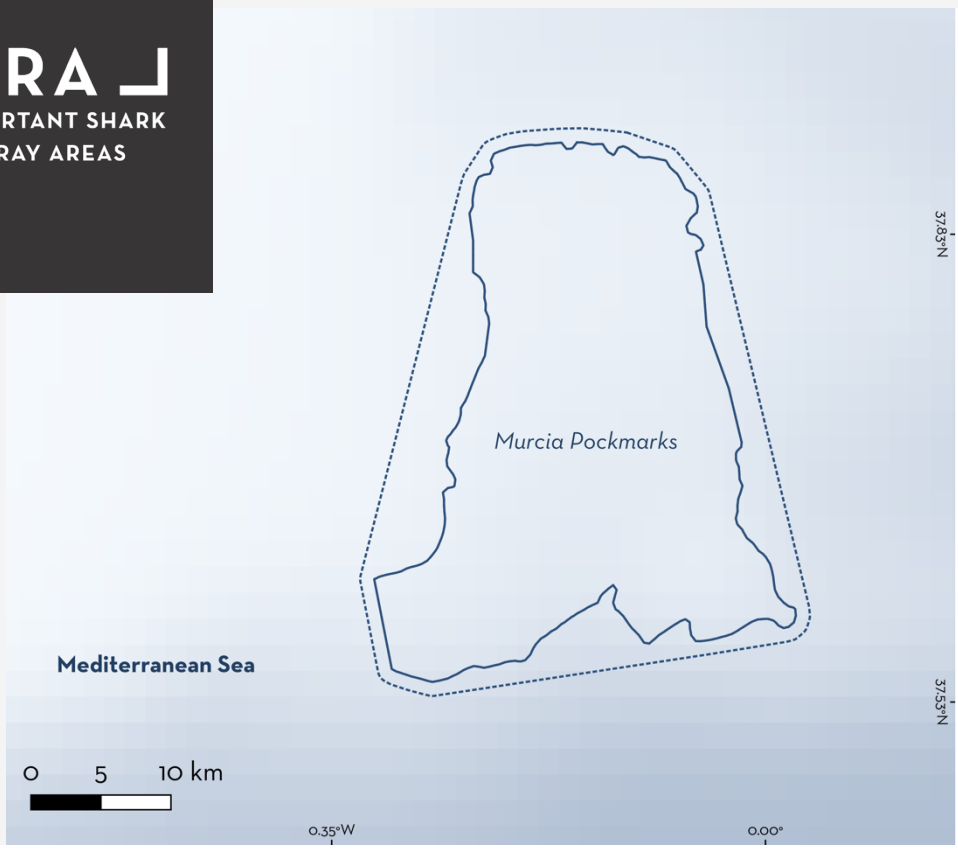
ISRA
IMPORTANT SHARK AND RAY AREAS



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

MURCIA POCKMARKS ISRA

Mediterranean and Black Seas Region

SPAIN

300-800 metres

682.6 km²

SUMMARY

Murcia Pockmarks is located in a transition zone between the Alboran Sea and the Algerian-Balearic basin in the western Mediterranean Sea. It includes the seamount of Seco de Palos, the knolls Planazo and Plis-Plas, and a muddy field of pockmarks created by the expulsion of gas and water. It is characterised by habitats that are considered Vulnerable Marine Ecosystems, including sponges (Demospongiae), gorgonian assemblages, yellow tree coral, sea-pen fields, and bamboo coral gardens. This area overlaps with the North-western Mediterranean Benthic Ecosystems Ecologically or Biologically Significant Marine Area. Within the area there are: **threatened species** (Velbet Belly Lanternshark *Etmopterus spinax*); **range-restricted species** (Starry Skate *Raja asterias*); and **reproductive areas** (Velbet Belly Lanternshark).

CRITERIA

Criterion A – Vulnerability; Criterion B – Range Restricted; Sub-criterion C1 – Reproductive Areas

DESCRIPTION OF HABITAT

Murcia Pockmarks is located in a transition zone between the Alborán Sea and the Algerian-Balearic basin off the coast of southeastern Iberian Peninsula in Spain (western Mediterranean Sea). Oceanographically, the area represents a connectivity zone between the Alborán and Balearic Seas, where Atlantic and Mediterranean waters converge, forming an anticyclonic eddy through the Cabo de Palos-Cabo Ténés oceanographic front (Ojeda et al. 2022). This area includes the seamount of Seco de Palos, the knolls Planazo and Plis-Plas, and a muddy field of pockmarks created by the expulsion of gas and water. Submarine canyons create upwelling events that result in a rich benthic community that includes large sponges (Demospongiae; e.g., *Pachastrella* spp., *Phakellia* spp., *Poecillastra* spp.), gorgonian assemblages (*Bebryce* spp., *Swiftia* spp., *Nicella* spp., *Paramuricea* spp., *Acanthogorgia* spp., *Placogorgia* spp.), cold-water white corals (genera *Desmophyllum* and *Madrepora*), and Yellow Coral (*Dendrophyllia cornigera*) on hard substrates, and sea-pen fields and bamboo coral gardens (*Isidella elongata*) on muddy substrates (Rossi et al. 2014; Cobo-Viveros et al. 2022; Ramos et al. 2022).

Reefs and pockmarks are considered key-priority habitats by the European Habitats Directive (92/43/ECC). Most of these benthic communities are considered Vulnerable Marine Ecosystems and Essential Fish Habitat by the Food and Agriculture Organization of the United Nations. Several habitat-building species protected by the Barcelona Convention of the Mediterranean Action Plan in the context of the Regional Seas Programme of the United Nations Environment Programme (UNEP-MAP) are found in the area like White Gorgonian (*Callogorgia verticillata*), Black Coral (*Savalia savaglia*), and Yellow Coral.

This area is within an Ecologically or Biologically Significant Marine Area (EBSA), the North-western Mediterranean Benthic Ecosystems EBSA (CBD 2023).

This Important Shark and Ray Area is benthopelagic from 300 to 800 m depth, based on the bathymetry of the area and the spatial distribution of key habitats, such as seamounts and the field of pockmarks.

ISRA CRITERIA

CRITERION A – VULNERABILITY

One Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species™. The Velvet Belly Lanternshark is assessed as Vulnerable (Finucci et al. 2021).

CRITERION B – RANGE RESTRICTED

This area holds the regular presence of the Starry Skate as a resident range-restricted species. This species has been encountered yearly from 2002 to 2017 (except for 2004), being found in 17.2% of scientific benthic trawls in the area through the Mediterranean International Trawl Survey (MEDITS) (Arroyo et al. 2020). This area also overlaps with the highest abundance (24 individuals/km^2) of this species in the Spanish western Mediterranean Sea (from Cap Creus to Cabo de Palos) according to MEDITS data collected between 2002–2012 during the early boreal summer period (May–July) (Giménez et al. 2020). Starry Skate is distributed primarily in the Mediterranean Sea Large Marine Ecosystem (LME) and only very marginally in the Canary Current LME and Iberian Coastal LME.

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Murcia Pockmarks is an important reproductive area for one shark species. A total of 148 Velvet Belly Lanternsharks were caught in MEDITS trawls with 73 of them captured since 2010 (Arroyo et al. 2020). The mean estimated size over the whole dataset was 18 ± 5 cm total length (TL), with a range of 11–29 cm TL. Over 60% of specimens were close to the size-at-birth (8–14 cm TL) (Marano et al. 2000), indicating that this area is important for neonates and young-of-the-year, as the regular presence of this life-stage has been recorded over multiple years (1994–2017). This area also overlaps with one of the highest abundances (12 individuals/km^2) of this species in the Spanish western Mediterranean Sea (from Cap Creus to Cabo de Palos) according to MEDITS data collected between 2002–2012 during the early summer period (May–July) (Giménez et al. 2020).

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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
SHARKS												
Etmopterus spinax	Velvet Belly Lanternshark	VU	70–2,000	X		X						
RAYS												
Raja asterias	Starry Skate	NT	0–700		X							

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Alopias superciliosus	Bigeye Thresher	VU
Alopias vulpinus	Common Thresher	VU
Carcharhinus altimus	Bignose Shark	NT
Carcharhinus obscurus	Dusky Shark	EN
Carcharias taurus	Sand Tiger Shark	CR
Carcharodon carcharias	White Shark	VU
Centrophorus uyato	Little Gulper Shark	EN
Cetorhinus maximus	Basking Shark	EN
Dalatias licha	Kitefin Shark	VU
Echinorhinus brucus	Bramble Shark	EN
Galeorhinus galeus	Tope	CR
Galeus atlanticus	Atlantic Sawtail Catshark	NT
Galeus melastomus	Blackmouth Catshark	LC
Heptranchias perlo	Sharpnose Sevengill Shark	NT
Hexanchus griseus	Bluntnose Sixgill Shark	NT
Isurus oxyrinchus	Shortfin Mako	CR*
Isurus paucus	Longfin Mako	EN
Lamna nasus	Porbeagle	VU
Mustelus mustelus	Common Smoothhound	EN
Odontaspis ferox	Smalltooth Sand Tiger	VU
Oxynotus centrina	Angular Roughshark	EN
Prionace glauca	Blue Shark	CR*
Scyliorhinus canicula	Smallspotted Catshark	LC
Scyliorhinus stellaris	Nursehound	VU
Sphyrna lewini	Scalloped Hammerhead	CR
Sphyrna zygaena	Smooth Hammerhead	VU
Squalus acanthias	Spiny Dogfish	VU
Squalus blainville	Longnose Spurdog	DD
RAYS		
Bathytoshia lata	Brown Stingray	VU

Dipturus oxyrinchus	Longnosed Skate	NT
Leucoraja circularis	Sandy Skate	EN
Leucoraja naevus	Cuckoo Skate	LC
Mobula mobular	Spinetail Devil Ray	EN
Myliobatis aquila	Common Eagle Ray	CR
Raja brachyura	Blonde Skate	NT
Raja clavata	Thornback Skate	NT
Raja miraletus	Brown Skate	LC
Raja montagui	Spotted Skate	LC
Rostroraja alba	White Skate	EN
Tetronarce nobiliana	Great Torpedo Ray	LC
Torpedo marmorata	Marbled Torpedo Ray	VU
CHIMAERAS		
Chimaera monstrosa	Rabbitfish	VU

*Assessed as CR in a Mediterranean regional assessment but considered NT (Blue Shark) and EN (Shortfin Mako) 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.

SUPPORTING INFORMATION

There are additional indications that this area might be important for the reproduction of Kitefin Shark. Six specimens captured in the MEDITS surveys from 1994–2018 in this area (2 specimens in the last 15 years) ranged between 35 and 45 cm TL (mean = 41 ± 4 cm TL) (Arroyo et al. 2020). The size-at-birth of this species is 30–40 cm TL (Finucci et al. 2018), and thus these specimens were considered young-of-the-year. Further information is needed to understand the importance of this area for reproduction.

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