
Global patterns in extinction and threats to vertebrates by biological invasions in islands.

Celine Bellard^{*1}, Tim Blackburn , Piero Genovesi , Phil Cassey , and Jonathan Jeschke

¹University College of London (UCL) – United Kingdom

Abstract

Alien species have a range of impacts documented in their new environments, and there are well-documented examples of native species that have been driven extinct by aliens. However, biological invasions as drivers of biodiversity loss have recently been challenged. Some of the arguments about the impacts of alien species have been based on data on extinction, and extinction risk from the IUCN Red List. This is a dynamic resource, for which regular updates add ever greater and more accurate information on the conservation status of increasing numbers of species. Here, we revisit this resource to assess the current state of knowledge about biological invasions on islands. We report links between vertebrates threatened by more than 200 invasive alien species from the completely revised Global Invasive Species Database. Our results show that invasive alien species are the second most common threat associated with species that have gone extinct from these taxa since AD 1500, especially on islands (> 85%). New maps of the vulnerability of threatened vertebrates show that centres of IAS-threatened vertebrates are concentrated in the Americas, India, Indonesia, Australia and New Zealand, especially on islands. We found that the threat posed by invasive alien species in relation to other threats is greater on islands than mainland areas, except in South America. Overall, there tend to be fewer threats on islands than on mainland areas. The differences in invasive threats between regions and taxa can help efficiently target invasive species, which is essential for achieving the goals of the CBD.

Keywords: biological invasions, vertebrates, threatened, IUCN

*Speaker