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Editorial

Striking underrepresentation of biodiversity-rich regions among editors of conservation journals

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ABSTRACT

Biodiversity conservation is hampered by mismatches between conservation capacity and needs for research, funding, policy, and management. Here we show that a profound geographical mismatch also exists among editors of 20 leading conservation science journals. Collectively, these journals had few or sometimes no editors from many of the most biodiverse countries. This geographic bias likely influences what papers and topics are published and highlighted, and hinders global conservation goals. Compared with other biases, it is relatively easy to address this mismatch through journal policies and practices to recruit editors from under-represented countries, perhaps helping to reduce other mismatches too. Recruiting more editors from biodiversity-rich countries could improve conservation science by (1) adding diversity of expertise and perspectives to editorial boards and (2) creating capacity and empowering conservation leaders in countries where effective conservation is most needed.

1. Introduction

Tackling the human-caused biodiversity crisis (Johnson et al., 2017) is one of the greatest challenges of our time (Steffen et al., 2015). Biodiversity and threats to it are both geographically unevenly distributed (Myers et al., 2000). Regions richer in biodiversity tend to have greater conservation needs but often lack the resources and human capacity to conduct effective conservation.

Inequality and biases are prevalent in science (e.g. Sugimoto et al., 2013; Mori et al., 2015; Stephan et al., 2017). Conservation science is no exception and it suffers from important geographic disconnects between conservation needs and resources. Tropical ecosystems, for example, host much of the world's biodiversity but are poorly understood and represented in global databases compared with less diverse temperate systems (e.g. Lenoir and Svenning, 2015; Feeley et al., 2017). Conservation research is lacking where it is most needed (e.g. Deikumah et al., 2014; Wilson et al., 2016; Mammides et al., 2016), and studies from high-priority regions (i.e., areas particularly rich in biodiversity and endemism) are less frequently published in readily accessible open access journals (Wilson et al., 2016). Further, much if not most conservation science in certain priority regions is not conducted by local researchers (Stocks et al., 2008), and experts from many biodiversity-rich countries are poorly represented in global conservation forums such as the International Union for Conservation of Nature (IUCN) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES; Wilson et al., 2016). The same geographical biases exist in the conservation science publishing system; for example, most reviewers for *Biological Conservation*, a leading journal in biodiversity conservation, are based in a handful of English-speaking Western countries (Primack et al., 2016).

These geographical biases are unfortunate. As a normative field, conservation science and its application are inextricably intertwined with culture—e.g., conservation values, cultural history, economy, and many other traits that can vary dramatically from country to country (McClanahan and Rankin, 2016). So geographical biases in databases, research, the publishing system, and other aspects of the scientific community could limit or omit key perspectives and approaches from the conservation literature, and in turn contribute to misinformed conservation policies and misallocated funding (Karlsson et al., 2007; Waldron et al., 2013; McClanahan and Rankin, 2016). Foreign-based expertise is unlikely to effectively compensate for the lack of local capacity to conduct high quality conservation science as well as to translate this science into conservation policy and practice. Understanding and reducing bias in conservation science, and the conservation publication system in particular, is therefore important.

Our aim is to investigate geographical biases within the leadership of the conservation science publishing system—specifically, journal editors. Journal editors serve as gatekeepers and leaders in the scientific process. They decide what science gets published and whose research is highlighted, and they influence decisions on what science gets funded. Geographic bias in editors could contribute to biases in these other critical areas of the scientific process, and could influence research and policy (Karlsson et al., 2007). Our assumption here is that the existence of marked geographical biases might have negative impacts on conservation science by (1) excluding relevant diversity from editorial boards and (2) hindering the development of world-class conservation in biodiversity-rich regions.

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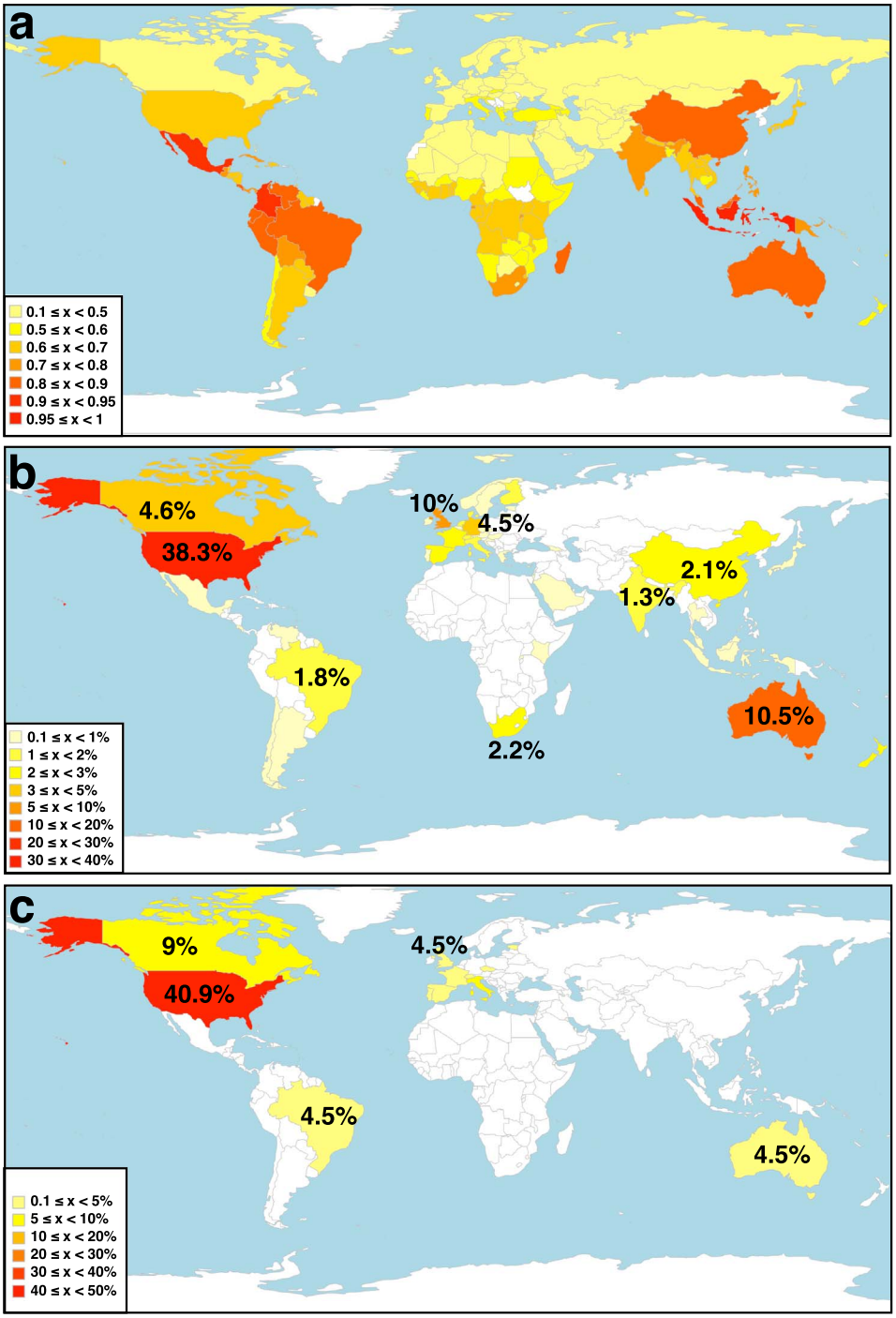

Fig. 1. Geographic distribution of (a) National Biodiversity Index (NBI) with 1 being the highest and 0 being the lowest and the percent of (b) editors and (c) editors-in-chief in 20 top conservation science journals.

2. Methods

We used Google Scholar Metrics (https://scholar.google.com/intl/en/scholar/metrics.html) to identify the top 20 journals in the field of 'biodiversity and conservation biology'. For each of these journals, we retrieved the complete list of their editorial board members as of April 2017, including information on each editor's role on the board (editor-in-chief or equivalent, subject editor, or member at large of the editorial board) and country of affiliation as indicated in the journal's website. We then used the Convention on Biological Diversity's National Biodiversity Index (NBI) as an indicator of national biodiversity values. NBI is based on estimates of countries' richness and endemism in four terrestrial vertebrate classes and vascular plants, and includes an adjustment for country size. NBI values range from 1 (maximum) to 0 (minimum). NBI values are not available for countries with land areas less than 5000 km^2 or for overseas territories and dependencies. For details see https://www.cbd.int/gbo1/annex.shtml.

We show geographical patterns by mapping the distributions of editors and NBI values by country. We used Pearson correlation to analyze relationships between national NBI values and the number of editors in leading conservation journals.