

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

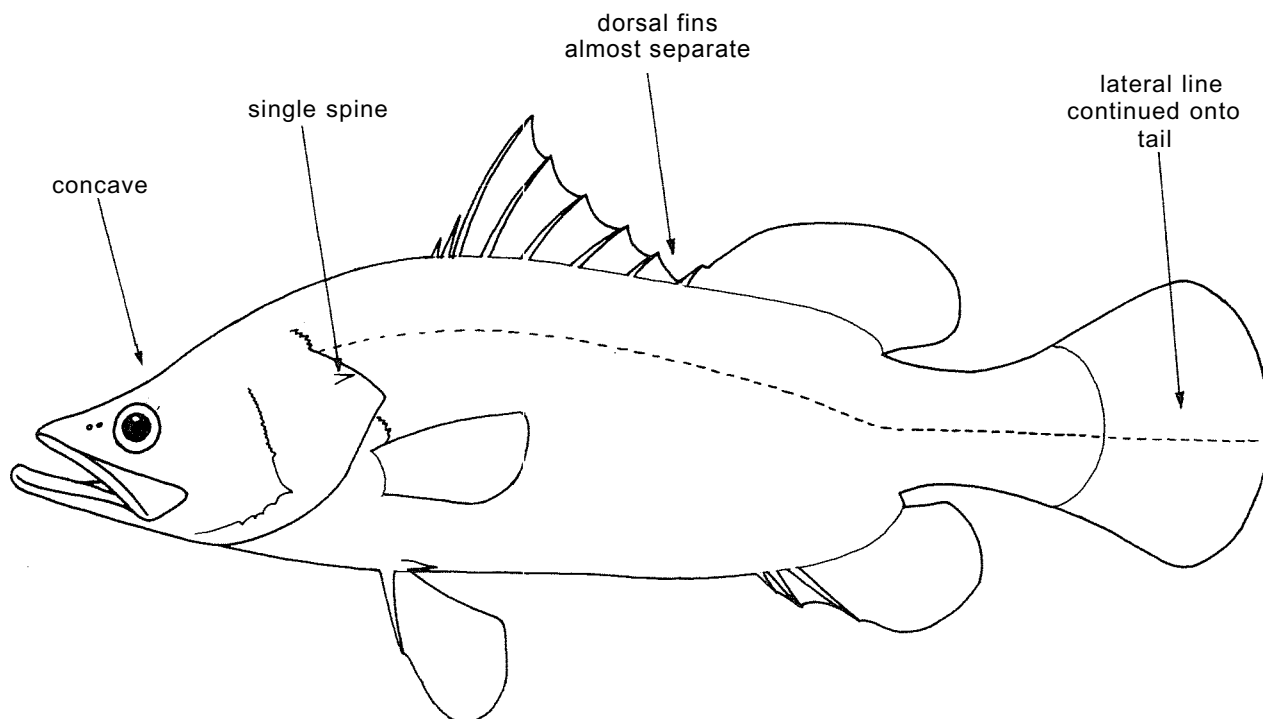
CENTROPOMIDAE

Barramundis, sea perches

Body elongate or oblong, compressed, dorsal profile concave at nape. Mouth large, jaws equal or with lower longer than upper; teeth small, in narrow or villiform bands on jaws and on vomer and palatines (roof of mouth), sometimes also on tongue; preopercle with a serrated posterior border or with 2 ridges; opercle with a single spine. Dorsal fin almost wholly separated into 2, with 7 or 8 strong spines in front, followed by 1 spine and 10 to 15 soft rays; pelvic fins below pectoral fins, with a strong spine and 5 soft rays; anal fin short, with 3 spines and 8 to 13 soft rays; caudal fin rounded. Scales usually large, ctenoid and adherent; lateral line continued onto caudal fin.

Colour: usually dark grey or green above and silvery below.

Medium- to large-sized bottom-living fishes occurring in coastal waters, estuaries and lagoons, in depths between about 10 and 30 m. Highly esteemed food and sport fishes taken mainly by artisanal fisheries.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Serranidae: spinous and soft parts of dorsal fin not as deeply notched; also, colour pattern distinctive and/or caudal fin truncate or weakly emarginate in some.

Lethrinidae, Lutjanidae: dorsal fin not deeply notched, head profile not concave over eye and canine teeth present in some.

Sciaenidae: lateral line also extends onto tail, but only 2 anal spines.

KEY TO GENERA OCCURRING IN THE AREA:

- 1a. Upper jaw reaching to behind eye; nostrils close together; lower edge of pre-opercle serrated; tongue smooth; lower gillrakers 16 or 17 Lates
- 1b. Upper jaw only reaching to below eye; nostrils widely separated; lower edge of pre-opercle not serrated; some teeth on tongue; lower gillrakers 11 to 13 Psammoperca

LIST OF SPECIES OCCURRING IN THE AREA: *

Code numbers are given for those species for which Identification Sheets are included

<u>Lates calcarifer</u> (Bloch, 1790)	CENTRP Lat 1
<u>Psammoperca waigensis</u> (Cuvier, 1828)	CENTRP Psamm 1

Prepared by P.J.P. Whitehead, Department of Zoology, British Museum (Natural History), London, UK

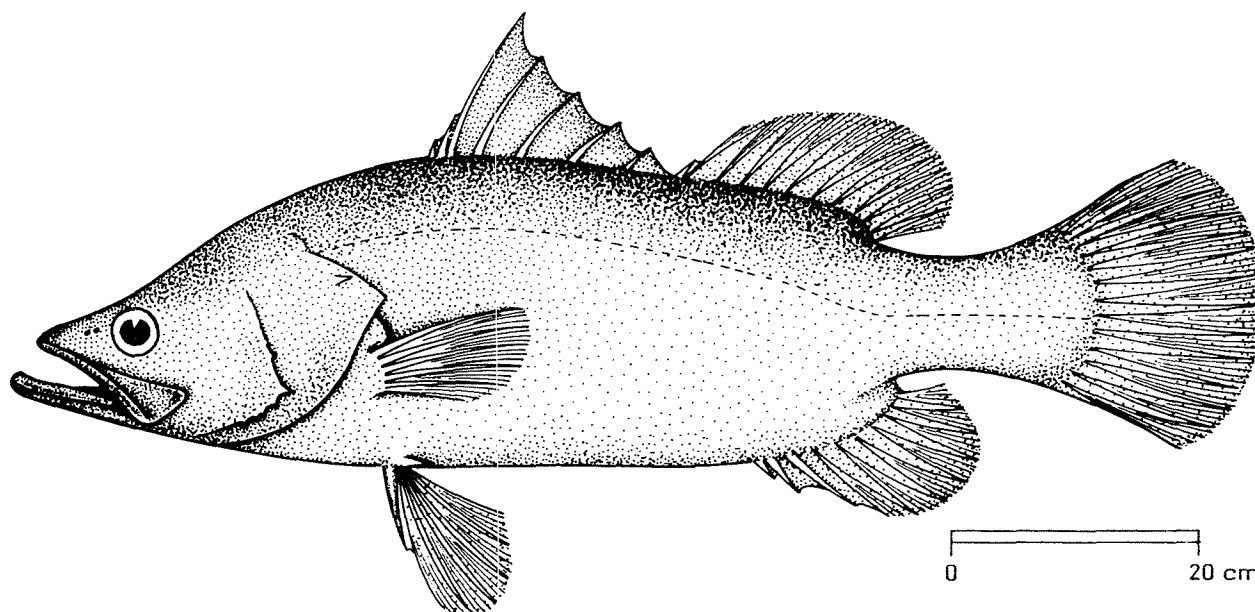
* The genus Ambassis was included in the sheets for Areas 57 and 71, but recent work now separates the Ambassidae from the Centropomidae. The family is given as Latidae by Munro, I.S.R., 1955, The marine and freshwater fishes of Ceylon, but this is incorrect.

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CENTROPOMIDAE

FISHING AREA 51
(W. Indian Ocean)*Lates calcarifer* (Bloch, 1790)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Barramundi (= Giant seaperch Areas 57/71)
Fr - Barramundi
Sp - Barramundi

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate, compressed, with a deep caudal peduncle. Head pointed, with concave dorsal profile becoming convex in front of dorsal fin; nostrils close together; mouth large, slightly oblique, upper jaw reaching to behind eye; teeth villiform, no canines present, tongue smooth; lower gillrakers 16 or 17; lower edge of preopercle serrated, with a strong spine; opercle with a small spine and with a serrated flap above origin of lateral line. Dorsal fin with 7 to 9 spines and 10 or 11 soft rays; a very deep notch almost dividing spiny from soft part of fin; pectoral fins short and rounded, several short, strong serrations above their bases; dorsal and anal fins both have scaly sheaths; anal fin rounded, with 3 spines and 7 or 8 soft rays; caudal fin rounded. Scales large, ctenoid (rough to touch); lateral line extending onto tail.

Colour: two phases, either olive brown above with silver sides and belly (usually juveniles) or green/blue above and silver below. No spots or bars present on fins or body. Eyes bright pink, glowing at night.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Psammoperca waigiensis: lower edge of preopercle smooth, tongue with patch of small teeth (no teeth on tongue in L. calcarifer) and upper jaw reaching to below eye (behind eye in L. calcarifer).

Ambassis species: caudal fin forked.

SIZE:

Maximum: 200 cm; common between 25 and 100 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Sri Lanka, perhaps extending into Arabian Sea. Also present in the Eastern Indian Ocean and the Western Central Pacific.

Found in coastal waters, estuaries and lagoons. Usually occurs at depths of 10 to 40 m.

Feeds on fishes and

PRESENT FISHING GROUNDS:

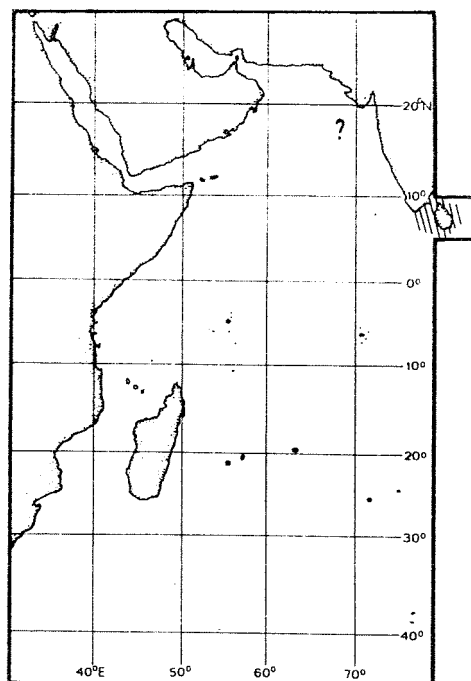
Caught in estuaries and coastal waters down to about 40 m depth. Seasonally important.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls, handlines, bottom gillnets and traps; also esteemed as a sport fish.

Marketed mostly fresh.

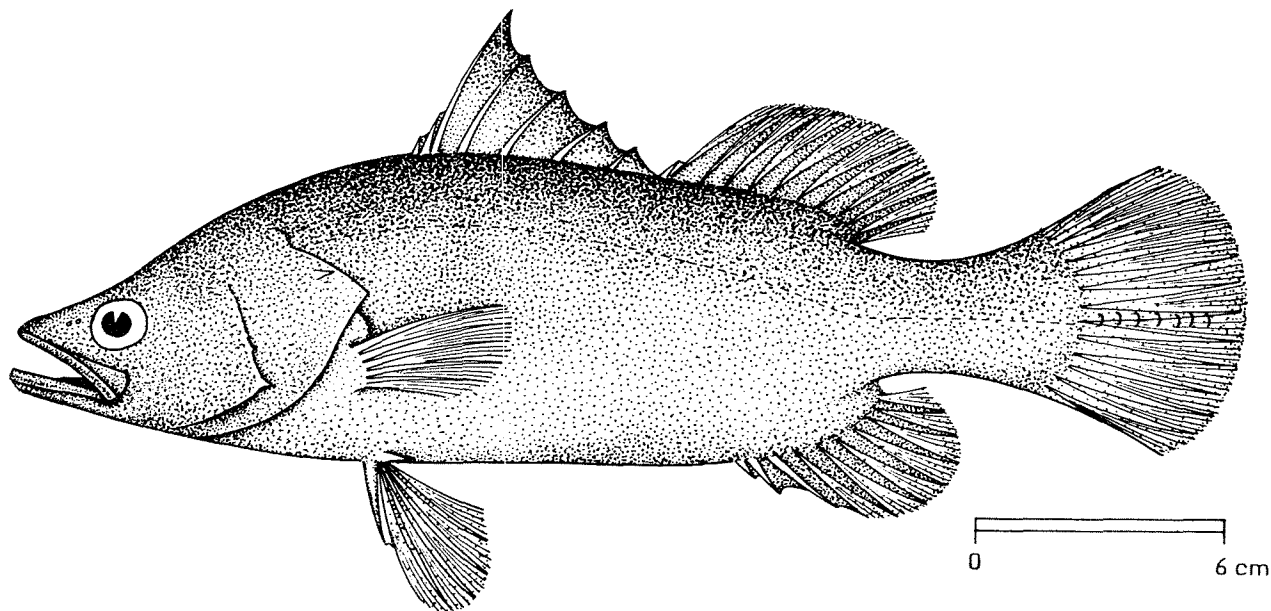


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CENTROPOMIDAE

FISHING AREA 51
(W. Indian Ocean)*Psammoperca waigensis* (Cuvier, 1828)

OTHER SCIENTIFIC NAMES STILL IN USE : None



VERNACULAR NAMES:

FAO : En - Waigeu sea perch
 Fr - Brochete de mer
 Sp - Perca de mar

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate, compressed, with a deep caudal peduncle. Head pointed, with concave dorsal profile becoming convex in front of dorsal fin; nostrils widely separated; mouth large, slightly oblique, upper jaw not reaching beyond pupil; teeth villiform, no canines present, some teeth on tongue; lower gillrakers 11 to 13; lower edge of preopercle smooth, with a strong spine; opercle with a strong spine. Dorsal fin with 7 or 8 spines and 12 soft rays; a very deep notch almost dividing spiny from soft part of fin; pectoral fins short and rounded; anal fin rounded, with 3 spines and 8 soft rays; caudal fin rounded. Scales large, ctenoid (rough to touch); lateral line extending onto tail.

Colour: dull reddish brown above, silvery below, sometimes with darker longitudinal streaks along scale rows. Median fins reddish brown, paired fins pale. Eyes glassy.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Lates calcarifer: lower edge of opercle serrated, tongue smooth (a few teeth in P. waigensis) and upper jaw reaching to behind eye (to below eye in P. waigensis).

Ambassis species: caudal fin forked.

SIZE:

Maximum: about 35 cm; common between 25 and 30 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Sri Lanka, perhaps extending into the Arabian Sea. Also present in the Eastern Indian Ocean and the Western Central Pacific.

Found in coastal waters, entering estuaries.

Feeds on fishes and crustaceans.

PRESENT FISHING GROUNDS:

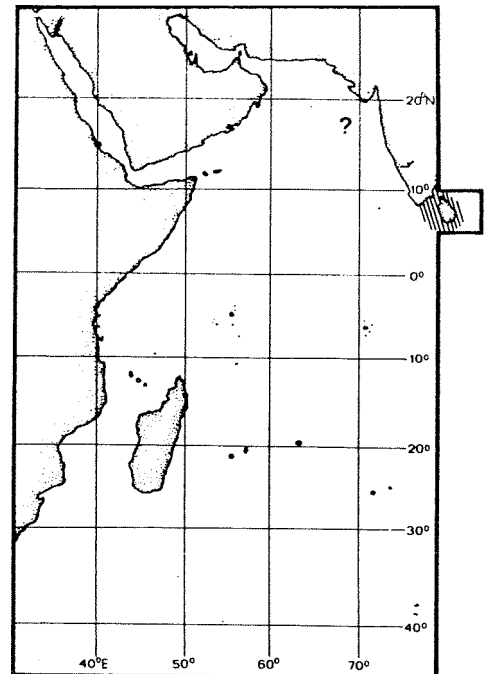
Caught in coastal waters and estuaries; often caught by handlines near rocky reefs.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with handlines.

Marketed mostly fresh.



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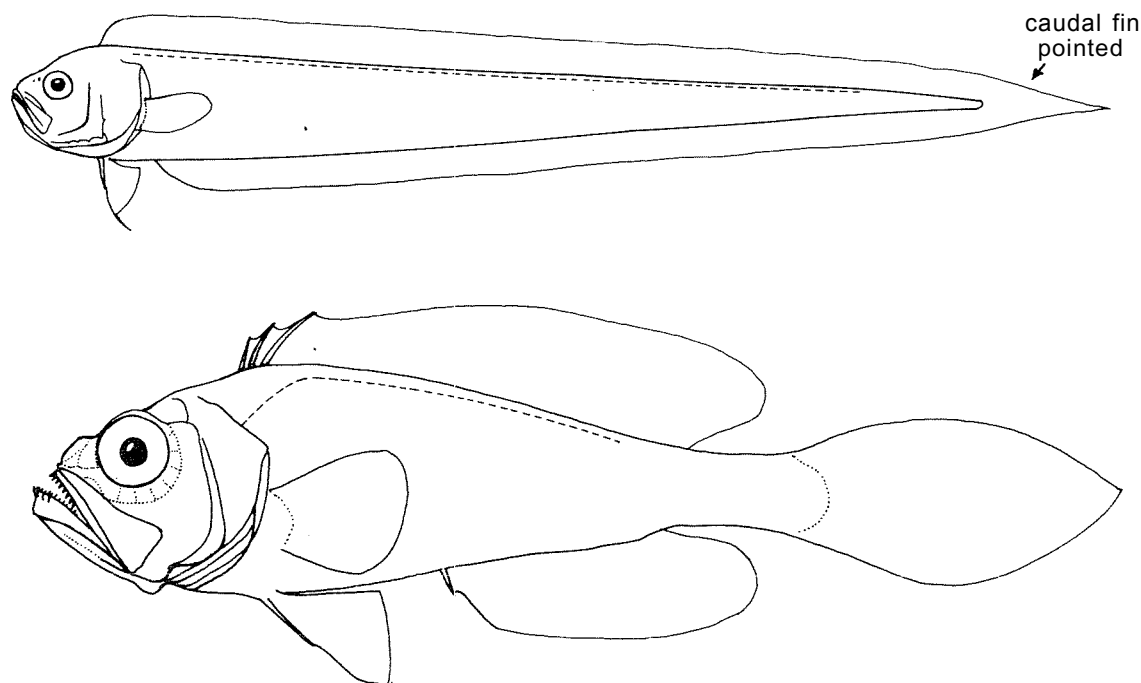
CEPOLIDAE *

Bandfishes

Small, moderately to noticeably elongate fishes with compressed, tapering body and lanceolate caudal fin. Mouth large, oblique; upper jaw broad at end, without supramaxilla, extending to below posterior margin of eye; eyes relatively large and high on head; a single row of slender, slightly curved teeth in jaws with an inner cluster of teeth at symphysis in some species. Dorsal fin continuous, with 0 to 4 flexible spines and 21 to 89 segmented rays; anal fin with 0 or 1 spine and 13 to 102 segmented rays; pelvic fins positioned below or slightly anterior to pectoral fins, with 1 spine and 5 segmented rays; outermost segmented ray unbranched or weakly branched, inner rays branched; caudal fin lanceolate, middle 9 to 15 rays branched. Lateral line high on body, close to dorsal-fin base, terminating posteriorly near end of fin; lateral-line tubes or canals mostly embedded in skin. Scales cycloid (smooth), relatively large to minute.

Colour: in life red or pink, a dark spot frequently present anteriorly in dorsal fin; additionally all known species have a distinctive dark stripe on the membrane (usually hidden) connecting the premaxillary and maxillary bones of the upper jaw.

Most species rather small, the largest about 40 cm in total length. Relatively uncommon fishes taken by trawls in shallow to relatively deep depths (to at least 475 m). Bandfishes occur on level bottom, sand or mud substrates where they live in burrows, which they excavate themselves. Not of significant commercial importance, but consumed by the local population in some areas.

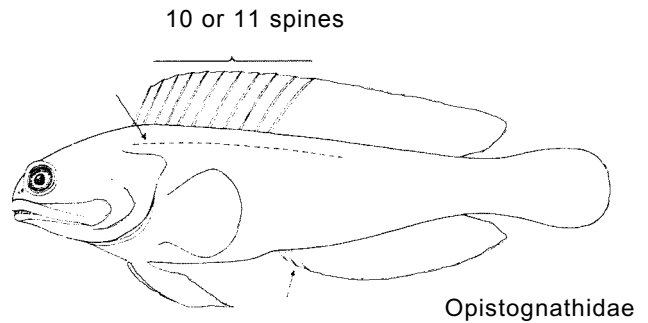


* Includes the Owstoniidae of some authors,

SIMILAR FAMILIES OCCURRING IN THE AREA:

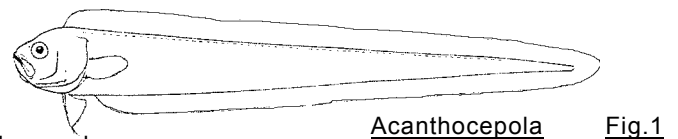
The combination of a lanceolate tail, large oblique mouth and the arrangement of the pelvic fin rays, consisting of 1 spine and 5 segmented rays (the outermost ray unbranched or weakly branched and the inner 4 branched), will distinguish the bandfishes from all other families. Additional distinguishing characters of the superficially similar Opistognathidae are the following:

Opistognathidae: dorsal fin spines 10 or 11 (0 to 4 in Cepolidae); caudal fin rounded (moderately to strongly lanceolate in Cepolidae); pelvic fin with 5 segmented rays, the outer 2 unbranched.

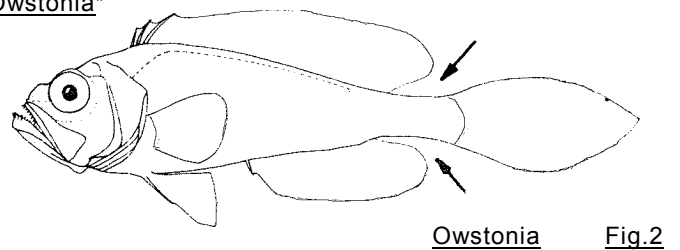


KEY TO GENERA OCCURRING IN THE AREA:

1a. Last ray of dorsal and anal fins broadly united to caudal fin by a membrane; total dorsal fin elements 71 to 89 (Fig.1) ... Acanthocepola



1b. Last ray of dorsal and anal fins not connected to caudal fin by a membrane; total dorsal fin elements 24 or 25 (Fig.2) Owstonia*



LIST OF SPECIES OCCURRING IN THE AREA:

- Acanthocepola abbreviata (Valenciennes in Cuv. & Val., 1835)
- Acanthocepola limbata (Valenciennes in Cuv. & Val., 1835)
- (A. cuneatus Smith, 1935 is considered to be a synonym)

- Owstonia simoterus (Smith, 1968)
- Owstonia weberi Gilchrist, 1922)
- Owstonia whiteheadi (Taiwar, 1972)

Prepared by W.F. Smith-Vaniz, Department of Ichthyology, Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania, USA

Illustrations provided by the author

* Sphenanthias Weber, 19,13 recognized by some authors as a valid genus, has traditionally been distinguished from Owstonia solely on the basis of a different lateral line arrangement. Sphenanthias is here treated as a junior synonym because O. tosaensis Kamohara has an intermediate lateral line configuration

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CHAETODONTIDAE

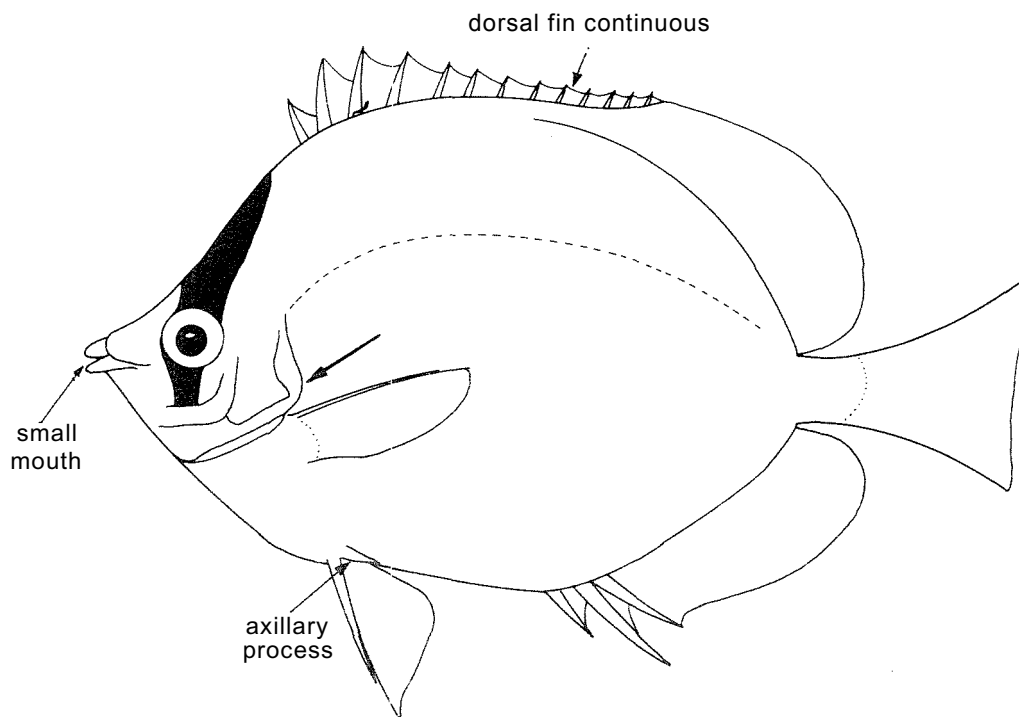
Butterflyfishes

Body deep and strongly compressed, oval to orbicular or subrhomboid in shape. Head about as high as long; mouth very small, terminal, protractile, the gape not extending to level of anterior rim of eye. Snout slightly produced to greatly elongate; teeth setiform usually arranged in brushlike bands in jaws; preopercle never with a strong spine at angle; gill membranes narrowly attached to isthmus (throat). Dorsal fin with 6 to 16 spines and 15 to 31 soft rays, fin continuous, sometimes with a slight notch between spinous and soft portions; anal fin with 3 (rarely 4) spines and 14 to 27 soft rays. Lateral line extending to base of caudal fin or ending near base of soft portion of dorsal fin. Scales ctenoid (rough to touch), small to medium-sized, rounded to angular in shape, extending onto soft portions of vertical fins; an axillary scaly process present at base of pelvic-fin spine.

Colour: greatly variable, but common ground colours are white, yellow, orange and brown; frequently with bars or stripes of black or brown; a dark eyeband often present.

The colourful butterflyfishes are generally found on coral reefs, usually in shallow water above depths of 20 to 30 m. A few species such as Chaetodon mitratus and C. guezei range to at least 100 m depth. Butterflyfishes are usually solitary or occur in pairs, but sometimes are found in large aggregations (particularly Hemitaurichthys and Heniochus). They feed diurnally on coral polyps, colonial sea anemones, tentacles of tubeworms, small crustaceans, zooplankton and algae.

Because of their relatively small size (seldom exceeding 25 cm) and compressed, bony bodies, they have little value as foodfishes. The occasional butterflyfishes found in markets are caught mainly with gillnets and traps. The young are popular aquarium fish.



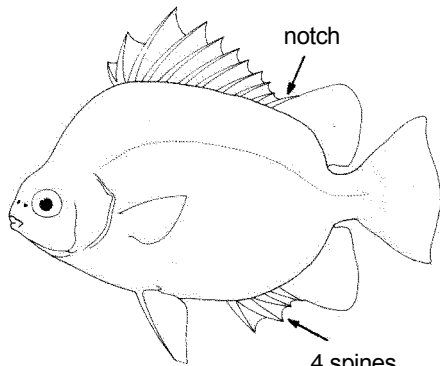
SIMILAR FAMILIES OCCURRING IN THE AREA:

Pomacanthidae; a strong spine at angle of preopercle; exception most of the conspicuous species (i.e., with the of Centropyge) are larger and more colourful.

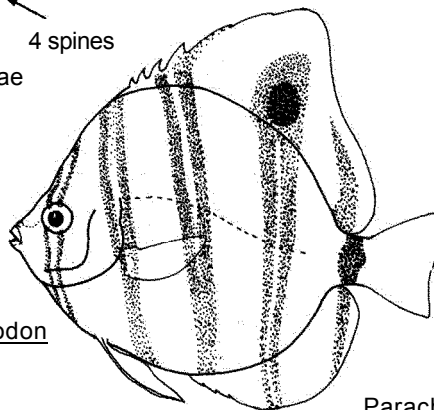
Scatophagidae: dorsal fin with a deep notch; mouth not protractile; anal fin with 4 spines.



Pomacanthidae



Scatophagidae



Parachaetodon Fig.1

KEY TO GENERA OCCURRING IN THE AREA:

1a. Lateral line incomplete, ending in vicinity of last rays of dorsal fin

2a. Dorsal fin with 6 spines (Fig.1)Parachaetodon

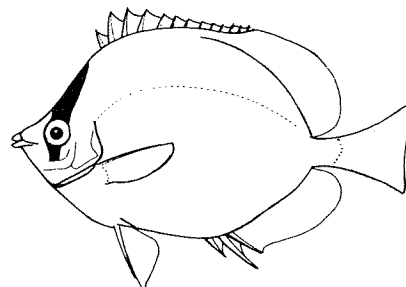
2b. Dorsal fin with 10 to 16 spines (Fig.2) Chaetodon

1b. Lateral line complete, ending at base of caudal fin

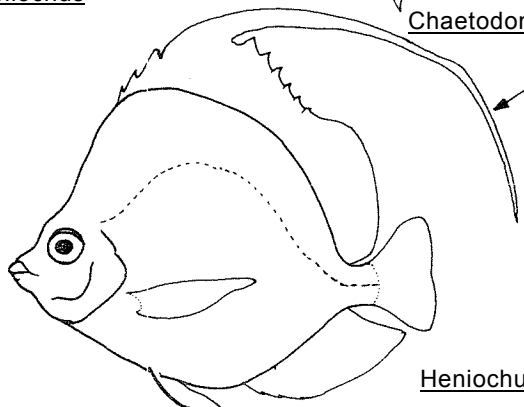
3a. Fourth dorsal spine elongate to filamentous; forehead of adults with spines or horns and usually with a hump or strong bony projection (Fig.3)..... Heniochus

3b. Fourth dorsal spine normal or only slightly elongate; no horns or hump on forehead

4a. More than 65 scales in lateral line; pectoral fins elongate, falcate



Chaetodon Fig.2

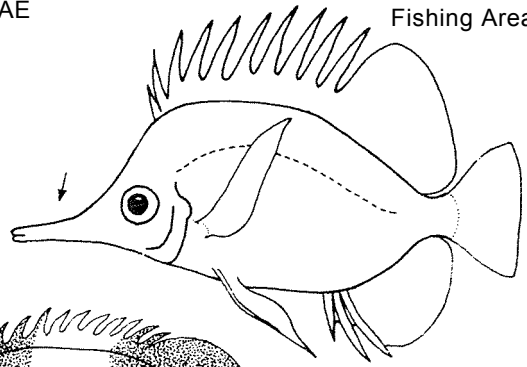


Heniochus Fig.3

5a. Snout elongate, tubular (Fig.4) Forcipiger

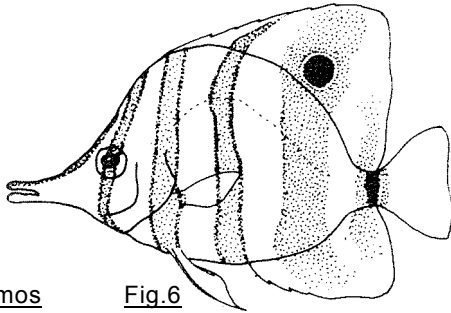
5b. Snout not elongate (Fig.5) Hemitaurichthys

4b. Less than 60 scales in lateral line; pectoral fins not elongate, rounded (Fig.6) Chelmon



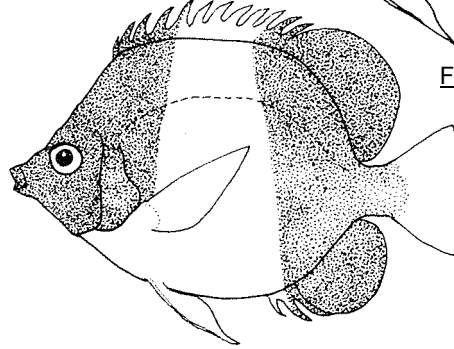
Forcipiger

Fig.4



Chelmos

Fig.6



Hemitaurichthys

Fig.5

LIST OF SPECIES OCCURRING IN THE AREA:

Code numbers are given for those species for which Identification Sheets are included

- Chaetodon auriga Forsskål, 1775
- **Chaetodon austriacus Rüppell, 1835
- Chaetodon bennetti Cuvier, 1831
- Chaetodon blackburnii Des Jardins, 1836
- Chaetodon citrinellus Cuvier, 1831
- Chaetodon collare Bloch, 1787
- Chaetodon decussatus Cuvier, 1831
- Chaetodon dolosus Ahl, 1923
- Chaetodon falcula Bloch, 1793
- **Chaetodon fasciatus Forsskål, 1775
- Chaetodon gardineri Norman, 1939
- Chaetodon quezei Mauge & Bouchot, 1976
- Chaetodon guttatissimus Bennett, 1832
- Chaetodon hoefleri Steindachner (= C. rnarleyi), 1881
- Chaetodon kleinii Bloch, 1790
- **Chaetodon larvatus Cuvier, 1831
- **Chaetodon leucopleura Playfair, 1866
- Chaetodon lineolatus Cuvier, 1831
- Chaetodon lunula (Lacepède, 1803)
- Chaetodon madagascariensis Ahl, 1923
- Chaetodon melannotus Bloch & Schneider, 1801
- **Chaetodon melapterus Guichenot, 1862
- **Chaetodon mesoleucos Forsskål, 1775
- Chaetodon meyeri Bloch & Schneider, 1801
- Chaetodon mitratus Günther, 1860
- Chaetodon modestus Temminck & Schlegel, 1842
- **Chaetodon nigropunctatus Sauvage, 1880
- Chaetodon ocellicaudus Cuvier, 1831)
- *Chaetodon octofasciatus Bloch, 1787
- *Chaetodon ornatissimus Cuvier, 1831
- *Chaetodon oxycephalus Bleeker, 1853

*Just barely occurs in area (i.e., Sri Lanka-India)

**Mainly Red Sea or the "Gulf"

Chaetodon paucifasciatus Ahl, 1923
Chaetodon plebeius Cuvier, 1831
Chaetodon rafflesi Bennett, 1830
Chaetodon semeion Bleeker, 1855
Chaetodon semilarvatus Cuvier, 1831
Chaetodon triangulum Cuvier, 1831
Chaetodon trifascialis Quoy & Gaimard, 1825
Chaetodon trifasciatus Park, 1797
Chaetodon unimaculatus Bloch, 1787
Chaetodon vagabundus Linnaeus, 1758
Chaetodon xanthocephalus Bennett, 1832

Chaetodon zanzibariensis Playfair, 1866

*Chelmon rostratus (Linnaeus, 1758)

Forcipiger flavissimus Jordan & McGregor, 1898
Forcipiger longirostris (Broussonet, 1782)

Hemitaurichthys zoster (Bennett, 1831)

Heniochus acuminatus (Linnaeus, 1758)
Heniochus diphreutes Jordan, 1903
Heniochus intermedius Steindachner, 1893
Heniochus monoceros Cuvier, 1831
Heniochus pleurotaenia Ahl, 1923
*Parachaetodon ocellatus (Cuvier, 1831)

Prepared by G.R. Allen, Western Australian Museum, Perth, Australia

* gust barely occurs in area (i.e., Sri Lanka-India)

** Mainly Red Sea or the "Gulf"