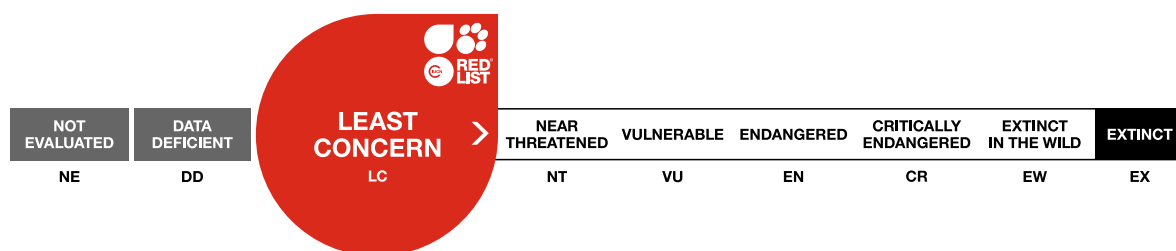


Heterodontus japonicus, Japanese Bullhead Shark

Assessment by: Rigby, C.L., Walls, R.H.L., Derrick, D., Dyldin, Y.V., Herman, K., Ishihara, H., Jeong, C.-H., Semba, Y., Tanaka, S., Volvenko, I.V. & Yamaguchi, A.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Chondrichthyes	Heterodontiformes	Heterodontidae

Scientific Name: *Heterodontus japonicus* Miklouho-Maclay & Macleay, 1884

Synonym(s):

- *Cestracion philippi* ssp. *japonicus* Dumeril, 1865

Common Name(s):

- English: Japanese Bullhead Shark
- Japanese: Nekoame

Taxonomic Source(s):

Eschmeyer, W.N., Fricke, R. and Van der Laan, R. (eds). 2016. Catalog of Fishes: genera, species, references. Updated 29 September 2016. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (Accessed: 29 September 2016).

Assessment Information

Red List Category & Criteria: Least Concern [ver 3.1](#)

Year Published: 2021

Date Assessed: August 29, 2019

Justification:

The Japanese Bullhead Shark (*Heterodontus japonicus*) is a small (to 120 cm total length) shark that occurs in the Northwest Pacific Ocean from Japan to China, including North and South Korea and Taiwan. It is demersal and likely nocturnal on rocky habitats on the continental shelf at depths of 6–125 m. The species is mainly caught in gillnet fisheries, and possibly other fisheries, in rocky habitats across its range. In Japan, the gillnet fisheries that encounter this species seasonally target lobster (*Panilurus* spp.) with the Japanese Bullhead Shark discarded, except for some individuals that are retained for display in aquaria. It is retained by fishing in the Republic of Korea. The species is common in Japan and rare in Taiwan. The rocky habitats and nocturnal behaviour would considerably reduce the threat of fishing pressure and post-release survival is suspected to be high. It is suspected that some localised population reductions may have occurred in areas overlapping with fisheries in rocky habitats but not sufficiently to be close to reaching the population reduction threshold, and the Japanese Bullhead Shark is assessed as Least Concern.

Previously Published Red List Assessments

2009 – Least Concern (LC)

<https://dx.doi.org/10.2305/IUCN.UK.2009-2.RLTS.T161714A5486896.en>

Geographic Range

Range Description:

The Japanese Bullhead Shark is endemic to the Northwest Pacific Ocean off Japan (including the Ogasawara Islands), North and South Korea, China, and Taiwan (Ebert *et al.* 2013a, Dylidin 2015).

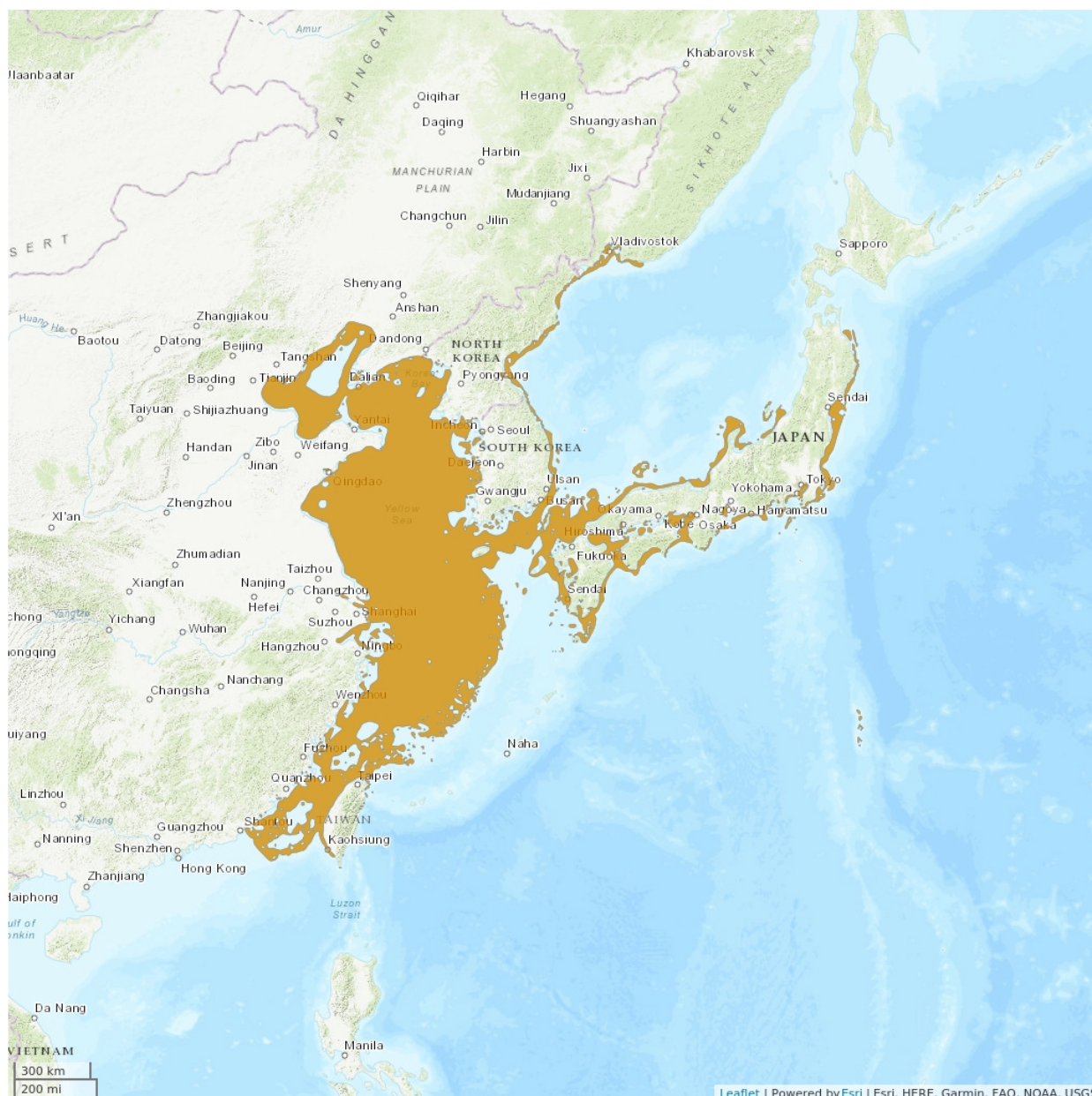
Country Occurrence:

Native, Extant (resident): China; Japan; Korea, Democratic People's Republic of; Korea, Republic of; Taiwan, Province of China

FAO Marine Fishing Areas:

Native: Pacific - northwest

Distribution Map

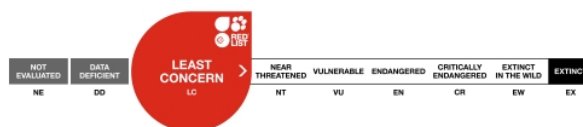


Legend

■ EXTANT (RESIDENT)

Compiled by:

IUCN SSC Shark Specialist Group 2020



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

Population

The species is rare in Taiwan (Ebert *et al.* 2013b) and has been noted as common in shallow waters off Japan (Tanaka and Nakaya 2009). The rocky habitat and nocturnal behaviour would provide considerable refuge from fishing pressure in most areas of this species distribution. Due to fishing threats in some areas, it is suspected the population may have reduced but not sufficiently to be close to meeting the population reduction threshold.

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

The Japanese Bullhead Shark is demersal on the continental shelf at depths of 6–125 m (Nakabo 2013, Weigmann 2016). It prefers rocky habitats including reefs and kelp-covered substrates (Compagno 2001). If similar to other species in the family, it is mainly nocturnal (Ebert *et al.* 2013a). It reaches a maximum size of 120 cm total length (TL), males mature at 69 cm TL and female size-at-maturity is unknown (Ebert *et al.* 2013a). Reproduction is oviparous with pairs of egg cases laid among rocks or kelp at depths of 8–9 m, during 6–12 spawnings from March to September; size-at-birth is 18 cm TL (Ebert *et al.* 2013a). Nothing else is known of its biology.

Systems: Marine

Use and Trade

The species is used for its meat in the Republic of Korea, and possibly China. It is a popular aquarium species in Japan (S. Tanaka unpubl. data 2019).

Threats (see Appendix for additional information)

The Japanese Bullhead Shark is a bycatch of gillnet and possibly other fisheries in rocky habitats across its range, and it is retained in the Republic of Korea. In Japan, it is a bycatch of gillnet fisheries for lobster (*Panilurus* spp.) that operate for less than six months of the year and it is discarded (A. Yamaguchi unpubl. data 2019). Based on other *Heterodontus* species, it is suspected to have low at-vessel-mortality of ~0–3% in gillnets and post-release mortality is also suspected to be low (Tovar-Ávila *et al.* 2010, Ellis *et al.* 2017).

Conservation Actions (see Appendix for additional information)

No specific measures are in place. In China, it is likely that some of the potential rocky reef habitat of this species are within marine protected areas. It is estimated that ~20% of the Chinese coastline is included in Protected Areas (MacKinnon *et al.* 2012). In Taiwan, potential rocky reef habitat of this species would occur within marine protected areas. There are ~32 Protected Areas which cover ~38% of the Taiwan coastline and ~47% of Taiwan territorial seas, with no-entry and no-take areas accounting for accounting for 0.9% and 4.6% of the territorial seas, respectively (MacKinnon *et al.* 2012, Fisheries Agency 2019, Liao *et al.* 2019). Since the mid-2000s, gillnets have been banned within 3 nautical miles (nm) in parts of five counties with a policy of gradual removal of gillnets from within 3 nm of the entire coast and government assistance to transition to line and troll fishing (Fisheries Agency 2019, Liao *et al.* 2019). Further research is needed on population size and trend, and life history, and catch rates should be monitored.

Credits

Assessor(s):	Rigby, C.L., Walls, R.H.L., Derrick, D., Dyldin, Y.V., Herman, K., Ishihara, H., Jeong, C.-H., Semba, Y., Tanaka, S., Volvenko, I.V. & Yamaguchi, A.
Reviewer(s):	Carlson, J. & Dulvy, N.K.
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Authority/Authorities:	IUCN SSC Shark Specialist Group (sharks and rays)

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Citation

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External Resources

For [Supplementary Material](#), and for [Images and External Links to Additional Information](#), please see the Red List website.

Appendix

Habitats

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

Habitat	Season	Suitability	Major Importance?
9. Marine Neritic -> 9.2. Marine Neritic - Subtidal Rock and Rocky Reefs	Resident	Suitable	Yes
9. Marine Neritic -> 9.4. Marine Neritic - Subtidal Sandy	Resident	Suitable	Yes
9. Marine Neritic -> 9.5. Marine Neritic - Subtidal Sandy-Mud	Resident	Suitable	Yes
9. Marine Neritic -> 9.6. Marine Neritic - Subtidal Muddy	Resident	Suitable	Yes
9. Marine Neritic -> 9.7. Marine Neritic - Macroalgal/Kelp	Resident	Suitable	Yes

Use and Trade

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

End Use	Local	National	International
Food - human	Yes	Yes	No
Pets/display animals, horticulture	No	Yes	No

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%)	Negligible declines	Low impact: 4
	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%)	Negligible declines	Low impact: 4
	Stresses:	2. Species Stresses -> 2.1. Species mortality		

Conservation Actions in Place

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

Conservation Action in Place
In-place research and monitoring
Action Recovery Plan: No
Systematic monitoring scheme: No

Conservation Action in Place
In-place land/water protection
Conservation sites identified: No
Area based regional management plan: No
Occurs in at least one protected area: Yes
Invasive species control or prevention: Not Applicable
In-place species management
Harvest management plan: No
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

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
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.2. Harvest level trends

Additional Data Fields

Distribution
Lower depth limit (m): 125
Upper depth limit (m): 6

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