

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(w. Indian Ocean)

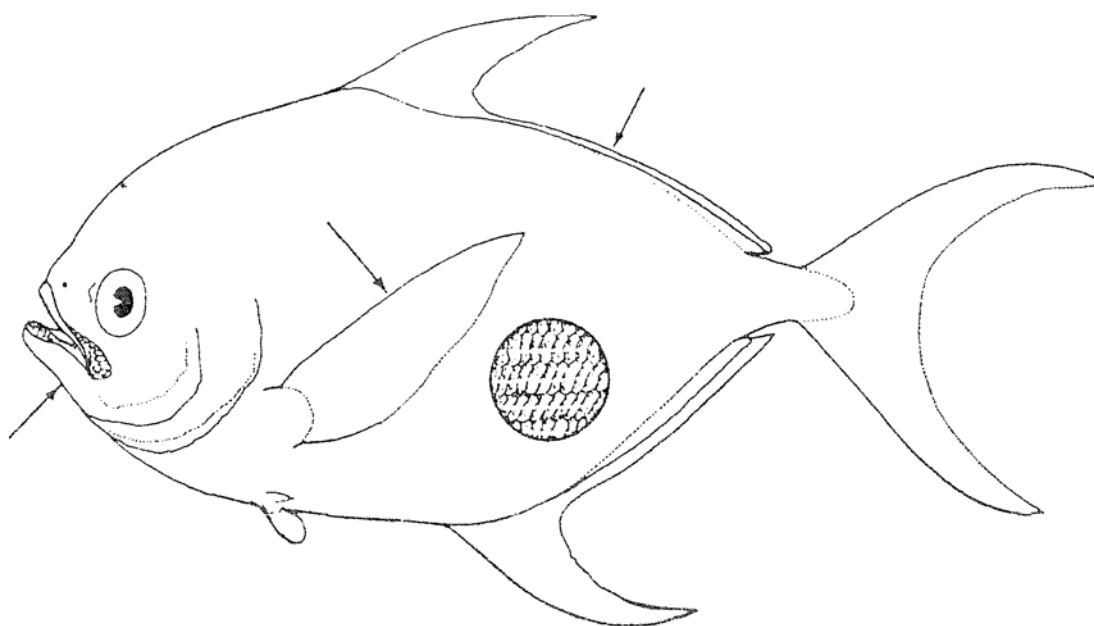
BRAMIIDAE

Pomfrets, ocean breams

Body deep and somewhat compressed, with a heavy caudal peduncle. Head rather deep; eyes large, centrally located; mouth large and oblique; jaws heavy, the maxilla exposed, broad, scaled and extending at least to below middle of eye; opercle and preopercle smooth-edged in adults; teeth moderately strong and in bands. A single, long-based dorsal fin, equal in length to, or longer than, anal fin, with a few spines forming an integral part of the fin; pectoral fins long and wing-like; pelvic fins usually with 1 spine and 5 soft rays and a prominent axillary scale except in Pteraclis); anal fin very similar to dorsal fin; caudal fin strong and forked. Lateral line single or absent; scales large, usually keeled, covering body and head except for a naked area on snout in most species; scales also extending onto median fins, except in Pteraclis and Pterycombus where large scales form a basal sheath for the dorsal and anal fins.

Colour: uniform black, bluish-black or silvery.

Medium- to large-sized fishes (up to about 1 m in length). Most pomfrets are oceanic epi- and mesopelagic fishes of warm and temperate waters; only Eumegistus (not known from the area) is possibly deep benthic. Pomfrets probably travel in small schools and some (i.e. Brama) undertake extensive migrations; they feed mostly on small fishes and squid. In the tropical Indian Ocean, Taractichthys and Taractes may be caught incidentally on tuna longlines while Brama is a by-catch in the deep-water trawl fishery off Kenya. They are excellent foodfishes, but are the subjects of directed fisheries only in the eastern Atlantic (Brama).



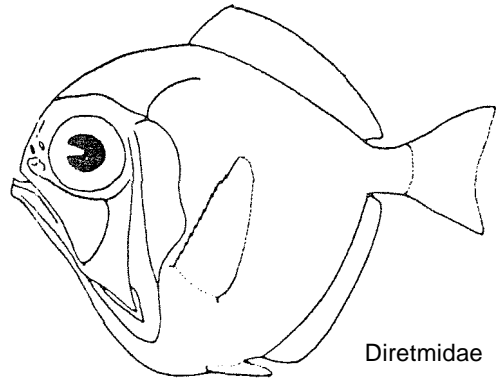
SIMILAR FAMILIES OCCURRING IN THE AREA:

Diretmidae: small fishes (usually less than 25 cm); abdomen keeled, with a row of scutes ahead of the anal fin; no lateral line; pelvic fins with one spine and 6 soft rays (5 in Bramidae).

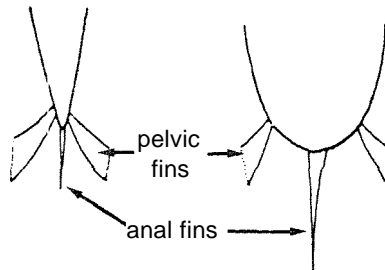
Lampridae: brightly coloured, with scarlet fins and jaws; mouth small; pelvic fins about equal in size to pectoral fins, both with approximately horizontal bases.

Stromateidae: mouth small; gill membranes attached to isthmus; no pelvic fins; small deciduous scales.

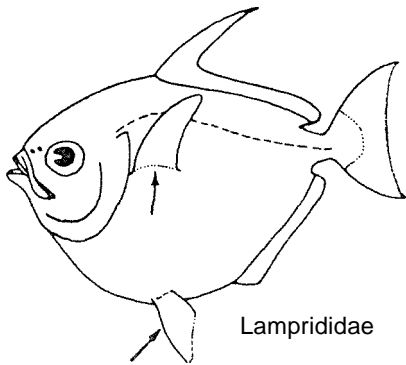
Apolectus niger (Carangidae): no pelvic fins; mouth small; adipose tissue around eye; scales of lateral line scute-like on caudal peduncle.



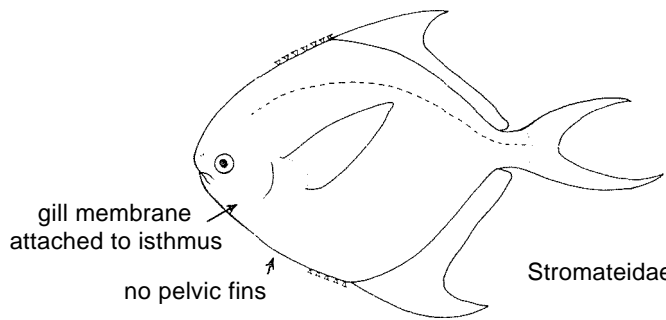
Diretmidae



Diretmidae **Bramidae**
schematic cross section

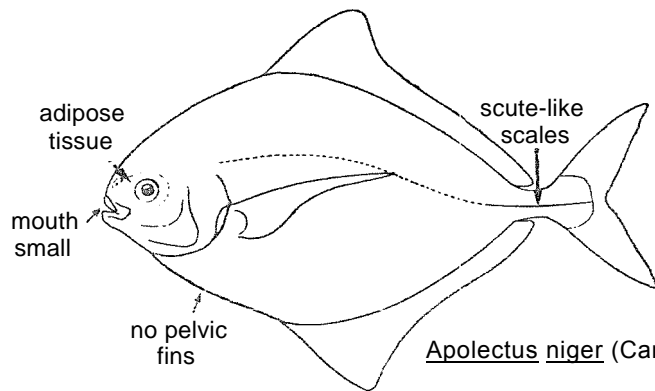


Lampridae



gill membrane attached to isthmus
no pelvic fins

Stromateidae

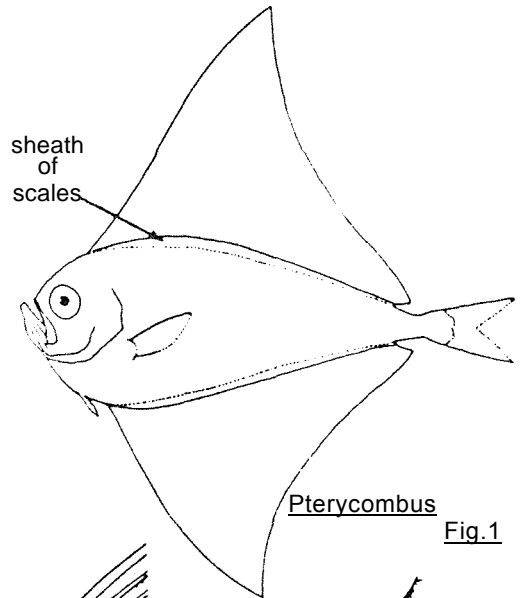


adipose tissue
mouth small
no pelvic fins

scute-like scales
Apolectus niger (Carangidae)

KEY TO GENERA OCCURRING IN THE AREA:

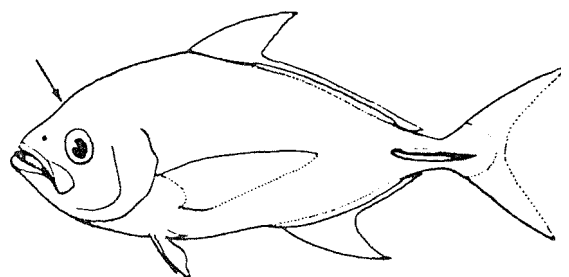
- 1a. Dorsal and anal fins high, scaleless, flexible, completely depressible into a sheath formed by elongate scales arranged along the base of the fin (Fig.1)
- 2a. One of the anterior 5 dorsal and anal rays notably thickened; basal sheath of dorsal fin continuing forward to scaleless area on snout (Fig.2a) Pteraclis
- 2b. Anterior dorsal and anal rays of similar thickness; basal sheath of dorsal fin ending at dorsal fin origin (Fig.26) Pterycombus
- 1b. Dorsal and anal fins scaled, moderately stiff and erect and without a basal sheath of modified scales
 - 3a. Dorsal profile of head between eyes flat or slightly concave, not arched and rounded (Fig.3) Taractes
 - 3b. Dorsal profile of head between eyes notably arched and rounded, the distance between orbit and nearest point on dorsal mid-line more than half the eye diameter (Fig.4)
 - 4a. Head strongly compressed, lower edges of mandibles wholly touching each other behind symphysis at ventral midline (Fig.5a); scales on caudal peduncle form a graded size series with those on base of caudal fin Brama
 - 4b. Head moderately compressed, lower edges of mandibles not wholly touching at ventral midline behind symphysis with the isthmus visible between them (Fig.5b); scales on caudal peduncle abruptly larger than those on base of caudal fin



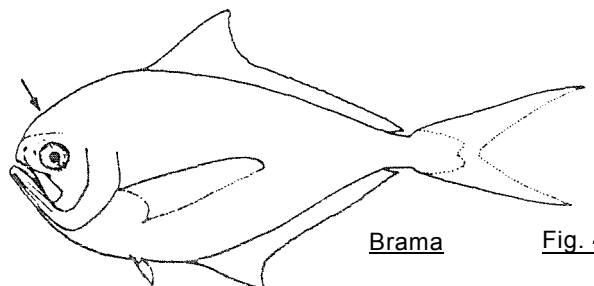
Pterycombus Fig.1



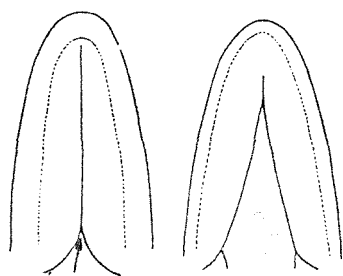
a) Pteraclis b) Pterycombus Fig.2



Taractes Fig. 3



Brama Fig. 4

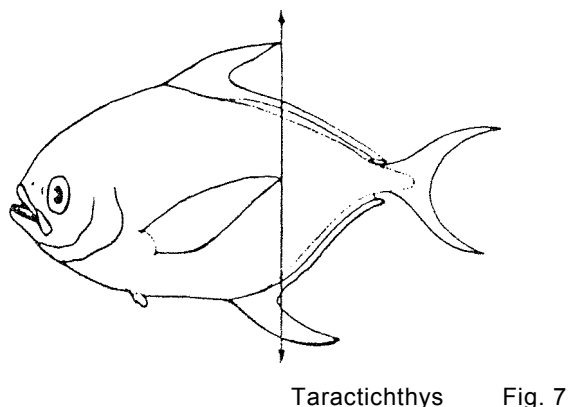
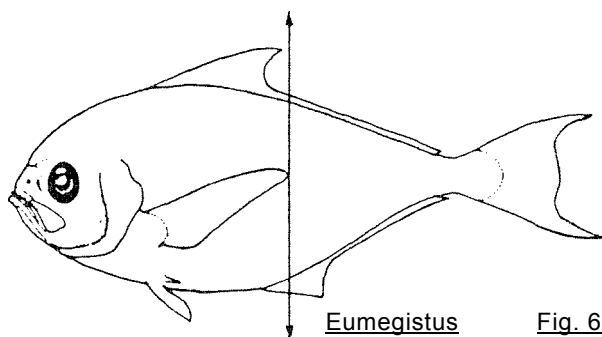


a) Brama b) Eumegistus and Taractichthys

head viewed from below

Fig. 5

- 5 a. Scaleless area present above and behind eye; pectoral fins ending over lobe of anal fin; insertion of pelvic fins under end of pectoral fin base (Fig. 6) Eumegistus*
- 5 b. No scaleless area over and behind eye; pectoral fin extends beyond lobe of anal fin; insertion of pelvic fin under anterior end of pectoral fin base (Fig. 7) Taractichthys



LIST OF SPECIES OCCURRING IN THE AREA:

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

Brama dussumieri Cuvier, 1831

BRAM Bram 2

Brama myersi Mead, 1972

Brama orcini Cuvier, 1831

Pteraclis velifera Pallas, 1769

Pterycombus petersii (Hilgendorf, 1878)

Taractes asper Lowe, 1843

Taractichthys steindachneri (Döderlein, 1883)

Prepared by R.L. Haedrich, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, and R. Nzioka, Kenya Marine and Fisheries Research Institute, Mombasa, Kenya

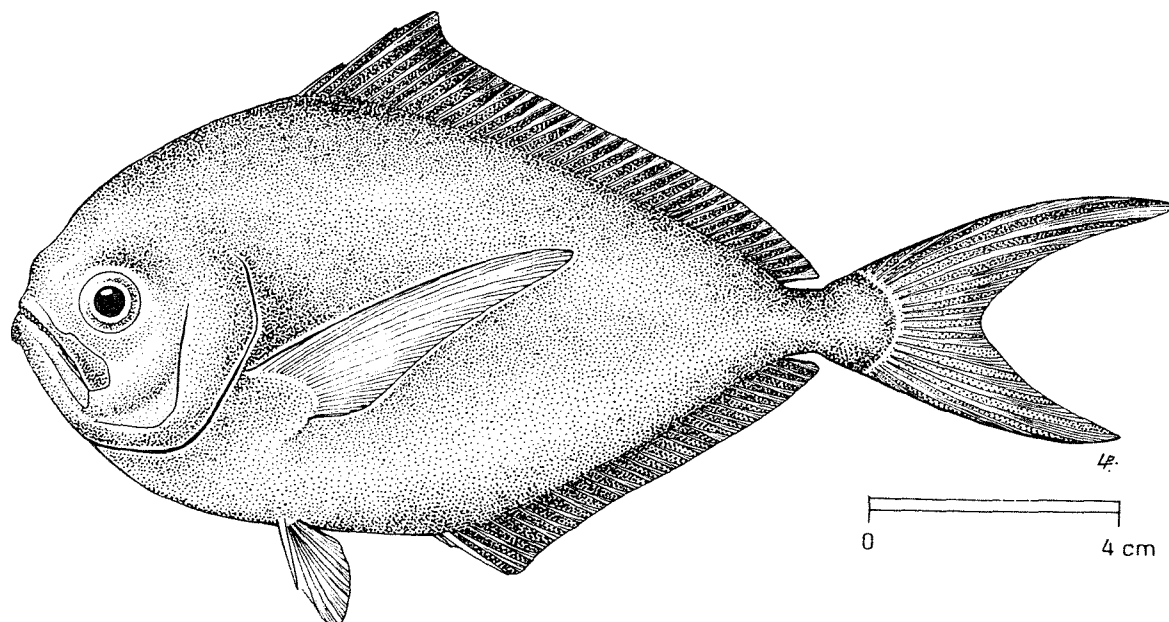
*So far, known only from the Atlantic and Pacific Oceans, but to be: expected in the Indian Ocean.

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: BRAMIDAE

FISHING AREA 51
(W. Indian Ocean)*Brama dussumieri* (Cuvier, 1831)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Lesser bream
 Fr - Castagnole mignonne
 Sp - Japuta menuda

NATIONAL:

DISTINCTIVE CHARACTERS:

Body moderately deep and compressed; caudal peduncle short and compressed, without keels; musculature firm. Profile of head high and arched; snout blunt and slightly concave; eye large, centrally located, without adipose tissue; mouth large, oblique; lower edges of mandibles in contact for their entire lengths, the isthmus not visible between them; upper jaw extending to below centre of eye; 2 or 3 small canines in both jaws followed by conical teeth in the outer row, these separated by villiform teeth from an inner row; free edge of opercle evenly rounded, without spines; gillrakers normal, 13 to 15 on first arch. A single, long-based dorsal fin with a low lobe; anal fin similar but without a lobe; dorsal fin rays 33 to 35; anal fin rays 26 to 28; distance from lower end of pectoral fin base to insertion of pelvic fins 3 times or more in head length; pectoral fins long and wing-like; pelvic fins inserting under posterior half of, or slightly behind, pectoral fin base, with a prominent axillary scales almost as long as the fin; caudal fin forked, with long lobes, the upper usually longer than the lower. Scales smooth, with uneven edges, extending well onto the median fins, 57 to 65 in a horizontal series; the last scales on midlines of caudal peduncle graduating in size to the smaller scales on caudal fin; lateral line indistinct or absent.

Colour: dark brown to tan, median fins may be darker than body; pectorals light. A silvery cast in life.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA

Brama orcin: distance from lower end of pectoral fin bases to insertion of pelvic fins less than 3 times in head length, nearer 2.5 times (more than 3 times in B. dussumieri). Scales in horizontal series 48 to 55. Snout not concave.

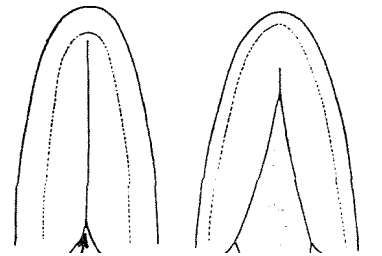
Eumegistus and Taractichthys species: lower edges of mandibles not wholly touching at ventral midline behind symphysis, with the isthmus visible between them; scales on caudal peduncle abruptly larger than those on caudal fin.

Taractes asper: dorsal profile of head between eyes flat or slightly concave, not arched and rounded.

Other species of Bramidae: dorsal and anal fins high, scaleless, flexible, completely depressible into a sheath formed by elongate scales arranged along base of fins.

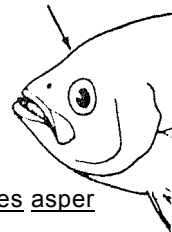
Psenes species (Nomeidae): 2 dorsal fins, the first with 10 to 12 long slender weak spines; mouth small, lacrimal bone enlarged; no enlarged canine teeth in jaws.

Apolectus niger (Carangidae): no pelvic fins; mouth small; eye surrounded by adipose tissue; lateral keels formed of modified scales on caudal peduncle.

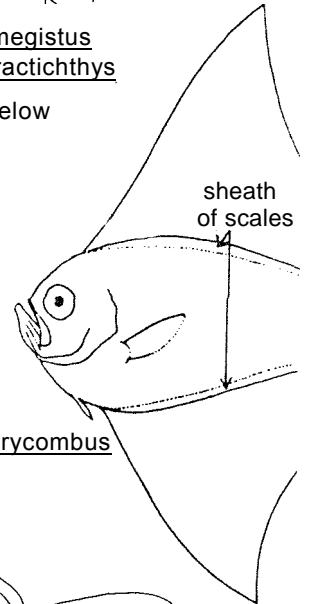


a. Brama b. Eumegistus
Taractichthys

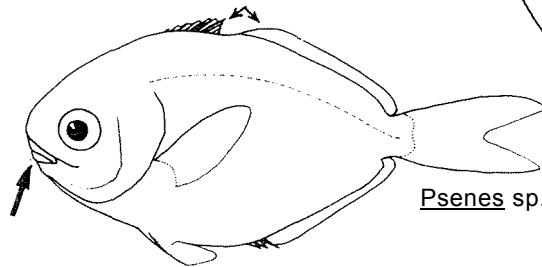
head viewed from below



Taractes asper



Pterycombus



Psenes sp.

SIZE:

Maximum: about 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Circum-tropical on the high sea, with records in the Western Indian Ocean from East Africa to India, between the Equator and 10°S, Mozambique Channel, Seychelles, and Madagascar.

Epipelagic or near the edge of the continental shelf. Appears to spawn the year-round.

PRESENT FISHING GROUNDS:

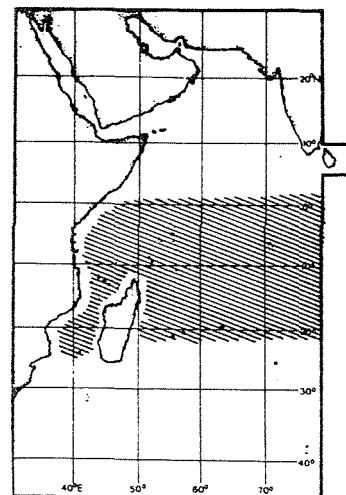
East African coast, especially the edge of the North Kenya Banks.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Taken as a by-catch, but landed and sold, by trawling for deep-sea prawns and lobsters.

Marketed fresh, and fried in oil.



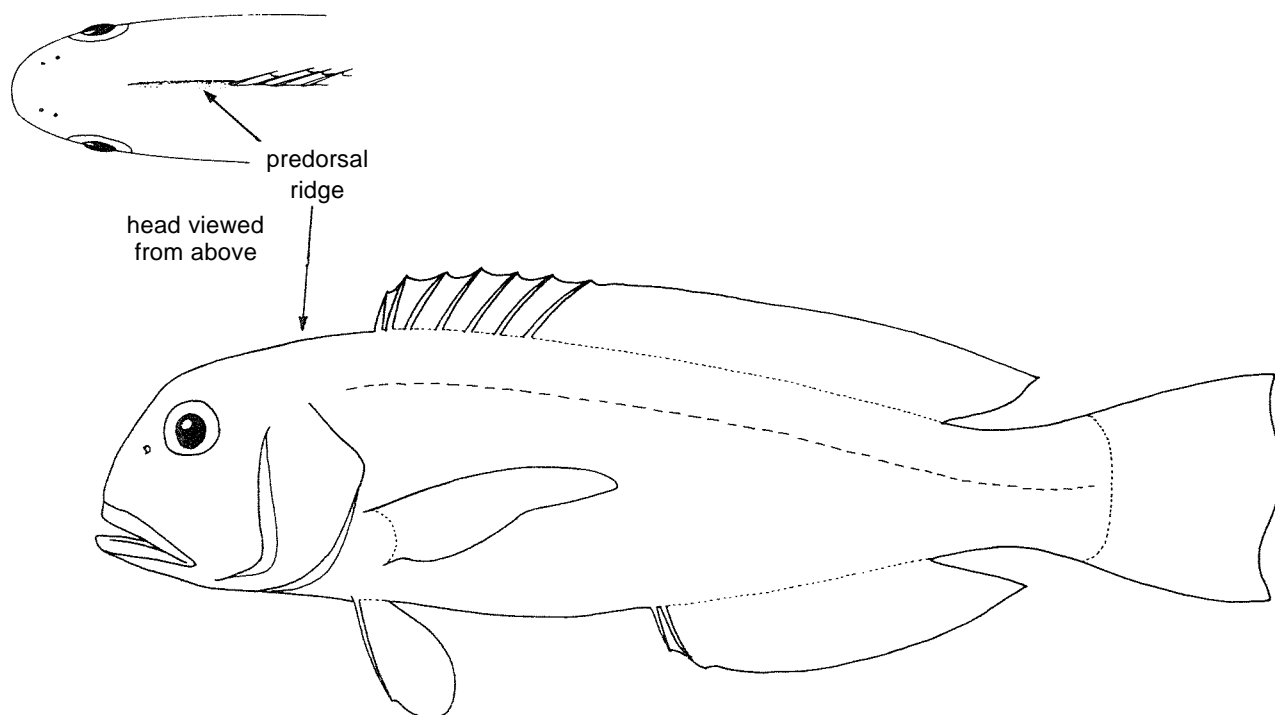
FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

BRANCHIOSTEGIDAE

Tilefishes *

Body shape ranging from robust and round-headed to quadriform and square-headed; body depth 25 to 29% (usually 27%) of standard length. Predorsal ridge (a raised seam in front of dorsal fin) reduced, but always present; preopercle finely serrated on upper limb to angle or just below, lower limb with few or no serrae; no enlarged spine at preopercular angle; opercle with a single soft, blunt spine; gill membranes free from isthmus and nearly covering pectoral fin bases; both jaws with small canine teeth and patches of villiform teeth near the anterior portion; no teeth on roof of mouth or tongue, but well developed pharyngeal teeth; total number of gillrakers on first gill arch 18 to 21; dorsal and anal fins long and continuous; the dorsal with 6 or 7 spines and 15 or 16 soft rays; anal fin with 2 spines and 11 or 12 soft rays; caudal fin rounded or truncate with 17 principal rays sometimes with elongate tips. Vertebrae 10 to 14. Scales ctenoid over most of body, cycloid in head region. Pored lateral line scales 47 to 51.



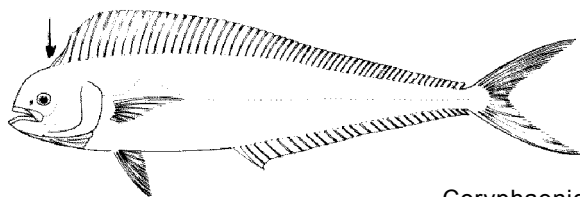
*Excluding Malacanthidae which are still classified under Branchiostegidae by some authors

SIMILAR FAMILIES OCCURRING IN THE AREA:

Coryphaenidae: dorsal fin extending forward to nape.

Malacanthidae: no predorsal ridge, body elongate, its depth 12 to 16% of standard length (25 to 29% in Branchiostegidae).

Other superficially similar families (Labridae, Serranidae, Nemipteridae): predorsal ridge absent, 3 anal fin spines (2 in Branchiostegidae).



Coryphaenidae



Malacanthidae

KEY TO GENERA OCCURRING IN THE AREA:

Branchiostegus only.

LIST OF SPECIES OCCURRING IN THE AREA:

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

Branchiostegus doliatus (Cuvier, 1830)

BRAN Bran 2

Branchiostegus sawakinensis Amirthalingam, 1969

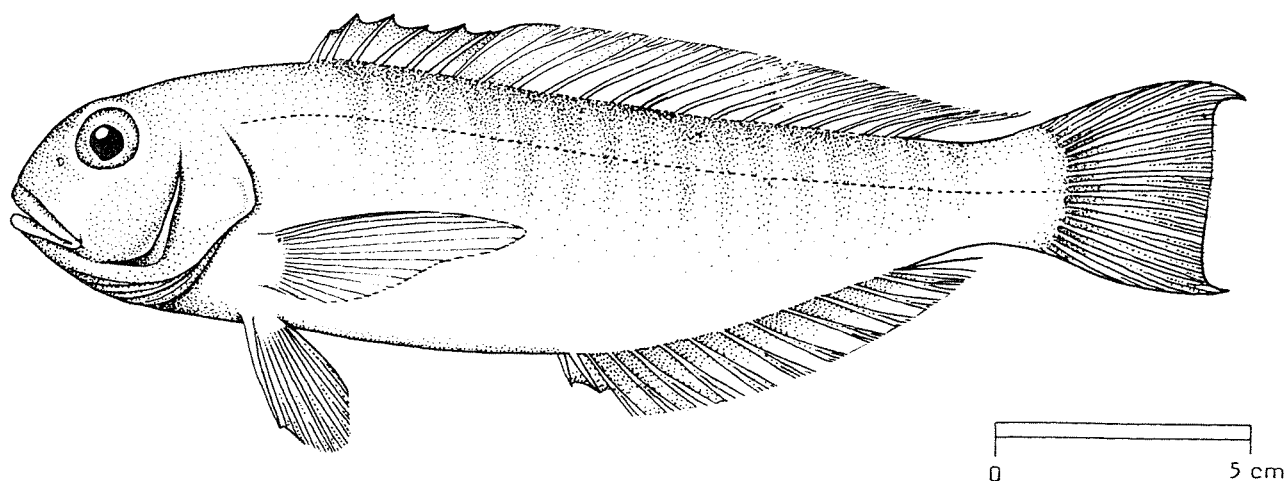
BRAN Bran 3

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: BRANCHIOSTEGIDAE

FISHING AREA 51
(W. Indian Ocean)Branchiostegus doliatus (Cuvier, 1830)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES

FAO : En - Ribbed tilefish
 Fr - Tile ridé
 Sp - Blanquillo rayado

NATIONAL:

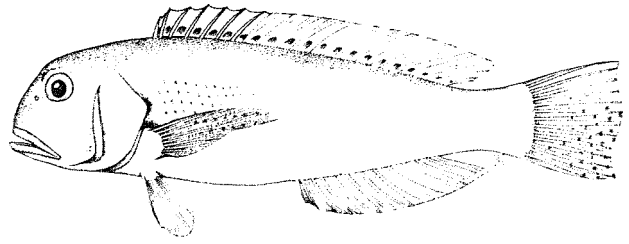
DISTINCTIVE CHARACTERS:

Body quadriform with a predorsal ridge (raised seam in front of dorsal fin). Eye diameter contained about 3 times in head length. Dorsal and anal fins more or less uniform in height and continuous; dorsal fin with 6 spines and 16 soft rays; anal fin with 2 spines and 12 soft rays; caudal fin truncate with tips of lateral rays slightly elongated. Prejuveniles unknown, but probably pelagic, with distinctive serrated ridges and spines on head as found in other species of the family.

Colour: body rosy pink with 16 to 18 violaceous vertical bars from behind opercle to near base of caudal fin; no dark markings on predorsal ridge, dorsal fin membrane or near pectoral fin base; opercle with a dark spot; supraorbital region dark.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Branchiostegus sawakinensis: 6 or 7 rows of dark spots on sides of body behind opercle; a dark area present above pectoral fin axil; no dark vertical bars on body; predorsal ridge dark, dorsal fin with 7 spines and 15 soft rays (6 spines and 16 soft rays in B. doliatus); dark areas along base of dorsal fin membrane between each spine and ray; eye diameter 4 or more times into head length (about 3 times in B. doliatus).



Branchiostegus sawakinensis

SIZE:

Maximum: 36 cm standard length; common to 25 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Known from Inhaca Island and Mozambique to Durban (South Africa); also reported from Réunion and Mauritius Islands.

A moderately deep-dwelling species, found from 90 to 612 m depth over mud bottom. May inhabit burrows as other species of the family.

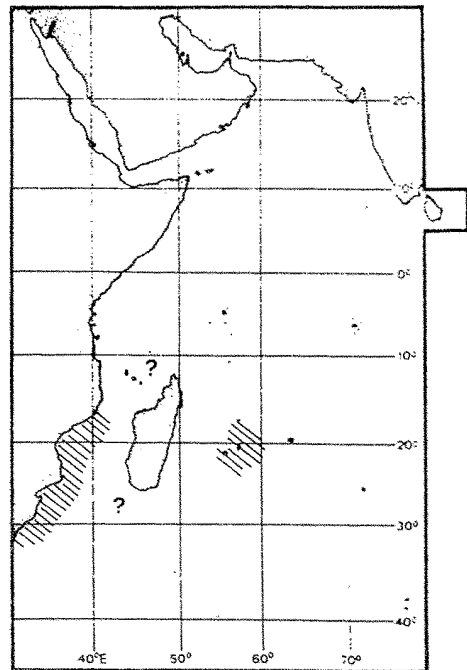
PRESENT FISHING GROUNDS:

Taken as bycatch in deeper offshore waters: associated fish species from Mozambique: Zenopsis conchifer, Zeus faber, Uranoscopus archionema, Polymixia nobilis, Chlorophthalmus agassizi, Saurida undosquamis, Lepidotrigla aratolepis, Neopinnula orientalis, Thyrsitoides marleyi and Bembrops caudimacula.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught by trawls or deep lines; possibly vulnerable to traps.



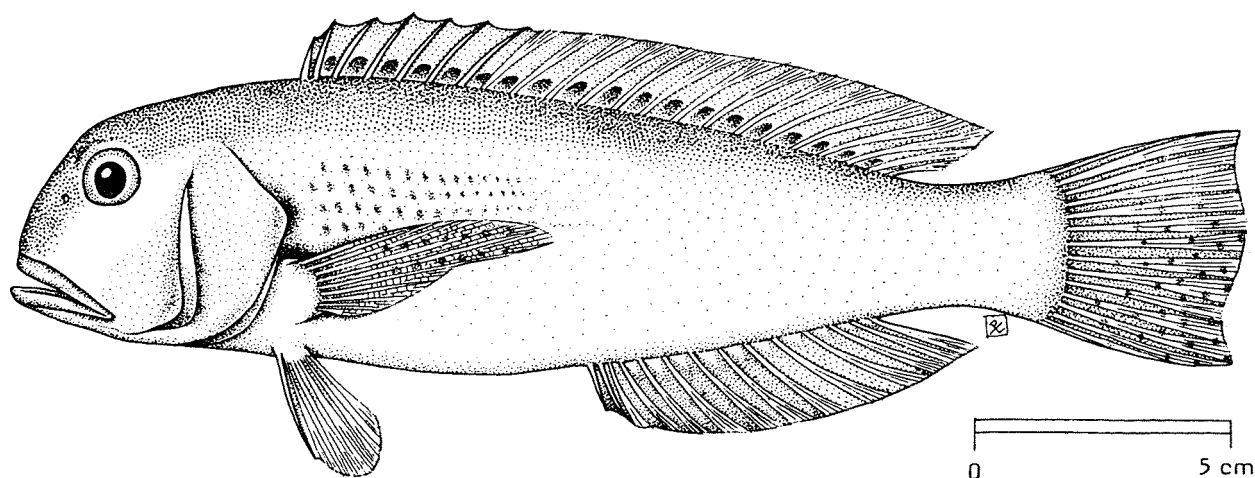
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: BRANCHIOSTEGIDAE

FISHING AREA 51
(W. Indian Ocean)

<i>Branchiostegus sawakinensis</i> Amirthalingam, 19691

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO :	En - Freckled tilefish
	Fr - Tile taches de son
	Sp - Blanquillo pecoso

NATIONAL:

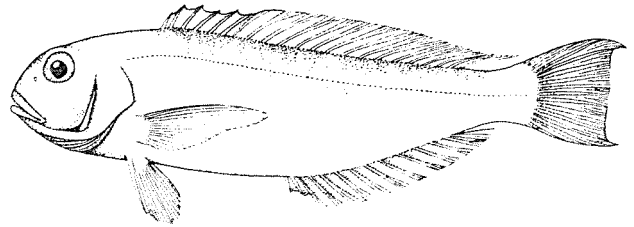
DISTINCTIVE CHARACTERS:

Body quadriform with a predorsal ridge (raised seam in front of dorsal fin). Eye diameter contained 4 or more times in head length. Dorsal and anal fins long and continuous, the dorsal fin with 7 spines and 15 soft rays; anal fin with 2 spines and 12 soft rays (rarely 11); caudal fin truncate with the central area slightly elongated. Prejuveniles unknown, but probably pelagic with distinctive serrated ridges and spines as found in other species of the family.

Colour: body with varied reddish and yellow pastel shades and 5 to 7 rows of dark spots on midsides from below lateral line to beneath pectoral fin; rose violet around eye and silvery yellow below, predorsal ridge darkly pigmented; a golden area above opercle; a small dark area in axil of pectoral fin; dorsal fin membrane with black rectangular markings along its base and between each spine and soft ray; anal fin membrane with small, silver-white triangles along its base and between each spine and soft ray; upper portion of caudal fin light with yellow rays lower portion dark grey with small yellow spots.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Branchiostegus doliatus: 16 to 18 dark body bars; opercle with a dark spot; no dark area above pectoral fin axil; predorsal ridge not dark; dorsal fin with 6 spines and 16 soft rays (7 spines and 15 soft rays in B. sawakinensis); caudal fin truncate with elongate lateral rays; no dark markings along dorsal fin base; eye diameter about 3 times into head length (4 or more times in B. sawakinensis).



SIZE

Maximum: 39 cm standard length; common to 25 cm.

Branchiostegus doliatus

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Known from Sudan (Red Sea) and southeast Africa to Durban (South Africa); also recently recorded from north-western Australia and the Philippines, so the species distribution may be widespread through the Indo-Pacific region.

Found over muddy bottoms at about 80 m depth in the Red Sea and recorded at a depth of 45 m from South Africa. It is caught over sandy bottoms at 36 to 180 m in the Philippines. It may inhabit burrows as found in other species of the family.

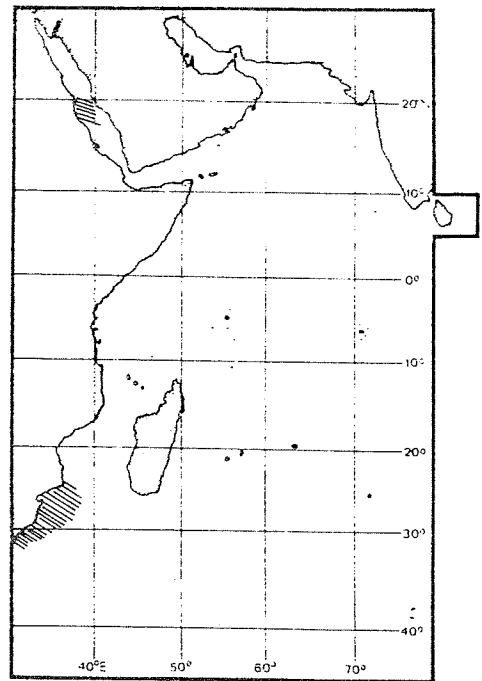
PRESENT FISHING GROUNDS:

The species is not common. In the Red Sea, fishermen consider it poisonous but this is unconfirmed*

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught by hook and line and trawls; possibly also in fish traps.



*All other tilefish are desirable foodfish