

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

TYRRHENIAN ISRA

Mediterranean and Black Seas Region

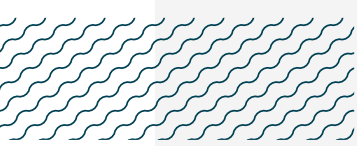
SUMMARY

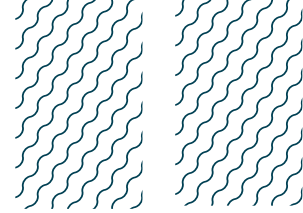
Tyrrhenian is a large area between the Italian peninsula and the east coasts of southern Corsica and Sardinia. The area is characterised by habitats that include mostly pelagic waters over an abyssal plain scattered with ridges and seamounts. The northern part of the area includes a portion of the Tuscan Archipelago National Park, and the North-western Mediterranean Pelagic Ecosystem Ecologically or Biologically Significant Marine Area. Within this area there are: **threatened species** and **undefined aggregations** (Spinetail Devil Ray *Mobula mobular*).

CRITERIA

Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations

— —
ITALY — —
FRANCE — —
 — —
0-1,112 metres — —
 — —
49,244.9 km² — —
 — —





DESCRIPTION OF HABITAT

Tyrrhenian is a large area between the Italian peninsula and the east coasts of southern Corsica and Sardinia. The area includes mostly pelagic habitats over an abyssal plain scattered with ridges and seamounts, typical of the Tyrrhenian Sea. This sea hosts delicate coastal and offshore ecosystems, and is characterised by rich hydrodynamics, driven by interactions between the local forcing, the topography, the bathymetry of the area, and exchanges with adjacent sub-basins (Iacono et al. 2021).

The northern part of the area includes a portion of the Tuscan Archipelago National Park, and the North-western Mediterranean Pelagic Ecosystem Ecologically or Biologically Significant Marine Area (CBD 2023).

This Important Shark and Ray Area is pelagic and is delineated from surface waters (0 m) to 1,112 m based on the known depth range of the Qualifying Species.

ISRA CRITERIA

CRITERION A - VULNERABILITY

The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Spinetail Devil Ray is assessed as Endangered (Marshall et al. 2022).

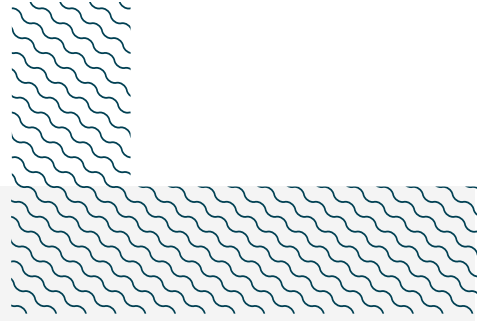
SUB-CRITERION C5 - UNDEFINED AGGREGATIONS

Tyrrhenian is an important area for aggregations of one ray species.

Evidence from aerial surveys indicates that Spinetail Devil Ray aggregate in the area during summer in densities comprised between 0.58 and 4.19 individuals per grid cell (17 km²) (Notarbartolo di Sciara et al. 2015). These data are based on a total of 118 sightings made in two separate years (2010 and 2013), with a total population estimate of 3,265 animals (CV = 15.1).

The reason(s) for this aggregation is/are still undefined. Spinetail Devil Ray is known to feed in the area, and there are a few instances in which stomach contents could be examined in individuals taken as bycatch. Likewise, Spinetail Devil Ray is known to migrate across the area in its seasonal movements within the Mediterranean.





Acknowledgments

Giuseppe Notarbartolo di Sciara (Tethys Research Institute) and Théophile L. Mouton (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2023 ISRA Region 3 - Mediterranean and Black Seas workshop for their contributions to this process.

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Suggested citation

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QUALIFYING SPECIES

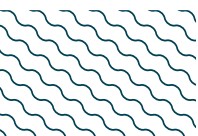
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met (mark with an 'X')							
				A	B	C1	C2	C3	C4	C5	D1
RAYS											
<i>Mobula mobular</i>	Spinetail Devil Ray	EN	0-1,112	X						X	

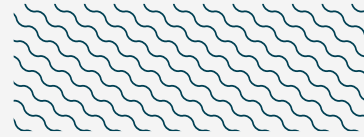
SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Alopias vulpinus</i>	Common Thresher	VU
<i>Carcharodon carcharias</i>	White Shark	VU
<i>Cetorhinus maximus</i>	Basking Shark	EN
<i>Isurus oxyrinchus</i>	Shortfin Mako	EN
<i>Prionace glauca</i>	Blue Shark	CR*
RAYS		
<i>Pteroplatytrygon violacea</i>	Pelagic Stingray	LC

*Assessed as CR in a Mediterranean regional assessment but considered NT globally.

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





REFERENCES

Convention on Biological Diversity (CBD). 2023. North-western Mediterranean Pelagic Ecosystems Ecologically or Biologically Significant Areas (EBSAs). Available at: <https://chm.cbd.int/database/record?documentID=204125> Accessed May 2023.

Iacono R, Napolitano E, Palma M, Sannino G. 2021. The Tyrrhenian Sea circulation: a review of recent work. *Sustainability* 13(11): 6371. <https://doi.org/10.3390/su13116371>

Marshall A, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, Rigby CL, et al. 2022. *Mobula mobular* (amended version of 2020 assessment). *The IUCN Red List of Threatened Species 2022*: e.T110847130A214381504. <https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T110847130A214381504.en>

Notarbartolo di Sciara G, Lauriano G, Pierantonio N, Cañadas A, Donovan G, Panigada S. 2015. The devil we don't know: investigating habitat and abundance of endangered giant devil rays in the North-western Mediterranean Sea. *PloS ONE* 10(11): e0141189. <https://doi.org/10.1371/journal.pone.0141189>