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Author for correspondence:

Colin A. Simpfendorfer

e-mail: colin.simpfendorfer@jcu.edu.au

Conservation biology

Assigning shark fin origin using species distribution models needs a reality check

Vincent Raoult¹, Michael I. Grant², Ana Paula Barbosa Martins³, Leonardo Manir Feitosa⁴, Matias Braccini⁵, Diego Cardeñoso⁶, John Carlson⁷, Andrew Chin², Tobey Curtis⁸, Luís Fernando Carvalho Costa⁹, Luís Fernando Rodrigues Filho¹⁰, Tommaso Giarrizzo¹¹, Jorge Luiz S. Nunes¹², João Bráullio L. Sales¹³, Jane E. Williamson¹⁴ and Colin A. Simpfendorfer²

¹School of Environmental and Life Sciences, University of Newcastle, Ourimbah, New South Wales 2258, Australia

²Centre for Sustainable Tropical Fisheries and Aquaculture and College of Science and Engineering, James Cook University, 1 James Cook Drive, Townsville, Queensland 4811, Australia

³Integrated Fisheries Laboratory, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4R2

⁴Bren School of Environmental Science and Management, University of California, Santa Barbara, CA 931117, USA

⁵Western Australian Fisheries and Marine Research Laboratories, Department of Primary Industries and Regional Development, Government of Western Australia, PO Box 20, North Beach, Western Australia 6920, Australia

⁶Department of Biological Sciences, Florida International University, 3000 NE 151st Street, North Miami, FL 33181, USA

⁷NOAA Fisheries Service, Southeast Fisheries Science Center, Panama City, FL 32408, USA

⁸Atlantic Highly Migratory Species Management Division, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Gloucester, MA 01930, USA

⁹Departamento de Biologia, Universidade Federal do Maranhão, Avenida dos Portugueses 1966, CEP 65080-805 São Luís, MA, Brazil

¹⁰Universidade Federal Rural da Amazônia (UFRA), Campus Universitário de Capanema, Rua João Pessoa 121, CEP 68700-030 Capanema, PA, Brazil

¹¹Núcleo de Ecologia Aquática e Pesca da Amazônia, Universidade Federal do Pará, Avenida Perimetral 2651, Terra Firme, CEP 66040-170 Belém, PA, Brazil

¹²Departamento de Oceanografia e Limnologia, Universidade Federal do Maranhão, Avenida dos Portugueses 1966, CEP 65080-805 São Luís, MA, Brazil

¹³Grupo de Investigação Biológica Integrada (GIBI), Universidade Federal do Pará, Avenida Perimetral da Ciência, Km01, PCT-Guamá, Terreno 11, CEP 66075-750 Belém, PA, Brazil

¹⁴Department of Biological Sciences, Macquarie University, Sydney, New South Wales 2109, Australia

VR, 0000-0001-9459-111X; CAS, 0000-0002-0295-2238

The conservation and management of shark populations have become urgent issues to ensure the future health of our oceans [1]. There are many drivers of the decline of shark populations, with the demand for shark fins being one of the more important [2]. Understanding fin origin can help identify regions for improved management, and hence has been the focus of recent research (e.g. Fields *et al.* [3], Cardeñoso *et al.* [4]). In a recent *Biology Letters* article, Van Houtan *et al.* [5] contributed to this work using data on species composition of shark fins at four markets and species distribution models (SDMs) to predict the probability of fin origin. Their purpose was to address knowledge gaps in source and trade routes of shark products, which currently limit the effective allocation of management resources. While the broad concept behind their paper is novel, we disagree with the results and conclusions owing to flaws in methodology and interpretation.

We fundamentally disagree with the central assumption of the paper that there is a direct link between species distribution and shark fin origin. This assumption relies on fisheries catch being equal through the distribution of a species, which we know is not true. Fishing effort that catches sharks is spatially

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