

Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

## TINIAN GROTTO & VALHALLA CAVES ISRA

New Zealand & Pacific Islands Region

### SUMMARY

Tinian Grotto & Valhalla Caves is located on the western side of Tinian Island in the northwestern Pacific Ocean. This area is situated in the Commonwealth of the Northern Mariana Islands, a self-governing commonwealth in association with the United States of America. This area is characterised by sinkholes, caves, and subterranean passages. Within this area there are: **threatened species** and **reproductive areas** (Whitetip Reef Shark *Triaenodon obesus*).

### CRITERIA

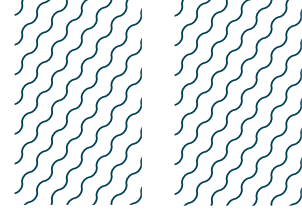
**Criterion A - Vulnerability; Sub-criterion C1 - Reproductive Areas**

NORTHERN  
 MARIANA  
 ISLANDS

0-60 metres

0.08 km<sup>2</sup>





## DESCRIPTION OF HABITAT

Tinian Grotto & Valhalla Caves is located on the western side of Tinian Island in the northwestern Pacific Ocean. This area is situated in the Commonwealth of the Northern Mariana Islands, a self-governing commonwealth in association with the United States of America.

The island of Tinian and Tatsumi Reef are adjacent volcanic structures that are mostly overlain by uplifted carbonate rock (Brainard et al. 2012). Much of the limestone on Tinian is covered by thin to moderately thick soils, but some limestone areas exhibit karst topography, which is formed by dissolution of carbonate rocks and characterised by sinkholes, caves, and subterranean passages (Brainard et al. 2012). There are two known dives sites within the area. 'Tinian Grotto' is found in a large sinkhole that connects to the ocean through several subterranean passages (Brainard et al. 2012). 'Tinian Grotto' starts at the surface and reaches a maximum depth of 22 m. The deeper 'Valhalla Caves' site has a depth between 25-55 m. These two caves are 32 m away.

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 60 m based on the bathymetry of the area.

## ISRA CRITERIA

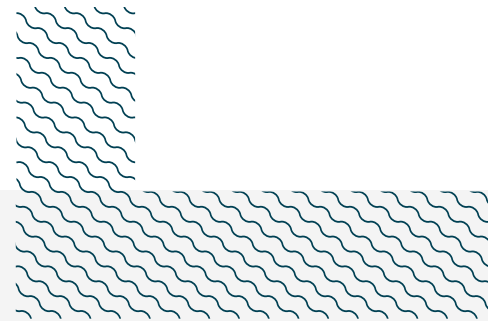
### CRITERION A - VULNERABILITY

One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Vulnerable Whitetip Reef Shark (Simpfendorfer et al. 2020).

### SUB-CRITERION C<sub>1</sub> - REPRODUCTIVE AREAS

Tinian Grotto & Valhalla Caves is an important reproductive area for one shark species.

Between 2019-2021, recreational divers visited Tinian Grotto regularly (~3/month) year-around and frequently observed aggregations of up to five neonate and young-of-the-year (YOY) Whitetip Reef Sharks (J Wolfe pers. obs. 2019-2024). Sharks observed in the caves were visually estimated to measure ~40-50 cm total length (TL), with the largest individuals observed measuring up to ~120 cm TL. The size-at-birth for the Whitetip Reef Shark is 52-60 cm TL (Ebert et al. 2021). Neonates and YOY were present in the area year-round with no life-stage seasonality observed. Recreational divers that frequently visit the Tinian Grotto have observed multiple life stages of Whitetip Reef Sharks in this area (J Wolfe pers. obs. 2019-2024). Since 2021, neonates and YOY Whitetip Reef Sharks have been less frequently observed in Tinian Grotto, probably due to increased dive activity. Generally, YOY Whitetip Reef Sharks have been frequently reported from the deeper caves in the area at the site known as 'Valhalla Caves', with aggregations of up to three individuals. Divers suggest that sharks have moved to this deeper cavern, as this area is less frequently visited (J Wolfe pers. obs. 2019-2024).



---

### **Acknowledgments**

Jay Wolfe (Axe Murderer Tours), Vanessa Bettcher Brito (IUCN SSC Shark Specialist Group - ISRA Project), and Adriana Gonzalez Pestana (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 10 - New Zealand and Pacific Islands workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

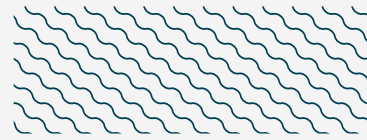
### **Suggested citation**

**IUCN SSC Shark Specialist Group. 2024.** Tinian Grotto & Valhalla Caves ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

## QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
<b>SHARKS</b>													
<i>Triacnodon obesus</i>	Whitetip Reef Shark	VU	0-330	X		X							

IUCN Red List of Threatened Species Categories are available by searching species names at [www.iucnredlist.org](http://www.iucnredlist.org) Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.



## REFERENCES

**Brainard RE, Asher J, Blyth-Skyrme V, Coccagna EF, Dennis K, Donovan MK, Gove JM, Kenyon J, Looney EE, Miller JE, et al. 2012.** Coral reef ecosystem monitoring report of the Mariana Archipelago: 2003-2007. Honolulu: NOAA Fisheries, Pacific Islands Fisheries Science Center Special Publication.

**Ebert DA, Dando M, Fowler S. 2021.** *Sharks of the world: A complete guide, Second edition.* Princeton: Wild Nature Press.

**Simpfendorfer C, Yuneni RR, Tanay D, Seyha L, Haque AB, Bineesh KK, Dharmadi, Bin Ali A, Gautama DA, Maung A, et al. 2020.** *Triaenodon obesus.* *The IUCN Red List of Threatened Species* 2020: e.T39384A173436715. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T39384A173436715.en>