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Freshwater Sawfish *Pristis microdon* Latham, 1794 (Chondrichthyes : Pristidae) in the Kimberley region of Western Australia

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Abstract

The Freshwater Sawfish *Pristis microdon* was captured in marine waters of King Sound, and estuarine and fresh waters of the Fitzroy and Robinson rivers, in the Kimberley region of Western Australia. In light of the IUCN listing of the species as critically endangered, non-destructive means, including tagging-recapture data and information from specimens found dead on the banks, were utilised. Observations of sexual maturity, annuli present on vertebrae, recaptures of tagged individuals and length-frequency data suggested that the freshwaters of the Fitzroy River are a nursery for this species where immature individuals (up to 2800 mm total length) remain for a maximum of four or five years. Morphology and counts of the number of rostral teeth indicated that, in most cases, the rostral tooth morphology can be used to differentiate male and female *P. microdon* and also are useful in distinguishing this species from the congeneric and sympatric *Pristis clavata*. Furthermore, differences in the relationship between rostrum length and total length between the sexes may provide an effective diagnostic tool for the collation of historical distribution and sex ratio data from rostrums held in private collections. Rostral tooth counts and length at age data also suggest that the synonymisation of *P. microdon*, *Pristis zephyreus* and *Pristis perotteti* is not warranted.

Key words: sawfish, *Pristis microdon*, *Pristis clavata*, Western Australia, Kimberley, Fitzroy River, rostral teeth

Introduction

Of the four *Pristis* species recorded from Australian waters, the Freshwater Sawfish *Pristis microdon* Latham, 1794 is the species most commonly encountered in freshwaters (Last & Stevens 1994). It is also known to occur throughout the Indo-West Pacific including New Guinea, South-east Asia, India and eastern Africa. *Pristis microdon* can attain lengths of up to 7 m and is distinguished from other sawfishes by the combination of the following characteristics: first dorsal fin anterior to the pelvic fins; caudal fin bearing a conspicuous ventral lobe; 18–23 teeth on the rostrum (Last & Stevens 1994; Compagno & Last 1998). There is currently some argument as to whether *P. microdon* should be synonymised with *Pristis perotteti* Müller and Henle, 1839 and *Pristis zephyreus* Jordan and Starks, 1895 from the Atlantic and east Pacific. Similar to *P. microdon* these latter species are commonly encountered in fresh inland waters, possess a first dorsal fin anterior to pelvic fins and have a distinct lobe on the lower caudal fin (Thorson 1982; Last & Stevens 1994; Compagno & Cook 1995; Compagno & Last 1998). Ishihara *et al.* (1991) however, found that their rostral teeth counts varied significantly, i.e. 17–21 and 19–23 cf. 14–17 and 16–20 in female and male *P. microdon* and *P. perotteti*, respectively, and although they tentatively considered that these species were valid, they expressed the need for further investigation.

Sawfish populations throughout the world have been decimated by gill net and trawl fisheries due to their susceptibility to entanglement in nets by their rostrum (Simpfendorfer 2000). Although there are currently

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