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FAO SPECIES IDENTIFICATION SHEETS

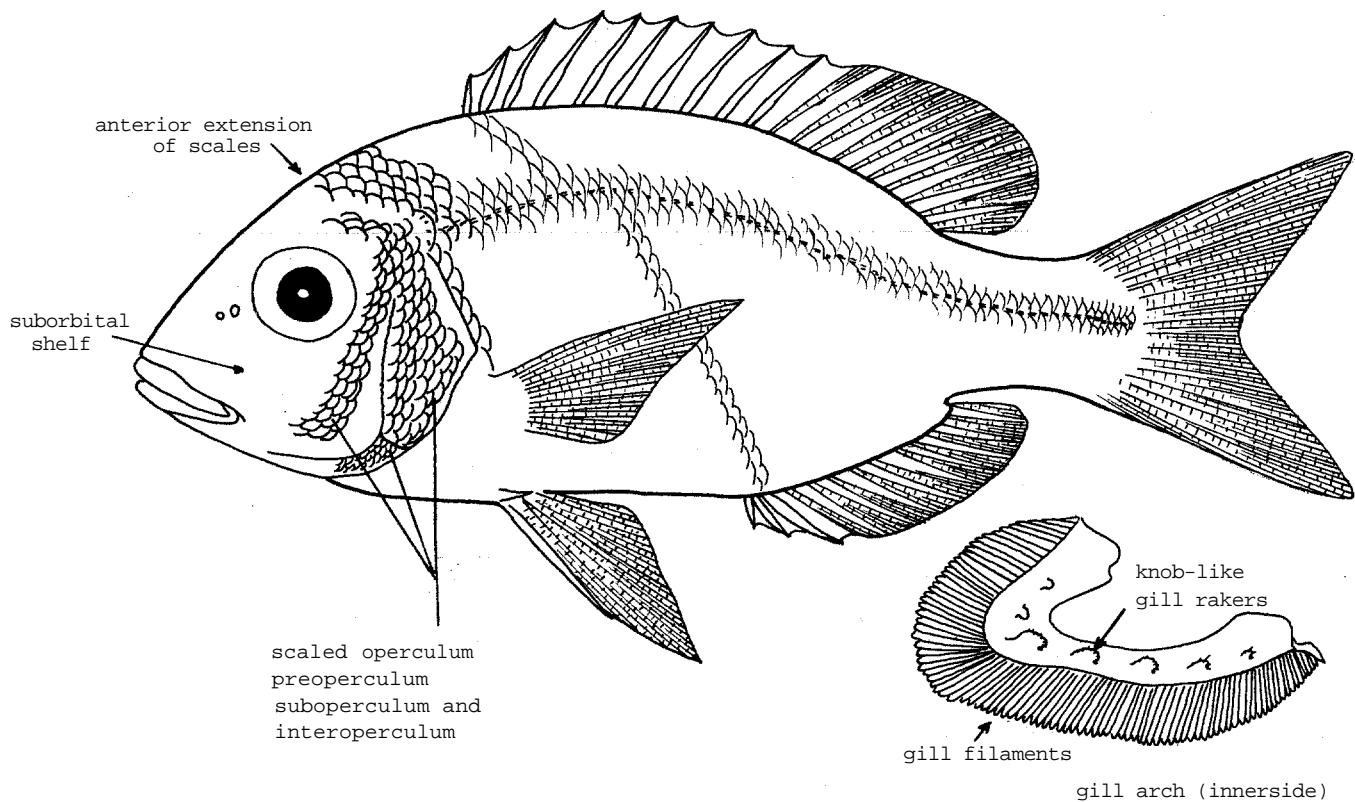
FISHING AREAS 57, 71
 (E Ind. Ocean)
 (W Cent. Pacific)

PENTAPODIDAE

Large-eye breams
 (placed by some authors in the Lethrinidae and by others in the Nemipteridae)

Perch-like fishes with an oblong, moderately compressed body. Eye noticeably large; interorbital region wide and flat. Mouth terminal, horizontal or slightly oblique. Tip of premaxilla not overlapping maxilla at hind end of mouth; maxilla broad, contained by a strong suborbital shelf when mouth is closed, bearing in 2 genera (*Monotaxis* and *Gnathodentex*) a lengthwise denticulated ridge. Canine and/or molar teeth in jaws, usually strong; palate toothless. Gill rakers knob-like, 5 to 6 on first arch. A single, continuous dorsal fin with 10 slender or strong spines and 9 to 11 soft rays; pelvic fins with 1 slender or strong spine and 5 soft rays; anal fin with 3 slender or strong spines and 7 to 11 soft rays; caudal fin invariably forked, with a rounded or pointed tip to each lobe. Scales ctenoid (rough), ranging from small to moderately large; present on operculum, preoperculum, suboperculum and interoperculum; those on top of head beginning from hind part of interorbital region; no scales on dorsal and anal fins.

Colour: ground colour varying from silvery grey to green or dark brown; body with either longitudinal bands or vertical bars, or with a blue sheen on back superimposed by regular dark spots, blotches or streaks; fins usually varying from pale yellow to orange or red.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Sparidae: tip of premaxilla overlaps maxilla at hind end of mouth.

Lethrinidae: no scales on preoperculum.

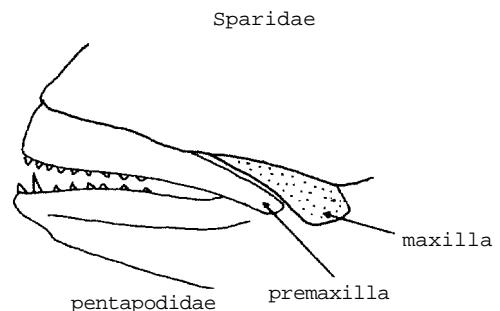
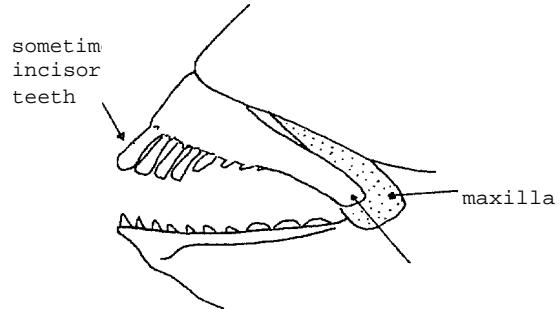
Nemipteridae: gill membranes only narrowly united across isthmus; many lack canine teeth

Lutjanidae: margin of preoperculum serrated; also, no molar teeth in jaws.

Kyphosidae: head small and scales present on snout; also, an outer row of strong, narrow incisors in jaws, and caudal fin emarginate.

Pomadasysidae: 2 to 6 pores behind lower lip and an emarginate or truncate caudal fin; also, scales on cheeks extend forward to hind end of maxilla.

Serranidae: caudal fin rounded, truncate, emarginate or lunate, but never forked.



Key to Genera

2 a. Maxilla with a strongly denticulated longitudinal ridge (Fig. 1)

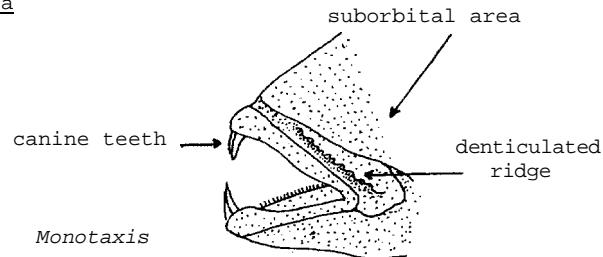


Fig. 1

2 a. Sides of jaws with round, flat molars preceded by a patch of small teeth and an anterior series of canines (Fig. 2); profile of head in front of eye strongly convex (Fig. 3)

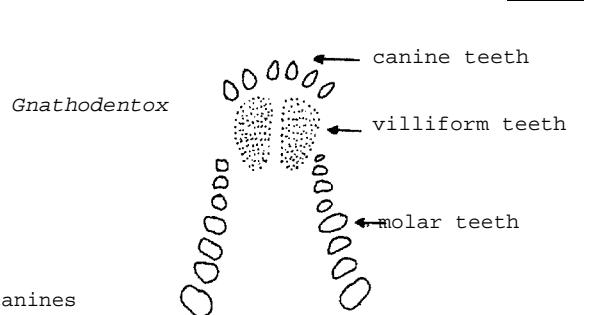


Fig. 2

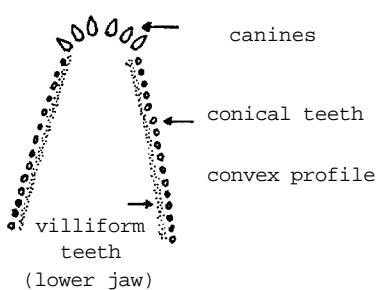


Fig. 4

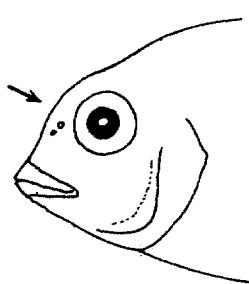


Fig. 3

Maxilla with a smooth surface devoid of denticulation.

- 3 a. Preoperculum fully scaled; edge of suborbital shelf free, tapering to blunt point posteriorly (Fig. 5); anal fin with 7 soft rays *Pentapodus*

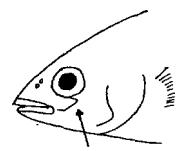


Fig. 5

- 3 b. Preoperculum with a broad naked border; edge of suborbital shelf not free (Fig. 6); anal fin with 10 to 11 soft rays *Gymnocranius*

suborbital shelf

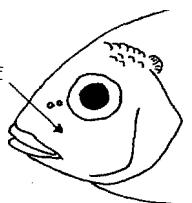


Fig. 6

List of Species occurring in the Area
(Code numbers are given for those species
for which Identification Sheets are included)

Gnathodentex aurolineatus PENTAD Gnath 1
Gnathodentex mossambicus PENTAD Gnath 2

Mcnotaxis grandoculis

PENTAD Mono 1

Gymnocranius bitorquatus
Gymnocranius elongatus
Gymnocranius frenatus
Gymnocranius griseus
Gymnocranius japonicus
Gymnocranius lethrinoides
Gymnocranius microdon
Gymnocranius robinsoni

PENTAD Gymno 1
PENTAD Gymno 2

Pentapodus caninus
Pentapodus helmuti
Pentapodus macrurus
Pentapodus microdon
Pentapodus nenurus
Pentapodus setosus
Pentapodus vitta

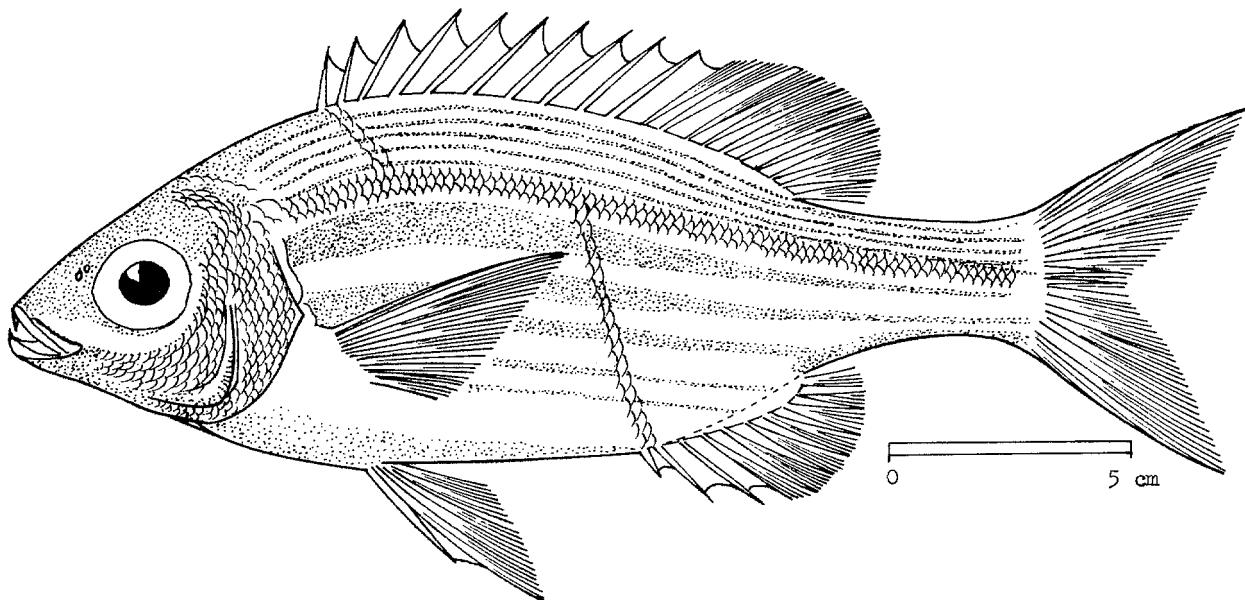
1974

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: PENTAPODIDAE

FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)*Gnathodentex aurolineatus* (Lacepède, 1803)

SYNONYMS STILL IN USE: None



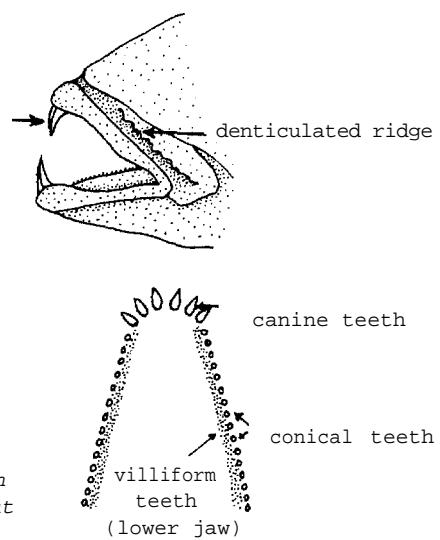
VERNACULAR NAMES:

FAO: En - Striped large-eye bream
Fr -
SP -

NATIONAL:

DISTINCTIVE CHARACTERS:

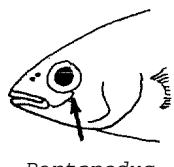
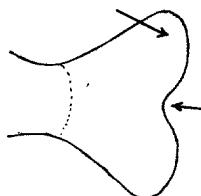
Body oblong, laterally compressed, its depth 2.7 times in standard length. Head profile straight in front of eye. Eye large, its diameter slightly greater than length of snout; interorbital space wide, slightly convex. Preoperculum with a rough but not clearly serrated hind edge and outer margin scaleless. Jaw teeth in a narrow, villiform band bordered by an outer series of canine-like teeth; anteriorly 4 moderate-sized canine teeth present in upper jaw and 6 in lower jaw. Maxilla with a longitudinal denticulated ridge; 2 close-set round nasal openings in front of eye. Dorsal fin with 10 slender spines and 10 soft rays, the 1st to 4th spines increasing in length, the length of 3rd spine equal to eye diameter; anal fin with 3 slender spines and 9 soft rays, length of 3rd spine about 1.1 times eye diameter, anal fin base 1.5 to 1.7 times length of longest anal fin ray; caudal fin forked with pointed tips. Scales 70 to 78 along lateral line; 5 scale rows between lateral line and 1st dorsal fin spine and 6 scale rows between lateral line and 1st anal fin spine; 6 scale rows on preoperculum and 9 on operculum.



Colour: ground colour brown/green, becoming paler below; 8 pearly white longitudinal stripes on body; a broad, silvery stripe on preorbital region, continuing below eye to its posterior margin; spinous parts of dorsal and anal fins and caudal fin light red; soft parts of dorsal and anal fins, and pectoral and pelvic fins, pale.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gnathodentex mossambicus: body much deeper, its depth 1.9 to 2.2 times in standard length (2.7 times in *G. aurolineatus*), a slightly forked caudal fin with broadly rounded lobes, much longer and stronger spines in the fins, and considerably larger and stronger scales, ranging from 41 to 47 in lateral line (70 to 78 in *G. aurolineatus*).

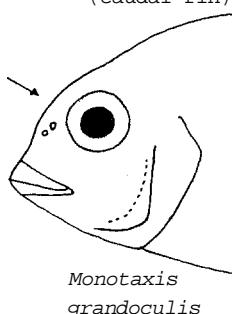


G. mossambicus
(caudal fin)

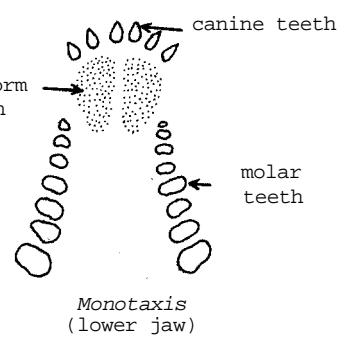
Gymrocranius species: surface of maxilla smooth.

Pentapodus species: a blunt suborbital spine below eye.

Monotaxis species: head profile strongly convex above eye; also, molar teeth at hind end of each jaw.



Monotaxis
grandoculis



Monotaxis
(lower jaw)

SIZE:

Maximum: 30 cm; common: 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

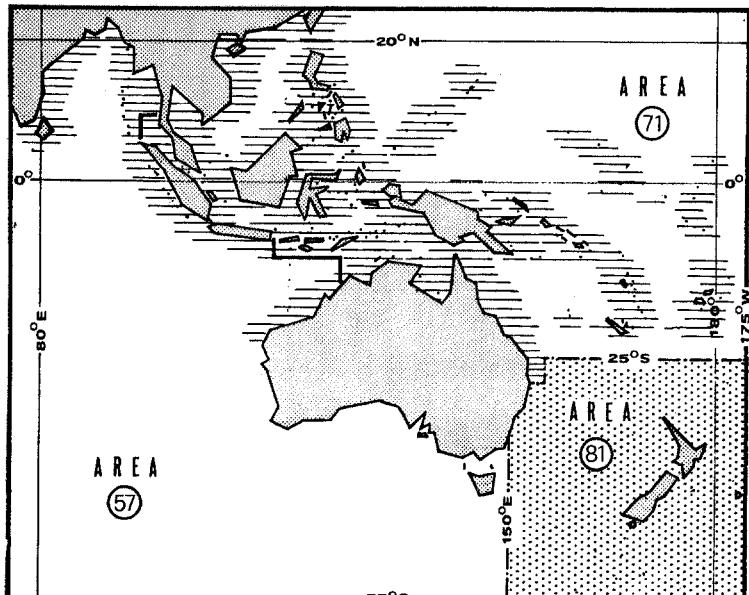
Probably throughout most of area, but perhaps not beyond northern coasts of Australia.

Found on coral reefs and in coastal waters, down to 20 m.

Feeds on bottom-living invertebrates and fishes.

PRESENT FISHING GROUNDS:

Shallow waters throughout its range.



CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with traps and handlines.

Marketed mostly fresh.

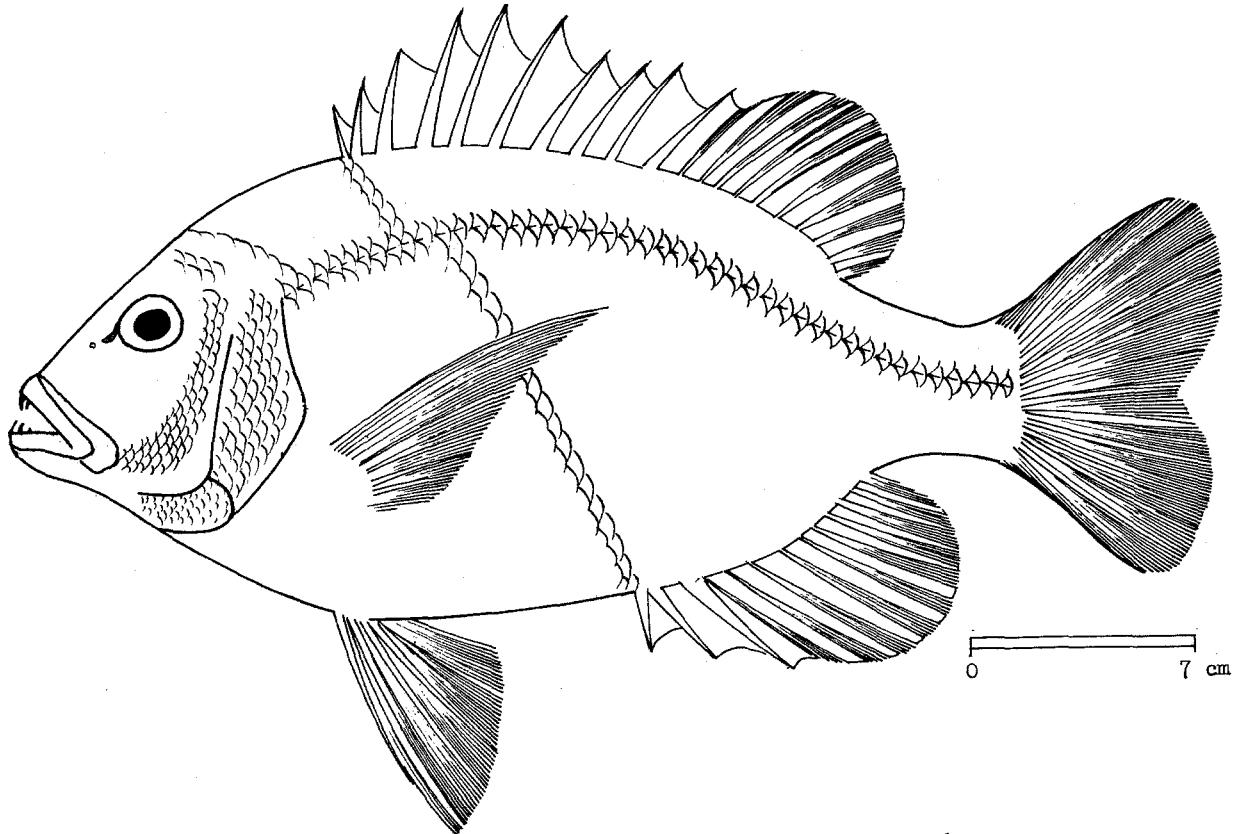
1974

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: PENTAPODIDAE

FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)*Gnathodentex mossambicus* Smith, 1957

SYNONYMS STILL IN USE: None



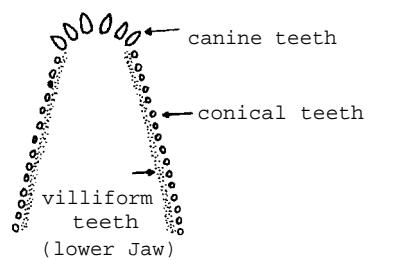
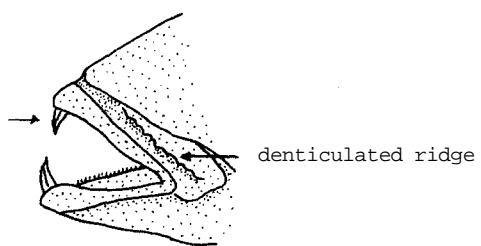
VERNACULAR NAMES:

FAO: En - Mozambique large-eye bream
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body deep, rhomboid and laterally compressed, its depth 1.9 to 2.2 times in standard length. Head profile slightly convex. Eye moderate in size, its diameter 2 times in snout length; interorbital space flat, its width slightly greater than eye diameter. Preoperculum with a rough and scaleless hind margin. Jaw teeth in a narrow, villiform band bordered by an outer series of canine-like teeth; anteriorly 4 moderate-sized canine teeth in upper jaw and 6 in lower, jaw. Maxilla with a longitudinal denticulated ridge; 2 close-set nasal openings, the posterior one slit-like, ending close to



eye. Dorsal fin with 10 long, strong spines and 10 soft rays, 1st spine about 2/3 the length of the 2nd, the 2nd spine slightly longer than eye diameter, the 4th to 6th spines longest (1.3 to 1.6 times in head length); anal fin with 3 long, strong spines and 10 to 11 soft rays, the 3rd spine twice as long as eye diameter, anal fin base 1.4 to 1.6 times longer than largest anal fin ray; caudal fin very slightly forked with broadly rounded lobes. Scales 41 to 47 along lateral line; 6 to 8 scale rows between lateral line and 1st dorsal fin spine and 15 to 17 between lateral line and 1st anal fin spine; 5 scale rows on preoperculum and 6 on operculum.

Colour: silvery yellowish grey above, grading to lighter shades below; margins of scales darker; indistinct dark blotchy cross-bars on body; dorsal, anal and caudal fins orange/olive to yellow/orange.

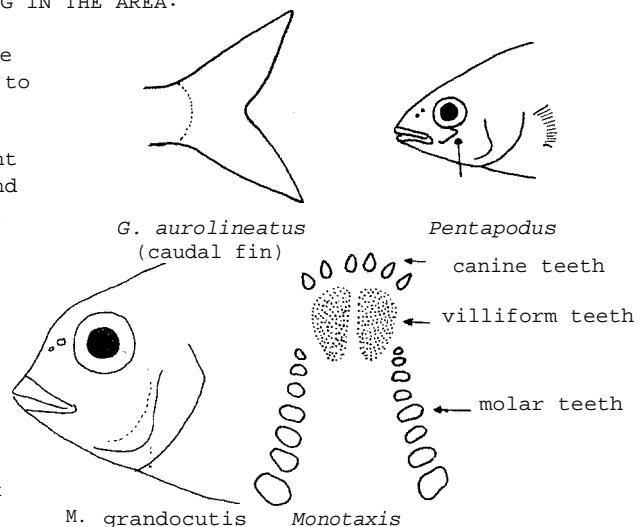
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gnathodentex aurolineatus: body considerably more slender, its depth 2.7 times in standard length (1.9 to 2.2 in *G. mossambicus*), spines in fins shorter and weaker, a more deeply forked caudal fin with pointed lobes, a round posterior nostril located well in front of eye, pearly white longitudinal stripes on body, and much smaller scales, ranging from 70 to 78 in lateral line (41 to 47 in *G. mossambicus*).

Gymnocranius species: surface of maxilla smooth, spines in fins considerably shorter and weaker, a round posterior nostril well in front of eye, and a more deeply forked caudal fin.

Pentapodus species: a blunt suborbital spine below eye.

Monotaxis species: head profile strongly convex above eye; also, molar teeth at hind end of each jaw.



SIZE:

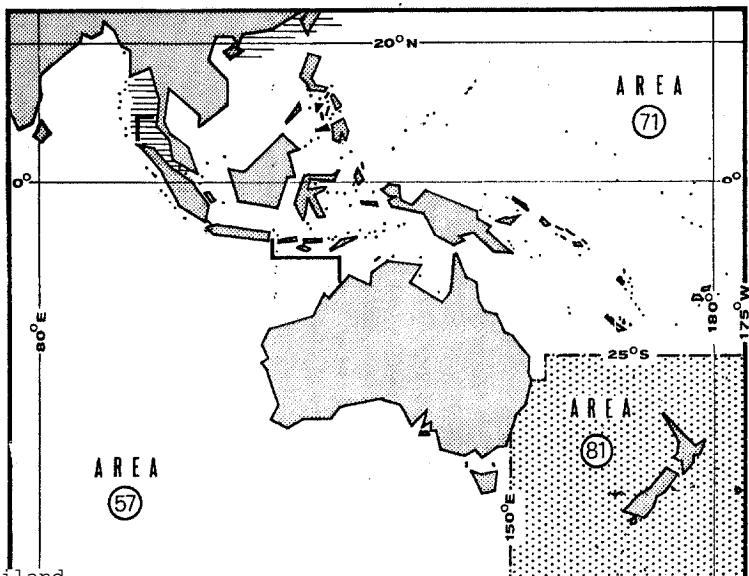
Maximum: 55 cm; common: 35 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Recorded only from western coasts of Malay Peninsula; also, northern Mozambique and South China and Japan.

Found on outer edge of continental shelf, from 140 to 180 m.

Feeds on bottom-living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Deeper trawling grounds off western Thailand and South China.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom longlines and bottom trawls.

Marketed mostly fresh.

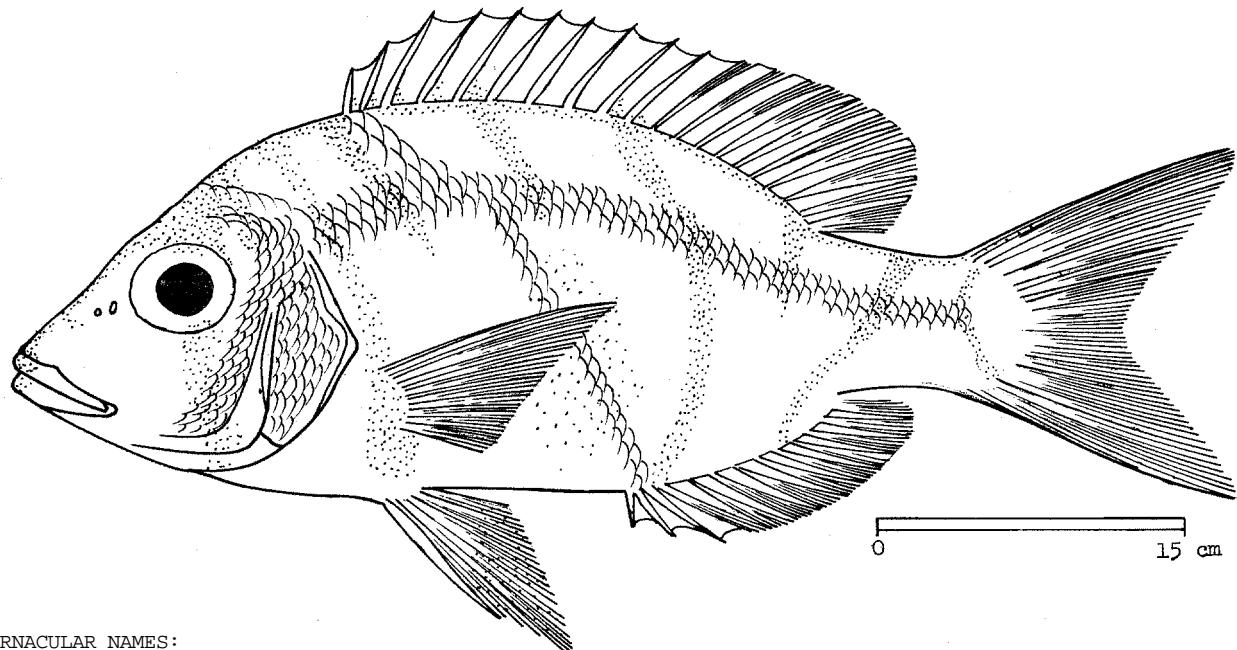
1974

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: PENTAPODIDAE

FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)*Gymnocranius griseus* (Schlegel, 1843)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Grey large-eye bream
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, laterally compressed, its depth 2.0 to 2.3 (young) or 2.5 to 2.8 (adults) times in standard length. Dorsal profile of head smoothly convex. Eye large, its diameter shorter than length of snout in young, 1.2 to 1.3 times in snout length in adults; interorbital space moderately wide, its width about equal to eye diameter. Preoperculum with rough hind edge and hind margin scaleless. 6 moderate canines in front of each jaw, conical teeth at sides and fine teeth within. Maxilla with a smooth surface; 2 closely set round nasal openings in front of eye. Dorsal fin with 10 spines and 10 soft rays, the 1st to 4th spines increasing in length, the length of 3rd spine greater than eye diameter; anal fin with 3 slender spines and 9 soft rays, length of 3rd spine about equal to eye diameter, anal fin base 2.1 to 2.5 times longer than longest anal fin ray; caudal fin forked with pointed tips. Scales 47 to 51 along lateral line; 6 between lateral line and 1st dorsal fin spine; 16 to 19 between lateral line and 1st anal fin spine; 4 to 5 rows on preoperculum, and 6 to 7 rows on operculum.

Colour: silvery grey/blue dorsally becoming silvery white ventrally; in young specimens, head and body with 5 to 8 irregular dark bands, 1 from between eyes through suborbital region to preoperculum, 1 from front of dorsal fin to hind margin of operculum and base of pectoral fin, and others on body and caudal peduncle; in adults, remnants of bands usually present.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

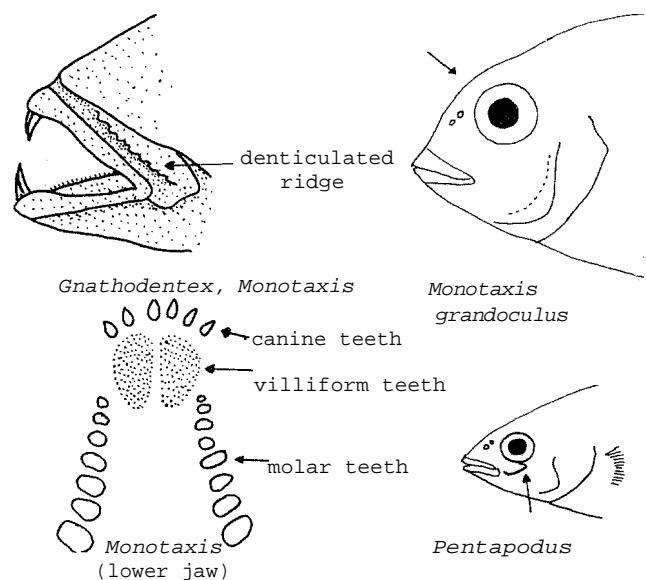
Gymnocranius elongatus: caudal fin very deeply forked, the median rays shorter than eye diameter, and with red hind margin.

Other *Gymnocranius* species: no dark cross-bands through eye and on body.

Gnathodentex species: a longitudinal denticulated ridge on maxilla; also, longer and stronger fin spines and a slightly forked caudal fin with broadly rounded lobes in *G. mossambicus*.

Pentapodus species: a blunt suborbital spine below eye.

Monotaxis species: head profile strongly convex above eye and a longitudinal, denticulated ridge on maxilla; also, molar teeth at hind end of each jaw.



SIZE:

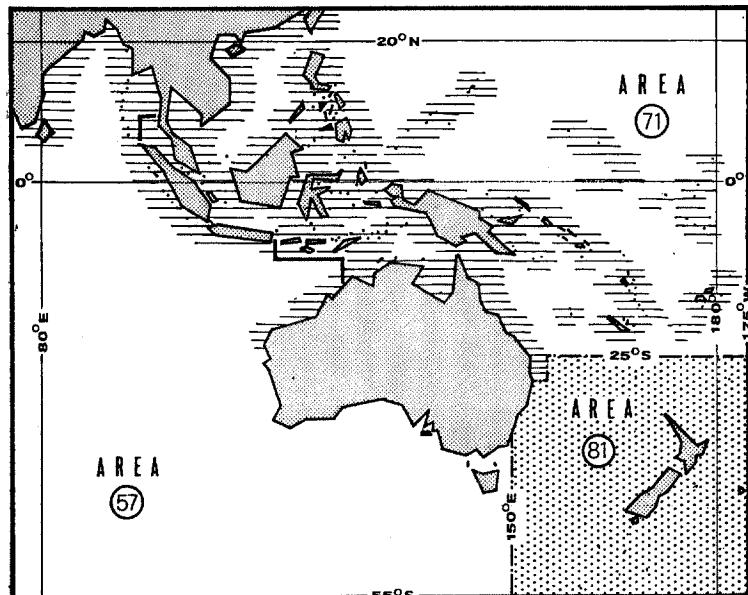
Maximum: 80 cm; common: 60 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area but perhaps not beyond northern coasts of Australia.

Found in coastal waters down to 80 m.

Feeds on bottom-living crustaceans and fishes.



PRESENT FISHING GROUNDS:

Coastal waters throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls, bottom longlines and handlines.

Marketed mostly fresh.

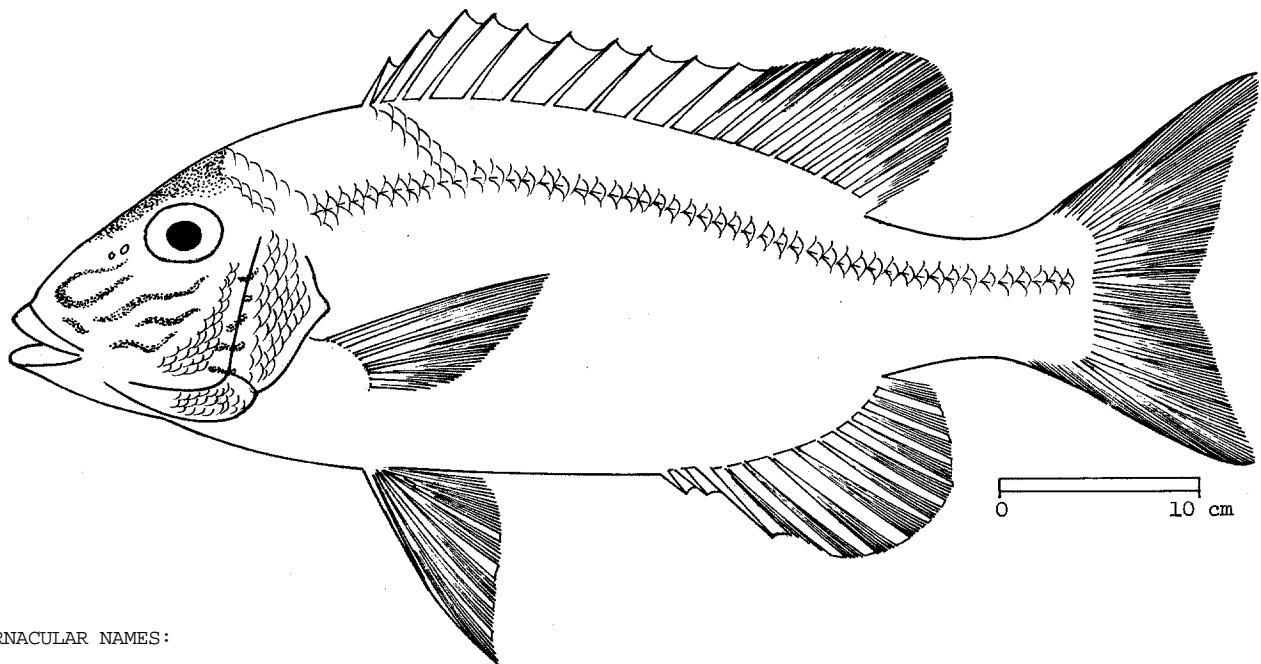
1974

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: PENTAPODIDAE

FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)*Gymnocranius robinsoni* (Gilchrist & Thompson, 1908)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Blue-lined large-eye bream
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, laterally compressed, its depth 2.3 to 2.7 times in standard length. Dorsal profile of head smoothly convex. Eye moderate in size, its diameter slightly shorter than length of snout; interorbital space wide, its width equal to or slightly greater than length of snout. Preoperculum with a rough hind edge and hind margin scaleless. 6 moderate canines in front of each jaw, conical teeth at sides and fine teeth within. Maxilla with a smooth surface. 2 close-set round nasal openings in front of eye. Dorsal fin with 10 spines and 10 to 11 soft rays, 1st to 4th spines increasing in length, the length of 3rd spine greater than eye diameter; anal fin with 3 slender spires and 9 to 10 soft rays, the length of 3rd spine slightly greater than eye diameter, anal fin base 1.8 times longer than longest anal fin ray; caudal fin forked with pointed lobes. Scales 45 to 49 along lateral line; 6 to 7 between lateral line and 1st dorsal fin spine; 4 to 5 rows on operculum.

Colour: silvery grey/blue above becoming silvery white below; cheeks, snout and operculum with many wavy blue lines; median fins orange/yellow.

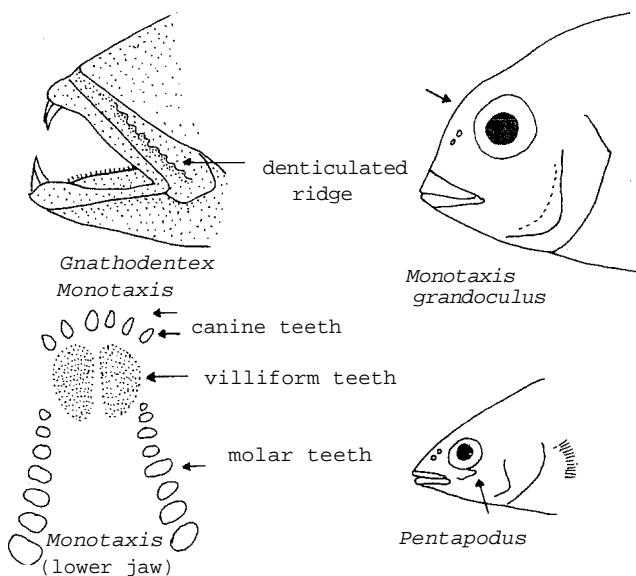
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Gymnocranius* species: no wavy blue streaks on head.

Gnathodentex species: a longitudinal denticulated ridge on maxilla; longer and stronger fin spines and a slightly forked caudal fin with broadly rounded lobes in *G. mossambicus*.

Pentapodus species: a blunt suborbital spine below eye.

Monotaxis species: head profile strongly convex over eye and a longitudinal, denticulated ridge on maxilla; also, molar teeth at hind end of each jaw.



SIZE:

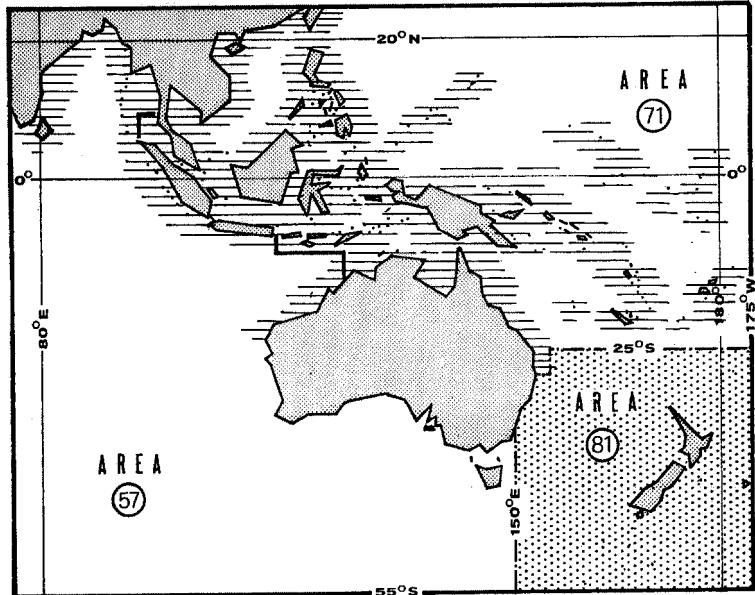
Maximum: 80 cm; common: 60 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area but perhaps not beyond northern coasts of Australia.

Found on coral and rocky reefs and in coastal waters down to 80 m.

Feeds on bottom-living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom longlines, handlines, gillnets and traps.

Marketed mostly fresh; also dried-salted.

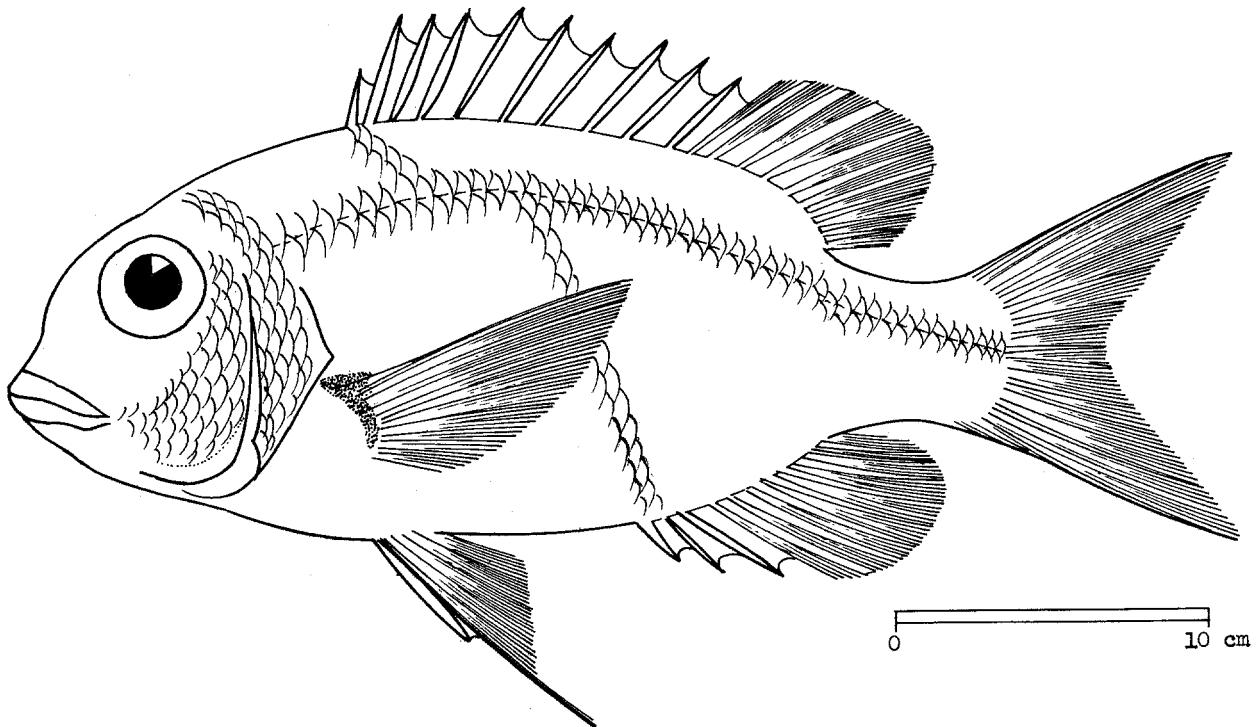
1974

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: PENTAPODIDAE

FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)*Monotaxis grandoculis* (Forsskål, 1775)

SYNONYMS STILL IN USE: None



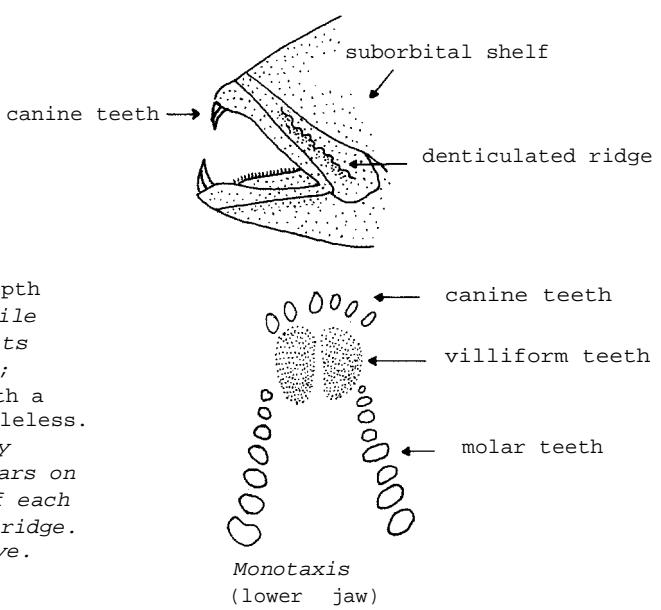
VERNACULAR NAMES:

FAO: En - Humpnose large-eye bream
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, laterally compressed, its depth 2.2 to 2.4 times in standard length. Head profile strongly convex in front of eye. Eye large, its diameter slightly shorter than length of snout; interorbital space wide, flat. Preoperculum with a roughly serrated hind edge and hind margin scaleless. A broad patch of small teeth in jaws anteriorly followed by a series of 6 to 7 round, flat molars on each side, and preceded by canines in front of each jaw. Maxilla with a longitudinal denticulated ridge. 2 close-set round nasal openings in front of eye.



Dorsal fin with 10 slender spines and 10 soft rays, the 1st spine half the size of 2nd, otherwise all spines nearly equal (2nd spine about equal to eye diameter; anal fin with 3 spines and 9 soft rays, the 3rd spine 1.2 to 1.3 times the eye diameter, anal fin base as long as longest anal soft ray; caudal fin forked with pointed tips. Scales 46 to 47 along lateral line; 5 scales between lateral line and 1st dorsal fin spine and 14 to 15 between lateral line and 1st anal fin spine; 5 to 6 rows of scales on preoperculum and operculum.

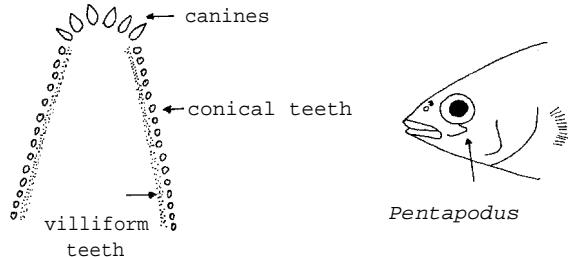
Colour: ground colour bluish grey above, paler below; centres of scales silvery; area over and around eye yellow or orange; median fins yellowish orange; occasionally a few dark brown scales on sides.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gymnocranius species: surface of maxilla smooth.

Gnathodentex species: no molar teeth in jaws.

Pentapodus: no molar teeth in jaws; a blunt postorbital spine below eye.



SIZE:

Maximum: 60 cm; common: 40 cm.

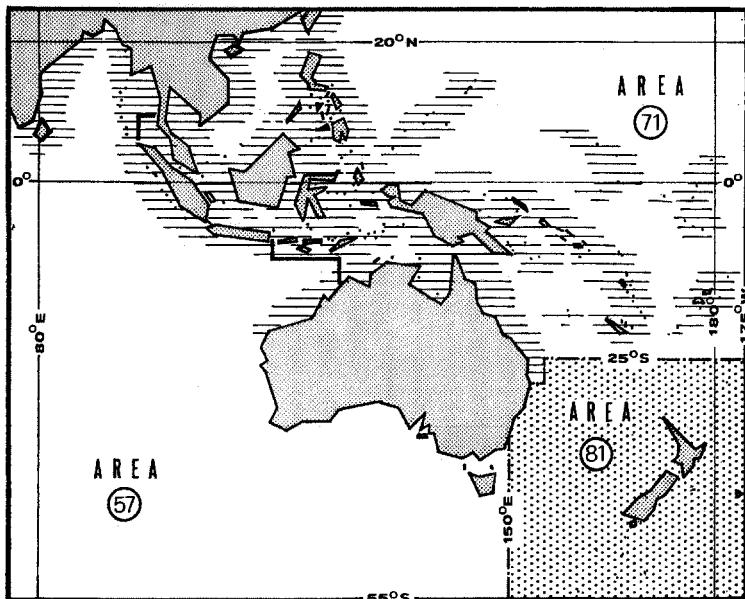
Gnathodentex
(lower jaw)

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, but perhaps not beyond northern coasts of Australia.

Found on coral reefs and in coastal waters, down to 60 m.

Feeds on bottom-living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with gill nets, traps, bottom longlines and handlines.

Marketed mostly fresh.