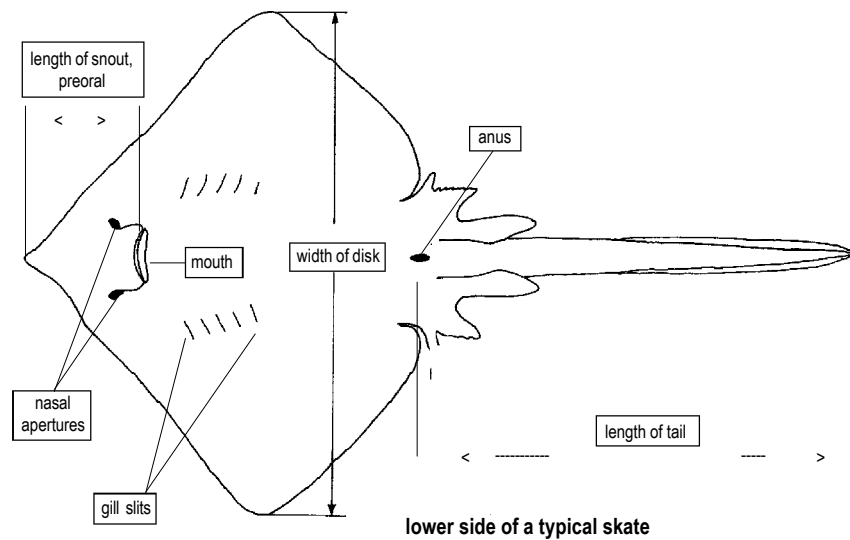
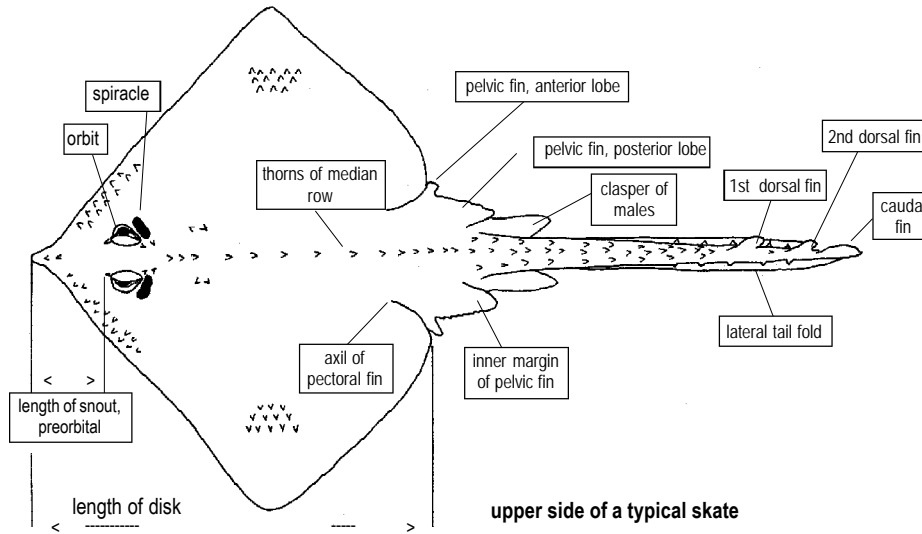


# BATOID FISHES

Rays, Skates, Guitar Fishes & Mantas

## Technical terms and measurements



# Guide to the Orders and Families of batoid fishes found in the Red Sea and Gulf of Aden

## How to use this guide

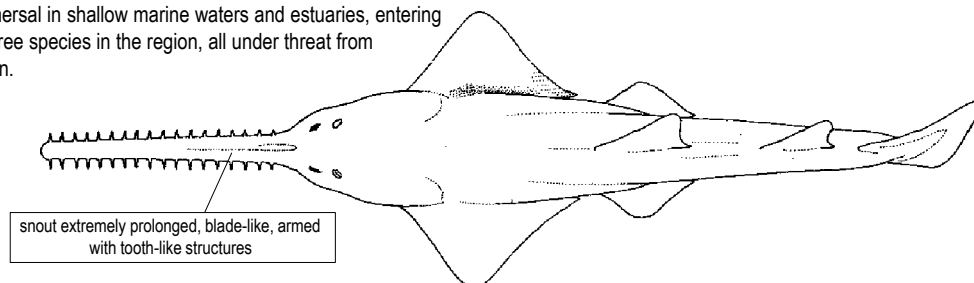
Readers are strongly advised to follow these simple steps in order to successfully identify any shark or batoid found in the region. First, read **carefully** through the description of key characters listed under each Order. Use the illustrations of the Families under each Order only as a secondary aid in making certain that the right Order has been found. Once the right Order has been identified, proceed to narrow down on the Family of the specimen using the illustration and key characters for the Family annotated in each illustration; make use of the size data included for each family. Once the Family has been identified, move to the corresponding pages where each species for that Family is illustrated. These illustrations and the key characters marked on them should allow proper identification of all sharks and batoids known from the region.

### ORDER PRISTIFORMES - Sawfishes

Body shark-like with a saw-like elongated snout bearing a row of strong lateral teeth on each side. Gill slits on the underside of the head.

#### PRISTIDAE Sawfishes

To 7.3 m. Demersal in shallow marine waters and estuaries, entering freshwater. Three species in the region, all under threat from overexploitation.

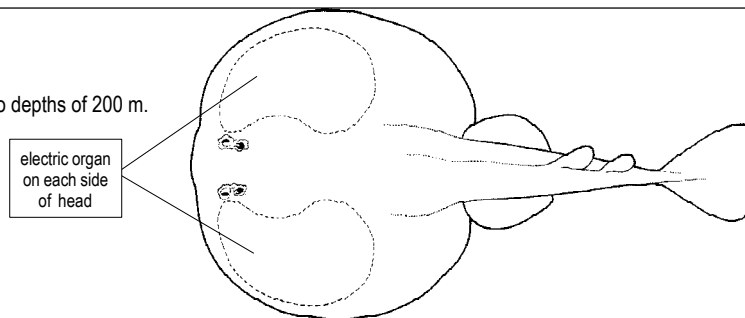


### ORDER TORPEDINIFORMES – Electric rays

Pectoral fins greatly expanded and fused with head and trunk, forming a large oval disc; tail stout and shark-like, without any spines. A large electric organ on each side of head, usually visible through the skin as a pattern of hexagonal markings.

#### TORPEDINIDAE Electric rays

To 1.3 m. Demersal, from shallow waters to depths of 200 m. Probably two species in the region.



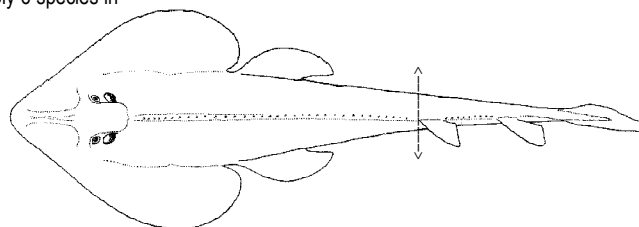
## ORDER RHINOBATIFORMES – Guitarfishes, wedgefishes and shark-rays

Body elongated and shark-like with pectoral fins expanded and fused with head and trunk; two sub-equal and well separated dorsal fins; no saw-like snout.

### RHINOBATIDAE Guitar fishes

To 3 m. Demersal, in inshore waters and sometimes in deeper waters of the upper slope, off sandy beaches, muddy bays, estuaries, and off river mouths. From the intertidal down to 366 m. Possibly 6 species in the region.

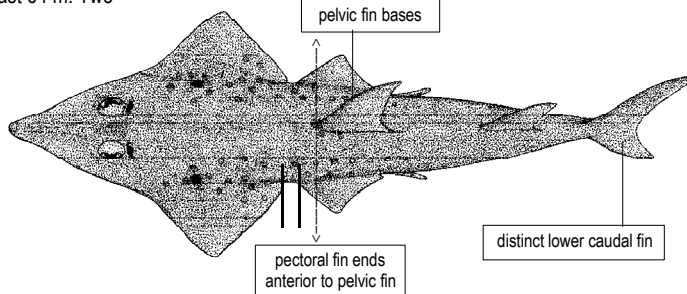
1st dorsal fin well posterior to pelvic-fin bases



### RHYNCHOBATIDAE Wedge fishes and shark-rays

To 3 m. Demersal, in inshore waters, muddy bays, estuaries and river mouths, and coral reefs; from the intertidal to at least 64 m. Two species in the region.

1st dorsal fin over pelvic fin bases



distinct lower caudal fin

pectoral fin ends anterior to pelvic fin

## ORDER MYLIOBATIFORMES – Stingrays, butterfly rays, eagle rays & mantas

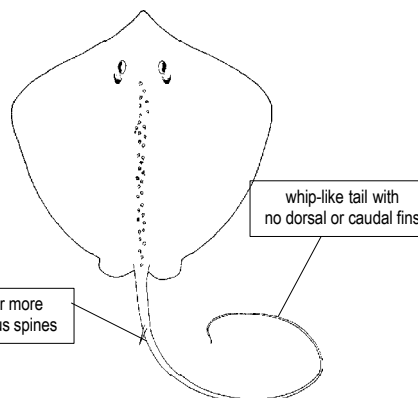
Body flattened with pectoral fins greatly expanded and fused with head and trunk; tail slender or whiplike, usually with a spine; usually with a single dorsal fin, but no caudal fin. No electric organ.

### DASYATIDAE Stingrays

To 2 m disc width. Mostly demersal, with one species pelagic. In marine, estuarine and fresh-water habitats, down to 480 m of depth. Possibly 8 species in the region.

whip-like tail with no dorsal or caudal fins

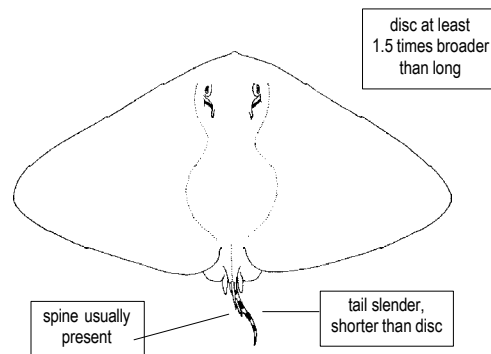
One or more poisonous spines



## GYMNURIDAE

### Butterfly rays

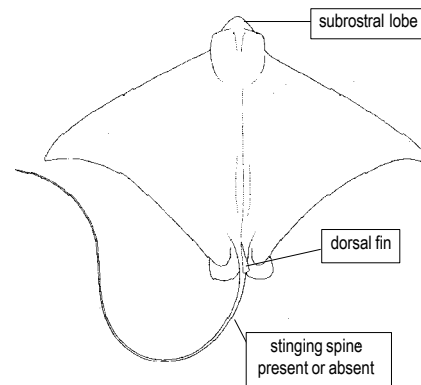
To 2.5 m disc width. Demersal, inshore waters off sandy beaches, estuaries, enclosed bays and lagoons, and offshore banks down to a depth of 110 m. A single species.



## MYIOBATIDAE

### Eagle rays

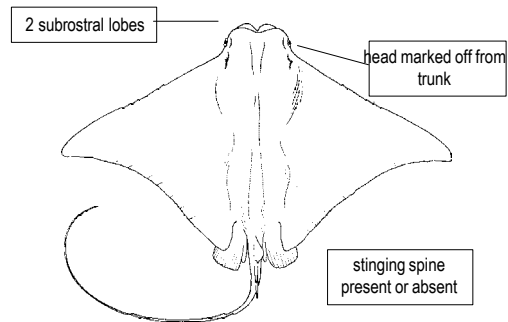
To 3 m disc width. Semi-pelagic in inshore waters, around coral or rocky reefs, kelp beds, estuaries and enclosed bays and lagoons, but often found also in the epipelagic zone. From the intertidal to a depth of 527 m. Three species in the region.



## RHYNOPTERIDAE

### Cownose rays

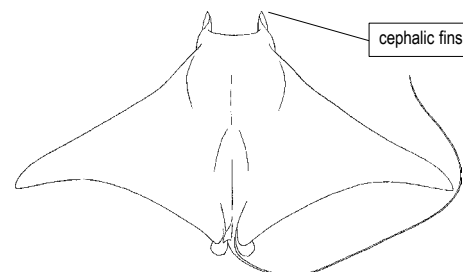
To 1.5 m disc width. Semi-pelagic inshore and offshore, off sandy beaches, estuaries, enclosed bays and lagoons, and offshore banks; from the intertidal to at least 26 m of depth. One species in the region, possibly two.



## MOBUSTIDAE

### Mantas and devil rays

To at least 6.7 m disc width. Pelagic, in coastal and oceanic waters from the intertidal to the epipelagic zone; around coral and rocky reefs, in lagoons and enclosed and open bays. Three species in the region.



## PRISTIDAE

### *Anoxypristis cuspidata* (Latham, 1794)

**Frequent synonyms / misidentifications:** None / *Pristis pectinata* Latham, 1794; *Pristis zijsron* Bleeker, 1851.

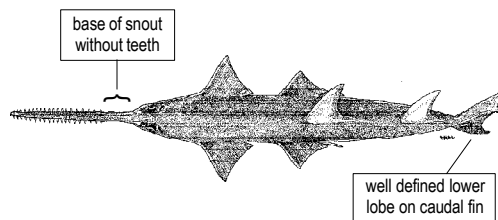
**FAO names:** En - Narrow sawfish.

**Size:** To at least 4.7m.

**Habitat and biology:** Found close inshore in the intertidal to a depth of 40 m, frequents river deltas and estuaries, and may go upstream in rivers. Oviviparous; litters of 6-23 young. Feeds on small fish and cuttlefish.

**Importance to fisheries:** Caught in bottom trawls, in fixed bottom gill nets, and probably with line gear. Meat utilized for human consumption.

**Distribution:** Confined to the Indo-West Pacific, from the Red Sea to southern Japan, New Guinea and tropical Australia.



### *Pristis pectinata* Latham, 1794

**Frequent synonyms / misidentifications:** None / *Anoxypristis cuspidata* (Latham, 1794); *Pristis zijsron* Bleeker, 1851.

**FAO names:** En - Smalltooth sawfish; Fr - Poisson-scie tident.

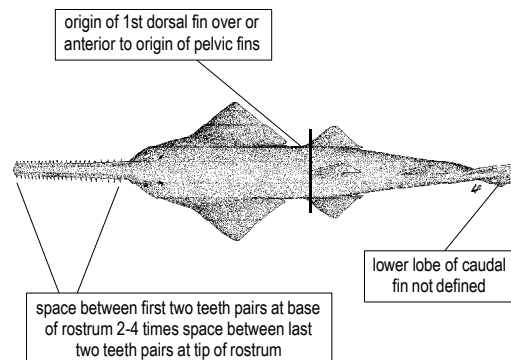
**Local names:** Libaax-Miinshaar, Zaraacimo.

**Size:** Probably to 7.6 m, common to 5.5 m.

**Habitat and Biology:** In shallow bays, lagoons and estuaries, also enters freshwater.

**Importance to fisheries:** Caught with line gear and bottom trawls. Flesh of good quality. Severely depleted throughout its range. In need of strong conservation measures.

**Distribution:** Possibly found in all warm-temperate and tropical seas of the world, but status of nominal records uncertain. Presence in the Red Sea needs confirmation.



### *Pristis zijsron* Bleeker, 1851

**Frequent synonyms / misidentifications:** None / *Anoxypristis cuspidata* (Latham, 1794); *Pristis pectinata* Latham, 1794 .

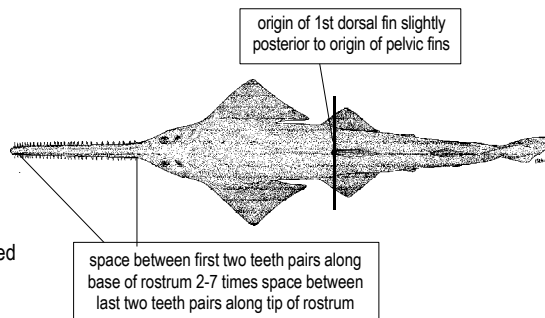
**FAO names:** En - Longcomb sawfish.

**Size:** Reported to reach 7.3 m.

**Habitat and biology:** In shallow waters, also enters freshwater.

**Importance to fisheries:** Caught with line gear and bottom trawls. Flesh of good quality. Severely depleted throughout its range. In need of strong conservation measures.

**Distribution:** Confined to the Indian and western Pacific Oceans. From South Africa north to the Red Sea and eastwards to southern China, New Guinea and Australia.



## TORPEDINIDAE

### *Torpedo panthera* Olfers, 1831

**Frequent synonyms / misidentifications:** / *Torpedo sinuspersici* Olfers, 1831.

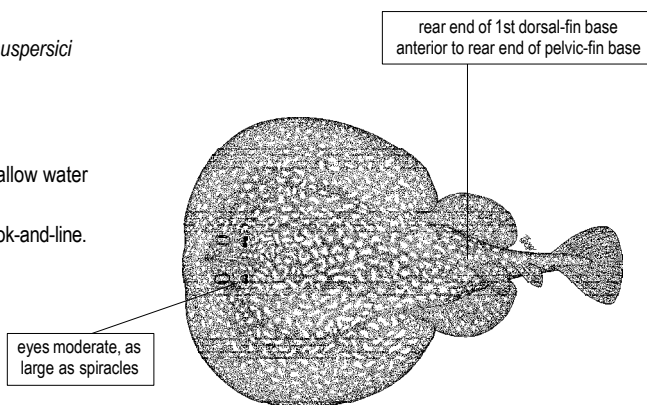
**FAO names:** En Panther electric ray.

**Size:** To 1 m.

**Habitat and biology:** On mud or sandy bottoms, from shallow water to depths of 110 m. Can deliver a strong electric shock.

**Importance to fisheries:** Caught with bottom trawls and hook-and-line.

**Distribution:**



### *Torpedo sinuspersici* Olfers, 1831

**Frequent synonyms / misidentifications:** / *Torpedo panthera* Olfers, 1831.

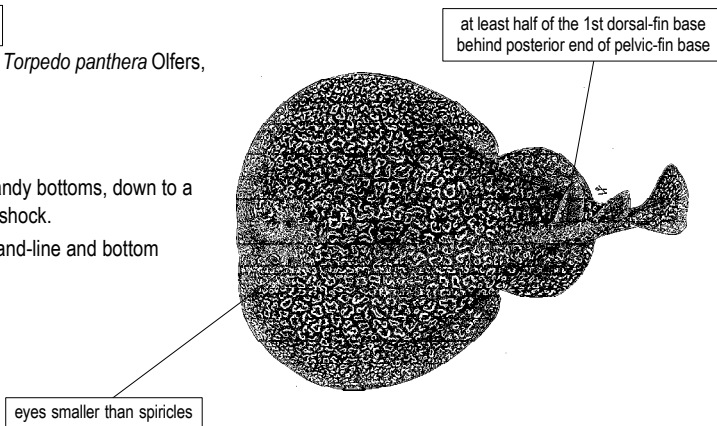
**FAO names:** En Marbled electric ray.

**Size:** To 1.3 m total length, 90 cm disc with.

**Habitat and biology:** Inshore waters over sandy bottoms, down to a depth of 200 m. Can deliver a strong electric shock.

**Importance to fisheries:** Caught with hook-and-line and bottom trawls. Flesh edible.

**Distribution:**



## RHINOBATIDAE

### *Rhinobatos granulatus* Cuvier, 1829

**Frequent synonyms / misidentifications:**

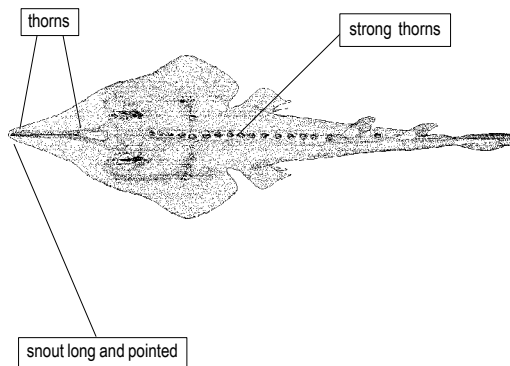
**FAO names:** En Sharpnose guitarfish.

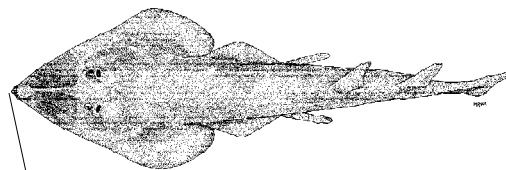
**Size:** To at least 1.8, possibly to 2.15 m.

**Habitat and biology:** Found inshore and offshore at depths from the intertidal to the offshore continental shelves down to 119 m. Biology little known.

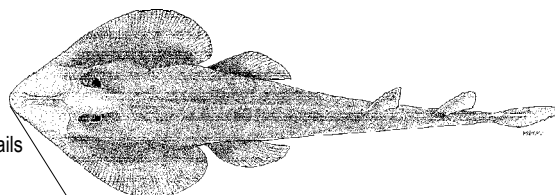
**Importance to fisheries:** Utilized where it occurs, but details lacking.

**Distribution:** Occurs in the Indo-West Pacific from the Persian Gulf and off India east to Viet Nam and New Guinea.

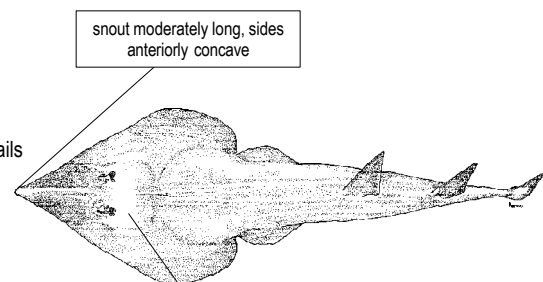


***Rhinobatos halavi*** (Forsskal, 1775)**Frequent synonyms / misidentifications:****FAO names:** En - Halavi guitarfish.**Size:** To 150 cm.**Habitat and biology:** An inshore species. Biology little known.**Importance to fisheries:** Utilized where it occurs, but details lacking.**Distribution:** Occurs in the Indo-West Pacific from the Red Sea to the Gulf of Oman. Possibly east to the Persian Gulf, India, Myanmar, Philippines, Viet Nam, and China.

snout moderately long and broad,  
sides nearly straight

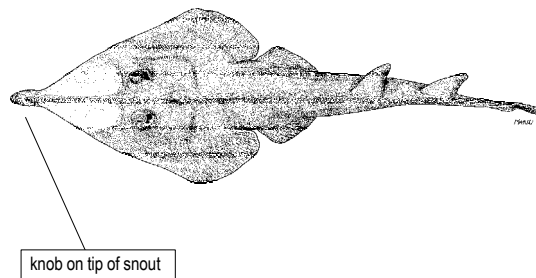
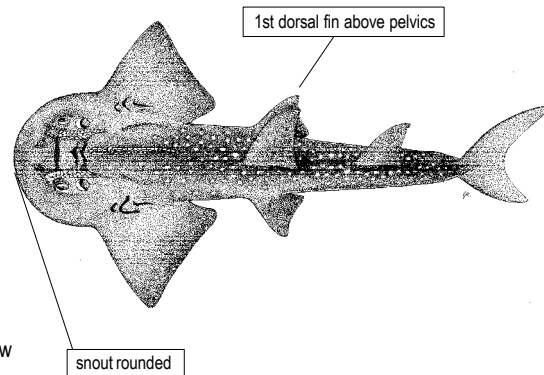
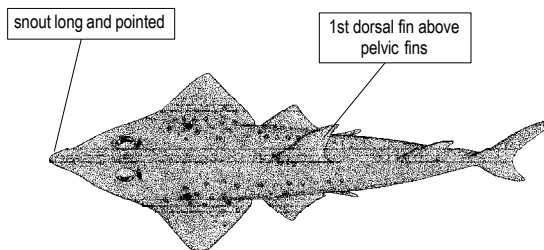
***Rhinobatos obtusus*** Müller and Henle, 1841**Frequent synonyms / misidentifications:****FAO names:** En - Bluntnose guitarfish.**Size:** To at least 93 cm.**Habitat and biology:** Found inshore and offshore. Biology little known.**Importance to fisheries:** Probably utilized where it occurs, but details lacking.**Distribution:** Occurs in the Indo-West Pacific from off Pakistan, India, the Malay Archipelago and the East Indies, with more specific records from the area not confirmed.

snout short, preoral length less than  
2 times mouth width

***Rhinobatos schlegelii*** Norman, 1926**Frequent synonyms / misidentifications:****FAO names:** En - Brown guitarfish.**Size:** To at least 75 cm.**Habitat and biology:** An inshore species. Biology little known.**Importance to fisheries:** Probably utilized where it occurs, but details lacking.**Distribution:** Occurs in the western Pacific off China, Korea, and Japan, also Viet Nam and Philippines; westward records from India and Oman may not be this species.

snout moderately long, sides  
anteriorly concave

thorns on orbits, back and shoulders  
very small

***Rhinobatos thouin*** (Anonymous, in Lacepede, 1798)**Frequent synonyms / misidentifications:****FAO names:** En - Clubnose guitarfish.**Size:** between 2.5 to 3.0 m.**Habitat and biology:** Found inshore. Biology little known.**Importance to fisheries:** Caught in inshore and offshore fisheries in trawls and probably gill nets and line gear. Utilized for human consumption fresh and probably dried-salted.**Distribution:** Occurs in the Indo-West Pacific from the Red Sea, Malaysia, Singapore, Thailand, Viet Nam, Indonesia, New Guinea, and Japan.**RHYNCHOBATIDAE*****Rhina ancylostoma*** Bloch and Schneider, 1801**Frequent synonyms / misidentifications:****FAO names:** En - Bowmouth guitarfish; Fr - Angelot.**Local names:** Oolo-Oolo Tuurey.**Size:** Reported to reach 2.7 m.**Habitat and biology:** A bottom living species that occurs close inshore and on offshore reefs, from depths of 3 to 90 m. Feeds on crabs and shellfish.**Importance to fisheries:** Caught with bottom trawl. Commercially caught off Asia.**Distribution:** Confined to the Indian and western Pacific Oceans. From South Africa north to the Red Sea and eastwards to Japan, New Guinea and Australia***Rhynchobatus djiddensis*** (Forsskal, 1775)**Frequent synonyms / misidentifications:****FA) names:** En - Giant guitarfish; Fr - Pois-son paille a pois.**Local names:** Oolo-Oolo Shabeelley.**Size:** To at least 3 m.**Habitat and biology:** Occurs in shallow inshore waters, on sandy bottoms, from depths of 2 to 50 m. Feeds on benthic invertebrates.**Importance to fisheries:** Caught with line gear gillnets and bottom trawls. An important species in small-scale fisheries throughout its range. Meat used for human consumption; fins highly appreciated in the oriental shark-fin soup market.**Distribution:** Known from the western Indian Ocean including the Red Sea and Gulf of Aden. Possibly also in the eastern Indian and western Pacific Ocean but records need confirmation.

## DASYATIDAE

### *Dasyatis kuhlii* (Müller and Henle, 1841)

**Frequent synonyms / misidentifications:** None / None.

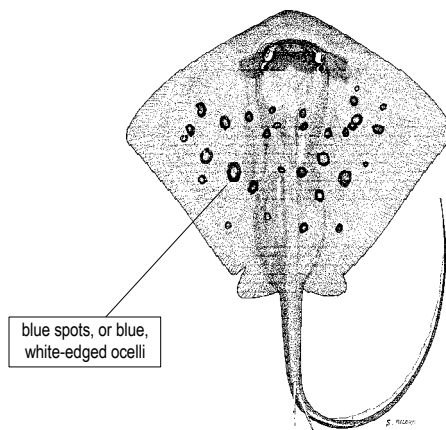
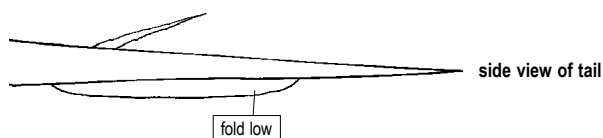
**FAO names:** En - Bluespotted stingray.

**Size:** To 38 cm disc width and about 67 cm total length.

**Habitat and biology:** In coastal waters, to a depth of 90 m.

**Importance to fisheries:** Caught with line gear and bottom trawls.

**Distribution:** Indian and western Pacific Oceans. From South Africa north to the Red Sea and eastwards to Japan, Melanesia and Micronesia, and including Australia.



### *Himantura gerrardi* (Gray, 1851)

**Frequent synonyms / misidentifications:** *Himantura macrurus* (Bleeker, 1852) / None.

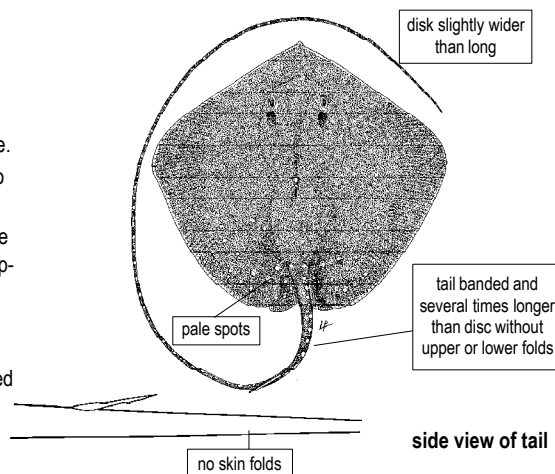
**FAO names:** En - Whitespotted whipray.

**Size:** Length to at least 200 cm; maximum disc width 90 cm or more.

**Habitat and biology:** Depth distribution limits unknown, but likely to be confined to inner continental shelf

**Importance to fisheries:** An important commercial stingray in some areas and the most regularly landed. Meat used for human consumption salt-dried, the skin also used to produce leather.

**Distribution:** Widespread in the Indo-Pacific from India to New Guinea, north to Taiwan Province of China. Reported from the Red Sea and the south and east African coasts, but western records need to be validated.



### *Himantura imbricata* (Bloch and Schneider, 1801)

**Frequent synonyms / misidentifications:**

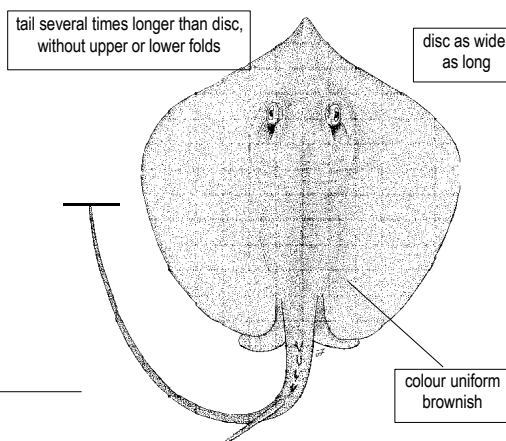
**FAO names:** En - Scaly whipray.

**Size:** Maximum total length about 65 cm; maximum disc width 22 cm.

**Habitat and biology:** Demersal in inshore coastal waters. Ovoviviparous. Feeds on bottom invertebrates.

**Importance to fisheries:** Caught in bottom trawls. Utilization unknown.

**Distribution:** Found in the Indo-Malay Archipelago but distribution not well defined. Thought to occur from the Red Sea to Java.



***Himantura jenkinsii*** (Annandale, 1909)

**Frequent synonyms / misidentifications:** *Himantura draco* Compagno and Heemstra, 1984 / *Himantura fai* Jordan and Seale, 1906.

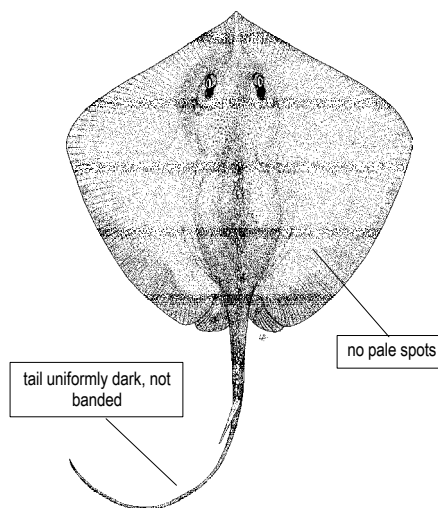
**FAO names:** En - Jenkin's whipray.

**Size:** Maximum total length at least 200 cm; maximum disc width 104 cm.

**Habitat and biology:** Lives inshore mainly on sandy substrates to a depth of 50 m. Common throughout parts of its range.

**Importance to fisheries:** Locally important in some localities where it can comprise a substantial component of the batoid catch.

**Distribution:** Tropical Indo-Pacific from Australia to southern Africa; appears not to extend northward into China Seas and Japan.

***Himantura uarnak*** (Forsskal, 1775)

**Frequent synonyms / misidentifications:** *Himantura punctata* (Günther, 1870); *Himantura* sp. 1 [Gloerfelt-Tarp and Kailola, 1984] / None.

**FA names:** En - Reticulate whipray.

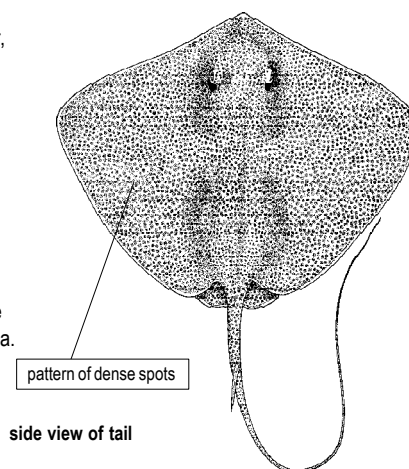
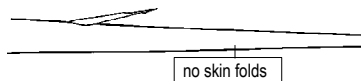
**Size:** Maximum total length at least 450 cm; maximum disc width about 150 cm.

**Habitat and biology:** Occurs inshore on soft substrates; often intertidal but to depths of at least 50 m.

**Importance to fisheries:** Caught with bottom trawls. Important commercial species through some of its range.

**Distribution:** Widespread in the Indo-Pacific; from South Africa and the Mediterranean and Red Seas, to Australia and Taiwan Province of China.

**Remarks:** Several colour morphs exist, some of which may prove to be distinct species.

***Pastinachus sephen*** (Forsskal, 1775)

**Frequent synonyms / misidentifications:** *Dasyatis gruvelli* Chabanaud, 1923 / None.

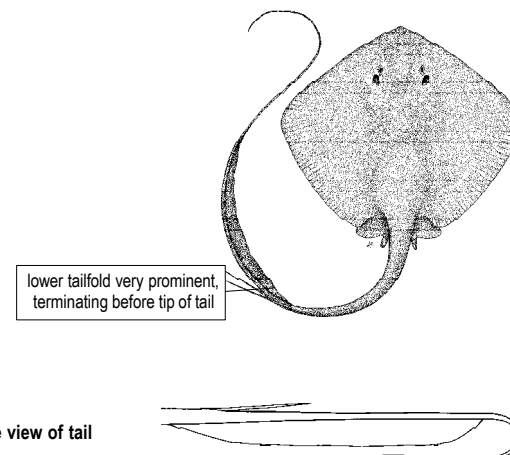
**FA names:** En - Cowtail stingray.

**Size:** Maximum total length at least 300 cm; maximum disc width 180 cm.

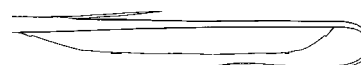
**Habitat and biology:** Common inshore to a depth of 60 m or more in both coral and sedimentary habitats. Enters estuaries and recorded from fresh water.

**Importance to fisheries:** Marketed throughout its range in small to moderate quantities.

**Distribution:** Widespread in the tropical Indo-Pacific from the Red Sea, north to Japan, east to Australia, including Melanesia and Micronesia. Also reported from South Africa.



side view of tail



***Taeniura lymma*** (Forsskal, 1775)

**Frequent synonyms / misidentifications:** None / None.

**FA) names:** En - Bluespotted ribbontail ray; Fr- Pastenague queue & ruban.

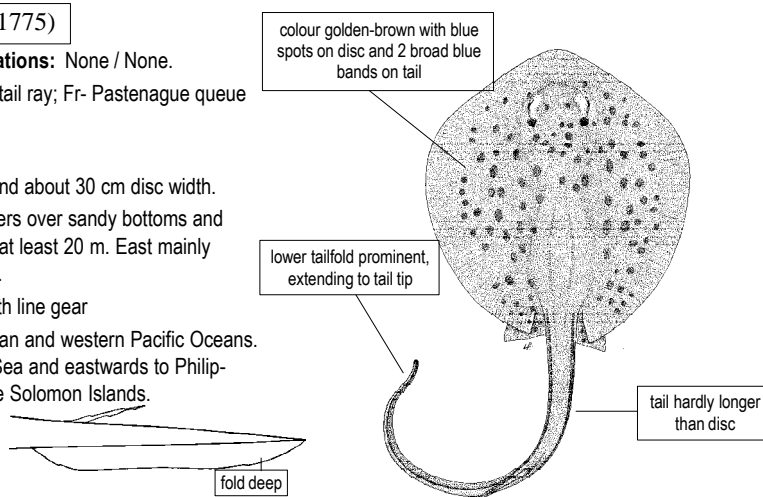
**Local names:** Shafane.

**Size:** To at least 70 cm total length and about 30 cm disc width.

**Habitat and biology:** In coastal waters over sandy bottoms and specially on coral reefs, to depths of at least 20 m. East mainly molluscs, worms, shrimps and crabs.

**Importance to fisheries:** Caught with line gear

**Distribution:** Widespread in the Indian and western Pacific Oceans. From South Africa north to the Red Sea and eastwards to Philippines, Australia, New Guinea and the Solomon Islands.

***Taeniura meyeri*** Müller and Henle, 1841

**Frequent synonyms / misidentifications:** *Taeniura melanospilos* Bleeker, 1853 / None.

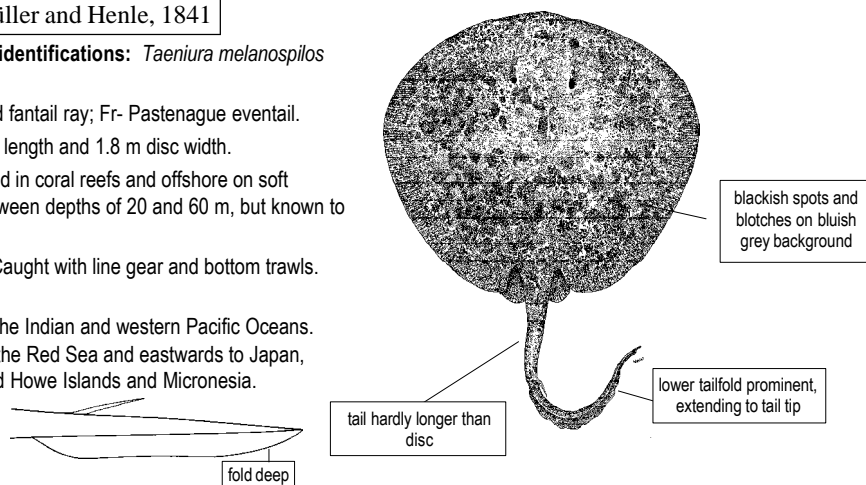
**FAO names:** En Blotched fantail ray; Fr- Pastenague eventail.

**Size:** To at least 3.3 m total length and 1.8 m disc width.

**Habitat and biology:** Found in coral reefs and offshore on soft bottoms. Most common between depths of 20 and 60 m, but known to occur in a depth of 450 m.

**Importance to fisheries:** Caught with line gear and bottom trawls. Utilization unknown.

**Distribution:** Known from the Indian and western Pacific Oceans. From South Africa north to the Red Sea and eastwards to Japan, Australia, New Guinea, Lord Howe Islands and Micronesia.

***Urogymnus asperrimus*** Bloch and Schneider, 1801

**Frequent synonyms / misidentifications:** *Urogymnus africanus* (Bloch & Schneider, 1801); *U. rhombeus* (Klunzinger, 1871) / None.

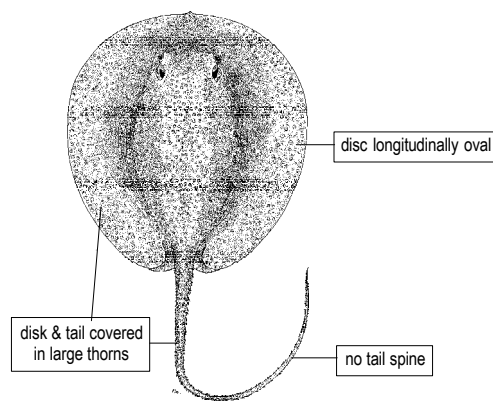
**FAO names:** En - Porcupine ray.

**Size:** up to at least 1 m disc width.

**Habitat and biology:** Demersal in shallow inshore waters, associated to coral reefs and also found in brackish waters and sandy bottoms, often in caves. Eats polychaetes, bottom crustaceans and some bony fishes.

**Importance to fisheries:** of very little or no importance to fisheries but often caught in trawls and beach seines. Utilised seasonally for its liver in some localities in the Red Sea (Farasan Islands, KSA).

**Distribution:** Coast of East Africa and Red Sea eastward to Marshall Islands and Fimi, and south to northern Australia. Also found in West Africa in Senegal, Guinea and Ivory Coast.



## GYMNURIDAE

*Gymnura poecilura* (Shaw, 1804)

**Frequent synonyms / misidentifications:**

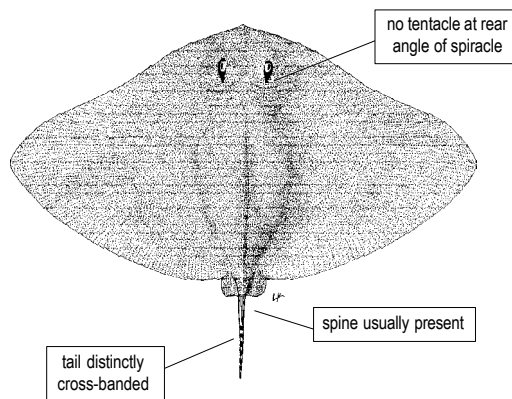
**FAO names:** En - Longtail butterfly ray.

**Size:** To a length at least 66 cm and width at least 82 cm.

**Habitat and biology:** Locally common, found in shallow inshore waters over sandy and muddy bottoms. Ovoviviparous. Feeds mainly on crustaceans and clams.

**Importance to fisheries:** Caught as bycatch in bottom trawls and sometimes by hook-and-line. Utilized for human consumption in some parts of its range.

**Distribution:** From the Red Sea eastward to the Society Islands, China, and southern Japan.



## MYLIOBATIDAE

*Aetobatus narinari* (Euphrasen, 1790)

**Frequent synonyms / misidentifications:**

**FAO names:** En - Spotted eagle ray; Fr - Aigle de mer leopard.

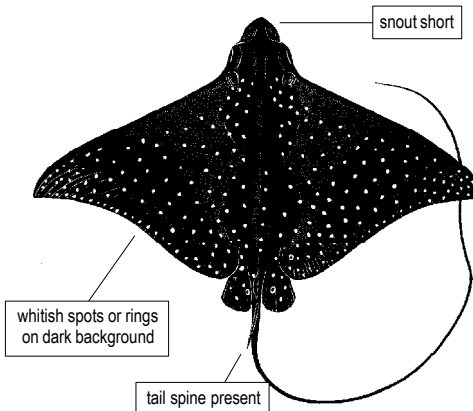
**Local names:** Maylan.

**Size:** To at least 8.8 m total length when tail undamaged and 3.3 m disc width.

**Habitat and biology:** Inshore semi-pelagic found in coral reefs, estuaries, off beaches, and enclosed bays; to depths of 60 m. Can form large schools and can leap out of the water. Number of young usually 4. Feeds mainly on bivalves, but also on shrimps, crabs, octopus, and worms.

**Importance to fisheries:** Caught with hook-and-line and harpoons. Flesh edible but seldom utilized. Ideal for display in Aquaria.

**Distribution:** Apparently found in all tropical and sub-tropical seas of

*Aetobatus flagellum* (Bloch and Schneider, 1801)

**Frequent synonyms / misidentifications:**

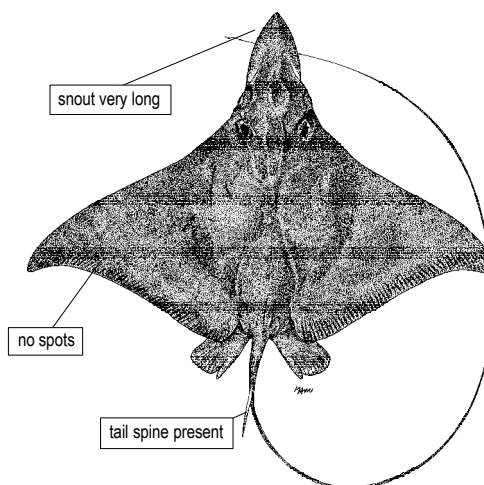
**FAO names:** En - Longheaded eagle ray.

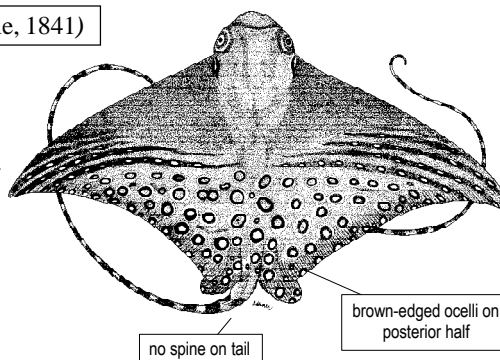
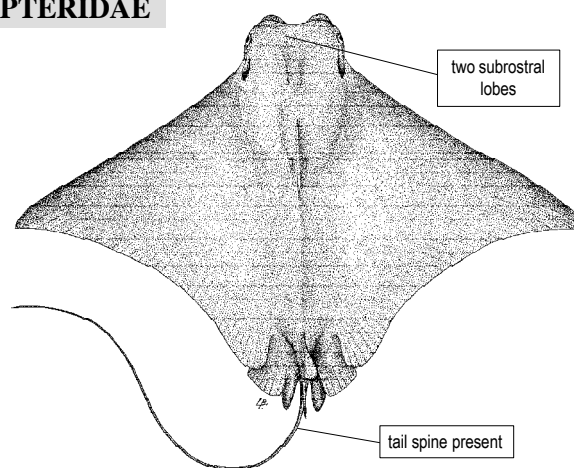
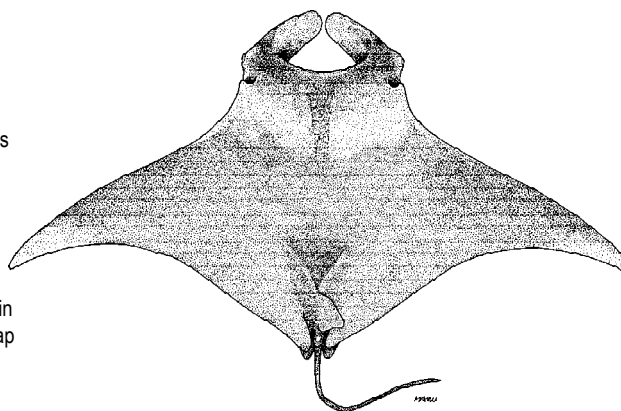
**Size:** To at least 126 cm in length, width to 47 cm.

**Habitat and biology:** An inshore species. Biology not well known.

**Importance to fisheries:** Details of utilization unknown, but it is regularly landed in the fish markets of Jakarta.

**Distribution:** From the Red Sea, India, Indonesia, and southern China; records from the eastern Atlantic and Hawaii need validation.



***Aetomylaeus milvus*** (Valenciennes in Müller and Henle, 1841)**Frequent synonyms / misidentifications:****FAO names:** En- Ocellate eagle ray.**Size:** To at least 37 cm disc width.**Habitat and biology:** An inshore eagle ray, with biology poorly known.**Importance to fisheries:** Details of utilization sketchy; utilized for human consumption in some parts of its range. **Distribution:** Thought to occur in the Indo-West Pacific from the Red Sea, Pakistan, India, Malaysia, Indonesia and Thailand, Philippines, and China. May be the juvenile of either *Aetomylaeus maculatus* or *A. vespertilio*.**RHINOPTERIDAE*****Rhinoptera javanica*** Müller and Henle, 1841**Frequent synonyms / misidentifications:** None /**FAO names:** En Javanese cownose ray; Fr Mourine javanaise**Local names:** Mayla-Cadde**Size:** to 1.5 m disc width.**Habitat and biology:** In coastal waters. Gregarious, often occurring in large numbers. Ovoviviparous. Feeds mainly on clams, oysters and crustaceans.**Importance to fisheries:** Caught in gillnets, hook-and-line, and beach seines; edible but seldom utilized. Fished by sportfishermen, and also displayed in public aquaria.**Distribution:** Nominally from South Africa and Mozambique north to the Gulf of Aden, and eastward to Southeast Asia and tropical northern Australia.**MOBULIDAE*****Manta birostris*** (Donndorff, 1798)**Frequent synonyms / misidentifications:****FAO names:** En Giant manta; Fr Mante geante; Sp Manta voladora.**Size:** Disc width at least 6.70 m, with unsupported citations to 7.63 m and about 9.10 m in width; possibly the largest living batoid and rivalled in size only by certain sawfishes.**Habitat and biology:** A common inshore and offshore inhabitant of all temperate and tropical seas, found in shallow muddy bays and the intertidal as well as river mouths and off coral reefs. Occurs individually, in pairs or in groups or schools; probably highly migratory. Known to leap out of the water. Feeds on zooplankton and small to moderate-sized fishes, appears at seasonal plankton blooms off coral reefs to feed.**Importance to fisheries:** Caught with harpoons. Utilized for human consumption in some parts of its range. Easy to be approached by divers and willing to investigate them. A preferred species for eco-touristic diving operations.**Distribution:** Found in all warm seas of the world. Recognition of a single species in the genus *Manta* is provisional, and needs to be critically examined.

***Mobula eregoodootenkee*** (Bleeker, 1859)

**Frequent synonyms / misidentifications:**

**FAO names:** En- Pygmy devilray.

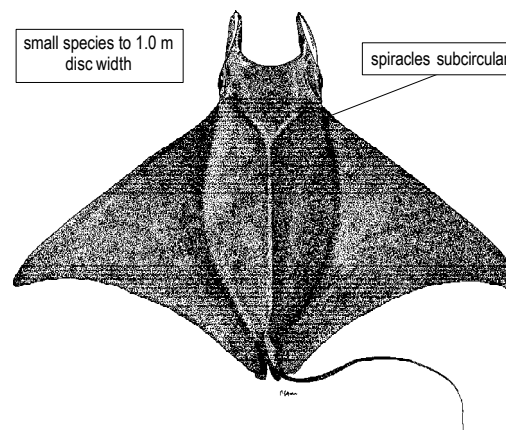
**Size:** Disc width to about 1.0 m.

**Habitat and biology:** Lives inshore and offshore in continental coastal waters, not known to penetrate the epipelagic zone and not recorded from oceanic islands. Biology little known.

**Importance to fisheries:** Utilization pattern in the area poorly known, marketed in some parts of its range.

**Distribution:** Occurs in the Indo-West Pacific from South Africa north to the Red Sea, eastwards to Viet Nam, New Guinea and tropical northern Australia.

**Remarks:** Use of the species name is provisional, as Cuvier's original citation in 1829 was not a binomial but apparently a citation of an earlier vernacular name; use of *eregoodootenkee* as a valid binomial dates from Bleeker, 1859, with the first description as such from Garman, 1913. Also *Mobula diabolus* (Shaw, 1804) could be interpreted as the earliest valid name for this species rather than as a junior synonym of *M. mobular* (Bonnaterre, 1788).



***Mobula tarapacana*** (Philippi, 1892)

**Frequent synonyms / misidentifications:**

**FAO names:** En Chilean devilray; Fr Mante chilienne; Sp Manta comuda.

**Size:** Disc width to about 3.7 m

**Habitat and biology:** An uncommon inshore and offshore species. Biology poorly known, feeds on planktonic crustaceans. Sometimes strands on beaches in temperate areas.

**Importance to fisheries:** Utilization pattern in the area little known.

**Distribution:** Probably in all tropical seas of the world, but recorded from scattered localities including the western Atlantic (off Venezuela), eastern Atlantic (Ivory Coast), Atlantic and Indian Ocean coasts of South Africa, the northwestern Red Sea, the western Pacific (Japan, Taiwan Province of China, and probably tropical Australia), and eastern Pacific (Gulf of California and Chile).

