Identification guide of the main shark and ray species of the eastern tropical Atlantic, for the purpose of the fishery observers and biologists
About the author
Ocean biologist by education, **Bernard SÉRET** is an ichthyologist specialized in the study of the elasmobranch fishes (sharks and rays) at the « Institut de Recherche pour le Développement » (IRD). He sojourned and made several missions overseas and took part to numerous exploratory cruises in the Atlantic, Southern and South Pacific oceans. He is the author of about an hundred scientific papers and several popular publications. His current researches concern the biodiversity, the fisheries and the conservation of sharks and rays. His works related to biodiversity include the description of several new species of sharks and rays from the Atlantic and the South Pacific, and contributions to various FAO catalogue projects (e.g. guide of fishery resources of the eastern tropical Atlantic; catalogue of the batoids of the world). Engaged in the conservation of sharks and rays, he is a member of the Shark Specialist Group of the IUCN and the scientific chair of the European Elasmobranch Association; he took part to the elaboration of several shark action plans and to the review of CITES files.

Acknowledgements
This field guide could be realized thanks to the willingness and support of Mathieu Ducrocq (FIBA, Tour du Valat) and Mika Diop (CRSP, Dakar). The participants of the training workshop held in Dakar in December 2005 tested the preliminary version of this guide. Régis Jalabert (Opus, Arles) did the graphic conception. Thank to all.

Photo credit

This guide was elaborated in the frame of the implementation of the Sub-Regional Plan of Action for the conservation and management of shark populations (PSRA-Requins) adopted by the Sub-Regional Commission of Fisheries (CSRP) for the countries of the sub-region: Mauritania, Senegal, Gambia, Cape Verde, Guinea-Bissau, Sierra Leone, Republic of Guinea (Conakry).

The aim of this guide is to allow a quick and easy identification of the main species of sharks and rays commonly observed in the landing sites in West Africa. Indeed, the collection of statistical data by species is a necessity for planning sustainable management of the resources. This guide is designed mainly for the fishery observers and biologists, but it will also be useful for the fishermen to record their catches on logbooks.

It has been edited thanks to the support of the International Foundation of « Banc d’Arguin » (FIBA).

Comments and observations on species included or not included in this guide can be addressed to Bernard Séret, Muséum national d'Histoire naturelle, Département Systématique et Evolution, UMS 602 « Taxonomie et Collections », case postale n°51, 55 rue Buffon, 75231 Paris cedex 05 (e-mail: seret@mnhn.fr).

The line-drawings were made by François Guiol (after documents).
Shark fisheries have rapidly expanded all over the world during the last three decades, so that today some species are threatened. Several local extinctions have to be deplored, and a considerable decrease has been observed for most species. The increasing demand related to the consumption of shark fin soup, along with the high price of this product, are the main causes of this evolution. In West Africa, the influence of this market is very sensitive. The finning practice has been generalized on board of the industrial fishery vessels. The artisanal fishermen have been modifying their fishing practises to increase the by-catch of sharks, and some of them gave up their previous activities to entirely focus on shark-targeted fishery. Networks to collect and market shark products were organized at regional level, inciting the fishermen to catch sharks and offering them loans to increase the fishing effort, whereas stocks have been showing more and more evident signs of decline.

The function of sharks, as top predators at the end of the food chain, is however essential to maintain the balances and the genetic quality of the prey populations. The collapse of shark stocks, beside the lost of biological diversity, represents a real threat for the sustainability of the marine ecosystems.

Being in mind of the threats and in favour of the ecosystemic approach for fisheries management, the member states of the Sub-Regional Commission of Fisheries (CSRP) took the initiative, in 2001, to develop a Sub-Regional Plan of Action for the management and the conservation of shark populations (PSRA-Requins), following the recommendations of the international plan elaborated by the FAO. Among the objectives of this plan is the improvement of the scientific information related to the impact of the fisheries on shark populations. Today, the level of accuracy of the fishery statistical data does not allow the monitoring of different shark populations.

This identification guide should allow to help to improve the capacity of shark monitoring and hence the accuracy of the scientific information necessary for their management. The identification guide has been designed for an easy use in the field and to facilitate the work of the fishery officers and embarked observers. Its edition was possible thanks to the involvement of Prof. Bernard Séret and the support of the PRSA-Requins, sponsored by FIBA and IUCN, within the framework of the Regional Programme for the Conservation of Marine and Coastal Zone in West Africa (PRCM).

Mathieu Ducrocq
Fondation Internationale du Banc d'Arguin (FIBA)
Shark Specialists Group - West Africa
Presentation and use of the guide

Every species is treated on a “form-like page” including a main central drawing, sometimes with additional drawings to detail a particular morphological feature (snout, teeth). The family to which belongs the concerned species, its scientific name and the common names in French, English, Spanish and Portuguese are given. The main morphological features are listed to attract the attention of the guide user on the “distinctive characteristics” allowing the species identification. The maximal length (or the maximal disc width for some rays) is given in cm. The fishing gears used to catch the concerned species are indicated; the information is strengthened by pictograms schematizing the gears. The bathymetric distribution and the habitat are together represented on a schematized cross-section of the continental margin. The depth range is indicated and the habitat materialized by a thick line for the benthic species (living on or near the sea bottom) and by hachured lines for pelagic species (living in the water column).

At the beginning of the guide, there are plates with outline drawings of sharks and rays allowing a visual, quick and reliable identification of the main families. Besides every outline drawing, the pages concerning the family are indicated; these pages should be consulted in order to find out the species to be identified. At the end of the guide, plates with colour pictures facilitate the species identification.
SHARKS (families)
P8

Squatinidae  angel sharks
Squatina ........................................P10

Ginglymostomatidae  nurse sharks
Ginglymostoma ................................P13

Alopiidae  thresher sharks
Alopias ..........................................P15

Hemigaleidae  weasel sharks
Paragaleus .....................................P21

Ginglymostomatidae  nurse sharks
Ginglymostoma ................................P13

Lamnidae  mako sharks
Isurus .............................................P17

Carcharhinidae  requiem sharks
Carcharhinus, Galeocerdo, Negaprion,
Prionace, Rhizoprionodon ........P22

Rhincodontidae  whale shark
Rhincodon ........................................P14

Leptochariidae  barbel ed houndsharks
Leptocharias ......................................P18

Sphyrnidae  hammerhead sharks
Sphyra .............................................P37

Triakidae  houndsharks
Mustelus, Galeorhinus ...............P20
RAYS (families)

Pristidae  sawfishes
Pristis .................................. P42

Rhynchobatidae  wedgefishes
Rhynchobatus ........................................... P45

Zanobatidae  panrays
Zanobatus ........................................... P51

Torpedinidae  electric rays
Torpedo ........................................... P52

Rajidae  skates
Raja ........................................... P56

Rhinobatidae  guitarfishes
Rhinobatos ........................................... P46

Dasyatidae  stingrays
Dasyatis ........................................... P58

Gymnuridae  butterfly rays
Gymnura ........................................... P64

Myliobatidae  eagle rays
Myliobatis, Aetobatus, Pteromylaeus ........................................... P66

Rhinopteridae  cownose rays
Rhinoptera ........................................... P69

Mobulidae  mantas, devil rays
Manta, Mobula ........................................... P70
Sharks
Shark morphology

- **Eye**
- **Nostril**
- **Snout**
- **Spiracle**
- **Dorsal Spine**
- **1st Dorsal Fin**
- **2nd Dorsal Fin**
- **Precaudal Pit**
- **Caudal Fin**
- **Precaudal Keel**
- **Pelvic Fin**
- **Pectoral Fin**
- **Labial Grooves**
- **Mouth**
- **Gill Slits**
- **Interdorsal Ridge (when present)**
- **Clasper (Male)**

**Anatomical Regions:**
- **Head**
- **Trunk**
- **Tail**

**Other Details:**
- **Skin Texture**
- **Muscle Arrangement**
- **Bone Structure**
- **Fossil Evidence**

**Behavioral Traits:**
- **Prey Hunting**
- **Defense Mechanisms**
- **Habitat Preferences**

**Ecological Impact:**
- **Predator Role**
- **Prey Interaction**
- **Population Dynamics**

**Conservation Status:**
- **Threats**
- **Protection Measures**
- **International Treaties**

**Growth and Development:**
- **Larval Stages**
- **Maturity**
- **Reproduction**
Squatinidae

Squatina aculeata
Ange de mer épineux
Sawback angelshark
Anjo-espinhoso
Angelote espinudo

Distinctive characteristics:
A mediadorsal row of strong thorny tubercles
Nasal barbels strongly fringed

Habitat: continental shelf and slope

Fishing gears: trawls, nets

Max. size: 190 cm TL
Fishing gears: trawls, nets

Max. size: 140 cm TL

Habitat: continental shelf and slope

**Squatina oculata**

Ange de mer ocellé
Smoothback angelshark
Anjo-de-malhas
Pez angel

**Distinctive characteristics:**
- No mediodorsal row of thorny tubercles
- Nasal barbels weakly fringed
- Conspicuous white blotches, symmetrically arranged
**Squatinidae**

**Squatina squatina**
Ange de mer commun
Common angelshark
Anjo
Angelote

**Distinctive characteristics:**
- No mediodorsal row of thorny tubercles
- Nasal barbels not fringed, cone-like
- No blotches on body

Max. size: 244 cm LT

Fishing gears: trawls, nets

Habitat: continental shelf
**Ginglymostoma cirratum**
Requin-nourrice
Nurse shark
Dormedor
Gata nodriz

**Ginglymostomatidae**

**Max. size:** 430 cm LT

**Fishing gears:** trawls, lines, nets

**Distinctive characteristics:**
- Long nasal barbels
- Mouth situated well in front of the level of eyes
- Small eyes
- Large and rounded dorsal fins
- Body yellowish brown, juveniles with small dark brown blotches

**Habitat:** coastal, on the bottom
Distinctive characteristics:

- Its size: it is the largest fish
- Head large and depressed, with a large mouth, almost terminal in position
- Very large gill slits
- Very large caudal fin, almost symmetrical
- Body brownish with light vertical lines and row of blotches

Rhincodon typus
Requin-baleine
Whale shark
Tubarão-baleia, Pintadona
Tiburón ballena

Protected species: CITES Appendix II

Habitat: coastal and in the open sea

Rhincodontidae

Max. size: 15 m LT

Fishing gears: seines
Distinctive characteristics:

- Very long caudal fin, almost as long as the rest of the body
- A frontal groove above eyes and extending backwards
- Large eyes
- Pectoral fins falciform but with narrowly rounded tips
- The white colour of the belly does not extend on to the flanks

Habitat: coastal and in the open sea
Alopiidae

Alopias vulpinus
Requin-renard commun
Common thresher shark
Raposo
Zorro

Distinctive characteristics:
Very long caudal fin, almost as long as the rest of the body
No frontal groove above eyes
Small eyes
Pectoral fins falciform with pointed tip
The white colour of the belly extends on to the flanks and above the pectoral fin base

Habitat: coastal and in the open sea
**Distinctive characteristics:**

- Body torpedo-shaped, snout pointed
- A strong longitudinal keel on the caudal peduncle
- Large caudal fin, crescent-shaped
- Pectoral fins short: shorter than the head length
- A small anal fin opposite to the second dorsal fin
- Long teeth knife-like, without lateral denticles
- Belly white, back blue

**Lamnidae**

*Isurus oxyrinchus*

Requin-taupe bleu
Shortfin mako shark
Anequim
Marrajo dientuso

**Habitat:** in the open sea

**Fishing gears:** long-lines

**Max. size:** ± 4 m LT
Leptochariidae

Leptocharias smithii
Émissole à grandes lèvres
Barbled houndshark
Cação-corre-corre
Tiburon barbudo

Max. size: 82 cm LT

Fishing gears: trawls, nets, long-lines

**Distinctive characteristics:**
- Body slender and thin
- Two large, well-separated dorsal fins, with pointed tips
- Upper labial grooves very long
- Numerous small pointed teeth with a central cusp and lateral cusplets
- Back plain light grey; belly white
**Galeorhinus galeus**

*Requin-hâ*
*Tope shark*
*Perna-de-moça*
*Cazón*

**Distinctive characteristics:**
- Snout elongated
- Two well-separated dorsal fins, the second smaller, but as large as the anal fin
- Caudal fin with a well-developed ventral lobe
- Teeth blade-like with a strong bent cusp and small accessory cusplets
- Back plain grey brownish

**Fishing gears:** nets, long-lines

**Habitat:** continental shelf, in water column

**Max. size:** ± 2 m LT

**Leptochariidae**
Distinctive characteristics:

- Two large, well separated dorsal fins, the second larger than the anal fin
- Ventral lobe of the caudal fin short
- 1 interdorsal ridge
- Small granular teeth (without cups) arranged in pavement
- Back plain grey

Triakidae

Mustelus mustelus

Émissole lisse
Smooth hound
Cação-liso, Caneja
Musola

Max. size: 164 cm LT

Fishing gears: trawls, nets, long-lines

Habitat: continental shelf, near the bottom
**Paragaleus pectoralis**
Milandre jaune
Atlantic weasel shark
Tubarão-dononha
Tuburon comadiza

**Distinctive characteristics:**

- Two well separated dorsal fins, the second smaller than the first one, but larger than the anal fin
- Caudal fin with a well developed ventral lobe and a subterminal notch
- Upper margin of dorsal lobe of the caudal fin undulated
- Spiracles present but small
- Precaudal pit present
- Teeth small, those of the upper jaw blade-like with a bent central cusp and with accessory cusplets, those of the lower jaw with an erected central cusp without cusplets
- Back light brown with yellowish longitudinal stripes on the flanks

**Hemigaleidae**

**Fishing gears:** trawls, nets, long-lines

**Max. size:** 140 cm LT

**Habitat:** continental shelf
Distinctive characteristics:
Snout rounded and rather long
Upper teeth triangular with serrated edges
First dorsal fin above the level of the internal margin of the pectoral fin
1 interdorsal ridge
Back greyish, tips of fins dusky

Max. size: 300 cm LT

Fishing gears: trawls, long-lines

Habitat: shelf and continental slope
Carcharhinus amboinensis
Requin balestrine
Pigeye shark
Marracho-baleta
Tiburón baleta

Distinctive characteristics:
- Body stocky, snout very short and rounded
- First dorsal fin high with a pointed apex
- Upper teeth blade-like, triangular and with finely serrated edges
- No interdorsal ridge
- Back grey; tips of fins dusky in juveniles, faded in adults

Max. size: 280 cm LT

Fishing gears: long-lines

Habitat: continental shelf
Distinctive characteristics:
Snout rounded (in dorsal view), conical and pointed (in lateral view)
Upper teeth with a strong and bent cusp, well marked off its base, with finely serrated edges
No interdorsal ridge
Back dark grey; sometimes tip of fins dusky
Carcharhinus brevipinna

Requin-tisserand
Spinner shark
Tubarão-tecedlão
Tiburon aleta negra

Distinctive characteristics:
- Snout long and pointed
- Upper and lower teeth with similar shape but the upper teeth have their edges finely serrated, instead lower teeth are smooth edged
- No interdorsal ridge
- Back grey, with a light longitudinal strip on flanks; tip of fins black in adults

Habitat: continental shelf

Fishing gears: trawls, long-lines,

Max. size: 280 cm LT
Distinctive characteristics:

Body rather slender, snout conical
Upper teeth triangular, cusp almost straight erected, with strong serrations on base and fine ones to tip
Lower teeth with a straight erected cusp on a wide base
Interdorsal ridge present
Back grey to yellowish brown; tip of fins usually plain, without dusky markings

Carcharhinus falciformis

Requin soyeux
Silky shark
Marracho-sedoso
Tiburón jaqueton

Max. size: 350 cm LT

Fishing gears: seines, long-lines

Habitat: in the open sea
Distinctive characteristics:

- Body rather stocky, snout short and rounded
- Upper teeth triangular with bent cusp and serrated edges
- Lower teeth almost straight erected on a wide base, with finely serrated edges
- Back greyish brown, tip of fins dusky mainly in juveniles

Habitat: coastal, in estuaries and rivers

Fishing gears: nets, lines

Carcharhinidae

Carcharhinus leucas

Requin-bouledogue
Bull shark
Tubarão-buldogue
Tiburón sarda
Distinctive characteristics:

Body relatively slender, snout elongated and conical
Upper and lower teeth similar, cusp almost straight erected, with finely serrated edges and a wide base
No interdorsal ridge
Back ash-grey; a dark longitudinal strip on flanks, between the level of the pelvic fins ad the gill slits; tip of fins dusky, but variable, except for a constant black blotch on pelvic fins
Max. size: 350 cm LT

Fishing gears: long-lines, seines

**Distinctive characteristics:**

- Body rather stocky, snout short and rounded
- First dorsal fin very large with widely rounded apex.
- Pectoral fins very long.
- Upper teeth triangular, cusp straight erected with serrated edges. Lower teeth with a narrow cusp, its tip triangular, edges serrated.
- Interdorsal ridge present.
- Back bluish grey, dark; tip of dorsal, pectoral and caudal ventral lobe whitish, maculated of small dark blotches

**Habitat:** in the open sea
Carcharhinus obscurus

Distinctive characteristics:
Body relatively slender, snout short and rounded
Upper teeth large and triangular, cusp slightly bent, not marked off base, edges finely serrated
Lower teeth with straight erected cusp, marked off base, edges smooth
Interdorsal ridge present
Back bluish grey; tip of fins often dusky in juveniles only

Habitat: continental shelf and slope

Fishing gears: nets, long-lines

Max. size: 360 cm LT


Carcharhinus plumbeus

Requin gris
Sandbar shark
Tubarão-cinzento
Tiburón trozo

Distinctive characteristics:

Body stocky, snout short and rounded
First dorsal fin high with pointed apex
Upper teeth large and triangular, cusp straight erected, edges finely serrated. Lower teeth with narrow erected cusp, marked off its wide base, edges almost smooth
Interdorsal ridge present
Back grey; tip of fins dusky in juveniles

Habitat: continental shelf

Fishing gears: nets, long-lines

Max. size: 300 cm LT

Carcharhinidae

SHARKS
**Distinctive characteristics:**

- Body rather stocky, snout long and rounded
- Upper teeth with a strongly bent cusp and a few accessory cusplets
- Lower teeth with straight erected cusp on a wide base
- Interdorsal ridge present
- Back bluish grey; belly greyish, inside of mouth white

**Habitat:** continental shelf
**Galeocerdo cuvier**

*Requin-tigre*
*Tiger shark*
*Tubarão-tigre*
*Tintorera*

**Distinctive characteristics:**

- Body torpedo-shaped, snout short and rounded
- Teeth similar in both jaws, very distinctive in shape: a blade-like cusp, bent, with a strong notch, edges clearly serrated
- Spiracles present
- Interdorsal ridge present
- Back brownish grey with dark blotches and stripes, forming marble lines, well conspicuous in juveniles

**Habitat:** Coastal
**Distinctive characteristics:**

- Body stocky, snout short and rounded
- Two large dorsal fins of about the same size
- Upper and lower teeth with straight erected cusp, smooth edged; base of upper teeth finely serrated, base of lower teeth smooth
- No interdorsal ridge. No spiracle.
- Back yellowish grey, belly yellowish white

**Negaprion brevirostris**

- Requin citron
- Lemon shark
- Tubarão-limão
- Tiburon galano

- Max. size: 320 cm LT

- Habitat: coastal

- Fishing gears: nets, long-lines, lines
Prionace glauca
Requin peau bleue
Blue shark
Tubarão-azul; tintureira
Tiburón azul

Distinctive characteristics:
- Body very slender; snout long and conical
- Upper teeth dagger-shaped, with serrated edges
- Lower teeth with straight erected cusp, high and narrow, edges serrated on tip only
- Back dark blue; tip of pectoral fins and anal fin dusky

Habitat: in the open sea

Fishing gears: long-lines, seines
Distinctive characteristics:

Body torpedo-shaped, snout long and pointed
Second dorsal fin smaller than the first one
A long ventral keel in front of the anal fin
Teeth similar in both jaws, with a narrow, strongly bent cusp, a deep notch and accessory cusplets
No spiracle
Back greyish brown; dorsal fins and anal fin with dusky edges

Max. size: 115 cm LT

Fishing gears: trawls, nets, long-lines

Habitat: continental shelf
Distinctive characteristics:
- Anterior margin of head curved, with a weak but conspicuous median notch
- Posterior margin of pelvic fins straight
- Tip of pectoral fins dusky

Fishing gears: nets, long-lines, seines

Habitat: continental shelf

Max. size: 420 cm LT

Sphyrna lewini
Requin-marteau halicorne
Scalloped hammerhead
Tubarão-martelo-recortado
Cornuda comun

Sphyrnidae
SHARKS
Sphyrnidae

Sphyrna mokarran
Grand requin-marteau
Great hammerhead
Cornuda-gigante

Distinctive characteristics:
Anterior margin of head almost straight, with a weak median notch
First dorsal fin very high, falciform, with pointed apex
Posterior margin of pelvic fins concave
Tip of fins dusky in juveniles

Habitat: continental shelf

Fishing gears: nets, long-lines, seines

Max. size: ± 6 m LT
**Sphyra zygaena**  
**Requin-marteau commun**  
**Smooth hammerhead**  
**Cornuda cruz**

- Distinctive characteristics:
  - Anterior margin of head strongly curved, without median notch
  - Posterior margin of pelvic fins slightly concave
  - Fins usually plain coloured (no dusky markings)

**Habitat:** continental shelf, coastal

**Fishing gears:** nets, long-lines, seines

**Max. size:** ± 4 m LT
Rays
Ray morphology

- Pectoral fin
- Alar thorns (male)
- Anterior pelvic lobe
- Posterior pelvic lobe
- Clasper
- 1st dorsal fin
- 2nd dorsal fin
- Caudal fin
- Tail fold
- Mediodorsal row of thorns
- Alar thorns (male)
- Eye
- Spiracle
- Pectoral axil
- Pelvic inner margin
- Preorbital length
- Disc length
**Distinctive characteristics:**

- Saw with 14 to 23 pairs of rostral teeth
- Interspace between the posterior rostral teeth 1 to 2 times greater than that between the anterior teeth
- Origin of the first dorsal fin in front of level of the pelvic fin origin
- Caudal fin with a small but distinct ventral lobe

**Conservation:** endangered
**Pristis pectinata**

**Poisson-scie tident**

**Smalltooth sawfish**

**Tubarão-serra**

**Pejesierra**

**Conservation:** endangered

**Distinctive characteristics:**

- Saw with 20 to 32 pairs of rostral teeth
- Interspace between the posterior rostral teeth 2 to 4 times greater than that between the anterior teeth
- Origin of the first dorsal fin at level of the pelvic fin origin
- Caudal fin without a distinct ventral lobe

**Habitat:** coastal, in estuaries and rivers

**Fishing gears:** nets, lines

**Max. size:** ± 7 m LT
Distinctive characteristics:
- Saw with 16 to 20 pairs of rostral teeth
- Rostral teeth regularly spaced
- Origin of the first dorsal fin at level of the pelvic fin origin
- Caudal fin with a weak ventral lobe

Conservation: endangered

Habitat: coastal, in estuaries and rivers

Pristis pristis
Poisson-scie commun
Common sawfish
Tubarão-serra
Pez sierra comûn

Max. size: ± 7 m LT
Fishing gears: nets, lines
**Distinctive characteristics:**

- Snout pointed
- Caudal fin with differentiated dorsal and ventral lobes
- Spiracle with 2 dermal folds on their posterior margin
- Several rows of thorny tubercles on back, shoulders and on the rostral cartilages
- Back light brownish with light circular blotches, circled of black, and 2 larges blackish blotches on shoulders

**Habitat:** coastal, on the bottom

**Conservation:** protected in Mauritania

**Fishing gears:** trawls, nets, lines

**Max. size:** ± 3 m LT
Rhinobatidae

Rhinobatos (Rhinobatos) albomaculatus
Raie-guitare à lunaires
Whitespotted guitarfish
Viola-malhada
Guitarra pecosa

Max. size: 80 cm LT
Fishing gears: trawls, nets, lines

Distinctive characteristics:
- Snout pointed
- Rostral cartilages well separated on their whole length
- Spiracle with 2 dermal folds on their posterior margin
- Numerous small, circular, white blotches, circled of black and symmetrically arranged

Habitat: coastal, on the bottom
**Rhinobatos (Acroteriobatus) blochii**

**Raie-guitare de Bloch**

**Bluntnose guitarfish**

**Guitarra embocada**

**Habitat:** coastal; on the bottom

**Fishing gears:** trawls, nets, lines

**Max. size:** 100 cm LT

**Rhinobatidae**

**Conservation:** rare, to be preserved

**Distinctive characteristics:**

- Snout obtuse
- Nasal valves extending onto the internasal space and almost connected
- Spiracle with a single dermal fold on its posterior margin
- Colour plain brownish; juveniles with a few small, light blotches
Distinctive characteristics:

- Snout pointed
- Rostral cartilages separated by a narrow space, and getting closer forwards
- Spiracle with 2 dermal folds on its posterior margin
- Colour plain light brownish; usually a black blotch on tip on snout (on ventral surface)
Rhinobatos (Rhinobatos) irvinei
Raie-guitare d’Irvine
Spineback guitarfish
Irvine guitarra

Max. size: 100 cm LT
Fishing gears: trawls, nets, lines
Habitat: coastal, on the bottom

Distinctive characteristics:
- Snout pointed
- Rostral cartilages well separated on their whole length
- Spiracles with 2 dermal folds on their posterior margin
- Back greenish brown with numerous irregular, light blotches, circled of black and forming an X between the eyes
Rhinobatos (Rhinobatos) rhinobatos
Raie-guitare commune
Common guitarfish
Guitarra comum

Maximum size: 100 cm LT

Fishing gears: trawls, nets, lines

Rhinobatidae

Distinctive characteristics:
- Snout pointed
- Rostral cartilages well separated on their whole length
- Spiracles with 2 dermal folds on their posterior margin
- Colour greenish brown, or reddish brown with faded greenish stripes, sometimes forming a V or an X between the eyes

Habitat: coastal, on the bottom
**Distinctive characteristics:**

- Disc almost circular with an obtuse snout
- Tail well marked off the disc
- Concentrically circles of small thorny tubercles on disc
- Back greyish brown to greenish brown with dark brown transversal stripes; skin with a silky aspect

**Habitat:** coastal, on the bottom

**Fishing gears:** trawls

**Max. size:** 60 cm LT

**Zanobatus schoenleinii**

Raie tigrée
Striped panray
Raia de altura

**Zanobatidae**

**RAYS**
Distinctive characteristics:
Disc almost circular and fleshy
Skin totally naked
Spiracle with 6-8 tentacles
Colour variable, background reddish brown with brown marbles and irregular blotches
Torpedo (Torpedo) torpedo

Distinctive characteristics:
- Disc circular and fleshy
- Skin totally naked
- Spiracle with tentacles often reduced to knobs
- Back brown to reddish brown, usually with 5 large blue ocelli, circled by black and yellow rings

Habitat: coastal, on the bottom

Fishing gears: trawls

Max. size: 60 cm LT

Torpedinidae
Torpille ocellée
O cellate torpedo
Tremelga-de-olhos
Tremolina comùn
Distinctive characteristics:
Disc circular and fleshy
Skin totally naked
Spiracle with 9 - 11 small tentacles not converging to centre of spiracle
Dorsal colour very variegated with numerous light and dark blotches forming rosettes

Fishing gears: trawls

Max. size: 60 cm LT

Habitat: coastal, on the bottom

Rare: should be preserved
**Distinctive characteristics:**
- Disc circular and fleshy
- Skin totally naked
- Spiracle with smooth margin, without any tentacles
- Back greyish brown with a few small, irregular, brown or white blotches, scattered on disc and tail

**Habitat:** coastal, on the bottom

**Fishing gears:** trawls

**Max. size:** 40 cm LT

**Torpedo (Tetronarce) mackayana**
- Torpille de McKay
- McKay electric ray
- Tremolina de McKay

**Torpedinidae**

**RAYS**
Raja miraletus
Raie-miroir
Twineye skate
Raia-de-dois-olhos
Raya de espejas

Distinctive characteristics:
Disc lozenge with a pointed snout
Back and tail covered with thorny denticles and strong thorns
Back ochre brown with small black blotches scattered on disc and a large tricolour ocellus on each pectoral centre

Max. size: 63 cm LT
Fishing gears: trawls

Habitat: continental shelf, on the bottom
Distinctive characteristics:

- Disc lozenge with a pointed snout
- Back and tail covered with thorny denticles, strong thorns above eyes, on nape and shoulders; a mediodorsal row from nape to first dorsal fin
- Back brown with black blotches and spots, symmetrically arranged, sometimes forming rosettes in the centre of the pectoral fins

Habitat: outer shelf and continental slope

Fishing gears: trawls
Distinctive characteristics:
Disc lozenge, snout obtuse
Tail whip-like, very thorny, with strong sting at base
A low dorsal keel below the sting
A cutaneous fold under the tail
Back rough with large thorny tubercles scattered on disc
Colour plain brown or greenish brown

Habitat: continental shelf, on the bottom

Fishing gears: trawls, bottom long-lines

Max. size: ±2 m disc width
Distinctive characteristics:

- Disc oval with a pointed snout
- Tail whip-like with a sting at base
- A low and short dorsal keel below the sting
- A short cutaneous fold under the tail
- A central belt of rounded denticles, developing with growth
- A large pearl-like tubercle in the middle of the back
- Jaws strongly undulated
- Colour plain light brown
**Distinctive characteristics:**

- Disc oval with a pointed snout
- Tail whip-like with a sting at base
- A low and short dorsal keel below the sting
- A short cutaneous fold under the tail
- A central belt of rounded denticles, developing with growth
- A large pearl-like tubercle in the middle of the back
- Jaws weakly undulated
- Colour plain light brown
**Max. size:** 140 cm disc width

**Distinctive characteristics:**
- Disc lozenge with an obtuse snout
- Tail whip-like with a sting at base
- A long dorsal keel below the sting
- A long cutaneous fold under the tail
- Skin naked except for a mediodorsal row of small thorny tubercles
- Colour plain greyish or greenish brown

**Fishing gears:** trawls, beach seines, nets

**Habitat:** continental shelf, on the bottom
Distinctive characteristics:

Disc lozenge, snout obtuse
Tail whip-like with a sting at base
A short dorsal keel below the sting
A cutaneous fold under the tail twice as long as the sting
Skin totally naked
Back brownish with blue and golden marbles
Taeniura grabata
Pastenague africaine
Round stingray
Ratão
Chucho redondo

**Distinctive characteristics:**

- Disc almost circular
- Tail relatively short and thick, with a sting
- No dorsal keel below the sting
- A cutaneous fold under the tail
- Back rough with a few large thorny tubercles
- Colour plain brown to reddish brown, with small black blotches in juveniles

**Habitat:** continental shelf, on the bottom

**Fishing gears:** trawls, nets

**Max. size:** 100 cm disc width

**Dasyatidae**

**RAYS**
Distinctive characteristics:

- Disc lozenge in its horizontal axis
- Spiracle with a tentacle on its posterior margin
- 1 or 2 stings on tail
- Back with variegated marbles and blotches
- Tail with transversal bands, alternatively light and dark

Gymnuridae

Gymnura altavela

Raie-papillon épineuse
Spiny butterfly ray
Uge-mata
Raya mariposa

Max. size: ± 2 m disc width

Fishing gears: trawls, nets

Habitat: coastal, on the bottom
Gymnura micrura
Raie-papillon glabre
Smooth butterfly ray
Uge-borboleta
Rata mariposa

Distinctive characteristics:
- Disc lozenge in its horizontal axis
- Spiracle without tentacle on posterior margin
- No sting on tail
- Back with variegated reticulations and blotches
- Tail with only 3 - 4 transversal bands, light and dark

Max. size: 120 cm disc width

Fishing gears: trawls, nets

Habitat: coastal, on the bottom
**Distinctive characteristics:**

- Disc lozenge
- Head distinct from disc, forming a rostrum
- Pectoral fins wing-like with pointed tips
- Tail whip-like with 1 or several stings and a small dorsal fin at base
- Teeth plate-like arranged in a single series
- Back greyish brown with numerous light blotches

**Habitat:** coastal, on the bottom and in open water

**Fishing gears:** trawls, nets, seines, lines

**Max. size:** 230 cm disc width
Myliobatis aquila
Aigle de mer commun
Common eagle ray
Chuco
Aquila marina

Distinctive characteristics:

- Disc lozenge
- Head distinct from disc, forming a rostrum
- Pectoral fins wing-like with pointed tips
- Tail whip-like with 1 or several stings and a small dorsal fin at base
- Teeth plate-like arranged in 7 series
- The lateral plates are smaller than the median one
- Colour plain greenish brown or yellowish

Fishing gears: trawls, nets, seines

Habitat: coastal, on the bottom and in open water

Max. size: 100 cm disc width
Distinctive characteristics:
Disc lozenge
Head distinct from disc, forming a rostrum
Pectoral fins wing-like with pointed tips
Tail whip-like with 1 or several stings
and a small dorsal fin at base
Teeth plate-like arranged in 7 series
The lateral plates are smaller than
the median one
Colour greenish brown with 5 to 9
transversal dark stripes

Myliobatidae
Pteromylæus bovinus
Aigle-vachette
Bullray
Bispo
Cuhcho vaca

Max. size: 150 cm disc width
Fishing gears: trawls, nets, seines

Habitat: coastal, on the bottom and in open water
**Distinctive characteristics:**

- **Disc lozenge**
- **Head distinct with snout notched**
- **Tail whip-like with 1 sting and a small dorsal fin at base**
- **Teeth plate-like arranged in 9 series (sometimes 8 or 10)**
- **Median plates larger than the lateral ones**
- **Colour plain greenish or greyish brown**

**Habitat:** coastal, on the bottom and in open water

**Fishing gears:** trawls, nets, seines

**Max. size:** 200 cm disc width

**Rays**

**Rhinopteridae**

**Rhinoptera marginata**  
Mourine lusitanienne  
Lusitanian cownose  
Gavião-do-mar  
Gavilàn lusitànico
Distinctive characteristics:

- Head wide: more than 20% of disc width
- Mouth terminal in position (genus *Manta*)
- Teeth on lower jaw only
- Back dark; sometimes with small light blotches
- Belly white, often with large, irregular, dark botches

**Manta birostris**

*Mante*

Giant manta ray

Urjamanta, Jamanta

Manta voladora

**Max. size:** 7 m disc width

**Fishing gears:** seines

**Habitat:** coastal, in open water
**Mobula rochebrunei**

*Petit diable de mer de Guinée*
*Lesser Guinean devilray*
*Jamanta-da-Guiné*
*Diablito de Guinea*

**Distinctive characteristics:**
- Head less than 20% of disc width
- Mouth subterminal in position (genus *Mobula*)
- Teeth present on both jaws
- Tooth band of lower jaw less than 50% of mouth width
- No sting on tail
- Back dark blue

**Habitat:** coastal, in open water

**Fishing gears:** seines

**Max. size:** 130 cm disc width
Rays
P40

Rhinobatos lübberti ..........P45  Rhinobatos albomaculatus......P46  Rhinobatos blochii ...............P47
Rhinobatos cemiculus ..........P48  Rhinobatos irvinei ...............P49  Rhinobatos rhinobatos ..........P50  Zanobatus schoenleinii ..........P51
Torpedo marmorata ............P52  Torpedo torpedo ..................P53  Torpedo bauchotae ..............P54  Torpedo mackayana .............P55
Identification guide of the main shark and ray species of the eastern tropical Atlantic, for the purpose of the fishery observers and biologists

This field guide is designed for the needs of the biologists and fishery observers: its aim is to help them in the identification of the main species of sharks and rays occurring off the West-African coasts. Its simple design was elaborated on purpose: the distinctive features of the different species are summarized and the texts providing information on size, biology, habitat and fisheries were reduced to the main points. These data are presented around a central drawing representing the shark or ray species; detailed drawings (snout, teeth) are provided when they are useful for the identification. Plates of colour pictures complete the illustration and make easier the identification of the species.

Thanks to this guide, the catches of sharks and rays could be recorded by species; this would improve the quality of the fishery statistics and allow a better management of the shark and ray populations in West Africa.