

Bat biodiversity is in danger on islands worldwide

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Anthropogenic pressures, such as habitat loss and harvesting for human consumption, are severely threatening bat species, to the point that all human-driven bat extinctions have happened on islands. Credit: Adrià López-Baucells

A new study from the University of Helsinki investigates knowledge

gaps among the largely unknown, but greatly threatened, group of island-restricted bats, and leads future research efforts to actual priorities.

Island ecosystems, as a consequence of isolation from mainland, have evolved peculiar faunas with a great number of species found nowhere else. They are also some of the most vulnerable habitats in the world due to limited resilience to anthropogenic threats.

"Island bats play a fundamental role in the maintenance of insular ecosystems through seed dispersal, pollination, and suppression of arthropod pests", highlights Irene Conenna from the Metapopulation Research Center at the University of Helsinki.

Anthropogenic pressures, such as habitat loss and harvesting for human consumption, are severely threatening these [species](#), to the point that all human-driven bat extinctions have happened on [islands](#). Knowledge of species biology and conservation status is of foremost importance to lead successful and cost efficient rescue plans, and the early, the better to avoid regrettable news. A group of researchers revised the existing knowledge for the 310 species of bats that are restricted to islands, to investigate which species and islands worldwide have been overlooked by scientific research.

The researchers collected information on the bats' distribution and conservation status and quantified the number of scientific publications dedicated to each species. They found that research focusing on island restricted species is extremely scarce and is centred on species of lesser conservation concern.

"Areas rich in island endemic bats, such as Southeast Asian and Oceanian islands, are largely unexplored. As species located in these areas are not only overlooked, but they also face risk of extinction, their islands and species constitute top priorities for future research", explains Conenna.

An example is the New Guinea Big-eared Bat (*Pharotis imogene*), a species from New Guinea that was believed extinct for 120 years and only recently rediscovered.

Biodiversity conservation is most efficient when supported by sound knowledge of species biology. However, various social and logistics constraints drive efforts away from conservation priorities. The study in question leads future research efforts to actual priorities in protecting bat biodiversity. As a hopeful note, research seems to contribute for the improvement of the conservation status of the target species, therefore foreseeing benefits of future studies.

"Channelling funding and research effort towards the now identified [priority](#) island and species would allow to fine-tune [conservation](#) actions, and consequently hinder population declines", says Conenna.

More information: Irene Conenna et al, Insular bats and research effort: a review of global patterns and priorities, *Mammal Review* (2017). [DOI: 10.1111/mam.12090](https://doi.org/10.1111/mam.12090)

Provided by University of Helsinki

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