May 4th 2021

To: the Editor-in-Chief, Vicent Devictor,

UMR CNRS-UM2 5554 cc065,

Institut des Sciences de l'Evolution de Montpellier,

Montpellier,

France

Dear Vicent Devictor,

Please consider our manuscript ‘Quantifying a wildlife conflict: estimates of seabird predation by recovering fur seals across southeastern Australia’ for publication as an article in Biological Conservation.

Conflict between iconic species is likely to increase with mounting pressures during the Anthropocene. This paper provides critical quantitative information for the management of a contentious wildlife conflict in southern Australia, between two species of conservation concern – the recovering long-nosed fur seal and the culturally important little penguin. This conflict has resulted in calls to cull the fur seals. The predator is now recolonizing its former range in Bass Strait and risk assessments are required to predict impacts on seabird populations.

In this study, we present a multi-assay approach to diet analysis that can be applied across systems and wildlife conflict scenarios to identify and quantify predation. We combine traditional morphological and modern DNA metabarcoding assays to corroborate and expand on previous estimates of predation. Our paper demonstrates a reproducible protocol to identify target species from predator scat and, further, uses haplotype analyses to assess genetic diversity and probable abundances of prey species within and between scat samples. This novel research provides a powerful tool for quantifying predator-prey relationships. Our study advanced frameworks for processing DNA metabarcoding that enables us to determine the number of individual penguins consumed from scat samples collected from fur seal colonies across multiple sites. In conclusion, seabirds, particularly little penguins, are an important foraging strategy for some long-nosed fur seals. This research provides a critical step towards an up-to-date cumulative impact assessment for threats to little penguins in southern Australia.

We present original work carried out by the authors and acknowledge the requirements for publication in Elsevier’s Biological Conservation and appreciate your time and attention in considering this manuscript for publication in your journal.

Sincerely,

Natasha Hardy