







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

PIONEER BANK ISRA

New Zealand & Pacific Islands Region

SUMMARY

Pioneer Bank is a seamount located in the Northwestern Hawaiian Islands in the United States of America. It is situated ~70 km east of Lisianski Island and ~450 km southwest of Midway Atoll. The area is characterised by sandy substrates with pebbles and coral rubble, and low rugosity. The area overlaps with the Northwestern Hawaiian Islands Key Biodiversity Area and with the Papahānaumokuākea Marine National Monument. Within this area there are: range-restricted species (Hawaiian Spurdog Squalus hawaiiensis).

CRITERIA

Criterion B - Range Restricted

HAWAII

300-450 metres

93.01 km²

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DESCRIPTION OF HABITAT

Pioneer Bank is located in the Northwestern Hawaiian Islands in the United States of America. This seamount is situated ~70 km east of Lisianski Island and ~450 km southwest of Midway Atoll (Uchida & Uchiyama 1986). The summit extends ~29 km from northeast to southwest and ~21 km from northwest to southeast (Mejía-Mercado & Baco 2022). The area is characterised by sandy substrates with pebbles and low rugosity on the northeast side, hard substrates and low rugosity on the northwest and hard substrates with coral rubble and low rugosity on the south (Mejía-Mercado & Baco 2022). The sea bottom temperature averages ~9.8°C (Mejía-Mercado & Baco 2022).

The area overlaps with the Northwestern Hawaiian Islands Key Biodiversity Area (KBA 2024) and with the Papahānaumokuākea Marine National Monument (UNEP-WCMC & IUCN 2024).

This Important Shark and Ray Area is benthic and subsurface and is delineated from 300 m to 450 m based on the distribution of the Qualifying Species in the area.

ISRA CRITERIA

CRITERION B - RANGE RESTRICTED

This area holds the regular presence of the Hawaiian Spurdog as a resident range-restricted species. Autonomous underwater vehicle surveys (AUV) conducted in Pioneer Bank in the Northwestern Hawaiian Islands during 2014 and 2015, which included 2-3 replicate photo transects of ~1,000 metres each, detected the Hawaiian Spurdog at depths of 300-450 m (Mejía-Mercado & Baco 2022). Thirty-eight individuals were observed on the northwest (in 2014) and northeast (in 2015) sides of the seamount (Mejía-Mercado & Baco 2022). AUV surveys from 2016 and 2017 confirm the species' continued presence in the area and have indicated that the northwest side of this seamount shows the highest abundance of Hawaiian Spurdog compared to other seamounts in the region (Mejía-Mercado & Baco 2023; Mejía-Mercado unpubl. data 2024). The Hawaiian Spurdog is only found within the Insular Pacific-Hawaiian Large Marine Ecosystem.



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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				Α	В	C1	C2	C3	C4	C5	Dı	D2
SHARKS												
Squalus hawaiiensis	Hawaiian Spurdog	LC	100-500		Х							

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

REFERENCES

Key Biodiversity Areas (KBA). 2024. Key Biodiversity Areas factsheet: Northwestern Hawaiian Islands. Available at: https://www.keybiodiversityareas.org/site/factsheet/29587 Accessed September 2024.

Mejía-Mercado B, Baco A. 2022. Characterization and spatial variation of the deep-sea fish assemblages on Pioneer Bank, Northwestern Hawaiian Islands. *Mαrine Ecology Progress Series* 692: 99–118. https://doi.org/10.3354/meps14071

Mejía-Mercado BE, Baco AR. 2023. Horizontal distribution of benthic and demersal fish assemblages on three seamounts in the Papahānaumokuākea Marine National Monument. Deep-Seα Research Part I: Oceanographic Research Papers 195: 104003. https://doi.org/10.1016/j.dsr.2023.104003

Uchida RN, Uchiyama JH. 1986. Fishery atlas of the Northwestern Hawaiian Islands. NOAA Technical Report NMFS 38. US Department of Commerce/National Oceanic and Atmospheric Administration/National Marine Fisheries Service: Hawaii. https://spo.nmfs.noaa.gov/sites/default/files/legacy-pdfs/tr38.pdf

UNEP-WCMC & IUCN. 2024. Protected Planet: The World Database on Protected Areas (WDPA) and World Database on Other Effective Area-based Conservation Measures (WD-OECM) [Online], February 2024, Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net. Accessed September 2024.