

FAO SPECIES IDENTIFICATION SHEETS

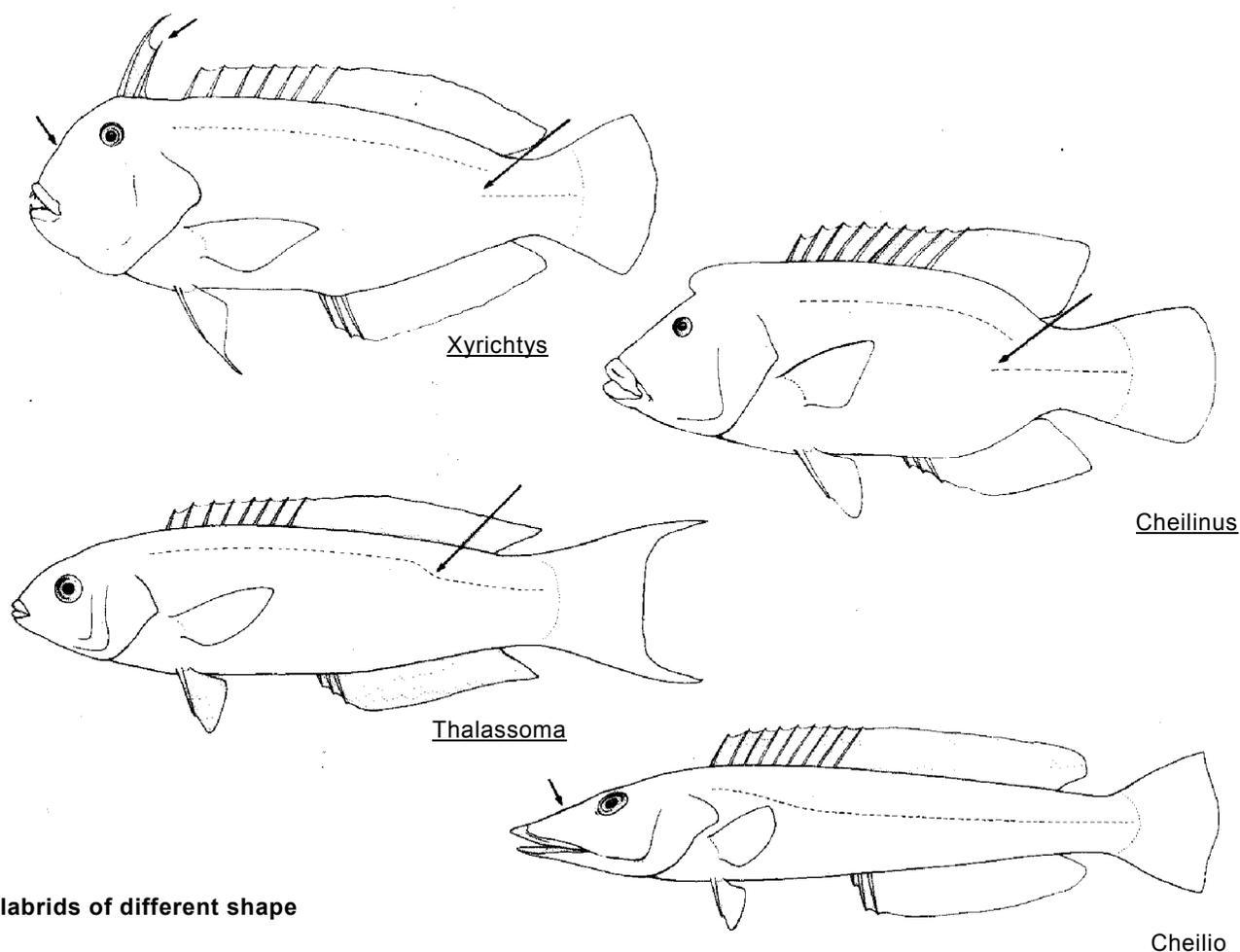
FISHING AREA 51
(W. Indian Ocean)

LABRIDAE

Wrasses, hogfishes, razorfishes, coris, tuskfishes

Wrasses are variable in shape, coloration and size, though the majority of the species attain a maximum length of less than 20 cm. Body slightly to extremely compressed. Mouth terminal, usually with prominent lips; jaws slightly to extremely protrusible; teeth in jaws usually separate and caniniform, the anteriormost 1 or 2 pairs typically enlarged and directed somewhat forward; a few forms with lateral teeth reduced and coalesced to form a bony cutting edge and anteriormost teeth modified into prominent incisors; pharyngeal teeth (located at base of throat) strong. A single, long-based dorsal fin, although in some species (e.g., *Xyrichtys*) the first 2 spines are more or less removed from the rest of fin; spines pungent to flexible; spines and soft rays usually of similar length, though the first few spines or certain soft rays may be elongate in some. Scales cycloid (smooth to touch), usually of moderate to large size, although very small in some forms; lateral lines smoothly curved or with an abrupt curve below soft portion of dorsal fin, either continuous or interrupted below posterior part of dorsal fin.

Colour: generally bright and elaborately patterned, often differing between sexes and changing with age.



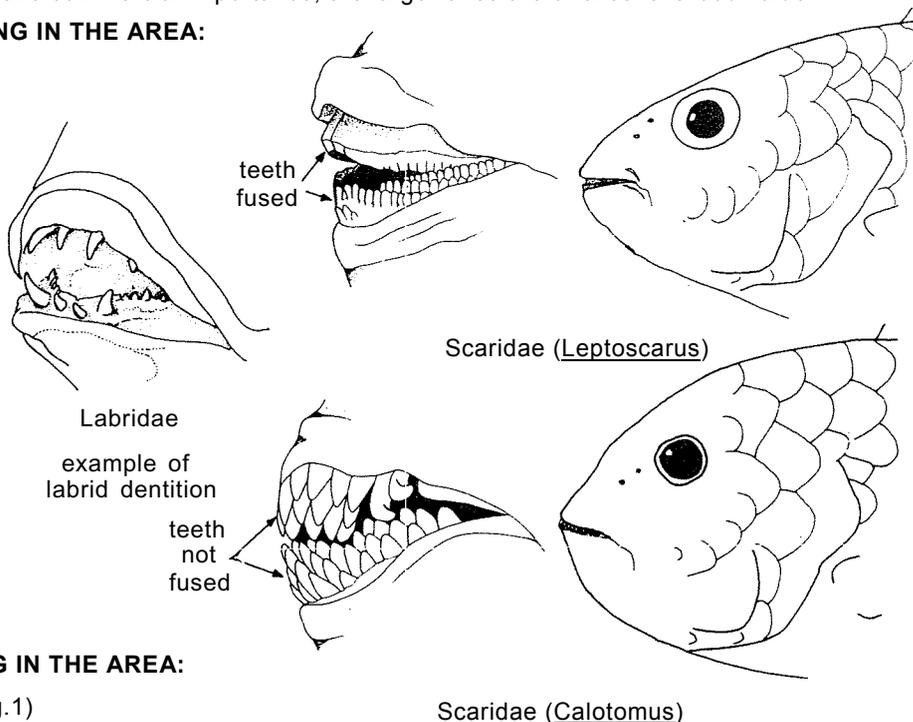
labrids of different shape

Cheilio

Common in shallow to moderately shallow wates in a variety of habitats, including bare sand and rock, grass and algae-covered bottoms and coral reefs, but rare in muddy areas. Wrasses are active only in the daytime, burrowing in the sand or sleeping in rock or coral shelters at night. Most feed heavily on bottom-dwelling invertebrates, especially hard-shelled forms, though some pick small free-swimming animals from the water column. A few others feed exclusively on extoparasites and mucus that they remove from other fishes. Most species exhibit some form of sex change, with a transformation from female to male state being the normal occurrence; a change in colour pattern is often associated with change in sex, as well as with maturation; the large, brightly coloured individuals in species that reach a large size are invariably males. Wrasses normally swim solely with their pectoral fins, bringing their tails into play when increased swimming speed is needed. Although many species are too small to have commercial importance, the larger ones are of excellent food value.

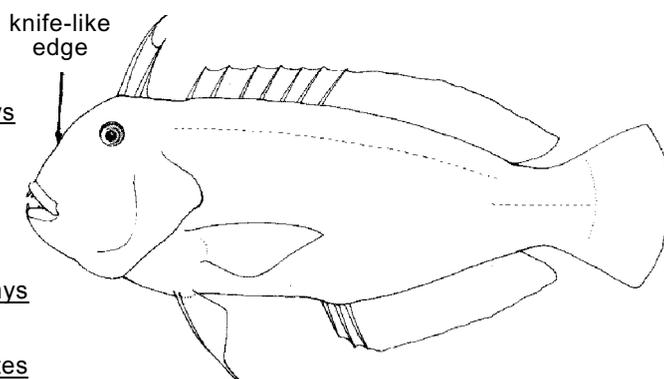
SIMILAR FAMILIES OCCURRING IN THE AREA:

Scaridae: mouth not protrusible; teeth in jaws coalesced at base or fused into a bony, parrot-like beak; except for a few species (Calotomus) which have free, imbricate teeth; when not fused, a pair of canines usually directed horizontally to the side of upper jaw; lips continuous with facial skin without an indentation or fold.



KEY TO GENERA OCCURRING IN THE AREA:

- 1a. Lateral line interrupted (Fig.1)
- 2a. Segmented anal fin rays 12
- 3a. 24 to 29 pored scales in lateral line
- 4a. Top of head and snout compressed into a knife-like edge; first 2 rays often separated from rest of fin by a deep notch in the fin membrane or completely detached (Fig.1)Xyrichtys
- 4b. Top of head and snout somewhat compressed, but not forming a knife-like edge; first 2 rays broadly joined to rest of fin by membrane without a distinct notch ... Novaculichthys
- 3b. 72 to 77 pored scales in lateral line Cymolutes



Xyrichtys

Fig.1

2b. Segmented anal-fin rays 8 or 9

5a. Dorsal fin spines 11 (rarely 12) Cirrhilabrus

5b. Dorsal fin spines 9 or 10

6a. Mouth extremely protrusible (Fig.2) Epibulus

6b. Mouth moderately protrusible

7a. Eyes with double thickening of cornea (Fig.3a)

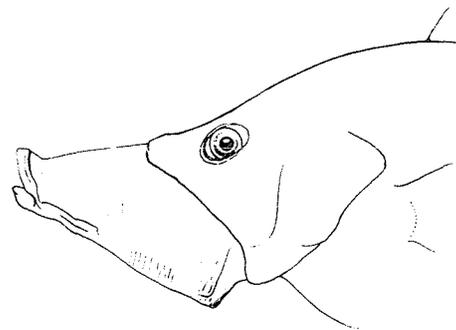
8a. Snout short (about 4 times in head length), mouth small, lips narrow and scarcely visible with mouth closed (Fig.4a) Paracheilinus

8b. Snout of moderate length (about 2.5 to 3 times in head length), mouth moderately large, lips broad, lower lip quite prominent (Fig.4b) Pseudocheilinus

7b. Eyes normal (Fig.3b)

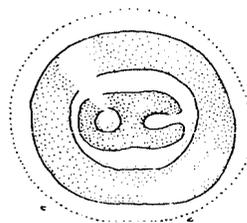
9a. Mouth small, head covered with very large scales that extend onto snout and cover entire preopercle (Fig.5a) . Wetmorella

9b. Mouth of moderate to large size, head covered with moderately sized scales that do not reach onto snout or to preopercular edge (Fig.5b) Cheilinus

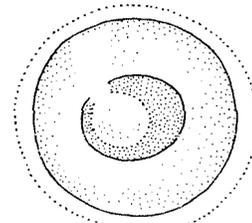


Epibulus Fig.2

double thickening of cornea

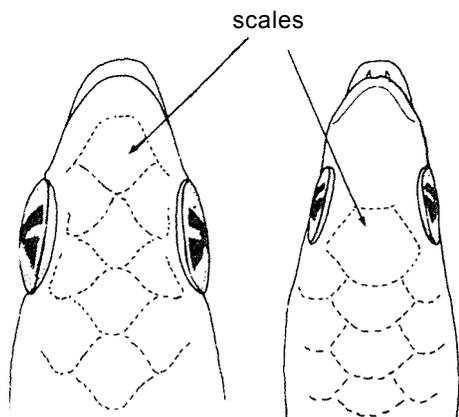


a) Paracheilinus



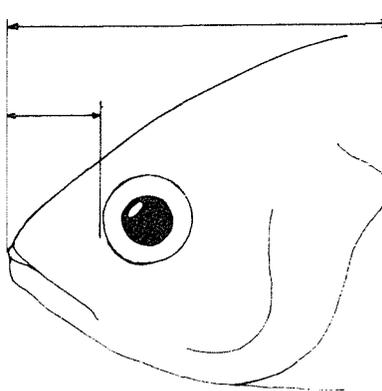
b) Bodianus

Fig.3



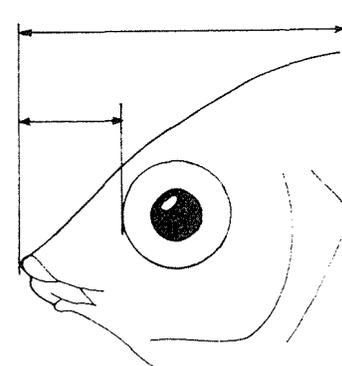
a) Wetmorella

b) Cheilinus
top of head



a) Paracheilinus

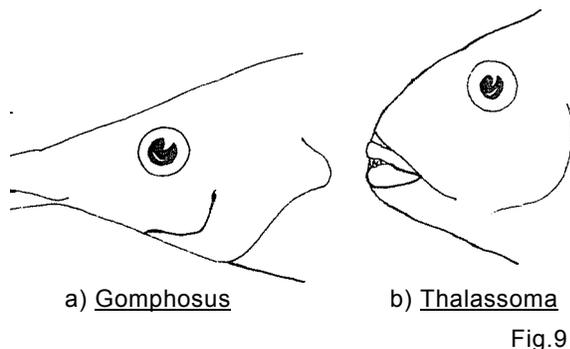
Fig.5



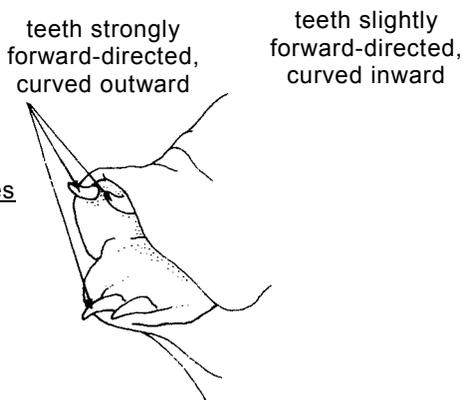
b) Pseudocheilinus

Fig.4

- 15a. Segmented dorsal fin rays 7 or 8; segmented anal fin rays 9 or 10 Choerodon
- 15b. Segmented dorsal fin rays 10; segmented anal fin rays 12 Bodianus
- 10b. Lateral line curved abruptly downward beneath posterior end of dorsal fin (Fig.3)
- 16a. Dorsal fin spines 8
 - 17a. Jaws in adults extremely elongate, snout more than half the length of head (Fig.9a) Gomphosus
 - 17b. Jaws in adults normal, snout less than half the length of head (Fig.9b) Thalassoma



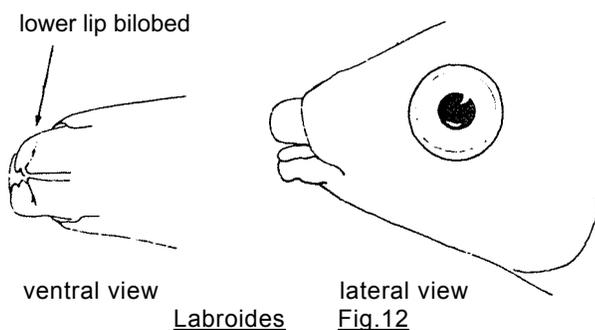
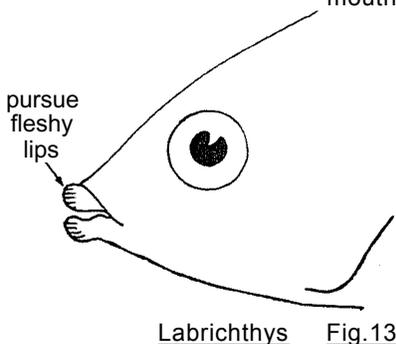
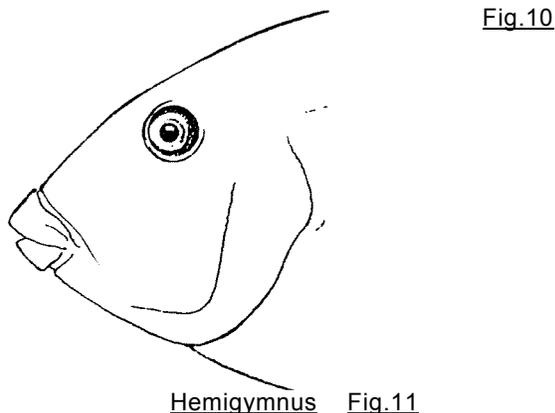
- 16b. Dorsal fin spines 9 to 11
 - 18a. Anterior-most pair of teeth in each jaw directed horizontally forward, curved away from the gape, incisiform in large individuals (Fig.10a)... Anampses
 - 18b. Anterior-most pair or 2 pairs of teeth directed only slightly forward at most, usually curved toward the gape, always distinctly caniniform (Fig.10b)



- 19a. Lateral line with 90 to 118 pored scales.....Hologymnosus

- 19b. Lateral line with 25 to 80 pored scales

- 20a. Lips prominent, either very fleshy (especially that of upper jaw, Fig. 11), with a distinctly bilobed lower lip (Fig.12) or with pursed fleshy lips forming a short tube when mouth is closed (Fig.13); mouth small



21a. Predorsal scales reaching forward well onto snout, covering interorbital space (Fig.14a) Labrichthys

21b. Predorsal scales not reaching much, if at all forward of above posterior extent of orbit; interorbital space usually totally naked (Fig.14b)

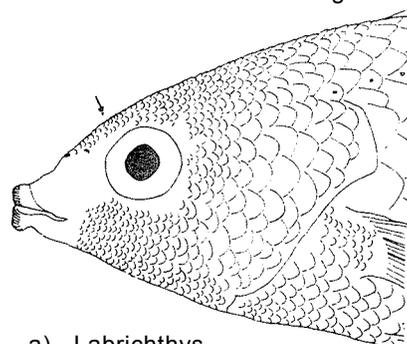
22a. Underside of head fully scaled (Fig.15a) Larabicus

22b. Underside of head naked (Fig.15b)

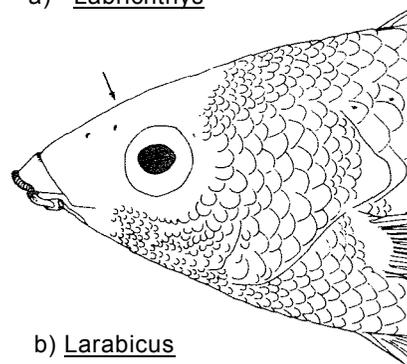
23a. Anal fin spines 2; cheek scales, if present, not extending forward beyond level of anterior margin of pupil (Fig.16a) Labropsis

23b. Anal fin spines 3; cheek scales extending forward beyond anterior eye margin, and approaching corner of mouth (Fig.16b)

24a. Body deep, greatest depth 2.4 to 2.7 times in standard length (3.1 to 3.3 times in total length); greatest depth greater than length of head (Fig.17); lower lip not separated into 2 lobes Hemigymnus

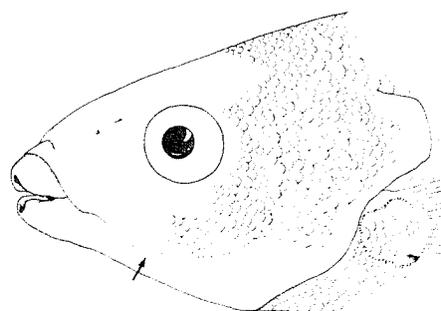


a) Labrichthys

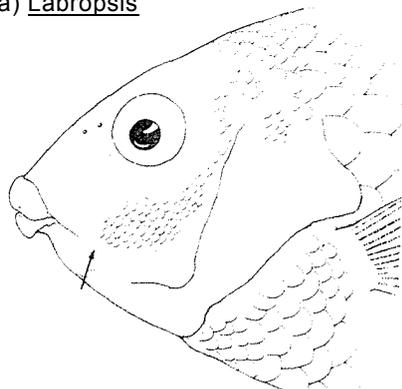


b) Larabicus

Fig.14

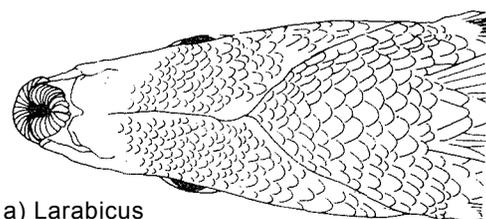


a) Labropsis

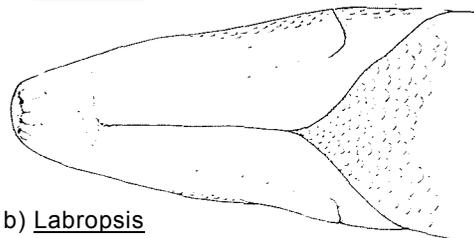


b) Hemigymnus

Fig.16

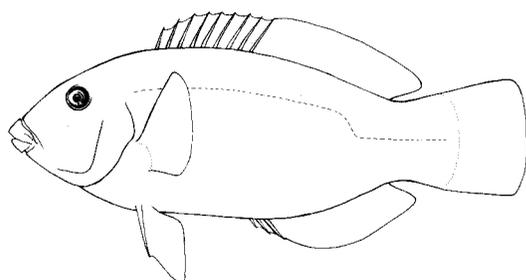


a) Larabicus



b) Labropsis

Fig.15

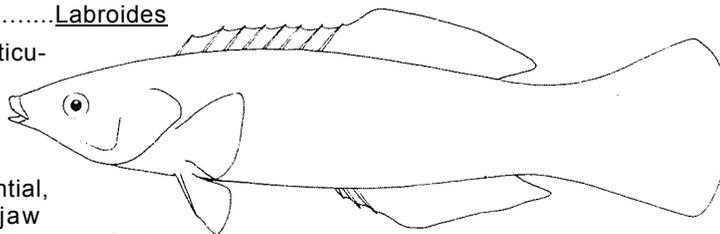


Hemigymnus

Fig.17

24b. Body slender, greatest depth 3.5 to 4.4 times in standard length (4.6 to 5.2 in total length); greatest depth less than length of head; lower lips separated into 2 lobes (Fig.18).....Labroides

20b. Lips narrow to moderately broad, but not particularly prominent (Figs.19-24)



Labroides Fig.18

25a. Lateral line with 50 to 80 pored scales

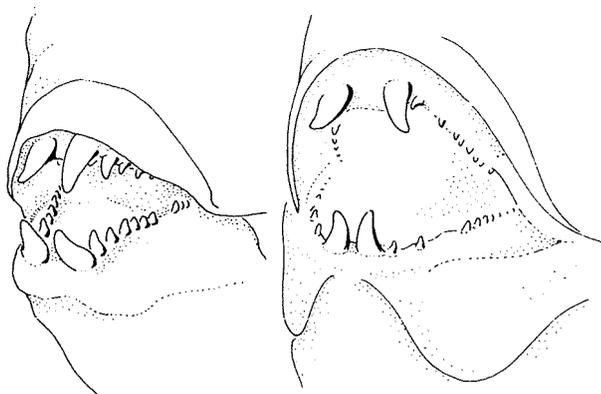
26a. Lateral teeth in jaws substantial, second pair of teeth in each jaw about half length of first. (Fig.19a) Coris

26b. Lateral teeth in jaws rather feeble, second pair of teeth about one-third length of first in each jaw (Fig.19b) Pseudocoris

25b. Lateral line with 25 to 30 pored scales

27a. Eye with double thickening of cornea (Fig.3a); outer pair of anterior canines in each jaw longer than inner pair and curved laterally (Fig.20a)

27b. Eye with normal cornea (Fig.3b); outer pair of anterior canines in each jaw approximately the same length or shorter than inner pair and not markedly curved laterally (Figs.20b,c)



teeth

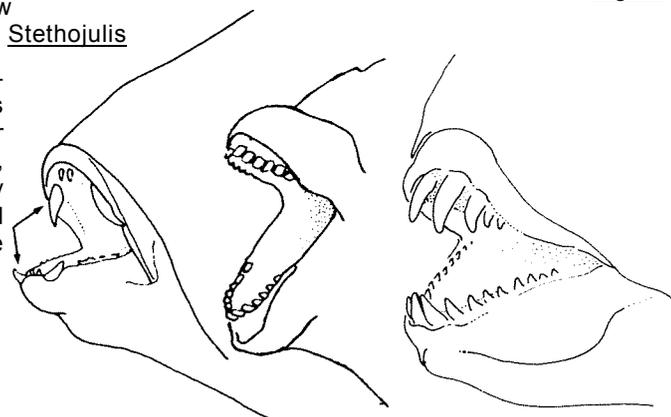
a) Coris

b) Pseudocoris

Fig.19

28a. Teeth in jaws incisiform, set close together, only gradually enlarged anteriorly (Fig.20b); body robust; caudal peduncle narrow (Fig.21) Stethojulis

28b. Teeth in jaws caniniform, the anterior ones usually distinctly larger than others (Fig.20c), body at least slightly compressed; caudal peduncle of moderate depth (Figs.22,23)

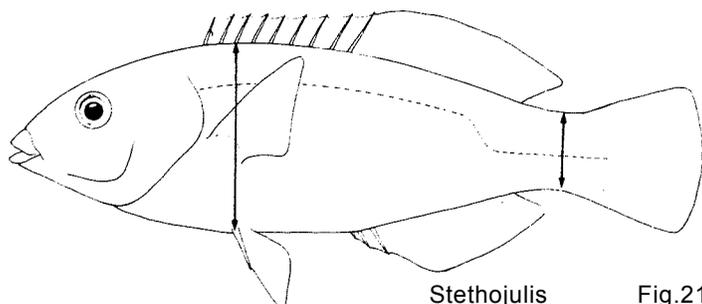


a) Pteragogus

b) Stethojulis

e) Suezichthys

Fig.20

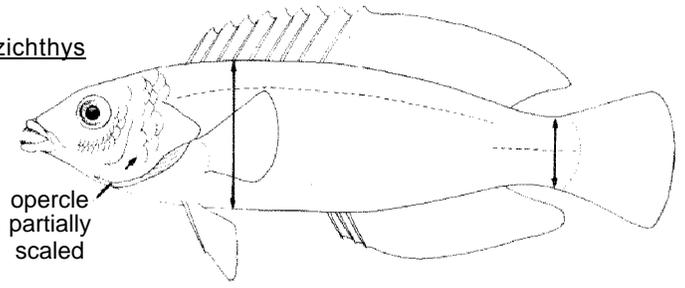


Stethojulis

Fig.21

29a. Cheek and opercle partially scaled (Fig.27); gill membranes free from isthmus Suezichthys

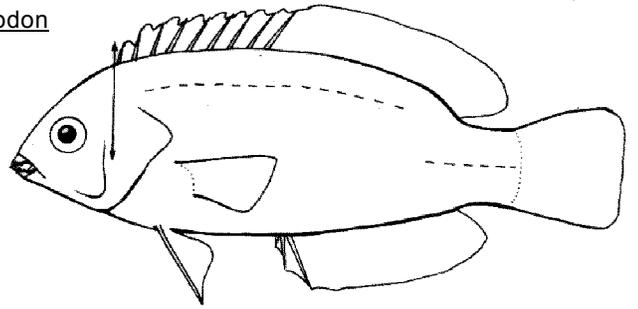
29b. Cheek and opercle naked (except for a small patch of scales at upper end of opercle in some) (Figs.23,24); gill membranes attached to isthmus



Suezichthys Fig.22

30a. Dorsal fin origin above point midway between eye and pectoral fin base; body deep, greatest depth 2.3 to 3.1 times in standard length; body distinctly compressed (Fig.23) Macropharyngodon

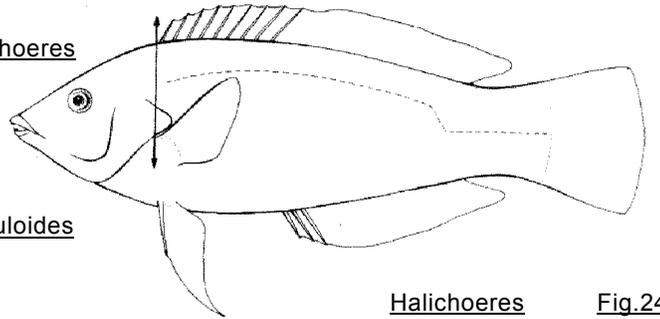
30b. Dorsal fin origin usually noticeably posterior to spot above midpoint between eye and pectoral fin base; body of moderate depth to rather deep, greatest depth 2.7 to 4.1 times (usually more than 3.0) in standard length; body moderately compressed (Fig. 24)



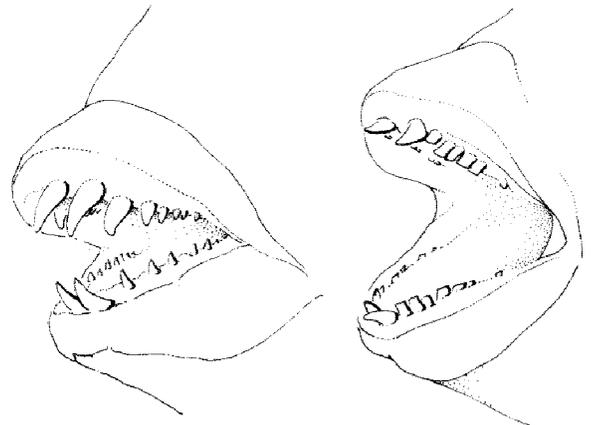
Macropharyngodon Fig.23

31a. Each jaw with 1 or 2 pairs of noticeably recurved prominent anterior canines, followed by a row of numerous unmodified smaller canines (Fig.25a) .. Halichoeres

31b. Each jaw with a pair of prominent outwardly curved canines anteriorly, followed on each side by about 5 large, laterally expanded, chisel-like teeth (Fig.25b) Pseudojuloides



Halichoeres Fig.24



a) Halichoeres

b) Pseudojuloides

Fig.25

LIST SPECIES OCCURRING IN THE AREA:

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

<u>Anampses caeruleopunctatus</u> Rüppell, 1828	
<u>Anampses melanurus</u> Bleeker, 1857	
<u>Anampses meleagrides</u> Cuvier, 1839	
<u>Anampses twistii</u> Bleeker, 1856	
<u>Anampses viridis</u> Valenciennes, 1840	
<u>Anchoeroops natalensis</u> (Gilchrist & Thompson, 1908)	LABR Anch 1
<u>Bodianus anthioides</u> (Bennett, 1830)	
<u>Bodianus axillaris</u> (Bennett, 1831)	
<u>Bodianus bilunulatus bilunulatus</u> (Lacepède, 1801)	LABR Bod 6
<u>Bodianus bimaculatus</u> Allen, 1973	
<u>Bodianus diana</u> (Lacepède, 1801)	LABR Bod 7
<u>Bodianus leucostictus</u> (Bennett, 1831)	LABR Bod 8
<u>Bodianus macrognathos</u> (Morris, 1974)	LABR Bod 9
<u>Bodianus macrourus</u> (Lacepède, 1801)	LABR Bod 10
<u>Bodianus neilli</u> (Day, 1867)	
<u>Bodianus opercularis</u> (Guichenot, 1847)	
<u>Bodianus perditio</u> (Quoy & Gaimard, 1834)	LABR Bod 11
<u>Bodianus tanyokidus</u> Gomon & Madden, 1980	
<u>Bodianus trilineatus</u> (Fowler, 1934)	LABR Bod 12
<u>Cheilinus</u> sp. nov.	
<u>Cheilinus abudjubbe</u> Rüppell, 1835	LABR Che 1
<u>Cheilinus arenatus</u> (Valenciennes, 1840)	
<u>Cheilinus bimaculatus</u> (Valenciennes, 1840)	
<u>Cheilinus chlorurus</u> (Bloch, 1791)	LABR Che 2
<u>Cheilinus digrammus</u> (Lacepède, 1801)	LABR Che 3
<u>Cheilinus fasciatus fasciatus</u> (Bloch, 1791)	LABR Che 4
<u>Cheilinus fasciatus quinquecinctus</u> Rüppel, 1828	
<u>Cheilinus lunulatus</u> (Forsskål, 1775)	LABR Che 5
<u>Cheilinus mentalis</u> Rüppell, 1828	
<u>Cheilinus orientalis</u> Günther, 1862	
<u>Cheilinus oxycephalus</u> Bleeker, 1853	
<u>Cheilinus trilobatus</u> Lacepède, 1801	LABR Che 6
<u>Cheilinus undulatus</u> Rüppell, 1828	LABR Che 7
<u>Cheilio inermis</u> (Forsskål, 1775)	LABR Chei 1
<u>Choerodon</u> sp. nov.	
<u>Choerodon anchorago</u> (Bloch, 1791)	LABR Cho 1
<u>Choerodon gymnogenys</u> (Playfair & Günther, 1866)	
<u>Choerodon robustus</u> Günther, 1862)	LABR Cho 2
<u>Cirrhilabrus</u> spp. nov. (3)	
<u>Cirrhilabrus blatteus</u> Springer & Randall, 1974	
<u>Cirrhilabrus exquisitus</u> Smith, 1957	
<u>Cirrhilabrus rubriventralis</u> Springer & Randall, 1974	
<u>Coris aygula</u> Lacepède, 1801	LABR Cor 2
<u>Coris caudimacula</u> Quoy & Gaimard, 1834	
<u>Coris formosa</u> Bennett, 1830)	LABR Cor 3
<u>Coris gaimard africana</u> Smith, 1957	LABR Cor 4
<u>Coris variegata</u> (Rüppell, 1835)	
<u>Cymolutes lecluse</u> (Quoy & Gaimard, 1824)	
<u>Decodon grandisquamus</u> (Smith, 1968)	
<u>Epibulus insidiator</u> (Pallas, 1770)	LABR Epi 1

<u>Gomphosus coeruleus coeruleus</u> Lacepède, 18U1	LABR Gom 1
<u>Gomphosus coeruleus klunzingeri</u> Klausewitz, 1962	
<u>Halichoeres cosmetus</u> Randall & Smith, 1980	LABR Hal 2
<u>Halichoeres dussumieri</u> (Valenciennes, 1839)	
<u>Halichoeres hoeveni</u> (Bleeker, 1851)	
<u>Halichoeres hortulanus centiquadrus</u> (Lacepède, 1801)	
<u>Halichoeres iridis</u> Randall & Smith, 1980	
<u>Halichoeres lapillus</u> Smith, 1947	
<u>Halichoeres leucoxanthus</u> Randall & Smith, 1980	
<u>Halichoeres marginatus</u> Rüppell, 1835	
<u>Halichoeres nebulosus</u> (Valenciennes, 1839)	
<u>Halichoeres pardaleocephalus</u> (Bleeker, 1849)	
<u>Halichoeres pelicierii</u> Randall & Smith, 1980	
<u>Halichoeres scapularis</u> (Bennett, 1831)	
<u>Halichoeres stigmaticus</u> Randall & Smith, 1980	
<u>Halichoeres timorensis</u> (Bleeker, 1952)	
<u>Halichoeres trispilus</u> Randall & Smith, 1980	
<u>Halichoeres zeylonicus</u> (Bennett, 1832)	
<u>Hemigymnus fasciatus</u> (Bloch, 1792)	LABR Hem 1
<u>Hemigymnus melapterus</u> (Bloch, 1791)	LABR Hem 2
<u>Hologymnosus annulatus</u> (Lacepède, 1801)	LABR Hol i
<u>Hologymnosus doliatus</u> (Lacepède, 1801)	LABR Hol 2
<u>Labrichthys unilineatus</u> (Guichenot, 1847)	
<u>Labroides bicolor</u> Fowler, 1928	
<u>Labroides dimidiatus</u> (Valenciennes, 1839)	
<u>Labropsis xanthonota</u> Randall, 1981	
<u>Larabicus quadrilineatus</u> (Rüppell, 1835)	
<u>Macropharyngodon bipartitus marisrubri</u> Randall, 1978	
<u>Macropharyngodon bipartitus bipartitus</u> Smith, 1957	
<u>Macropharyngodon cyanoguttatus</u> Randall, 1978	
<u>Macropharyngodon ornatus</u> Randall, 1978	
<u>Macropharyngodon vivienae</u> Randall, 1978	
<u>Minilabrus striatus</u> Randall & Dor, 1981	
<u>Novaculichthys macrolepidotus</u> (Bloch, 1791)	LABR Nov 1
<u>Novaculichthys taeniourus</u> Lacepède, 1801)	
<u>Paracheilinus hemitaeniatus</u> Randall & Harmelin-Vivien, 1977	
<u>Paracheilinus mccoskeri</u> Randall & Harmelin-Vivien, 1977	
<u>Paracheilinus octotaenia</u> Fourmanoir, 1955	
<u>Pseudocheilinus evanidus</u> Jordan & Evermann, 1902	
<u>Pseudocheilinus hexataenia</u> (Bleeker, 1857)	
<u>Pseudocheilinus octotaenia</u> Jenkins, 1900	
<u>Pseudocoris heteroptera</u> (Bleeker, 1857)	
<u>Pseudocoris yamashiroi</u> (Schmidt, 1930)	
<u>Pseudodax moluccanus</u> (Valenciennes, 1840)	LABR Pseu 1
<u>Pseudojudoides argyreogaster</u> (Günther, 1866)	
<u>Pseudojudoides cerasinus</u> (Snyder, 1904)	
<u>Pseudojudoides erythropros</u> Randall, 1981	
<u>Pseudojudoides xanthomus</u> Randall, 1981	

Pteragogus cryptus Randall, 1980
Pteragogus flagellifer (Valenciennes, 1839)
Pteragogus pelycus Randall, 1980
Pteragogus taeniops Peters, 1855

Stethojulis albovittata (Bonnaterre, 1788)
Stethojulis interrupta (Bleeker, 1851)
Stethojulis strigiventer (Bennett, 1832)

Suezichthys caudovittatus (Steindachner, 1898)
*Suezichthys tripunctatus Randall & Kotthaus, 1977

Thalassoma amblycephalum Bleeker, 1856
Thalassoma fuscum (Lacepède, 1801) LABR Thal 1
Thalassoma genivittatum (Valenciennes, 1839)
Thalassoma hardwicki (Bennett, 1830)
Thalassoma herbraicum (Lacepède, 1801)
Thalassoma lunare (Linnaeus, 1758) LABR Thal 2
Thalassoma janseni (Bleeker, 1856)
Thalassoma klunzingeri Fowler & Steinitz, 1956
Thalassoma purpureum (Forsskål, 1775) LABR Thal 3
Thalassoma quinquevittatum (Lay & Bennett, 1839)

Wetmorella nigropinnata (Seale, 1901)

**Xyrichtys sp.
Xyrichtys aneitensis (Günther, 1862)
Xyrichtys bimaculatus Rüppell, 1828 LABR Xyr 2
Xyrichtys cyanifrons Valenciennes, 1840
Xyrichtys niger Steindachner, 1900
Xyrichtys pavo (Valenciennes, 1840) LABR Xyr 3
Xyrichtys pentadactylus (Linnaeus, 1758) LABR Xyr 4

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*This species may be restricted to the Pacific. If so, the species in the Indian Ocean will take a new name

**This species has been reported in the literature as X. melanopus and X. spilnotus, the latter considered by some authors to be a junior synonym of the former, but the figure presented with the original Indian Ocean record does not agree with descriptions of those species. This species may be undescribed