

Threatened Species of the Northern Territory

DWARF SAWFISH BROAD-BILLED SAWFISH

Pristis clavata

Conservation status

Australia: Vulnerable

Northern Territory: Vulnerable



Photo: S. Peverell

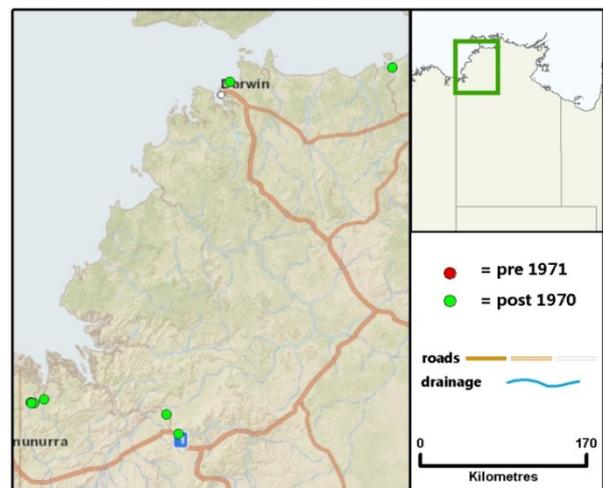
Description

The dwarf sawfish is a small, robust shark-like sawfish that grows to at least 1.4 m long. The rostrum (snout) is broad and bears 18 to 22 pairs of lateral teeth (denticles) starting from the base, and equally spaced. Nostrils behind the eyes are broad with large nasal flaps. The body is usually greenish-brown above and white ventrally. The pectoral fins are broadly triangular with broad bases and the dorsal fins are tall and pointed with the first dorsal fin positioned over or just forward of the pelvic fin origin. The lower lobe of the caudal fin is small and the posterior margin of the caudal fin almost straight (Last and Stevens 1994).

Distribution

The dwarf sawfish occurs in shallow waters (2-3 m) in coastal and estuarine areas of tropical Australia, extending some distance up rivers almost into freshwater (one record from the Victoria River was about 100 km from the mouth: Thorburn et al. 2003). In the Northern Territory (NT) it has been recorded in several catchments, including the Keep River, Victoria River, Buffalo Creek and Rapid Creek (Darwin Harbour), and the South Alligator River (Thorburn et al. 2003; Peverell et al. 2004).

Conservation reserves where reported:
Kakadu National Park.



Known locations of the dwarf sawfish

Ecology

The dwarf sawfish lives in coastal marine and estuarine habitats, with adults moving between the two in a seasonal cycle. They are not known to enter purely freshwater areas (Peverell 2007). Pupping probably occurs in estuarine areas during Wet seasons and juveniles may remain in such habitats for several years (Peverell 2005). Like other sawfish it feeds on slow-moving shoaling fish, which are stunned by sideswipes of the snout. A favoured prey species is Popeye Mullet

(*Rhinomugil nasutus*). Molluscs and crustaceans may also be swept out of the mud by the saw (Allen 1982).

This is a long-lived species: sexual maturity is attained at about nine years; the life span is about 40 years, so generation time is estimated to be 20 years (S. Peverell unpubl.). Sawfish generally have low fecundity, slow maturity and low intrinsic rates of natural increase.

Conservation assessment

Considerable progress has been made to reduce the impacts of commercial fishing (gill nets) and recreational fishing on NT sawfish species. Commercial net fishing is prohibited in the mouth of the Adelaide River to protect sawfish *Glyphis* spp. However, threats from illegal fishing remain. Deliberate capture and destruction of dwarf sawfish is illegal in the NT.

The species is listed as Critically Endangered worldwide on the 2006 International Union for the Conservation of Nature (IUCN) Red List of Threatened Species, based on IUCN criteria A2abcd+3cd+4bcd (Cavanagh *et al.* 2003).

In the NT, the species is classified as **Vulnerable** (under criterion A2d) based on:

- an inferred population size reduction of ≥ 30 percent over the last three generations (60 years) where the reduction may have not ceased (based on potential levels of exploitation).

Declines are inferred based on the susceptibility of the species to various fishing practices in coastal and estuarine habitats (Peverell *et al.* 2004).

Threatening processes

The anatomy of sawfish, especially the rostrum, makes them particularly vulnerable to entanglement in nets and fishing line. The sharp teeth on the rostrum makes handling

them dangerous, increasing the difficulty when trying to untangle and release them. Populations have been significantly reduced as a result of interactions with commercial gill net and trawl fishing equipment (Pogonoski *et al.* 2002). Recreational fishing may also have impact on the species and there is an unquantified Indigenous harvest. There has also been a degree of trophy collecting of the rostrum. Elsewhere, sawfish generally have also been affected by habitat degradation (Cavanagh *et al.* 2003). Residential and industrial development in coastal areas can also impact this species.

Conservation objectives and management

The managing authority for this species is the Fisheries section of the Department of Primary Industry and Fisheries. Considerable progress has been made in reducing harmful interactions between sawfish and fishers (L. Lambeth *pers comm.*).

A recovery plan for Sawfish and *Glyphis* shark species is currently being developed by the Australian Government Department of Sustainability, Environment, Water, Population and Communities.

The recovery priorities are to:

- i. investigate the distribution, status, biology and habitat requirements of the species;
- ii. monitor and limit the impacts of fishing in estuarine areas, and improving compliance, as any take of this species is illegal; and
- iii. education of fishers on the protection and methods of release of dwarf sawfish, as a degree of illegal take and death is probably due to ignorance.

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