

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

COPPER RIVER DELTA ISRA

North American Pacific Region

SUMMARY

Copper River Delta is located in Alaskan waters of the United States of America. It sits in the Gulf of Alaska and is characterised by a narrow continental shelf with sandy and muddy substrates. The area receives a large freshwater input that, in combination with coastal currents, promote a high-productivity area. The area overlaps with the Copper Sands Research Natural Area. Within this area there are: **undefined aggregations** (Big Skate *Beringaja binocularata*).

CRITERIA

Sub-criterion C5 - Undefined Aggregations

—	—
UNITED STATES OF AMERICA	
—	—
0-120 metres	
—	—
887.4 km²	
—	—





DESCRIPTION OF HABITAT

Copper River Delta is located in Alaskan waters of the United States of America. It is situated in the Gulf of Alaska and extends from the barrier islands in the delta that separate the tidal mudflats from the narrow continental shelf. The area is characterised by sandy and muddy substrates (Powers et al. 2002).

The area receives freshwater and sediment inputs from the Copper River, which is higher during boreal summer, after the spring ice melt (Powers et al. 2002). It is also influenced by the Alaska Coastal Current, an eastern boundary current forced by strong winds and influenced by freshwater input from rivers and glaciers that produces mixing in the column water. These processes along with the formation of eddies during autumn and winter along the continental slope contribute to the high productivity of the area (Stabeno et al. 2004; Weingartner et al. 2009; Mordy et al. 2023).

The area overlaps with the Copper Sands Research Natural Area (UNEP-WCMC & IUCN 2026).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 120 m based on the bathymetry of the area.

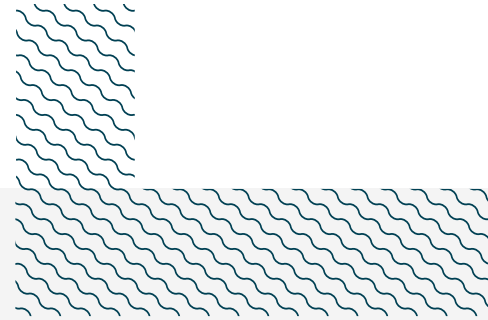
ISRA CRITERIA

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Copper River Delta is an important area for undefined aggregations of one 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). Between 1982–2025, the Alaska Fisheries Science Center (AFSC) - National Oceanic and Atmospheric Administration (NOAA) conducted trawl surveys during the late spring and summer in the Bering Sea, the Aleutian Islands, and the Gulf of Alaska (NOAA-AFSC 2026). Temporal coverage of the surveys varies per region with most conducted annually (e.g., continental shelf surveys in the Bering Sea), or biennially (e.g., Gulf of Alaska) since 1999 (Hoff 2016; Siple et al. 2024; Markowitz et al. 2025; Dowlin et al. 2026). The continental slope survey in the Bering Sea stopped in 2016 (Markowitz et al. 2025). Surveys are conducted at fixed stations or following a stratified random survey design and covering depths from 0–1,000 m divided in multiple depth strata across 300–500 stations per region. In general, otter trawls of ~25 m headrope and ~34 m footrope were used and tows lasted between 15–30 minutes at a speed of ~3 knots. Catch-per-unit-effort (CPUE) was estimated as the number of individuals/number of egg cases per square kilometre (no/km²) and the area swept (km²) as the linear distance towed, multiplied by the mean net width (Hoff 2016; Siple et al. 2024; Markowitz et al. 2025; Dowlin et al. 2026).

Between 1990–2025, aggregations of Big Skate were regularly recorded in this area. During this period, Big Skate was recorded in 1,298 tows during trawl surveys across the whole region, of which 49 (3.8%) tows were recorded inside this area in June–August across all surveyed years mostly at depths of 45–120 m (total range = 15–150 m; NOAA-AFSC 2026). The highest mean CPUE of Big Skate in the region was reported from this area (mean = 241.9 individuals/km²; 18.6–1,673.5) compared to adjacent areas in the region (mean CPUE outside the region = average = 80.2 individuals/km²; 16.9–2,047.2). Multiple individuals (>5) were recorded in 14 tows (28.6% of the tows inside this area) with 64 being the maximum number of individuals recorded in a single tow. Additional information is required to understand the nature and function of these aggregations.



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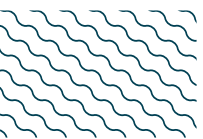
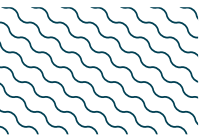
QUALIFYING SPECIES

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>Beringraja binoculata</i>	Big Skate	LC	0-800							X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Squalus suckleyi</i>	North Pacific Spiny Dogfish	LC
RAYS		
<i>Bathyraja interrupta</i>	Bering Skate	LC
<i>Caliraja rhina</i>	Longnose 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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