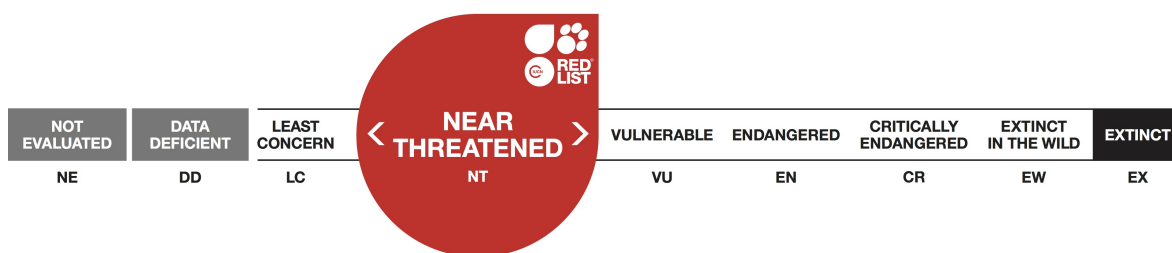


Bythaelurus hispidus, Bristly Catshark

Assessment by: Pollom, R., Akhilesh, K.V., Ali, M., Ebert, D.A., Khan, M.,
Samoilys, M. & Weigmann, S.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Carcharhiniformes	Scyliorhinidae

Taxon Name: *Bythaelurus hispidus* (Alcock, 1891)

Synonym(s):

- *Halaelurus hispidus* (Alcock, 1891)
- *Scyllium hispidum* Alcock, 1891

Common Name(s):

- English: Bristly Catshark

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2019. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 03 September 2019. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>.

Assessment Information

Red List Category & Criteria: Near Threatened [ver 3.1](#)

Year Published: 2019

Date Assessed: April 25, 2018

Justification:

The Bristly Catshark (*Bythaelurus hispidus*) is a small (to 37 cm TL) benthic deep-water shark found on the upper continental slope at depths of 200–800 m. It has a patchy distribution in the Western and Eastern Indian Ocean, from off Kenya, Socotra Island (Yemen), Oman, southern India, the Andaman Islands, and Myanmar. This small shark is viviparous with a low fecundity of two young per litter, suggesting it has low biological productivity. It is a relatively rare bycatch in the deep-water shrimp trawl fishery off southwest India, and there are concerns that the regional population may have been impacted by this intense fishery, though this species may have some refuge in depths outside of the current operations of the trawl fishery (200–500 m). The Bristly Catshark is also likely caught in the Sri Lankan deep-water handline fishery and the new and growing deep-water shark fishery in the Andaman Islands. Given the low productivity of the species and the overlap with fishing pressure across large parts of its range, together with potential refuge in deeper waters, it is suspected that a population reduction approaching 30% has occurred over the past three generations (30 years); therefore, the Bristly Catshark is assessed as Near Threatened, nearly meeting Vulnerable A2d. This species may meet thresholds for being threatened in the near future.

Previously Published Red List Assessments

2004 – Data Deficient (DD)

<https://dx.doi.org/10.2305/IUCN.UK.2004.RLTS.T44228A10875620.en>

Geographic Range

Range Description:

The Bristly Catshark has a patchy distribution in the Indian Ocean, where it is known from Kenya, Socotra Island (Yemen), Oman, southern India, the Andaman Islands, and Myanmar (Weigmann *et al.* 2016, 2018).

Country Occurrence:

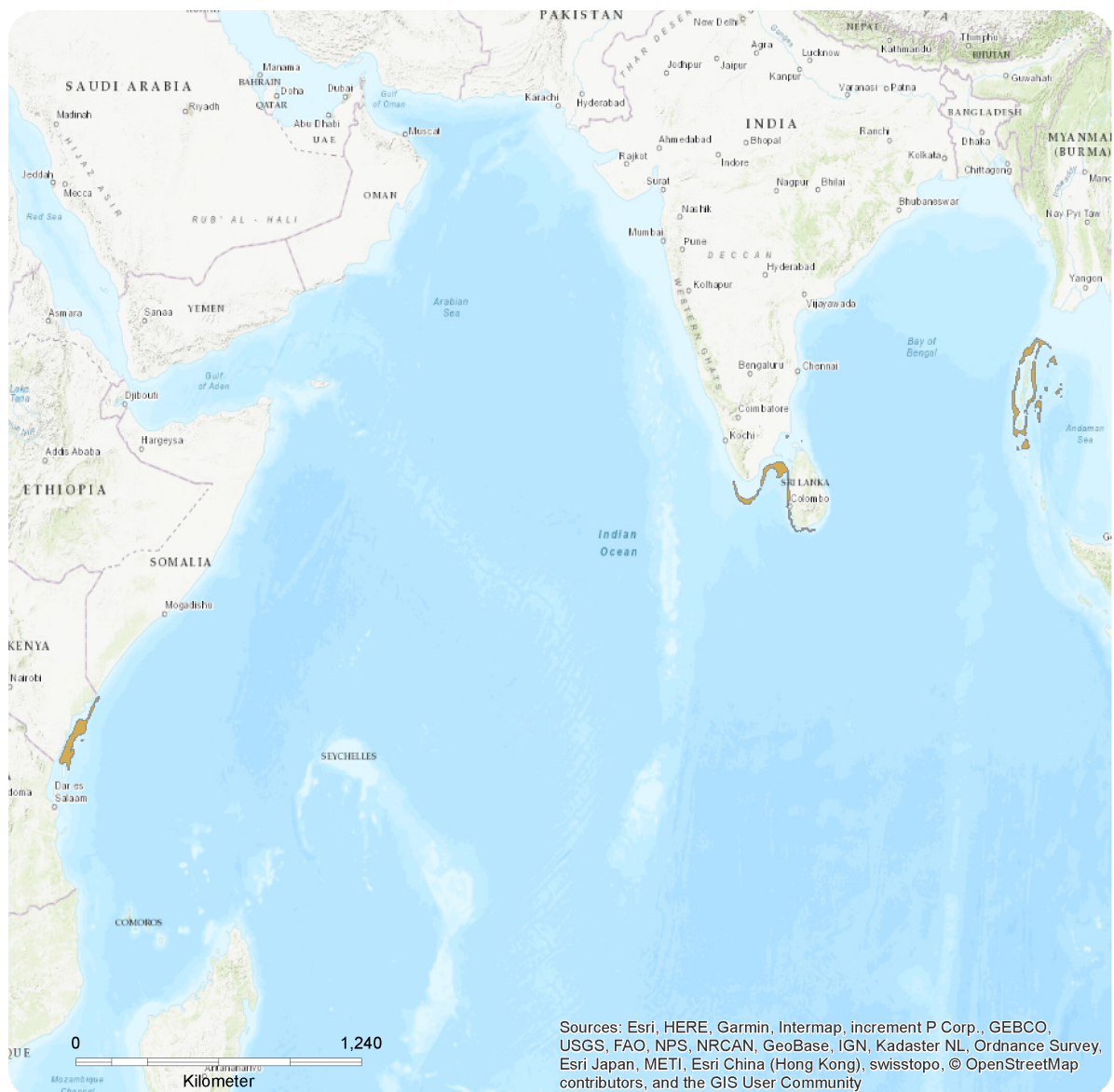
Native: India (Andaman Is.); Kenya; Myanmar; Oman; Yemen (Socotra)

FAO Marine Fishing Areas:

Native: Indian Ocean - western, Indian Ocean - eastern

Distribution Map

Bythaelurus hispidus



Range

Extant (resident)

Compiled by:

IUCN SSC Shark Specialist Group



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

Currently there is no information on the population size or structure of the Bristly Catshark. Formerly this species was common; for example, Nair and Lal Mohan (1973) reported 130 specimens in a single haul in the Gulf of Mannar, whereas Akhilesh *et al.* (2013) reported this species as a relatively rare component of the southwest Indian deep-water shrimp trawl fishery in 2010 and 2011. It is exposed to unmanaged fisheries in other parts of its range, including the Gulf of Aden and the Andaman Islands. Overall, given existing fishing pressure over part of its range, combined with some likely refuge areas in deeper waters, it is suspected that this species has undergone a population reduction of at least 20–29% over the past three generations (30 years).

Current Population Trend: Unknown

Habitat and Ecology (see Appendix for additional information)

The Bristly Catshark is a small species found on the upper continental slope at depths of 200–800 m (Weigmann *et al.* 2018). The maximum size is 37 cm total length (TL) with size-at-maturity reported at 24–26 cm TL for females and 21–28 cm TL for males (Akhilesh *et al.* 2013, Weigmann *et al.* 2018). The species is lecithotrophic viviparous, with embryos developing in thin membranous egg cases *in utero* and pregnant females having one embryo per uterus (Akhilesh *et al.* 2013). Size-at-birth is ~12–13 cm TL. Catsharks are difficult to age and the most reliable age estimates to date are from the Blacktip Sawtail Catshark (*Galeus sauteri*) that has an age-at-maturity of 9 years and maximum age of 21 years, resulting in a generation length of 15 years (Liu *et al.* 2011). The Blacktip Sawtail Catshark is larger than the Bristly Catshark (48 cm vs 37 cm TL) and thus based on scaled-size, the generation length is inferred as 10 years for the Bristly Catshark.

Systems: Marine

Use and Trade

No utilization or commercial trade of this species is currently known to exist.

Threats (see Appendix for additional information)

The main threat to this species is the commercial deep-water shrimp trawl fishery operating in the Arabian Sea off southwest India in which the Bristly Catshark is a relatively rare component of the chondrichthyan bycatch (Akhilesh *et al.* 2011, 2013). That fishery developed in 1999 and expanded rapidly with trawler numbers peaking soon thereafter in 2000–2001 before dropping significantly, although there are still some 300–400 boats operating in the fishery (Fernandez *et al.* 2015). The fishery is intense and operates on the Quilon Bank and Wedge Bank areas off southwest India at depths of 200–500 m. Targeted shark fisheries are beginning to appear in the Andaman Islands, where commercial and artisanal longlines fish for *Centrophorus* species. Deep-water trawl fisheries for slipper lobsters (Scyllaridae) are also active in the area. The depths at which these fisheries operate are unknown but are suspected to be 200–400 m (S. Advani, pers. comm., 13 January 2019). Fisheries in Kenya are thus far not interacting with the Bristly Catshark, but the situation there should be monitored. Any expansion of Kenyan fisheries into deeper waters would likely affect the population. Steep population reductions have been observed in deep-water shark fisheries where data are available (e.g. Graham *et al.* 2001).

Conservation Actions (see Appendix for additional information)

There are currently no species-specific conservation measures in place. India has a seasonal trawl ban in June and July (45 days) that might benefit the species. Research is needed to determine distribution, population size, life history, and trends in abundance. More data are needed regarding the degree to which fisheries interact with this species

Credits

Assessor(s): Pollom, R., Akhilesh, K.V., Ali, M., Ebert, D.A., Khan, M., Samoilys, M. & Weigmann, S.

Reviewer(s): Dulvy, N.K., Crysler, Z. & Kyne, P.M.

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Facilitators(s) and Compiler(s): Kyne, P.M., Pollom, R. & Dulvy, N.K.

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Citation

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External Resources

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Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
11. Marine Deep Benthic -> 11.1. Marine Deep Benthic - Continental Slope/Bathyl Zone (200-4,000m) -> 11.1.1. Hard Substrate	Resident	Suitable	Yes
11. Marine Deep Benthic -> 11.1. Marine Deep Benthic - Continental Slope/Bathyl Zone (200-4,000m) -> 11.1.2. Soft Substrate	Resident	Suitable	Yes

Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.3. Unintentional effects: (subsistence/small scale) [harvest]	Ongoing	Minority (50%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.4. Unintentional effects: (large scale) [harvest]	Ongoing	Minority (50%)	Unknown	Unknown
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions in Place
In-Place Research, Monitoring and Planning
Action Recovery plan: No
Systematic monitoring scheme: No
In-Place Land/Water Protection and Management
Conservation sites identified: No
Occur in at least one PA: Unknown
Area based regional management plan: Unknown
Invasive species control or prevention: Not Applicable
In-Place Species Management
Harvest management plan: No

Conservation Actions in Place
Successfully reintroduced or introduced benignly: No
Subject to ex-situ conservation: No
In-Place Education
Subject to recent education and awareness programmes: No
Included in international legislation: No
Subject to any international management/trade controls: No

Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions Needed
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends

Additional Data Fields

Distribution
Lower depth limit (m): 800
Upper depth limit (m): 200
Habitats and Ecology
Generation Length (years): 10

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