

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

EASTERN KORYAK SLOPE ISRA

Asia Region

SUMMARY

Eastern Koryak Slope is located in the western Bering Sea in the waters of the Russian Federation. The area is characterised by a steep slope with underwater canyons. This area overlaps with the East and South Chukotka Coast Ecologically or Biologically Significant Marine Area. Within the area there are: **undefined aggregations** (e.g., Roughtail Skate *Bathyraja trachura*).

CRITERIA

Sub-criterion C5 - Undefined Aggregations

RUSSIAN
 FEDERATION

200-1,000
 metres

6,100.5 km²





DESCRIPTION OF HABITAT

Eastern Koryak Slope is located in the western Bering Sea in the Russian Federation. The shelf, the continental slope, and the deep-sea basin are clearly distinguished in the relief of the seafloor. The area is characterised by rift-breaking through valleys, which are the basis for the formation of fjords (Anastasia Bay, Dezhnev Bay). The shelf width in this area is narrow and varies between 20–80 km (Terziev 1999). The continental slope is steep and dissected by underwater valleys, many of which are typical underwater canyons (Udintsev et al. 1959).

This area is influenced by the Navarin Current (Matishov et al. 2009) and most of the year, as in the rest of the Bering Sea, is covered with ice. Almost the entire mass of ice in the Bering Sea is of local origin, meaning that it forms, collapses, and melts in the sea itself. In early November, ice appears in the area of Cape Navarin, and in mid-November it spreads to Olyutor Cape (Arsenyev 1967). The sea surface temperature decreases from south to north. In winter, it ranges from 0–1.5°C while in spring the water begins to warm up and the ice melts, producing maximum sea surface temperatures of 4–8°C during summer (Arsenyev 1967).

The area overlaps with the East and South Chukotka Coast Ecologically or Biologically Significant Marine Area (EBSA; CBD 2024).

This Important Shark and Ray Area is benthopelagic and subsurface and is delineated from 200 m to 1,000 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Eastern Koryak Slope is an important area for undefined aggregations of five ray species.

Skates are known to aggregate, with temporal changes in aggregations related to sex and life-stage segregations (Swain & Benoît 2006; Frisk 2010; Hoff 2010). Skate aggregations are usually related to high density areas where large catch quantities occur (Bizzarro et al. 2014). Scientific surveys using benthic trawls between 2010–2021 showed that aggregations of Roughtail Skate, Alaska Skate, Whitebrow Skate, Duskypurple Skate, and Whiteblotched Skate regularly occur in Eastern Koryak Slope (Orlov & Volvenko 2022; Orlov & Volvenko unpubl. data 2023). Catch-per-unit-effort (CPUE; individuals/km²) for each species was calculated based on the area swept by survey trawls (Volvenko 2014; Orlov & Volvenko 2022).

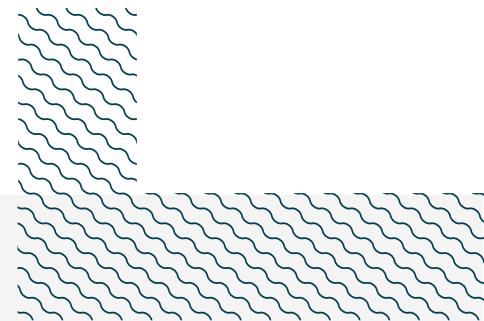
This area holds the largest abundance of Whiteblotched Skate (mean: = 125 individuals/km², max = 1,129 individuals/km²) in Russian waters of the Northwest Pacific (Orlov & Volvenko 2022; Grigorov et al. in press). Compared to other sampled areas, the largest abundances were found in Eastern Koryak Slope year-round, except for November and December, at depths between 120–752 m, with higher abundances recorded at depths >200 m and with multiple individuals caught in a single haul (Orlov & Volvenko 2022). Further information is needed to confirm the nature of these aggregations.

This area holds the second largest abundance of Duskypurple Skate (mean = 164 individuals/km², max = 2,721 individuals/km²) in Russian waters of the Northwest Pacific (Orlov 2003; Orlov & Volvenko 2022; Orlov & Volvenko unpubl. data 2023). Compared to other sampled areas, the largest abundances were found in Eastern Koryak Slope between January–October at depths between 235–966 m with multiple individuals caught in a single haul. Further information is needed to confirm the nature of these aggregations.

This area holds the largest abundance of Whitebrow Skate (mean = 107 individuals/km², max = 574 individuals/km²) in Russian waters of the Northwest Pacific (Orlov & Volvenko 2022; Orlov & Volvenko unpubl. data 2023). Compared to other sampled areas, the largest abundances were found in Eastern Koryak Slope between March–September, at depths between 245–760 m, with multiple individuals caught in a single haul. Based on stomach content analysis from 68 individuals (58 with full stomachs), Humpy Shrimp *Pandalus goniurus* is the main prey of this species (Orlov 2003). However, further information is needed to confirm the nature of these aggregations.

This area holds the largest abundance of Alaska Skate (mean = 114 individuals/km², max = 1,664 individuals/km²) in Russian waters of the Northwest Pacific (Orlov & Volvenko 2022; Orlov & Volvenko unpubl. data 2023). Individuals of this species were caught in other areas of the region but in minimal numbers compared to Eastern Koryak Slope where it was caught between July–December at depths of 39–735 m, with higher abundances recorded at depths >300 m and multiple individuals caught in a single haul (Orlov & Volvenko 2022). Based on stomach content analysis from 113 individuals (86 with full stomachs), Pacific Herring *Clupea pallasii* and Walleye Pollock *Gadus chalcogrammus* are the main prey of the Alaska Skate (Orlov 2003) and are also seasonal target species for fisheries in the area. It has been proposed that larger Alaska Skates migrate to more coastal areas to feed during summer while younger ones stay in deeper waters (Grigorov et al. 2015). However, further information is needed to confirm the nature of these aggregations.

This area holds the largest abundance of Roughtail Skate (mean = 220 individuals/km², max = 975 individuals/km²) in Russian waters of the Northwest Pacific (Orlov & Volvenko 2022; Orlov & Volvenko unpubl. data 2023). Individuals of this species were caught in other areas of the region but in minimal numbers compared to Eastern Koryak Slope where it was found between July–December at depths between 540–937 m with multiple individuals caught in a single haul (Orlov & Volvenko 2022). Further information is needed to confirm the nature of these aggregations.



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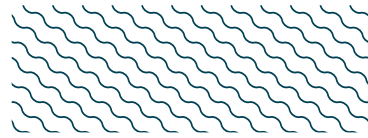
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QUALIFYING SPECIES

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	
RAYS													
<i>Bathyraja maculata</i>	Whiteblotched Skate	LC	73-1,200								X		
<i>Bathyraja matsubarai</i>	Dusky purple Skate	LC	120-2,000								X		
<i>Bathyraja minispinosa</i>	Whitebrow Skate	LC	150-1,420								X		
<i>Bathyraja parmifera</i>	Alaska Skate	LC	15-400								X		
<i>Bathyraja trachura</i>	Roughtail Skate	LC	90-2,900								X		

SUPPORTING SPECIES



Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Somniosus pacificus</i>	Pacific Sleeper Shark	NT
RAYS		
<i>Bathyraja aleutica</i>	Aleutian Skate	LC
<i>Bathyraja interrupta</i>	Bering Skate	LC
<i>Bathyraja taranetzi</i>	Mud Skate	LC
<i>Bathyraja violacea</i>	Okhotsk Skate	LC

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.





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