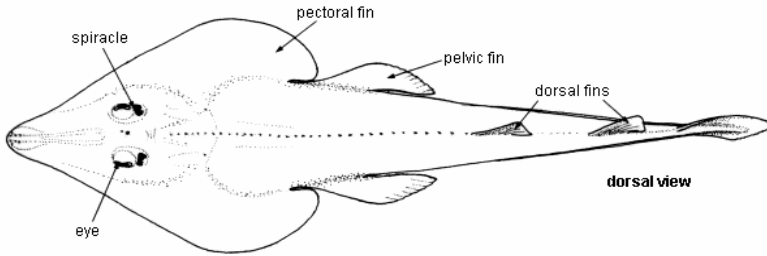


## Family Rhinobatidae The Guitarfishes

Order Rajiformes  
Suborder: Rhinobatiformes  
Family: Rhinobatidae



- 4 Genera, ~ 45-46 species
  - *Aptychotrema*: 4 species
  - *Rhinobatos*: 5 subgenera, 33-34\* species
    - Subgenera: *Rhinobatos*: 10 Spp; *Glaucostegus*: 12-13 Spp.; *Acroteriobatus*: 7 Species; *Scobatus*: 2 species; *Platypornax*: 1 species
  - *Trygonorrhina*: 2 species
  - *Zapteryx*: 3 species
- \**Rhinobatos nudidorsalis* tentatively named 2004 by Last/Compagno/Nakaya,

### Diagnostic Characteristics

- Range in size from 50 – 280cm TL, majority under 1 meter TL
- Smallest listed 34cm but thought to be juveniles
- Anteriorly flattened, Elongate snout
- Stout tail, confluent with trunk
- Pectoral fins expanded slightly & attached to head from nostrils to ½ the snout length.
- Relatively large dorsal fins which begin about mid-length of tail
- Single-lobed pelvic fins only moderately expanded laterally
- Caudal fin not bilobed
- Often with dermal denticles along dorsal midline
- Short, relatively straight mouth, Small molariform teeth
- Well developed spiracles

### Differences between the four genera

- Separating 3 of the 4 genus' are the position, size and orientation of nostrils
- Within *Rhinobatos*, rostral cartilage expansion, and nostril length v internarial length are primary diagnostic characters

### Distribution and Habitat

- Found in tropics and subtropics in shallow coastal waters on soft bottoms
- *Rhinobatos* sp. distributed worldwide
  - *Rhinobatos lentiginosus* Western Atlantic from North Carolina to gulf of Mexico, south to Yucatan (common in Florida)
- *Aptychotrema* (4 spp.) all endemic to Australia
- *Trygonorrhina* (2 spp.) endemic to Australia
- *Zapteryx*: (2) Eastern Pacific California to Peru, (1) spp. *Zapteryx brevirostris* (Lesser guitarfish) found in Southwest Atlantic off Brazil & Argentina

### Reproductive Biology

- Yolk-sac viviparous
- Range of litter sizes from 4 to 28, sex ratios 1:1
  - E.g. *Aptychotrema rostrata* 4 pups/litter, 13cm at birth
  - *R. productus* produces 28 pups of 15cm.

- Gestation Period
  - *Rhinobatos* spp. about one year,
  - *Zapteryx* spp. ~ 3-4 months
- Reproductive Cycle
  - *Rhinobatos*-gestation 1 yr
  - Parturition in summer
- Female anatomy:
  - Both ovaries functional,
  - produce additional eggs during gestation

Evidence of following behavior observed in *Rhinobatos lentiginosus*

#### Feeding and Prey

- Molariform dentition for crushing and grinding
  - *R. productus*: 221 rows of 20 teeth – well defined lateral uvula
- Suction feed on benthic invertebrates and small fishes
- While catching prey, guitarfishes use the rostrum to hold the prey against the sea floor and block escape route
- Feeding duration 16 sec
- Depression of lower jaw used for capturing prey
- Protrusion of upper jaw maximum at closure to decrease gape
  - Less likely to lose prey

#### Status:

Caught as bycatch in benthic fisheries, a few targeted fisheries exist

- IUCN Redlist status: 27 species listed
  - Least Concern/Data Deficient 10 species
  - Near threatened (5), Vulnerable (9)
  - One Critically endangered: *R. horkelii*
    - Off Brazil in S.W. Atlantic, primary fishing target
  - 2 Endangered: *R. cerniculus* & *R. rhinobatus*
    - Targeted off Africa, for fins and flesh, absent from Mediterranean areas previously inhabited

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<i>Aptychotrema bougainvillii</i>	Short-snouted shovelnose ray
<i>Aptychotrema rostrata</i>	East Australian shovelnose ray
<i>Aptychotrema timorensis</i>	Spotted shovelnose ray
<i>Aptychotrema vincentiana</i>	Western shovelnose ray
<i>Glaucostegus granulatus</i>	Sharpnose guitarfish
<i>Glaucostegus halavi</i>	Halavi's guitarfish
<i>Glaucostegus typus</i>	Giant shovelnose ray
<i>Rhinobatos albomaculatus</i>	White-spotted guitarfish
<i>Rhinobatos annandalei</i>	Annandale's guitarfish
<i>Rhinobatos annulatus</i>	Lesser sandshark
<i>Rhinobatos blochii</i>	Bluntnose guitarfish
<i>Rhinobatos cemiculus</i>	Blackchin guitarfish
<i>Rhinobatos formosensis</i>	Taiwan guitarfish
<i>Rhinobatos glaucostigma</i>	Speckled guitarfish
<i>Rhinobatos holcorhynchus</i>	Slender guitarfish
<i>Rhinobatos horkelii</i>	Brazilian guitarfish
<i>Rhinobatos hynnicephalus</i>	Angel fish
<i>Rhinobatos irvinei</i>	Spineback guitarfish
<i>Rhinobatos lentiginosus</i>	Atlantic guitarfish
<i>Rhinobatos leucorhynchus</i>	Whitesnout guitarfish
<i>Rhinobatos leucospilus</i>	Grayspotted guitarfish
<i>Rhinobatos lionotus</i>	Smoothback guitarfish
<i>Rhinobatos microphthalmus</i>	Smalleyed guitarfish
<i>Rhinobatos nudidorsalis</i>	Discovered 2004, 1 holotype
<i>Rhinobatos obtusus</i>	Widenose guitarfish
<i>Rhinobatos ocellatus</i>	Speckled guitarfish (S. Africa)
<i>Rhinobatos percellens</i>	Chola guitarfish
<i>Rhinobatos petiti</i>	Madagascar guitarfish
<i>Rhinobatos planiceps</i>	Pacific guitarfish
<i>Rhinobatos prahli</i>	Gorgona guitarfish
<i>Rhinobatos productus</i>	Shovelnose guitarfish
<i>Rhinobatos punctifer</i>	Spotted guitarfish
<i>Rhinobatos rhinobatos</i>	Common guitarfish
<i>Rhinobatos sainsburyi</i>	Goldeneye shovelnose
<i>Rhinobatos salalah</i>	Salalah guitarfish
<i>Rhinobatos schlegelii</i>	Yellow guitarfish
<i>Rhinobatos spinosus</i>	Spiny guitarfish
<i>Rhinobatos thouin</i>	Clubnose guitarfish
<i>Rhinobatos thouiniana</i>	Shaw's shovelnose guitar fish
<i>Rhinobatos variegatus</i>	Stripenose guitarfish
<i>Rhinobatos zanzibarensis</i>	Zanzibar guitarfish
<i>Trygonorrhina fasciata</i>	Southern fiddler
<i>Trygonorrhina melaleuca</i>	Magpie fiddler ray
<i>Zapteryx brevirostris</i>	Lesser guitarfish
<i>Zapteryx exasperata</i>	Banded guitarfish
<i>Zapteryx xyster</i>	Southern banded guitarfish