Freshwater Sawfish

Pristis microdon[1]

PROPOSAL #45

Proposed action Transfer from CITES Appendix II to Appendix I

Lead proponent Australia

AUSTRALIAN NATIONAL FISH COLLECTION, CSIRO

Overview

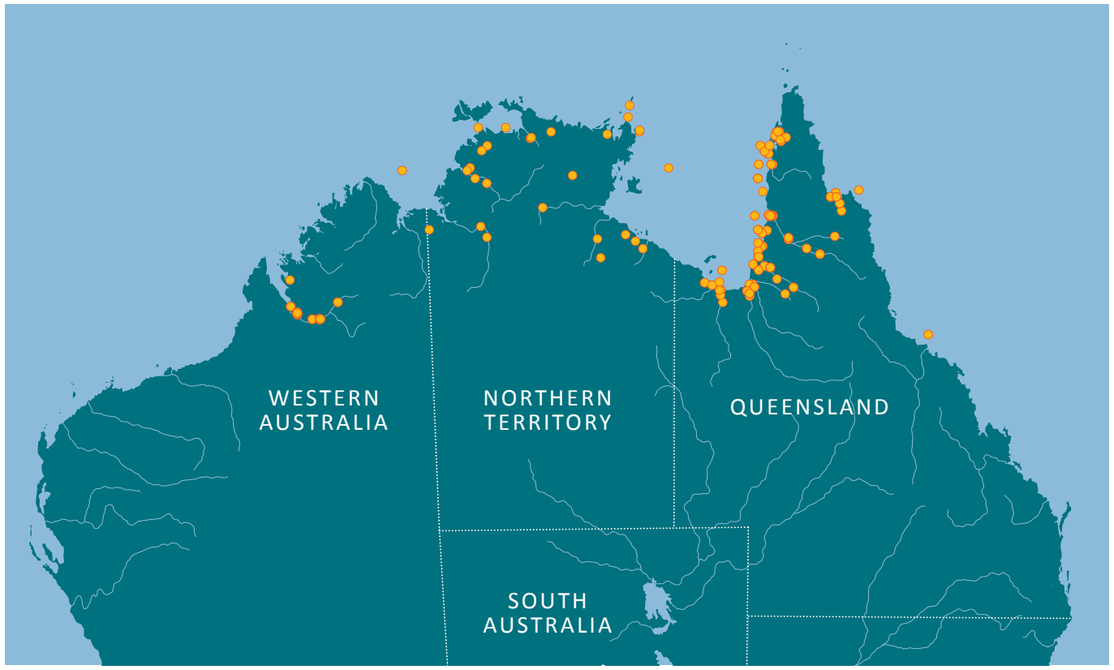
Pristis microdon is a Critically Endangered sawfish species that has been nearly extirpated in most of its former Indo-West Pacific range, due in part to international trade. CITES Appendix I listing is warranted based on the steep declines in numbers, contraction of historical range, and associated fragmentation of populations, exacerbated by the species' low productivity, tendency for lethal entanglement in fishing nets, and value in trade. Appendix I listing will align the CITES status of *P. microdon* with that of the rest of family Pristidae, thereby encouraging and facilitating stricter enforcement of conservation measures for all sawfish species, on a global scale.

1. Family Pristidae is being revised; the scientific name *Pristis microdon* is likely to change to *Pristis pristis*.

Distribution

P. microdon is thought to occur/have once occurred in the Indo-West Pacific from the Indian subcontinent throughout the coastal areas of Southeast Asia and Australia.

Although virtually extinct in much of the region, *P. microdon* is still found in northern Australia (Western Australia, Northern Territory, and Queensland), where it has been recorded up to 400km upstream and 100 km offshore.



Locations where *P. microdon* have been recorded in Northern Australia. Giles *et al.* (2007), Peverell (2005) and Thorburn *et al.* (2003) [compiled in Morgan *et al.*, 2004].

Biological Characteristics

The freshwater sawfish is a large, shark-like ray with a distinctive flattened and elongated snout (rostrum) that is studded with about 20 pairs of teeth. Despite its common name, *P. microdon* is not confined to freshwater. The species inhabits the sandy or muddy bottoms of rivers, estuaries, and shallow coastal waters, with adults appearing to spend most of their time in the marine environment. A high-order predator, the freshwater sawfish feeds mainly on bony fishes and prawns.

Like all sawfish species, *P. microdon* is exceptionally vulnerable to overexploitation due to:

- **Slow growth**
- **Late maturity (6–8 years)**
- **Few young (up to 12, likely only every two years)**
- **Long life (estimated at 35–80 years).**

Freshwater sawfish can grow to more than six meters in length. To protect the mother, sawfish are born with a temporary protective sheath over their rostral teeth. Later in life, the rostrum makes the sawfish exceptionally prone to entanglement in fishing nets.

PETER KYNE

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Population Status

Freshwater sawfish have been severely depleted across the vast majority of their Indo-West Pacific range and have not been seen for decades in places where they were once common, including Indonesia, Thailand, Malaysia, and Cambodia. Sawfishes have undergone significant declines in Australia as well. The number of sawfish (several species) taken in beach protection gear along the Queensland east coast declined steadily for three decades starting in the 1960s, while sawfishes completely disappeared from these records in southern areas of Queensland. Fragmented yet viable populations of freshwater sawfish in northern Australia now represent a vital stronghold for the species in this region. Scientists suspect that female *P. microdon* do not venture far from the regions where they were born, which would limit the species' ability to re-establish populations through natural emigration.

IUCN classifies the freshwater sawfish and all other members of family Pristidae as *Critically Endangered*. Fishing mortality from gillnet and trawl gear presents the greatest risk to remaining sawfish populations. Destruction of their specific habitats, such as mangrove stands, also poses a significant threat to sawfish survival.

Economic and Cultural Significance

Because of their large fins with high fin needle content, sawfish are preferred species for the Chinese celebratory dish, *shark fin soup*, reportedly fetching up to 4000 USD/set. Sawfish fins – as well as meat, skin, liver oil, eggs, and bile – are used in traditional Chinese medicine. Sawfish rostra have long been a favorite marine curio, which have sold in recent years for close to 1500 USD. Freshwater sawfish were formerly targeted by fishermen for these uses, but are now taken primarily as bycatch in legal and illegal fisheries.

Sawfish are popular attractions in public aquariums. In 2005, *P. microdon* from Australia for the aquarium trade sold for roughly 1,600 USD/foot. Although Australia ceased freshwater sawfish exports in 2011 for conservation reasons, a limited number of freshwater sawfish are still collected from the Northern Territory and Queensland for display in select domestic aquariums.

There is extensive tribal mythology regarding sawfish in countries around the world, including Papua New Guinea and Australia. Sawfish are featured in cosmological and narrative paintings in Thai Buddhist temples and in Islamic art from Indonesia. Rostra have been fashioned into weapons in many countries including the Philippines, and even New Zealand, where sawfish are not native.

Wild sawfish are among the species used in advertisements to attract tourists to visit Australia's Geikie Gorge National Park.

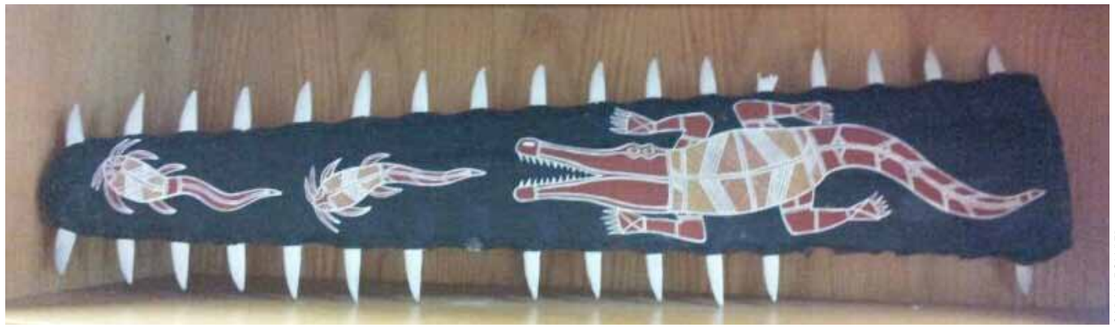
International Trade

The only remaining targeted take of freshwater sawfish is the collection of specimens from Australia for the aquarium trade. An estimated 30–40 individuals have been removed from the wild in Australia for this purpose since 1998.

In accordance with a 2007 CITES Appendix II listing and associated annotation, international trade in *P. microdon* is permitted only for live specimens destined for accredited aquariums, primarily for conservation purposes. Trade records show that, since the time of CITES listing, nine live specimens have been exported from Australia. In 2011, the Australian government was unable to conclude that catches of *P. microdon* for the aquarium trade would not be detrimental to the survival of the species, and consequently ended exports. Illegal trade in sawfish rostra and fins is thought to be occurring, but the extent and impact are unknown.

Conservation Measures

The current, annotated CITES Appendix II listing of *P. microdon* is the only international measure for this species. National conservation measures and legal protections for the species have been established by Australia, Bangladesh, India, Indonesia, Malaysia, and Myanmar. The Australian government is also preparing a recovery plan for the country's three *Pristis* species. The IUCN Shark Specialist Group is developing a priority, global strategy to promote sawfish conservation.



SARAH FOWLER

Fact sheet for the 16th Meeting of the Conference of the Parties (CoP16) to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES History

The United States proposed CITES Appendix I listing for all sawfish species in 1997 and in 2007. The latter proposal was successful for all but *P. microdon*, which was included instead in Appendix II (for live specimen trade to certain aquariums only), at the request of Australia. At the time, the Australian government believed that their freshwater sawfish populations were robust enough to safely sustain this relatively low level of removals. However, new information from genetic studies has since shown that reduction in female abundance in one region is not likely to be replenished by migration from another. This evidence, considered as part of the CITES non-detriment finding process, indicates that these populations are more vulnerable than previously thought, and forms the basis for Australia's decision to end exports and propose that *P. microdon* be transferred to CITES Appendix I.

Expert Advice

IUCN and TRAFFIC have concluded that the freshwater sawfish meets the criteria for inclusion in CITES Appendix I, and TRAFFIC recommends that Parties support the proposal at CoP16. The ad hoc Expert Panel convened by the UN Fisheries and Agriculture Organization (FAO) to review CITES proposals for marine species also found that *P. microdon* meets the biological criteria for an Appendix I listing. In preparations for CoP14, the CITES Secretariat, as well as IUCN, TRAFFIC, and the FAO Expert Panel, reported that all sawfish species met the Appendix I criteria. The CITES Secretariat recommends that this proposal be adopted.

Call to action

Listing the freshwater sawfish under CITES Appendix I is:

- **Warranted under the listing criteria;**
- **Essential to preventing unsustainable international trade;**
- **Complementary to national sawfish recovery efforts;**
- **Consistent with the FAO International Plan of Action for Sharks.**

This listing is needed to align the CITES status of freshwater sawfish with that of all other Pristidae species, thereby significantly reducing room for illegal trade, and facilitating enforcement of CITES requirements for all of the species in this Critically Endangered family.

Our coalition urges CITES Parties to vote in favor of Proposal #45 to transfer the freshwater sawfish (*Pristis microdon*) from Appendix II to Appendix I at CoP16.

References

Information in this fact sheet is based on that in the listing proposal, the associated IUCN/TRAFFIC analyses, the TRAFFIC Recommendations, the 2012 FAO Ad Hoc Expert Panel report, the CITES Secretariat's findings, as well as personal communication with Dr. Colin Simpfendorfer (James Cook University, Townsville, Queensland) and Dr. Peter Kyne (Charles Darwin University, Darwin, Northern Territory), and:

Stevens, J.D., Pillans, R.D. and Salini, J. 2005.Conservation assessment of *Glyphis* sp. A (speartooth shark), *Glyphis* sp. C (northern river shark), *Pristis microdon* (freshwater sawfish) and *Pristis zijsron* (green sawfish). Final Report to the Department of the Environment and Heritage.

Morgan, D. L., Allen, M. G., Bedford, P. and Horstman, M. 2004. Fish fauna of the Fitzroy River in the Kimberley region of Western Australia – including the Bunuba, Gooniyandi, Ngarinyin, Nyikina and Walmajarri Aboriginal names. Records of the Western Australian Museum, 22: 147-161