





An anecdotal observation of an amputee sawfish recapture and development of safe release guide for Papua New Guinea gillnet fisheries

Michael I. Grant^{A,B,*} , Yolarnie Amepou^B, Andrew Chin^A , Sarah J. Hill^C, Dana Maggacis^C and Madeline Green^{D,E}

For full list of author affiliations and declarations see end of paper

***Correspondence to:**

Michael I. Grant
Centre for Sustainable Tropical Fisheries and Aquaculture and College of Science and Engineering, James Cook University, Townsville, Qld 4814, Australia
Email: Michael.grant4@jcu.edu.au

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Fig. 1. A juvenile largetooth sawfish *Pristis pristis* caught with no rostrum in the mouth of the Turama River, southern Papua New Guinea.

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Sawfishes (Pristidae) are highly threatened, with four species listed as Critically Endangered, and one as Endangered on the International Union for the Conservation of Nature Red List of Threatened Species. Papua New Guinea (PNG) has recently been identified as a sawfish ‘stronghold’ within the Indo-West Pacific (Grant *et al.* 2021a). However, sawfishes in PNG are vulnerable to small-scale fishers using gillnets to target barramundi (*Lates calcarifer*) and scaly craoker (local name ‘stone fish’, *Nibea squamosa*) for the fish maw (teleost swim bladder) trade (Grant *et al.* 2021a, 2021b). When captured, fishers often amputate the rostrum of sawfish to assist with dis-entanglement, regardless of whether the animal is being retained for consumption, sale, or being released (Grant *et al.* 2021b). On 28 February 2022, during a fishery monitoring project being conducted in the northern Gulf of Papua, a largetooth sawfish *Pristis pristis* was captured. The individual appeared to be a recapture that had its rostrum amputated during a previous capture (Fig. 1). At the front of the head, the wound appeared inflamed, red, and bleeding (the wound appears to have been reopened during capture). The individual appeared to be very emaciated, with the vertebral column visible, and the region between the anterior section of the pectoral fins appearing to be thin and indicative of muscle atrophy. The present observation adds to the evidence base that rostrum amputation leads to starvation and eventual death (Morgan *et al.* 2016).

In small-scale fisheries in low-income nations, an entangled sawfish can pose a complex scenario for fishers. The rostrum poses a risk to the fisher’s safety during dis-entanglement and the rostrum of a struggling sawfish risks damaging fishing nets. While sawfish ‘safe release guides’ exist, they are tailored to high-capacity western fishery contexts, and often encourage the cutting of fishing gear to dis-entangle the animal (e.g. Queensland Department of Agriculture and Fisheries safe release guide; https://www.daf.qld.gov.au/_data/assets/pdf_file/0005/49109/Sawfish-Guide-Final-Nov-2010.pdf).

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Such guides are not appropriate for fishery contexts in low-income nations where gillnets may represent a substantial capital investment by the fishers. In response to this, here we present a sawfish safe release guide developed with advice from local fishers in PNG (available as Supplementary Material). The purpose of this guide is to offer fishers a more appropriate method to release sawfishes of various sizes, that is context specific to the gear used in PNG's small-scale sector.

Supplementary material

Supplementary material is available [online](#).

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Data availability. All data generated in this study is available within the manuscript.

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Author affiliations

^ACentre for Sustainable Tropical Fisheries and Aquaculture and College of Science and Engineering, James Cook University, Townsville, Qld 4814, Australia.

^BPiku Biodiversity Network, Waigani Drive, Ensisi Valley, Port Moresby, National Capital District 121, Papua New Guinea.

^CChunky Duck, 11 Kimberly Way, Happy Valley, SA 5159, Australia.

^DCentre for Marine Socioecology, University of Tasmania, Hobart, Tas. 7004, Australia.

^ECSIRO Environment, Castray Esplanade, Hobart, Tas. 7004, Australia.