CALLION

1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Italian Ocean)

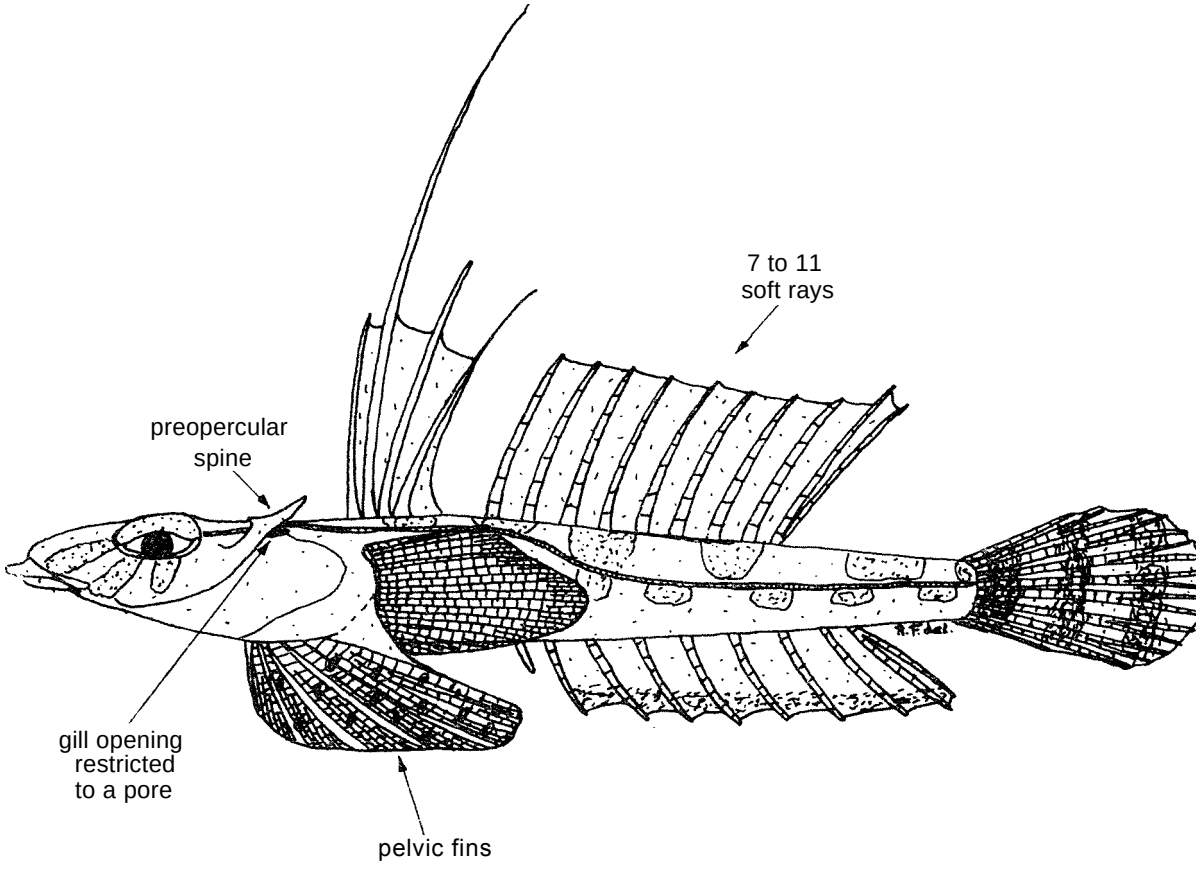
CALLIONYMIDAE

Dragonets

Body elongate, moderately depressed. Head usually broad and depressed, the upper jaw very protrusible; usually rows of very small, villiform teeth, restricted to the jaws; preopercle armed with a stout spine but opercle and subopercle spineless; gill opening restricted to a small dorsal or sublateral pore; eyes moderate to large, usually directed dorsally. Spinous and soft dorsal fins separate, consisting, respectively, of 4 rarely 0 to 5) flexible spines and 7 to 11 segmented soft rays (last divided at base); anal fin with 6 to 12 soft rays (last divided at base); pelvic fins jugular in position, widely separated from each other, each with 1 spine and 5 rays. Lateral line consisting of pores. Body scaleless.

Colour: ranging from more or less uniform sand to conspicuously marked with colourful stripes and spots. Nearly all species are sexually dichromatic.

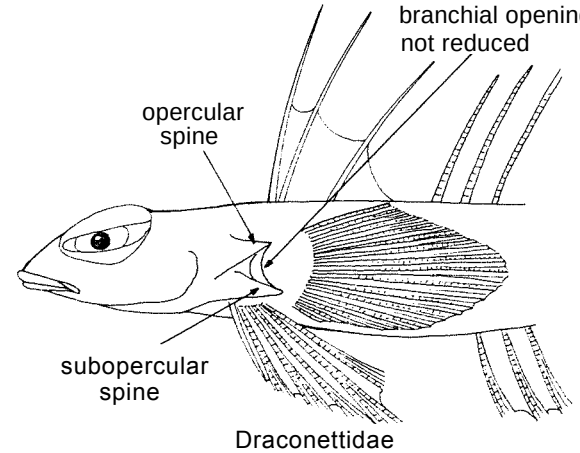
Relatively small benthic fishes (2 to 35 cm in total length) found on sandy or muddy substrates, among weeds, and in coral reefs from tide pools and the surf zone to depths of about 600 m. Taken as bycatch in bottom trawls, but only one species (Callionymus marleyi) occasionally commercially used.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Uraconettidae: preopercle spineless, but one simple spine present on both opercle and subopercle; gill opening not reduced to a pore, but developed as a slit opposite pectoral fin base; soft dorsal fin rays 12 (7 to 11 in Callionymidae); lateral line consisting of a broad channel.

other superficially similar families: none has the following combination of characters: naked body, widely separated pelvic fins, a stout preopercular spine and 0 to 5 dorsal fin spines.



Draconettidae (Draconetta)

KEY TO GENERA OCCURRING IN THE AREA:

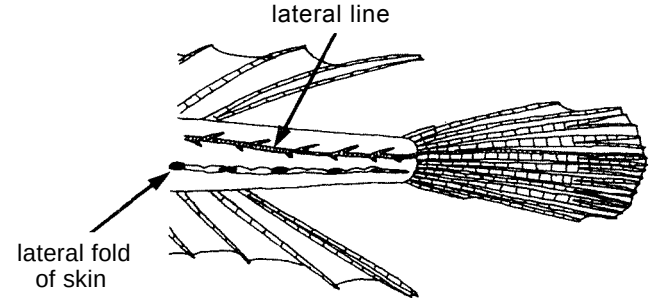
1a. Opercle with a free flap of skin

2a. body with a lateral fold of skin below the lateral line (Fig.1) ..... Diplogrammus

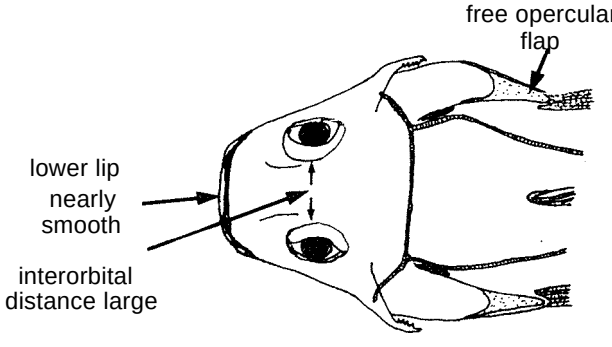
2b. body without a lateral fold of skin below the lateral line

3a. Dorsal margin of lower lip with very small fleshy papillae; interorbital distance more than eye diameter (Fig.2) ..... Eleutherochir

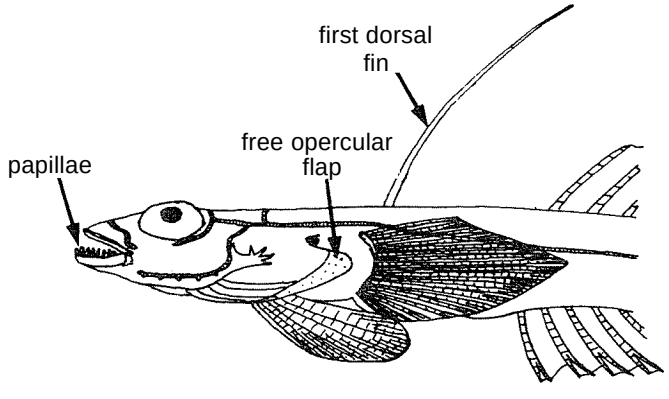
3b. Dorsal margin of lower lip with a row of large erect fleshy papillae (Figs 3 and 4); interorbital distance less than one third of eye diameter ..... Draculo



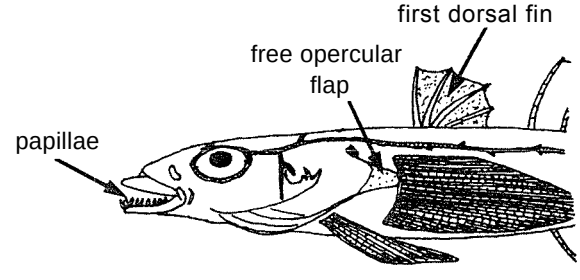
Diplogrammus Fig.1



Eleutherochir Fig.2



Draculo (celetus) Fig.4



Draculo (margey) Fig.3

1b. Opercle without a free flap of skin

4a. Lateral line with 29 to 40 upper and 21 to 29 lower branches; preopercular spine simple, without additional teeth on its dorsal or ventral margins or at its base (Fig.5) ..... Paracallionymus

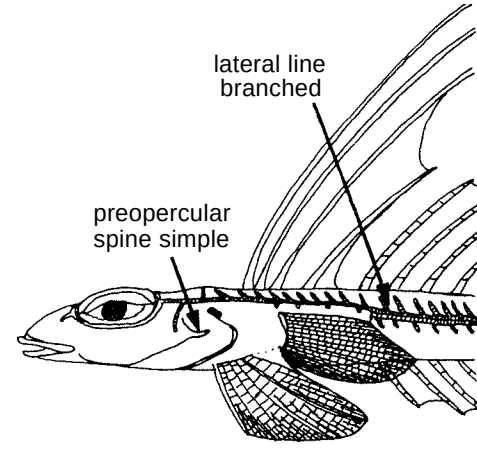
4b. Lateral line nearly unbranched; preopercular spine with 1 to 10 teeth at its dorsal margin (additionally to the main tip), occasionally also with teeth at its ventral margin

5a. Membrane behind last dorsal fin spine large; rays of 2nd dorsal fin unbranched except for the last, which is divided at base; gill opening dorsal in position; snout equal to, or longer than, eye diameter (Fig-6) ..... Callionymus

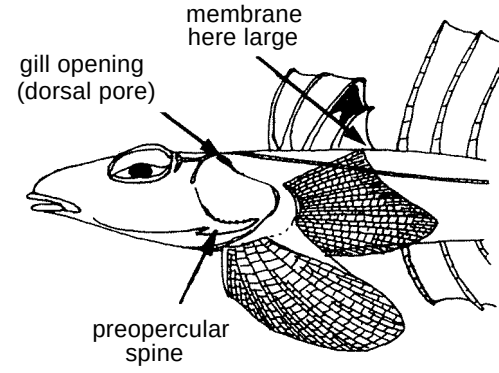
5b. Membrane behind last dorsal fin spine usually very small or absent; rays of 2nd dorsal fin branched (in specimens longer than 3 cm total length); gill opening sublateral; snout shorter than eye diameter

6a. No large, rounded, pulsating (in life) vesicle behind the pectoral fin base (Fig-7) ..... Synchiropus

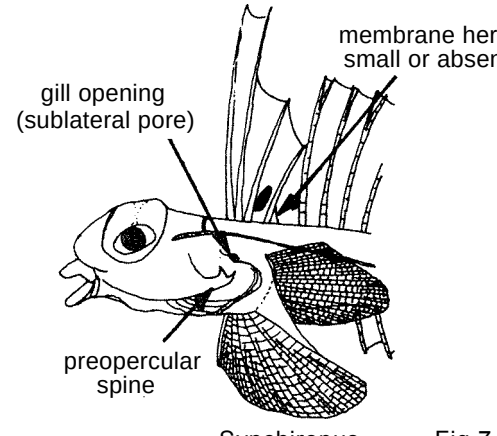
6b. A large, rounded, pulsating (in life) vesicle behind the pectoral fin base (Fig.8) ..... Neosynchiropus



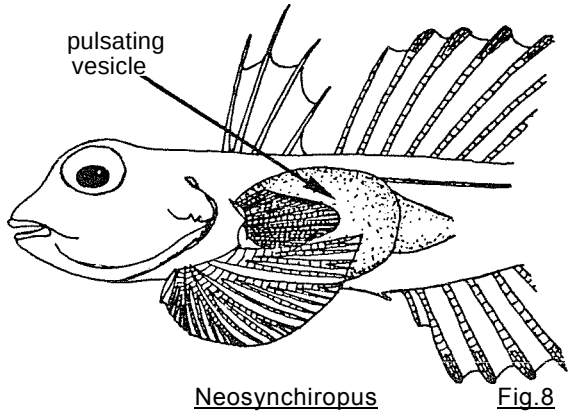
Paracallionymus Fig.5



Callionymus Fig.6



Synchiropus Fig.7



Neosynchiropus Fig.8

LIST OF SPECIES OCCURRING IN THE AREA:

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

Lallionymus africanus (Kotthaus, 1977)
Callionymus bentuviai Fricke, 1981
Callionyrruws carebares Alcock, 1890
Callionymus cooperi Regan, 1908
Callionymus delicatulus Smith, 1963
Callionymus erythraeus Ninni, 1934
Callionymus filamentosus Valenciennes, 1837
Lallionymus flavus Fricke, 1963
Lallionymus gardineri Regan, 1908
Callionymus hindsi Richardson, 1844
Lallionymus kotthausi Fricke, 1981
Callionymus margaretae Regan, 1905
Callionymus marleyi Regan, 1919 CALLION Callion 1
Callionymus mascarenus Fricke, 1983
Callionymus muscatensis Regan, 1905
Callionymus neptunius (Seale, 1910)
Callionymus oxycephalus Fricke, 1980
Lallionymus persicus Regan, 1905
Callionymus regani Nakabo, 1979
Callionymus sagitta Pallas, 1770
Callionymus spiniceps Regan, 1908
Callionymus stigmatopareius Fricke, 1981
Callionymus tenuis Fricke, 1981

Diplogrammus gruveli Smith, 1963
Diplogrammus infulatus Smith, 1963
Diplogrammus pygmaeus Fricke, 1981
Diplogrammus randalli Fricke, 1983

Draculo celetus Smith, 1963
Draculo maugei Smith, 1965

Eleutherochir opercularis (Valenciennes, 1837)

Neosynchiropus bacescui Nalbant, 1980

Paracallionymus costatus (Boulenger, 1898)

Synchiropus lineulatus (Valenciennes, 1837)
Synchiropus marmoratus (Peters, 1855)
Synchiropus monacanthus Smith, 1936
Synchiropus postulus Smith, 1963
Synchiropus sechellensis Regan, 1908
Synchiropus stellatus Smith, 1963

Prepared by R. Fricke, Braunschweig, Federal Republic of Germany

CALLION Callion 1

1983

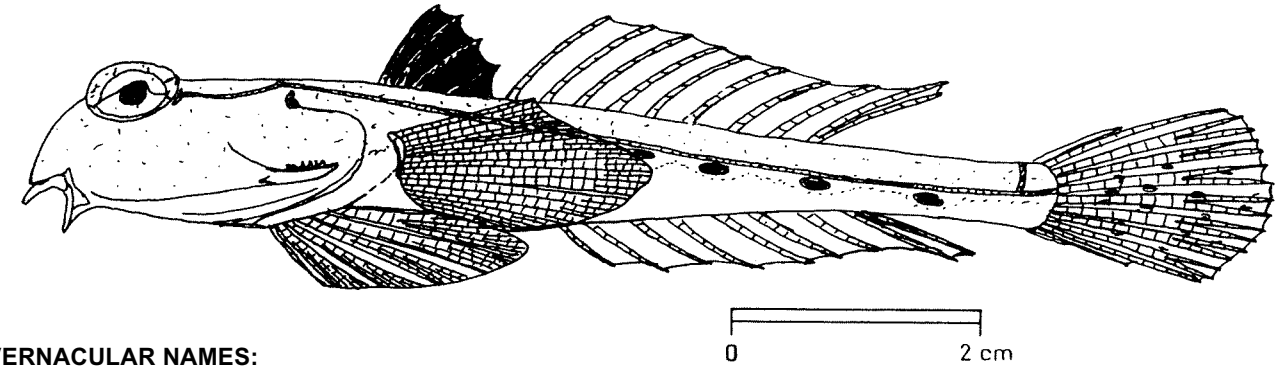
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CALLIONYMIDAE

FISHING AREA 51
(W. Indian Ocean)

Callionymus marleyi Regan, 1919

OTHER SCIENTIFIC NAMES STILL IN USE: Callionymus sagitta (non Pallas, 1770) Ninni, 1934



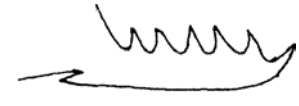
VERNACULAR NAMES:

FAO: En - Sand dragonet
Fr - Dragonnet de sable
Sp - Primita arenera

NATIONAL:

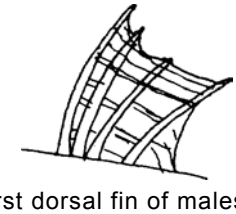
DISTINCTIVE CHARACTERS:

Body elongate, depressed. Head broad and depressed, its length contained 3.0 to 3.2 times in standard length; eye diameter 3.8 to 4.2 in head length measured to branchial opening). Preopercular spine broad, with 3 to 6 (usually 5) points at its dorsal side, an upcurved main point, and an antrorse point at its base. First dorsal fin with 4 spines, lower than second dorsal fin in females, higher than 2nd dorsal fin and with fourth spine longer than the third in males; second dorsal fin with 9 unbranched soft rays (last ray divided at base); anal fin with 8 unbranched soft rays (last divided at base); distal margin of pelvic fin convex; pectoral fins somewhat pointed; caudal fin rounded. Lateral line originating in postorbital region and reaching to mid of median caudal fin ray; lateral lines of both sides interconnected by a transverse branch across the occipital region and across the dorsal part of the caudal peduncle.



preopercular spine

Colour: ground coloration variable (usually same as the colour of the bottom on which the fish is living), from sand to dark brown, usually with a row of dark blotches along body side. First dorsal fin transparent and with darkish lines in males, but black in females. Other fins transparent, sometimes with darkish spots and/or blotches.



first dorsal fin of males

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Callionymus sagitta: preopercular spine short and narrow, with 2 to 4 sharp points at its dorsal side; 9 anal fin rays 8 in C. marleyi); caudal fin 3.6 to 3.8 times in standard length (4.0 to 4.5 in C. marleyi). Also different geographical distribution, found from southern India and Sri Lanka eastward.

C. filamentosus: main point of preopercular spine straight, with 4 to 9 small straight antrorse serrae at its dorsal side and a strong antrorse spine at its base; 1st spine of 1st dorsal fin long and filamentous in males, with a light first dorsal fin and a black blotch on its 3rd membrane in females.

C. erythraeus: males with a high first dorsal fin with 3 long filaments, females with a transparent 1st dorsal fin (black in females of C. marleyi), the 2nd spine of which is the longest (1st spine longest in C. marleyi); preopercular spine bent at its base: back with 5 dark saddles.

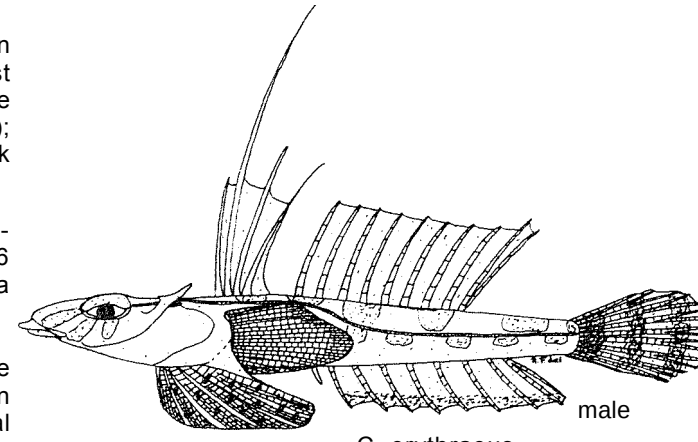
C. margaretae and C. persicus: caudal fin elongate; preopercular spine with a straight main tip, 3 to 6 small straight antrorse serrae at its dorsal margin, and a strong antrorse spine at its base.

Other species of Callionymus: C. marleyi can be distinguished by the combination of 4 spines and 9 rays in the dorsal fins and 8 rays in the anal fin, a rounded caudal fin, and a very broad preopercular spine with 3 to 6 large curved points at its dorsal margin (ventral margin smooth).

Species of Synchiropus and Neosynchiropus: membrane behind last dorsal fin spine usually very small or absent; snout shorter than eye diameter.

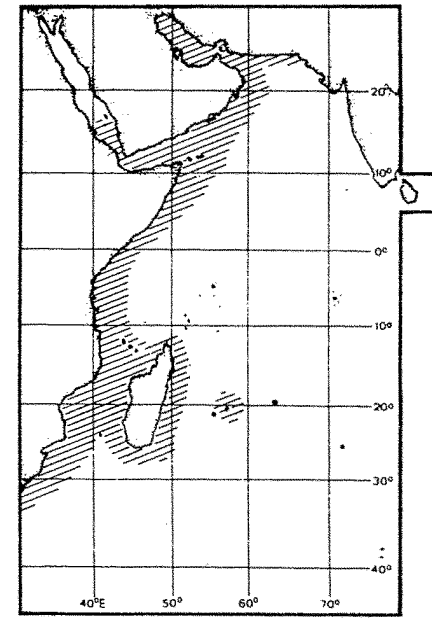
Species of Paracallionymus: preopercular spine simple, without additional teeth on its dorsal or ventral margins or at its base.

Species of Diplogrammus and Eleutherochir: opercle with a free flap of skin.



male

C. erythraeus



SIZE:

Maximum: 13 cm; common to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Found along the east coast of Africa, from the Cape of Good Hope northward to the southern Red Sea and the "Gulf"; also, off Madagascar and Mauritius.

Benthic, inhabits sand bottoms of shallow coastal areas.

Feeds on small bottom invertebrates (crustaceans, worms and snails).

PRESENT FISHING GROUNDS:

Sand bottoms in the "Gulf".

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Rather common, often caught as bycatch in shrimp trawls.

Occassionally marketed (usually fresh).

CAPRO

1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

CAPROIDAE

Boarfishes

Only one species in the area; see species sheet for:

Antigonia rubescens (Günther, 1860) CAPRO Anti 1

Prepared by P.C. Heemstra, J.L.B. Smith Institute of Ichthyology, Grahamstown, South Africa

CAPRO Anti 1

1983

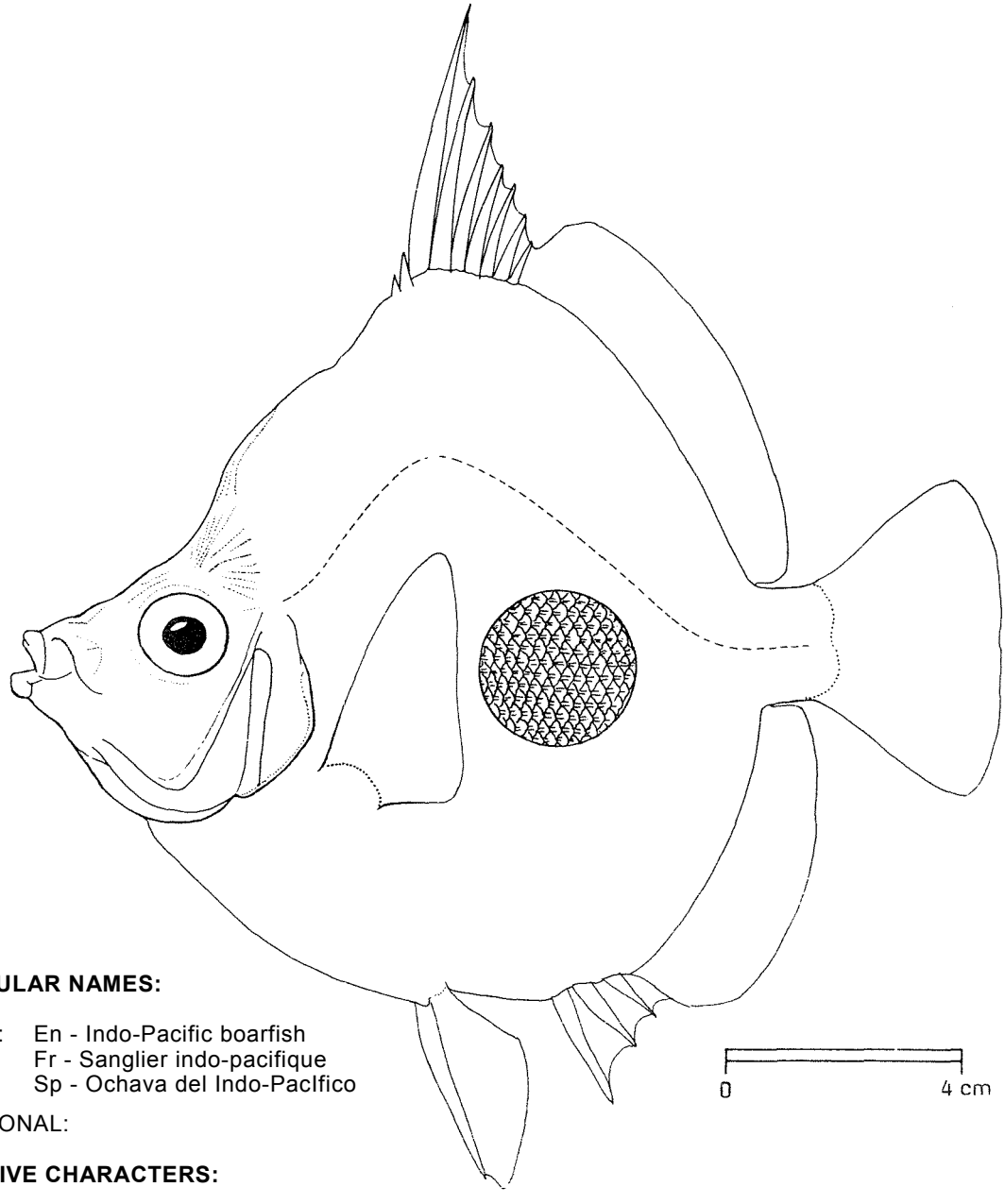
FAO SPECIES IDENTIFICATION SHEETS

FAMILY : CAPROIDAE

FISHING AREA 51
(W. Indian Ocean)

Antigonia rubescens (Günther, 1860)

OTHER SCIENTIFIC NAMES STILL IN USE: Antigonia fowleri Franz, 1910



VERNACULAR NAMES:

FAO: En - Indo-Pacific boarfish
Fr - Sanglier indo-pacifique
Sp - Ochava del Indo-Pacífico

NATIONAL:

DISTINCTIVE CHARACTERS:

Body strongly compressed, discoid, with small ctenoid scales. Mouth small; upper jaw protrusible; bands of small teeth on jaws; vomer and palatines toothless. A single dorsal fin with 8 or 9 spines and 25 to 27 soft rays; anal fin with 3 spines and 25 to 27 soft rays; pelvic fins with 1 strong spine and 5 soft rays; caudal fin truncate, with 10 branched rays; pectoral fins with 15 rays, longer than pelvics and slightly shorter than head. Cheeks and operculum with distinct scales. Gill membranes free from isthmus; branchiostegal rays 6.

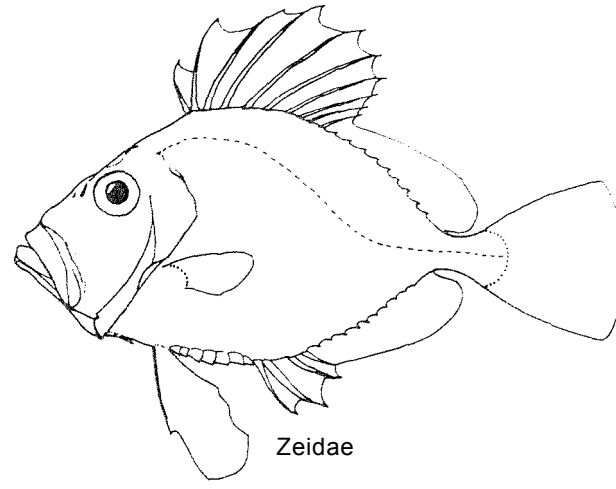
Colour: head and body reddish orange dorsally, silvery below: median fins yellow.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

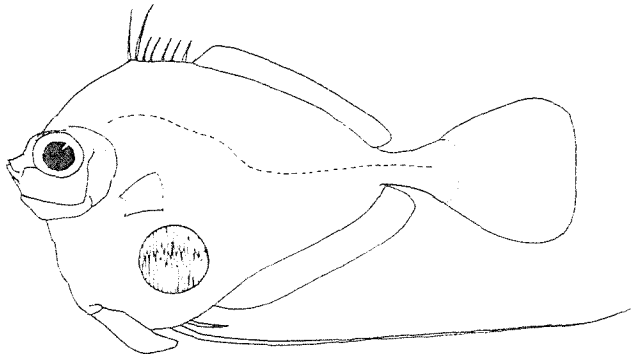
Species of Zeidae: pelvic fins closer to pectoral fins than to anal fin origin (pelvic fins closer to anal fin than to pectoral fins in A. rubescens); dorsal and anal fin rays unbranched (branched in A. rubescens).

Species of Grammicolepidae: pelvic fins with 1 spine and 6 soft rays (5 soft rays in A. rubescens); scales much elongated vertically; caudal Finn with 13 branched rays (10 in A. rubescens).

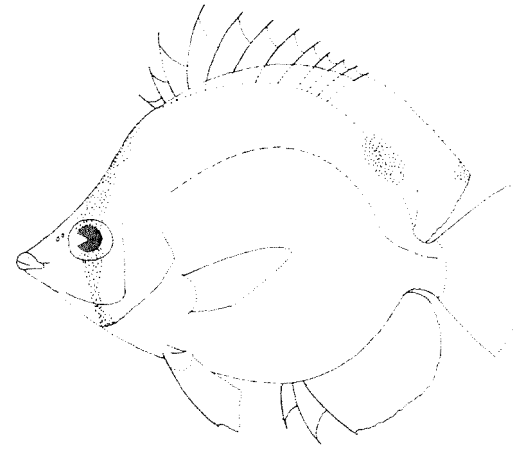
Species of Chaetodontidae: dorsal fin spines 10 to 17 (8 or 9 in A. rubescens); scales smooth (rough in A. rubescens).



Zeidae



Grammicolepidae



Chaetodontidae

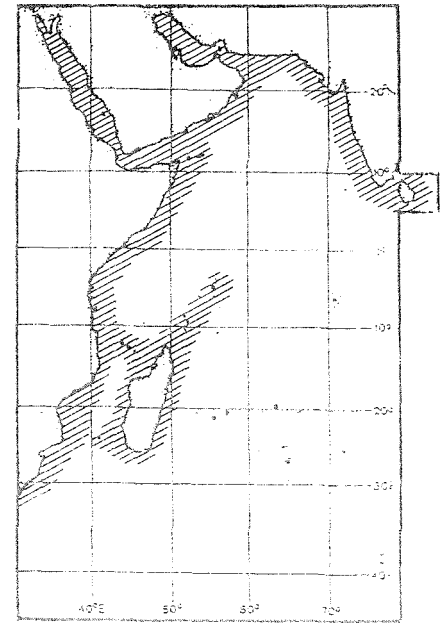
SIZE:

Maximum: 22 cm total length.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Tropical and temperate waters of all oceans. present in most of area 51.

Living near the bottom in depths of 65 to 600m. The larvae are pelagic.



PRESENT FISHING GROUNDS:

Deep waters throughout its range.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught as bycatch in bottom trawls.