HOLOC
1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

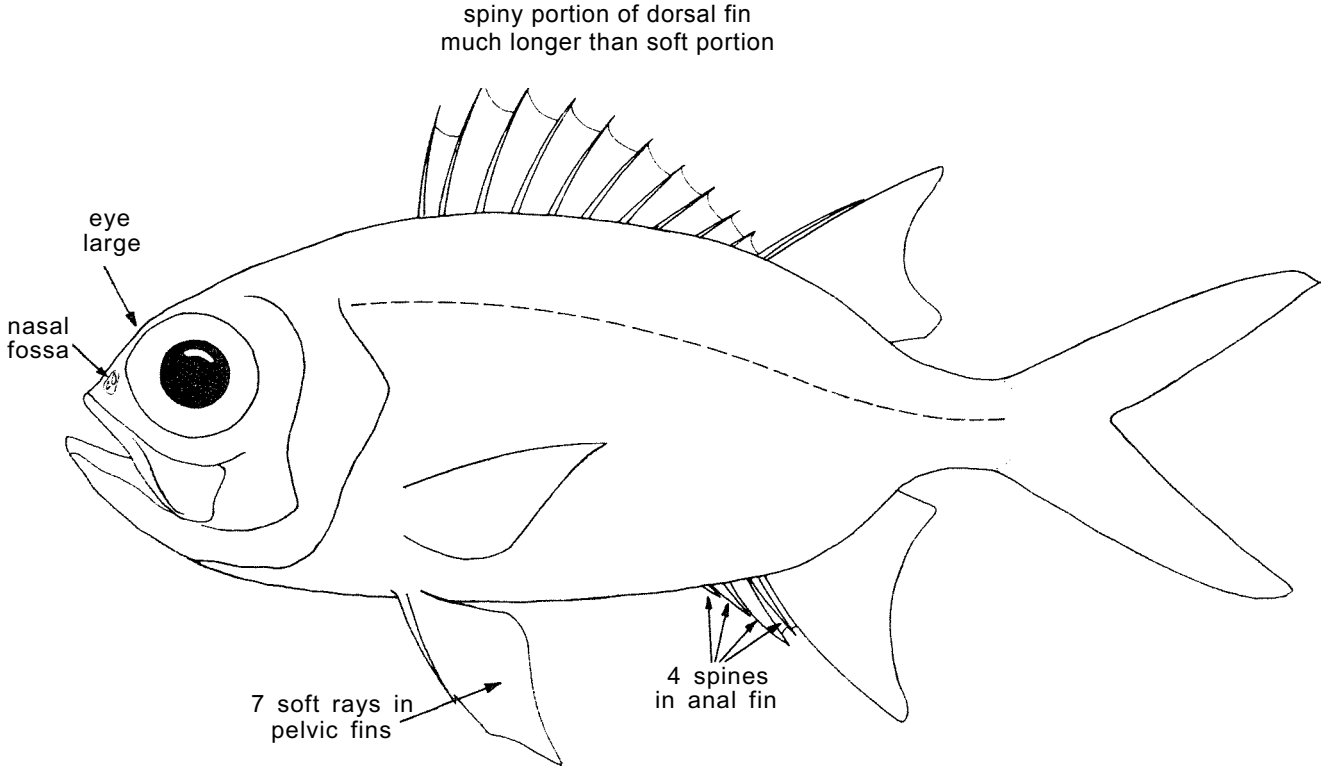
HOLOCENTRIDAE

Squirrelfishes, soldierfishes

Body moderately elongate, compressed, the caudal peduncle slender; mucous channels developed on head; edges of membrane bones of head serrated or with spines; eyes large. Mouth terminal or with lower jaw projecting, the gape slightly to moderately diagonal; small villiform teeth in bands in jaws and on roof of mouth (on vomer, palatines and for some on ectopterygoids); branchiostegal rays 8. Dorsal fin with 11 or 12 stout spines and 12 to 17 soft fin rays, deeply (sometimes completely) notched between spinous and soft portions, the base of spinous portion 2 to 3.5 times longer than the soft; anal fin with 4 spines, the third the stoutest and often the longest; pelvic fins with 1 spine and 7 rays; caudal fin forked, with 17 branched rays. Lateral line complete; scales coarsely ctenoid.

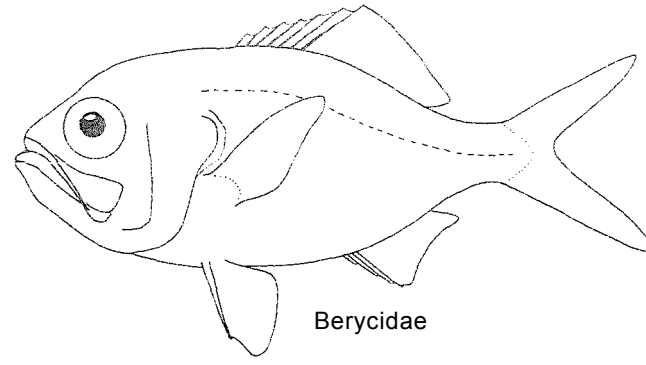
Colour: usually red or pink, plain or striped, sometimes with black markings around gill opening or on fins.

Most of the squirrelfishes (Holocentrinae) and soldierfishes (Myripristinae) live in relatively shallow water on coral reefs or rocky bottoms, but a few (particularly the genus Ostichthys) occur in water of 200 m or more. The holocentrid fishes are believed to be derived from deep-dwelling berycoid ancestors. Their large eyes suit them well for their nocturnal habits. The family is also well known for sound production. The squirrelfishes feed mainly or crustaceans living on or near the bottom, while the soldierfishes of the genus Myripristis feed on the larger elements of the zooplankton. The preopercular spine of at least some species of Sargocentron is venomous; although wounds from these spines may be very painful, they are not as serious as those from the dorsal spines of most scorpionfishes. Many of the holocentrids are too small to be of any commercial value; the largest species are frequently seen in local markets, but rarely in abundance.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Berycidae: a single short-based dorsal fin with 4 to 7 spines, without a notch between spinous and soft portions. Deep water.



Berycidae

KEY TO GENERA OCCURRING IN THE AREA:

1a. Anal fin rays 7 to 10; corner of preopercle with a sharp stout spine, longer than broad (Fig.1a); front of swimbladder blunt, with no direct connection to auditory bullae of skull ..... (Holocentrinae)

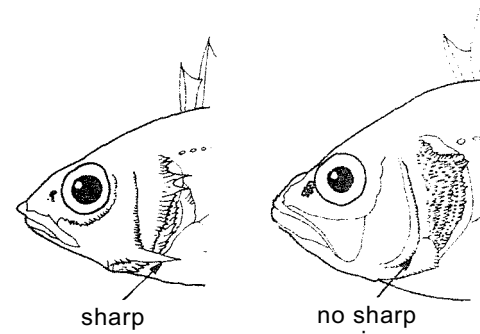
2a. Last dorsal spine the shortest, equidistant between penultimate spine and first soft fin ray (Fig.2a); lower jaw not projecting (except in S. spinifer); ground colour red ..... Sargocentron*

2b. Last dorsal spine longer than penultimate spine, much closer to first soft fin ray than to penultimate spine (Fig.2b); lower jaw projecting; ground colour silvery to silvery pink .....Neoniphon**

1b. Anal fin rays more than 10; corner of preopercle either rounded or without a sharp spine (at most with a short and very broad spine) (Fig.1b); front of swimbladder bifurcate, each anterior projection connecting to auditory bullae of skull ..... (Myripristinae)

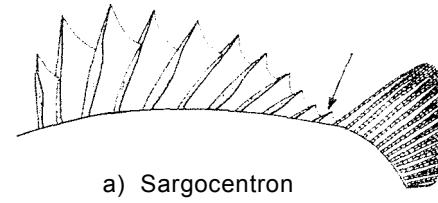
3a. Dorsal spines 11; lower gillrakers 19 to 32; scales finely to moderately ctenoid ..... Myripristis

3b. Dorsal spines 12 (except Ustichthys delta with 11); lower gillrakers 11 to 18; scales coarsely ctenoid

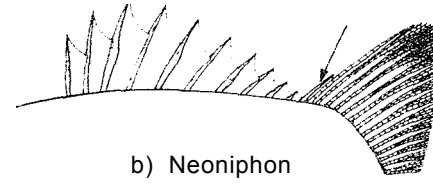


a) Holocentrinae b) Myripristinae

Fig.1



a) Sargocentron



b) Neoniphon

dorsal fin Fig.2

*Replaces the hitherto widely used name Adioryx

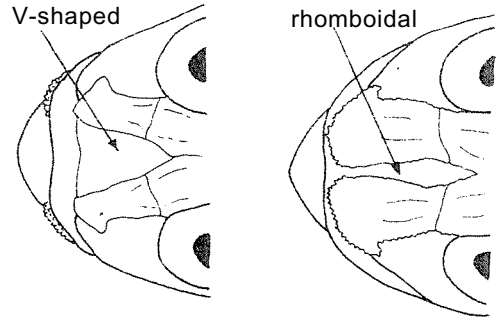
**Replaces the hitherto widely used name Flammeo

4a. Premaxillary groove either broadly V-shaped or rhomboidal (Fig.3a,b); vertebrae 26 to 27

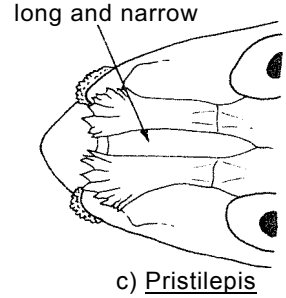
5a. Premaxiilary groove broadly V-shaped (Fig.3a); longest dorsal spine 1.9 to 2.3 in head; lateral line scales 28 to 30 ..... Ostichthys

5b. Premaxillary groove narrow and rhomboidal (Fig.3b); longest dorsal spine 2.5 to 2.9 in head; lateral line scales 40 to 42 (Indo-Pacific species only) ..... Plectrypops

4b. Premaxillary groove long and narrow, the nasal bone margins parallel (Fig.3c); vertebrae 29 ..... Pristilepis



a) Ostichthys b) Plectrypops



c) Pristilepis

top of head showing premaxillary groove (Fig.3)

LIST OF SPECIES OCCURRING IN THE AREA:

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

Subfamily Holocentrinae

Neoniphon argenteus (Valenciennes, 1831)	
Neoniphon aurolineatus (Liénard, 1839)	
Neoniphon opercularis (Valenciennes, 1831)	HOLOC Neon 1
Neoniphon sammara (Forsskål, 1775)	HOLOC Neon 2
Sargocentron caudimaculatum (Rüppell, 1835)	HOLOC Sargo 1
Sargocentron diadema (Lacepède, 1802)	
Sargocentron ittodai (Jordan & Fowler, i903)	
Sargocentron punctatissimum (Cuvier, 1829)	
Sargocentron melanospilos (Bleeker, 1858)	
Sargocentron microstoma (Günther, 1859)	
Sargocentron praslin (Lacepède, 1802)	HOLOC Sargo 2
Sargocentron rubrum (Forsskål, 1775)	HOLOC Sargo 3
Sargocentron seychellensis (Smith & Smith, 1963)	
Sargocentron spiniferum (Forsskål, 1775)	HOLOC Sargo 4
Sargocentron tiere (Cuvier, 1829)	
Sargocentron tiereoides (Bleeker, 1853)	
Sargocentron violaceum (Bleeker, 1853)	

Subfamily Myripristinae

Myripristis adustus Bleeker, 1853	HOLOC Myrip 2
Myripristis berndti Jordan & Evermann, 1903	HOLOC Myrip 3
Myripristis chryseres Jordan & Evermann; 1903	
Myripristis hexagonus (Lacepède, 1802)	
Myripristis kuntee Cuvier, 1831	HOLOC Myrip 4
Myripristis melanostictus Bleeker, 1853	HOLOC Nlyrip 5
Myripristis murdjan (Forsskål, 1775)	HOLOC Myrip 6
Myripristis pralinius (Cuvier, 1829)	
Myripristis seychellensis Cuvier, 1829	
Myripristis violaceus Bleeker, 1851	HOLOC Myrip 7
Myripristis vittatus Cuvier, 1831	
Myripristis xanthacrus Randall & Guézé, 1981	
Ostichthys acanthorhinus Randall, Shimizu & Yamakawa, 1982	
Ostichthys archiepiscopus (Valenciennes, 1862)	HOLOC Ostic 1
Ostichthys delta Randall, Shimizu & Yamakawa, 1982	
Ostichthys kaianus (Günther, 1880)	
Plectrypops lima (Valenciennes, 1831)	
Pristilepis oligolepis (Whitley, 1941)	

Prepared by J.E. Randall, Bernice P. Bishop Museum, Honolulu, Hawaii, USA. Edited by P.J.P. Whitehead, Department of Zoology, British Museum Natural History, London, UK. Species illustrations by T. Shimizu, Tokyo, Japan

HOLOC Myrip 2

1983

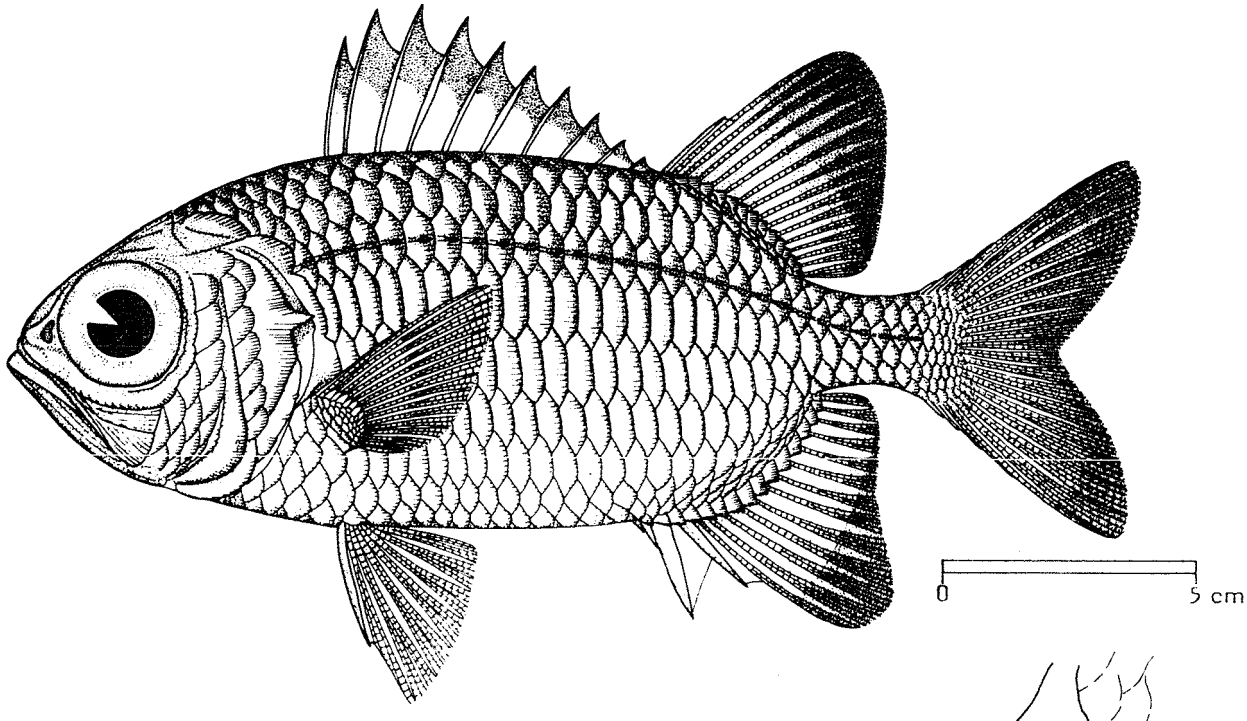
FAO SPECIES IDENTIFICATION SHEETS

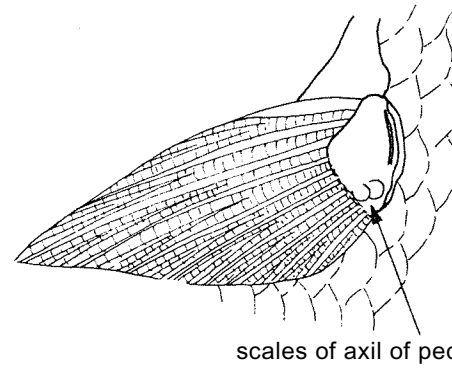
FAMILY: HOLOCENTRIDAE

FISHING AREA 51
(W. Indian Ocean)

Myripristis adustus Bleeker, 1853

OTHER SCIENTIFIC NAMES STILL IN USE: None





scales of axil of pectoral fin

VERNACULAR NAMES:

FAO :
En - Shadowfin soldierfish
Fr - Marignan ombré
Sp - Candil sombreado

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, depth 2.1 to 2.55 times in standard length. Snout short, 5.0 to 6.1 times in head; 1 or 2 (usually 1) pair of tooth patches at front of lower jaw outside mouth. Dorsal fin with 11 spines and 14 to 16 soft fin rays, notched to back between the last two spines, the 11th spine more than twice length of 10th and closely applied to soft portion of fin; anal fin with 4 spines (3rd spine the strongest, but 4th spine the longest) and 12 to 14 soft fin rays. Lateral line scales 27 or 28; 1 or 2 scales on lower half of pectoral axil. Gillrakers 35 to 40.

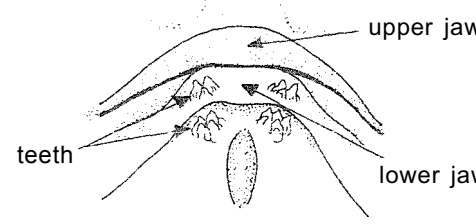
Colour: scale centres a combination of pale copper and light bluish, the edges narrowly rimmed with deep blue to black dorsally and orangish brown to salmon pink on sides; a large blackish spot posteriorly on gill cover mmand its membrane; median fins edged with black (broadest at tips of lobes).

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Myripristis melanostictus: tips of soft dorsal, anal and caudal fires black, but 2 pairs of tooth patches at front of lower jaw outside mouth; no scales in axil of pectoral fins: spinous dorsal fin broadly edged in red.

Other Myripristis species: lack dark margins to median fins, or have more than 30 lateral line scales or 2 pairs of teeth outside lower jaw.

Other Holocentridae: 12 dorsal spines (11 in M. adustus) or a sharp spine at angle of preopercle.

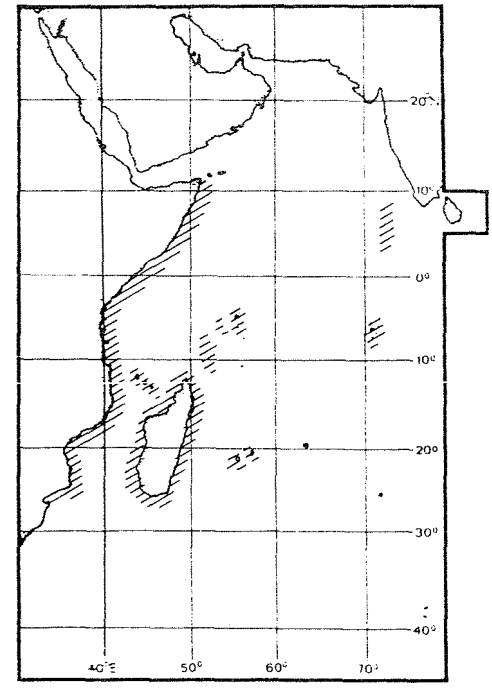


M. melanostictus

front view of mouth

SIZE:

Maximum: 33 cm; common to 25 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

East African coast as far south as Madagascar and Delagoa Bay, Mozambique, but absent from the Red Sea. Elsewhere, generally in Indo-Pacific.

One of the 2 largest species of Myripristis. A relatively shallow-water coral reef fish which seeks refuge in caves and beneath ledges by day.

PRESENT FISHING GROUNDS:

No special fishing areas.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Taken by hook and line and gillnets at night; also by spearing.

Marketed fresh.

HOLOC Myrip 3

1983

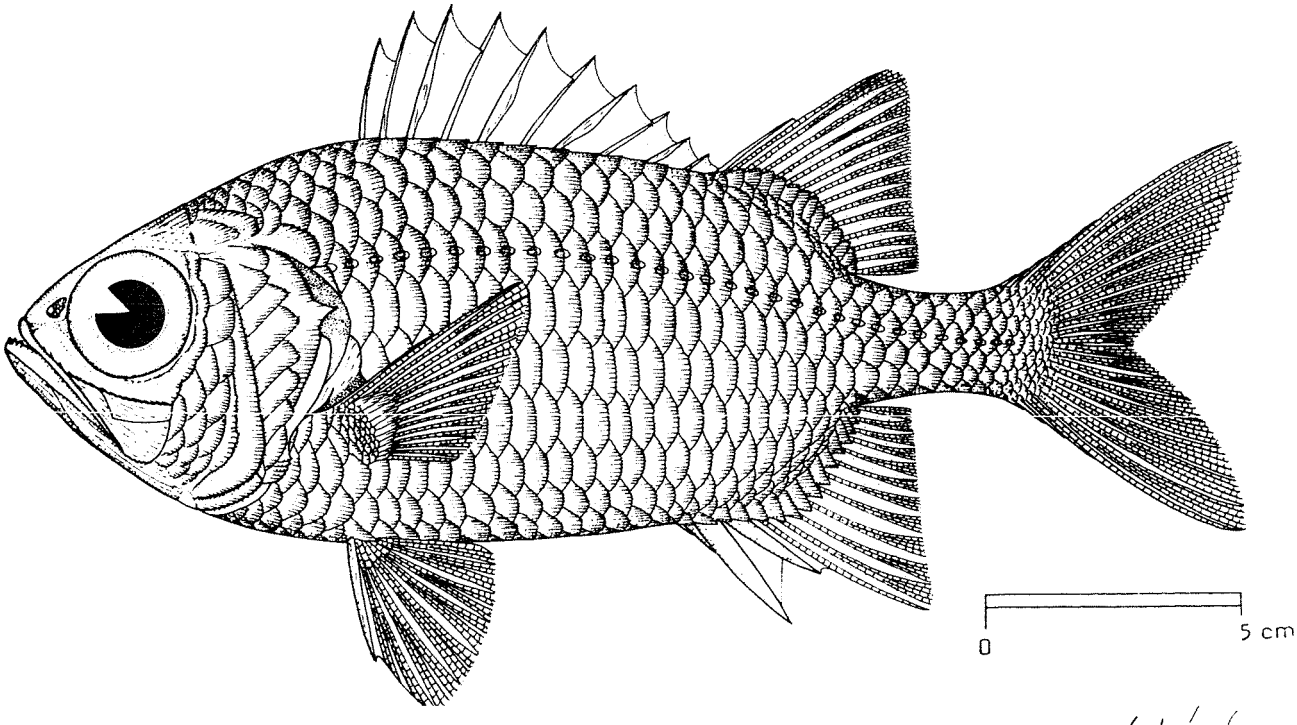
FAO SPECIES IDENTIFICATION SHEETS

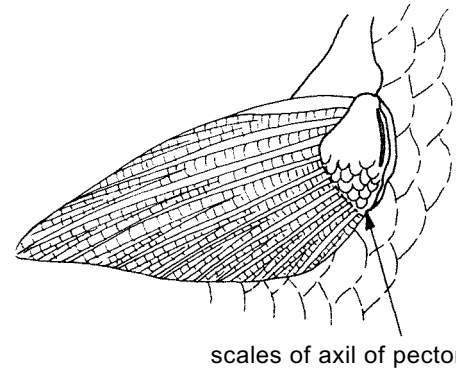
FAMILY: HOLOCENTRIDAE

FISHING AREA 51
(W. Indian Ocean)

Myripristis berndti Jordan & Evermann, 1903

OTHER SCIENTIFIC NAMES STILL IN USE: Myripristis murdjan (misidentification)





scales of axil of pectoral fin

VERNACULAR NAMES:

FAO : En - Blotcheye soldierfish
Fr - Marignan à oeillères
Sp - Candil ojo manchado

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, depth 2.3 to 2.6 times in standard length. Snout short, 4.6 to 5.3 times in head; interorbital space narrow, its width 4.3 to 5.2 in head; lower jaw prominently projecting when mouth is closed; a single pair of tooth patches at front of lower jaw outside mouth; vomerine teeth in a triangular patch with rounded corners. Dorsal fin with 11 spines and 13 to 15 soft fin rays (usually 14), notched to back between last two spines, the 11th spine more than twice length of 10th and closely applied to soft portion of fin; anal fin with 4 spines and 11 to 13 soft fin rays (3rd spine longest and strongest). Lateral line scales 28 to 31 (usually 29 or 30); lower 1/2 to 3/4 of pectoral axil with small scales. Gillrakers 35 to 42.

Colour: red, the edges of the scales rimmed with a much deeper red than centres; outer third to half of spinous dorsal fin orange-yellow; black of opercular membrane extending ventrally only to about level of lower edge of pupil; axil of pectoral fins black.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

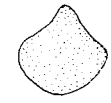
Myripristis murdjari: interorbital space relatively broad, its width 3.8 to 4.4 times in head length (4.3 to 5.2 in M. berndti); lower jaw only slightly projecting when mouth fully closed; outer part of spinous dorsal fin red in life.

M. hexagonus: black pigment on opercular membrane extending down to about level of lower edge of eye; also, 2 pairs of teeth outside lower jaw.

M. seycheliensis: black pigment of opercular membrane extending down to about level of lower edge of eye; mouth terminal or lower jaw slightly inferior when mouth closed; posterior border of patch of teeth on vomer rounded; soft dorsal fin rays usually 15 (usually 14 in M. berndti); outer part of spinous dorsal fin red in life.

Other Myripristis species upper scales brown or black-rimmed (M. violaceus), or median fin margins black or blue (M. adustus) or 2 pairs of teeth outside lower jaw, or more than 31 lateral line scales.

Other Holocentridae: 12 dorsal spines (11 in M. berndti) or a sharp spine at angle of preopercle.



M. seycheliensis

M. berndti

tooth patch on vomer

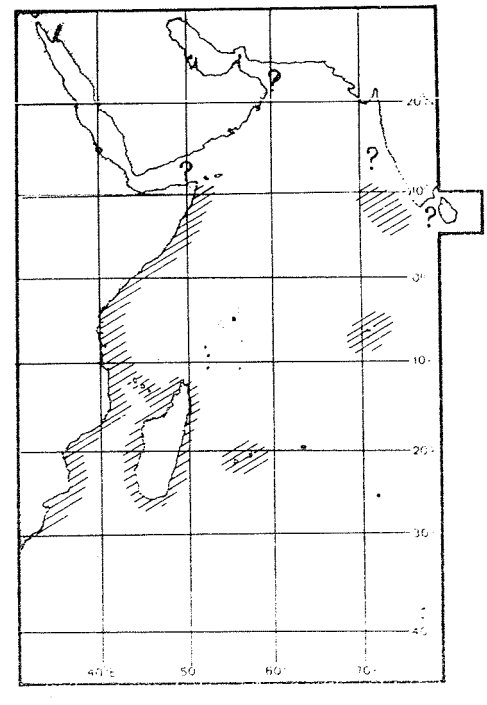
SIZE:

Maximum: 29 cm; common to 22 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Probably common in Western Indian Ocean, but exact limits of range unknown due to confusion in the literature with other species (does not occur in the Red Sea, however); also, generally in Indo-Pacific.

A reef species of shallow to moderate depths; a cave resident by day.



PRESENT FISHING GROUNDS:

No special fishing areas.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly by hook arid line or gilinets at night; also by spearing.

Marketed fresh.

HOLOC Myrip 4

1983

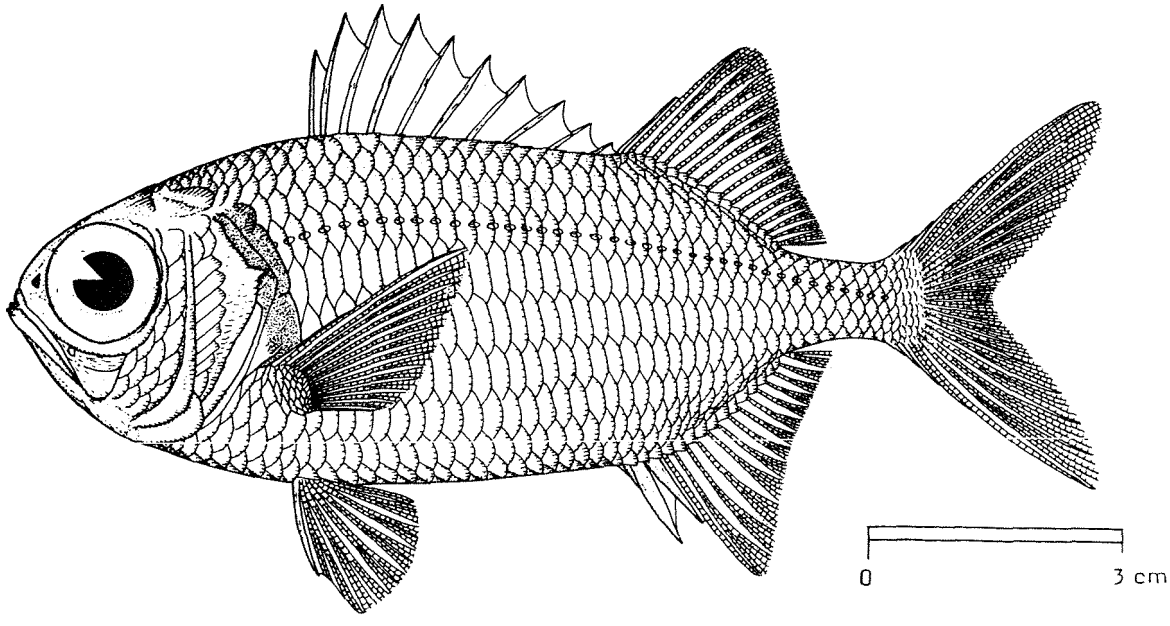
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: HOLOCENTRIDAE

FISHING AREA 51
(W. Indian Ocean)

Myripristis kuntee Cuvier, 1831

OTHER SCIENTIFIC NAMES STILL IN USE: Myripristis murdjan (misidentification)



VERNACULAR NAMES:

FAO : En - Shoulderbar soldierfish
Fr - Marignan ardoisé
Sp - Candil de lomo manchado

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, depth 2.2 to 2.9 times in standard length. Snout short, 5.0 to 6.0 times in head; a single pair of tooth patches at front of lower jaw outside mouth. Dorsal fin with 11 spines and 15 to 17 (usually 16) soft fin rays, notched to back between last two spines, the 11th spine about twice length of 10th and closely applied to soft portion of fin; anal fin with 4 spines and 14 to 16 soft fin rays (3rd spine stoutest, but the 4th slightly longer). Lateral line scales 37 to 44; no small scales in axil of pectoral fins. Gillrakers 33 to 41.

Colour: light red, the edges of the scales darker than centres; a continuous reddish brown bar from upper end of gill opening to axil of pectoral fin; outer part of spinous dorsal fin orange-yellow; red pigment in soft dorsal and anal fins concentrated in a large spot at tips of fins.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

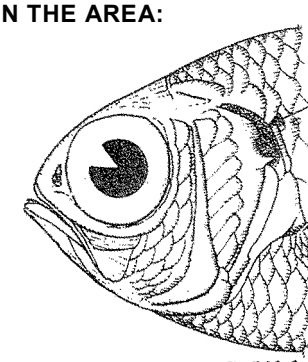
Myripristis pralinius: dark pigment on opercular membrane reaching only to opercular spine or slightly below it; lateral line scales 34 to 40 (37 to 44 in M. kuntee); outer part of spinous dorsal fin red (orange-yellow in M. kuntee and anterior spines often tipped whitish.

M. chryseres: median fins predominately yellow; lateral line scales 32 to 38; a relatively deep water species (usually deeper than 40 m).

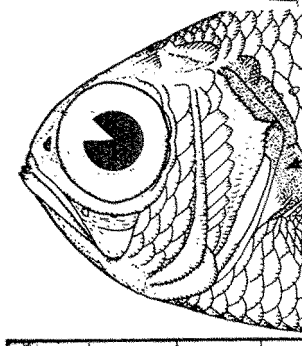
M. vittatus: no blackish pigment on opercular membrane; spinous dorsal fin red, the spines broadly tipped with white; lateral line scales 35 to 40.

Other Myripristis species: lateral line scales 32 or less.

Other Holocentridae: 12 dorsal spines (11 in M. kuntee) or a sharp spine at angle of preopercle.



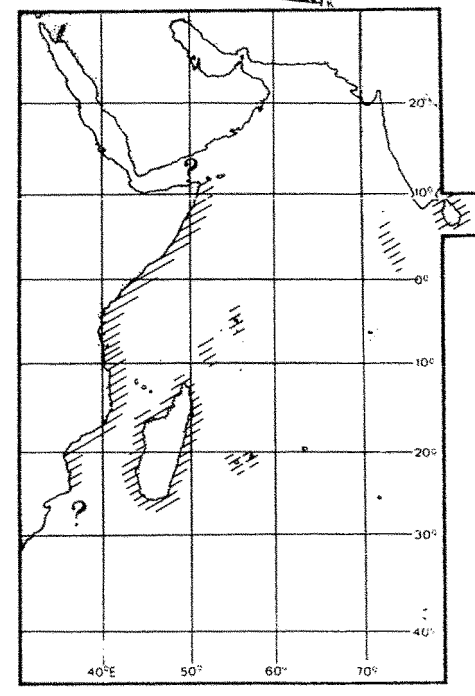
M. pralinius



M. kuntee

SIZE:

Maximum: 20 cm; common to 16 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Sri Lanka, East African coast to Mozambique and Madagascar, but absent from the Red Sea; also, generally in Indo-Pacific.

A coral reef species generally found in relatively shallow water.

PRESENT FISHING GROUNDS:

No special fishing areas. Although among the most abundant species of genus, M. kuntee is of little commercial importance due to its small size.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Usually caught by hook and line or gillnets at night.

Marketed fresh.

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