019) but they are sold both legally and illegally mainly in the United States and Europe (CEC 2017).

Concerned with the issues this trade has caused, the Commission for Environmental Cooperation (CEC) combined efforts with spider specialists, key stakeholders and law enforcement officers to assess the Red List status of tarantula species listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This culminated in the assessment of twenty-one tarantula species under the IUCN Red List criteria, eighteen of them from the genus *Brachypelma* Simon 1891, but also one from the genus *Aphonopelma* Pocock 1901 and two from the genus *Sericopelma* Ausserer 1875, representing three species which had previously been placed under *Brachypelma*.

With the inclusion of these twenty-one North and Central American species, the number of tarantula species in the Red List more than doubled. Therefore these assessments can be considered an important step to improving our knowledge of spider conservation, as they gathered and facilitated access to high-quality data about these species' ecology, population status, geographic range, threats and conservation actions that can be used to reduce the impact of illegal wildlife trade.

References

- CEC (Commission for Environmental Cooperation). 2017. Sustainable Trade in Tarantulas: Action Plan for North America. Montreal: Commission for Environmental Cooperation, 52 pp. ISBN 978-2-89700-198-8.
- IUCN (International Union for Conservation of Nature). 2019. The Red List of Threatened Species. <<http://www.iucnredlist.org/>>. Accessed: 24 January 2019.
- Joppa, L.N., B. O'Connor, P. Visconti, C. Smith, J. Geldmann, M. Hoffmann, J.E.M. Watson, S.H.M. Butchart, M. Virah-Sawmy, B.S. Halpern, S.E. Ahmed, A. Balmford, W.J. Sutherland, M. Harfoot, C. Hilton-Taylor, W. Foden, E. Di Minin, S. Pagad, P. Genovesi, J. Hutton, and N.D. Burgess. 2016. Filling in biodiversity threat gaps. *Science* 22 April 2016: 416–418. doi: 10.1126/science.aaf3565.
- NHMB (Natural History Museum Bern). 2019. World Spider Catalog. Version 19.0. doi:10.24436/2. <<http://wsc.nmbe.ch>>. Accessed: 24 January 2019.
- Rodrigues, A.S.L., J.D. Pilgrim, J.F. Lamoreux, M. Hoffmann, and T.M. Brooks. 2006. The value of the IUCN Red List for conservation. *Trends in Ecology & Evolution* 21(2): 71–76. doi:10.1016/j.tree.2005.10.010.
- Rojo, R. 2004. Las tarántulas de México: Pequeños gigantes incomprendidos. *Conabio Biodiversitas* 56: 7–11.
- West, R.C. 2005. The *Brachypelma* of Mexico. *Journal of the British Tarantula Society* 20(4): 108–119.
- Wise, D.H. 1993. *Spiders in Ecological Webs*. Cambridge Studies in Ecology. Cambridge: Cambridge University Press. doi:10.1017/CBO9780511623431.