

#### Required citation:

Tesfamichael, A., Mostarda, E. and Psomadakis, P.N. 2019. *Pocket guide to important coastal fishery species of Eritrea*. FAO, Rome.

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-131907-9 © FAO, 2019



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization http://www.wipo.int/amc/en/mediation/rules and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

#### Project management:

Dismas Mbabazi (FAORAF), KwamiDzifanu NyarkoBadohu (FAORAF), Florence Poulain (FAO, Rome); Kim Friedman (FAO, Rome).

#### Contributors:

Amanuel Tesfamichael: definition of species list, information on local names, habitat and fishing methods.

Edoardo Mostarda (FAO, Rome): preparation of species accounts and key features, technical editing and formatting.

Peter Nick Psomadakis (FAO, Rome): preparation of species accounts and key features.

Colour illustrations, images, graphic design, and cover: Emanuela D'Antoni (FAO, Rome).

## Preparation of this document

This pocket guide was prepared under the direction of the FAO FishFinder Programme (former Species Identification and Data Programme), thanks to the support of the "Capacity building for the management of small-pelagic fisheries in Eritrea project" (TCP/ERI/3606). Its purpose is to provide local fishery observers, fishers, scientists, fishery officers and the interested public with a user-friendly tool for identifying a selection of species that are common in coastal marine fisheries in Eritrea.

The guide includes a total of 204 species. Fifty-eight are presented in a main card and depicted with a scientific illustration and photo. In addition, each main card is supported by one including short accounts for similar-looking species that are known to occur in the area. It should be noted that there are many more marine species exploited by coastal fisheries in Eritrea that could not be included here. Therefore, caution is advised when identification is carried out.

The format of the pocket guide was developed for use by nontaxonomists and to facilitate communication with practitioners (fishers and marketers). For this purpose, the most common local names are included, but users should be aware that the same local name often applies to several species and that one species may be known by more than one local name.

To aid in quick identification, the pocket guide includes a colour-coded grouping of species based on simple morphological characteristics (i.e., the size and position of the dorsal and anal fins) as well as symbols for common sizes, ecological preferences and catch methods.

## Geography of Eritrea

Eritrea is located in North East Africa between 12° and 18° N, and 36° and 44° E. It is bordered by Sudan to the north and west, Ethiopia to the south, Djibouti to the south-east and the Red Sea to the north and north-east. The coastline measures around 1 200 km and off it there are 360 islands adding another 1 300 km of coastline. About 210 of the 360 islands comprise the area of the Dahlak Archipelago. Eritrea has a continental shelf of 56 000 km². Nineteen percent of the shelf is less than 30 m deep and thus off limits to trawling activities.

The waters of the southern part of the Red Sea are highly productive in part due to allochthonous advection of monsoon upwelled nutrient rich waters through Bāb al-Mandab, the strait between Arabia and Africa that connects the Red Sea with the Gulf of Aden and the Indian Ocean.



Source: FAO

## The Fisheries of Eritrea

Prior to the war for independence, (50s and 60s), significant commercial fishing activities existed in Eritrea and accounted for up to 35 000 tonnes/year of landed fish. During the war, most infrastructures were destroyed and the fishing grounds almost completely abandoned. After independence in 1991, the Ministry of Marine Resources undertook a complete reorganization of the fishery sector from infrastructural reconstruction, including fisheries and quality control regulations, and establishment of

a fully competent inspection authority. The prior intervention resulted in fulfillment of the conditions of list II of EU Decision 97/296/EC, which authorized Eritrea to export fish and fishery products to EU countries. This has also resulted in a steady increase in total landings throughout the years.

Basic fisheries management and biodiversity research has also been undertaken alongside all activities for the assurance of the sustainable utilization of the fisheries resources and conservation of the marine resources and environment. The Maximum Sustainable Yield (MSY) of Eritrea Red Sea fisheries has been estimated by several sources at about 80 000 tonnes per year (Tsehaye, 2007 - https://edepot.wur.nl/121917).

The Eritrean fishery sector comprises three main types based on level of exploitation: the artisanal fishery (traditional, subsistence, small-scale and low-tech fishing practices targeting mainly the reef fishes and the middle-sized pelagic ones), the semi-industrial, and the industrial fishery (modern, high-scale-high-tech fishery focusing on the demersal resources of the continental shelf). The main commercial groups of living marine resources exploited include: coral reef fishes, soft-bottom demersal fishes, small pelagic fishes, large pelagic fishes, sharks, crustaceans (lobsters, shrimps, crabs), cephalopods (cuttlefishes) and sea cucumbers.

## Acknowledgements

The authors would like to thank the staff of the "Capacity building for the management of small-pelagic fisheries in Eritrea project" (TCP/ERI/3606). Special thanks go to Luca Garibaldi (FAO) for initiating the process that has led to the production of this pocket guide and to Florence Poulain (FAO, Rome) and Dismas Mbabazi (FAORAF) for managing it through to its conclusion.

Particular thanks are due to the staff of the Research Division of the Ministry of Marine Resources for their comments and general review of the pocket guide.

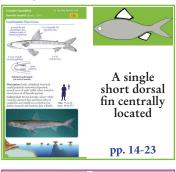
Thanks go to John E. Randall for providing FAO with the photos of most species herein included, except for the photo of *Encrasicholina heteroloba* (by Gregorio V. Hermosa, Jr.), *Tylosurus crocodilus* (by José F. González Jiménez), *Lutjanus bohar* (by Elamin Mohamed, Red Sea Fisheries Research Station, Sudan), *Sphyraena obtusata* (by Sergey Bogorodsky), *Penaeus semisulcatus* and *P. monodon* (by Peter N. Psomadakis), *Scylla serrata* (by Almandine/CC BY-SA 4.0), *Holothuria scabra* (by D.C.T. Dissanayake), *Thunnus tonggol, Himantura uarnak*, and *Sepia pharaonis* (by H.B. Osmany).

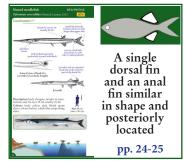
Finally, thanks to Dr. Iyob Tsehaye (PhD), for providing photos and information on fishing activities in Eritrea.

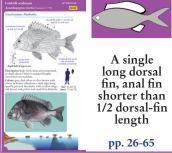
## Quick access keys:

The marine species included in this pocket guide have been grouped using easily identifiable morphological characteristics, i.e., the number and size of the dorsal and anal fins in bony fish species. The groupings do not reflect taxonomic classification and are only intended to allow users to quickly find a species. Each group has been colour-coded for easy recognition within the card set. Within each group, cards are arranged in alphabetical order of family and then by alphabetical order of species' scientific name.

## Bony fish:

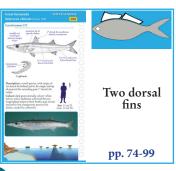


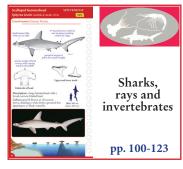




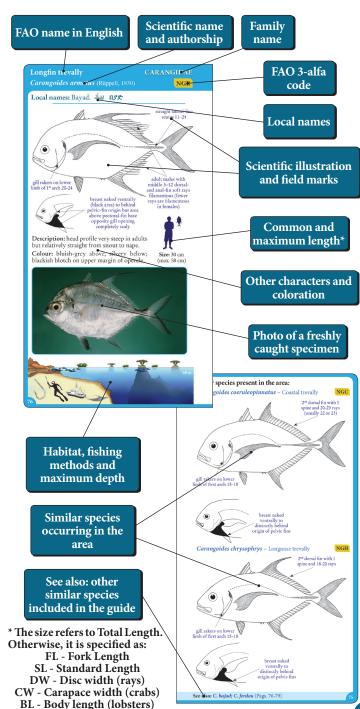


## Other groups:

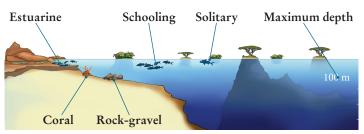


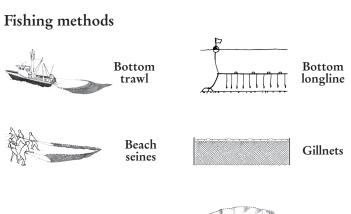


#### How to Use this Guide



# **Symbols**







Driftnets



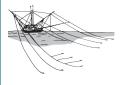
Purse seine



Pelagic longline



Hook-andline



Trolling lines



Traps



Hand picking

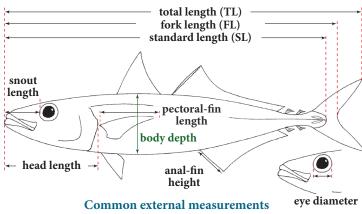


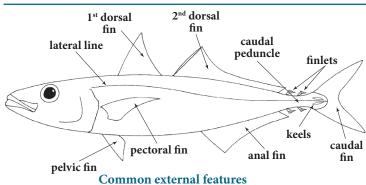
Spear fishing\*

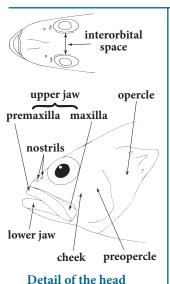


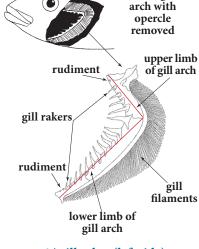
Squid jig \*Spear fishing is currently banned in Eritrea under the Fisheries Proclamation

## Technical terms and measurements Bony fishes



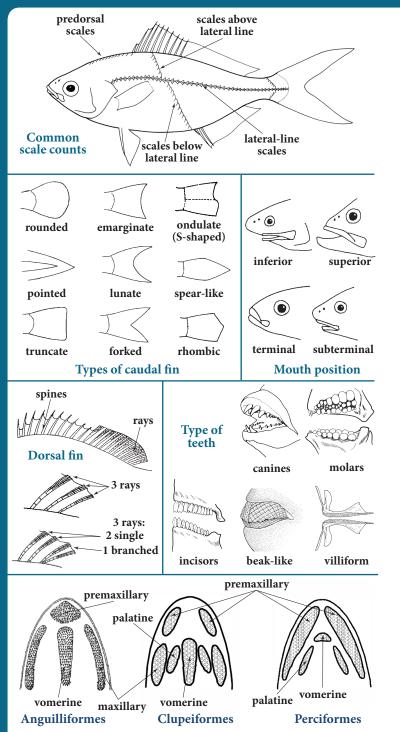






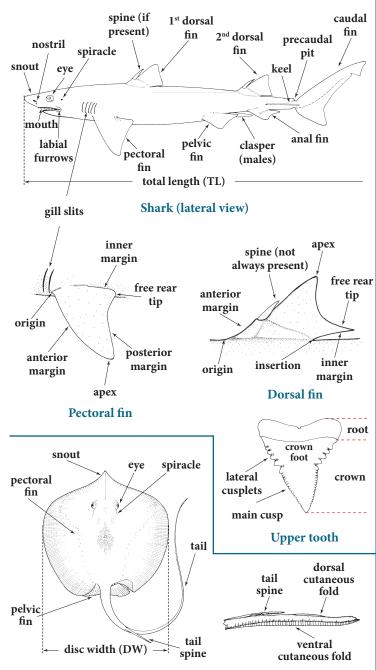
1st left gill

1st gill raker (left side)

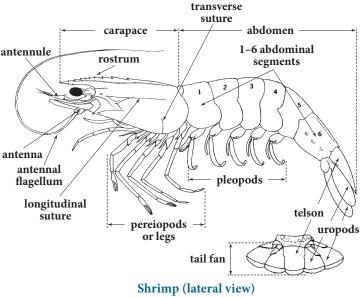


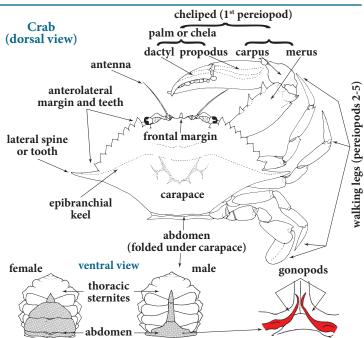
Roof of mouth and teeth

## Technical terms and measurements Sharks and Rays



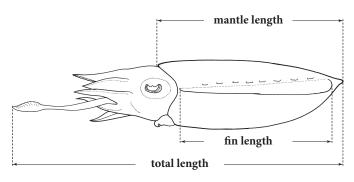
## Technical terms and measurements Crustaceans



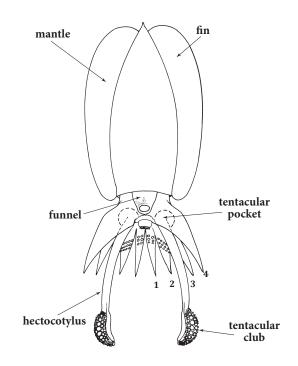


Adult male and female crabs are easily distinguished by the shape of their abdomen. In females the abdomen is broad, whereas in males it is triangular to broadly T-shaped.

## Technical terms and measurements Cuttlefishes



#### **Cuttlefish (lateral view)**



**Cuttlefish (ventral view)** 

## Glossary

Adipose eyelid: transparent fleshy tissue covering part or all of the eye in some fishes.

Anal fin: the median, unpaired, ventrally located fin that lies behind the anus, usually on the posterior half of the fish.

Barbel: elongate fleshy tentacle-like sensory projection, usually located close to the mouth.

Blotch: a spot or mark especially when large or irregular.

Branchiostegal rays: series of long, curved and often pointed bones that support the branchiostegal (gill) membrane.

Canine: slender conical tooth, often enlarged and elongate.

Carapace: a bony or chitinous case or shield covering the back of an animal.

Caudal fin: often called the tail fin, it provides the main power for forward movement in fish.

**Caudal peduncle:** in fish, the posterior part of the body between the rear parts of the dorsal and anal fins, and the caudal fin.

Clasper: intromittent organ; the rod-like extension of the medial portion of the pelvic fin in male cartilaginous fishes used as copulatory organ.

Compressed: flattened laterally; a body shape much deeper than wide.

Continental shelf: the flattened edge of the continental land mass between the coast and the continental slope (generally, the continental subtidal zone down to a depth of about 200 m).

Cusp: a projection on a tooth.

**Cusplet:** a small or secondary projection as on a tooth or spine; also a denticle.

Cuttlebone: the internal calcified shell remnant of cuttlefish.

**Cycloid scale:** scale with smooth, spineless posterior margin. Typical of bony fishes.

**Dorsal fin:** a median fin along the back; there may be two or more dorsal fins, in which case the most anterior one is designated the first.

**Depressed:** flattened from top to bottom; body shape much wider then deep.

Falcate: sickle-shaped.

Fin: flap-like external organ concerned with locomotion in fishes (dorsal, adipose, caudal, anal, pelvic, and pectoral fins).

**Finlets:** small non-retractable fins, generally on the caudal peduncle between the last dorsal or anal fin and the caudal fin of some fishes. In some groups, such as tunas, finlets are rayless.

Gill rakers: bony, finger-like projection of the gill arch on the opposite side from the red gill filaments which function in retaining food organisms.

Gill slits: external openings leading to the gill chamber. The opening allows water to exit after passing over the gills for respiration.

**Hectocotylus:** one (or more) arm(s) of male cephalopods modified into a penis-like process for transferring spermatophores to the female.

Keel: a prominent ridge.

Labial furrows: shallow grooves around the lips.

**Lateral line:** a sense organ along the side of the body (mainly fish) used to detect movement and vibration in the surrounding water.

Maxilla: the bone in the upper jaw behind the premaxilla.

Molar: a low, blunt, rounded tooth for crushing and grinding.

**Nape:** the dorsal part of the body just behind the occiput or hard dorsal region of the skull.

Nostril: external nares open onto the head.

**Notch:** an indentation, usually in a fin, dividing it into two parts or lobes.

Opercle: the large posterior upper bone of the gill cover.

Papillae: in sea cucumbers, the conical fleshy projections of the body wall with sensory tube feet at their apices.

Patch: a small section which differs from or contrasts with the whole.

**Pectoral fins:** in fish, paired fins on the sides behind the gill cover. **Pelvic fins:** in fish, pair of fins located ventrally on the body in front of the anus; sometimes called ventral fins.

Premaxilla: anterior bone in the upper jaw (see maxilla).

Preorbital space: the bone or region before and below the eye.

Preopercle: the upper anterior bone of the gill cover.

**Rostrum:** the beak, snout or spinelike anterior median prolongation of the carapace of a crustacean; any projecting snout or beak.

**Scutes:** hard, thick external plates derived from scales and present on the skin of some teleost fishes.

**Snout:** the tip of the head in front of the eyes.

**Spine:** a fin support element that is unpaired laterally, unsegmented, unbranched and usually stiff and pointed, also refers to slender sharply pointed bony processes not associated with fins.

Spinule: a small spine.

**Spiracle:** a small respiratory opening behind the eye of certain cartilaginous fishes.

Telson: the terminal portion of an arthropod body.

Tentacular club: terminal portion of a tentacle; armed with suckers (or suckers and/or hooks), used for capturing prey.

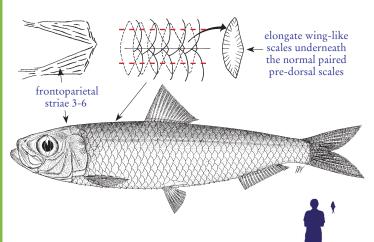
**Vomer:** an unpaired median bone on the roof of the mouth.

#### **CLUPEIDAE**

# Bluestripe herring

Herklotsichthys quadrimaculatus (Rüppell, 1837) HES

بليم، عيدة، ابو راس Local names: Abu ras, Aida, Belem. ሳርዲን፡ ዓይዳ፡ በለም



Description: body slender, its depth 18-30% standard length.

Colour: flanks silvery with an electric blue line preceded by two orange spots.

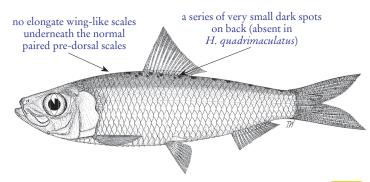
Size: 10 cm (max. 25 cm)





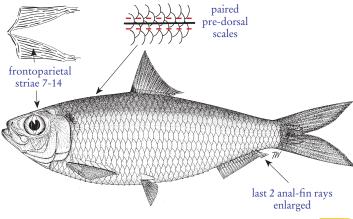
#### *Herklotsichthys punctatus* – Spotback herring

**JBL** 



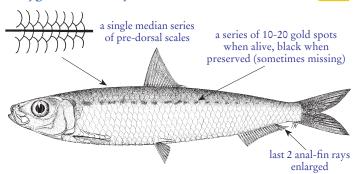
#### Sardinella spp. – Sardinellas

SIX



#### Amblygaster sirm – Spotted sardinella

AGS

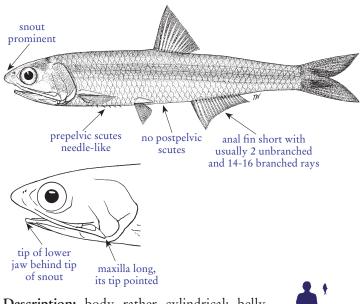


Two other clupeid genera, *Etrumeus* and *Dussumeria*, are present in Eritrea. They are characterized by having 14-19 branchiostegal rays *vs.* 4-8 in the other genera.

Encrasicholina heteroloba (Rüppell, 1837)

**ECT** 

عيدة، وزف، بليم Local names: Wedif, Belem, Aida. عيدة، وزف، بليم مردة، ورف، بليم مردة، ورف، بليم المردة، ورف، بليم المر



**Description:** body rather cylindrical; belly rounded with 4-6 sharp needle-like prepelvic scutes.

Colour: in life, a distinct blue upper edge to its lateral stripe and a dull silver or grey band on flank, the back beige.



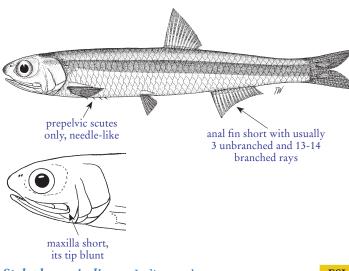
**Size:** 8 cm (max. 12 cm)





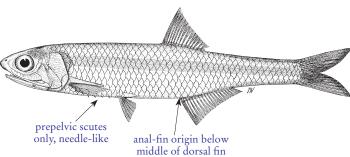
**Encrasicholina punctifer** – Buccaneer anchovy

STL



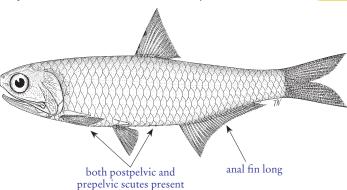
## *Stolephorus indicus* – Indian anchovy

ESI



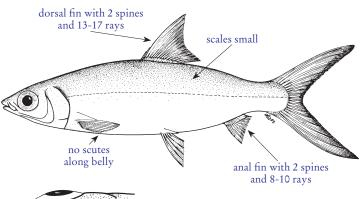
## *Thryssa baelama* – Baelama anchovy

EYB



MIL

# Local names: Salmani. سلماني ۱۵۳۸





Underside of head

**Description:** body elongate and somewhat compressed; mouth small with no teeth; lower jaw with a small tubercle at tip.

**Colour:** back olive green, flanks silvery; dorsal, anal and caudal fins with dark margins.



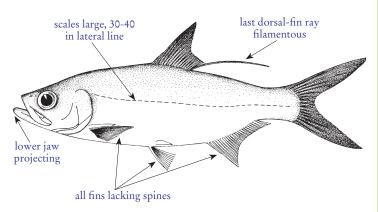
**Size:** 100 cm (max. 180 cm)





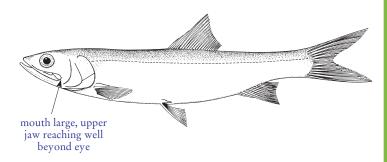
## Megalops cyprinoides – Indo-Pacific tarpon

TAI



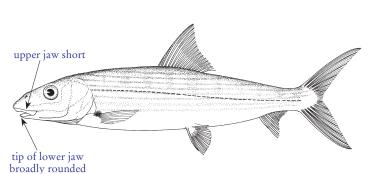
## Elops machnata – Tenpounder

CEV



## Albula glossodonta – Roundjaw bonefish

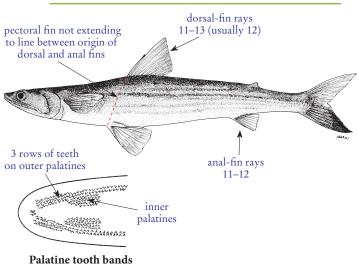
**BGV** 



Saurida tumbil (Bloch, 1795)

LIG





Palatine tooth bands on roof of mouth

**Description:** body cylindrical, head and caudal peduncle somewhat depressed; several rows of teeth visible when mouth is closed (true of all *Saurida* species).

**Colour:** light brown dorsally, silvery white ventrally; pectoral fins and lower lobe of caudal fin, and middle rays of pelvic fins dusky; stomach and intestine pale whitish.

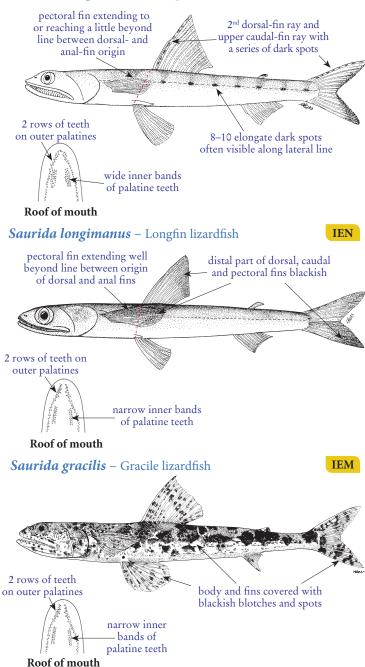


Size: 30 cm FL (max. 60 cm FL)



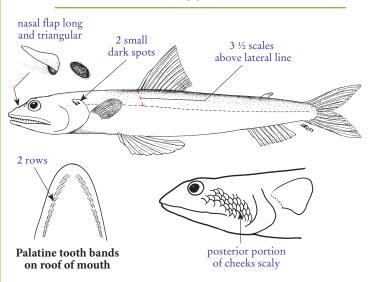


#### Saurida lessepsianus – Lessepsian lizardfish



N/A\*

Local names: Maccorona. مكرونا



**Description:** body tubular, head and caudal region a little compressed; inner rays of pelvic fins about 2–3 times longer than outermost rays; several rows of teeth not visible when mouth is closed (true of all *Saurida* species).

**Colour:** body dusky pink above with pale blue-grey blotches and stripes; peritoneum pale; 9–11 peritoneal spots.



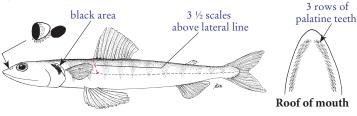
**Size:** 12 cm (max. 33 cm)



\*FAO 3-alpha code not available

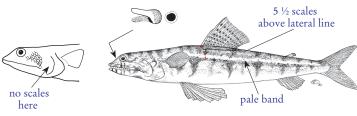


Synodus hoshinonis – Blackear lizardfish

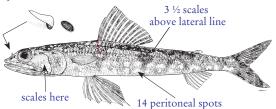


*Synodus dermatogenys* – Sand lizardfish



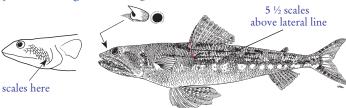


#### Synodus randalli - Randall's lizardfish



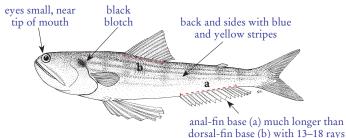
#### Synodus variegatus - Variegated lizardfish

#### SYW



## Trachinocephalus myops - Snakefish

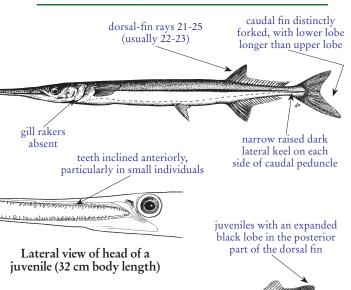
**TCY** 



Tylosurus crocodilus (Péron & Lesueur, 1821)

**BTS** 





Juvenile

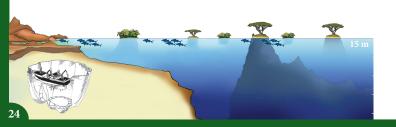
**Description:** body elongate, circular in cross-section; anal-fin rays 19-22, usually 21-22.

**Colour:** body colour dark bluish green above, silvery below; a dark blue stripe along sides.



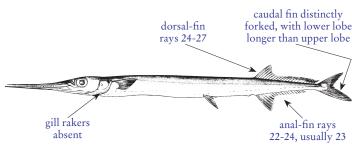
**Size:** 90 cm (max. 150 cm)





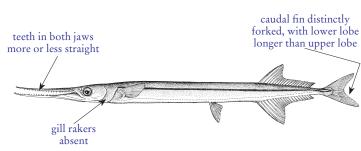
#### Tylosurus melanotus – Agujon needlefish





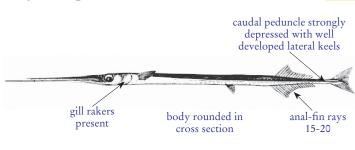
## *Tylosurus choram* – Red Sea houndfish

TBH



#### Platybelone platura - Keeltail needlefish

PTA



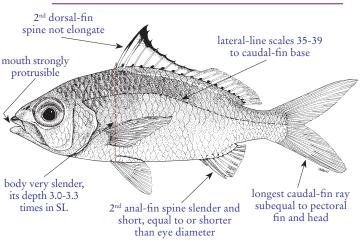
#### Ablennes hians - Flat needlefish

BAF



**GEI** 

Local names: Kass. かり



**Description:** body oblong, compressed, anterodorsal profile convex.

**Colour:** pale olive above to silvery below; 7-8 faint dusky bars on sides of body, more pronounced in young.



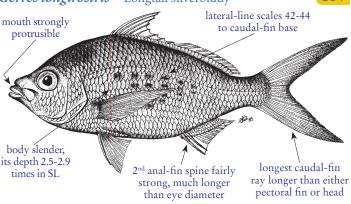
**Size:** 15 cm (max. 25 cm)





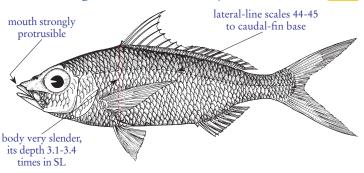
#### Gerres longirostris - Longtail silverbiddy



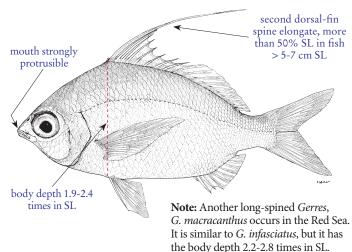


#### Gerres oblongus - Slender silver-biddy

#### GEO

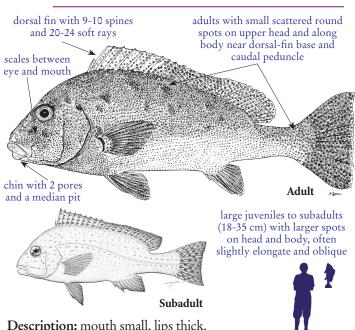


#### Gerres infasciatus - Nonbanded whipfin mojarra



DGP





Description: mouth small, lips thick.

Colour: ground colour of adults plain silvergrey to grey-bronze.



(max. 100 cm)

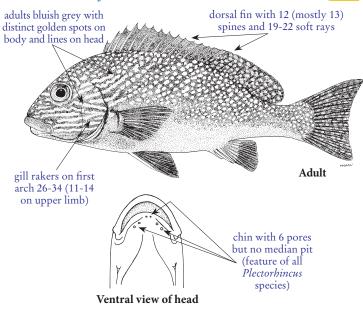


Remarks: the form occurring in the Red Sea is recognized by some authors as a distinct species: Diagramma punctatum (Cuvier, 1830).



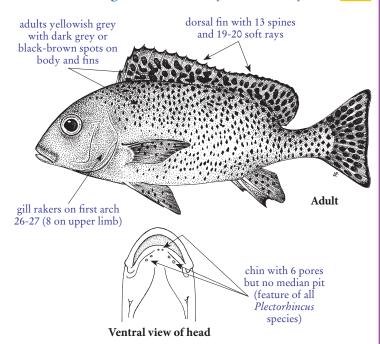
#### Plectorhinchus flavomaculatus – Lemonfish





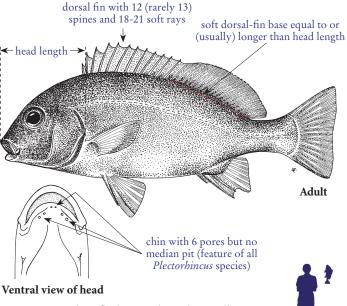
## **Plectorhinchus gaterinus** – Blackspotted rubberlip

**GQT** 



**PKF** 

# Local names: Sobaity, Shatef. سوبيتى ሸጣፍ: ሰባይቲ



Description: lips fleshy, moderately swollen with age; pored lateral-line scales 54-58.

Colour: body uniform grey, silver, or greyish brown; pale grey to whitish below.



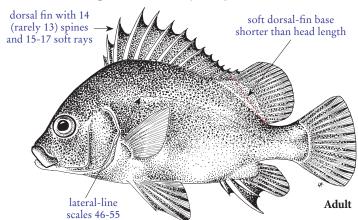
Size: 40 cm (max. 90 cm)



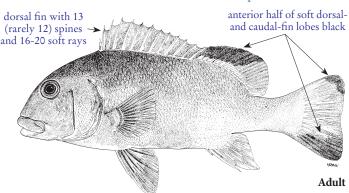


#### *Plectorhinchus gibbosus* – Harry hotlips



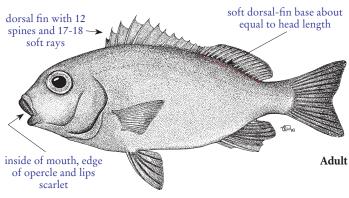


#### Plectorhinchus albovittatus - Giant sweetlips



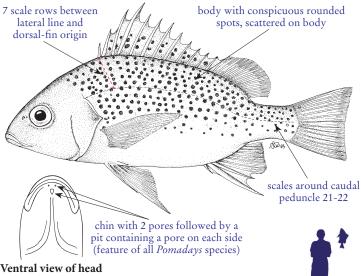
## *Plectorhinchus sordidus* – Sordid rubberlip

**GQD** 



GRL

كوكو، شيفش، جيتران، شاتف. Local names: Shatef, Koko, Gatren ሸጣፍ: **ኮኮ**: *ጋትረን* 



**Description:** head blunt, its upper profile convex; mouth small; maxilla reaching to eye.

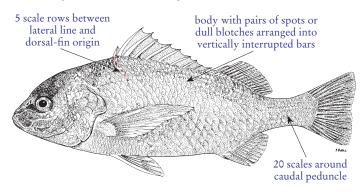
Size: 25 cm (max. 70 cm)





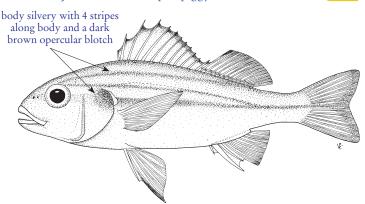
#### **Pomadasys kaakan** – Javelin grunter

**KAH** 

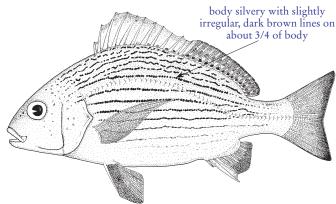


#### Pomadasys stridens - Striped piggy





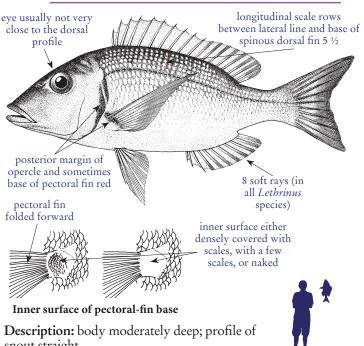
#### **Pomadasys punctulatus** – Lined grunt



**Note:** Another *Pomadasys*, *P. maculatus* occurs in the Red Sea. It has an oblique dark bar on the nape and a blotch on the spinous dorsal fin.

LTS

## Local names: Shu'ur. محسنه، شعور ۲۰۰۲



snout straight.

Colour: body greenish or grey, shading to white below.

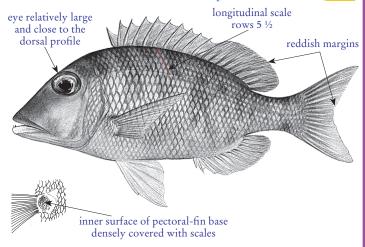




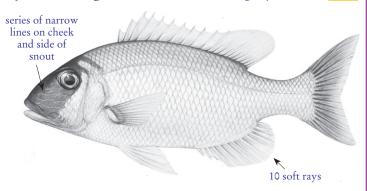


#### *Lethrinus borbonicus* – Snubnose emperor





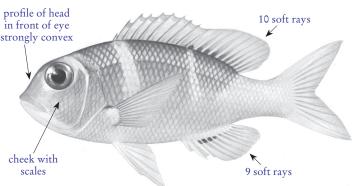
#### *Gymnocranius grandoculis* – Blue-lined large-eye bream



# *Monotaxis grandoculis* – Humpnose big-eye bream

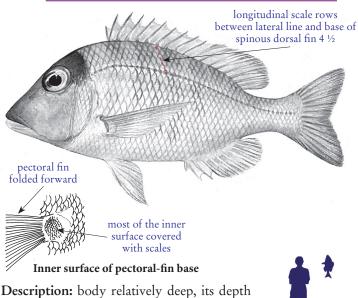


**GMW** 



LTQ

Local names: Shu'ur, Mahsena. محسنه، شعور ሽውር: ማሕሴና



2.3-2.5 times in standard length.

Colour: head purplish grey, sometimes with a red blotch on nape; body yellow to greenishblue, lighter ventrally.



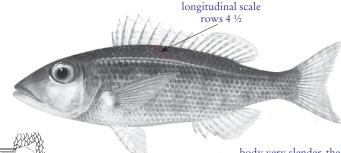
Size: 40 cm (max. 60 cm)











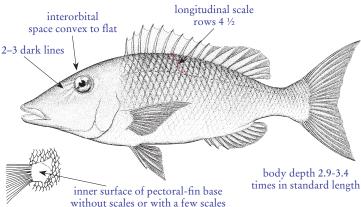
without scales or with a few scales

body very slender, the depth 3.4-3.9 times in standard length

# **Lethrinus microdon** – Smalltooth emperor

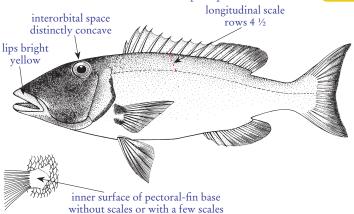
inner surface of pectoral-fin base







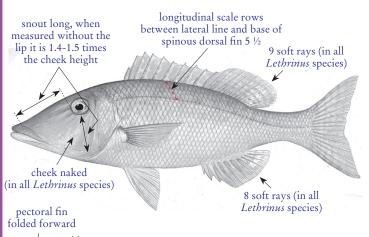




Lethrinus olivaceus Valenciennes, 1830

**LHO** 

### Local names: Shu'ur, Suli. ሽውር: ሱሊ



inner surface without scales or, with a few scales

Inner surface of pectoral-fin base

**Description:** body relatively slender, its depth 2.9-3.4 times in standard length.

**Colour:** body grey, lighter ventrally, often with scattered irregular dark blotches.



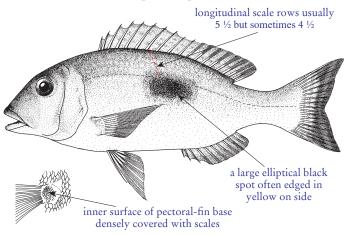
**Size:** 70 cm (max. 100 cm)





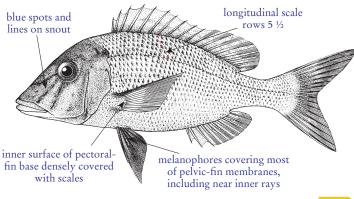
# *Lethrinus harak* – Thumbprint emperor





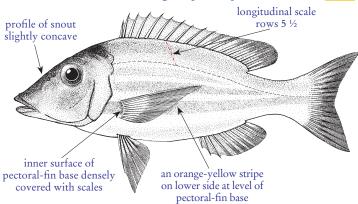
# Lethrinus nebulosus – Spangled emperor





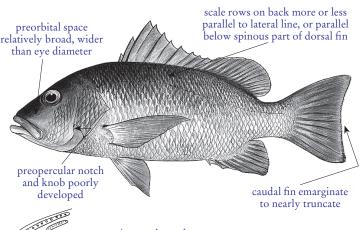
#### **Lethrinus obsoletus** – Orangestriped emperor

LWO



RES

# Tocal names: Shaefen. شعفن مملك شعفن





vomerine tooth patch crescentic, without a medial posterior extension

#### Roof of mouth

**Description:** body moderately deep, its depth 2.5-3.1 times in standard length.

**Colour:** back and sides greenish brown to reddish; belly silvery or whitish.



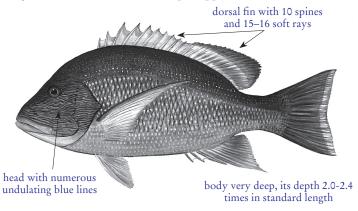
**Size:** 80 cm (max. 150 cm)





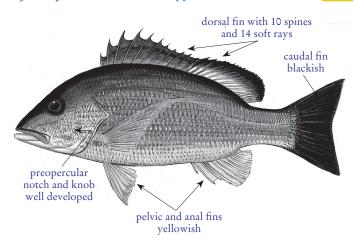
#### Lutjanus rivulatus – Blubberlip snapper





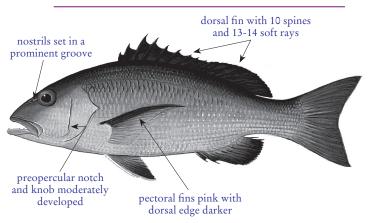
### *Lutjanus fulvus* – Blacktail snapper

LJV



LJB

# 



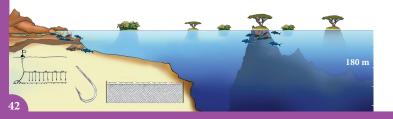
**Description:** body relatively deep, greatest depth 2.4-2.9 times in standard length.

**Colour:** back and upper sides dark brown or blackish; lower sides and belly reddish, with darker horizontal stripes.



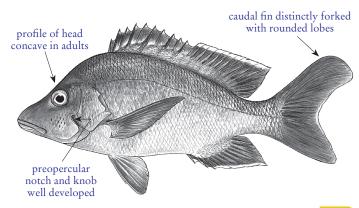
**Size:** 75 cm (max. 90 cm)





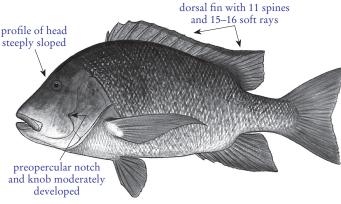
#### Lutjanus gibbus - Humpback red snapper

LJG



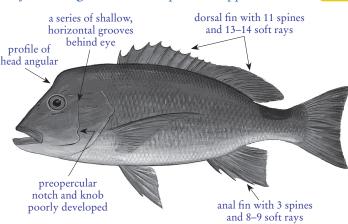
#### Lutjanus sebae – Emperor red snapper

LUB



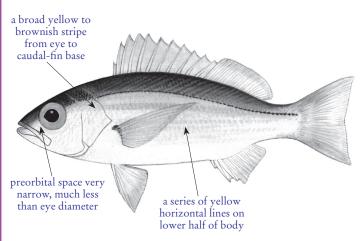
### *Lutjanus sanguineus* – Humphead snapper

LZJ



LJL

# Local names: Shaefen. ሻዕፌን



**Description:** body fusiform, slender, its depth 2.9-3.3 times in standard length; preopercular notch and knob poorly developed.

**Colour:** upper back golden brown; sides silvery white.



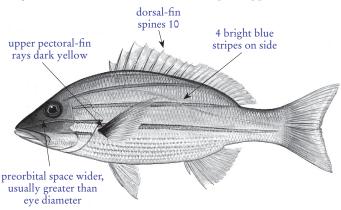
**Size:** 30 cm (max. 35 cm)



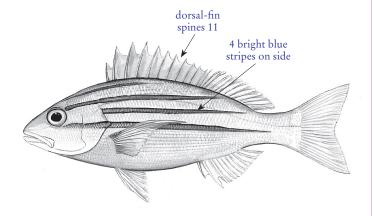


# *Lutjanus kasmira* – Common bluestripe snapper



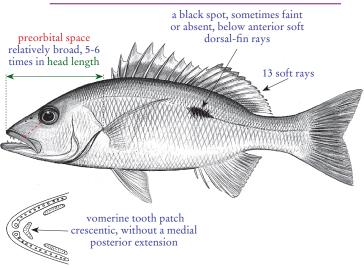


# *Lutjanus sapphirolineatus* – Arabian blue-striped snapper



LJK

Local names: Shaefen. ሻዕፌን



#### Roof of mouth

**Description:** body moderately deep to somewhat slender, greatest depth 2.6-3.0 in standard length. **Colour:** body whitish to pinkish with dusky scale margins; grey or brown on upper back and dorsal portion of head.



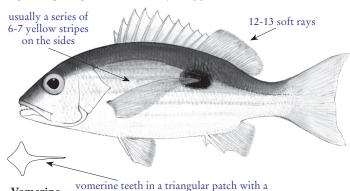
(max. 60 cm)





#### Lutjanus fulviflamma – Dory snapper

LJF



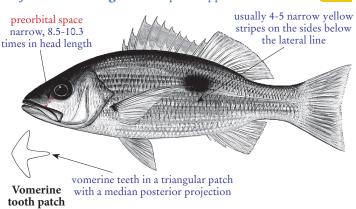
long median posterior projection

# Lutjanus ehrenbergi – Blackspot snapper

Vomerine

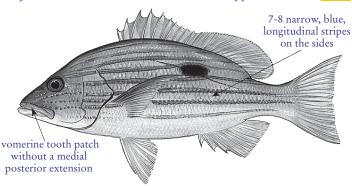
tooth patch

LWE



#### Lutjanus coeruleolineatus – Blueline snapper

LWN

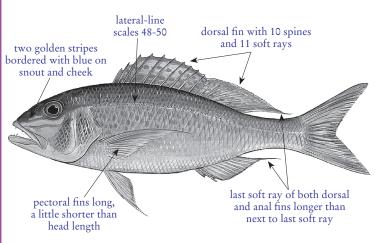


**Note:** another black-spotted *Lutjanus*, *L. indicus* seems to occur in Eritrea. It is characterized by usually having 14 soft dorsal-fin rays.

Pristipomoides multidens (Day, 1871)

LRI

Local names: Anthak. عنتق 97분기



**Description:** body elongate, laterally compressed; 1<sup>st</sup> gill arch with 20-22 gill rakers. **Colour:** yellowish to rosy, with about 6 broken golden stripes on sides.



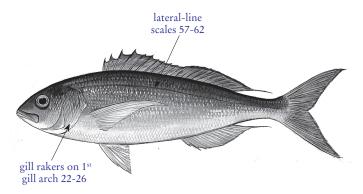
**Size:** 70 cm (max. 90 cm)





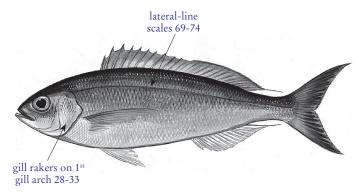
#### **Pristipomoides filamentosus** – Crimson jobfish

**PFM** 



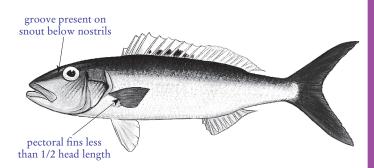
### Pristipomoides sieboldii – Lavender jobfish

LRB



# Aprion virescens - Green jobfish

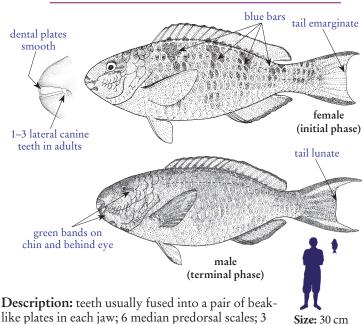
AVN



(max. 75 cm)

USY

Local names: Harida. 스스



like plates in each jaw; 6 median predorsal scales; 3 rows of scales on cheek; 15-16 (usually 15) pectoral-

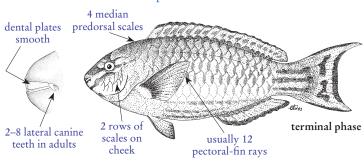
fin rays.

Colour: initial phase characterized by 4–5 diffuse blue bars on yellowish body; terminal phase bluish green with salmonpink scale margins; upper lip salmon pink with a broad green band above.



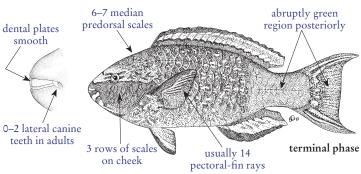


**Scarus collana** – Red Sea parrotfish



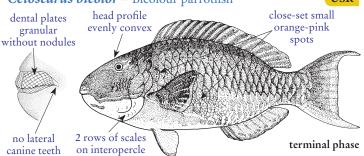
# *Scarus frenatus* – Bridled parrotfish

USZ



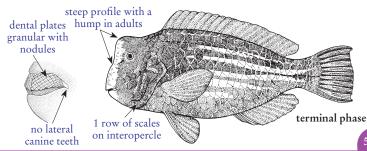
#### Cetoscarus bicolor – Bicolour parrotfish

USR



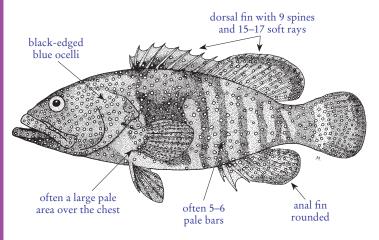
#### **Bolbometopon muricatum** – Green humphead parrotfish

BMK



**CFF** 

# Local names: Kusher. کشر ابو بلحة ۸۵۹



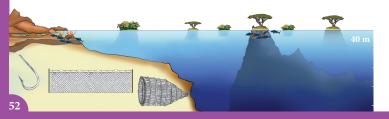
**Description:** body depth distinctly less than head length; pectoral fins clearly longer than pelvic fins.

**Colour:** dark brown, covered with small black-edged blue ocelli on head, body and fins.



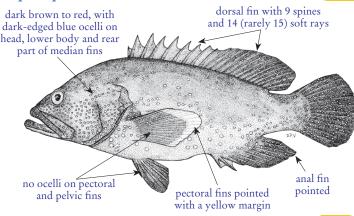
**Size:** 40 cm (max. 55 cm)





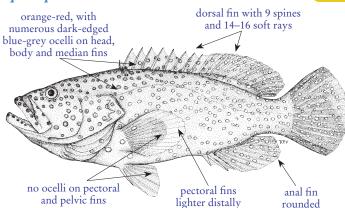
#### Cephalopholis hemistiktos - Yellowfin hind



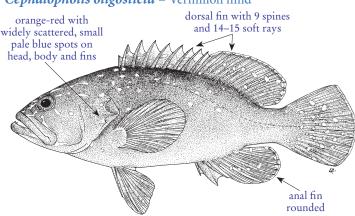


#### Cephalopholis miniata – Coral hind



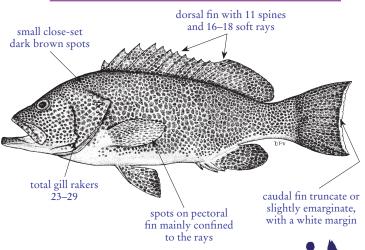


### Cephalopholis oligosticta – Vermilion hind



**EFH** 

#### Local names: Samman, Shurwi. שמט ሳማን: ሹርዊ

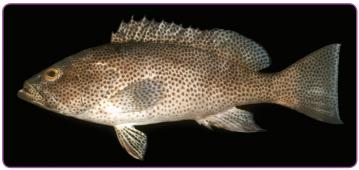


Description: body depth less than head length, contained 2.8-3.3 in standard length.

Colour: whitish, with small dark brown spots on head, body, and fins except ventrally on head, thorax, and lower abdomen.



(max. 80 cm)

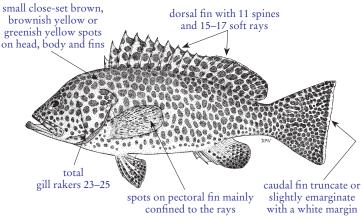


Remarks: the form occurring in the Red Sea is recognized by some authors as a distinct species: E. geoffroyi (Klunzinger, 1871).



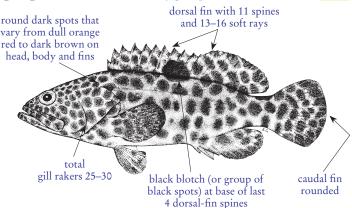
#### *Epinephelus areolatus* – Areolate grouper

**EPR** 



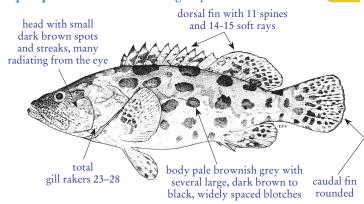
#### Epinephelus tauvina - Greasy grouper

**EPT** 



## **Epinephelus tukula** – Potato grouper

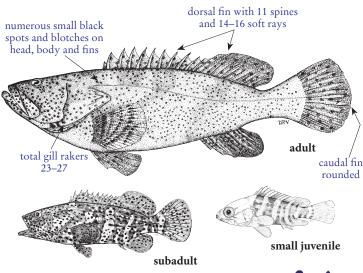
**EWL** 



Epinephelus malabaricus (Bloch & Schneider, 1801)

MAR

# Local names: Kushar. کشر طوینی ۱۳۳۵

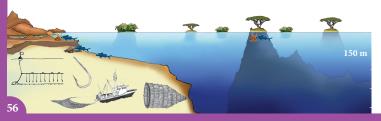


**Description:** body elongate, its depth 3.0–3.7 times in standard length.

Colour: light grey to yellowish brown with 5 slightly irregular oblique dark brown bars that bifurcate ventrally.

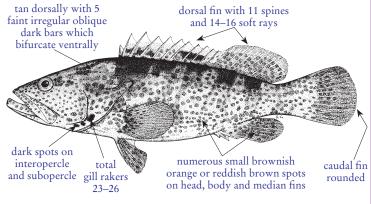






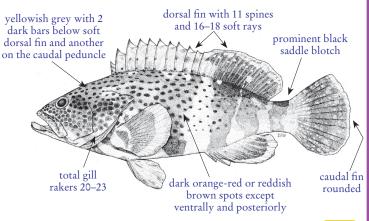
### *Epinephelus coioides* – Orange-spotted grouper





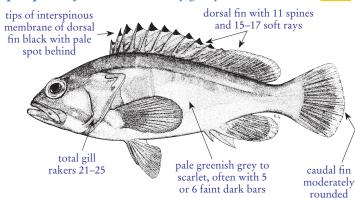
# Epinephelus stoliczkae – Epaulet grouper

EPZ



#### Epinephelus fasciatus – Blacktip grouper

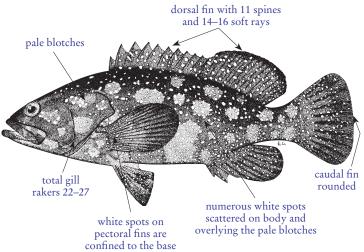
EEA



Epinephelus summana (Forsskål, 1775)

**EWS** 

Local names: Kushar mubal'at. کشر موبالات ኩሽር: ሙባላዓት



**Description:** body robust; upper edge of the operculum strongly convex; posterior nostril of adults vertically elongate.

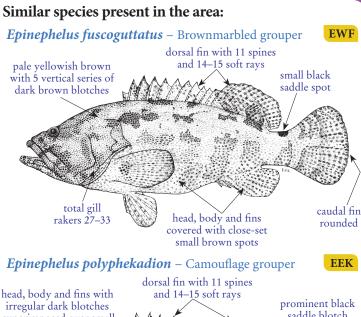
**Colour:** body dark olive-brown to dark brownish grey.

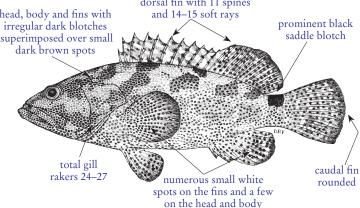


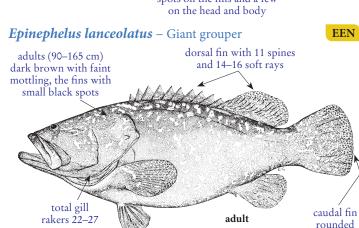
**Size:** 40 cm (max. 52 cm)





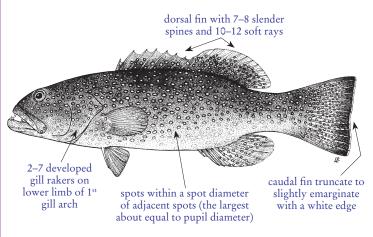






**EME** 

Local names: Kushar, Najil. ኩሽር: ናጇል



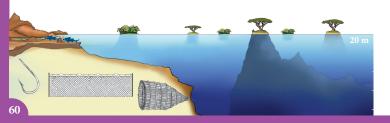
**Description:** body elongate and robust, depth 2.9-3.9 in standard length.

Colour: body whitish to pale grey, with numerous round to oval dark-edged blue spots; pelvic fins with dark brown to blackish membranes.



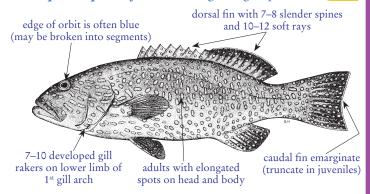
**Size:** 60 cm (max. 80 cm)





#### **Plectropomus pessuliferus** – Roving coralgrouper

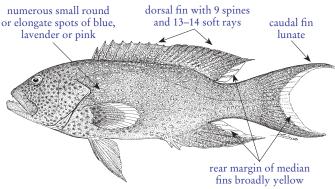




Remarks: the Red Sea population is recognized by some authors as a distinct species: *P. marisrubri* Randall & Hoese, 1986.

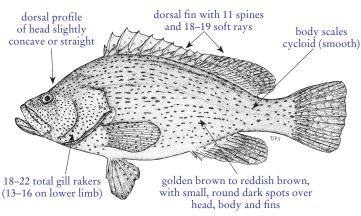
# *Variola louti* – Yellow-edged lyretail

VRL



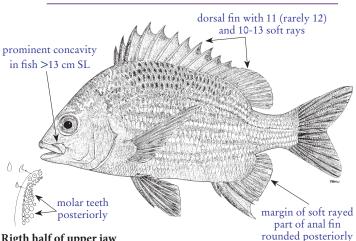
# **Dermatolepis striolata** – Smooth grouper

DEV



**MLB** 

Local names: Abuberite. ابو بریت አቡ በሪጥ



Rigth half of upper jaw

Description: body fairly deep and compressed, its depth about 2 times in standard length; interorbital area scaleless.

Colour: grey, dark silver or olive-brown with silvery or brassy reflections; a dark edge along opercle; pectoral fins dusky with a yellow tinge; soft dorsal, anal, pelvic, and caudal fins blackish.



Size: 25 cm (max. 75 cm)

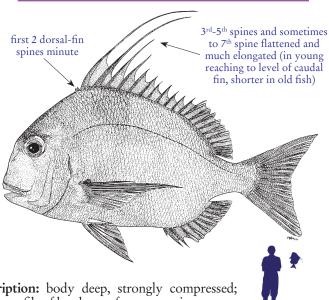




#### Similar species present in the area: Acanthopagrus bifasciatus – Twobar seabream **EMU** silvery with 2 black bars on dorsal fin with 11 spines and 12 soft rays head, and a black spot at center of each body scale often side of snout and cheek below dorsal, pectoral and eve yellow caudal fins yellow pelvic- and anal-fin rays dense black Crenidens - Karanteen seabream **CWC** dorsal fin with usually 11 silvery, greenish blue spines and 11 soft rays above with darker longitudinal stripes along scale row teeth with 5 points on 4 1/2 scale rows between cutting edge the 10th dorsal-fin spine 9-10 gill rakers base and lateral line on lower limb of 1st gill arch Upper and lower tooth Rhabdosargus sarba - Goldlined seabream RSS dorsal fin with usually silvery black with 11 spines and 12-14 yellow or golden (usually 13) soft rays longitudinal lines na. enlarged posterior molar 6 1/2-7 1/2 scale rows between the 5th dorsal-fin anal fin with 3 spines and spine base and lateral line 10-11 (rarely 10) soft rays Right half of upper jaw

**KBR** 

Local names: Fofal, Abyad. فوفل، ابيض ፎፋል: አብያድ



**Description:** body deep, strongly compressed; upper profile of head steep from upper jaw to eye. **Colour:** body mainly silvery pinkish; usually dark red on margin of upper part of opercle.

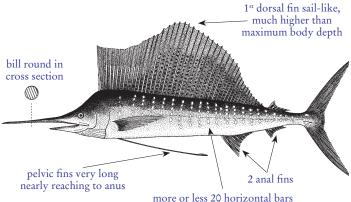






SFA

# Local names: Abu feres. أبو فرس አቡ ፌሬስ



on body, each consisting of several pale blue spots

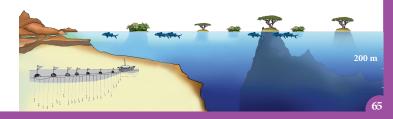
**Description:** body elongate and compressed; 1st dorsal fin with about 42–49 rays; 2 separate anal fins, with 12–17 and 6–7 rays, respectively; pectoral fins falcate, with 17–20 rays.

**Colour:** body dark bluish violet dorsally, silvery white ventrally; 1<sup>st</sup> dorsal-fin membrane dark blue with many small black spots.



**Size:** 270 cm FL (max. 348 cm FL)





# Bluespine unicornfish

**ACANTHURIDAE** 

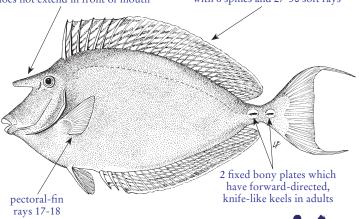
Naso unicornis (Forsskål, 1775)

NAS

# Local names: Kurnjal, Abu Garn. قرنجل ኩሩንጃል፡ አቡ ቀርን

adults with a median horn-like projection anterior to eyes which does not extend in front of mouth

a continuous unnotched dorsal fin with 6 spines and 27-30 soft rays



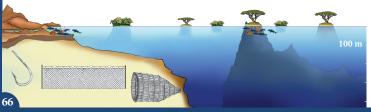
**Description:** body deep and compressed, its depth 1.8-2.6 times in standard length.

**Colour:** light olive to yellowish grey, the peduncular spines and a small area around each bright blue.



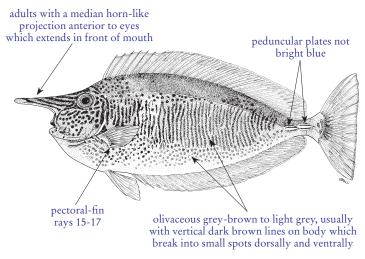
**Size:** 50 cm (max. 70 cm)





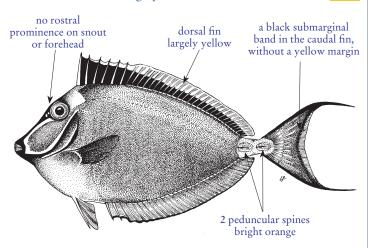
#### Naso brevirostris – Spotted unicornfish

NAB



#### Naso lituratus – Orangespine unicornfish

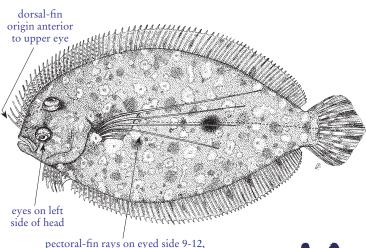
NAI



Remarks: the form occurring in the Red Sea is recognized by some authors as a distinct species: *N. elegans* (Rüppell, 1829).

OUN

Local names: Shebet al bahir. شيبت البحر ሻበፕ ባሕሪ



**Description:** body ovoid, its depth 1.6-2 times in standard length; pelvic fin of eyed side anterior to that of pelvic fin of blind side.

greatly elongate in males > 12 cm SL

Colour: eyed side with numerous dark spots, blotches, and rings on body and median fins.



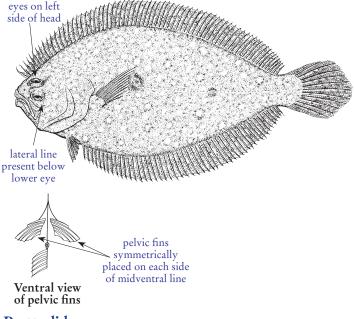
**Size:** 20 cm (max. 39 cm)



# Similar families and species present in the area: Paralichthyidae

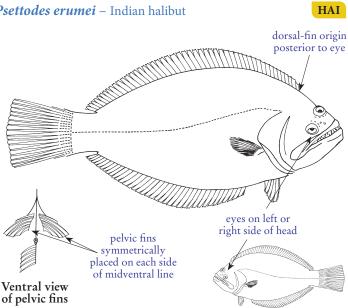
**Pseudorhombus arsius** – Largetooth flounder

**UHA** 



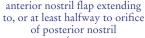
### Psettodidae

Psettodes erumei - Indian halibut

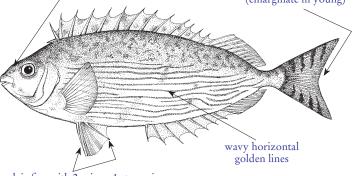


SRI

# Local names: Sejan. سجان ۱۳۶۸



caudal fin forked (emarginate in young)



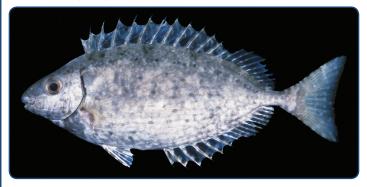
pelvic fins with 2 spines, 1 strong inner and 1 outer, with 3 soft rays in between (a character unique to this family)

**Description:** body compressed and slender, its depth 2.6–3.4 times in standard length; midline region of thorax scaleless.

Colour: body grey, green or brownish, silvery below, with 6-19 wavy, horizontal golden lines running length of body when fresh.



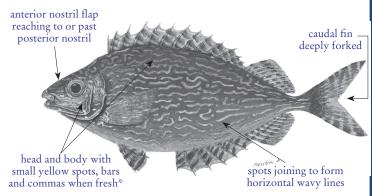
**Size:** 20 cm (max. 27 cm)





### Siganus argenteus – Streamlined spinefoot

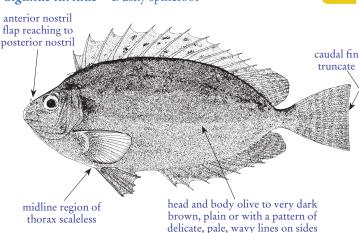
**IGA** 



\* colours fade rapidily at death so that head and trunk may be solid brown

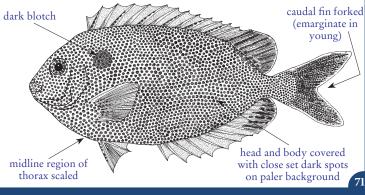


IGU



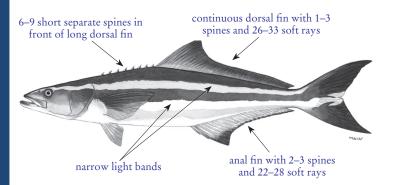
### Siganus stellatus – Brownspotted spinefoot

**IUT** 



**CBA** 

## Local names: Sikla. سیکین، فیتل، سیکلا ሲቅላ: ኮብድ



**Description:** head broad and depressed; mouth large, terminal, with projecting lower jaw; pectoral fins pointed; caudal fin lunate in adults (convex in juveniles) with upper lobe longer than lower

Colour: back and sides dark brown, with 2 sharply defined narrow light bands; belly yellowish.

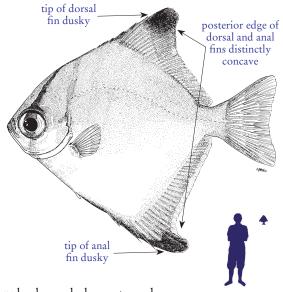


**Size:** 100 cm (max. 200 cm)





### Local names: not available.

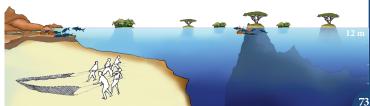


**Description:** body oval, deep, strongly compressed; body depth 1.2-1.6 times in standard length.

Size: 12 cm (max. 27 cm SL)

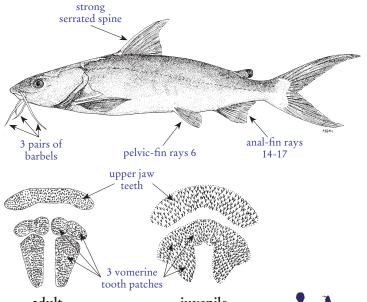
Colour: adults bright silver with yellow and dusky dorsal fin tip; small juveniles more colorful with yellow over most of the dorsal fin and two vertical black bands over the head.





AUX

## Local names: Koumel, Shilan. کومل، شیلان ኩመል፡ ሺላን



adult

juvenile

Dental plates on roof of mouth

Description: snout prominent and somewhat pointed; mouth inferior.

Colour: body iridescence coppery or golden.



Size: 70 cm (max. 185 cm)



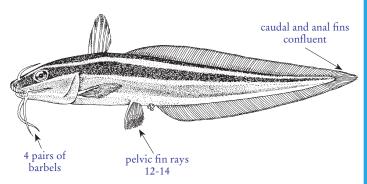


Netuma thalassina is the only representative of the family Ariidae know to occur in the Red Sea. A similar catfish species belonging to the family Plotosidae is here included.

#### Plotosidae

Plotosus lineatus - Striped eel catfish

PII

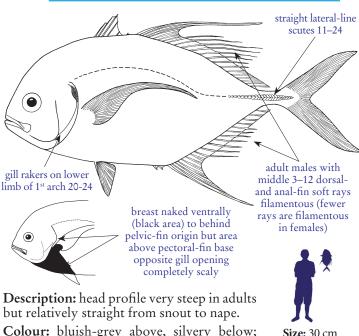




Carangoides armatus (Rüppell, 1830)

NGR

#### Local names: Bayad. بياد nge



Colour: bluish-grey above, silvery below; blackish blotch on upper margin of opercle.

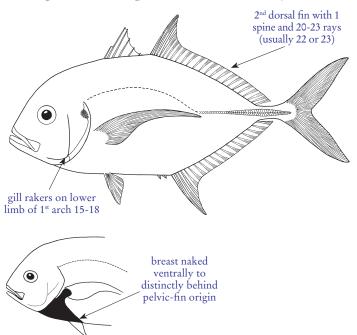






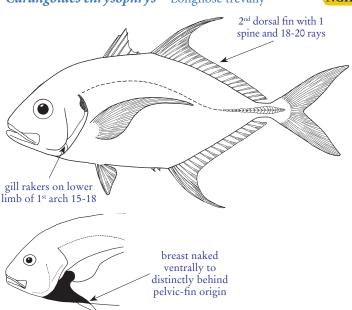






### Carangoides chrysophrys - Longnose trevally

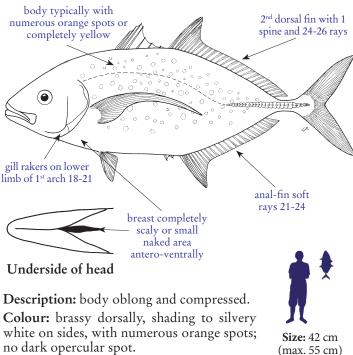
NGH

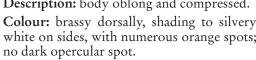


Carangoides bajad (Forsskål, 1775)

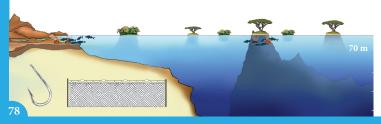
NGJ

#### Local names: Bayad. بياد በያድ



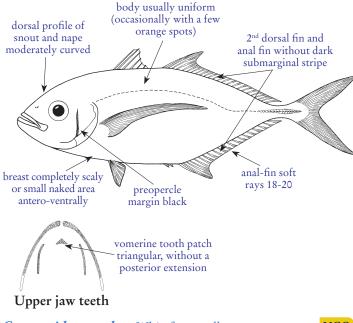






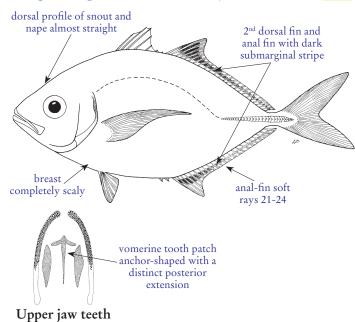
#### **Carangoides plagiotaenia** – Barcheek trevally

**GSP** 



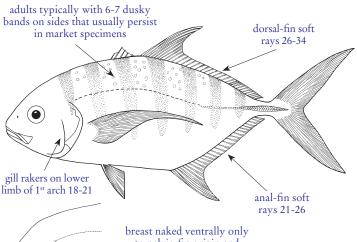
### *Carangoides equula* – Whitefin trevally

NGQ



CRF

## Local names: Bayad. بياد በ۶ድ



breast naked ventrally only to pelvic-fin origin and laterally naked breast and pectoral-fin base interrupted by moderate band of scales

**Description:** dorsal profile of head slightly convex. **Colour:** silvery blue-green dorsally, shading to silvery on sides and ventrally; numerous, inconspicuous golden spots often present on sides.



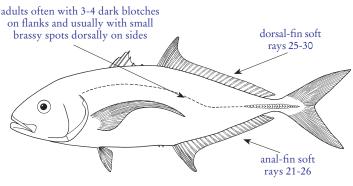
**Size:** 30 cm (max. 70 cm)



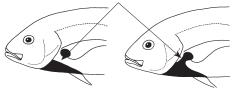


#### **Carangoides fulvoguttatus** – Yellowspotted trevally



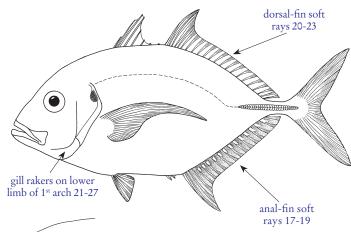


breast naked ventrally to behind pelvic-fin origin and laterally squamation variable; naked breast with or without a band of scales as in *C. ferdau* 



### **Carangoides malabaricus** – Malabar trevally

NGS



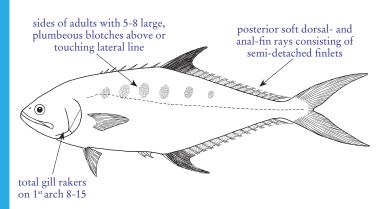


**Note:** Another *Carangoides* species, *C. talamparoides* occurs in the Red Sea. It is similar to *C. malabaricus*, but it has 17-21 gill rakers on lower limb of 1st gill arch.

Scomberoides commersonnianus Lacepède, 1801

OBM

### Local names: Dorob. دورب ዶሮብ



**Description:** body oblong to elliptical, strongly compressed; dorsal and ventral profiles similar, snout blunt with dorsal profile of head and nape slightly convex.

Colour: dorsal and anal fins dusky to dark, uniformly pigmented.



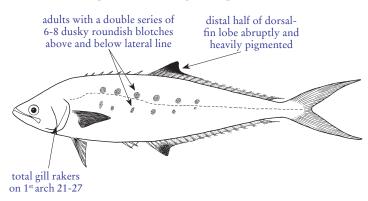
Size: 94 cm FL (max. 120 cm FL)





Scomberoides lysan – Doublespotted queenfish

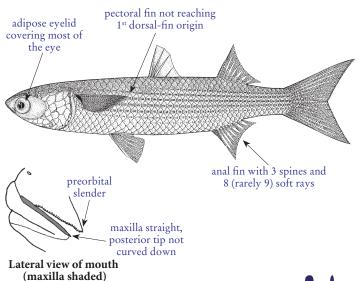
**OBY** 





MUF

### Local names: Araaby. عربي ٩٨٨.



**Description:** body stout, cylindrical in crosssection, slightly compressed; head broad and flattened.

**Colour:** olive-green on back, silvery on sides with 6–7 dark stripes following rows of scales.



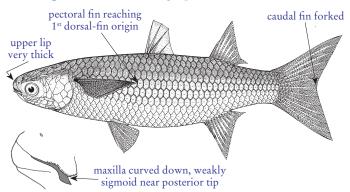
**Size:** 35 cm (max. 90 cm)





Crenimugil crenilabis - Fringelip mullet

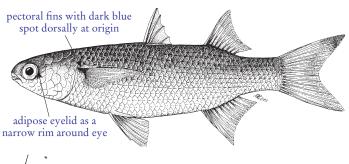




Lateral view of mouth (maxilla shaded)

### Crenimugil seheli – Bluespot mullet





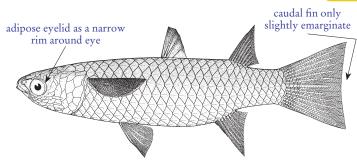


maxilla slender, with a slightly curved tip usually not visible when mouth closed

Lateral view of mouth (maxilla shaded)

### Ellochelon vaigiensis – Squaretail mullet

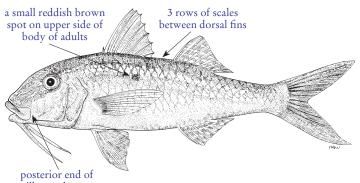




Parupeneus heptacanthus (Lacepède, 1802)

**ROF** 

## Local names: Abusheneb. ابو شنب አቡ ሽንብ



maxilla evenly convex

teeth in jaws in 1 row, moderately large, bluntly conical, and well spaced (true of all *Parupeneus*)

no teeth on vomer or palatines (true of all *Parupeneus*)

Roof of mouth

**Description:** body slightly elongate, its depth 3.0-3.55 times in standard length.

Colour: brownish yellow to light red.



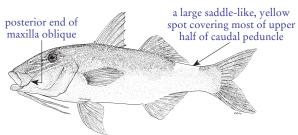
**Size:** 25 cm (max. 36 cm)





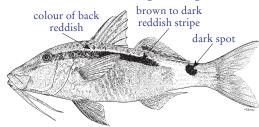
Parupeneus cyclostomus – Gold-saddle goatfish

**RPY** 



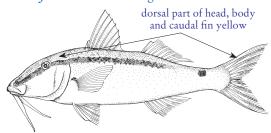
Parupeneus macronemus – Long-barbel goatfish

RPO



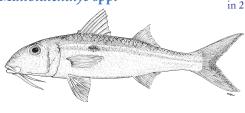
Parupeneus forsskali – Red Sea goatfish

RPF



Mulloidichthys spp.

teeth in jaws small, in 2 to several rows



Roof of mouth

**Upeneus** spp. – Goatfishes

**GOX** vomerine and palatine



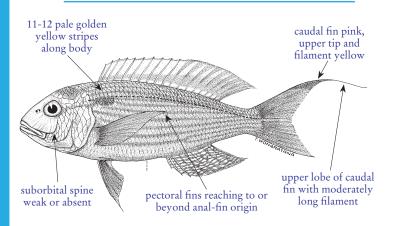


Roof of mouth

Nemipterus japonicus (Bloch, 1791)

NNJ

### Local names: Sare, Ser'a. ሳሬ፡ ሰርዓ



**Description:** body depth 2.7-3.5 times in standard length; snout length equal to or greater than eye diameter.

**Colour:** upper part of body pinkish, becoming silvery below; top of head behind eye with a golden sheen.



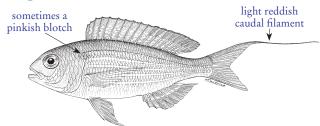
**Size:** 25 cm (max. 30 cm)





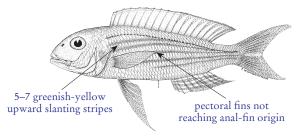






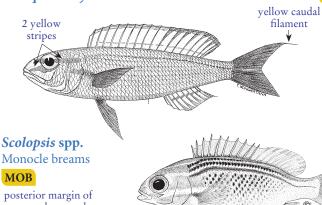
## Nemipterus bipunctatus - Delagoa threadfin bream

KZJ



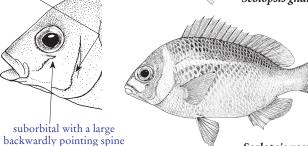
### Nemipterus zysron – Slender threadfin bream

KZI



posterior margin of preopercle coarsely denticulate or serrate

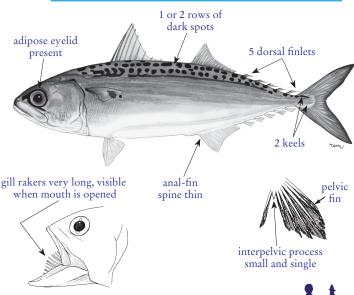




Scolopsis vosmeri

RAG

### Local names: Baka. باغة



**Description:** body moderately deep, slightly compressed, its depth at posterior margin of opercle 4.3–5.2 times in fork length.

**Colour:** back blue-green, flanks silver with golden tint; a black spot near pectoral fins.



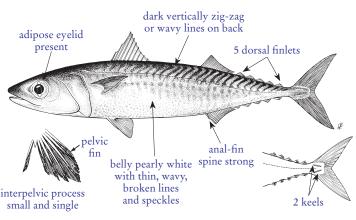
**Size:** 25 cm (max. 42 cm)





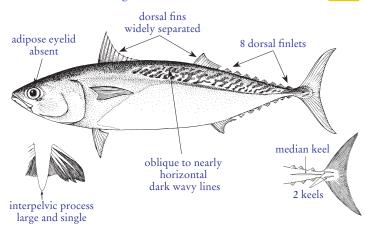
#### **Scomber australasicus** – Blue mackerel





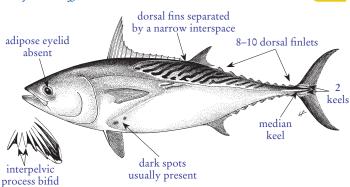
### Auxis thazard - Frigate tuna

FRI



## **Euthynnus affinis** – Kawakawa

KAW

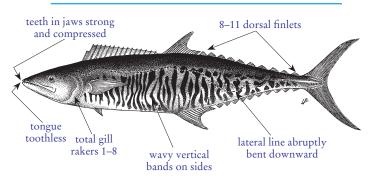


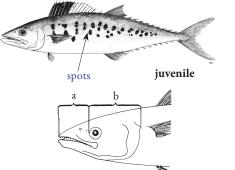
### Narrow-barred Spanish mackerel SCOMBRIDAE

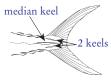
Scomberomorus commerson (Lacepède, 1800)

COM

## Local names: Derak. ديرك

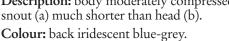










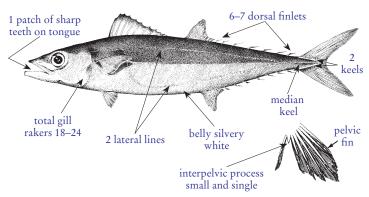






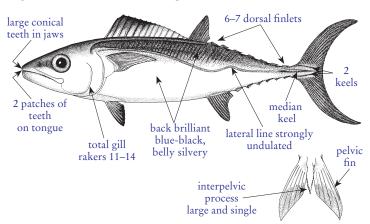
#### *Grammatorcynus bilineatus* – Double-lined mackerel





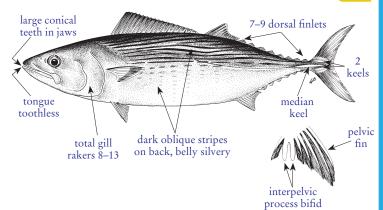
### Gymnosarda unicolor - Dogtooth tuna

### DOT



### Sarda orientalis - Oriental bonito

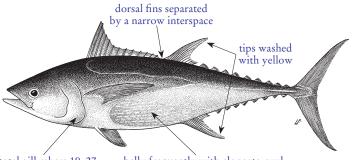
#### BIP



Thunnus tonggol (Bleeker, 1851)

LOT

#### شروي، تونة . Local names: Tonno, Shurwi ቶ**ኖ** : ሽርዊ



total gill rakers 19-27 (usually 26 or fewer)

belly frequently with elongate-oval spots arranged in horizontal rows





Description: a small tuna species with a long caudal peduncle; dorsal- and anal-fin lobes never greatly elongated (< 20% FL).

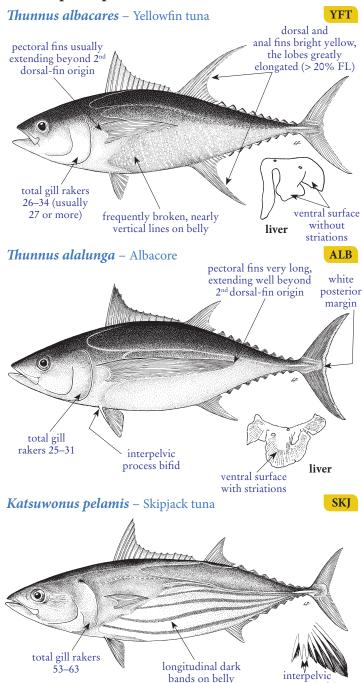
Colour: back dark blue or black, lower sides silvery white; dorsal, pectoral, pelvic and caudal fins blackish.



Size: 70 cm FL (max. 130 cm FL)



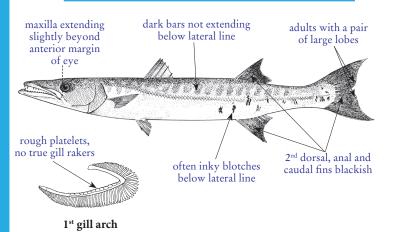




process bifid

**GBA** 

## المجادية عقام . Local names: Agam, Dodaf تو داف، عقام . وداف، عقام . بيرو تو داف، عقام .



**Description:** body elongate, slightly compressed; jaws long, studded with large, sharp, flattened or conical teeth of unequal size (true of all *Sphyraena* species).

Colour: many oblique dark bars on upper half of body, these not crossing the lateral line; caudal fin black with white tips; juveniles with a series of large dark blotches arranged on dorso-lateral part of body.



**Size:** 140 cm (max. 200 cm)

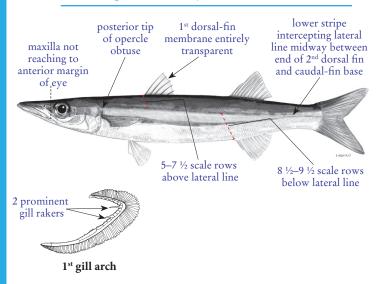




#### Similar species present in the area: BAN **Sphyreana putnamae** – Sawtooth barracuda caudal fin forked, dorsal, pectoral with a pair of (and caudal) last ray maxilla extending indistinct lobes fins dusky to just below elongate in large adults anterior margin of eye rough platelets, no true gill rakers anal (and pelvic) dark bars extending fins white well below lateral line 1st gill arch Sphyraena jello – Pickhandle barracuda BAC caudal fin forked, dusky maxilla extending dorsal fins dusky green to just below yellow in colour anterior margin of eye rough platelets, no true gill rakers dark bars extending anal fin pale slightly below lateral line 1st gill arch **BAB** Sphyraena qenie – Blackfin barracuda caudal fin forked, with dorsal (and caudal) maxilla extending a pair of indistinct fins largely blackish to just below lobes in adults anterior margin of eye rough platelets, no true gill rakers dark bars extending anal (and pelvic) well below lateral line fins pale 1st gill arch

YRB

# Local names: Agam, Dodaf. توداف، عقام ، 479 بهرج



**Description:** a small species, with 1<sup>st</sup> dorsal-fin origin behind pelvic-fin origin and tip of pectoral fin extending past 1<sup>st</sup> dorsal-fin origin.

Colour: dark green dorsally, silvery white below, with 2 indistinct yellowish brown longitudinal stripes (when fresh); anal, dorsal and pelvic fins transparent; pectoral fin dusky; caudal fin yellowish.



**Size:** 30 cm (max. 43 cm)





#### Similar species present in the area: Sphyraena iburiensis – Iburi barracuda 2 distinct yellowish brown stripes, the 1st dorsal-fin maxilla not posterior tip lower extending to membrane entirely reaching to of opercle caudal-fin base just transparent anterior margin below lateral line obtuse of eye 2 prominent 8 ½-9 ½ scale rows gill rakers 10 ½-11 ½ scale rows above lateral line below lateral line 1st gill arch Sphyraena pinguis - Red barracuda YRN 1<sup>st</sup> dorsal fin membrane posterior tip maxilla not of opercle dusky distally reaching to sharply pointed anterior margin of eye 2 prominent 10 ½-12 ½ scale rows gill rakers 7 ½–9 ½ scale rows below lateral line above lateral line a single vellowish brown stripe 1st gill arch Sphyraena forsteri - Bigeye barracuda YBS median black maxilla reaching to or fins dusky blotch slightly before anterior margin of eye distinct spinules on platelets pored lateral line tips of 2nd dorsal and

scales 118-133

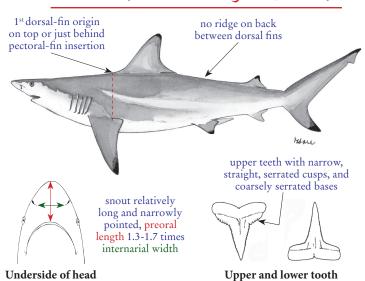
1st gill arch

anal fins white

Carcharhinus limbatus (Müller & Henle, 1839)

CCL

### Local names: Autat, Pechecane. عو تات アぞり: トのナナ



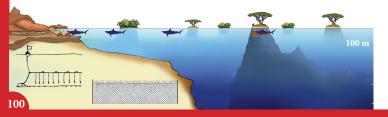
**Description:** a stout shark with a large and falcate 1<sup>st</sup> dorsal fin.

Colour: upper body grey or grey-brown, underside white; dorsal fins, pectoral fins, pelvic fins and lower lobe of caudal fin, black or dusky in young individuals, fading with growth.



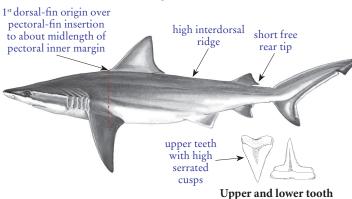
**Size:** 150 cm (max. 250 cm)





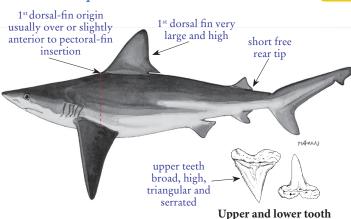
### Carcharhinus altimus – Bignose shark





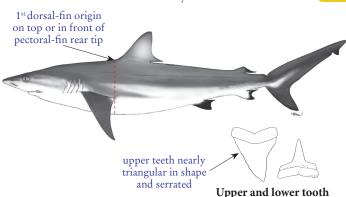
### Carcharhinus plumbeus – Sandbar shark

CCP



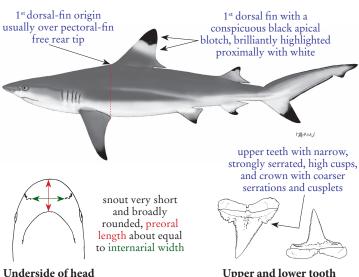
### Carcharhinus obscurus – Dusky shark

DUS



Carcharhinus melanopterus (Quoy & Gaimard, 1824) BLR

عوتات، زنجي Local names: Zingi, Autat, Pechecane. ፐቺካነ፡ ዚንጊ፡ አውታት



Upper and lower tooth

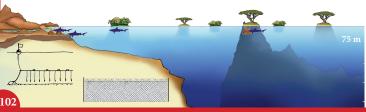
**Description:** a small to medium-sized shark with a moderately stout body.

Colour: yellow-brown above, white below; all fins conspicuous with black or dark brown tips.



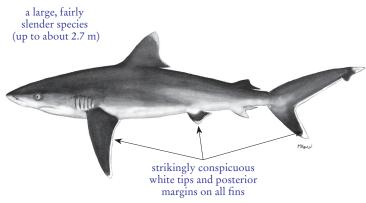
**Size:** 120 cm (max. 200 cm)





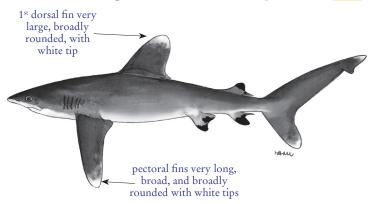
### Carcharhinus albimarginatus – Silvertip shark

ALS



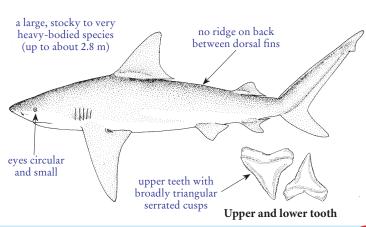
### Carcharhinus longimanus - Oceanic whitetip shark

OCS



### Carcharhinus amboinensis – Pigeye shark

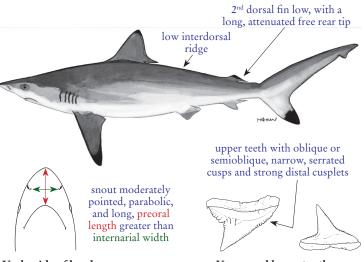
CCF



Carcharhinus sorrah (Müller & Henle, 1839)

CCQ

### Local names: Sweida, Pechecane. ፐቺካን፡ ስዎይዳ



Underside of head

Upper and lower tooth

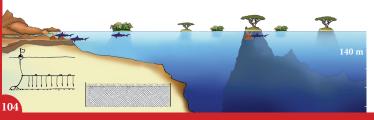
**Description:** a small to medium-sized shark with a slender to moderately stout body.

**Colour:** grey above, white below; a conspicuous and large black tip on the pectoral fins, 2<sup>nd</sup> dorsal, and ventral caudal-fin lobe, but 1<sup>st</sup> dorsal only with black edge at most.



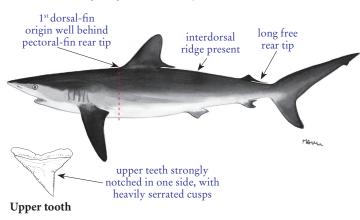
**Size:** 130 cm (max. 160 cm)





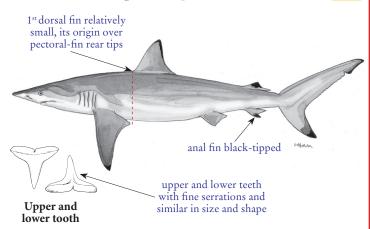
### Carcharhinus falciformis – Silky shark

FAL



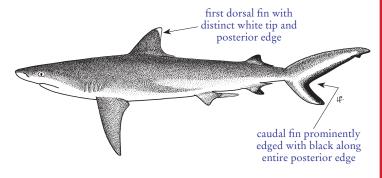
### Carcharhinus brevipinna – Spinner shark

CCB



### Carcharhinus wheeleri – Blacktail reef shark

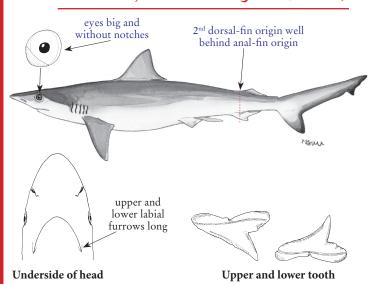
**CCW** 



Rhizoprionodon acutus (Rüppell, 1837)

RHA

## Local names: Autat, Pechecane. عوتات ፐቲካ: አውታት



**Description:** a small shark with a long, narrow, snout.

Colour: grey or grey-brown above, white below; dorsal and anal fins with dusky or blackish edges.



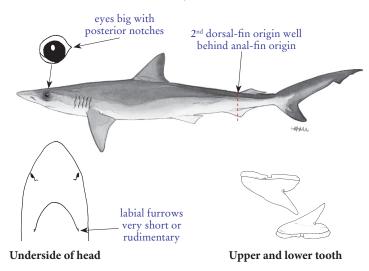
**Size:** 110 cm (max. 170 cm)





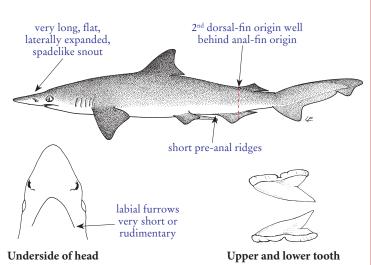
#### **Loxodon macrorhinus** – Sliteye shark

CLD



#### **Scoliodon laticaudus** – Spadenose shark

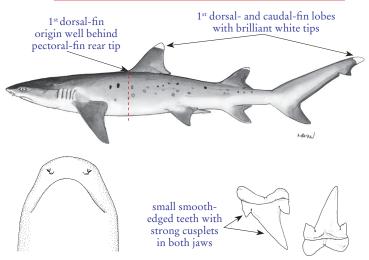
SLA



*Triaenodon obesus* (Rüppell, 1837)

TRB

#### Local names: Sweida, Pechecane. سو بد ተቺካን፡ ስዎይዳ



Underside of head

Upper and lower tooth

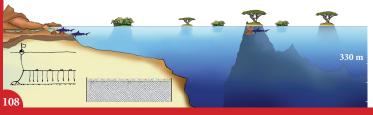
**Description:** a small, fairly slender grey requiem shark with an extremely short and broadly rounded snout.

**Colour:** grey-brown above, white below; sometimes with dark spots on sides.



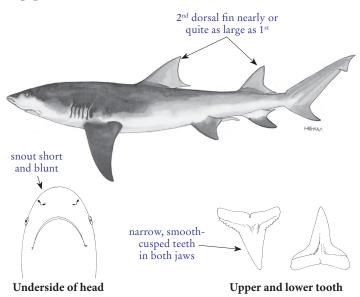
**Size:** 160 cm (max. 210 cm)





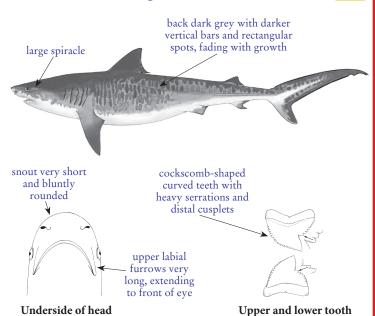
#### Negaprion acutidens – Sicklefin lemon shark





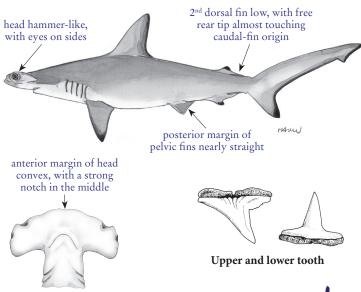
#### Galeocerdo cuvier - Tiger shark

TIG



SPL

# Local names: Gurna, Gurur. قرن، جرور ጉርና: ጉሩር



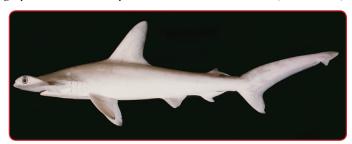
Underside of head

**Description:** a large hammerhead with a broad, narrow-bladed head.

Colour: greyish brown or olivaceous above, shading to white below; pectoral fins tipped grey or black ventrally.

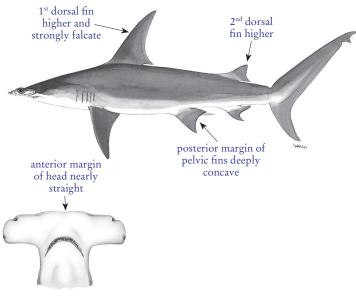


**Size:** 360 cm (max. 420 cm)



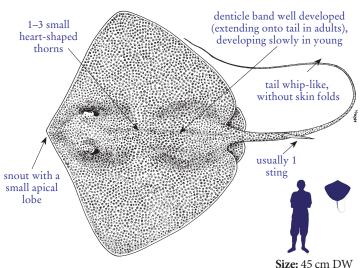
**Sphyrna mokarran** – Great hammerhead

SPK



DHV

#### Local names: Abromis, Halai. ابر و میس، هلالی አብሮሚስ: ሃላይ

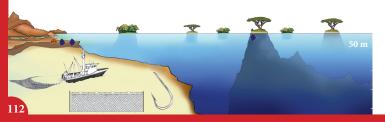


Size: 45 cm DW (max. 200 cm DW)

**Description:** disc weakly rhombic with narrowly rounded apices.

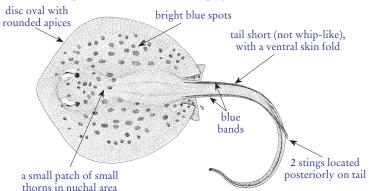
Colour: dorsal surface of adults covered with small brownish spots and flecks; subadults with fine reticulate pattern; newborns with pattern of similar sized, closely set black spots; ventral surface almost entirely white.





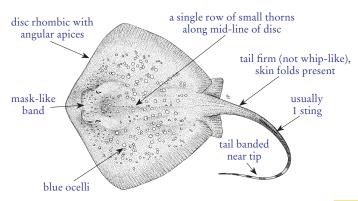
#### *Taeniura lymma* – Ribbontail stingray

RTY



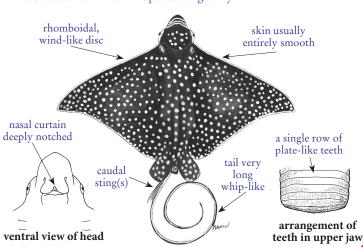
#### Dasyatis kuhlii – Blue-spotted stingray

RDK



#### Aetobatus narinari – Spotted eagle ray

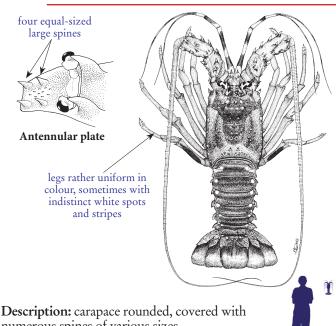
MAE



Panulirus homarus (Linnaeus, 1758)

LOK

شركا، لانجس Local names: Langus, Sharkha. شركا، ላንጉስ፡ ሻርካ



numerous spines of various sizes.

**Colour:** dark greenish to blackish finely spotted with white especially distinct on posterior half of abdomen, without transverse bands.





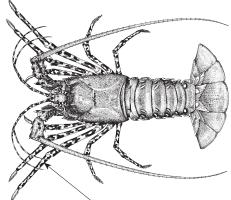
#### **Panulirus ornatus** – Ornate spiny lobster

**NUR** 

1 pair of principal spines anteriorly and a 2<sup>nd</sup> pair, half the size of the first, in middle of the plate



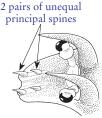
Antennular plate



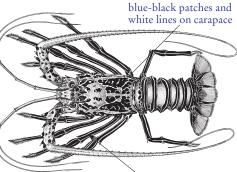
legs with distinct, sharply defined dark and pale blotches

#### Panulirus versicolor - Painted spiny lobster

NUV



Antennular plate



legs longitudinally striped

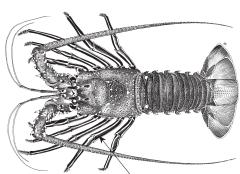
# **Panulirus penicillatus** – Pronghorn spiny lobster

NUP

4 close-set principal spines (posterior pair larger)



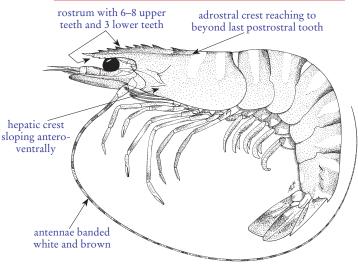
Antennular plate



legs conspicuously striped with white lines

TIP

#### Local names: Ghamberi. جمبري عصيري



**Description:** carapace with distinct grooves and crests.

**Colour:** body pale brown, sometimes greenish; carapace often with 2 yellow-cream dorsal transverse bands; abdomen with brown-grey and pale yellow dorsal transverse bands.

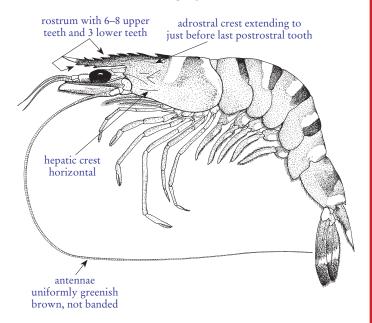


Size: 15 cm BL (max. 23 cm BL)



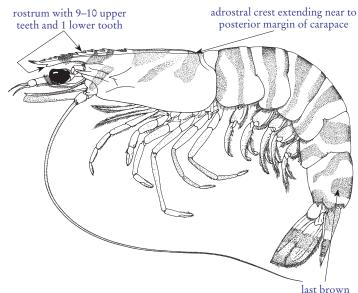
#### Penaeus monodon – Giant tiger prawn

**GIT** 



#### Marsupenaeus japonicus – Kuruma prawn

**KUP** 



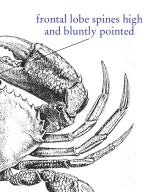
*Scylla serrata* (Forsskål, 1775)

MUD

Abu Mekass, Hinkakre. هنكاكار، ابو مقص

አቡ *መቀ*ስ፡ ሒንካክረ

anterolateral carapace spines narrow, with outer margin straight or slightly concave



**Description:** carapace smooth, with strong transversal ridges.

**Colour:** variable from purple through green to browny/black depending on habitat; chelipeds and legs all with polygonal patterning for both sexes and on abdomen of female only.



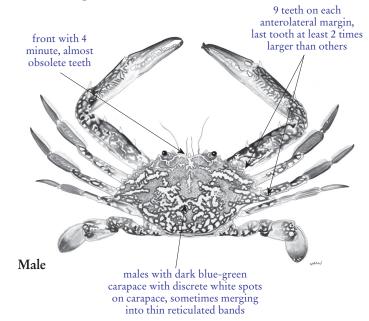
Size: 15 cm CW (max. 28 cm CW)





**Portunus segnis** - Arabian Flower Crab

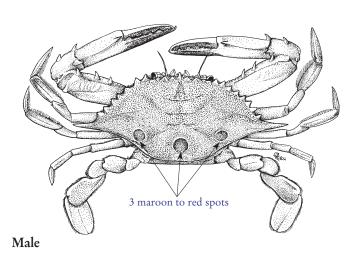
OSO



**Note:** females have a similar colour pattern to males except that tips of chelipeds are red tinged with brownish red instead of blue tinged with deep rust red.

#### **Portunus sanguinolentus** - Three-spot swimming crab

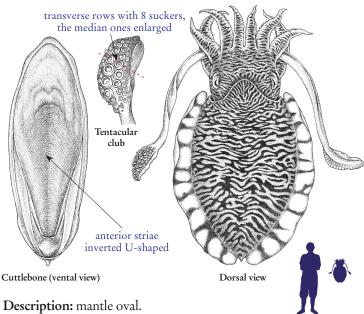
UNG



Sepia pharaonis Ehrenberg, 1831

IAH

ابو مداد، أم الحبر Local names: Ummel Hibir; Abu Midad. አቡ ሚዳድ፡ ኡመል ሕብር



Colour: pale brownish or reddish purple; head and arms with transverse zebra-stripe pattern.

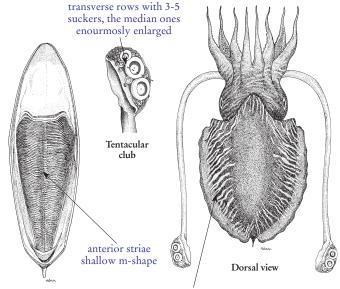
Size: 30 cm ML (max. 42 cm ML)





## Sepia prashadi – Hooded cuttlefish

EJH



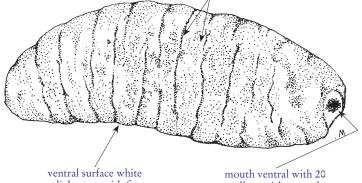
Cuttlebone (vental view)

dorsal mantle with a transverse zebra stripe pattern in breeding males Holoturia scabra (Jaeger, 1833)

HFC

#### Local names: Hedra Beyda. حيدر ል ሕድራ: ዙኪኒ ባሕሪ

dorsal surface with deep (3 mm) wrinkles and short (1.5 mm) papillae



or light grey with fine, dark spots

small, greyish, tentacles

**Description:** body oval; arched dorsally and moderately flattened ventrally.

Colour: colour variable; in the Indian Ocean, it is usually dark grey with white, beige or yellow transverse stripes.



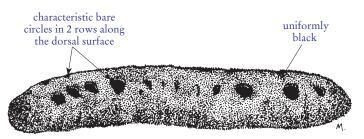
Size: 24 cm (max. 40 cm)





#### Holoturia atra – Lollyfish

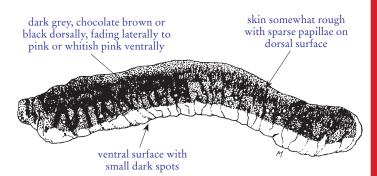




**Note:** this species has three morphs: a small morph (common) that is smooth and covered with sand; a morph on reef crests that has a rippled dorsal surface; and a large morph with little sand on its body, occurring more commonly in deeper waters.

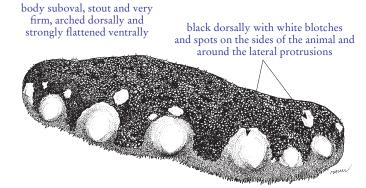
#### Holoturia edulis - Pinkfish

HFE



#### Holoturia nobilis – Black teatfish

HFN



# Index of local names

Abromis	Koko 32
Abuberite 62	Koumel 74
Abu feres 65	Kurnjal 66
Abu Garn 66	Kushar 56, 60
Abu Mekass	Kushar mubal'at 58
Abu Midad	Kusher
Abu ras	Langus
Abusheneb 86	Maccorona 20, 22
Abyad 64	Mahsena
Agam 96, 98	Najil 60
Aida 14, 16	Pechecane 100-108
Anthak 48, 50	Salmani 18
Araaby 84	Samman 54
Autat 100, 102, 106	Sare 88
Baka 90	Sejan 70
Bayad 76-80	Ser'a
Belem 14, 16	Shaefen 40-46
Bohar 42	Sharkha
Derak 92	Shatef
Dodaf	
,	
Dorob	Shilan
Fofal 64	Shotaf 28
Gatren	Shurwi 54, 94
Ghamberi 116	Shu'ur 34-38
Gurna 110	Sikla 72
Gurur 110	Sobaity 28, 30
Halai	Suli
Harida 50	Sweida 104, 108
Hedra Beyda 122	Tonno 94
Hinkakre	Ummel Hibir 120
Kass 26	Wedif
Kharam 24	Zingi
111111111111111111111111111111111111111	211181
Tioniary	ትወርኛ
rigrinya	ι - ትግርኛ
<b>ሃሳይ</b>	ሳሬ 88
ላንጉስ	ሳርዲን
<b>ሒንካከረ</b> 118	ስዎይዳ 104, 108
<b>ሐሪዳ</b> 50, 52	nget 28, 30
ሕድራ 122	<b>ሹርዊ</b> 54
<i>መ</i> ግሳዓት58	ሺላን 74
ማሕሴና 36	ሻ <b>ር</b> ካ 114
ማኮሮና 20, 22	ሻዕፌን 40, 42, 44, 46
ሰርዓ 88	<b>ሽርዊ</b> 94
ሰጃን 70	ሽበጥ ባሕሪ 68
ሱሲ 38	ሽ <b>o-c</b> 34, 36, 38
ሲቅላ 72	ሻጣፍ 28, 30, 32
ሳልማኒ	ቃስ
ሳማን 54	በለም 14, 16
-1 f f · · · · · · · · · · · · · · · · ·	1117 17, 10

በያድ 76, 78, 80 ባቻ 90 በሃር 42 ቶኖ 94 ናጇል 60 ኡመል ሕብር 120 አቡ መቀስ 118 አቡ ሚዳድ 120 አቡ ሽንብ 86 አብ ቀርን 66 አብ በሪፕ 62 አብ ፈረስ 65 አብሮሚስ 112 አብያድ 64 አውታት 100, 102, 106 ኩመል 74 ኩናንጇል 66 ኩሽር 56, 58, 60	ካራም 24 ኮብያ 72 ኮከ 32 መዲፍ 16 የራቢ 84 የንታከ 48 የይዳ 14, 16 የጋም 96, 98 ዘ.ንጊ 102 ይራከ 92 ዶሮብ 82 ዶዳፍ 96, 98 ዮሩር 110 ጉርና 110 ጋምቤሪ 116 ጋትረን 32 ፎፋል 64 ዮቼካ 100, 102, 104, 106, 108	
اللغة العربية - Arabic		
أبو فرس 65	شركا 114	
ابروميس112	شروي 94	
ابو بریت 62	شعفن 40	
ابو راس 14	شعور 34, 36	
ابو شنب	شوطاف	
ابو مداد	شيبت البحر	
ابو مقص 118	شيفش ثارة 32	
ام الحبر	شيلان	
بأغة	عربي 84	
بليم، عيدة	عقام	
بوهر 42	عنتق	
بياد 80, 78, 87, 76	عيدة 100, 102, 106 عيدة	
توداف 98, 96		
تونة	فوفل، ابيض 64	
جرور	فيتل	
جمبري 116	قرن	
جيتران	قرنجل 66	
حريد	کس که کام از	
حيدره	كشر ابو بلحة 52	
خرم 24	كَشْرُ طُويني 56	
دورب 82	كَشْرُ مُوبَالاًت 58	
ديرك	کوکو 32 عالم	
زنجى	كومل 74 الا:	
سلماني	النجس 114	
سمن	محسنه 36, 34	
سوبيتي 28, 30	مكرونا	
سوید ا	هلالي	
سیکلا	هنکاکار	
سيكين	وزف، بليم 16	

# Index of FAO english names

Agujon needlefish 25	Dusky shark 101
Albacore 95	Dusky spinefoot 71
Arabian blue-striped snapper 45	Emperor red snapper 43
Arabian Flower Crab 119	Epaulet grouper 57
Areolate grouper 55	Flathead grey mullet 84
Baelama anchovy 17	Flat needlefish 25
Barcheek trevally 79	Frigate tuna 91
Bicolour parrotfish 51	Fringelip mullet 85
Bigeye barracuda 99	Giant catfish 74
Bigeye snapper 44	Giant grouper 59
Bignose shark 101	Giant sweetlips 31
Blackear lizardfish 23	Giant tiger prawn 117
Blackfin barracuda 97	Goldbanded jobfish 48
Blackspot snapper 47	Goldlined seabream 63
Blackspotted rubberlip 29	Gold-saddle goatfish 87
Blacktail reef shark 105	Goldsilk seabream 62
Blacktail snapper 41	Gracile lizardfish 21
Black teatfish 123	Greasy grouper 55
Blacktip grouper 57	Great barracuda 96
Blacktip reef shark 102	Greater lizardfish 20
Blacktip shark 100	Great hammerhead 111
Blubberlip snapper 41	Green humphead parrotfish . 51
Blue-barred parrotfish 50	Green jobfish 49
Blue-lined large-eye bream 35	Green tiger prawn 116
Blueline snapper 47	Harry hotlips 31
Blue mackerel 91	Honeycomb stingray 112
Bluespine unicornfish 66	Hooded cuttlefish 121
Bluespot mullet 85	Hound needlefish 24
Blue-spotted stingray 113	Humpback red snapper 43
Bluestripe herring 14	Humphead snapper 43
Blue trevally 80	Humpnose big-eye bream 35
Bridled parrotfish 51	Iburi barracuda 99
Brownmarbled grouper 59	Indian anchovy 17
Brownspotted grouper 54	Indian halibut 69
Brownspotted spinefoot 71	Indian lizardfish 22
Buccaneer anchovy 17	Indian mackerel 90
Camouflage grouper 59	Indo-Pacific sailfish 65
Cinnabar goatfish 86	Indo-Pacific swamp crab 118
Coastal trevally	Indo-Pacific tarpon 19
Cobia 72	Japanese threadfin bream 88
Common bluestripe snapper . 45	Javelin grunter
Common silver-biddy 26	Karanteen seabream 63
Coral hind 53	Kawakawa 91
Crimson jobfish 49	Keeltail needlefish 25
Delagoa threadfin bream 89	King soldier bream 64
Dogtooth tuna	Kuruma prawn 117
Dory snapper 47	Largetooth flounder 69
Double-lined mackerel 93	Lavender jobfish 49
Doublespotted queenfish 83	Lemonfish 29

Leopard flounder 68 Lessepsian lizardfish 21 Lined grunt	Sardinellas
Lollyfish 123	Scalloped spiny lobster 114
Long-barbel goatfish 87	Shorthead anchovy 16
Longface emperor 38	Sicklefin lemon shark 109
Longfin lizardfish 21	Silky shark 105
Longfin trevally 76	Silver grunt 32
Longnose trevally 77	Silver moony
Longtail silverbiddy 27	Silvertip shark 103
Longtail tuna 94	Skipjack tuna 95
Malabar grouper 56	Sky emperor
Malabar trevally 81	Slender emperor
Mangrove red snapper 40	Slender silver-biddy 27
Marbled spinefoot 70	Slender threadfin bream 89
Milkfish 18	Sliteye shark 107
Milk shark 106	Smalltooth emperor 37
Minstrel sweetlips 30	Smooth grouper 61
Monocle breams 89	Snakefish 23
Narrow-barred Spanish mackerel	Snubnose emperor 35
	Sordid rubberlip 31
Nonbanded whipfin mojarra. 27	Spadenose shark 107
Obtuse barracuda 98	Spangled emperor 39
Oceanic whitetip shark 103	Spinner shark 105
One-spot snapper 46	Spotback herring 15
Orangespine unicornfish 67	Spottail shark 104
Orange-spotted grouper 57	Spotted eagle ray 113
Orangespotted trevally 78	Spotted sardinella 15
Orangestriped emperor 39	Spotted unicornfish 67
Oriental bonito 93	Squaretail coralgrouper 60
Ornate spiny lobster 115	Squaretail mullet 85
Painted spiny lobster 115	Streamlined spinefoot 71
Painted sweetlips 28	Striped eel catfish
Peacock hind 52	Striped piggy
Pharaoh cuttlefish 120	Summan grouper 58
Pickhandle barracuda 97	Talang queenfish 82
Pigeye shark 103	Tenpounder
Pink ear emperor	Thumbprint emperor 39
Potato grouper 55	Tiger shark 109
Pronghorn spiny lobster 115	Twobar seabream 63
Randall's lizardfish 23	Two-spot red snapper 42
Randall's threadfin bream 89	Ummel Hibir 120
Red barracuda 99	Variegated lizardfish 23
Red Sea goatfish	Vermilion hind 53
Red Sea houndfish 25	Whitefin trevally 79
Red Sea parrotfish 51	Whitetip reef shark 108
Ribbontail stingray 113	Yellow-edged lyretail 61
Roundjaw bonefish 19	Yellowfin hind53
Roving coralgrouper 61	Yellowfin tuna95
Sandbar shark 101	Yellowlip emperor 37
Sandfish 122	Yellowspotted trevally 81
Sand lizardfish 23	

# Index of scientific names

Ablennes hians	Epinephelus fuscoguttatus	. 59
Acanthopagrus berda62	Epinephelus lanceolatus	. 59
Acanthopagrus bifasciatus	Epinephelus malabaricus	. 56
Aetobatus narinari	Epinephelus polyphekadion	. 59
Albula glossodonta19	Epinephelus stoliczkae	
Amblygaster sirm	Epinephelus summana	
Aprion virescens 49	Epinephelus tauvina	. 55
Argyrops spinifer 64	Epinephelus tukula	. 55
Auxis thazard 91	Euthynnus affinis	. 91
Bolbometopon muricatum 51	Galeocerdo cuvier	
Bothus pantherinus 68	Gerres infasciatus	. 27
Carangoides armatus	Gerres longirostris	. 27
Carangoides bajad 78	Gerres oblongus	. 27
Carangoides chrysophrys 77	Gerres oyena	. 26
Carangoides coeruleopinnatus 77	Grammatorcynus bilineatus	. 93
Carangoides equula79	Gymnocranius grandoculis	. 35
Carangoides ferdau 80	Gymnosarda unicolor	
Carangoides fulvoguttatus	Herklotsichthys punctatus	. 15
Carangoides malabaricus	Herklotsichthys quadrimaculatus.	. 14
Carangoides plagiotaenia79	Himantura uarnak	
Carcharhinus albimarginatus 103	Holoturia atra	123
Carcharhinus altimus 101	Holoturia edulis	123
Carcharhinus amboinensis 103	Holoturia nobilis	123
Carcharhinus brevipinna 105	Holoturia scabra	122
Carcharhinus falciformis 105	Istiophorus platypterus	. 65
Carcharhinus limbatus 100	Katsuwonus pelamis	. 95
Carcharhinus longimanus 103	Lethrinus borbonicus	. 35
Carcharhinus melanopterus 102	Lethrinus harak	
Carcharhinus obscurus 101	Lethrinus lentjan	. 34
Carcharhinus plumbeus 101	Lethrinus mahsena	. 36
Carcharhinus sorrah 104	Lethrinus microdon	. 37
Carcharhinus wheeleri	Lethrinus nebulosus	. 39
Cephalopholis argus 52	Lethrinus obsoletus	
Cephalopholis hemistiktos53	Lethrinus olivaceus	
Cephalopholis miniata 53	Lethrinus variegatus	. 37
Cephalopholis oligosticta 53	Lethrinus xantochilus	. 37
Cetoscarus bicolor51	Loxodon macrorhinus	
Chanos chanos	Lutjanus argentimaculatus	. 40
Crenidens crenidens 63	Lutjanus bohar	
Crenimugil crenilabis 85	Lutjanus coeruleolineatus	
Crenimugil seheli 85	Lutjanus ehrenbergi	. 47
Dasyatis kuhlii 113	Lutjanus fulviflamma	. 47
Dermatolepis striolata	Lutjanus fulvus	
Diagramma picta	Lutjanus gibbus	
Ellochelon vaigiensis 85	Lutjanus kasmira	
Elops machnata	Lutjanus lutjanus	
Encrasicholina heteroloba	Lutjanus monostigma	. 46
Encrasicholina punctifer 17	Lutjanus rivulatus	. 41
Epinephelus areolatus 55	Lutjanus sanguineus	. 43
Epinephelus chlorostigma 54	Lutjanus sapphirolineatus	. 45
Epinephelus coioides 57	Lutjanus sebae	. 43
Epinephelus fasciatus 57	Marsupenaeus japonicus	117

Megalops cyprinoides19Saurida gracilis21Monodacylus argenteus73Saurida lessepsianus21Monotaxis grandoculis35Saurida lungimanus21Mugli cephalus84Saurida tumbil20Mulloidichthys spp.87Scarus collana51Naso brevirostris67Scarus ghobban50Naso unicornis66Scoliodon laticaudus107Negaprion acutidens109Scolopsis sphanam89Nemipterus bipunctatus89Scolopsis sphanam89Nemipterus japonicus88Scolopsis vosmeri89Nemipterus randalli89Scomber australasicus91Nemipterus randalli89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus ornatus115Scylla serrata118Panulirus ornatus115Scylla serrata118Panulirus versicolor115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis120Panulpeneus cyclostomus87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus siellatus71Penaeus semisulcatus116Sphyraena barracuda96Penaeus semisulcatus13Sphyraena forsteri99Pletctorhinchus glabounaculatus23Sphyraena putnamae97Pletctorhinchus gratura25 <td< th=""><th>16 1 : :1</th><th>0 11 11</th></td<>	16 1 : :1	0 11 11
Monotaxis grandoculis35Saurida tumbil21Mugil cephalus84Saurida tumbil20Mulloidichthys spp.87Scarus collana51Naso brevirostris67Scarus frenatus51Naso lituratus66Scoliodon laticaudus107Negaprion acutidens109Scolopsis sphanam89Nemipterus bipunctatus89Scolopsis spp.89Nemipterus randalli89Scolopsis sopnemia89Nemipterus zysron89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus ornatus114Scomberomorus commerson92Panulirus penicillatus115Scylla serrata118Panulirus penicillatus115Scylla serrata118Panulirus versicolor115Sepia pharaonis120Parupeneus cyclostomus87Siganus argenteus71Parupeneus septacanthus86Siganus luridus71Parupeneus septacanthus86Siganus sivilatus70Parupeneus macronemus87Siganus sivilatus71Penaeus monodon117Sphyraena barracuda96Penaeus monodon117Sphyraena barracuda96Penaeus monodon117Sphyraena putnatua96Penaeus semisulcatus116Sphyraena putnama97Pletctorbinchus albovittatus31Sphyraena put	Megalops cyprinoides	Saurida gracilis
Mugil cephalus84Saurida tumbil20Mulloidichthys spp.87Scarus collana51Naso brevirostris67Scarus frenatus51Naso lituratus67Scarus ghobban50Naso unicornis66Scoliodon laticaudus107Negaprion acutidens109Scolopsis ghanam89Nemipterus bipunctatus89Scolopsis spp.89Nemipterus randalli89Scolopsis vosmeri89Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberoides commersonnianus82Panulirus penicillatus115Scylla serrata118Panulirus versicolor115Scylla serrata118Panulirus versicolor115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis121Parupeneus cyclostomus87Siganus surgenteus71Parupeneus forskali87Siganus surgenteus71Parupeneus macronemus87Siganus stellatus70Parupeneus macronemus87Siganus stellatus71Penaeus semisulcatus86Siganus stellatus71Penaeus semisulcatus116Sphyraena barracuda96Penaeus semisulcatus31Sphyraena burnarae96Plectorhinchus flavomaculatus29Sphyraen	Monodactylus argenteus	Saurida lessepsianus
Mulloidichthys spp. 87 Scarus collana 51 Naso brevirostris 67 Scarus frenatus 51 Naso lituratus 67 Scarus ghobban 50 Naso unicornis 66 Scoliodon laticaudus 107 Negaprion acutidens 109 Scolopsis ghanam 89 Nemipterus bipunctatus 89 Scolopsis sphamam 89 Nemipterus japonicus 88 Scolopsis vosmeri 89 Nemipterus randalli 89 Scomber australasicus 91 Nemipterus zysron 89 Scomber australasicus 91 Netuma thalassina 74 Scomberoides lysan 83 Panulirus homarus 114 Scomberoides lysan 83 Panulirus homarus 115 Scylla serrata 118 Panulirus penicillatus 115 Scylla serrata 118 Panulirus versicolor 115 Sepia pharaonis 120 Panulirus versicolor 115 Sepia pharaonis 121 Parupeneus cyclostomus 87 Siganus argenteus 71 Parupeneus forsskali 87 Siganus luridus 71 Parupeneus macronemus 86 Siganus sivulatus 70 Parupeneus macronemus 87 Siganus stellatus 71 Penaeus monodon 117 Sphyraena barracuda 96 Penaeus semisulcatus 116 Sphyraena barracuda 96 Penaeus semisulcatus 116 Sphyraena iburiensis 99 Plectorhinchus flavomaculatus 29 Sphyraena obtusata 98 Plectorhinchus galevinus 29 Sphyraena obtusata 98 Plectorhinchus galevinus 29 Sphyraena pinguis 99 Plectorhinchus galevinus 29 Sphyraena pinguis 99 Plectorhinchus galevinus 31 Sphyraena pinguis 99 Plectorhinchus schotaf 30 Sphyraena pinguis 99 Plectorhinchus sordidus 31 Sphyraena pinguis 99 Ple	Monotaxis grandoculis	
Naso brevirostris 67 Scarus frenatus 51 Naso lituratus 67 Scarus ghobban 50 Naso unicornis 66 Scolidon laticaudus 107 Negaprion acutidens 109 Scolopsis ghanam 89 Nemipterus bipunctatus 89 Scolopsis vomeri 89 Nemipterus pipunctatus 88 Scolopsis vomeri 89 Nemipterus randalli 89 Scomber australasicus 91 Nemipterus zysron 89 Scomber australasicus 91 Nemipterus zysron 89 Scomberoides commersonnianus 82 Netuma thalassina 74 Scomberoides lysan 83 Panulirus homarus 114 Scomberomorus commerson 92 Panulirus penicillatus 115 Scylla serrata 118 Panulirus penicillatus 115 Sepia pharaonis 120 Panulirus versicolor 115 Sepia pharaonis 120 Panulirus versicolor 115 Sepia prashadi 121 Parupeneus cyclostomus 87 Siganus argenteus 71 Parupeneus forsskali 87 Siganus luridus 71 Parupeneus heptacanthus 86 Siganus rivulatus 70 Parupeneus macronemus 87 Siganus sillatus 71 Penaeus monodom 117 Sphyraena barracuda 96 Penaeus semisulcatus 116 Sphyraena forsteri 99 Pletcorhinchus albovittatus 31 Sphyraena luriensis 99 Plectorhinchus flavomaculatus 29 Sphyraena obtusata 98 Plectorhinchus gaterinus 29 Sphyraena pinguis 99 Plectorhinchus schotaf 30 Sphyraena pinguis 99 Plectorhinchus scotidus 31 Sphyraena pinguis 99 Plectorhinchus scotidus 49 Pristipomoides sieboldii 49 Pristipomoides sieboldii 49 Pristipomoides sieboldii 49 Pristipomoides	Mugil cephalus	
Naso lituratus67Scarus ghobban50Naso unicornis66Scoliodon laticaudus107Negaprion acutidens109Scolopsis ghanam89Nemipterus bipunctatus89Scolopsis spp.89Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomber australasicus91Nemipterus zysron89Scomberoides commersonianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberomorus commerson92Panulirus penicillatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis121Parupeneus cyclostomus87Siganus luridus71Parupeneus forsikali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus monodon117Sphyraena forsteri99Platybelone platura25Sphyraena forsteri99Plectorhinchus albovittatus31Sphyraena pinguis99Plectorhinchus gibosus31Sphyraena pinguis99Plectorhinchus sochotaf30Sphyraena pinguis99Plectorhinchus sochotaf30<		
Naso unicornis66Scoliodon laticaudus107Negaprion acutidens109Scolopsis ghanam89Nemipterus bipunctatus89Scolopsis sosmeri89Nemipterus japonicus88Scolopsis vosmeri89Nemipterus zysron89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberoides lysan83Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus forsskali87Siganus silulatus70Parupeneus macronemus86Siganus silulatus70Parupeneus macronemus87Siganus silulatus71Penaeus semisulcatus116Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena pinguis99Plectorhinchus albovittatus31Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus graerius29Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena penie97Plectorpomus areolatus<		
Negaprion acutidens109Scolopsis ghanam89Nemipterus bipunctatus89Scolopsis spp.89Nemipterus japonicus88Scolopsis vosmeri89Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberoorus commerson92Panulirus penicillatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus luridus71Parupeneus forsskali87Siganus luridus71Parupeneus forsskali87Siganus luridus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena pitnama98Plectorhinchus gaterinus29Sphyraena putnama98Plectorhinchus gaterinus29Sphyraena putnama97Plectorhinchus schotaf30Sphyraena putnama97Plectorhinchus sordidus31Sphyrae lewini110Plectropomus pessuliferus61Stolephorus indicus17Pomadasys kaakan		
Nemipterus bipunctatus.89Scolopsis spp.89Nemipterus japonicus.88Scolopsis vosmeri89Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberoides lysan83Panulirus bomarus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus rivulatus70Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Pletorhinchus albovitatus25Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus schotaf30Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena putnamae97Plectorpomus pessuliferus61Stolephorus indicus11Pletoropomus pessuliferus61Stolephorus indicus12Pomadasys stridens33Synodus strangani23Pomad		
Nemipterus japonicus88Scolopsis vosmeri89Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomberoides commersonianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberomorus commerson92Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Scylla serrata118Panulirus versicolor115Sepia pharaonis120Panulirus versicolor115Sepia pharabadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus70Parupeneus beptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus semisulcatus116Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Pletotrhinchus albovitatus25Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena jello97Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena putnamae97Plectorpomus pessuliferus61Stolephorus indicus17Plotous lineatus75Synodus dermatogenys23Pomadasys kaakan33Synodus randalli23Pomadasys		1 0
Nemipterus randalli89Scomber australasicus91Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus bomarus114Scomberomorus commerson92Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus argenteus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Plectorbinchus albovittatus31Sphyraena jello97Plectorbinchus slavomaculatus29Sphyraena pinguis99Plectorbinchus gaterinus29Sphyraena pinguis99Plectorbinchus gaterinus29Sphyraena pinguis99Plectorbinchus sordidus31Sphyraena punamae97Plectorbinchus sordidus31Sphyraena punamae97Plectorbinchus sordidus31Sphyraena pinguis99Plectorbinchus sordidus31Sphyraena pinguis99Plectorbinchus sordidus31Sphyraena pinguis99Pletoropomus pessuliferus60Sphyra makarran111 <t< td=""><td>Nemipterus bipunctatus 89</td><td></td></t<>	Nemipterus bipunctatus 89	
Nemipterus zysron89Scomberoides commersonnianus82Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberoinus commerson92Panulirus ornatus115Seylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus macronemus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Pletotorbinchus albovittatus31Sphyraena iburiensis99Plectorbinichus albovittatus31Sphyraena iburiensis99Plectorbinchus glavomaculatus29Sphyraena obtusata98Plectorbinchus glavomaculatus29Sphyraena pinguis99Plectorbinchus gaterinus29Sphyraena putnamae97Plectorbinchus schotaf30Sphyraena qenie97Plectorbinchus schotaf30Sphyraena qenie97Pletoropomus areolatus60Sphyrna mokarran111Pletoropomus pessuliferus61Stolephorus indicus17Pomadasys kaakan33Synodus hoshinonis23Pomadasys stridens33Synodus boshinonis23<	Nemipterus japonicus	
Netuma thalassina74Scomberoides lysan83Panulirus homarus114Scomberomorus commerson92Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia pharaonis121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus70Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus semisulcatus116Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus gaterinus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus schotaf30Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena putnamae97Pletoropomus areolatus60Sphyrna newarran111Pletropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys stridens33Synodus randalli23Pomadasys stridens33Synodus variegatus25Pomadasys stride	Nemipterus randalli 89	
Panulirus homarus114Scomberomorus commerson92Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus70Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena pello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gibbosus31Sphyraena putnamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyraena qenie97Plectropomus areolatus60Sphyrna lewini110Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus indicus22Pomadasys sargenteus33Synodus randalli23Pomadasys stridens33Synodus randalli23Pomadasys stridens33Synodus randalli23Pomadasys stridens3	Nemipterus zysron 89	Scomberoides commersonnianus 82
Panulirus ornatus115Scylla serrata118Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus70Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena pinguis99Plectorhinchus sordidus31Sphyraena qenie97Plectorhinchus sordidus31Sphyraena qenie97Plectropomus areolatus60Sphyrna lewini110Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus randalli23Pomadasys stridens33Synodus randalli23Portunus segnis	Netuma thalassina74	
Panulirus penicillatus115Sepia pharaonis120Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus somoodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena putramae97Plectorhinchus schotaf30Sphyraena putramae97Plectorhinchus sordidus31Sphyraena qenie97Plectorpomus areolatus60Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Pletrosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus randalli23Pomadasys bunctulatus33Synodus variegatus23Portunus segnis119Taeniura lymma113Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides fi	Panulirus homarus 114	Scomberomorus commerson 92
Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus somoodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus sochotaf30Sphyraena putramae97Plectorhinchus sordidus31Sphyraena qenie97Plectorpomus areolatus60Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Pletropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus randalli23Pomadasys baakan33Synodus variegatus23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides fila	Panulirus ornatus	Scylla serrata
Panulirus versicolor115Sepia prashadi121Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus somoodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus sochotaf30Sphyraena putramae97Plectorhinchus sordidus31Sphyraena qenie97Plectorpomus areolatus60Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Pletropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus randalli23Pomadasys baakan33Synodus variegatus23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides fila	Panulirus penicillatus	Sepia pharaonis
Parupeneus cyclostomus87Siganus argenteus71Parupeneus forsskali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena pinguis99Plectorhinchus sochaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyraena qenie97Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus randalli23Pomadasys stridens33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus alnogol94Psettodes	Panulirus versicolor	
Parupeneus forsskali87Siganus luridus71Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena pinguis99Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena putnamae97Plectorhinchus schotaf30Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena putnamae97Plectropomus areolatus60Sphyrna lewini110Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thunnus alalunga95Pristipomoides multidens48Thunnus allunga95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erume	Parupeneus cyclostomus	Siganus argenteus71
Parupeneus heptacanthus86Siganus rivulatus70Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus schotaf30Sphyraena putnamae97Plectorhinchus sordidus31Sphyraena qenie97Plectorpomus areolatus60Sphyrna lewini110Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Theristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilu	Parupeneus forsskali 87	
Parupeneus macronemus87Siganus stellatus71Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena putnamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Therius alalunga95Pristipomoides filamentosus49Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilus24Rhabdosargu		0
Penaeus monodon117Sphyraena barracuda96Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena punamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus dermatogenys23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Taeniura lymma113Portunus segnis119Thunnus alalunga95Pristipomoides filamentosus49Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachnocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilus24Rhabdosargus sarba	Parupeneus macronemus	
Penaeus semisulcatus116Sphyraena forsteri99Platybelone platura25Sphyraena iburiensis99Plectorhinchus albovittatus31Sphyraena jello97Plectorhinchus flavomaculatus29Sphyraena obtusata98Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena punamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus dermatogenys23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus indicus22Pomadasys stridens33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Taeniura lymma113Portunus segnis119Thunnus alalunga95Pristipomoides filamentosus49Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta<		
Platybelone platura 25 Sphyraena iburiensis 99 Plectorhinchus albovittatus 31 Sphyraena jello 97 Plectorhinchus flavomaculatus 29 Sphyraena obtusata 98 Plectorhinchus gaterinus 29 Sphyraena pinguis 99 Plectorhinchus gibbosus 31 Sphyraena punamae 97 Plectorhinchus schotaf 30 Sphyraena qenie 97 Plectorhinchus sordidus 31 Sphyrna lewini 110 Plectropomus areolatus 60 Sphyrna lewini 110 Plectropomus pessuliferus 61 Stolephorus indicus 17 Plotosus lineatus 75 Synodus dermatogenys 23 Pomadasys argenteus 32 Synodus hoshinonis 23 Pomadasys kaakan 33 Synodus indicus 22 Pomadasys tridens 33 Synodus randalli 23 Pomadasys stridens 33 Synodus variegatus 23 Portunus sanguinolentus 119 Taeniura lymma 113 Portunus segnis 119 Thryssa baelama 17 Pristipomoides filamentosus 49 Thunnus albacares 95 Pristipomoides multidens 48 Thunnus albacares 95 Pristipomoides erumei 69 Trachinocephalus myops 23 Pseudorhombus arsius 69 Triaenodon obesus 108 Rachycentron canadum 72 Tylosurus choram 25 Rastrelliger kanagurta 90 Tylosurus relanotus 25 Rhizoprionodon acutus 106 Upeneus spp. 87 Sarda orientalis 93 Variola louti 61		
Plectorhinchus albovittatus 31 Sphyraena jello 97 Plectorhinchus flavomaculatus 29 Sphyraena obtusata 98 Plectorhinchus gaterinus 29 Sphyraena pinguis 99 Plectorhinchus gibbosus 31 Sphyraena putnamae 97 Plectorhinchus schotaf 30 Sphyraena qenie 97 Plectorhinchus sordidus 31 Sphyraena qenie 97 Plectorhinchus sordidus 31 Sphyrna lewini 110 Plectropomus areolatus 60 Sphyrna mokarran 111 Plectropomus pessuliferus 61 Stolephorus indicus 17 Plotosus lineatus 75 Synodus dermatogenys 23 Pomadasys argenteus 32 Synodus hoshinonis 23 Pomadasys kaakan 33 Synodus indicus 22 Pomadasys punctulatus 33 Synodus indicus 22 Pomadasys stridens 33 Synodus variegatus 23 Portunus sanguinolentus 119 Taeniura lymma 113 Portunus segnis 119 Thryssa baelama 17 Pristipomoides filamentosus 49 Thunnus alalunga 95 Pristipomoides multidens 48 Thunnus albacares 95 Pristipomoides sieboldii 49 Thunnus albacares 95 Pristipomoides sieboldii 49 Thunnus conggol 94 Psettodes erumei 69 Trachinocephalus myops 23 Pseudorhombus arsius 69 Triaenodon obesus 108 Rachycentron canadum 72 Tylosurus choram 25 Rastrelliger kanagurta 90 Tylosurus crocodilus 24 Rhabdosargus sarba 63 Tylosurus melanotus 25 Rhizoprionodon acutus 106 Upeneus spp. 87 Sarda orientalis 93 Variola louti 61		Sphyraena iburiensis 99
Plectorhinchus flavomaculatus 29 Sphyraena obtusata 98 Plectorhinchus gaterinus 29 Sphyraena pinguis 99 Plectorhinchus gibbosus 31 Sphyraena punamae 97 Plectorhinchus schotaf 30 Sphyraena qenie 97 Plectorhinchus sordidus 31 Sphyraena qenie 97 Plectorhinchus sordidus 31 Sphyraena qenie 97 Plectorpomus areolatus 60 Sphyrna lewini 110 Plectropomus pessuliferus 61 Stolephorus indicus 17 Plotosus lineatus 75 Synodus dermatogenys 23 Pomadasys argenteus 32 Synodus hoshinonis 23 Pomadasys kaakan 33 Synodus indicus 22 Pomadasys punctulatus 33 Synodus randalli 23 Pomadasys stridens 33 Synodus variegatus 23 Portunus sanguinolentus 119 Taeniura lymma 113 Portunus segnis 119 Thryssa baelama 17 Pristipomoides filamentosus 49 Thunnus alalunga 95 Pristipomoides multidens 48 Thunnus albacares 95 Pristipomoides sieboldii 49 Thunnus tonggol 94 Psettodes erumei 69 Trachinocephalus myops 23 Rachycentron canadum 72 Tylosurus crocodilus 24 Rhabdosargus sarba 63 Tylosurus melanotus 25 Rastrelliger kanagurta 90 Tylosurus melanotus 25 Rhizoprionodon acutus 106 Upeneus spp. 87 Sarda orientalis 93 Variola louti 61		
Plectorhinchus gaterinus29Sphyraena pinguis99Plectorhinchus gibbosus31Sphyraena putnamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus sanguinolentus119Taeniura lymma113Portunus sanguinolentus119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Pseudorhombus arsius69Trachinocephalus myops23Pseudorhombus arsius69Trachinocephalus myops23Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp87Sarda orientalis93Variola louti61		
Plectorhinchus gibbosus31Sphyraena punamae97Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp87Sarda orientalis93Variola louti61		
Plectorhinchus schotaf30Sphyraena qenie97Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus allunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Pseudorhombus arsius69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Plectorhinchus sordidus31Sphyrna lewini110Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp87Sarda orientalis93Variola louti61		Sphyraena genie 97
Plectropomus areolatus60Sphyrna mokarran111Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Plectropomus pessuliferus61Stolephorus indicus17Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Trachinocephalus myops23Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus choram25Ratstrelliger kanagurta90Tylosurus melanotus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		Sphyrna mobarran 111
Plotosus lineatus75Synodus dermatogenys23Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pormadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Trachinocephalus myops23Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		Stolethorus indicus
Pomadasys argenteus32Synodus hoshinonis23Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		Since due dome et a amus
Pomadasys kaakan33Synodus indicus22Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		Symodus hochimonis 23
Pomadasys punctulatus33Synodus randalli23Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61	, ,	
Pomadasys stridens33Synodus variegatus23Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Portunus sanguinolentus119Taeniura lymma113Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61	Down of anno stail down	
Portunus segnis119Thryssa baelama17Pristipomoides filamentosus49Thunnus alalunga95Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Pristipomoides filamentosus 49 Thunnus alalunga 95 Pristipomoides multidens 48 Thunnus albacares 95 Pristipomoides sieboldii 49 Thunnus tonggol 94 Psettodes erumei 69 Trachinocephalus myops 23 Pseudorhombus arsius 69 Triaenodon obesus 108 Rachycentron canadum 72 Tylosurus choram 25 Rastrelliger kanagurta 90 Tylosurus crocodilus 24 Rhabdosargus sarba 63 Tylosurus melanotus 25 Rhizoprionodon acutus 106 Upeneus spp. 87 Sarda orientalis 93 Variola louti 61	Portunus sangumoientus	
Pristipomoides multidens48Thunnus albacares95Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Pristipomoides sieboldii49Thunnus tonggol94Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61	Pristipomoides filamentosus	
Psettodes erumei69Trachinocephalus myops23Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Pseudorhombus arsius69Triaenodon obesus108Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Rachycentron canadum72Tylosurus choram25Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		Trachmocephalus myops
Rastrelliger kanagurta90Tylosurus crocodilus24Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Rhabdosargus sarba63Tylosurus melanotus25Rhizoprionodon acutus106Upeneus spp.87Sarda orientalis93Variola louti61		
Rhizoprionodon acutus 106 Úpeneus spp. 87 Sarda orientalis 93 Variola louti 61		
Sarda orientalis 93 Variola louti 61	· ·	
	1	
Sardinella spp 15		Variola louti 61
	Sardinella spp	

This pocket guide includes a selection of species common in the coastal marine fisheries of Eritrea and is intended to help fishery workers collecting catch data in the field in their identification.

The format of the pocket guide was developed for use by non-taxonomists and to facilitate communication with practitioners (fishers and marketers). For this purpose, the most common local names are included.

To aid in quick identification, the pocket guide includes a colour-coded grouping of species based on simple morphological characteristics (i.e. the size and position of the dorsal and anal fins) as well as symbols for maximum sizes, ecological preferences and catch methods.

