

# The dilemma of self-citation in taxonomy

**To the Editor** — Almost three centuries since Linnaeus introduced the system of binomial classification<sup>1</sup>, thousands of species new to science are still described every year<sup>2</sup>. Any research dealing with living organisms is intrinsically dependent on taxonomy for reproducibility, since misidentifications may affect conclusions<sup>3</sup>. As such, published taxonomic results should not be seen as obscure specialized papers, but instead as primers for taxon recognition that allow researchers to correctly identify the organisms they study. Yet recent controversies around the low impact factors of taxonomic journals<sup>4</sup> highlight the need for more accurate measurement of the intellectual contribution of taxonomy<sup>5</sup>. Journals that still publish taxonomic contributions are being downgraded or threatened with exclusion from current impact evaluation metrics due to their self-citation rates<sup>6,7</sup>. But inevitably, as the numbers of both active taxonomists and journals publishing taxonomy decline, self-citation becomes more frequent both for journals and authors, exacerbating the issue and devaluing taxonomic work to a point where it might become unsustainable as an academic line of research, losing out in the competition for funding and jobs. Setting aside this disciplinary concern, the decreasing number of journals publishing taxonomy and the long-standing practice of not citing taxonomic work correctly in other biological research result in worrying underestimation of the impact that taxonomy has in every field of biology — this is especially concerning in a current climate of biodiversity decline, mass extinction and a pollination crisis<sup>8–10</sup>. In non-taxonomic papers, although it is generally recommended that author and year be given at first mention of a species name, the reference is not usually included in the literature cited. But in some of the most high-profile non-taxonomic journals, the inclusion of full taxonomic references would increase the manuscript by no more than one and a half references

per printed page<sup>3</sup>. For those papers in which vast numbers of taxonomic works require citation (for example, studies mentioning thousands of species), an alternative method for referencing the relevant papers would be to link either by DOI or as discrete metafiles that would be checked by citation tracking databases (for example, Scopus, SciELO and Web of Science) to ensure that the references are incorporated in impact metrics. This solution would require buy-in from both journals, by providing discrete references metafiles, and citation database developers and managers, by including these metafiles in the citation tracking process. We, and the 1,312 signatories, urge all researchers to consider these solutions and propose additional measures in order to ensure appropriate recognition of the science of taxonomy.

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Published online: 10 November 2020

<https://doi.org/10.1038/s41559-020-01359-y>

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## Acknowledgements

We thank all 1,312 signatories for supporting this article; a full list of signatories and their affiliations appears in the Supplementary Information.

## Competing interests

The authors declare no competing interests.

## Additional information

**Supplementary information** is available for this paper at <https://doi.org/10.1038/s41559-020-01359-y>.