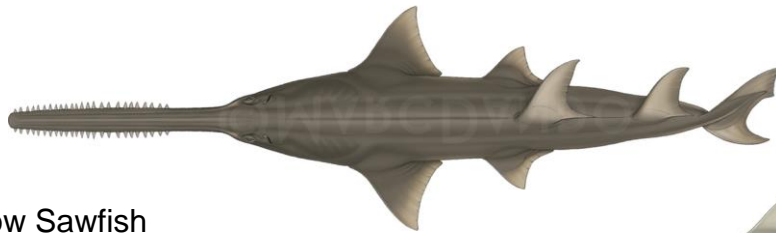
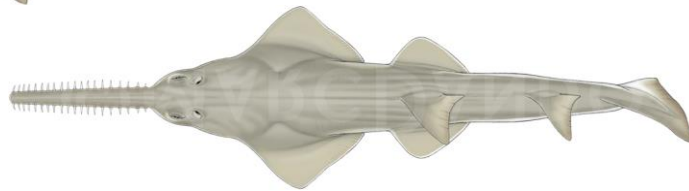


Fact Sheet

SAWFISHES
POISSONS-SCIES
PECES SIERRA



Narrow Sawfish
Anoxypristis cuspidata



Dwarf Sawfish
Pristis clavata

SAWFISHES

Class: *Chondrichthyes*

Order: *Rhinopristiformes*

Family: *Pristidae*

Species: *Anoxypristis cuspidata* - Narrow sawfish

Pristis clavata - Dwarf sawfish

Pristis pectinata - Smalltooth sawfish

Pristis zijsron - Green sawfish

Pristis pristis – Largetooth sawfish

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This fact sheet was produced by the Advisory Committee of the Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU).

For further information contact:

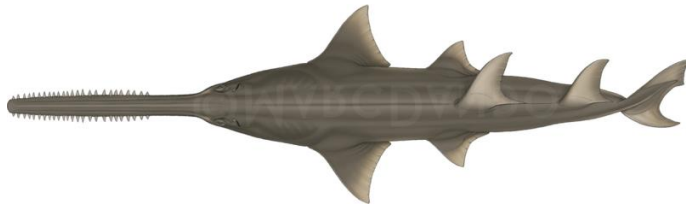
John Carlson, Ph.D.

Research Fish Biologist,

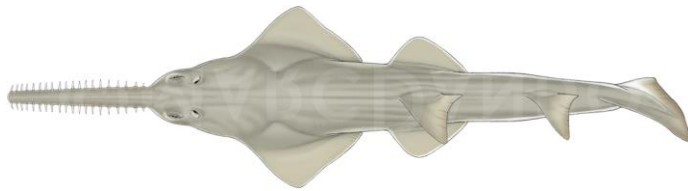
NOAA Fisheries Service-Southeast Fisheries Science Center Panama City,

john.carlson@noaa.gov

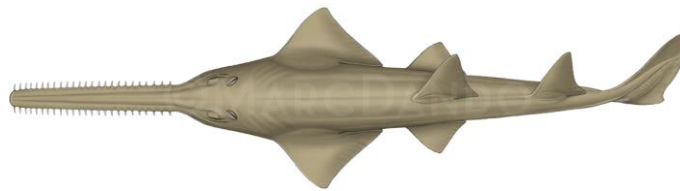
1. Species



Narrow sawfish
Anoxypristis cuspidata



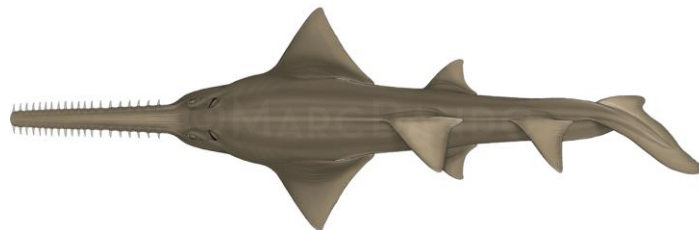
Dwarf Sawfish
Pristis clavata



Smalltooth sawfish
Pristis pectinata



Green Sawfish
Pristis zijsron



Largetooth Sawfish
Pristis pristis

2. Biology

The family Pristidae consists of five Sawfish species Narrow Sawfish (*Anoxypristis cuspidata*), Dwarf Sawfish (*Pristis clavata*), Smalltooth Sawfish (*Pristis pectinata*), Largetooth Sawfish (*Pristis pristis*) and Green Sawfish (*Pristis zijsron*). They range in maximum length from 3 m to over 7 m. Life history information is limited. All sawfishes are ovoviviparous, giving birth to 1–20 well-developed young. Growth is very rapid at younger ages slowing as juveniles increase in age. Although a variety of habitats may be preferred by different life stages, they spend much of their life in shallow (often <10 m) marine and estuarine waters, usually associated with mangroves or seagrasses (Simpfendorfer 2007; Carlson et al. 2014; Moore 2015). However, some species are known to seasonally inhabit deeper parts of the continental shelf, to depths of >80 m.

3. Distribution

Sawfishes occur in circum-tropical and warm temperate waters. In some regions, sawfishes are known to inhabit freshwater lakes and river systems. While their historical range comprised about 90 tropical countries, 43 countries are believed to have lost at least one species from their waters, while it is presumed that 20 Range States lost all species (Dulvy et al. 2016).



Figure 1: Distribution of Narrow Sawfish (*Anoxypristis cuspidata*), courtesy of IUCN ⁱ.

ⁱ For figures 1–5, maps obtained from the International Union for Conservation of Nature (IUCN) on 20 November 2017.



Figure 2: Distribution of Dwarf Sawfish (*Pristis clavate*), courtesy of IUCN.



Figure 3: Distribution of Smalltooth Sawfish (*Pristis pectinata*), courtesy of IUCN.



Figure 4: Distribution of Green Sawfish (*Pristis zijsron*), courtesy of IUCN.



Figure 5: Distribution of Largetooth Sawfish (*Pristis pristis*), courtesy of IUCN.

4. Critical Sites

The present extent of the different sawfish distributions represents just a small fraction of historic ranges. Therefore, the remaining areas sawfish occupy play a critical role in their protection.

5. Population Status and Trends

There are no stock assessments for Sawfish, although information on population trends are available for some species and areas. All sawfish species have undergone significant, albeit largely unquantified, declines with only patchy remnant populations in their once more wide-ranging historical distributions (Dulvy et al. 2016). The current IUCN Red List status for the global populations of both Narrow Sawfish and Dwarf sawfish are ‘Endangered’ (D’Anastasi et al. 2013; Kyne et al. 2013b), whilst Smalltooth sawfish, Largetooth Sawfish and Green Sawfish are ‘Critically Endangered’ (Carlson et al. 2013; Kyne et al. 2013a; Simpfendorfer 2013). More details of the population status and trends can be found in the IUCN assessmentⁱⁱ.

6. Threats

- **Fisheries:** The greatest threat is fisheries, with sawfish susceptible to being taken as bycatch. Because of their rostra, sawfish are particularly susceptible to gillnets, driftnets, trammel nets and trawls (Simpfendorfer 2000; Brewer et al. 2006; NMFS 2010). Fishing using longlines and handlines was also reported to capture sawfish, but with much lower impact than net entanglement (NMFS 2009).
- **Habitat degradation:** Sawfishes rely on several habitat types, which exposes them to a variety of anthropogenic threats (e.g. agriculture, mining operations, pollution, dam and canal building and land reclamation) (Harrison and Dulvy 2014).

ⁱⁱ The IUCN Red List of Threatened Species uses a set of criteria to evaluate the extinction risk of species and subspecies. For more information see <https://www.iucnredlist.org/>.

- **International trade:** Bycatch is often retained because of the economic value of sawfish fins and rostra.
- **Marine debris:** Entanglement in marine debris and abandoned fishing gear poses a threat to Sawfishes (Seitz and Poulakis 2006).

7. Key Knowledge Gaps

- Recent and accurate estimates of distribution, critical sites, population sizes and life history are lacking;
- Knowledge about effective bycatch mitigation measures is lacking.

8. Key Management and Conservation Gaps

- Only few Range States provide specific protections to sawfish, and enforcement of these laws is variable;
- Bycatch mitigation measures are limited.

9. Suggestions for Conservation and Management Action

- a) Incorporate conservation measures for sawfishes into national legislation of all Parties/Signatories (in compliance with the obligations of the for the Appendix I listed species of CMSⁱⁱⁱ and in line with the objectives of the Sharks MOU)**
- Implement and enforce relevant international measures (e.g. CMS and CITES^{iv}), that prohibit targeting, retaining, landing, transshipping, and selling of sawfish parts.
 - Incorporate sawfish and habitat protection into national legislation of all Parties to CMS/Range States.
 - Assist in drafting, enhancing and promoting new legislation for Range States that do not yet provide legal protection.
- b) Conserve and restore suitable habitats**
- Focus on key habitats and migration corridors for future research to support development of spatial fisheries management.
 - Conserve mangroves and other suitable habitats and stop land reclamation in key habitats.
 - Reduce anthropogenic activities (e.g. pollution) in sawfish habitats.
- c) Improve the understanding of sawfish populations through strategic research, monitoring and information exchange**
- Survey current and historic distributions and abundance along key river systems and coastal areas.
 - Identify critical sites of sawfish species and seasonality.
 - Conduct long-term monitoring of sawfish populations (using non-lethal techniques).

ⁱⁱⁱ Convention on the Conservation of Migratory Species of Wild Animals (CMS).

^{iv} Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

- Address data gaps in biological knowledge (life history parameters) of sawfish.

d) Improve multilateral cooperation among regions and RFBs^v

- Collaboratively draft and support proposal for sawfish Concerted Actions at the next CMS COP^{vi}.
- Engage neighboring countries/non-Signatories to protect Sawfishes and foster their integration in conservation planning and implementation workshops.
- Identify synergies with other Range States/stakeholders to support coordinated and resource-effective research and conservation programs.

e) Enforce compliance with fisheries management regulations, landing and trade bans

- Prioritize enforcement, including to conduct market surveys and patrols, protected area patrols and the prosecution of exporters.
- Improve capacity in species identification through trainings and the dissemination of available ID guides.

f) Identify effective approaches to reduce bycatch and improve survivorship of sawfishes

- Identify gear modifications and fishing practices e.g. soak time and safe release handling guidelines.
- Explore options for spatial management.
- Investigate post-release survivorship of sawfishes to inform improved handling and release protocols.

g) Engage local communities in the conservation of sawfishes

- Provide training to fishing communities on species identification and safe release guidelines.
- Involve local communities in the development of regional management.

h) Enhance or develop where necessary collection of fishery data (including landings, discards, size frequency, catch and effort where needed)

- Collect data on bycatch.
- Develop capacity in research and monitoring in all regions.

i) Raise awareness about the threats to sawfishes

- Inform the public about the need of sawfish conservation and status (illegal trade) and encourage the public to report encounters with sawfishes.

^v Regional Fishery Bodies (RFBs).

^{vi} Conference of Parties (COP)

10. Legal Instruments

Instrument:	Description:	Species:
<p>Barcelona Convention Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean</p>	<p>Annex II: Endangered or threatened species; Parties shall ensure the maximum possible protection and recovery of, while prohibiting the damage to and destruction of, these species.</p>	<p><i>P. pectinate</i> <i>P. pristis</i></p>
<p>Cartagena Convention Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region</p>	<p>Annex III: Parties may regulate the use of these species of flora and fauna in order to ensure and maintain their populations at the highest possible levels.</p>	<p><i>P. pectinata</i></p>
<p>CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora</p>	<p>Appendix I: Species threatened with extinction; trade in specimens of these species is permitted only in exceptional circumstances.</p>	<p>all species</p>
<p>CMS Convention on the Conservation of Migratory Species of Wild Animals</p>	<p>Appendix I: Migratory species threatened with extinction; CMS Parties strive towards strictly protecting these species, conserving or restoring the places where they live, mitigating obstacles to migration and controlling other factors that might endanger them.</p>	<p>all species</p>
	<p>Appendix II: Migratory species that have an unfavourable conservation status and need or would significantly benefit from international cooperation; CMS Parties shall endeavour to conclude global or regional agreements to benefit these species.</p>	<p>all species</p>

Instrument:	Description:	Species:
FAO Food and Agriculture Organization	<u>IPOA Sharks:</u> International Plan of Action for Conservation and Management of Sharks based on which states should adopt and implement a national plan of action for conservation and management of shark stocks (NPO Sharks) if their vessels conduct directed fisheries for sharks or if their vessels regularly catch sharks in non-directed fisheries.	all species
Sharks MOU Memorandum of Understanding on the Conservation of Migratory Sharks	<u>Annex 1:</u> Signatories should endeavor to achieve and maintain a favorable conservation status for these species based on the best available scientific information and taking into account their socio-economic value.	all species

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About the Sharks MOU

The Memorandum of Understanding on the Conservation of Migratory Sharks (Sharks MOU) is the first global instrument for the conservation of migratory species of sharks, rays, skates and chimaeras.

The Sharks MOU is an instrument of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) that engages all relevant stakeholders in addressing threats to migratory species in concert with all other aspects of wildlife conservation and management.

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Contact



UNEP / CMS Secretariat
United Nations Premises
Platz der Vereinten Nationen 1
53113 Bonn, Germany
Tel. (+49 228) 815 2401
Fax. (+49 228) 815 2449
E-mail: cms.secretariat@cms.int