

FAO SPECIES IDENTIFICATION SHEETS

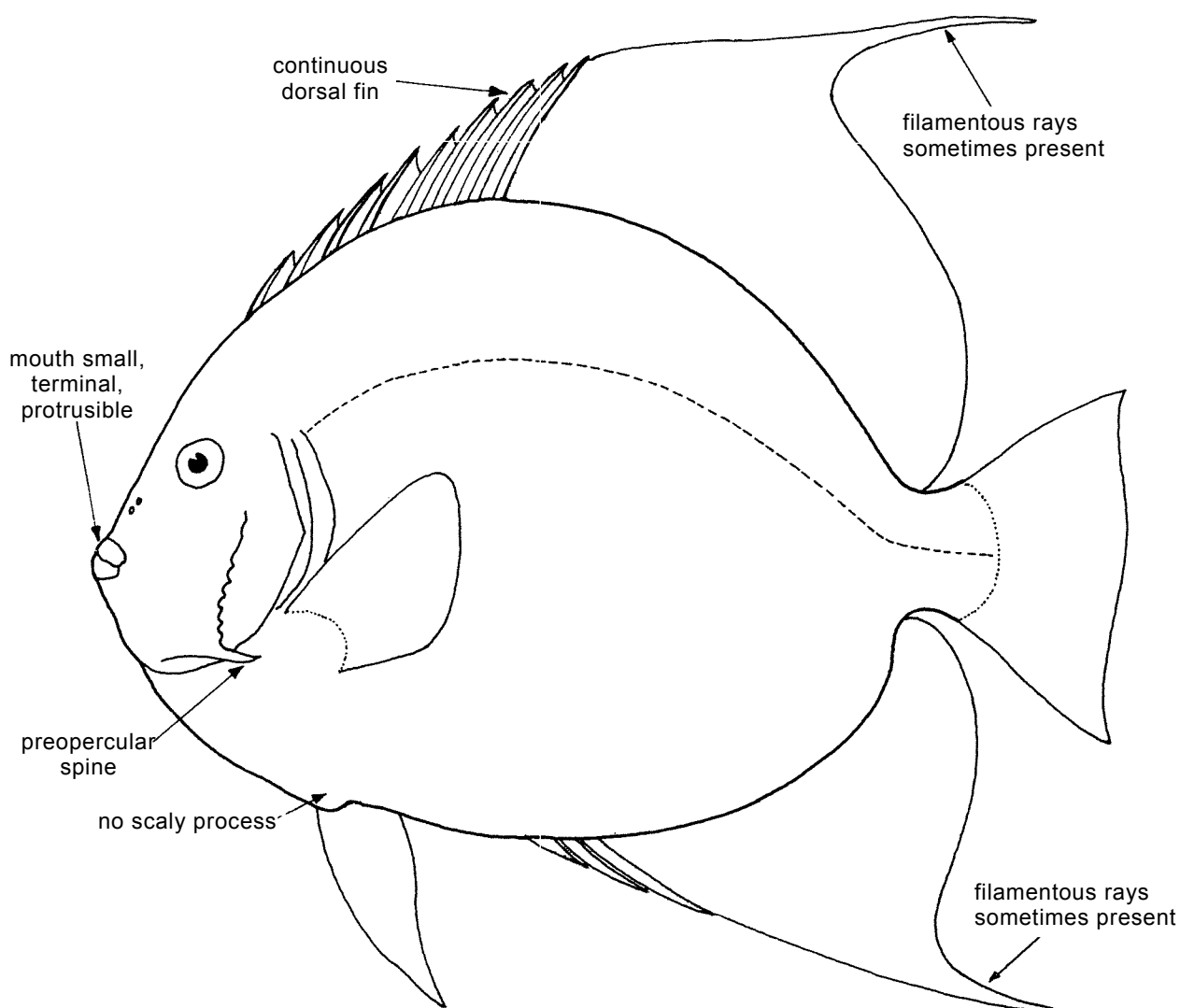
FISHING AREA 51  
(W. Indian Ocean)

POMACANTHIDAE

Angelfishes

Body elongate-oval to orbicular in shape, strongly compressed. Mouth very small, terminal, protrusible, the gape not extending to anterior rim of orbit; snout never produced; teeth setiform, usually arranged in brush-like bands in jaws; preopercle always with a strong spine at angle. Dorsal fin with 9 to 15 spines and 15 to 33 soft rays, continuous (never notched and sometimes, along with anal fin, greatly extended into filaments; anal fin with 3 spines and 14 to 25 soft rays. Scales ctenoid (rough to touch), ribbed, small to moderate in size, rounded to angular in shape, extending onto soft portions of vertical fins; no axillary scaly process at bases of pelvic fins; lateral line complete or nearly so.

Colour: brightly coloured fishes; ground colour white, grey, yellow, orange, red, blue, black or brown; often marked with bars, stripes, or spots of white, yellow, orange, blue, black or brown. Juveniles often differently coloured than adults.



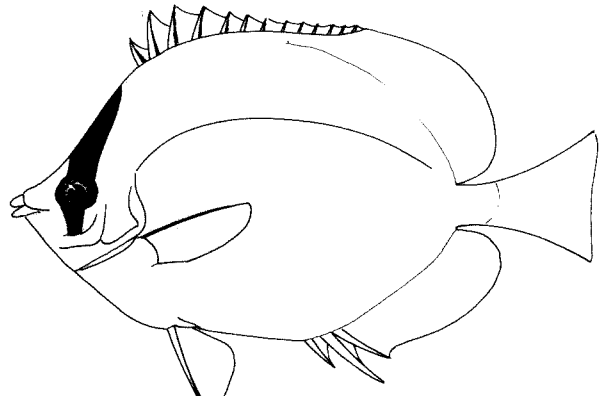
Angelfishes inhabit shallow coral reef areas in depths above 30 to 40 m. A few species range to depths of 80 m or more. As adults they feed mainly on sponges, while juveniles eat principally algae. Species of the genus *Pomacanthus* grow to a relatively large size (50 to 60 cm) and are frequently seen in markets, although they are considered commercially unimportant. They are caught chiefly with traps and gillnets. The young are popular aquarium fish.

**SIMILAR FAMILIES OCCURRING IN THE AREA:**

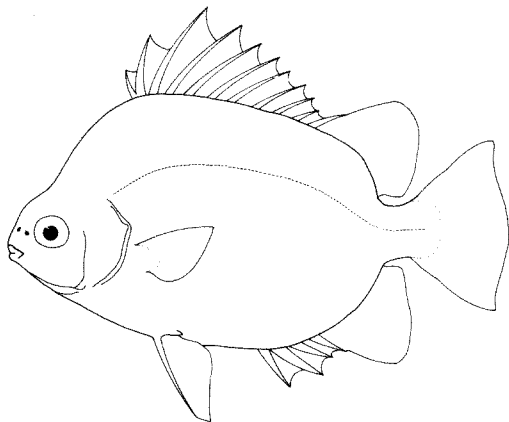
Chaetodontidae: never a strong spine at angle of preopercle; an axillary scaly process present at base of pelvic fins (absent in Pomacanthidae); generally smaller than most angelfishes (except *Centropyge*) and more compressed.

Ephippidae: large, more compressed fishes without a strong spine at angle of preopercle; dorsal and anal fins often very elongate.

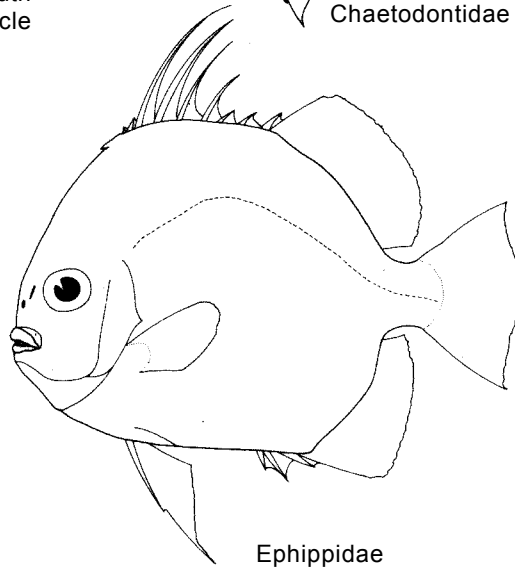
Scatophagidae: dorsal fin with a deep notch; mouth not protrusible; anal fin with 4 spines; preopercle without a strong spine.



Chaetodontidae



Scatophagidae

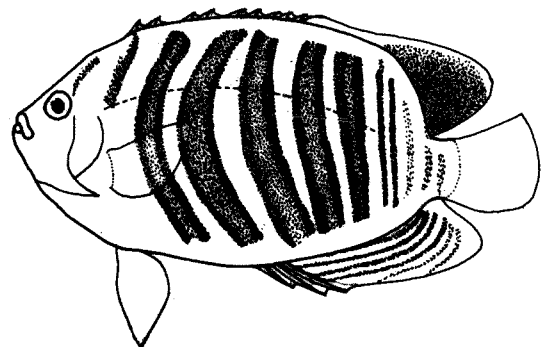


Ephippidae

**KEY TO GENERA OCCURRING IN THE AREA:**

1a. Body brightly marked with broad, alternating, vertical bands of yellow-orange and blue-white thickly margined with black (Fig.1) ..... Pygoplites

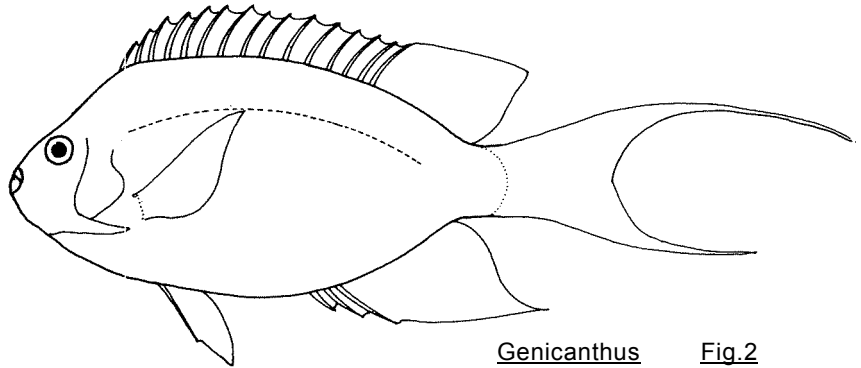
1b. Colour different than in 1a



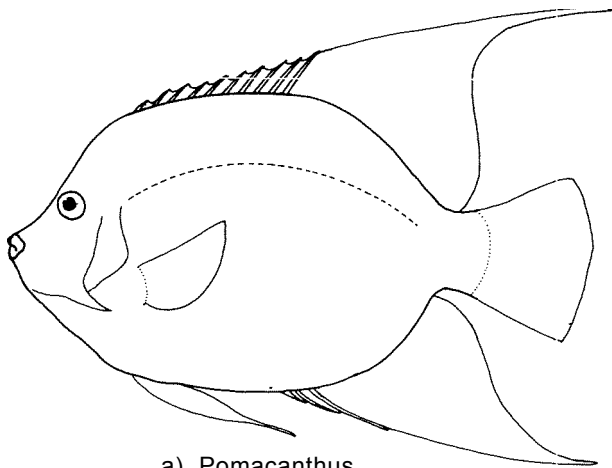
Pygoplites

Fig.1

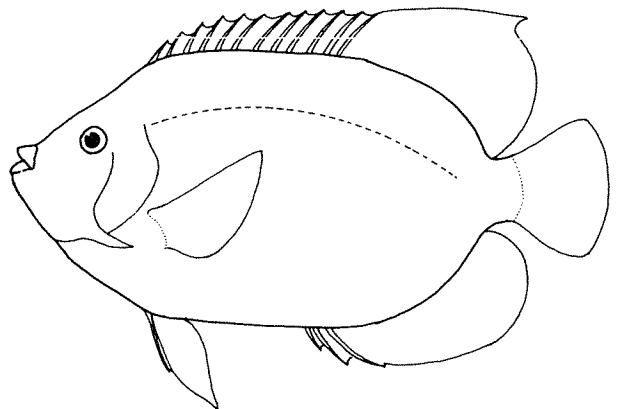
- 2a. Caudal fin forked, with long filamentous extensions on upper and lower lobes (Fig.2) ..... Genicanthus
- 2b. Caudal fin usually slightly rounded or truncate without filamentous extensions on upper and lower lobes
- 3a. Dorsal and/or anal fin frequently prolonged into filamentous extensions; longest dorsal (and usually anal) ray longer than middle caudal rays (Figs 3,4a); juveniles of different colour than adults, generally dark (black) with series of blue or white narrow, vertical bands on sides; soft dorsal rays usually 19 or more; large fishes, usually greater than 35 to 40 cm at full size ..... Pomacanthus



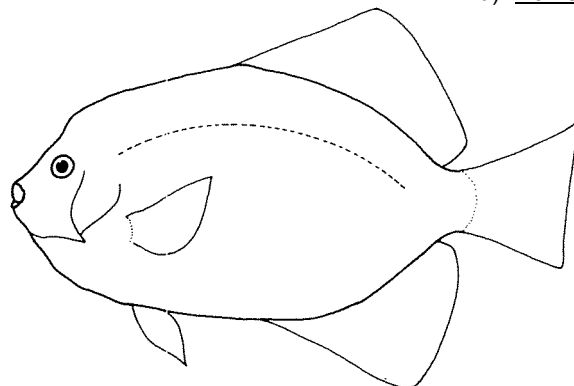
Genicanthus Fig.2



a) Pomacanthus



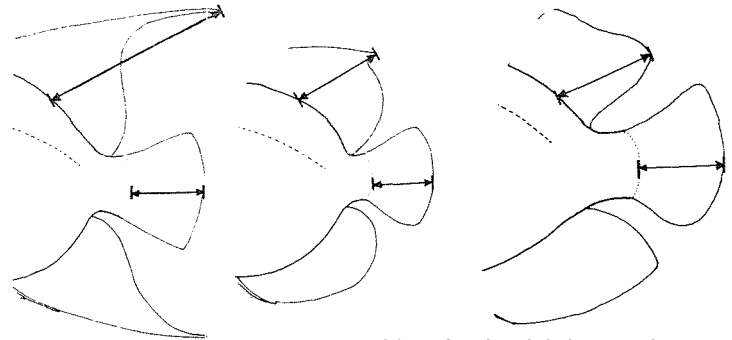
b) Pomacanthus



c) Pomacanthus  
(unusual shape P. striatus)

Fig.3

3b. Dorsal and anal fins not prolonged into a filamentous extension; longest dorsal and anal rays about equal to, or shorter than, middle caudal rays (Fig. 4b); juveniles similar to adults in colour; soft dorsal rays usually 18 or less; small to medium-sized fishes usually less than 25 cm at full size



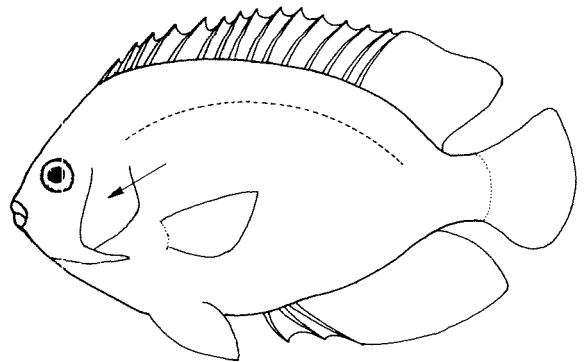
a) Pomacanthus

b) Apolemichthys and Centropyge

Fig.4

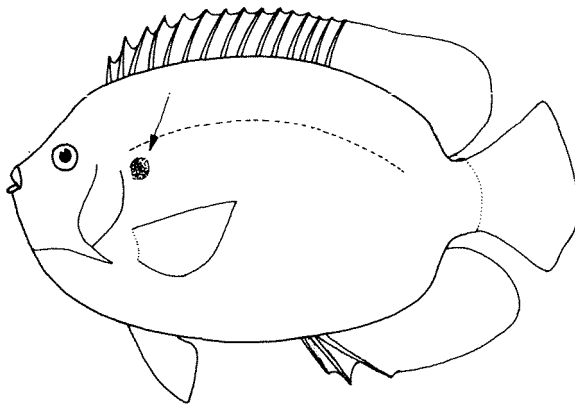
4a. Hind margin of preorbital bone with enlarged, posteriorly directed spines; no "ear-spot" behind upper edge of opercle (Fig.5); size small, generally less than 12 cm..... Centropyge

4b. Hind margin of preorbital bone without enlarged, posteriorly directed spines; an "ear-spot" of brown, black, or yellow behind upper edge of opercle (Fig.6) (except in A. quezei of Réunion which has a dark brown head and a yellow spot on each scale); medium-sized angelfishes reaching a length of 20 to 25 cm .. Apolemichthys



Centropyge

Fig.5



Apolemichthys

Fig.6

**LIST OF SPECIES OCCURRING IN THE AREA:**

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

- Apolemichthys quezei (Randall & Maugé, 1978)
- Apolemichthys trimaculatus (Cuvier, 1831)
- Apolemichthys xanthurus (Fraser-Brunner, 1951)
- Apolemichthys xanthurus (Bennett, 1832)
- Centropyge acanthops (Norman, 1922)
- Centropyge bispinosus (Günther, 1860)
- Centropyge eibli Klausowitz, 1963
- Centropyge flavipectoralis (Randall & Klausowitz, 1977)
- Centropyge multispinus (Playfair, 1866)
- Genicanthus caudovittatus (Günther, 1860)

Pomacanthus annularis (Bloch, 1787)  
Pomacanthus asfur (Forsskål, 1775)  
Pomacanthus chrysurus (Cuvier, 1831)  
Pomacanthus imperato (Bloch, 1787)  
Pomacanthus maculosus (Forsskål, 1775)  
Pomacanthus semicirculatus (Cuvier, 1831)  
Pomacanthus striatus (Ruppell, 1835)  
Pomacanthus xanthometopon (Bleeker, 1853)  
Pygoplites diacanthus (Boddaert, 1772)

## FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51  
(W. Indian Ocean)

## POMACENTRIDAE

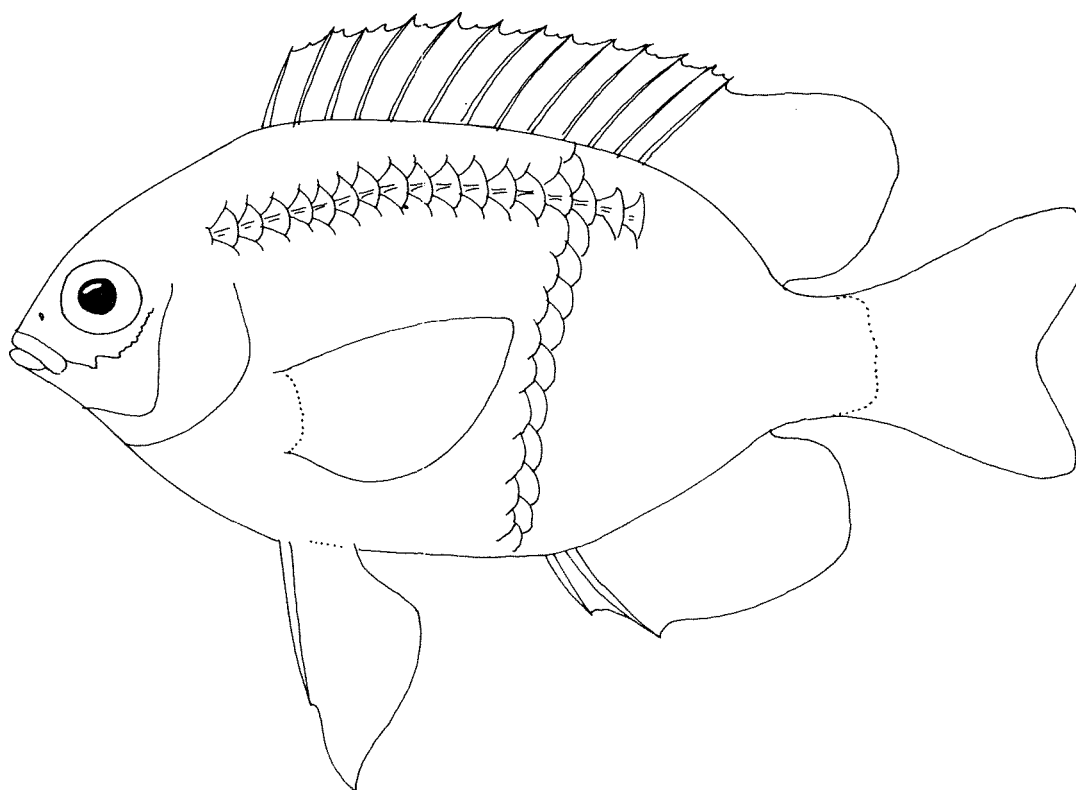
## Damsel-fishes

Body moderately elongate to orbiculate, laterally compressed. Eye moderate in size; mouth relatively small, oblique and terminal in position; teeth of jaws small, conical to incisiform in 1 or more rows. A single dorsal fin, usually with 9 to 17 spines and 10 to 20 soft rays; a single anal fin, usually with 2 spines and 10 to 17 soft rays; pectoral fins relatively short, with 14 to 24 rays; caudal fin variable in shape, forked to rounded. Head and body covered with small to moderate-sized scales, 28 to 76 in a horizontal row from upper edge of gill opening to base of caudal fin.

Colour: extremely variable, many species uniformly brown to blackish, others very colourful, exhibiting various shades of blue, green, yellow, orange, red, white, grey or a combination of 2 or more of these colours; certain species marked with 1 or more pale crossbars on darker ground colour or vice versa.

Pomacentrids are small, marine, territorial fishes found mainly on shallow coral reefs, although a few species penetrate to depths of 80 m or more. They exhibit a wide variety of feeding habits. Many of the plankton-feeders (Chromis, Dascyllus, etc.) form large midwater aggregations. Omnivorous feeders, which consume plankton, benthic invertebrates, and algae tend to be more solitary in habit. This category includes Abudefduf, Pomacentrus, Stegastes, etc.

Because of their small size (most species under 15 cm) they are not normally used as food. Some species, particularly the anemonefishes (Amphiprion), have bright colour patterns and are popular aquarium fishes.



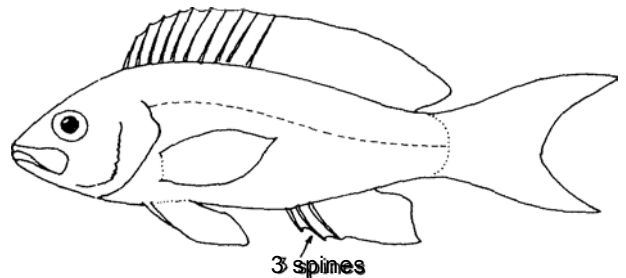
**SIMILAR FAMILIES OCCURRING IN THE AREA**

Cichlidae: anal fin spines 3 or more (2 in Pomacentridae); few species occurring in the region and all of these introduced freshwater forms, usually belonging to the genus Tilapia.

Serranidae: they generally resemble the pomacentrid genus Chromis, but easily distinguished by the 3 anal spines and the presence of enlarged canine teeth on the jaws.

3 or more  
spines

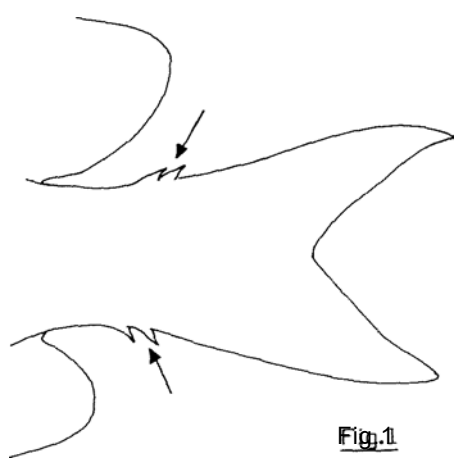
Cichlidae



Serranidae (~~Anthiinae~~)

**KEY TO GENERA OCCURRING IN THE AREA:**

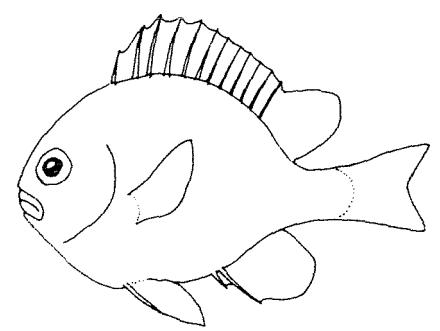
- 1a. Scales small, usually more than 40 in longitudinal series from upper edge of gill opening to caudal base
- 2a. Dorsal fin with 13 spines; longitudinal scale rows 44 to 47; tubed lateral line scales usually 32 or less; colour pattern not composed of contrasting light and dark bars; not commensal with sea anemones ..... Teixeirichthys



- 2b. Dorsal fin with 8 to 11 spines; longitudinal scale rows 47 to 66 (usually 50 to 60); tubed lateral line scales usually 33 or more; colour pattern frequently consisting of contrasting light and dark bars; commensal with large sea anemones .. Amphiprion

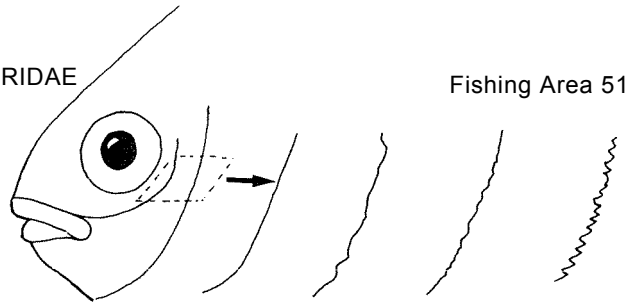
- 1b. Scales larger, usually less than 30 in longitudinal series from upper edge of gill opening to caudal base

- 3a. Upper and lower edge of caudal base with 2 or 3 projecting spiniform rays (Fig.1)
- 4a. Suborbital and hind margin of preopercle finely serrate; general shape relatively orbiculate (Fig.2); dorsal spines 12; greatest body depth 1.4 to 1.6 times in standard length ..... Dasyllus



Dasyllus      Fig.2

4b. Suborbital margin smooth or covered with scales, hind margin of preopercle usually smooth, occasionally weakly serrate or crenulate (Fig.3); dorsal spines 12 to 14; general shape more slender, greatest body depth usually greater than 1.8 times in standard length, but 1.5 to 1.7 times in a few species .....



Chromis

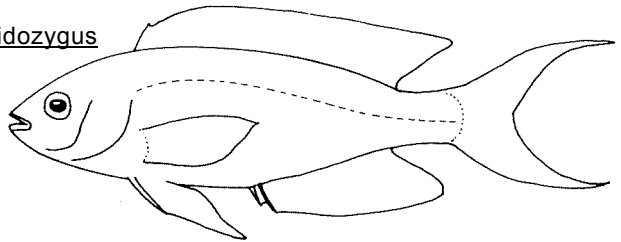
smooth crenulate weakly strongly serrate serrate

preopercular and suborbital serration

Fig.3

3b. Upper and lower edges of caudal fin base without projecting spiniform rays

5a. Body extremely elongate (Fig.4); its depth usually 2.9 to 3.0 times in standard length; small papilla-like structures on inner edge of posterior circumorbitals (Fig.5) .....



elongate body of Lepidozygus

Fig.4

5b. Body orbiculate to elongate, depth usually 1.5 to 2.7 times in standard length; no papilla-like structures on inner edge of posterior circumorbitals

6a. Suborbital scaled, its margin either completely hidden or smooth; hind margin of preopercle crenula to (nearly smooth) or weakly serrate; body relatively elongate, depth usually 2.2 to 2.7 times in standard length; caudal fin lunate to stringluc emarginate; posterior portion of dorsal and anal fins, and outer caudal rays frequently produced into filaments (Fig.6); teeth of jaws usually biserial, outer row with flattened or notched tips (Fig.7)...

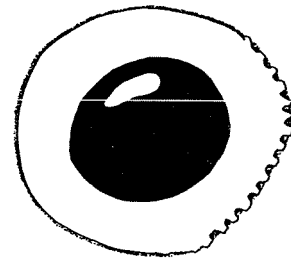
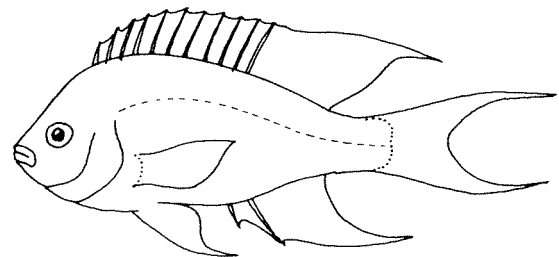


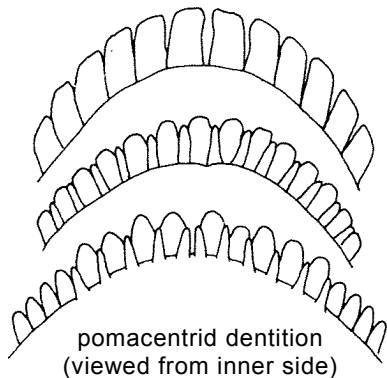
Fig.5

6b. Suborbital scaled or naked, its margin either smooth or serrate, but never hidden by scales; hind margin of preopercle smooth to strongly serrate; body depth variable, 1.5 to 2.7 times in standard length; caudal fin emarginate to rounded; posterior portion of dorsal and anal fins, and outer caudal rays seldom produced into filaments; teeth of jaws uniserial or biserial (Fig.8), if biserial, outer row usually with rounded or conical tips



Neopomacentrus

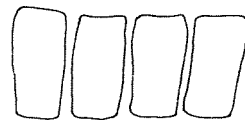
Fig.6



pomacentrid dentition (viewed from inner side)

Fig.8

flat tips



outer row of teeth Neopomacentrus

Fig.7

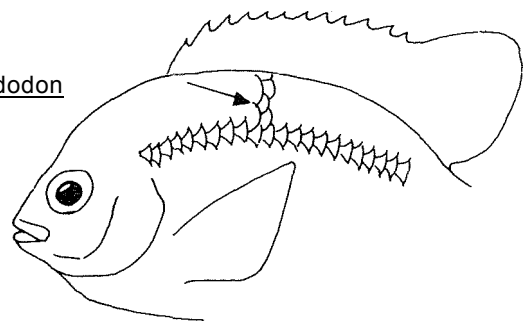


7a. Hind margin of preopercle either smooth or finely crenulate (Fig.3); edge of suborbital and posterior circumorbital smooth

8a. Dorsal spines 12; teeth of jaws uniserial .....Plectroglyphidodon

8b. Dorsal spines 13; teeth of jaws biserial, at least anteriorly (inner row sometimes difficult to detect, buried in mucus), or uniserial (only in Amblyglyphidodon leucogaster)

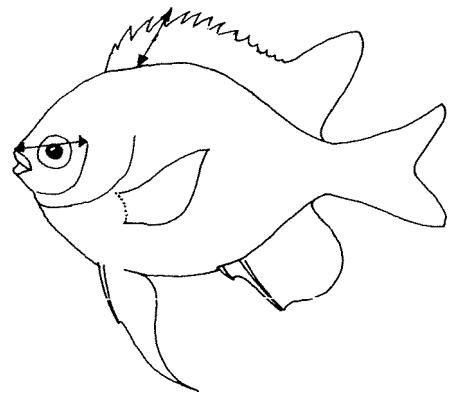
9a. Horizontal scale rows above middle of lateral line usually 3 to 3½ (Fig.9); colour pattern consisting of alternating light and dark bars or uniformly pale with large black spot in middle of tail base ..... Abudefduf



Abudefduf Fig.9

9b. Horizontal scale rows above middle of lateral line usually 1½, occasionally 2½; colour pattern variable

10a. Body shape orbiculate (Fig.10), the depth 1.5 to 1.8 times in standard length; colour generally pale; longest dorsal spine about equal in length to distance from tip of snout to uppermost portion of preopercle border (Fig.10) ..Amblyglyphidodon leucogaster



Amblyglyphidodon Fig.10

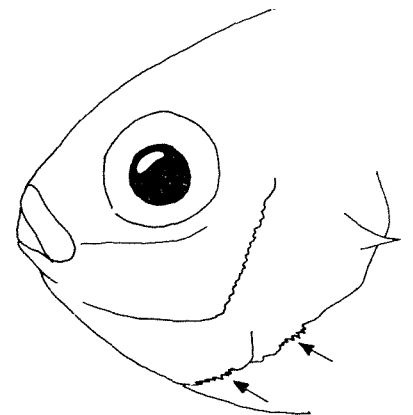
10b. Body moderately deep to elongate, depth usually 1.8 to 2.7 times in standard length; colour variable; longest dorsal spine usually much shorter than distance from tip of snout to uppermost portion of preopercle border (except in Paraglyphidodon)

11a. Body relatively deep, depth usually less than 2.0 times in standard length; suborbital scaly ..... Paraglyphidodon

11b. Body ovate to elongate, depth usually greater than 2.0 times in standard length; suborbital scaleless ... Chrysiptera

7b. Hind margin of preopercle weakly to strongly serrate (Fig.3); edge of suborbital and posterior circumorbitals usually serrate, occasionally smooth or crenulate

12a. Lower edge of subopercle and interopercle weakly to moderately serrate (Fig.11); gill-rakers on first arch more than 25..... Pristotis



Pristotis Fig.11

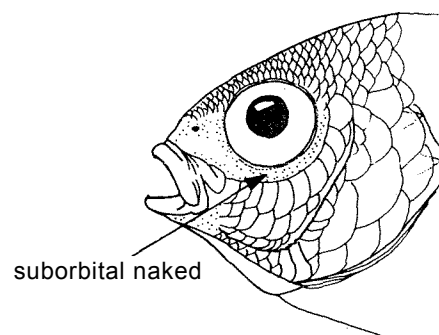
12b. Lower edge of subopercle and interopercle smooth; gilirakers on first arch 18 to 25

13a. Teeth in jaws biserial, at least anteriorly ..... Pomacentrus

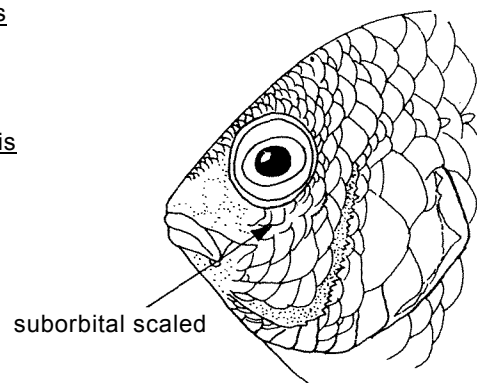
13b. Teeth in jaws uniserial

14a. Dorsal fin with 12 or 13 spines; suborbital scaly (Fig.12); body relatively deep, the depth usually 1.9 to 2.2 times in standard length ..... Stegastes

14b. Dorsal fin with 14 spines; suborbital scaleless (Fig.13); body more elongate, the depth 2.5 to 2.7 times in standard length ..... Pomachromis



Stegastes Fig.12



Pomachromis Fig.13

**LIST OF SPECIES OCCURRING IN THE AREA\*:**

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

- Abudefduf bengalensis (Bloch, 1787)
- Abudefduf margariteus (Cuvier, 1830)
- Abudefduf natalensis Hensley & Randall, 1983
- Abudefduf notatus (Day, 1869)
- Abudefduf septemfasciatus (Günther, 1881)
- Abudefduf sexfasciatus Lacepède, 1802)
- Abudefduf sordidus (Forsskål, 1775)
- Abudefduf vaigiensis (Quoy & Gaimard, 1824)
- Amblyglyphidodon flavilatus Allen & Randall, 1980
- Amblyglyphidodon leucogaster (Bleeker, 1847)
- Amphiprion akallopisos Bleeker, 1853
- Amphiprion allardi Klausewitz, 1970
- Amphiprion chagosensis Allen, 1972
- Amphiprion chrysogaster Cuvier, 1830
- Amphiprion clarkii (Bennett, 1830)
- Amphiprion fuscocaudatus Allen, 1972
- Amphiprion latifasciatus Allen, 1972
- Amphiprion nigripes Regan, 1908
- Amphiprion sebae Bleeker, 1653
- Chromis atripectoralis Welander & Schultz, 195.1
- Chromis axillaris Bennett, 1831)
- Chromis caerulea (Cuvier & Valenciennes, 1830)
- Chromis chrysur (Bliss, 1883)
- Chromis cinerascens (Cuvier, 1830)
- Chromis dasygenys (Fowler, 1935)
- Chromis dimidiatus (Klunzinger, 1871)
- Chromis elerae Fowler & Bean, 1928

- Chromis lepidolepis Bleeker, 1877
- Chromis nigrurus Smith, 1960
- Chromis opercularis (Günther, 1866)
- Chromis pembrae Smith, 1960
- Chromis ternatensis (Bleeker, 1856)
- Chromis weberi Fowler & Bean, 1928
- Chromis woodsii Bruner & Arnam, 1979
- Chrysiptera annulata (Peters, 1855)
- Chrysiptera biocellata (Quoy & Gaimard, 1824)
- Chrysiptera glauca (Cuvier, 1830)
- Chrysiptera imparipennis (Vaillant & Sauvage, 1875)
- Chrysiptera leucopoma (Lesson, 1830)
- Chrysiptera unimaculata (Cuvier, 1830)
- Dascyllus aruanus (Linnaeus, 1758)
- Dascyllus carneus Fisher, 1885
- Dascyllus marginatus (Rüppell, 1828)
- Dascyllus trimaculatus (Rüppell, 1828)
- Lepidozygus tapeinosoma (Bleeker, 1855)
- Neopomacentrus azyrson (Bleeker, 1877)
- Neopomacentrus cyanomos (Bleeker, 1856)
- Neopomacentrus fallax (Peters, 1855)
- Neopomacentrus fuliginosus (Smith, 1960)
- Neopomacentrus miryae Dor & Allen, 1977
- Neopomacentrus sindonis (Jordan & Evermann, 1902)
- Neopomacentrus taeniurus (Bleeker, 1856)

\*This list does not include approximately 10 undescribed species found in the area

Paraglyphidodon bonan (Bleeker, 1852)

Paraglyphidodon melas (Cuvier, 1830)

Plectroglyphidodon dickii (Lienard, 1839)

Plectroglyphidodon imparipennis (Vaillant & Sauvage, 1675)

Plectroglyphidodon johnstonianus Fowler & Ball, 1924

Plectroglyphidodon lacrymatus (Quoy & Gaimard, 1824)

Plectroglyphidodon leucozonus (Bleeker, 1859)

Plectroglyphidodon phoenixensis (Schultz, 1943)

Pomacentrus agassizii Bliss, 1883

Pomacentrus albicaudatus Baschieri-Salvadori, 1955

Pomacentrus aquilus Allen & Randall, 1980

Pomacentrus caeruleus (Quoy & Gaimard, 1824)

Pomacentrus chrysurus Cuvier, 1830

Pomacentrus leptus Allen & Randall, 1980

Pomacentrus pavo (Bloch, 1787)

Pomacentrus philippinus Evermann & Seale, 1907

Pomacentrus pikei Bliss, 1883

Pomacentrus sulfureus Klunzinger, 1871

Pomacentrus trichourus Günther, 1866

Pomacentrus trilineatus Cuvier, 1830

Pomacentrus tripunctatus Cuvier, 1830

Pomachromis richardsoni (Snyder, 1909)

Pristotis cyanostigma Rüppell, 1835

Pristotis jerdoni (Day, 1873)

Stegastes fasciolatus (Ogilby, 1889)

Stegastes limbatus (Cuvier, 1830)

Stegastes lividus (Bloch & Schneider, 1801)

Stegastes nigricans (Lacepède, 1803)

Teixeirichthys jordani (Rutter, 1897)

POMAT

1983

**FAO SPECIES IDENTIFICATION SHEETS**

**FISHING AREA 51  
(W. Indian Ocean)**

POMATOMIDAE

Bluefishes

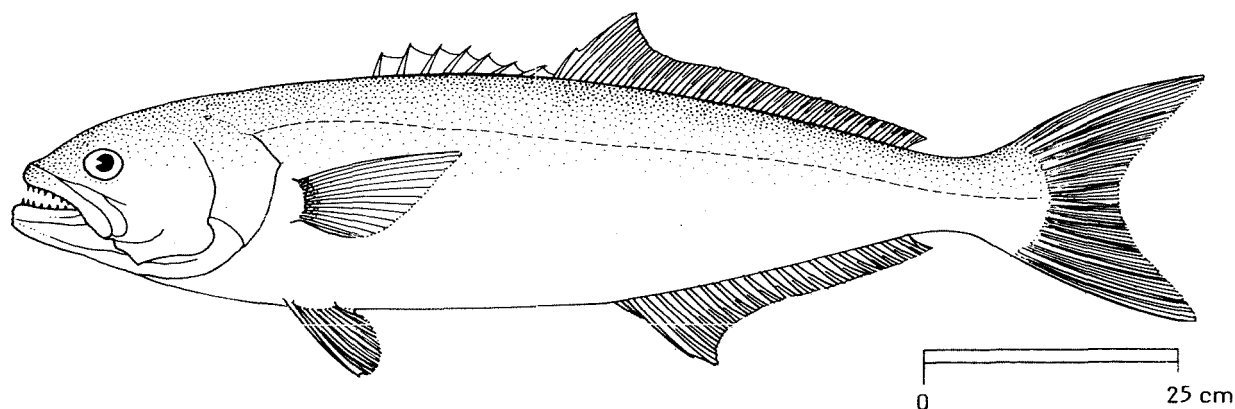
A single species in the area\*; see species sheet for:  
Pomatomus saltatrix (Linnaeus, 1766) POMAT Pomat 1

Prepared by B.B. Collette, NMFS Systematics Laboratory, NOAA, National Museum of Natural History, Washington, D.C., USA, and M.M. Smith, J.L.B. Smith Institute of Ichthyology, Grahamstown, South Africa

\*Scombrops, Neoscombrops and Howella have been placed in this family by some authors (i.e, FAO Species Identification Sheets, Area 31) but are here considered under separate families

## FAO SPECIES IDENTIFICATION SHEETS

FAMILY: POMATOMIDAE

FISHING AREA 51  
(W. Indian Ocean)Pomatomus saltatrix (Linnaeus, 1766)OTHER SCIENTIFIC NAMES STILL IN USE: Pomatomus saltator (Linnaeus, 1766)  
Temnodon saltator (Valenciennes, 1833)

## VERNACULAR NAMES:

FAO: En - Bluefish  
Fr - Tassergal  
Sp - Anchova de

NATIONAL:

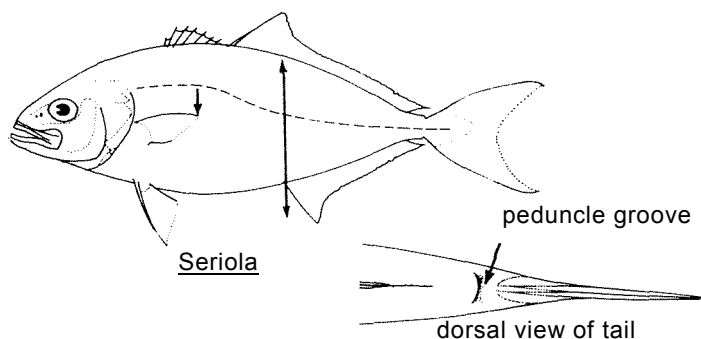
## DISTINCTIVE CHARACTERS:

A large species with a sturdy, compressed body and large head. Mouth large, terminal, lower jaw sometimes slightly projecting; jaw teeth prominent, sharp, compressed, in a single series. Two dorsal fins, the first short and low, with 7 or 8 feeble spines connected by a membrane, the second long with 1 spine and 23 to 28 soft rays; pectoral fins short, not reaching to origin of soft dorsal fin; anal fin a little shorter than soft dorsal fin, with 2 spines and 23 to 27 soft fin rays; caudal fin forked, but not deeply so. Scales small, covering head and body and bases of fins; lateral line almost straight.

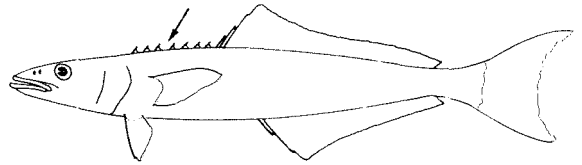
Colour: back greenish blue, sides and belly silvery; dorsal and anal fins pale green tinged with yellow; pectoral fins bluish at base; caudal fin dull greenish tinged with yellow.

## DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Species of Carangidae: 2 detached spines in front of anal fin; teeth in jaws usually small to minute. Seriola is superficially similar but has dorsal and ventral grooves on caudal peduncle. Lichia amia which also has very low dorsal fin spines, is characterized by a wavy lateral line. Many other carangid species have scutes on lateral line and some (Decapterus and Elagatis) have detached finlets behind dorsal and anal fins.



Rachycentron canadum: spines of dorsal fin short, isolated, not connected by a membrane; 2 silvery longitudinal stripes on sides.



**SIZE:**

Maximum: 120 cm; common to 60 cm.

Rachycentron

**GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

A cosmopolitan fish known from the warm waters of the Atlantic, Pacific and Indian Oceans. Within the area, recorded from East Africa (Natal to Somalia), Madagascar and southwest India.

A powerful, swift voracious predator, readily takes flesh bait or lures. The young are reported to hunt in schools, the adults in looser schools. Known to breed off the Natal coast from September to December when they are especially vulnerable to anglers and netters. Natal has closed season from September to November inclusive (the first fish to be so protected in the area) and a bag limit of four fish.

**PRESENT FISHING GROUNDS:**

Coastal waters throughout its range, especially off Natal.

**CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:**

Separate statistics are not reported for this species.

Caught mainly with gillnets, lines and purse seines.

Marketed mostly fresh or smoked; an excellent eating fish. However, its sale in Natal is temporarily forbidden to save the stocks.

