FAO SPECIES IDENTIFICATION SHEETS
FOR FISHERY PURPOSES

EASTERN INDIAN OCEAN Fishing Area 57
and WESTERN CENTRAL PACIFIC Fishing Area 71

VOLUME II

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 1974

FAD SPECIES IDENTIFICATION SWEETS
FOR FISHERY PURPOSES

EASTERN INDIAN OCEAN (Fishing Area 57)

and

WESTERN CENTRAL PACIFIC (Fishing Area 71)

Compiled by the Fishery Resources and Environment Division, FAO

Based on material prepared at the FAO/DANIDA Seminar on Fish Taxonomy
in South East Asia held at the Phuket Marine Biological Center,
Phuket, Thailand, 6 November to 8 December 1972

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VOLUME II

Bony Fishes: Families
from C (in part) to L

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 1974

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(fishing area 57) and Western Central
Pacific (fishing area 71). Volume 2

ISW, ISEW. Teleostei. Identification
sheets - taxonomy, geographic distribution,
fisheries, vernacular names.

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VOLUME II

C_2

CORY

1974

FAO SPECIES IDENTIFICATION SHEETS

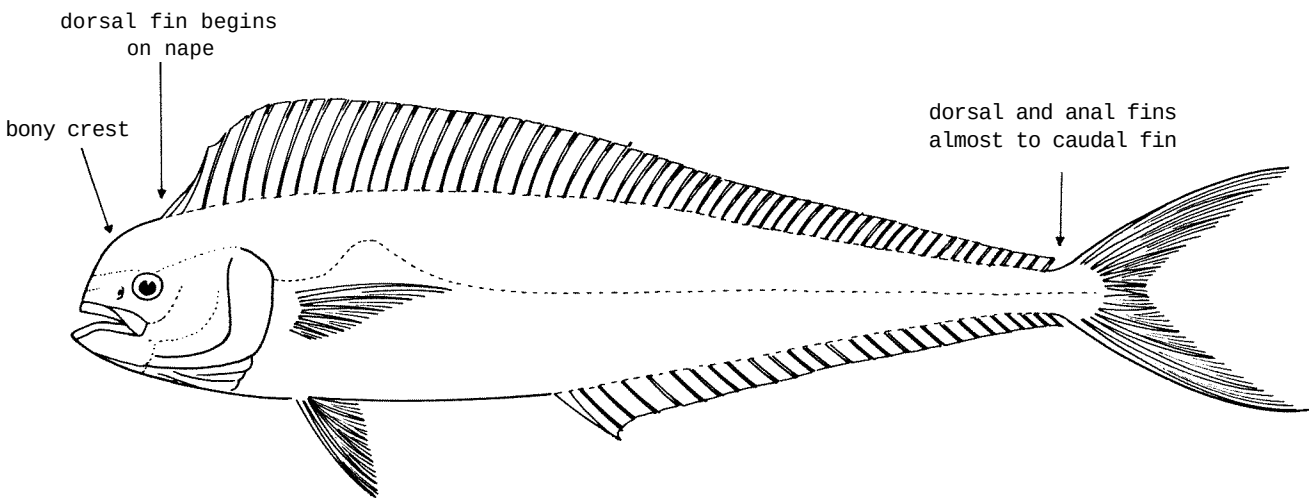
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

CORYPHAENIDAE

Dolphinfishes, 'dolphins'

Elongate compressed fishes. Scales small and cycloid (smooth to touch). Mouth large, with many fine teeth in bands. *Adults develop a bony crest on front of head* which is more pronounced in males. Lateral line curved upward above pectoral fin. *Dorsal and anal fins very long, continuing almost to caudal fin. Dorsal fin origin on nape;* anal fin origin at or before mid-point of body; caudal fin deeply forked; pelvic fins fit into a groove in body; *no spiny rays.*

Colour: in life very variable, *sides with golden hues* and back brilliant metallic greens and blues; many small, black spots on head and body. Specimens less than 15 cm have dark vertical bars.



SIMILAR FAMILIES OCCURRING IN THE AREA:

No other fishes have the following combination of characters: dorsal fin from nape almost to caudal fin and anal fin from about mid-point of body almost to caudal fin; no spiny rays; caudal fin deeply forked; pelvic fins present; adults with bony crest on front of head.

Key to Genera

Coryphaena only

List of Species occurring in the Area

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

Coryphaena equiselis	CORY Cory 2
Coryphaena hippurus	CORY Cory 1

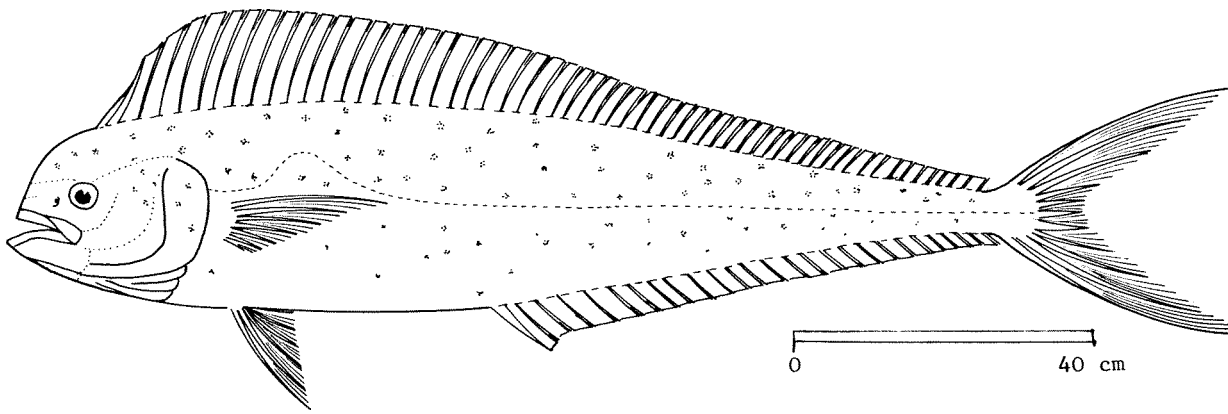
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CORYPHAENIDAE

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

Coryphaena hippurus Linnaeus, 1758

SYNONYMS STILL IN USE: None



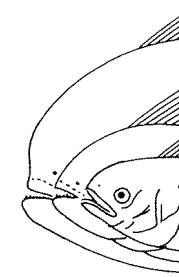
VERNACULAR NAMES:

FAO: En - Common dolphinfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate and compressed, *greatest body depth in adults Less than 25% of standard length;* young fish (up to 30 cm) have slender, elongate body with head profile slightly convex; in larger fishes (30 to 200 cm) head profile becomes vertical with development of bony crest, more pronounced in males. *A single dorsal fin extending from above eye almost to caudal fin,* with 55 to 65 rays; concave anal fin from anus almost to caudal fin; *pectoral fin more than half of head length;* caudal fin deeply forked. *Tooth patch on tongue small and oval;* bands of teeth on jaws, vomer and palatines.



head showing increase in steepness of profile with age

Colour: back brilliant metallic blue/green in life, after death fading to grey with green tinge; flanks silvery with golden sheen, and 1 row of dark spots or golden blotches running beside dorsal fin and l, 2 or more rows on and below lateral line, some scattered irregularly; dorsal and anal fins black, the latter with a white edge; pectoral fins pale; caudal fin silvery with golden sheen. In juveniles, only tips of caudal fin lobes white; pelvic fins pigmented.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Coryphaena equiselis: dorsal fin rays 48 to 55 (55 to 65 in C. *hippurus),* a broad and square tooth patch on tongue; greatest body depth more than 25% of standard length; pectoral fins about half of head length; anal fin convex in outline. In juveniles, entire margin of caudal fin white, but pelvic fins not pigmented.

SIZE:

Maximum: 200 cm; common: 70 to 100 cm.

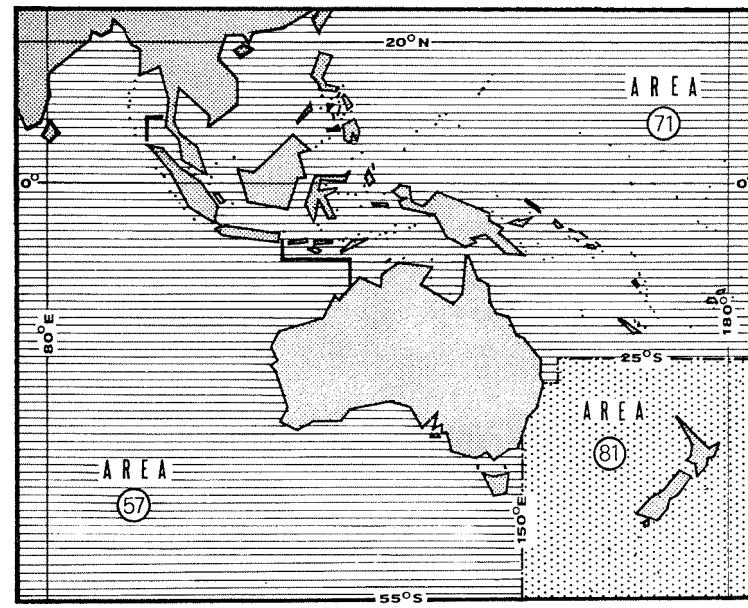
GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout whole area; also, all tropical and sub-tropical seas.

Pelagic, inhabiting open waters, but also approaching the coast; follows ships and forms small concentrations below floating objects.

Feeds mainly on fishes, but also on crustaceans and squids.

Breeds in the sea, probably approaching the coast as water temperatures rise.



PRESENT FISHING GROUNDS:

Mainly oceanic waters.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught by trolling and with floating traps; also occasionally with purse seines.

Marketed fresh; an important table fish in some areas.

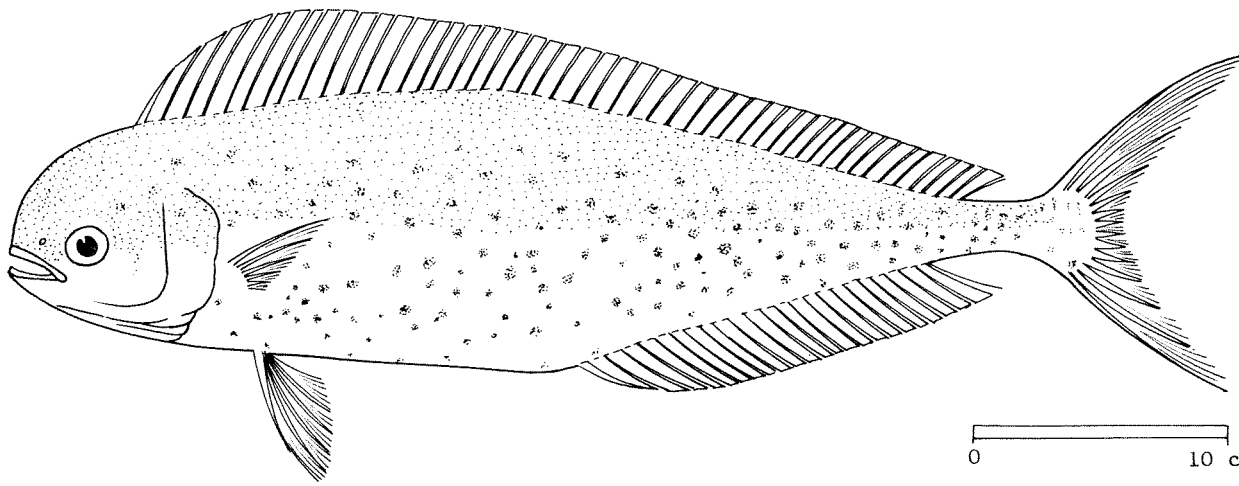
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CORYPHAENIDAE

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

Coryphaena equiselis Linnaeus, 1758

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Pompano dolphinfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate and compressed, *greatest body depth in adults more than 25% of standard length;* young fish (up to 30 cm) have head profile slightly convex; in larger fishes (30 to 200 cm) head profile becomes vertical with development of bony crest, more pronounced in males. *A single dorsal fin from just behind eye almost to caudal fin, with 48 to 55 rays; convex anal fin from anus almost to caudal fin; pectoral fin about half of head length;* caudal fin deeply forked. *Tooth patch on tongue broad and square;* bands of teeth on jaws, vomer and palatines.

head showing increase in steepness of profile with age

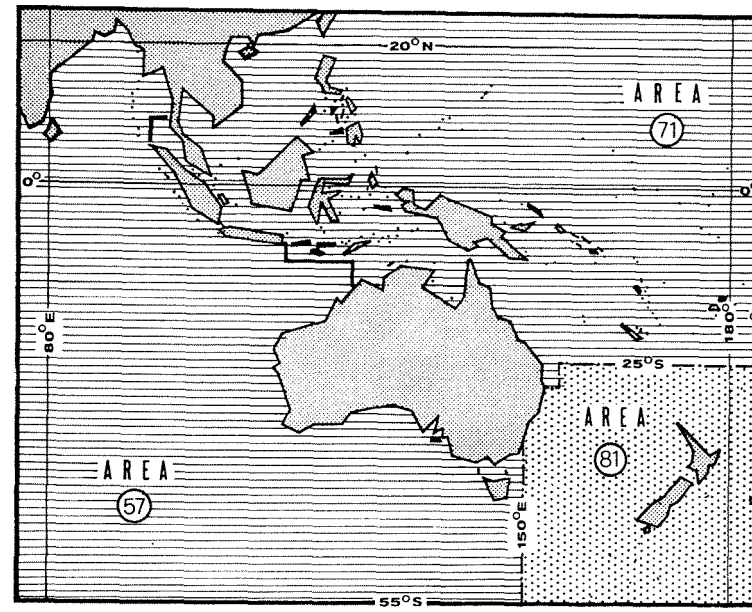
Colour: back brilliant metallic blue/green in life, fading rapidly after death to grey with green tinge; flanks silvery with golden sheen and numerous black spots; dorsal fin dark. In juveniles, entire margin of caudal fin white; pelvic fins not pigmented.

DISTINGUISHING CHARACTERS OF SIMILAR SPBCIES OCCURRING IN THE AREA:

Coryphaena hippurus: 55 to 65 dorsal fin rays (48 to 55 in *C. equiselis*); an oval tooth patch on tongue; greatest body depth less than 25% of standard length; pectoral fins more than half of head length; anal fin concave in outline. In juveniles, only caudal fin tips white, pelvic fins pigmented.

SIZE:

Maximum: 75 cm; common: 20 to 50 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Probably throughout area, but not always distinguished from *C. hippurus;* also, probably in most tropical and sub-tropical seas.

Pelagic, inhabiting open waters, but also approaching the coast. Probably resembles *C. hippurus* in following ships and concentrating below floating objects.

Feeds on small fish and squid.

PRESENT FISHING GROUNDS:

Mainly oceanic waters.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly by trolling and with floating lines; also occasionally with purse seines.

Marketed fresh.

CYNO

1974

FAO SPECIES IDENTIFICATION SHEETS

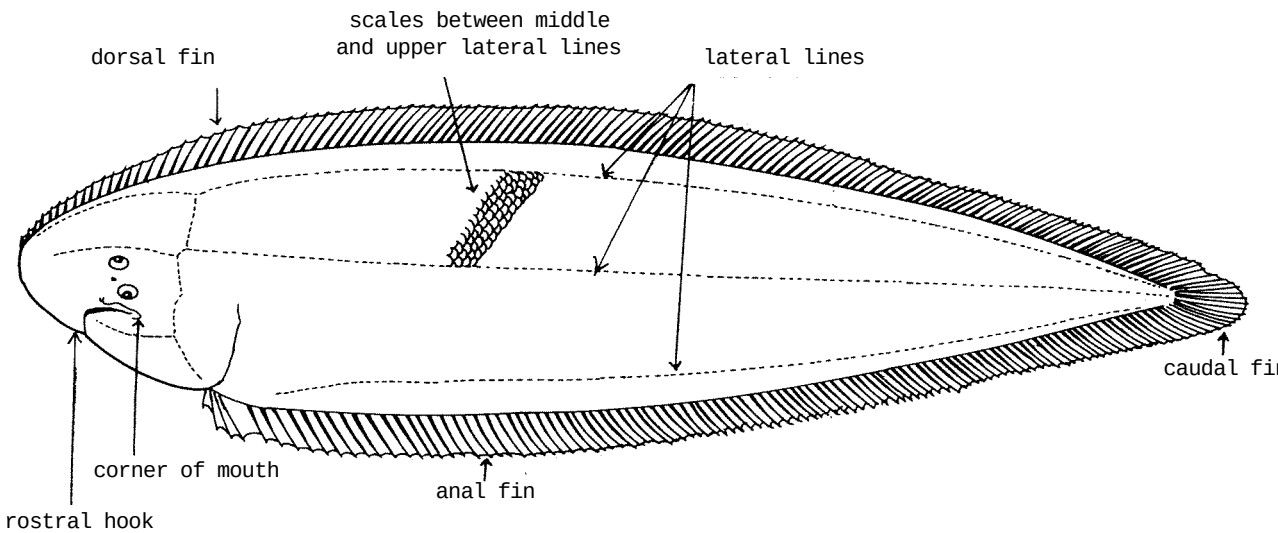
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

CYNOGLOSSIDAE

Tongue soles

Tongue-shaped flatfishes with *eyes on left side of body,* which is highly compressed and tapers posteriorly. Mouth asymmetrical, lips sometimes fringed, teeth minute and on blind side only; *rostral hook present below mouth. Preoperculum without free margin, hidden beneath skin. Dorsal fin reaching forward onto head; both,dorsal and anal fins joined to caudal fin; pectoral fins absent; only left pelvic fin present;* no spiny rays in dorsal and pelvic fins. Scales small, ctenoid (rough to touch) or cycloid (smooth); lateral lines variable, 0 to 3 on eyed side, 0 to 2 on blind side.

Colour: usually brownish, sometimes with indistinct cloudy patches or darker spots united into irregular cross-bands on eyed side, lighter on blind side; fins greyish. Colour highly variable according to substratum.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Soleidae: also have dorsal fin far forward on head and dorsal and anal fins joined to caudal fin, but eyes on right side of body (eyes on left side in Cynoglossidae).

Psettodidae: dorsal and anal fins separate from caudal fin, dorsal fin not extending forward onto head and spiny rays present in dorsal and pelvic fins (no spiny rays in Cynoglossidae).

Pleuronectidae, Bothidae: margin of preoperculum free and distinct (no free margin, preoperculum hidden beneath skin in Cynoglossidae).

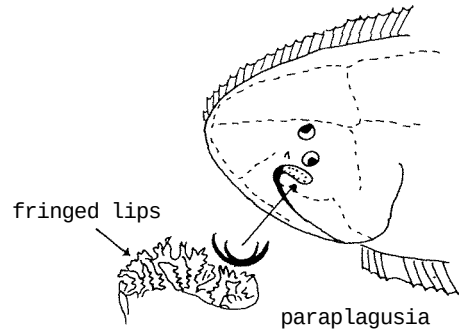
Key to Genera

1 a. Two or three lateral lines on eyed side

2 a. Lips fringed ..... *Paraplagusia*

2 b. Lips not fringed ..... *Cynoglossus*

1 b. No lateral line on eyed side ..... *Symphurus*



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

Cynoglossus abbreviatus	CYNO Cyno 1	*Paraplagusia bilineata*	CYNO Para 1
Cynoglossus bilineatus	CYNO Cyno 2	*Paraplagusia blochii*	
Cynoglossus borneensis			
Cynoglossus broadhurstti			
Cynoglossus carpenteri			
Cynoglossus cynoglossus	CYNO Cyno 3	*Symphurus australis**	
Cynoglossus dispar		*Symphurus-gilesi*	
Cyru)glossus gracilis		*Symphurus macrophthalmus*	
Cynoglossus kopsi (C. brachycephalus)		*Symphurus microrhynchus*	
Cynoglossus lida		*Symphurus regani*	
Cynoglossus lingua	CYNO Cyno 4	*Symphurus septemstriatus*	
Cynoglossus macrolepidotus	CYNO Cyno 5	*Symphurus trifasciatus*	
Cynoglossus riacrostomus	CYNO Cyno 6	*Symphurus woodmasoni*	
Cynoglossus maeulipinnis			
Cynoglossus monopus			
Cynoglossus puncticeps	CYNO Cyno 7		
Cynoglossus semifasciatus			
Cynoglossus suyeni			

Symphurus species occur at depths of 400 to 1 500 m and are thus unlikely in commercial catches.

CYNO Gyno 1

1974

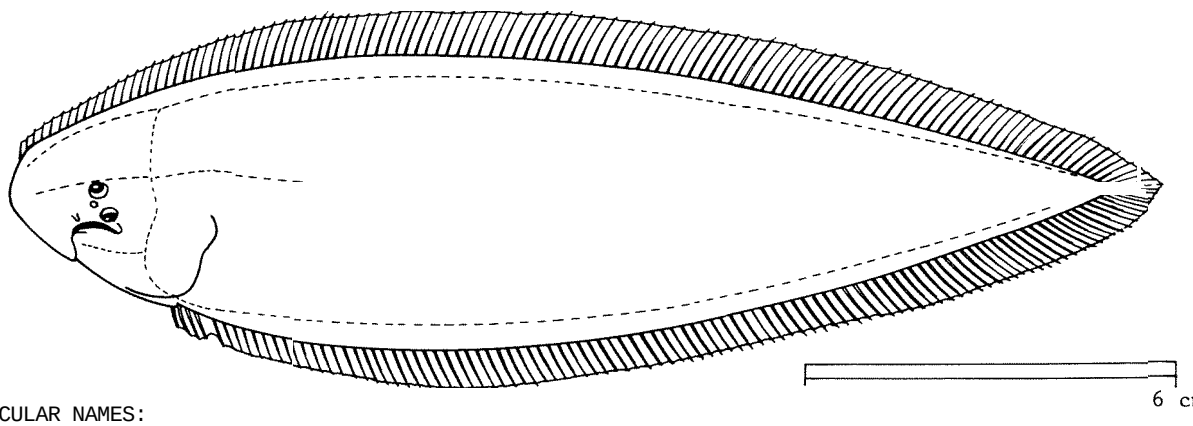
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus abbreviatus (Gray, 1834)

STILL IN USE: *Cynoglossus trigrammus* (Günther, 1862)



VERNACULAR NAMES:

FAO: En - Threelined tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on left side* of *body, with a small scaly space between them.* Snout obtusely pointed, rostral hook short, corner of mouth not reaching beyond lower eye, slightly nearer to gill opening than to tip of snout. 3 *lateral lines on eyed side, none on blind side. Scales ctenoid (rough to touch) on both sides of body,* small, 18 to 23 rows between upper and middle lateral lines on eyed side.

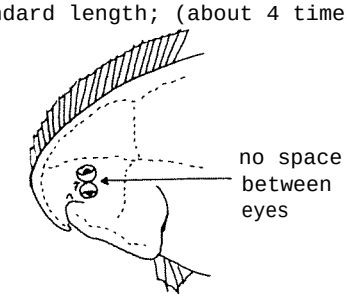
Colour: eyed side brown with dark blotches, blind side white.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus earpenteri and C. *suyeni:* also have 3 lateral lines on eyed side but snout acutely pointed; also, cycloid scales on both sides (*C. carpenteri*) or no space between eyes (*C. suyeni*).

Cynoglossus gracilis: body more slender (depth 5 times in standard length; (about 4 times in *C. abbreviatus).*

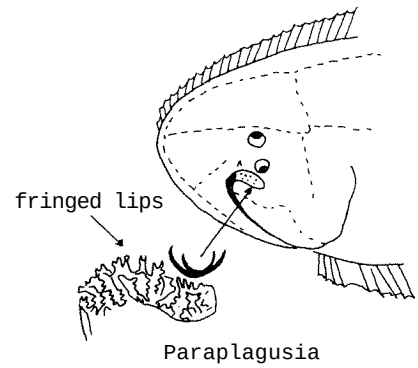
Cynoglossus kopsi, C. maeulipinnis: sometimes also have 3 lateral lines on eyed side, but no space between eyes.



C. kopsi

Other *Cynoglossus* species: only 2 lateral lines on eyed side (3 in *C. abbreviatus*).

Paraplagusia species: lips fringed.



Paraplagusia

SIZE:

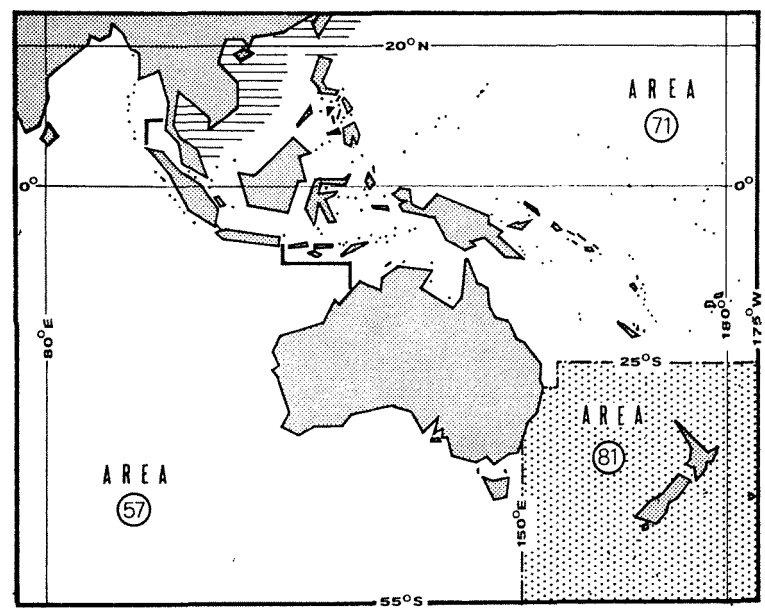
Maximum: 30 cm; common: 20 to 25 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Present only in the South China Sea, from the Gulf of Thailand to Taiwan.

Inhabits muddy and sandy bottoms of the continental shelf.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Trawling grounds on the continental shelf.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh or frozen; also dried-salted.

CYNO Cyno 2

1974

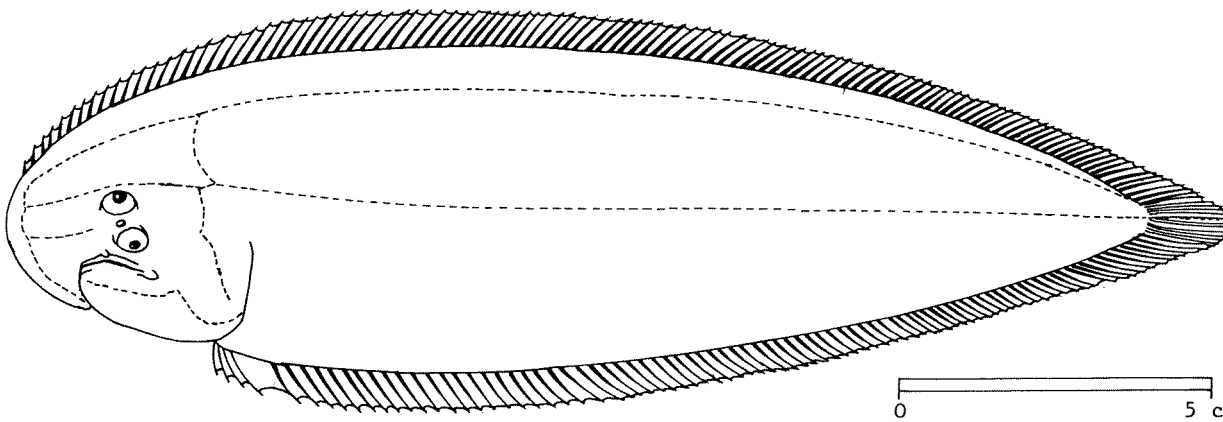
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus bilineatus (Lacepède, 1802)

SYNONYMS STILL IN USE : *Cynoglossus quadrilineata* (Bleeker, 1851)



VERNACULAR NAMES:

FAO: En - Fourlined tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate,with dorsal and anal fins joined to caudal fin. *Eyes on left side of body, with a small scaly space between them.* Snout rounded, rostral hook short, *corner of mouth reaching beyond lower eye, nearer to gill opening than to tip of snout. 2 lateral lines on eyed side and 2 on blind side. Scales ctenoid (rough to touch) on eyed side but cycloid (smooth) on blind side,* 13 to 16 rows between lateral lines on eyed side.

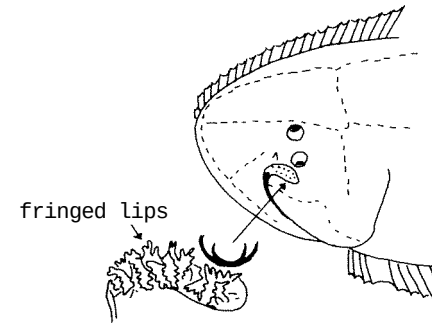
Colour: eyed side brown with an irregular dark blotch on gill cover, blind side white.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus dispar: also has 2 lateral lines on blind side but scales smaller, 18 to 20 scale rows between lateral lines on eyed side (13 to 16 in *C. bilineatus).*

Other *Cynoglossus* species: only 1 lateral line or none on blind side (2 on blind side in *C. bilineatus).*

Paraplagusia species: lips fringed.



Paraplagusia

SIZE:

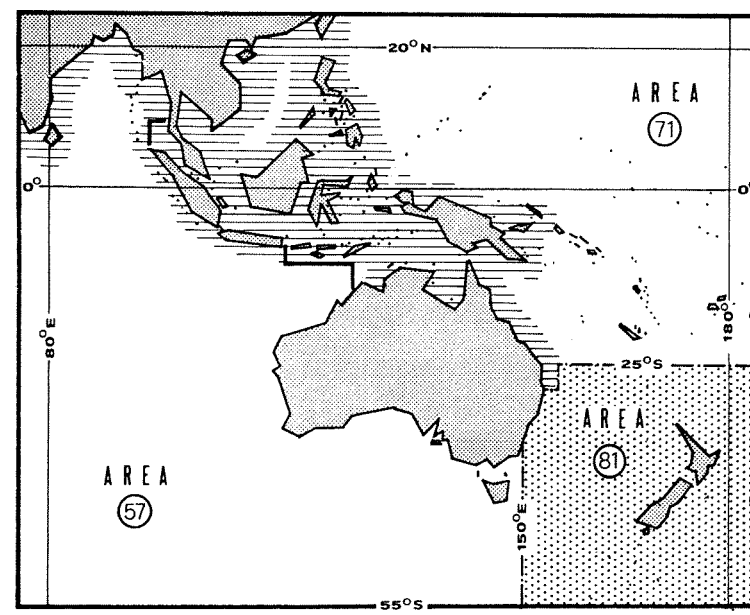
Maximum: 35 cm; common: 15 to 30 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of the northern part of area and southward to northern coast of Australia (but absent from waters to the east of New Guinea); also, westward to west coast of India.

Inhabits muddy and sandy bottoms of the continental shelf, down to about 80 m.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Trawling grounds on the continental shelf.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh and frozen; also dried-salted.

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1974

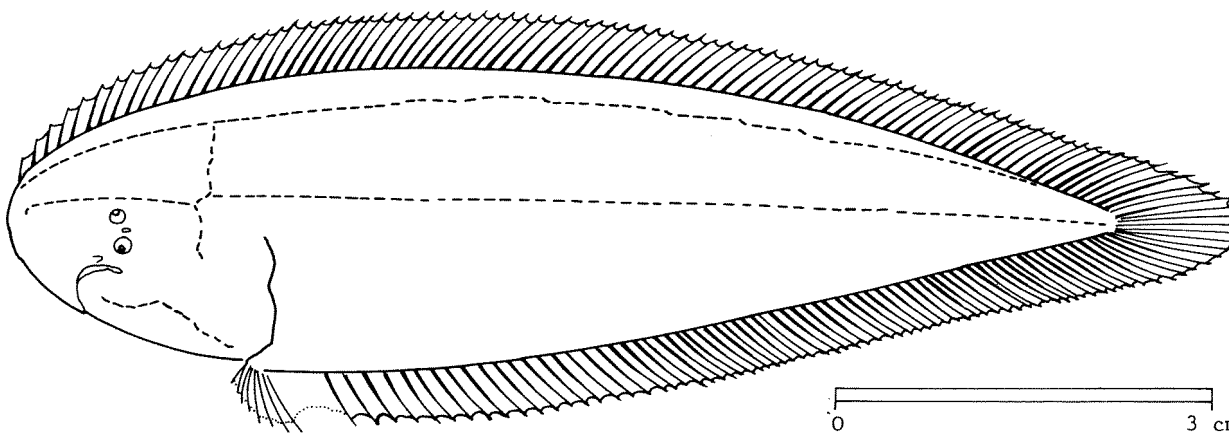
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus cynoglossus (Ham. Buch.,1822)

SYNONYMS STILL IN USE: *Cynoglossus sumatranus* (Sleeker, 1853)
Cynoglossus bengalensis (Sleeker, 1853)



VERNACULAR NAMES:

FAO: En - Bengal tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on left side of body, with a space between them.* Snout rounded, rostral hook short, corner of mouth not reaching beyond lower eye, nearer to tip of snout than to gill opening. *2 lateral lines on eyed side but none on blind side. Scales on both sides of body ctenoid* (rough to touch), 12 to 14 rows between lateral lines of eyed side.

Colour: eyed side brown/grey, with vague dark marbling.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus macrolepidotus: scales much larger (7 to 9 rows between lateral lines; 12 to 14 in *C. cynoglossus)* and cycloid (smooth) on blind side; also, snout pointed.

Cynoglossus punetieeps and *C. semifasciatus*: dark blotches forming irregular cross-bands on body.

Cynoglossus macrostomus, C. kopsi, C. monopus and *C. maculipinnis*: no space between eyes.

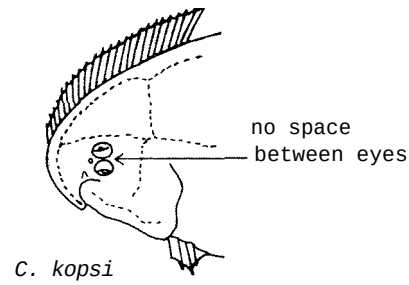
Cynoglossus lingua: body very elongate, its depth 6 times in standard length (about 4 times in *C. cynoglossus*).

Cynoglossus abbreviatus, C. carpenters and *C. suyeni*: 3 lateral lines on eyed side.

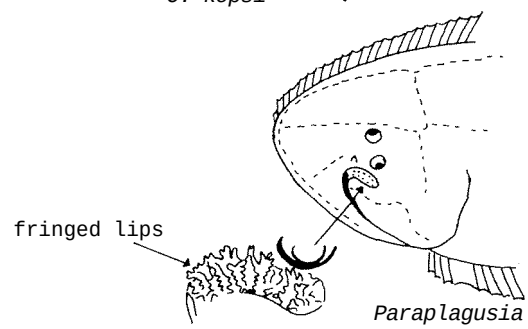
Cynoglossus lida: corner of mouth much nearer to gill opening than to tip of snout (nearer to snout in C. cynoglossus).

Other Cynoglossus species: 1 or 2 lateral lines on blind side of body (exceptions are species unlikely in commercial catches).

Paraplagusia species: lips fringed.



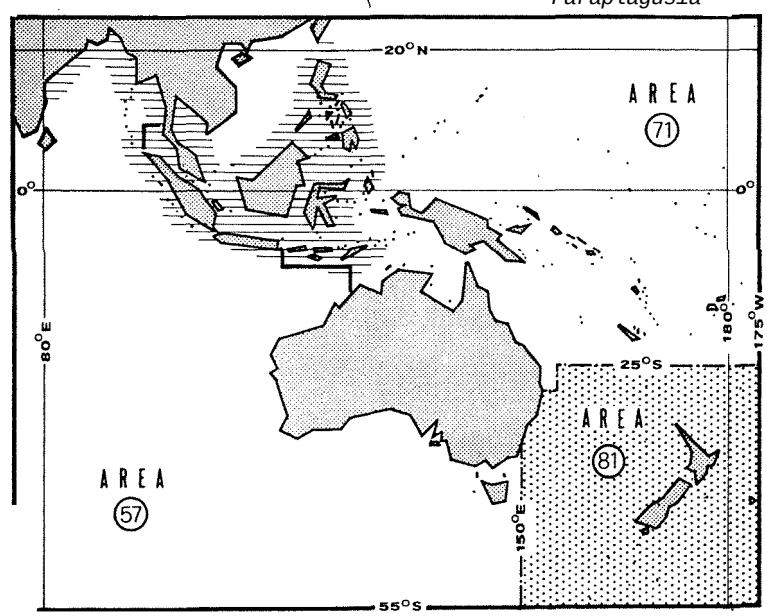
C. kopsi



Paraplagusia

SIZE:

Maximum: 20 cm; common: 10 to 15 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Northern part of area from northeastern coasts of India to the Philippines and Indonesia; not to New Guinea or Australia.

Inhabits muddy and sandy bottoms, often in shallow areas, including river estuaries and brackish waters.

Feeds mostly on bottom-living invertebrates.

PRESENT FISHING GROUNDS:

Trawling grounds on the continental shelf and in estuaries.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with beach seines.

Marketed mostly fresh or frozen; also dried-salted,

CYNO Cyno 4

1974

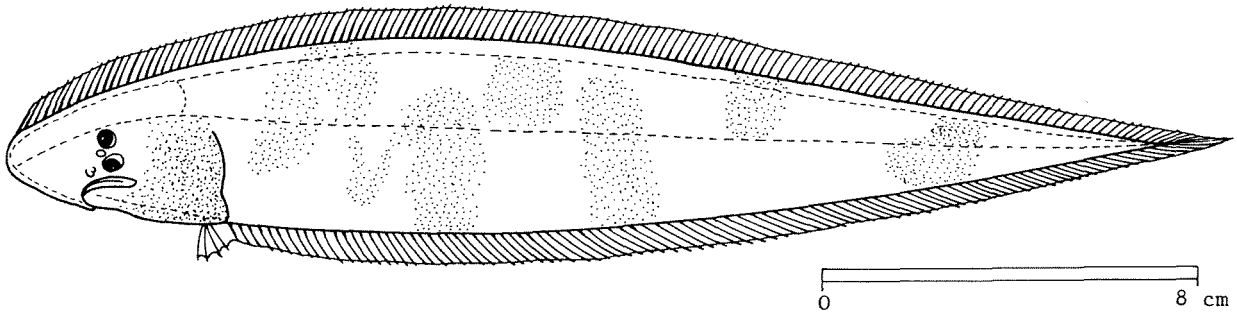
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus lingua (Ham. Buch.1822)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Long tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and *very elongate,* with dorsal and anal fins joined to caudal fin. *Eyes on left side of body, with a small space between them.* Snout obtusely pointed, rostral hook short, *corner of mouth reaching well beyond lower eye, much nearer to gill opening than to tip of snout.* 2 lateral lines on eyed side but none on blind side. *Scales ctenoid (rough to touch) on eyed side but cycloid (smooth) on blind side,* fairly large, only 11 to 12 rows between lateral lines on eyed side.

Colour: eyed side red/brown, sometimes with irregular brown/black patches, with a large black blotch on gill cover.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

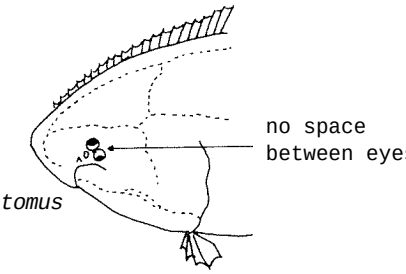
Cynoglossus gracilis, C. abbreviates, C. carpenteri and C. *suyeni:* three lateral lines on eyed side.

Cynoglossus cynoglossus, C. lida and C. *puncticeps:* body much less elongate (depth about 4 times in standard length; 6 times in *C. lingua*) and scales ctenoid on blind side.

Cynoglossus dubius, C. macrolepidotus, C. borneensis, C. bilineatus, C. dispar and *C. broadhursti:* also have cycloid scales on blind side, but body much less elongate (depth about 4 times in standard length; 6 times in *C. lingua*); also, 1 lateral line on blind side (*C. dubius*), or smaller scales (*C. macrostomus),* or 2 lateral lines on blind side (*C. bilineatus, C. dispar*).

Cynoglossus kopsi, C. macrostomus, C. monopus, C. suyeri and *C. maculipinnis*: no space between eyes.

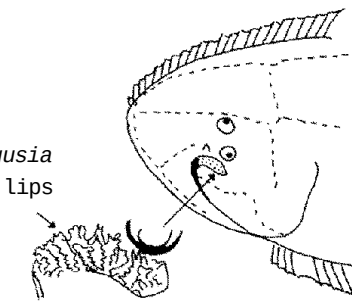
Paraplagusia species: lips fringed.



C. macrostomus

SIZE:

Maximum: 40 cm; common: 20 to 30 cm.

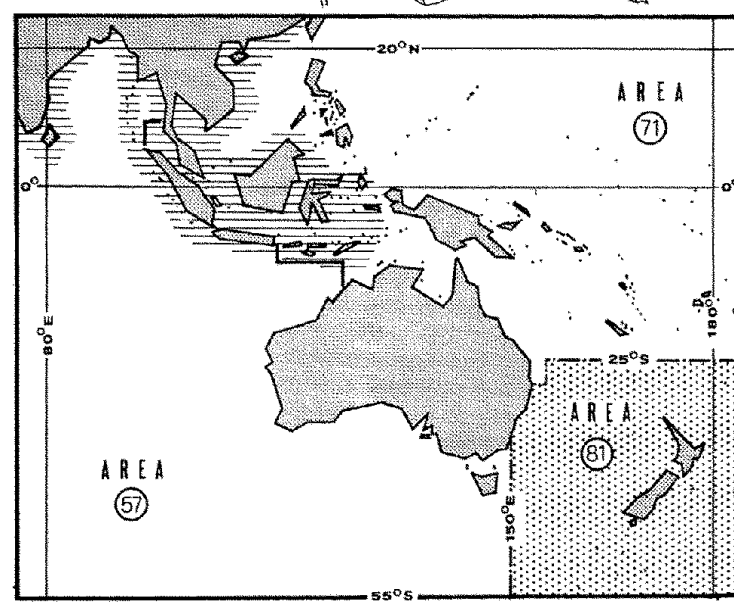


GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

From western coast of India to the Philippines and Indonesia; not to New Guinea or Australia.

Inhabits mainly shallow muddy and sandy bottoms of the continental shelf, entering estuaries.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Shallow trawling grounds of the continental shelf and estuaries.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh and frozen; also dried-salted.

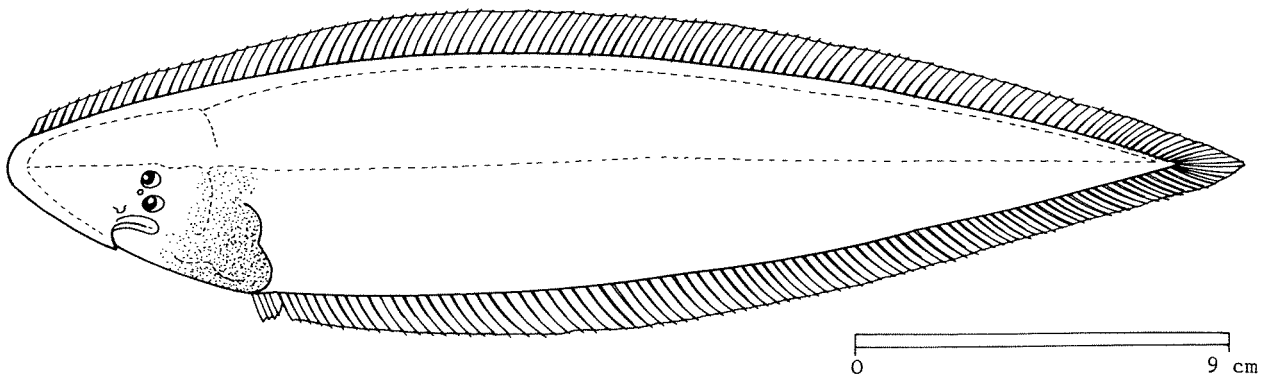
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus macrolepidotus (Bleeker, 1851)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Largescale tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on left side of body, with a small scaly space between them.* Snout obtusely pointed, rostral hook short, *corner of mouth reaching or almost reaching beyond lower eye, about midway between gill opening and tip of snout.* 2 lateral lines on eyed side but none on blind side. *Scales ctenoid (rough to touch) on eyed side but cycloid (smooth) on blind side, large,* 7 to 9 rows between lateral lines on eyed side.

Colour: eyed side uniform brown, with *a dark patch on gill cover,* blind side white.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus bilineatus, C. dubius and *C. dispar:* 2 lateral lines on blind side (*C. bilineatus, C. dispar)* or only 1 *(C. dubius)* (none in *C. macrolepidotus).*

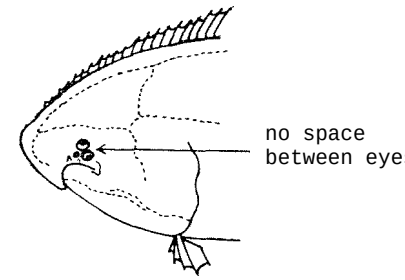
Cynoglossus lingua: also has dark patch on gill cover, but body much more elongate (depth 6 times in standard length; about 4.5 times in C. *macrolepidotus);* also, scales smaller.

Cynoglossus cynoglossus, C. abbreviatus and C. *puncticeps:* scales ctenoid on blind side (cycloid scales in *C. macrolepidotus).*

Cynoglossus kopsi, C. maculipinnis, C. monopus, C. macrostomus and *C. suyeni*: no space between eyes.

Other *Cynoglossus* species: scales much smaller (11 or more rows between lateral lines of eyed side; only 7 to 9 rows in *C. macrolepidotus*).

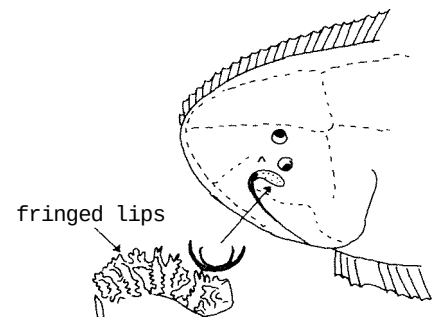
Paraplagusia species: lips fringed.



C. macrostomus

SIZE:

Maximum: 38 cm, common: 20 to 30 cm.



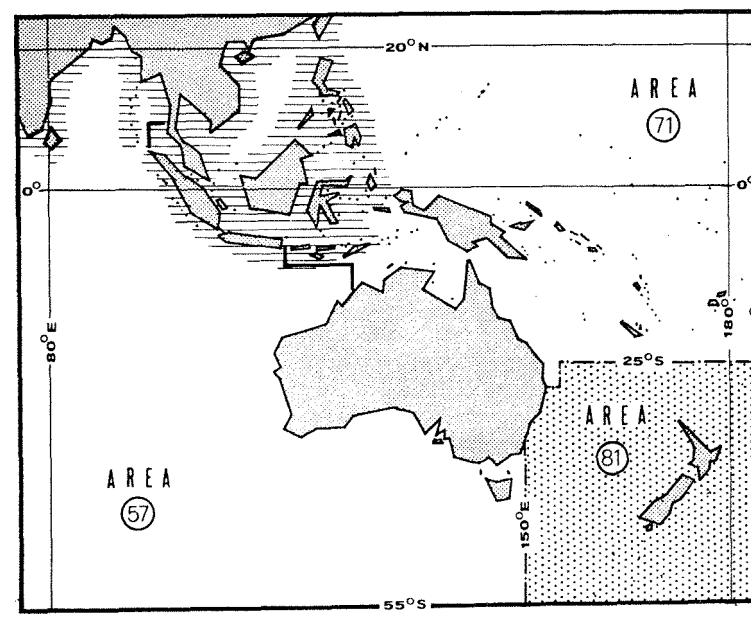
Paraplagusia

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

From western coasts of India to the Philippines and Indonesia; not to New Guinea or Australia.

Inhabits muddy and sandy bottoms of the continental shelf.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Trawling grounds on the continental shelf down to 125 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh or frozen; also dried-salted.

CYNO Gyno 6

1974

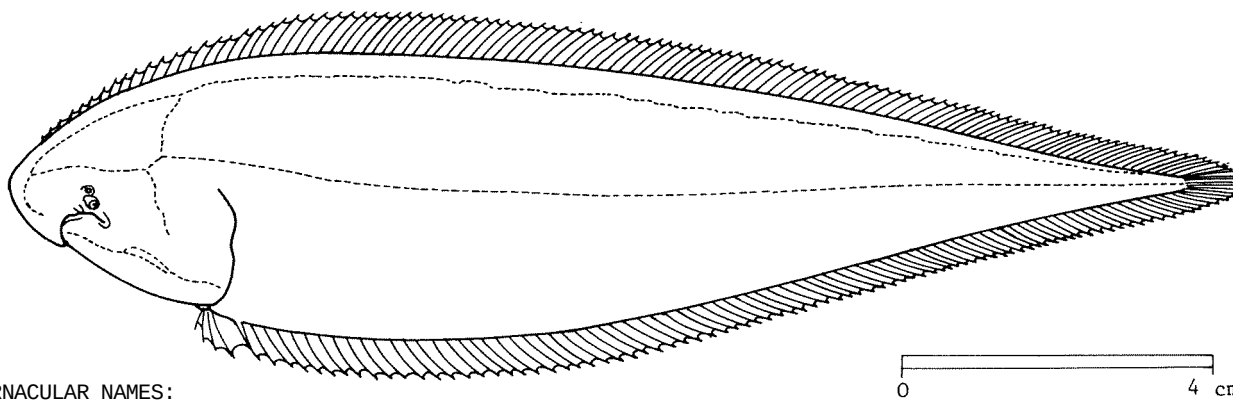
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GYNOGLOSSIDAE

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

Cynoglossus macrostomus Norman, 1928

SYNONYMS STILL IN USE: *Cynoglossus* luctosus Chabanaud, 1947



VERNACULAR NAMES:

FAO: En - Malabar tongue sole
Fr -
Sp -

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on left side of body, with no space between them.* Snout short and obtusely pointed, rostral hook short, *corner of mouth reaching well beyond Lower eye, nearer to tip of snout than to gill opening.* 2 lateral lines on eyed side but none on blind side. *Scales ctenoid (rough to touch) on both sides of body,* moderate-sized, 14 to 16 rows between lateral lines on eyed side.

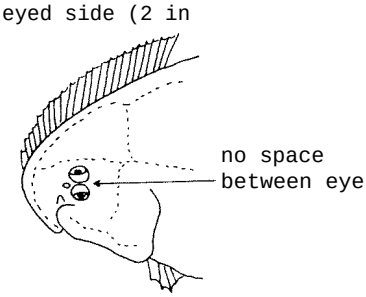
Colour: light brown on eyed side with dark brown mottling forming diffuse, irregular cross-bands; dorsal and anal fins grey/black.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus monopus: also has no space between eyes but eyes set on peduncular stalk (no peduncular stalk in *C. macrostomus).*

Cynoglossus suyeni: also no space between eyes, but 3 lateral lines on eyed side (2 in *C. macrostomus);* also, snout acutely pointed.

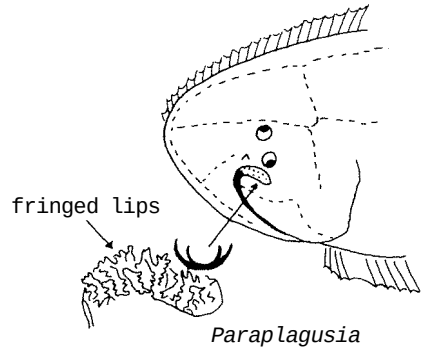
Cynoglossus kopsi and C. *maculipinnis: also* have no space between eyes, but scales larger (7 to 12 rows between lateral lines on eyed side in *kopsi,* 10 to 13 in *maculipinnis);* also upper lateral line extending along body to varying distances and a lower, third, lateral line rarely present.



C. kopsi

Other *Cynoglossus* species: a distinct space between eyes (no space in *C. macrostomus*).

Paraplagusia species: lips fringed,



Paraplagusia

SIZE:

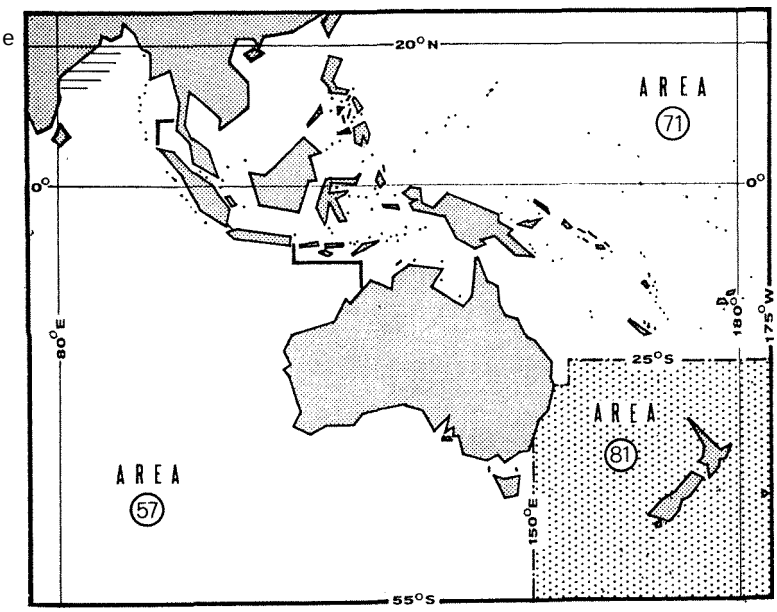
Maximum: 15 cm; common: 13 to 15 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Restricted to the coast of India; more common on the west coast where it is the object of an important fishery.

Inhabits shallow muddy and sandy bottoms of the continental shelf, down to 25 m; also found in midwaters in certain seasons of the year.

Feeds predominantly on bottom-living invertebrates, especially worms.



PRESENT FISHING GROUNDS:

Trawling grounds of the continental shelf, mainly between depths o£ 15 and 25 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh or frozen; also dried-salted.

CYNO Cyno 7

1974

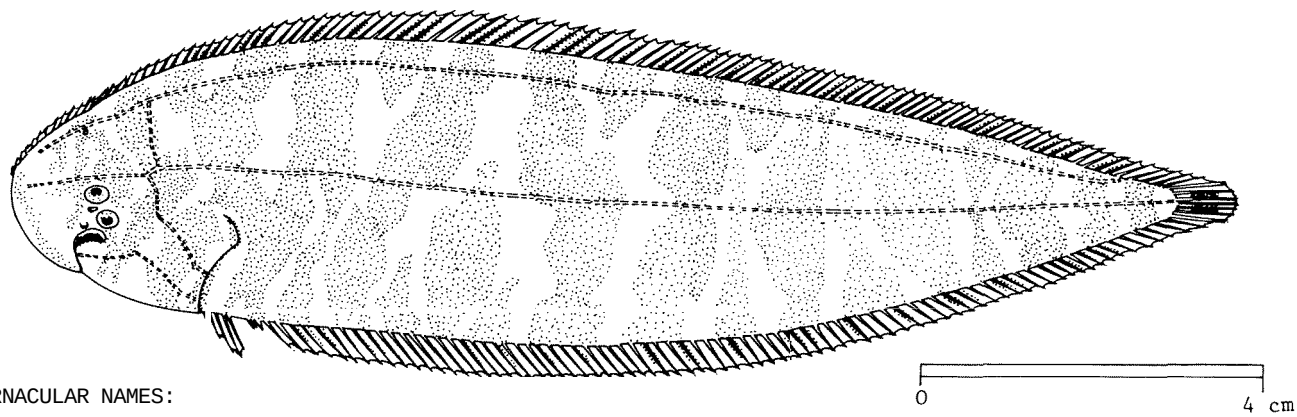
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Cynoglossus puncticeps (Richardson, 1846)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Speckled tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on Left side of body, with a narrow space between them.* Snout rounded, rostral hook short, corner of mouth not reaching beyond lower eye, a little nearer to tip of snout than to.gill opening, 2 *Lateral lines on eyed side, none on blind side. Scales ctenoid (rough to touch) on - both sides of body,* 15 to 19 rows between lateral lines on eyed side.

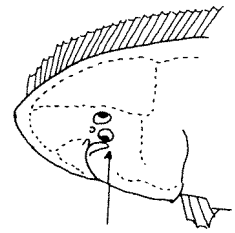
Colour: eyed side yellow/brown, with very *distinct* irregular *dark brown blotches,* often forming irregular cross-bands; some rays of dorsal and anal fins dashed with dark brown.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus *semifasciatus:* scales larger (11 to 14 rows between lateral lines on eyed side; 15 to 19 in C. *puncticeps).*

Cynoglossus lida: corner of mouth much nearer to gill opening than to tip of snout (corner nearer to tip of snout than to gill opening in C. *puncticeps);* also scales larger (12 to 15 rows between lateral lines; 15 to 19 in C. *puncticeps)* and no blotches on eyed side.

Cynoglossus *broadhursti:* scales cycloid (smooth) on blind side (ctenoid (rough) in *C. puncticeps)* and larger (12 to 14 rows between lateral lines on eyed side, 15 to 19 in *C. puncticeps).*

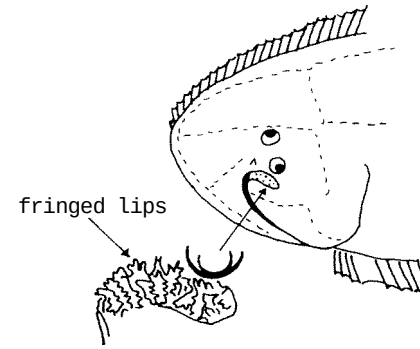


Mouth corner nearerto gill opening than to snout tip

C. lida

Other Cynoglossus species: no blotches on eyed side.

Paraplagusia species: lips fringed.



Paraplagusia

SIZE:

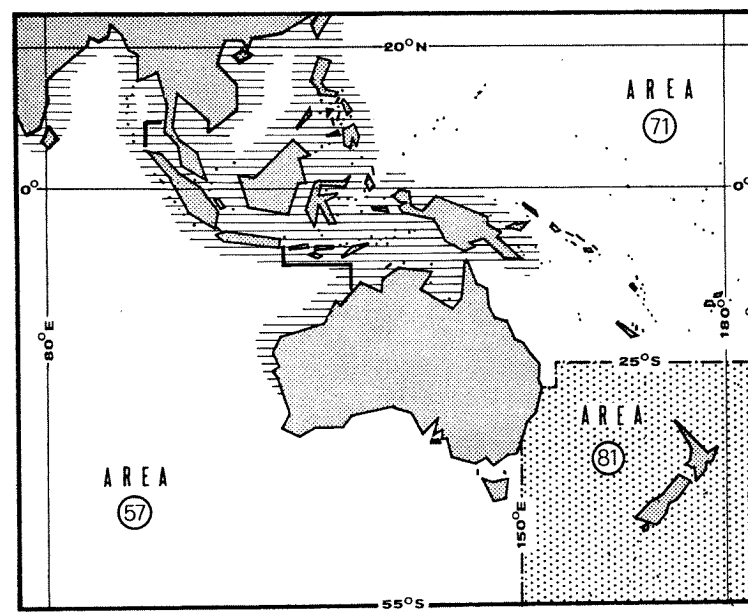
Maximum: 18 cm; common: 8 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southwards to the northwestern coast of Australia.

Inhabits muddy and sandy bottoms on the continental shelf; known from brackish waters as well.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Trawling grounds of the continental shelf, down to 140 m; also in estuaries.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls and beach seines.

Marketed mostly fresh and frozen; also dried-salted.

CYNO Para 1

1974

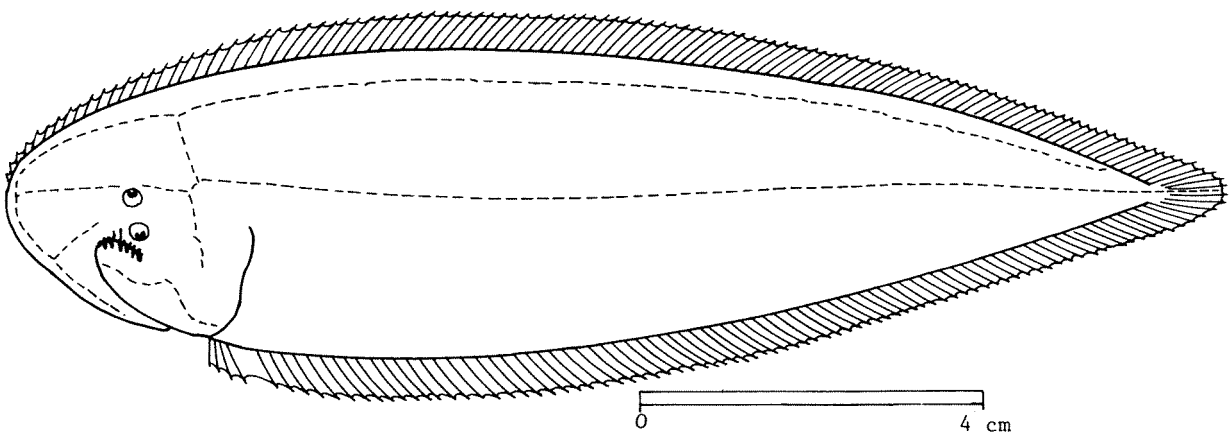
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

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

Paraplagusia bilineata (Bloch, 1784)

SYNONYMS STILL IN USE: *Paraplagusia marmorara* (Bleeker, 1.851)



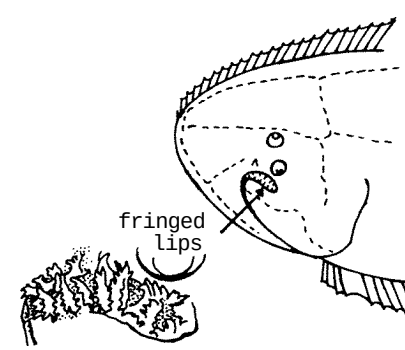
FAO: En - Doublelined tongue sole
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. *Eyes on Left side of body, with a scaly space between them.* Snout rounded, *rostral hook long and reaching beyond lower eye;* corner of mouth not reaching beyond lower eye, nearer to gill opening than to tip of snout. *Mouth fringed with tentacles.* 2 lateral lines on eyed side of body but none on blind side. Scales ctenoid (rough to touch) on both sides of body.

Colour eyed side brown, sometimes spotted or marbled with darker patches, blind side tinged with yellow.

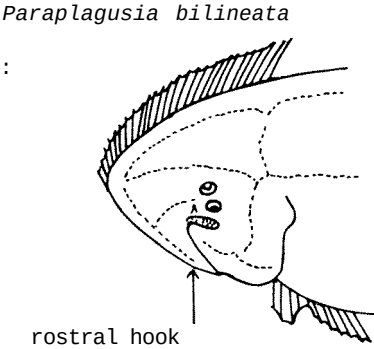


Paraplagusia bilineata

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Paraplagusia blochii: rostral hook shorter (not reaching beyond lower eye).

Cynoglossus species: no fringe of tentacles on lips.



P. blochii

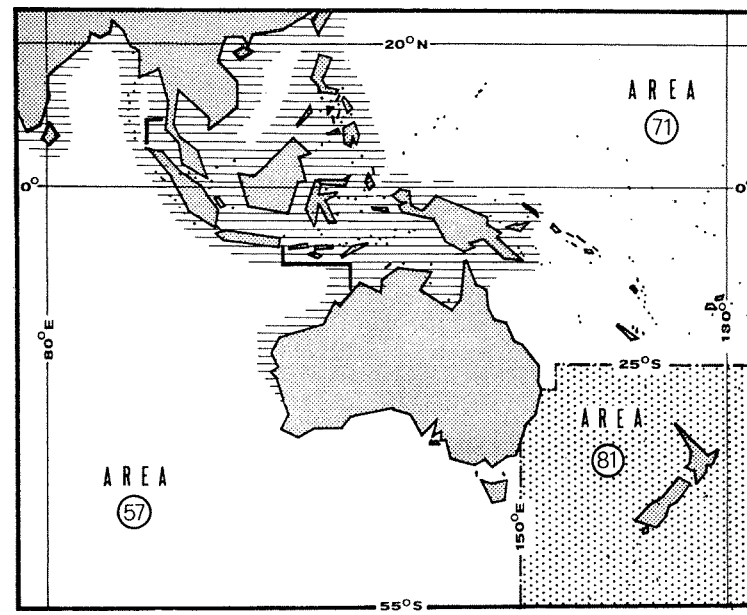
SIZE: Maximum: 30 cm; common: 15 to 25 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southward to northern coast of Australia.

Inhabits muddy and sandy bottoms of the continental shelf, often found in shallow and even estuarine (brackish) waters.

Feeds predominantly on bottom-living invertebrates.



PRESENT FISHING GROUNDS:

Trawling grounds of the continental shelf.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls, occasionally also with beach seines.

Marketed mostly fresh or frozen;also dried-salted.

click for previous page

D
E

DREP

1974

FAO SPECIES IDENTIFICATION SHEETS

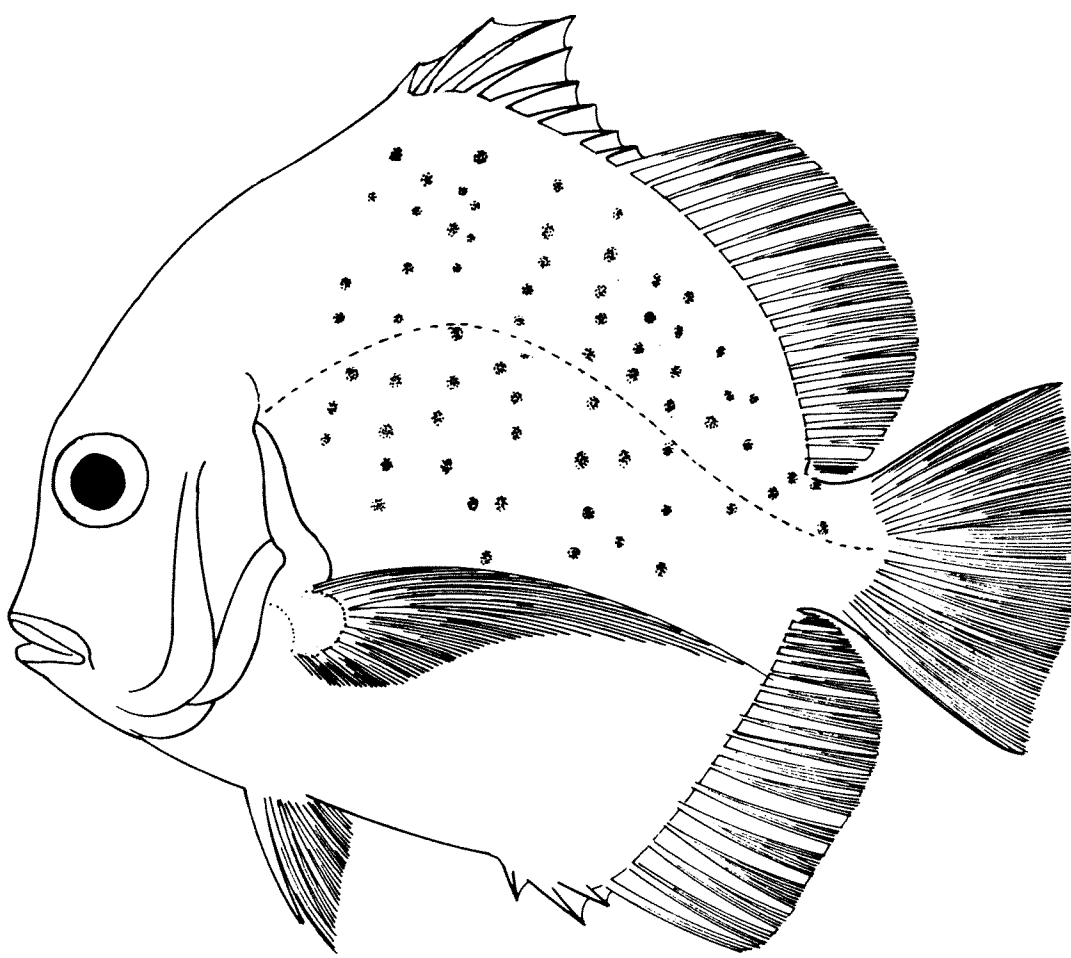
FISHING AREAS 57, 71
(E Ind. Ocean)
(W Cent. Pacific)

DREPANIDAE

Sicklefishes
(placed by some authors, together with the Platacidae, in the family Ephippidae)

Body very deep and strongly compressed; head short, with parabolic profile; scales absent in front of eye and on preoperculum, the latter with a denticulate lower border. *Mouth very small, terminal and protractile, forming a downward-pointing tube;* teeth small and setiform. Dorsal fin with 8 to 10 spines (the 1st small, procumbent, visible only in young), *the spinous part separated from the soft part by a deep notch. Pectoral fins long, falcate; pelvic fins present;* anal fin with 3 spines; hind margin of caudal fin rounded. Scales of moderate size, finely ciliated, extending onto dorsal and anal fins; lateral line strongly arched.

Colour: silvery grey above, silvery white below, with dusky spots or grey vertical bars.



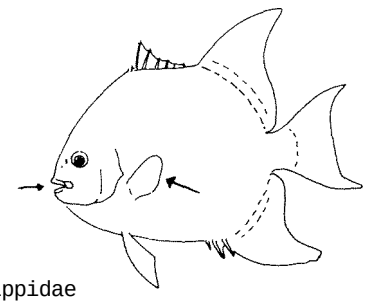
SIMILAR FAMILIES OCCURRING IN THE AREA:

Ephippidae: pectoral fins short, not falcate; also, mouth not protractile.

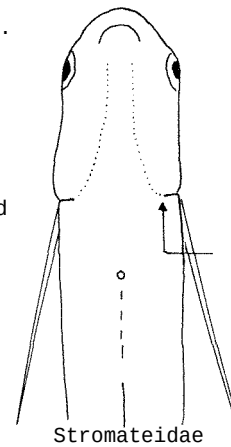
Platacidae: pectoral fins short, not falcate; also, 5 to 9 spines in dorsal fin, increasing in length posteriorly and not separated from soft part of fin by a notch.

Stromateidae (deep-bodied species): no pelvic fins in adults and gill membranes broadly united to isthmus (gill openings mere lateral slits).

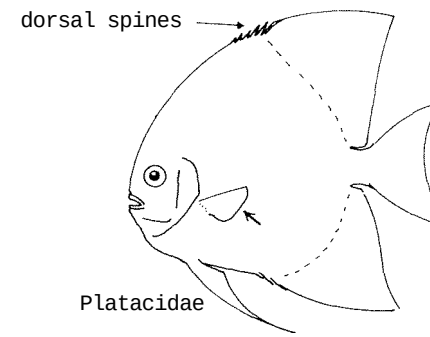
Scatophagidae: 4 anal fin spines and pectoral fins small and rounded; also, snout profile concave.



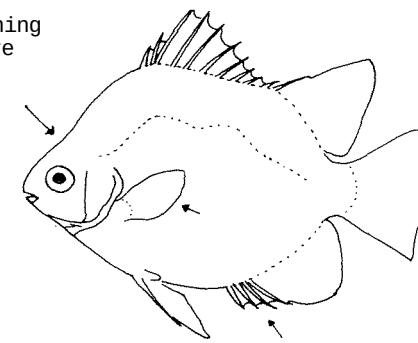
Ephippidae



Stromateidae
(underside)



Platacidae



Scatophagidae

Key to Genera

Drepane only

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

Drepane longimanna
Drepane punctata DREP Drep 1

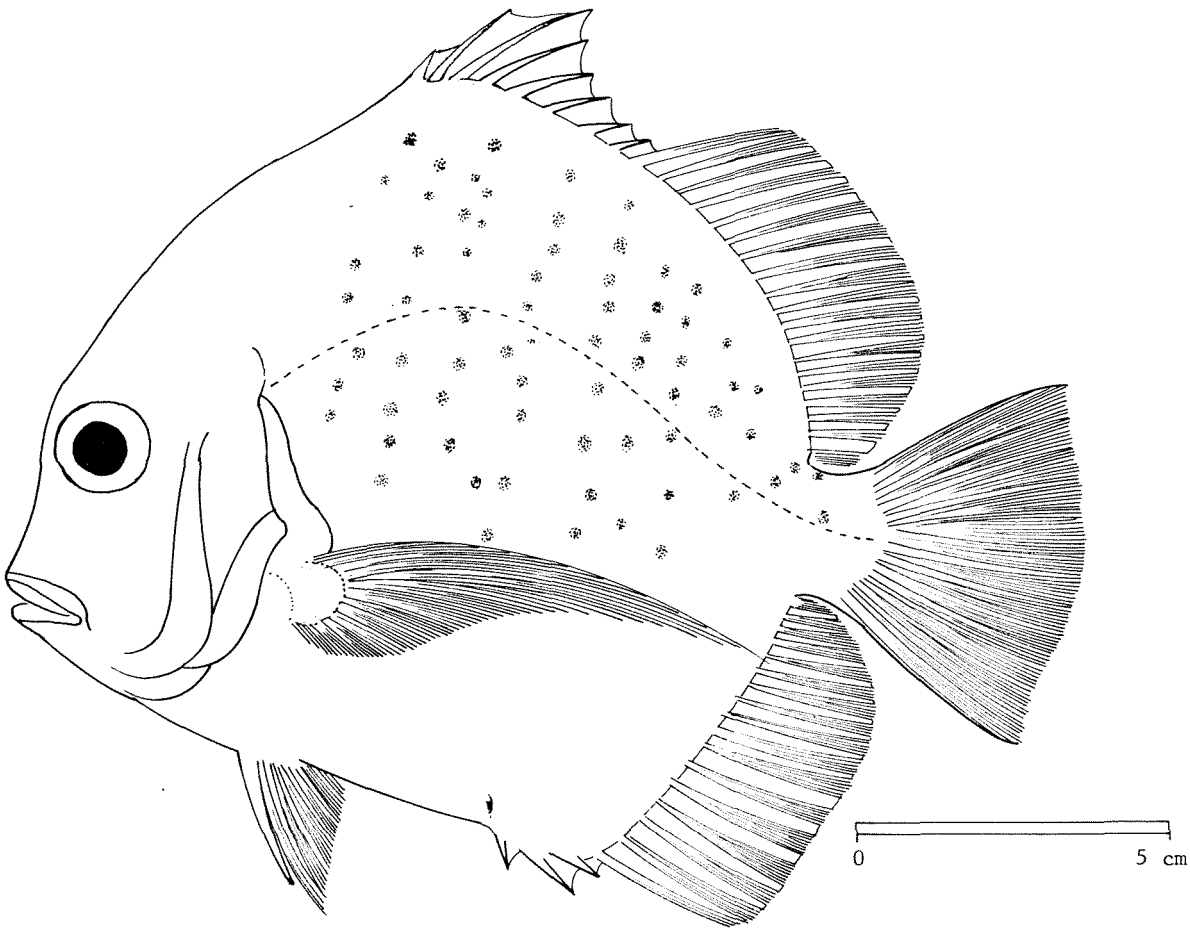
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: DREPANIDAE

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

Drepane punctata (Linnaeus, 1758)

SYNONYMS STILL IN USE: *Chaetodon punctata* Linnaeus, 1758



VERNACULAR NAMES:

FAO: En - Spotted sicklefish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Head and body deep, strongly compressed. Mouth protractile; teeth pointed, slender, crowded together; *fringe of 4 to 6 short cirri ventrally on lower jaw* (absent in specimens 10 or more inches in total length. *Dorsal fin with 8 to 9 spines and 19 to 22 soft rays;* the 4th dorsal spine the longest;

anal fin with 3 spines and 17 to 19 soft rays; pectoral fins long and pointed, reaching to base of caudal fin.

Colour: generally silvery with greenish tinge on upper half of body *and a large orange spot just above the base of the pectoral fin; 4 to 11 vertical bands of small black spots on upper half of body;* margins of dorsal, anal, caudal and pelvic fins greyish black.

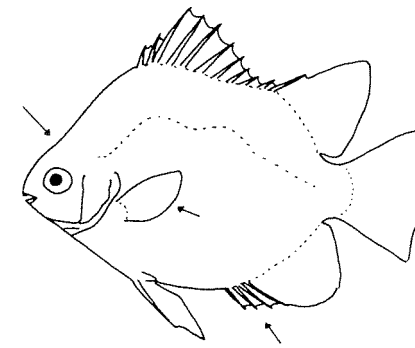
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

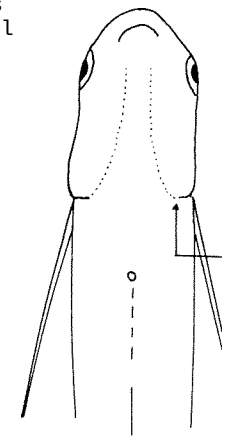
Drepane tongimanna: 4 to 9 vertical grey bars on upper half of sides, but no spots; also, 8 dorsal fin spines (9 in *D. punctata).*

Ephippus species: pectoral fins short, not falcate; mouth not protractile.

Scatophagidae: 4 anal fin spines, pectoral fins small and rounded; also, head profile concave above snout.

Platax species: pectoral fins short, not falcate; spines of dorsal fin increasing in length posteriorly; no notch between spinous and soft parts of dorsal fin.





Stromateidae
(underside)

Scatophagidae

SIZE:

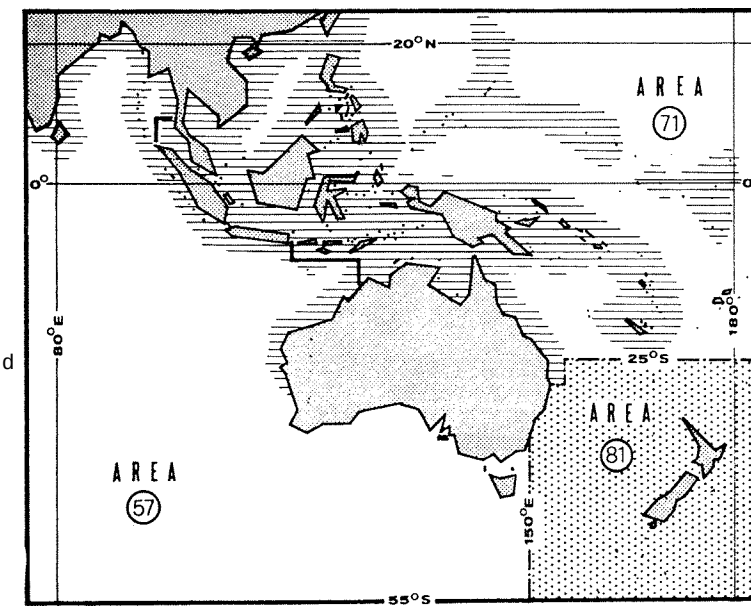
Maximum: 40 cm; common: 25 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to New South Wales (Australia); also, westward to East Africa.

Found in shallow waters around coral and rocky reefs.

Feeds on bottom-living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Shallow waters, throughout its range.

CATCHES, NIAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics for this species are reported only by Malaysia (1972: 400 tons).

Caught mainly with hand lines, traps and bottom trawls.

Marketed fresh only.

ELOP

1974

FAO SPECIES IDENTIFICATION SHEETS

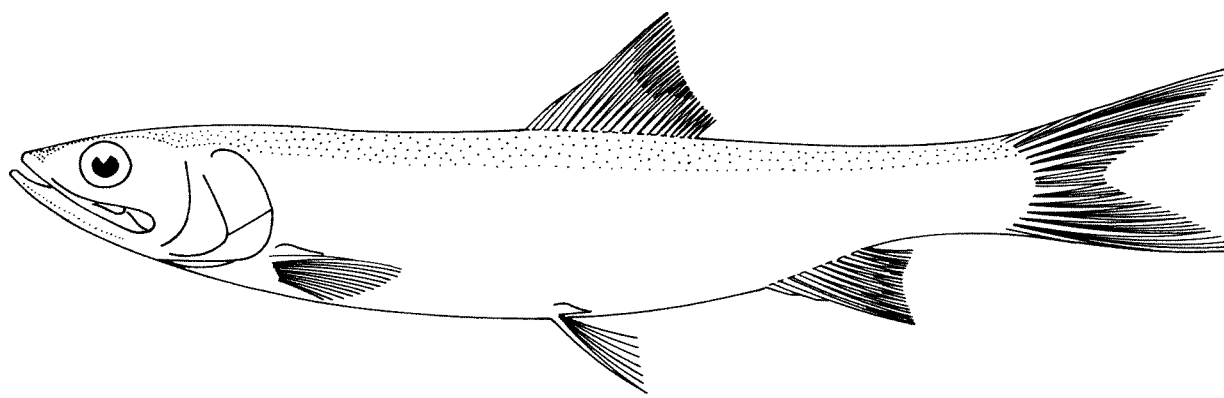
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

ELOPIDAE

Tenpounders, ladyfishes

Elongate, fusiform fishes with cylindrical bodies, *resembling the Clupeidae* (herrings) *but possessing a lateral Line and lacking scutes along belly.* A single dorsal fin, with soft unbranched rays, set at about midpoint of body; anal fin origin a little behind last dorsal ray. *Bony gular plate between arms of loner, jaw.* Pseudobranch present (gill-like structure on inner face of gill cover). *Scales present, small;* lateral line with about 100 scales.

Colour: blue/green on back, flanks silvery.



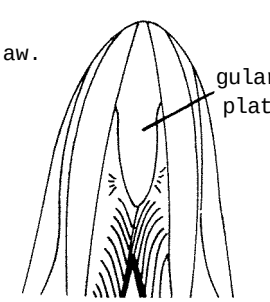
SIMILAR FAMILIES OCCURRING IN THE AREA:

Chanidae: lack a gular plate and have a small mouth with very short upper jaw.

Clupeidae: lack a gular plate and lateral line; also, belly usually with a sharp keel of scutes.

Megalopidae: possess a gular plate but last dorsal fin ray filamentous and scales very large.

Albulidae: possess a gular plate but have a projecting snout and inferior mouth.



Elops machnata

Key to Genera

Elops only

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

Elops maehnata (Elops hawaiensis probably a synonym) ELOP Elop 1

FLOP Elop 1

1974

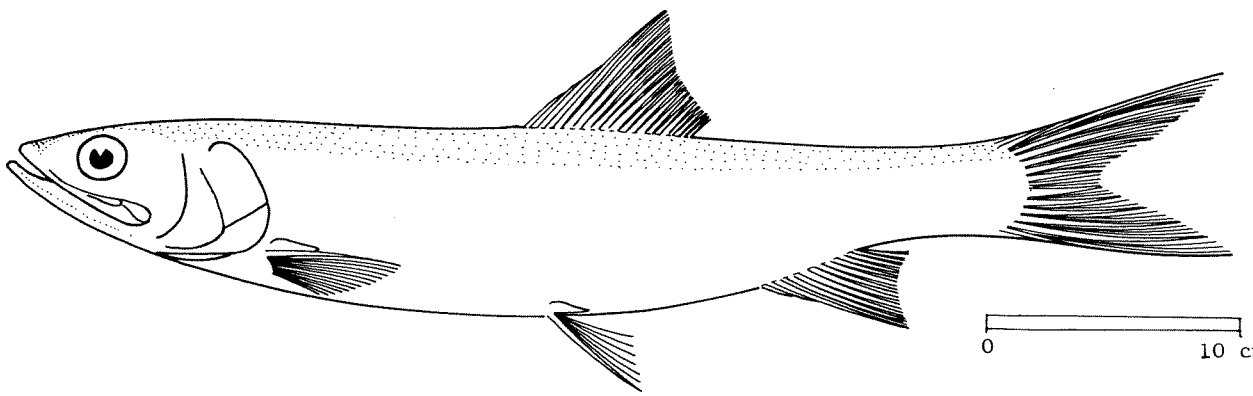
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ELOPIDAE

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

Elops machnata (Forsskål, 1775)

SYNONYMS STILL IN USE: *Elops hawaiensis:* Weber & de Beaufort, 1913
Elops saurus: misidentification



VERNACULAR NAMES

FAO: En - Tenpounder
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Elongate, fusiform body, sub-cylindrical, with *smooth unkeeled belly.* Single dorsal fin, with the unbranched rays soft, set near midpoint of body; pelvic fin base below middle of dorsal fin base; anal fin origin well behind last dorsal ray. Upper jaw long, tip of maxilla reaching well beyond eye; lower jaw projecting slightly. *Gular plate present between arms of lower, jaws. Branchiostegal rays* 25 *to* 35. Pseudobranch present (gill-like structure on inner face of gill cover). Scales present, small; lateral line with about 100 scales.

Colour: back blue/green, flanks silvery.

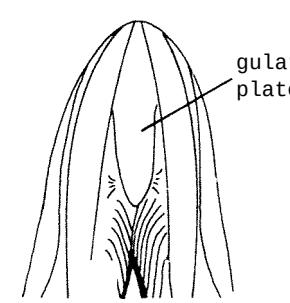
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Elops saurus: not found in Indo-Pacific region.

Species of Clupeidae and Engraulidae: lateral line and gular plate absent; scutes along belly in most species.

Megalops cyprinoides: a filamentous last dorsal ray and much bigger scales (not more than 40 in lateral line; about 100 in *Elops machnata*).

Chanos chanos: a small sub-terminal mouth and no gular plate.



Elops machnata

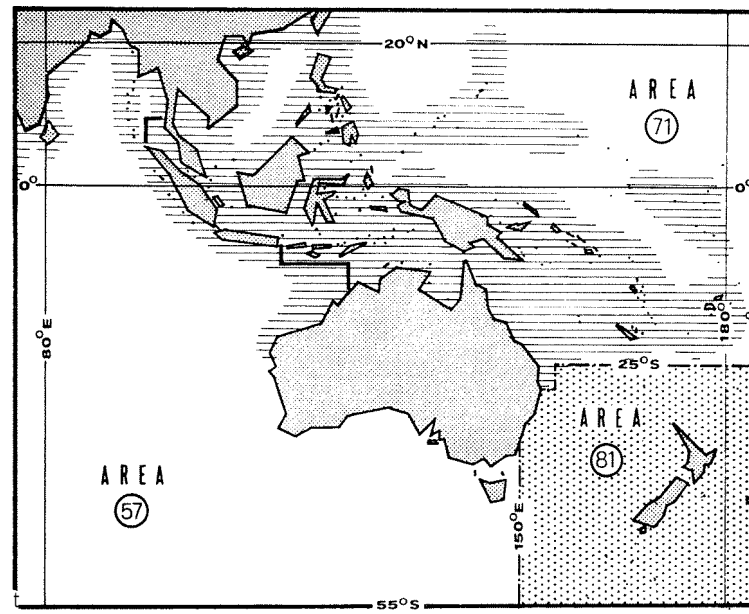
SIZE:

Maximum: 90 cm; common: 50 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout whole northern part of area and southward to tropical waters of Australia; also, westward to East Africa and eastward possibly to Hawaii (as *E. hawaiensis).*

Inhabits coastal waters; pelagic.



PRESENT FISHING GROUNDS:

Caught throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Catches probably small but perhaps locally important. Separate statistics are not reported for this species.

Caught with gill nets and by trolling.

Marketed mainly fresh; also dried-salted.

ENGR

1974

FAO SPECIES IDENTIFICATION SHEETS

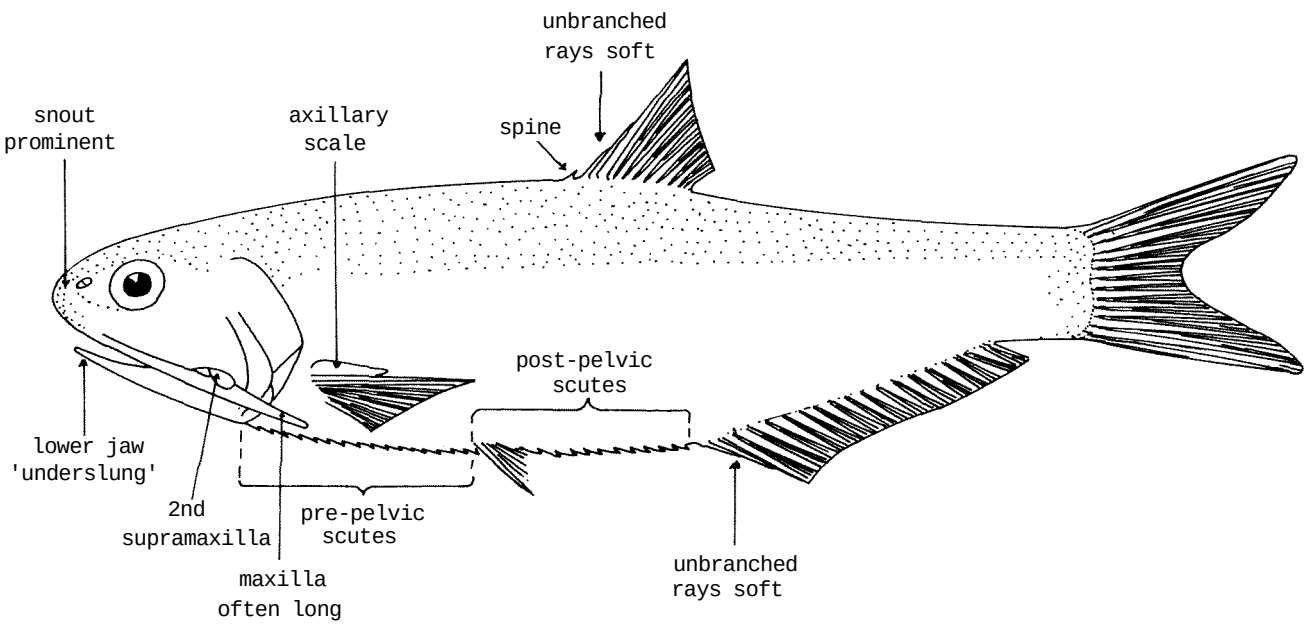
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

ENGRAULIDAE

Anchovies

Small silvery fishes, mostly 10 to 15 cm, usually with fusiform, sub-cylindrical bodies but sometimes quite strongly compressed; body tapers to very slender tail in *the* rat-tailed anchovies *(Coilia); scutes present along belly, either needle-like or strongly keeled. Snout usually pig-Like, strongly projecting, Lower jaw characteristically "underslung". No spiny rays in fins;* a single dorsal fin, usually short and at midpoint of body; pectoral fins set low on body, sometimes with 1 *(Setipinna)* or 4 to 19 *(Coilia)* filamentous rays; pelvic fins usually about midway between pectoral fin base and anal fin origin; anal fin short, moderate or very long; caudal fin forked except in *Coilia.* Scales always cycloid (smooth to touch) but often shed rather easily; no lateral line.

Colour: usually blue/green or brown on back, flanks wholly silver or with bright silver lateral stripe; darker markings include dark venulose area on shoulder *(Thryssa)* and dark pigmentation on all or part of dorsal, pectoral, pelvic, anal and caudal fins.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Clupeidae: have a short maxilla, a deep lower jaw and in most cases a terminal mouth.

Atherinidae: have a terminal mouth, short upper jaw, two dorsal fins and no scutes.

Key to Genera

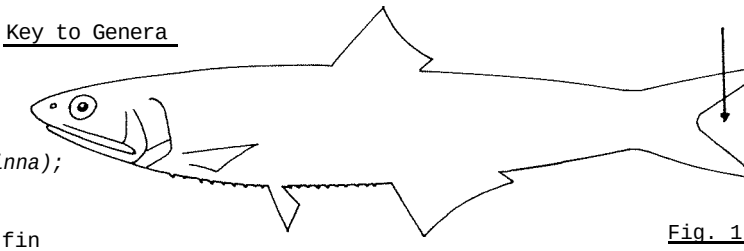


Fig. 1

la. Body normal, not tapering to a point, caudal fin forked (Fig. 1); at most, only 1 filament in pectoral fin *(Setipinna);* anal fin not joined to caudal fin

2a. No scutes before or behind pelvic fin base (except single pelvic scute); anal fin origin well behind last dorsal fin ray; maxilla tip blunt ..... *Engraulis*

2b. Scutes present, needle-like or keeled

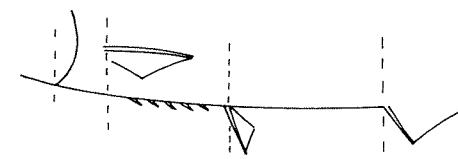


Fig. 2

3a. Scutes needle-like, only present between pectoral and pelvic fin bases (Fig. 2); anal fin short, less than 25 fin rays; small, slender fishes, usually 10 to 14 cm .. *Stolephorus*

3b. Scutes present before and behind pelvic fin base, keeled and not needle-like; anal fin longer, with more than 25 fin rays

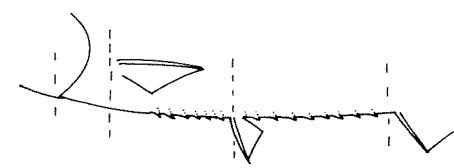


Fig. 3

4a. No scutes before pectoral fin base (rarely one or two followed by a gap) (Fig. 3)

5a. Teeth small, close-set ..... *Thrissina-*

5b. Canine teeth, widely spaced .. *Lycothrissa*

4b. Scutes present before pectoral fin base and, except in *Papuengraulis,* running as a keeled series to anus (Fig. 4)

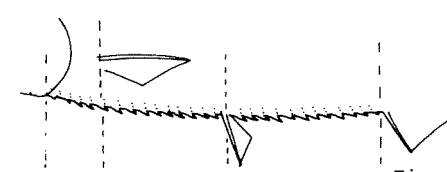


Fig. 4

6a. All scutes keeled and trenchant

pre-pectoral scutes

pre-pelvic scutes post-pelvic scutes

7a. 1st pectoral ray normal, not filamentous; maxilla often long, reaching beyond gill opening .. *Thryssa*

7b. 1st pectoral ray filamentous; maxilla usually short, not reaching to gill opening .... *Setipinna*

6b. Scutes barely apparent except before pectoral fin base ..... *Papuengraulis*

lb. Body tapering to slender tail, caudal fin very small, not forked; 4 to 19 upper pectoral fin rays filamentous; anal fin joined to caudal fin (Fig. 5)

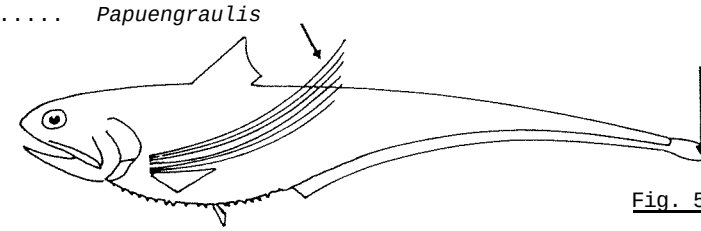


Fig. 5

..... *Coilia*

FAO Sheets ENGRAULIDAE Fishing Areas 57,71

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

Coilia coomansi	
Coilia dussumieri	ENGR Coil 2
Coilia macrognathus	ENGR Coil 1
Coilia mystus	
Coilia nasus	
Coilia neglecta	
Coilia potyfilis	
Coitia rebentischii	
Coilia rendahli	
Coilia reynaldi	
Engraulis australis	ENGR Engr 2
Lycothrissa crocodilus	
Setipinna breviceps	
Setipinna godavari	
Setipinna melanochir	ENGR Seti 2
Setipinna phasa	
Setipinna taty	ENGR Seti 1
Species A of Ronquillo (probably *S. devisi)*	
Stolephorus andhraensis	
Species B of Ronquillo	
Stolephorus bataviensis	ENGR Stol 3
Stolephorus buccaneers	ENGR Stol 2
Species C of Ronquillo	
Stolephorus chinensis	
Stolephorus commersonii	ENGR Stol 6
Stolephorus heterolobus	ENGR Stol 1
Stolephorus indicus	ENGR Stol 5
Stolephorus macrops	
Stolephorus tri	ENGR Stol 4
Thrissina baelama	ENGR Thris 1
Thryssa dussumier1	
Thryssa hamiltonii	ENGR Thrys 4
Thryssa kaormatensis	
Thryssa matabariea	ENGR Thrys 5
Thryssa mystax	ENGR Thrys 1
Thryssa purava	
Thryssa setirostris	ENGR Thrys 3
Thryssa vitrirostris	ENGR Thrys 2

ENGR Coil 1

1974

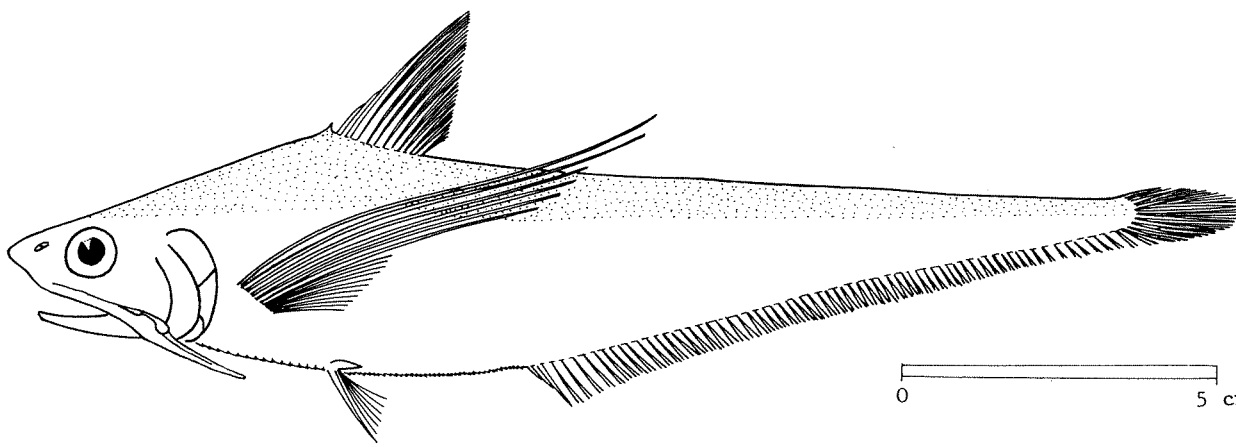
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Coilia macrognathus Bleeker, 1852

SYNONYMS STILL IN USE: None



VERNACULAR NAME:

FAO: En - Bigmouth grenadier anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate, its depth 4 to 5 times in standard length, *tapering evenly to very slender tail* (unless mutilated and new caudal fin grown); belly keeled, with 14 to 16 scutes in front of pelvic fin base, *and 32 to 38 scutes behind;* a small sharp spine before dorsal fin origin. Snout strongly projecting, pointed; *maxilla tip pointed, reaching well beyond gill opening; maxillary teeth of uneven lengths. Lower gill rakers 21 to 26.* Dorsal fin origin much nearer to snout than to caudal fin base; pectoral fin with upper 6 rays filamentous; anal fin very long, joined to caudal fin.

Colour: back brown, flanks silvery.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Coilia nasus: body more elongate (depth 6 to 7 times in standard length; 4 to 5 times in *C. macrognathus);* maxillary teeth of even lengths.

Coilia mystus: 25 to 30 gill rakers and 36 to 41 scutes (21 to 26 and 46 to 53 in *C. macrognathus)*

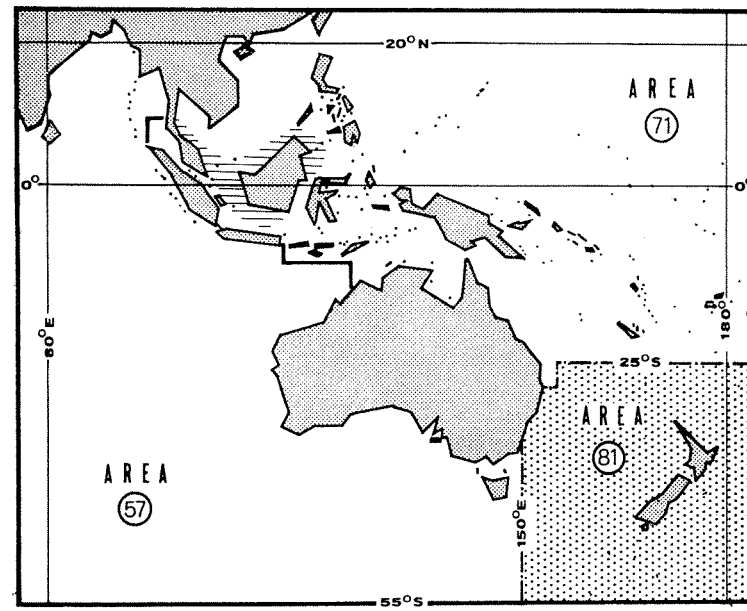
Coilia dussumieri: presence of pearly spots on body and less than 20 scutes.

Other *Coilia* species: maxilla shorter, not reaching beyond gill opening.

All other rat-tailed fishes (e.g. Macrouridae): no scutes along belly.

SIZE:

Maximum: 26 cm; common: about 20 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Borneo, Sarawak, Thailand.

Inhabits coastal waters and estuaries.

PRESENT FISHING GROUNDS:

Caught throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with bamboo-stake traps, lift nets and beach seines; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish sauce or fish balls.

ENGR Coil 2

1974

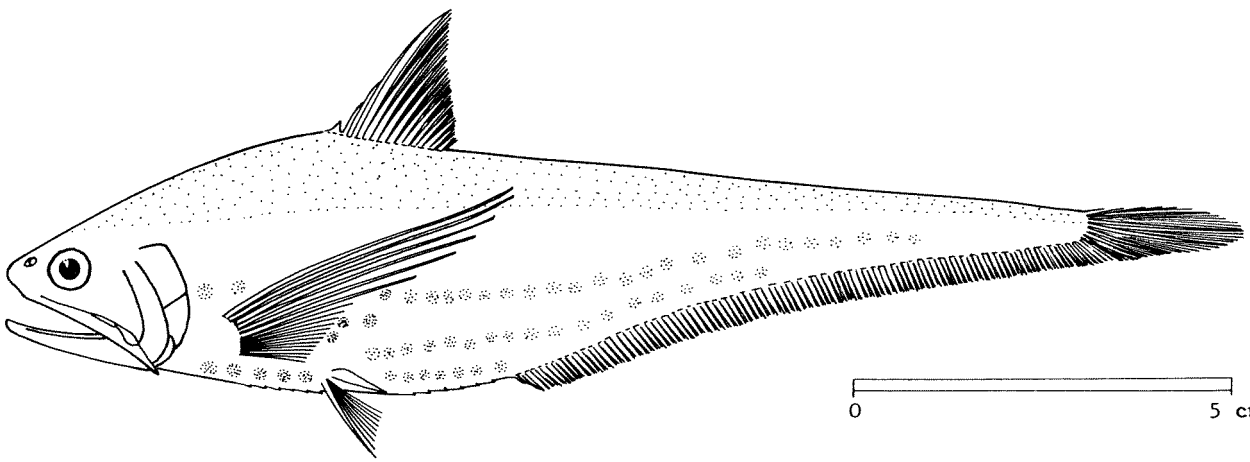
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Coilia dussumieri Valenciennes, 1848

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Gold-spotted grenadier anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate, tapering evenly to very slender tail (unless multilated and new caudal fin grown); belly rather rounded, with 4 to 6 scutes between pectoral and pelvic fin bases, *and 6 to 8 scutes behind pelvic fin base;* a small, sharp spine before dorsal origin. Snout strongly projecting, pointed; *maxilla tip pointed, reaching to or just beyond gill opening.* Dorsal fin origin much nearer to snout than to caudal fin base; pectoral fin with upper 4 to 6 rays filamentous; anal fin very long, joined to caudal fin.

Colour: back brown, flanks silvery, with *Longitudinal rows of golden or pearly spots on lower flanks.*

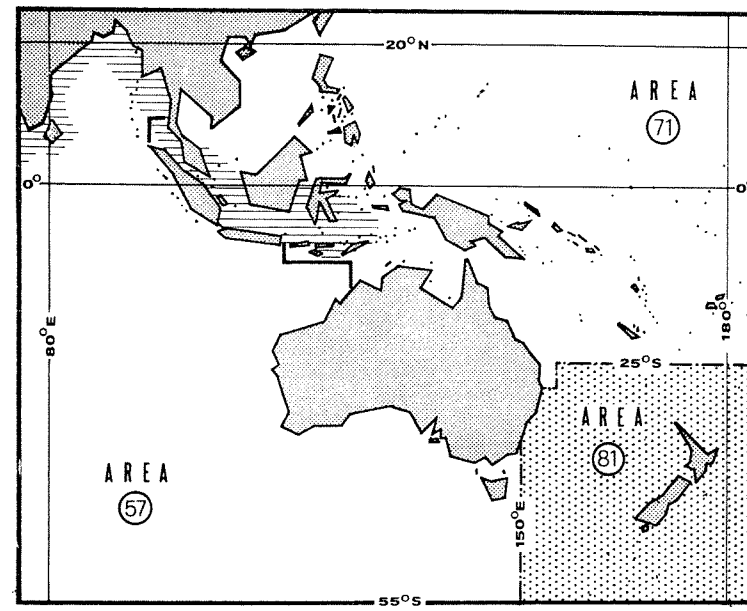
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Coilia* species: no spots on flanks.

All other rat-tailed fishes (e.g. Macrouridae): no scutes along belly.

SIZE:

Maximum: 20 cm; common: 13 to 17 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Coasts of India and Indo-Australian Archipelago.

Inhabits coastal waters.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with beach seines, purse seines, bamboo-stake traps; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish sauce or fish balls.

ENGR Engr 2
1974

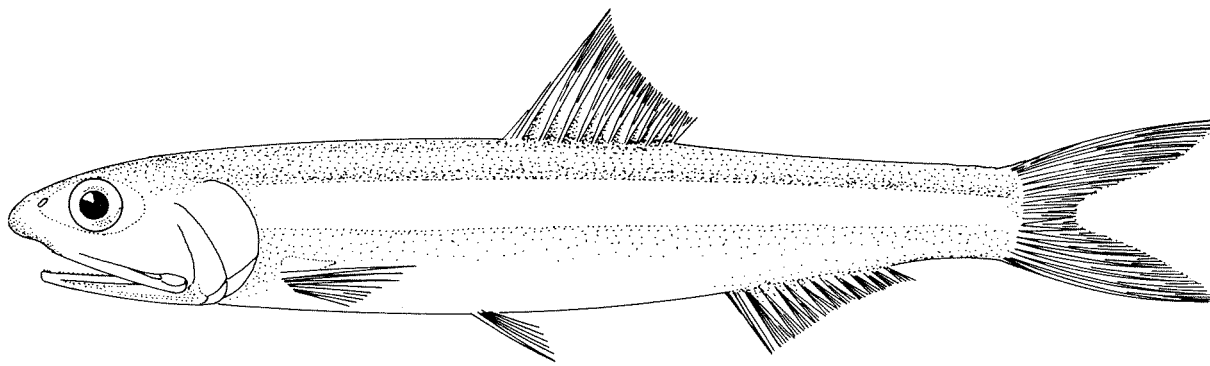
FAO SPECIES IDENTIFICATION SHEETS

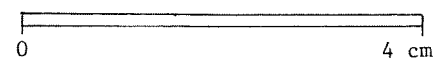
FAMILY: ENGRAULIDAE

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

Engraulis australis (White, 1790)

SYNONYMS STILL IN USE: none.





VERNACULAR NAMES:

FAO: En - Australian anchovy
Fr -
Sp.-

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, subcylindrical, *belly rounded, without scutes* (except for a plate-like scute at pelvic fin bases). Snout prominent and pointed; *maxilla tip truncate, not projecting beyond anterior margin of preoperculum;* isthmus not reaching to hind border of gill membrane, leaving exposed a vertical bony urohyal plate. *Anal fin origin behind vertical from last dorsal fin ray.*

Colour: blue/green above, silvery on flanks, or with a broad silver midlateral band, its upper edge dark (or black in preserved specimens).

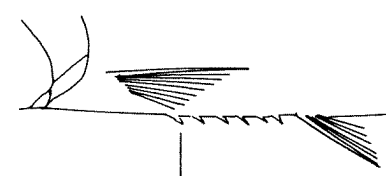
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus species: 4 or more sharp, needle-like scutes present on belly before bases of pelvic fins.

Thrissina species: scutes present both before and behind pelvic fin bases.

Thrissa species: body usually compressed, deeper than wide, and sharply keeled scutes present along belly, from isthmus to anal fin origin.

Lycothryssa species: canine teeth present in jaws.



needle-like
prepelvic scutes

Stolephorus

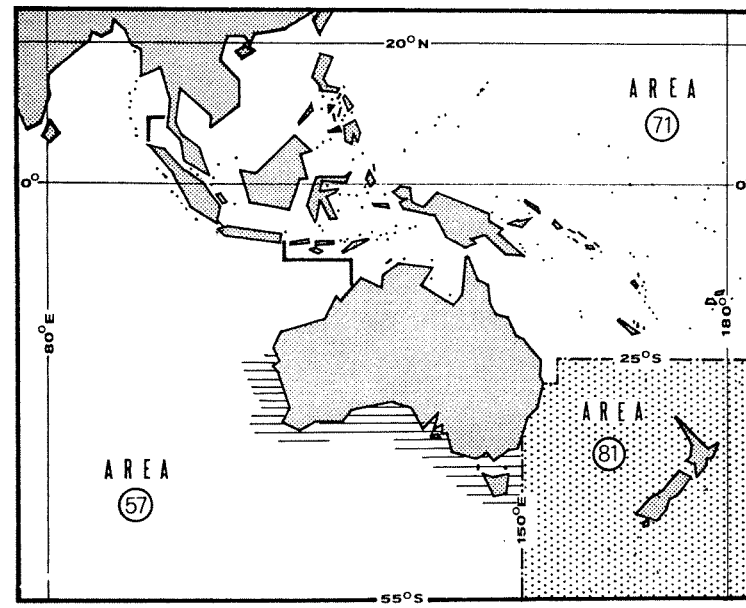
SIZE:

Maximum: 14 cm; common 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Southern coasts of Australia including Tasmania, northward to latitude 25°S; also eastward to New Zealand; closely allied to E. *japonicus* of Japanese waters, which extends southward to Taiwan (of which a few specimens have been recorded from Indonesia.

Inhabits inlets and coastal waters in schools, often very abundant; also, a brackish-water population in the rivers entering the Gippsland Lakes.



PRESENT FISHING GROUNDS:

Throughout its range, especially in Port Phillip Bay.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIATION:

Separate statistics are not reported for this species.

Caught mainly with beach seines.

Marketed mostly fresh.

ENGR Seti 1
1974

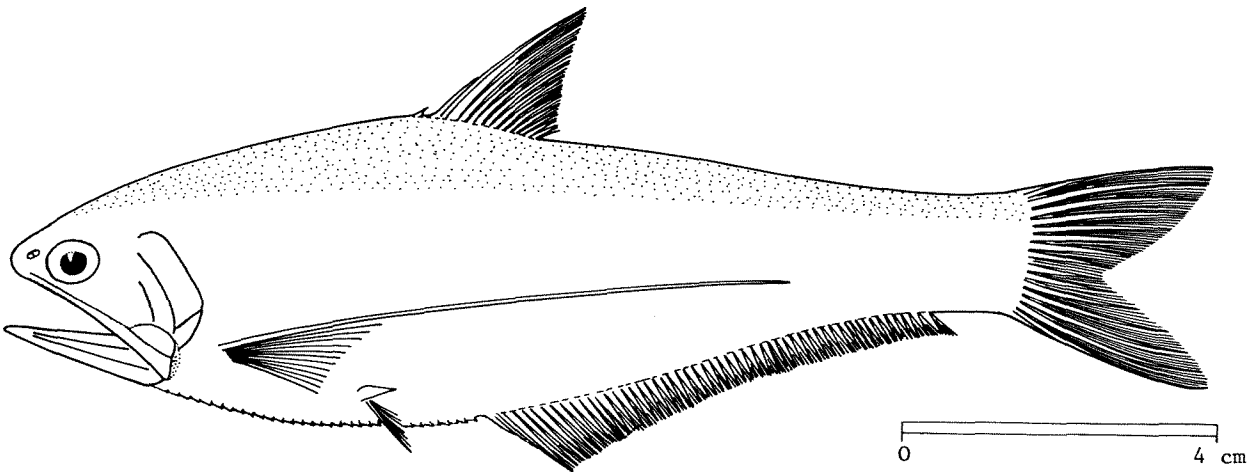
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Setipinna taty (Valenciennes, 1848)

SYNONYMS STILL IN USE: *Setipinna gilberti* Jordan & Starks, 1905



VERNACULAR NAMES:

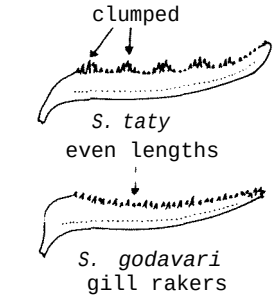
FAO: En - Hairfin anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, strongly compressed; belly sharply keeled, *with 18 to 26 scutes in front of pelvic fin base,* and 7 to 12 scutes behind pelvic fin base; a small, sharp spine before dorsal fin origin. Snout moderately prominent, bluntly pointed; maxilla short, its tip truncate, just reaching to gill opening; mouth not strongly oblique; *lower gill rakers 17 to 20, inner edges of rakers with small serrae forming distinct clumps. Dorsal fin origin nearer to snout than to caudal fin base; 1st pectoral ray filamentous;* anal fin with 48 to 60 rays.

Colour: back brown or blue, flanks silvery.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Setipinna phasa: 72 to 75 anal fin rays (48 to 60 in *S. taty*) and only 15 to 16 pre-pelvic scutes (18 to 26 in *S. taty).*

Setipinna godavari: only 12 to 16 lower gill rakers (17 to 20 in *S. taty),* the serrae on the rakers not forming distinct clumps.

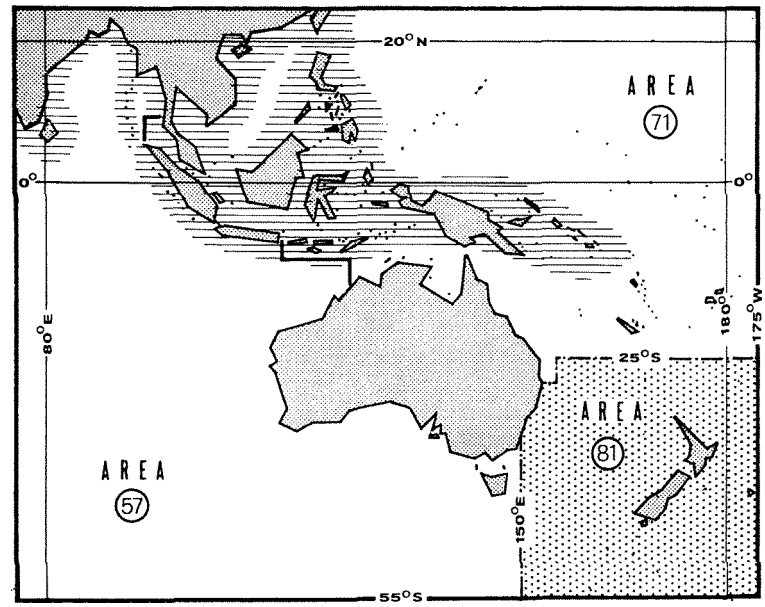
Other *Setipinna* species: only 11 to 13 lower gill rakers (17 to 20 in *S. taty*); dorsal fin at midpoint of body or nearer to base of caudal fin.

Thryssa, Thrissina: no filamentous lst pectoral ray; maxilla often reaches well beyond gill opening.

Papuengraulis: no pectoral filament; strongly keeled scutes present only before pectoral fin base.

SIZE:

Maximum: 20 cm; common: about 16 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, but not recorded from Australian waters.

Inhabits coastal waters and estuaries.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with purse seines, beach seines and bamboo-stake traps; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish sauce or fish balls.

ENGR Seti 2
1974

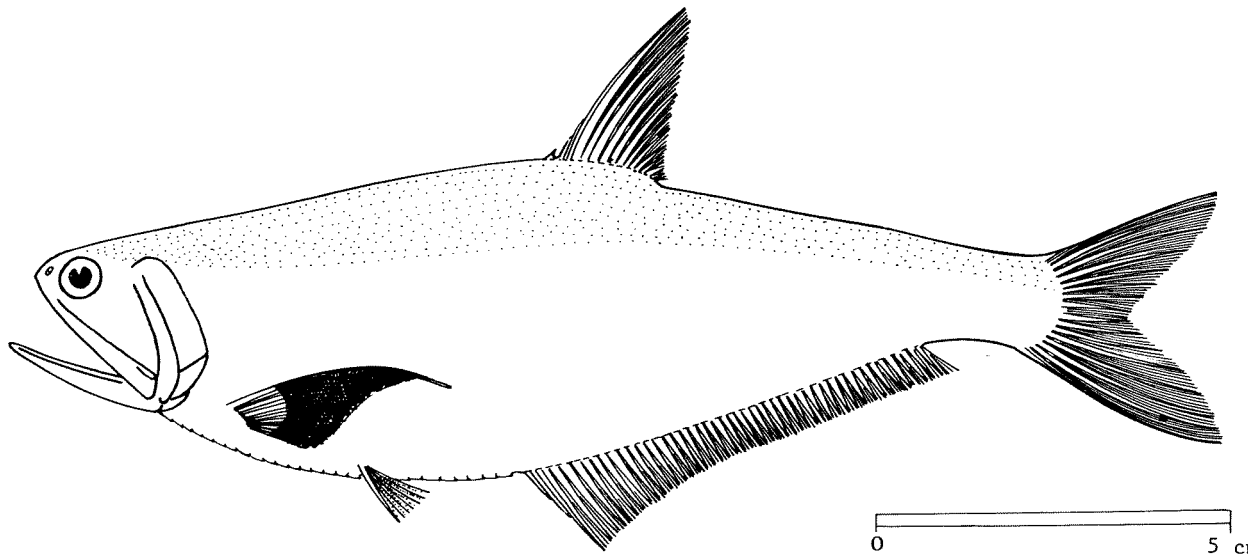
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Setipinna melanochir (Bleeker, 1849)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Dusky hairfin anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, strongly compressed; belly sharply keeled, *with 19 to 22 scutes in front of pelvic fin base,* and 7 to 9 behind; a small, sharp spine before dorsal fin origin. Snout short, scarcely projecting beyond tip of lower jaw; maxilla short, its tip truncate, not reaching to gill opening; *mouth strongly oblique; lower gill rakers 11 to 13. Dorsal fin origin at midpoint of body or nearer to caudal fin base; 1st pectoral fin ray filamentous,* but not reaching to anal fin origin; *anal fin with 44 to 50 rays.*

Colour: back brown or blue, flanks silvery; *pectoral (and often pelvic) fins black.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Setipinna breviceps: no black on pectoral fins; pectoral filament reaching beyond anal fin origin

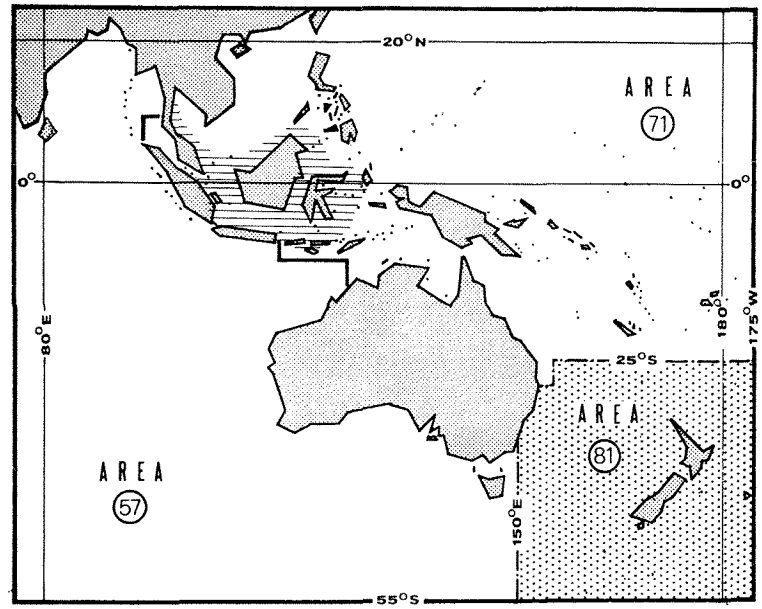
Other *Setipinna* species: dorsal fin origin before midpoint of body, mouth not strongly oblique, 12 to 18 gill rakers (11 to 13 in *S. melanochir).*

Thrissa, Thrissina: no filamentous 1st pectoral ray; maxilla often reaching beyond gill opening.

Papuengraulis: no pectoral filament; strongly keeled scutes present only before pectoral fin base.

SIZE:

Maximum: 23 cm; common: 18 to 19 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Indonesia and possibly north to Amoy, but not recorded from Australian coasts.

Inhabits fresh and brackish waters.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 as:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with bamboo-stake traps and beach seines; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish sauce or fish balls.

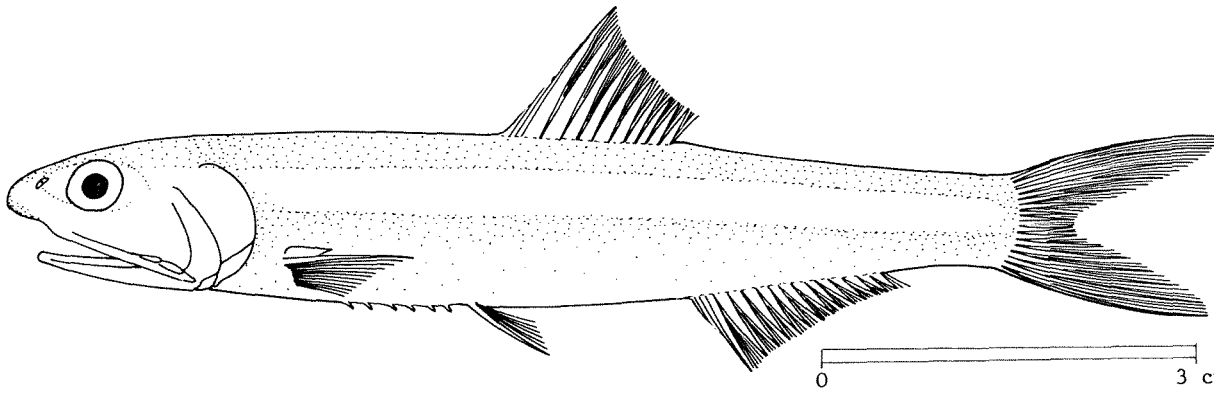
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus heterolobus (Rüppell, 1837)

SYNONYMS STILL IN USE: *Stolephorus pseudoheterolobus:* Hardenberg, 1933
Anchoviella heteroloba: Fowler, 1941



VERNACULAR NAMES:

FAO: En - Shorthead anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

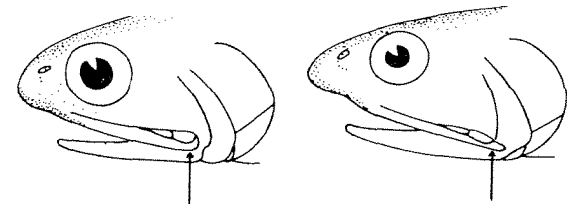
Body fusiform, sub-cylindrical; belly rounded, *with 5 to 6 needle-like scutes* between pectoral and pelvic fin bases. Head short (length more than 4 times in standard length); snout prominent and pointed; *maxilla tip pointed, projecting beyond anterior border of pre-operculum; isthmus not reaching to hind border of gill membrane, leaving exposed a small (white or silver) diamond-shaped urohyal bony plate* (easily visible without lens). Anal fin origin a little behind last dorsal fin ray. Lower gill rakers 24 to 27.

Colour: pale cream when scales lost; bright silver stripe along flanks.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus devisi: head longer (length less than 4 times in standard length; more than 4 in *S. heterolobus)* and fewer gill rakers (21 to 24, rarely 25; 24 to 27 in *S. heterolobus).*

Stolephorus buccaneers: maxilla tip truncate, not reaching to anterior border of pre-operculum.



short maxilla
S. buccaneers

long pointed maxilla
S. heterolobus

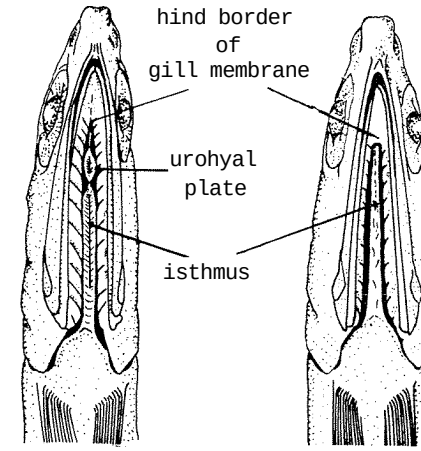
Other *Stolephorus* species: isthmus reaching to hind border of gill membrane, no diamond-shaped bony urohyal plate present; also, anal fin origin not behind last dorsal fin ray.

Engraulis: maxilla tip blunt and no scutes along belly.

Thrissina: scutes also present behind pelvic fins (but not immediately in front of pectoral fin base).

Thryssa: scutes present along entire belly, from isthmus to anal fin origin.

Lycothrissa: canine teeth present in jaws.



head viewed from below
S. *heterolobus* *S. bataviensis,* etc.

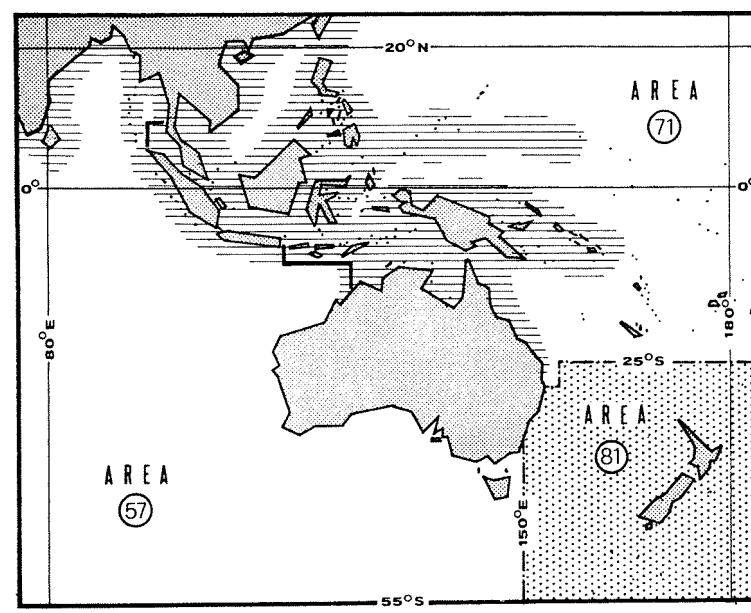
SIZE:

Maximum: 12 cm; common: 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area, and southward to Queensland; also, westward to East Africa and eastward to Okinawa.

Pelagic, feeding on zooplankton and phytoplankton.



PRESENT FISHING GROUNDS:

Throughout its range and especially in Philippines, Singapore, Malaysia.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species, although it seems to comprise a substantial proportion (42 to 96%) of the *Stolephorus* catches in the Philippines. The total reported catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with purse seines, beach seines, fish traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls; also used as bait.

ENGR Stol 2

1974

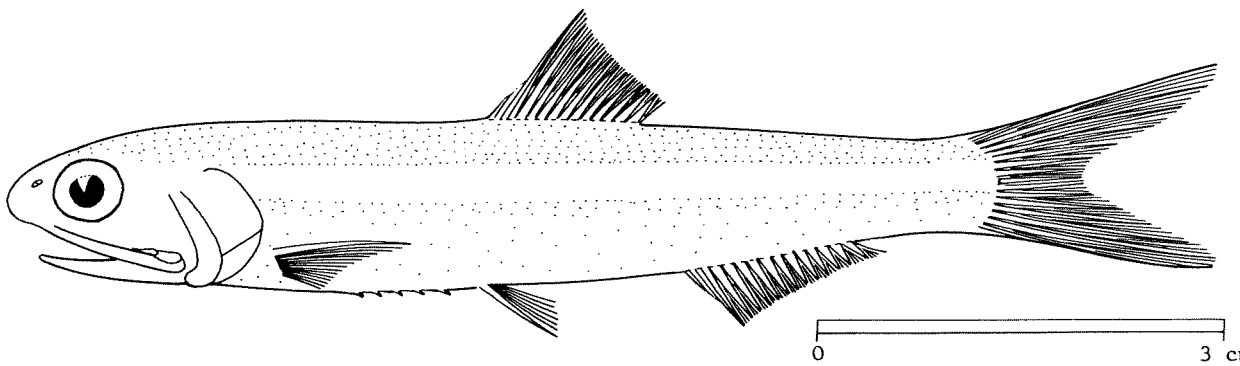
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus buccaneers Strasburg, 1960

SYNONYMS STILL IN USE: *Anchoviella zollingeri*: Fowler, 1941



VERNACULAR NAMES:

FAO: En - Buccaneer anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

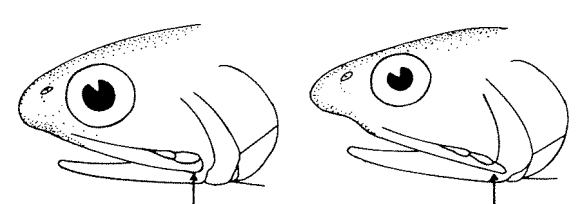
Body fusiform, sub-cylindrical; belly rounded, *with 4 to 6 needle-like scutes* between pectoral and pelvic fin bases. Snout prominent but rounded; *maxilla tip blunt, not reaching to anterior border of pre-operculum; isthmus not reaching to hind border of gill membrane, leaving exposed a small (white or silver) diamond-shaped fleshy plate* (easily visible without lens). Anal fin origin behind last dorsal ray. Lower gill rakers 24 to 26.

Colour: pale cream when scales lost; bright silver stripe along flanks.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus Species B of Ronquillo: only 16 to 18 Lower gill rakers (24 to 26 in S. *buccaneers);* also, maxilla 4 to 5 times in standard length (5 to 6 times in S. *buccaneeri).*

Stolephorus heterolobus: maxilla tip pointed and reaching well beyond anterior border of pre-operculum.



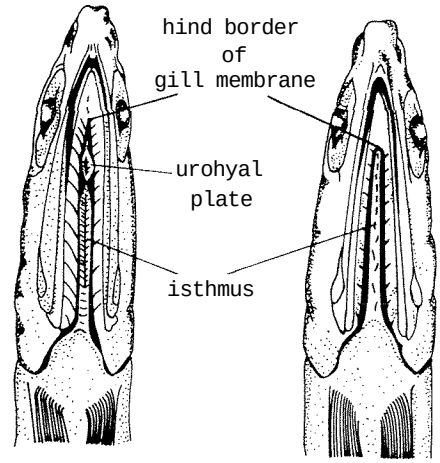
Other *Stolephorus* species: isthmus reaching to hind border of gill membrane, no diamond-shaped urohyal plate; also, anal fin origin not behind last dorsal fin ray.

Engraulis: no scutes along belly.

Thrissina: scutes also present behind pelvic fins (but not immediately in front of pectoral fin base).

Thryssa: scutes present along entire belly, from isthmus to anal fin origin.

Lycothrissa: canine teeth present jaws.



head viewed from below
S. buccaneeri *S. bataviensis*, etc

SIZE:

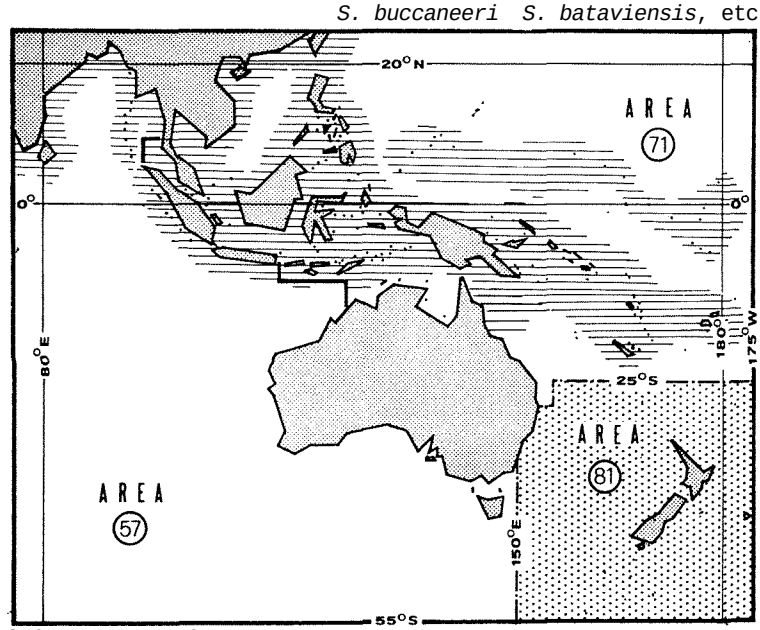
Maximum: 11 cm; common: about 9 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, possibly as far south as Queensland (Australia); also, westward to East Africa and eastward to Japan and Hawaii.

Pelagic, feeding on plankton.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species, although it seems to comprise a significant proportion of *Stolephorus* catches in some area, e.g. the Philippines. The total reported catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with purse seines, beach seines, bamboo-stake traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls; also used for bait.

ENGR Stol 3

1974

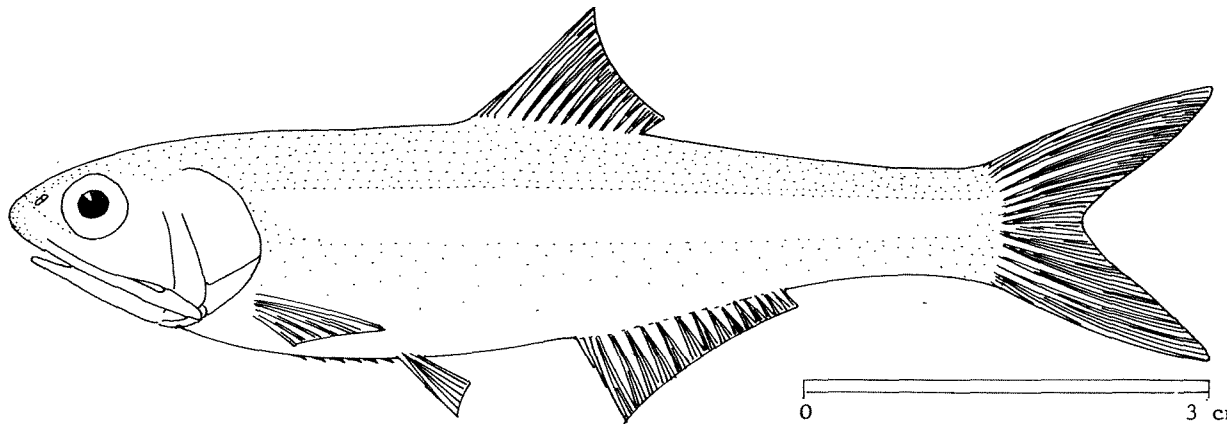
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus bataviensis Hardenberg, 1933

SYNONYMS STLL IN USE: *Anchoviella bataviensis:* Fowler, 1941
Stolephorus insularis Hardenberg, 1933 (homonym)



VERNACULAR NAMES:

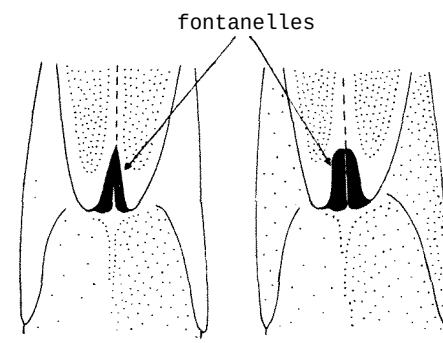
FAO: En - Batavian anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, moderately compressed; belly *with 4 to 7 needle-like scutes* between pectoral and pelvic fin bases. Head short, snout rather rounded; *maxilla tip pointed, projecting beyond posterior border of pre-operculum;* hind border of *pre-operculum evenly rounded near maxilla tip; isthmus reaching to hind border of gill membrane. Posterior frontal fontanelles narrow, with straight borders.* Anal fin origin below dorsal fin base. Lower gill rakers usually not more than 23.

Colour: pale cream when scales lost; bright silver stripe along flanks.



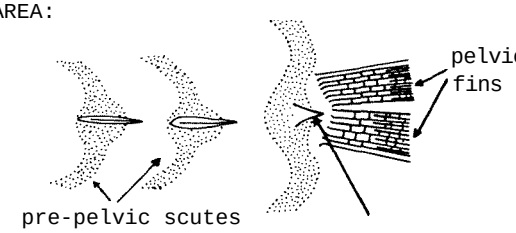
head viewed from above
S. bataviensis *S. commersonii*
S. indicus *S. chinensis*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus commersonii, S. chinensis: posterior frontal fontanelles broad, with outer borders sigmoid; also,usually more than 23 gill rakers on lower arch.

Stolephorus indicus: maxilla tip not reaching to posterior border of pre-operculum.

Stolephorus tri: a small spine before dorsal fin and another on pelvic scute; lower gill rakers 23 to 27.

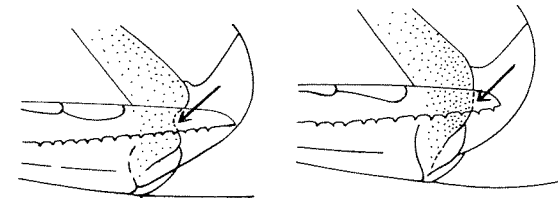


S. tri

spine on pelvic scute

Stolephorus andhraensis, S. macrops, Species C of Ronquillo: preoperculum indented near maxilla tip.

Other *Stolephorus* species: isthmus not reaching to hind border of gill membrane, leaving exposed a small (white or silver) diamond-shaped urohyal plate (easily visible without lens).



preoperculum indented
S. *macrops*

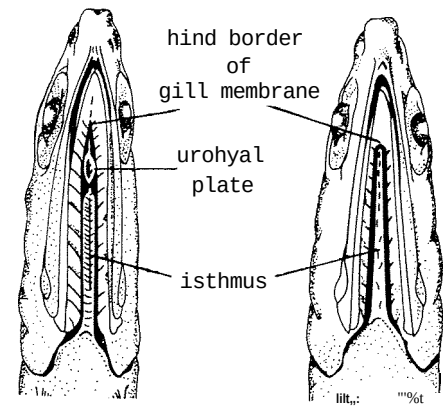
preoperculum rounded
S. *bataviensis*

Engraulis: maxilla tip blunt and no scutes along belly.

Thrissina: scutes also present behind pelvic fins (not not immediately in front of pectoral fin base).

Thryssa: scutes present along entire belly, from isthmus to anal fin origin.

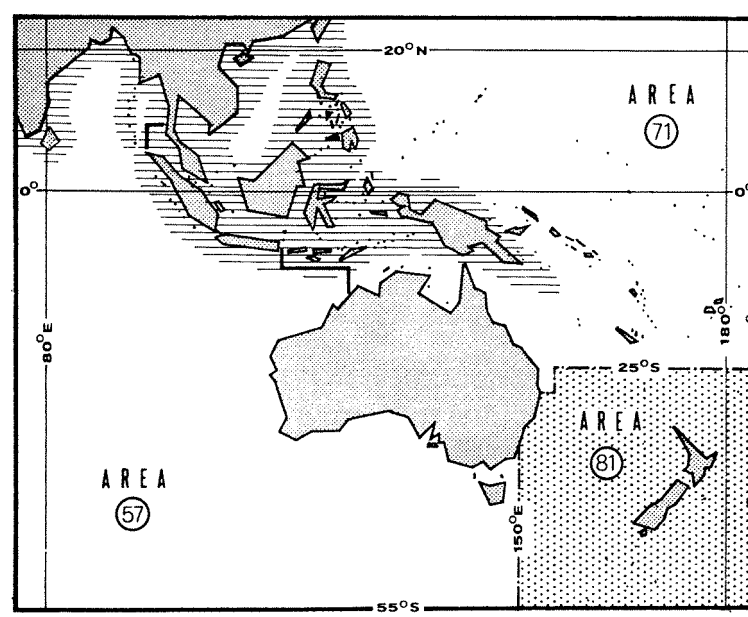
Lycothrissa: canine teeth present in jaws.



head viewed from below
S. *buccaneeri* S. *bataviensis,* etc.

SIZE:

Maximum: 11 cm; common: 9 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, but perhaps absent from Australia.

A coastal pelagic species.

Feeds on plankton organisms.

PRESENT FISHING GROUNDS:

Throughout its range and especially the Philippines, Thailand and Vietnam.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with purse seines, beach seines, bamboo-stake traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce and fish balls.

ENGR Stol 4
1974

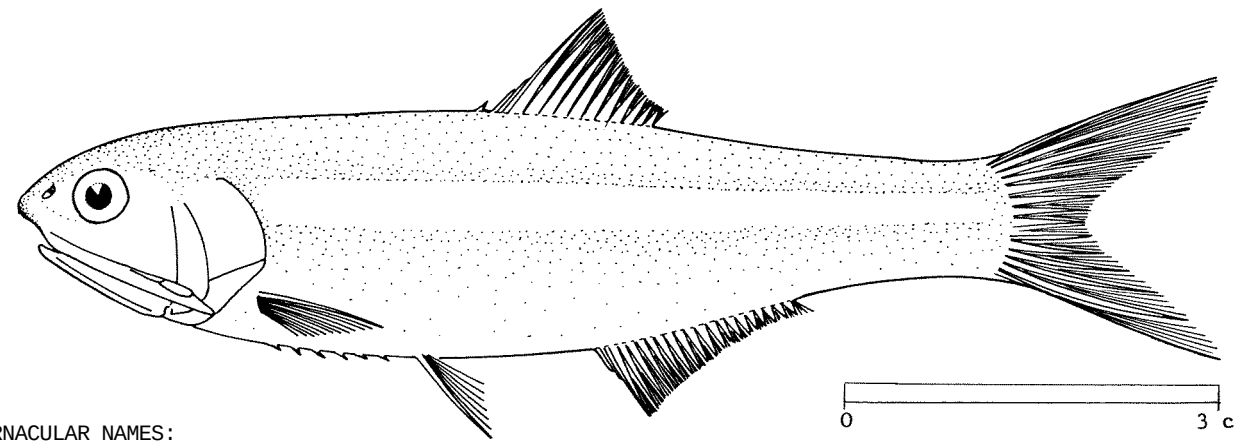
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus tri (Bleeker, 1852)

SYNONYMS STILL IN USE: *Anchoviella tri:* Fowler, 1941
Stolephorus baganensis baganensis Hardenberg, 1933



VERNACULAR NAMES:

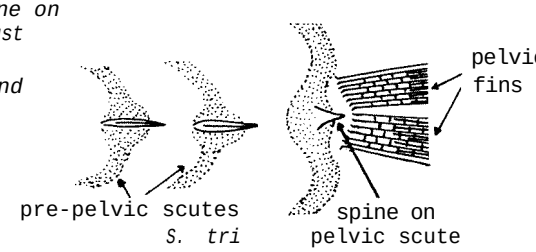
FAO: En - Spined anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

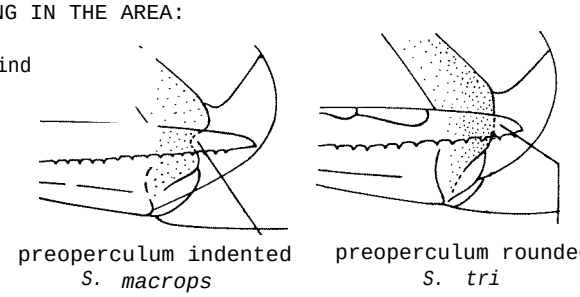
Body fusiform, somewhat compressed; *belly with 5 to 7 needle-like scutes* between pectoral and pelvic fin bases, and *a spine on pelvic scute between fin bases; a small spine also present just before dorsal fin;* snout projecting, bluntly pointed; *maxilla tip pointed, reaching to gill opening; isthmus reaching to hind border of gill membrane.* Anal fin origin below dorsal base; lower gill rakers 23 to 27.

Colour: pale cream when scales lost; bright silver stripe along flanks.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus macrops: no spine on pelvic scute; hind border of pre-operculum indented near maxilla tip (evenly rounded in S. *tri).*



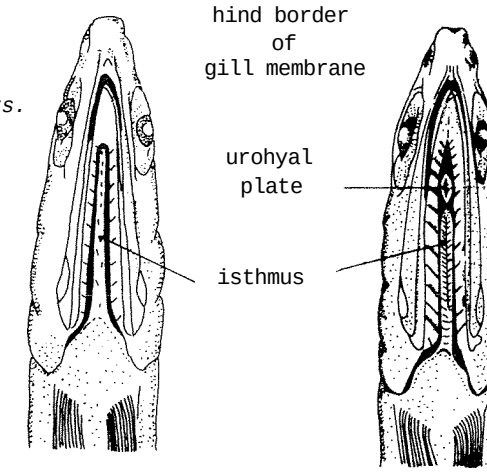
Other *Stolephorus* species: no spine before dorsal fin and small spine on pelvic scute; also, isthmus not reaching to hind border of gill membrane in S. *heterolobus, S. buccaneers.*

Engraulis: maxilla tip blunt and no scutes along belly.

Thrissina: scutes also present behind pelvic fins (but not immediately in front of pectoral fins).

Thryssa: scutes present along entire belly, from isthmus to anal fin origin.

Lycothrissa: canine teeth present in jaws.



head viewed from below
S. tri *S. buccaneers*

SIZE:

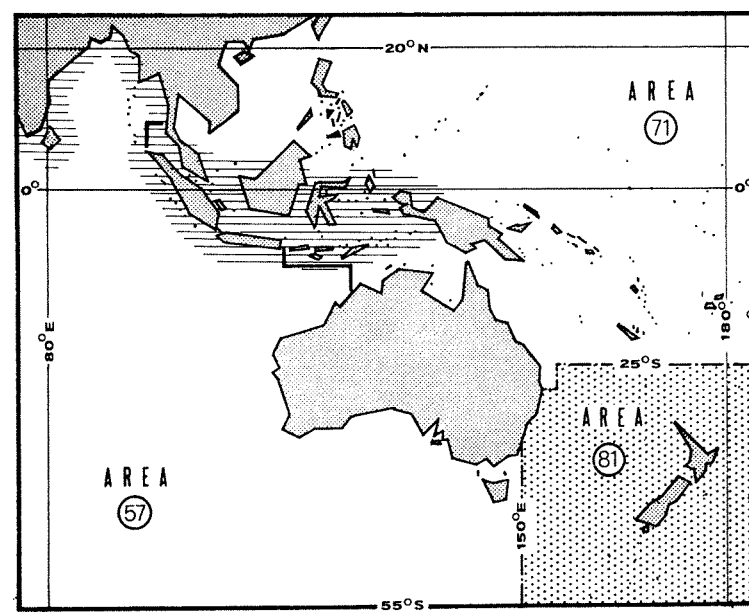
Maximum: 12 cm; common: 9 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, but not reported from South China Sea or Australia.

A coastal pelagic species.

Feeds on plankton organisms, especially zooplankton.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with purse seines, lift nets or bamboo-stake trape, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Stol 5

1974

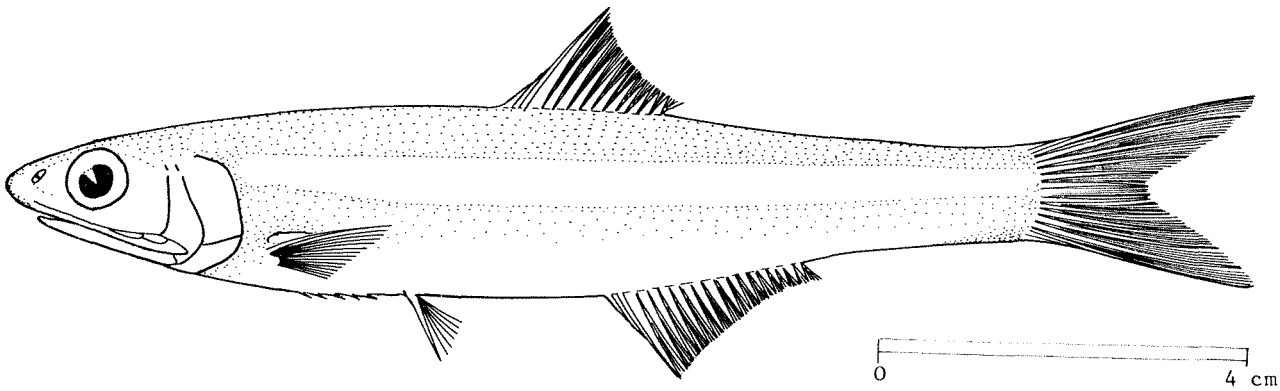
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus indicus (van Hasselt, 1823)

SYNONYMS STILL IN USE: *Anchoviella indica:* Fowler, 1941



VERNACULAR NAMES:

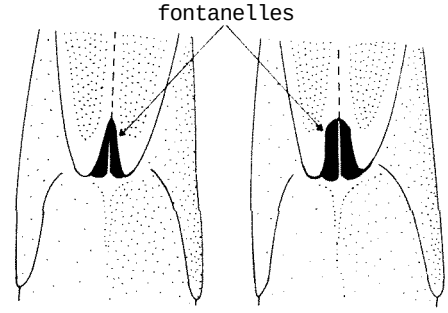
FAO: En - Indian anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, nearly cylindrical; belly rounded, *with 4 to 5 needle-like scutes* between pectoral and pelvic fin bases. Snout prominent, rather pointed; *maxilla tip pointed, projecting beyond anterior border of pre-operculum;* posterior border of pre-operculum evenly rounded near maxilla tip; *isthmus reaching to hind border of gill membrane. Posterior frontal fontanelles narrow, with straight borders.* Anal fin origin below dorsal fin base. Lower gill rakers 21 to 27.

Colour: pale cream when scales lost; bright silver stripe along flanks.

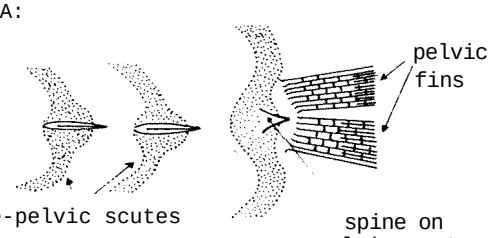


head viewed from above
S. bataviensis *S. commersonii*
S. indicus *S. chinensis*

DISTINGUISHING CILARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus commersonii, S. chinensis, S. bataviensis: maxilla longer, reaching beyond posterior border of pre-operculum; also, posterior frontal fontanelles broad and with sigmoid outer margins (but narrow and straight-sided in S. *bataviensis).*

Stolephorus tri: presence of a spine before dorsal fin and a spine on pelvic scute.



pre-pelvic scutes
S. tri

spine on pelvic scute

Stolephorus macrops, S. andhraensis, Species C of Ronquillo: hind border of preoperculum indented near maxilla tip.

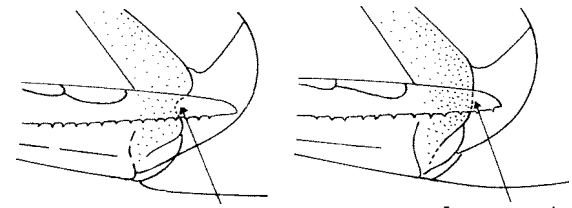
Other *Stolephorus* species: isthmus not reaching to hind border of gill membrane, leaving exposed a small (white or silver) diamond-shaped urohyal plate (easily visible without lens).

Engraulis: maxilla tip blunt and no scutes along belly.

Thrissina: scutes also present behind pelvic fins (but not immediately in front of pectoral fins).

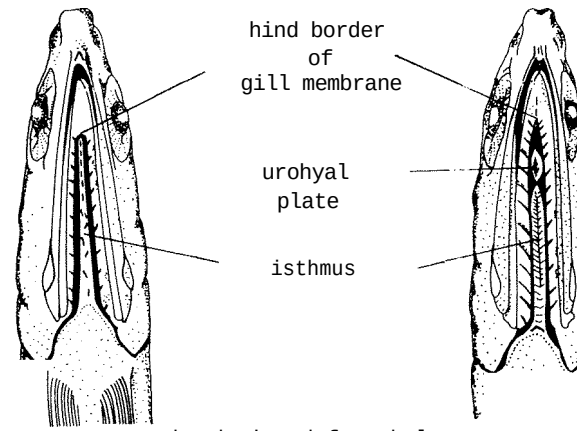
Thryssa: scutes present along entire body, from isthmus to anal fin origin.

Lycothrissa: canine teeth present in jaws.



preoperculum indented
S. macrops

preoperculum rounded
S. indicus



head viewed from below
S. indicus *S. Buccaneeri, etc.*

SIZE:

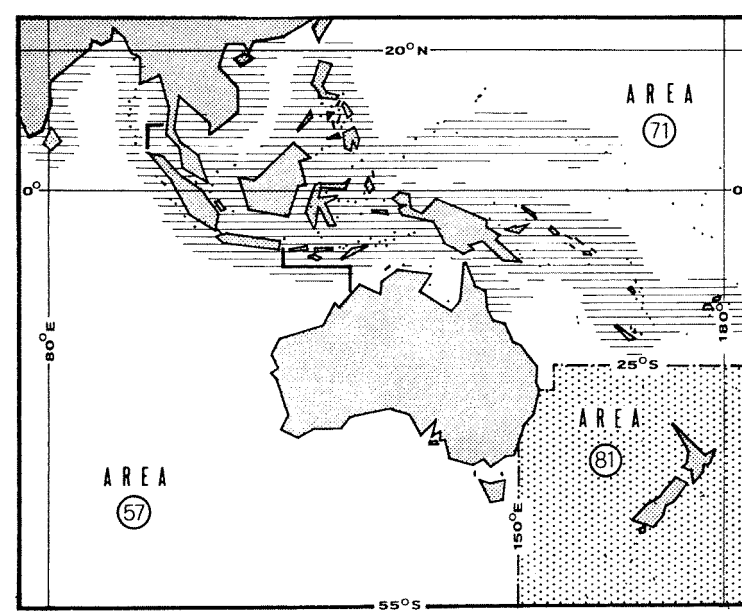
Maximum: 17 cm; common: 14 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area, and southward to Queensland (Australia); also, westward to East Africa and eastward to Samoa.

A coastal pelagic species.

Feeds on plankton organisms.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with purse seines, lift nets, traps and beach seines; also incidentally with bottom trawls

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Stol 6

1974

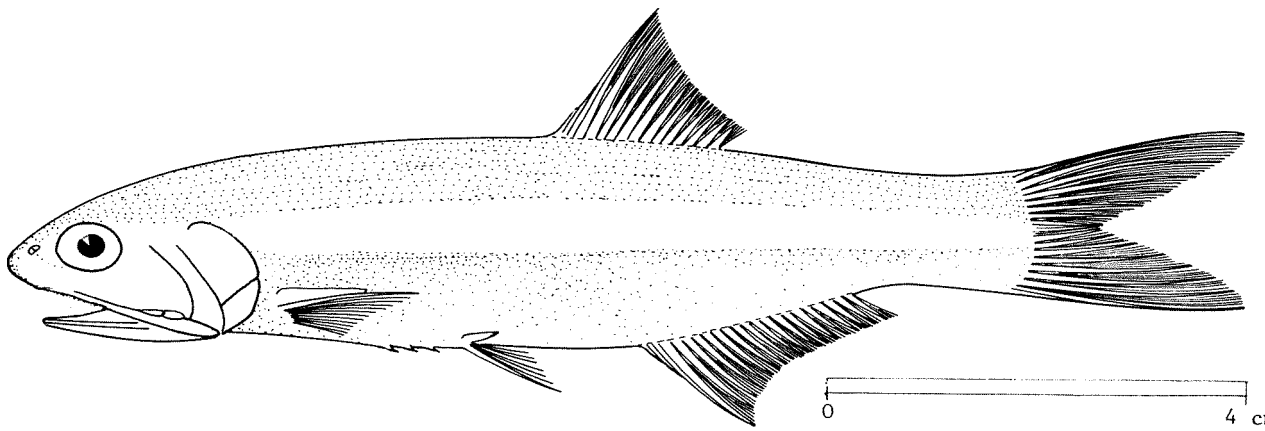
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Stolephorus commersonii Lacepède, 1803

SYNONYMS STILL IN USE: *Anchoviella commersonii:* Fowler, 1941



VERNACULAR NAMES:

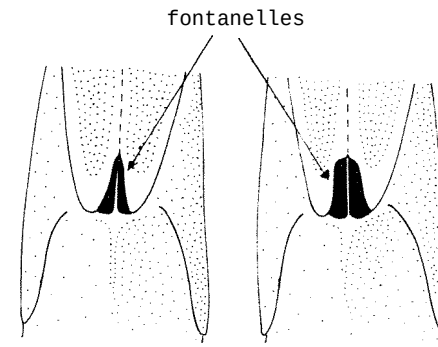
FAO: En - Commerson's anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, nearly cylindrical; belly rounded, *with 3 to 4 (rarely 5) needle-Like scutes between pectoral and pelvic fin bases.* Snout prominent, rather pointed; *maxilla long, its tip pointed and projecting to or beyond posterior border of pre-operculum;* posterior border of pre-operculum evenly rounded near maxilla tip; *isthmus reaching to hind border of gill membrane. Posterior frontal fontanelles broad, with sigmoid outer borders. Anal fin origin below* dorsal fin base. Lower gill rakers more than 21.

Colour: pale cream when scales lost; bright silver stripe along flank.



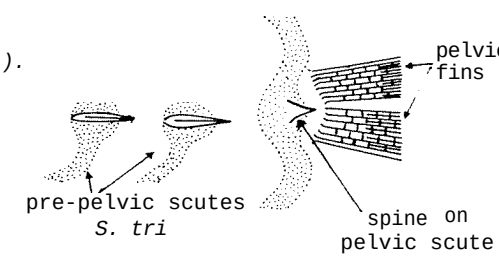
head viewed from above
S. bataviensis *S. corrvnerscntii*
S. indicus

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus chinensis: 5 to 6 (usually 6) scutes between pectoral and pelvic fin bases (3 to 4, rarely 5 in *S. commersonii).*

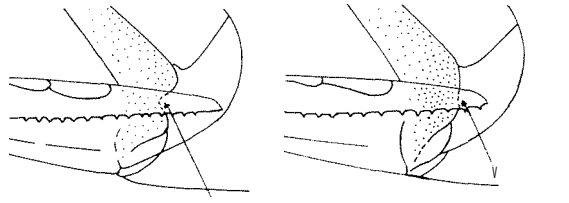
Stolephorus bataviensis, S. indicus: narrow posterior frontal fontanelles with the outer borders straight; maxilla not reaching to posterior margin of pre-operculum in S.indicus.

Stolephorus tri: presence of a spine before dorsal fin and a spine on pelvic scute.



Stolephorus macrops, S. andhraensis, Species C of Ronquillo: hind border of preoperculum indented near maxilla tip.

Other *Stolephorus* species: isthmus not reaching to hind border of gill membrane, leaving exposed a small (white or silver) diamond-shaped urohyal plate (easily visible without lens).



preoperculum indented
S. macrops

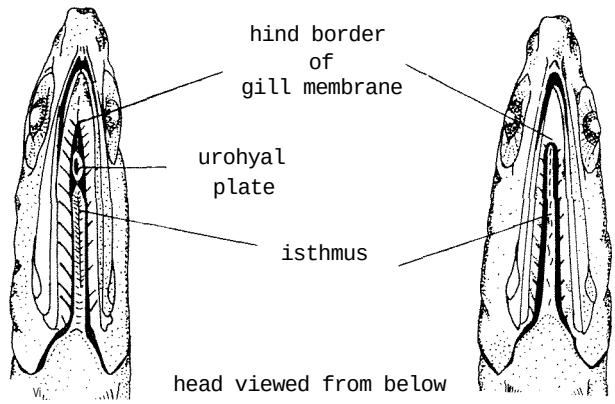
preoperculum rounded
S. commersonii

Engraulis: maxilla tip blunt and no scutes along belly.

Thrissina: scutes also present behind pelvic fins (but not immediately in front of pectoral fins).

Thryssa: scutes present along entire body, from isthmus to anal fin origin.

Lycothrissa: canine teeth present in jaws.



head viewed from below

S. buccarteeri *S. commersonii*

SIZE:

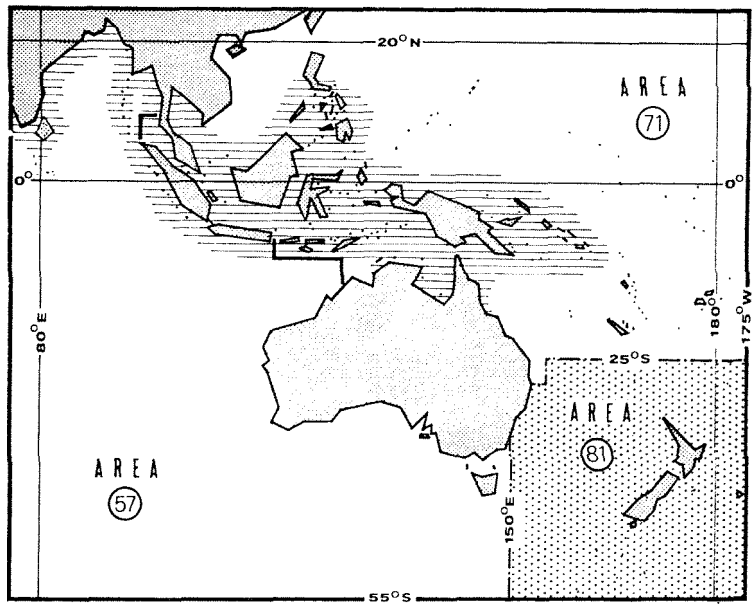
Maximum: 15 cm; common: about 12 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area, but not to Hong Kong; southward possibly to Queensland (Australia); also, westward to East Africa.

A coastal pelagic species.

Feeds on plankton organisms.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons tons)

Caught by purse seines, beach seines, bamboo-stake traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Thris 1

1974

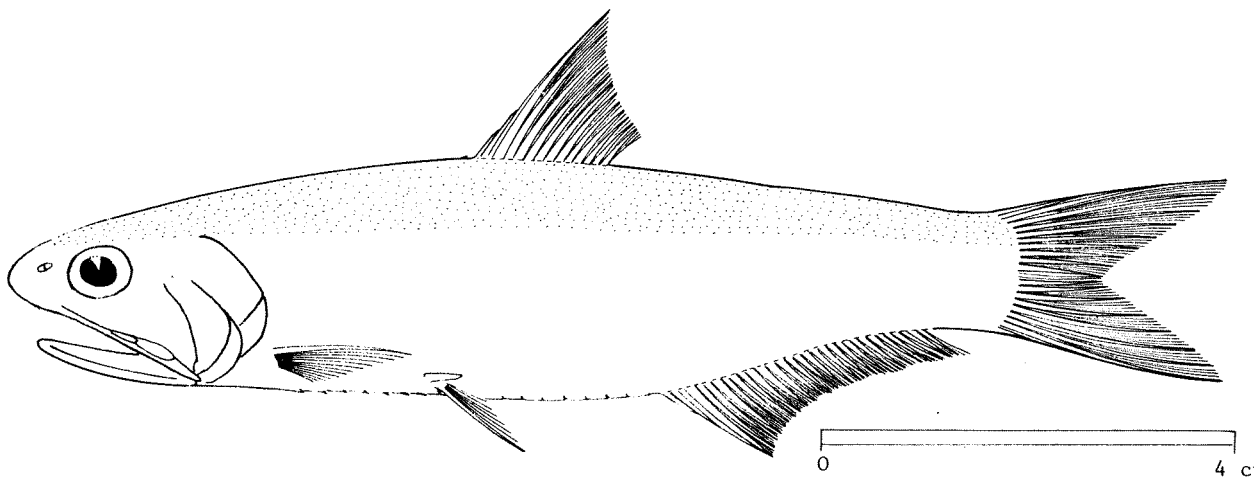
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thrissina baelana (Forsskål, 1775)

SYNONYMS STILL IN USE: *Engraulis baelana:* Weber & de Beaufort, 1913
Thrissocles baelama: Fowler, 1941



VERNACULAR NAMES:

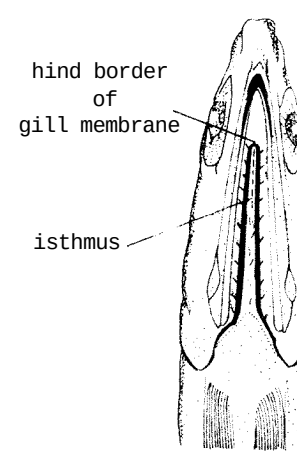
FAO: En - Baelama anchovy
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, a little compressed; belly rounded, *with 5 to 7 barely keeled scutes between pectoral and pelvic fin base and 8 to 10 slightly sharper scutes behind pelvic fin base*; occasionally, a single plate-like scute at isthmus; a small blunt spine before dorsal fin origin. Snout prominent, a little pointed; maxilla tip pointed and projecting just beyond articulation of lower jaw; isthmus reaching to hind border of gill membrane. Anal fin origin a little behind last dorsal fin ray; *27 to 33 anal fin rays* Lower gill raisers 20 to 23.

Colour: back dart. blue or brown, flanks silvery; no silver lateral stripe.



T. baelama
head viewed
from below

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stolephorus: no scutes behind pelvic fin base.

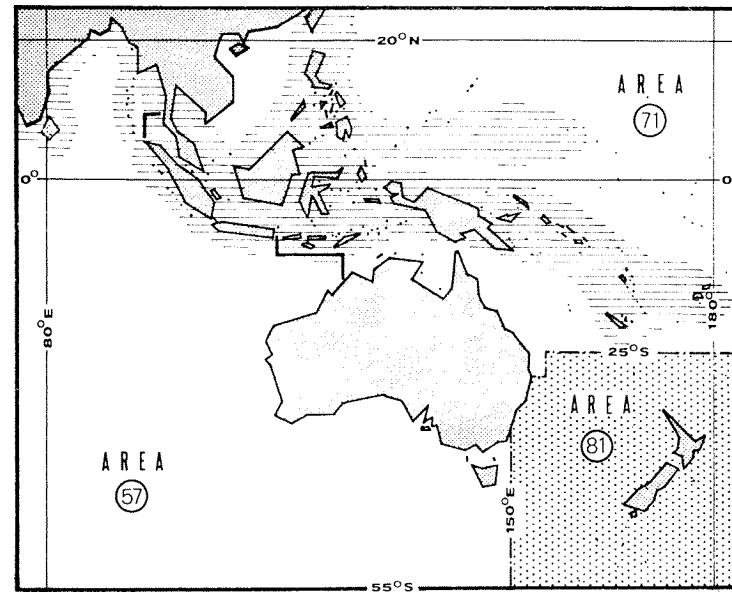
Thryssa: keeled scutes along entire belly from isthmus to anal fin origin.

Enngraulia: no abdominal scutes.

Lycothrissa: canine teeth present in jaws.

SIZE:

Maximum: 15 cm; common: 10 to 12 cm



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, northward to Amoy, but not recorded from Australian coasts; also, westward to East Africa.

A coastal pelagic species.

Feeds on plankton organisms.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with purse seines, beach seines, and bamboo-stake traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

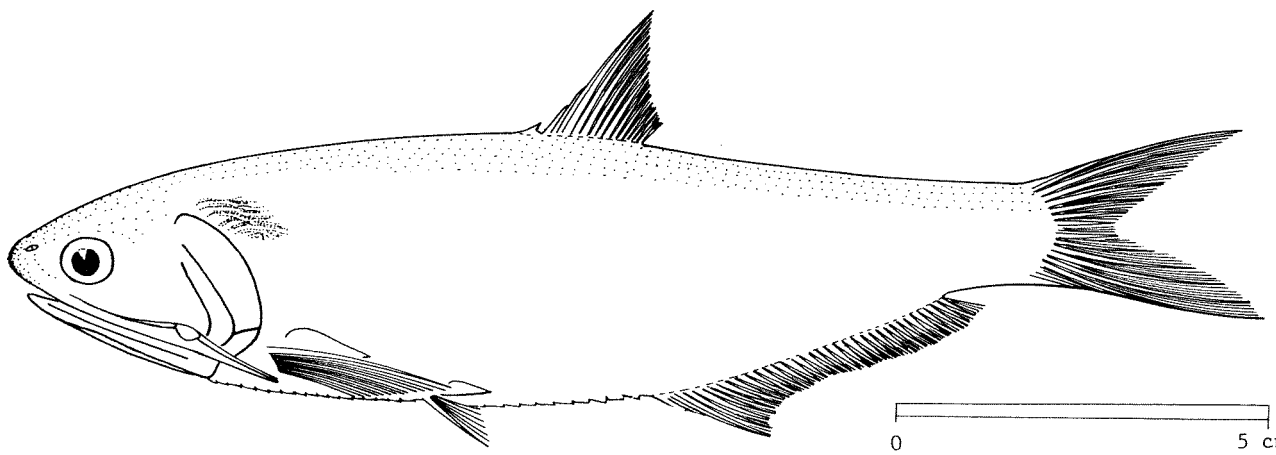
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thryssa mystax (Schneider, 1801)

SYNONYMS STILL IN USE: *Engraulis mystax:* Weber & de Beaufort, 1913
Thrissocles mystax: Fowler, 1941



VERNACULAR NAMES:

FAO: En - Moustached thryssa
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

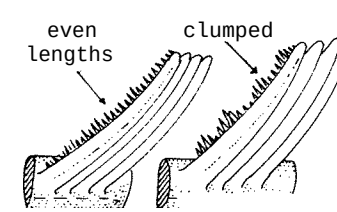
Body fusiform, fairly strongly compressed; belly keeled, *with 16 to 19 scutes in front of pelvic fin base,* and 9 to 11 scutes behind; a small, sharp spine before dorsal fin origin. Snout prominent, bluntly rounded; *maxilla long, its tip pointed and reaching to or beyond base of first pectoral ray;* mouth not strongly oblique; lower gill rakers 14 to 17, *inner edges of rakers with small serrae not forming distinct clumps.* Dorsal fin with 13 to 16 rays, anal fin with 35 to 41 rays.

Colour: back brown or blue, flanks silvery; dark venulose area at shoulder; gill cavity light orange in life.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Thryssa purava: mouth strongly oblique, 43 to 49 anal fin rays (35 to 41 in *T. mystax*) and 14 to 17 scutes before pelvic fins (16 to 19 in *T. mystax).*

Thryssa dussumieri, T. vitrirostris: serrae on the inner face of the gill rakers forming distinct clumps; maxilla reaching more than half way along pectoral fins in *T. dussumieri.*



gill rakers
showing form of serrae
T. mystax *T. vitrirostris*

Thryssa hamiltonii, T. malabarica, T. kammalensis: maxilla shorter, not reaching to pectoral fin base.

Thryssa setirostris: maxilla very long, reaching beyond tips of pelvic fins.

Thrissina: no scutes immediately before pectoral fin base.

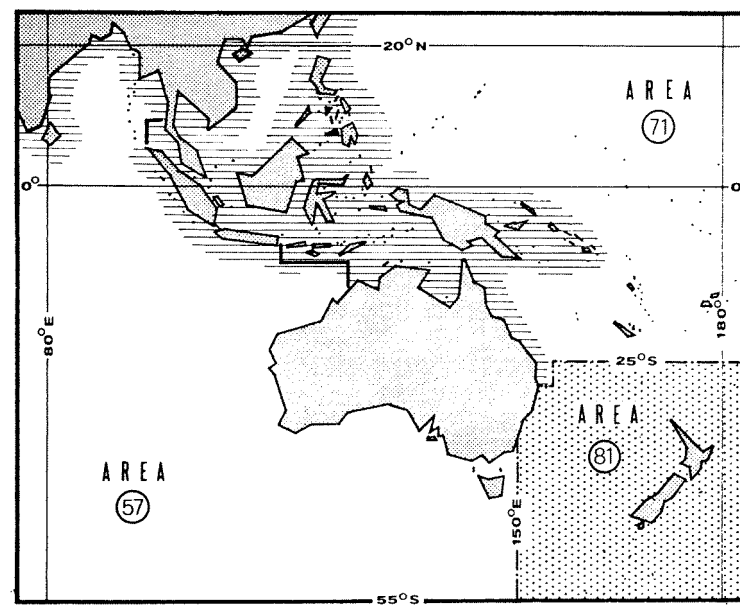
Setipinna: 1st pectoral fin ray filamentous.

Lycothrissa: canine teeth present in jaws.

Papuengraulis: strongly keeled scutes present only before pectoral fin base.

SIZE:

Maximum: 20 cm; common: about 17 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, northward to Amoy, and southward to Queensland (Australia).

A coastal pelagic species.

Feeds on plankton organisms.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with beach seines, purse seines and bamboo-stake traps, often using light; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Thrys 2

1974

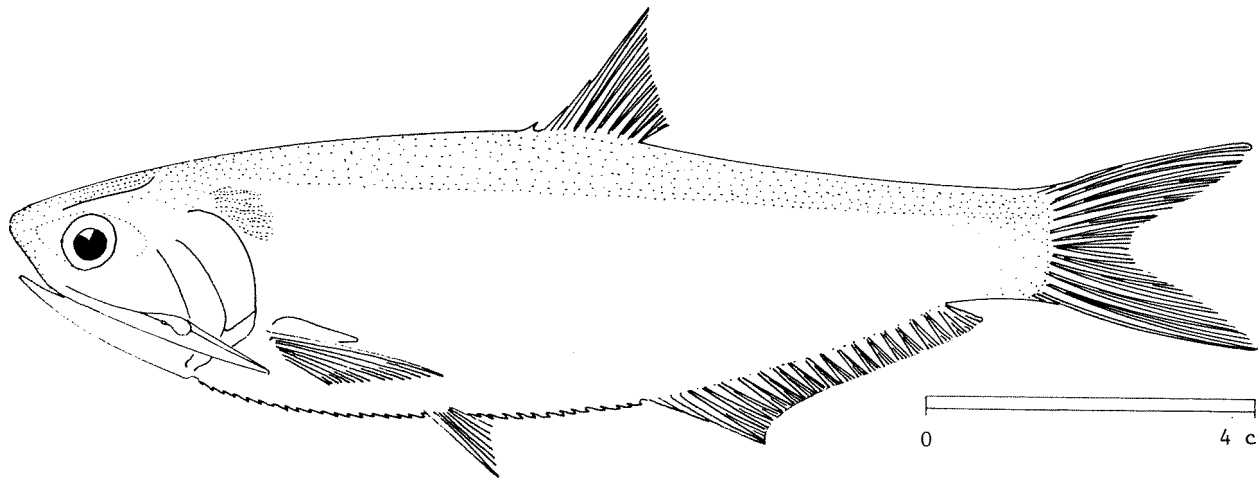
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thryssa vitrirostris (Gilchrist & Thompson, 1908)

SYNONYMS STILL IN USE: *Thrissocles vitirostris:* Fowler, 1941



VERNACULAR NAMES:

FAO: En - Orangemouth thryssa
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

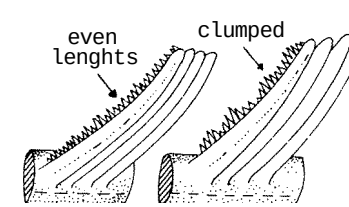
Body fusiform, fairly strongly compressed; belly keeled, *with 16 to 19 scutes in front of pelvic fin base,* and 9 to 12 scutes behind; a small, sharp spine before dorsal fin origin. Snout prominent, bluntly rounded; *maxilla long, its tip pointed and reaching to base of 1st pectoral fin ray; mouth not strongly oblique; lower gill rakers 20 to 24, inner edges of rakers with small serrae forming distinct clumps.*

Colour: back brown or blue, flanks silvery; dark venulose area at shoulder; *gill cavity bright orange in life.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Thryssa dussumieri: maxilla longer, reaching 1/2 to 7/8 along pectoral fin.

Thryssa mystax, T. purava: only 14 to 19 gill rakers (20 to 24 in T. *vitrirostris);* serrae not clumped along the inner edge of each raker.



gill rakers
showing form of serrae
T. mystax *T. vitrirostris*

Thryssa hamiltonii, T. malabarrica, T. kariunalensis: maxilla shorter, not reaching to base of 1st pectoral fin ray.

Thryssa setirostris: maxilla very long, reaching beyond tips of pelvic fins.

Thrissina: no scutes immediately before pectoral fin base.

Setipinna: 1st pectoral fin ray filamentous.

Lycothrissa: canine teeth present in jaws.

Papuengraulis: scutes strongly keeled only before pectoral fin base.

SIZE:

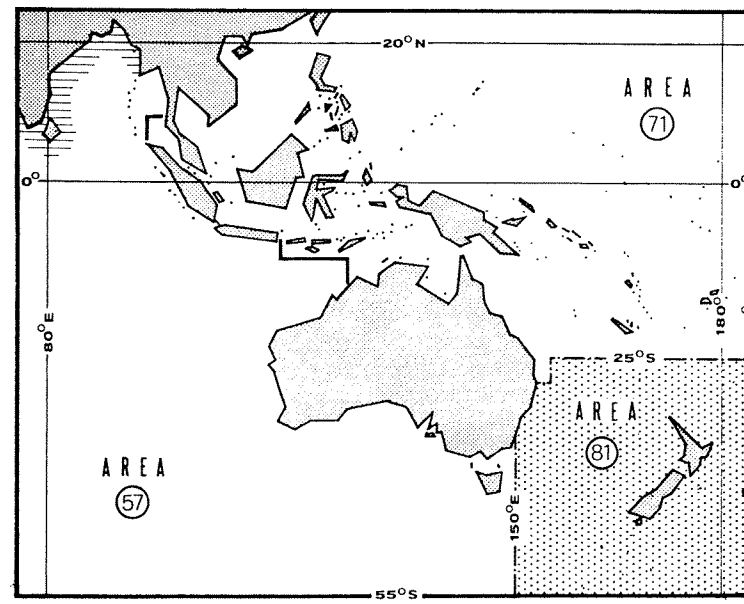
Maximum: 21 cm; common: 14 to 15 c

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Coasts of India; also found westward to East African coasts.

A coastal pelagic species.

Feeds on plankton organisms.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught mainly with purse seines, beach seines, bamboo-stake traps and lift nets.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Thrys 3

1974

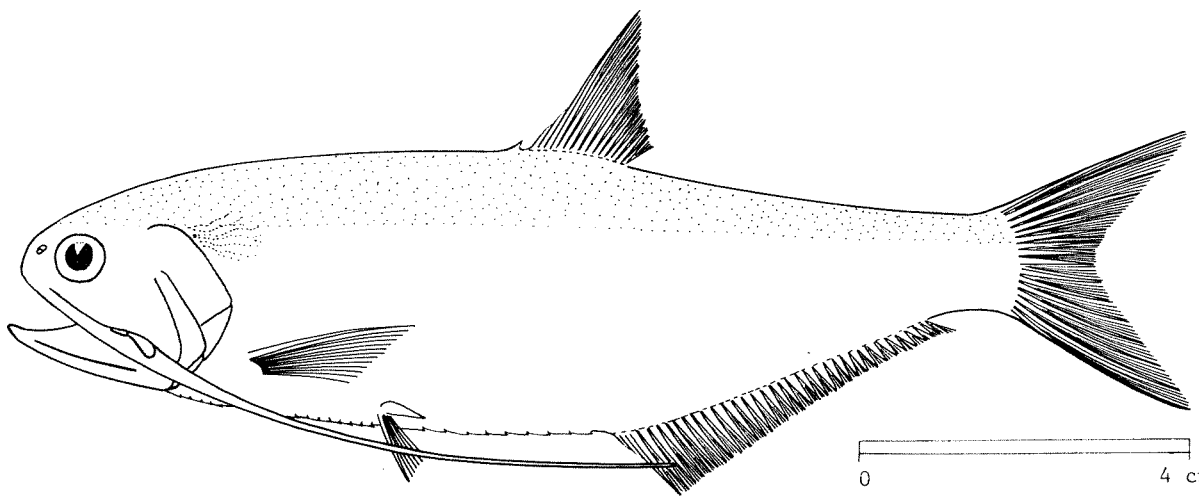
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thryssa setirostris (Broussonet, 1782)

SYNONYMS STILL IN USE: *Thrissocles setirostris*: Fowler, 1941



VERNACULAR NAMES:

FAO: En - Longjaw thryssa
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS

Body fusiform, fairly strongly compressed; belly keeled, with 16 to 18 scutes in front of pelvic fin base, and 8 to 9 behind; a small, sharp spine before dorsal fin origin. Snout bluntly rounded; *maxilla very long, reaching beyond tip of pectoral fin, often to anal fin origin*; lower jaw not slender but rising steeply in mouth; lower gill rakers 11 to 12.

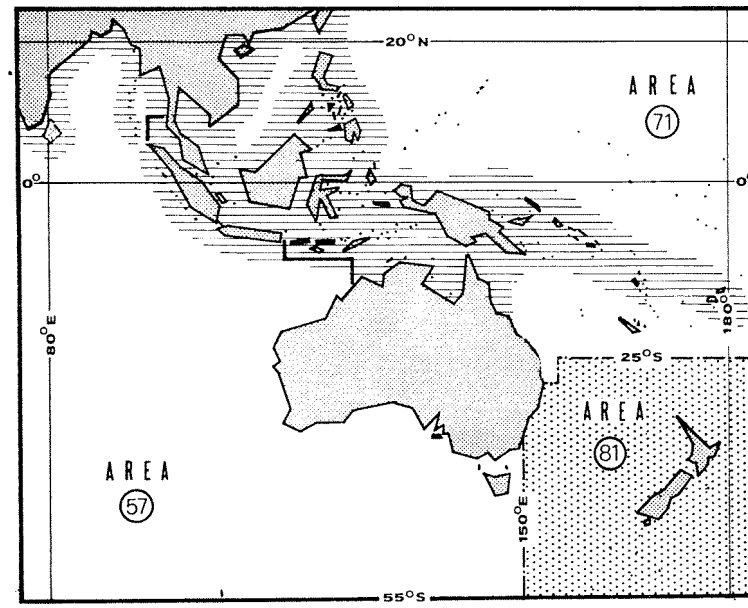
Colour: back brown or blue, flanks silvery; faint venulose area at shoulder.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Thryssa* species, *Thrissina, Setipinna, Lycothrissa, Papuengraulis*: maxilla much shorter, at most not reaching beyond pectoral fin tip; lower jaw slender, not rising steeply in mouth. Also, *Setipinna* has a pectoral filament and *Lycothrissa* has canine teeth.

SIZE:

Maximum: 18 cm; common: 13 to 15 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, southward to North Queensland (Australia), northward to Amoy; also westward to East Africa.

A pelagic species.

Feeds on plankton organisms.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with purse seines, beach seines, lift nets and traps.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Thrys 4

1974

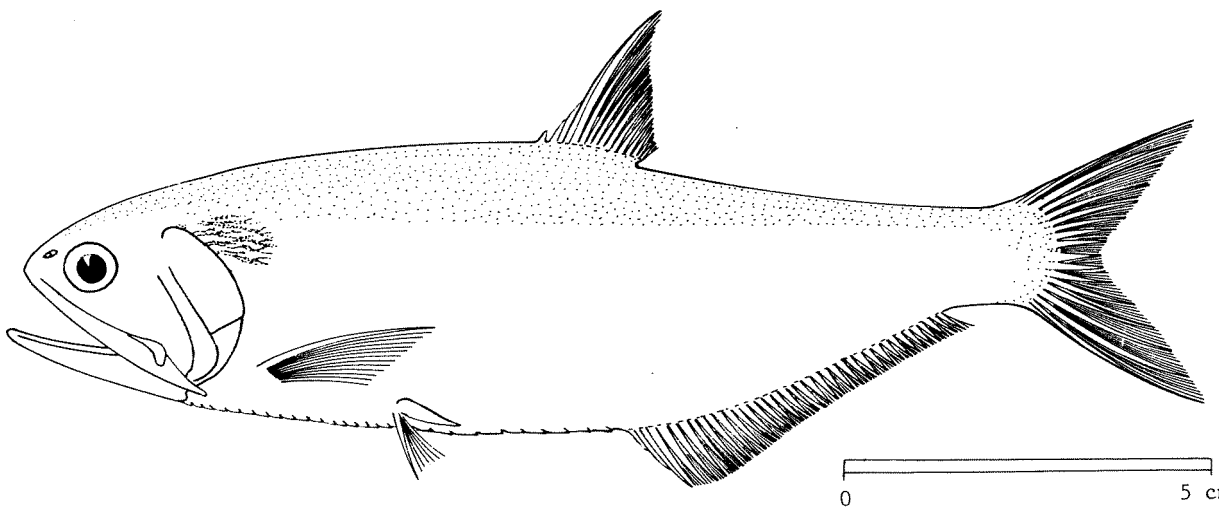
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thryssa hamiltonii (Gray, 1835)

SYNONYMS STILL IN USE: *Thrissocles hamiltonii*: Fowler, 1941



VERNACULAR NAMES:

FAO: En - Hamilton's thryssa
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, fairly strongly compressed; belly keeled, *with 17 scutes in front of pelvic fin base* and 10 to 11 scutes behind; a small, sharp spine before dorsal fin origin. Snout prominent, bluntly rounded; *maxilla reaching only a little beyond gill opening*, not to pectoral fin base; mouth not strongly oblique; *lower gill rakers 12 to 14. Anal fin rays 38 to 43*.

Colour: back brown or blue, flanks silvery; dark venulose area on shoulder.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Thryssa malabarica, T. kammalensis: 16 to 29 lower gill rakers (12 to 14 in *T. hamiltonii*).

Other *Thryssa* species: maxilla longer, reaching at least to base of 1st pectoral fin ray.

Thryssina: no scutes immediately before pectoral fin base.

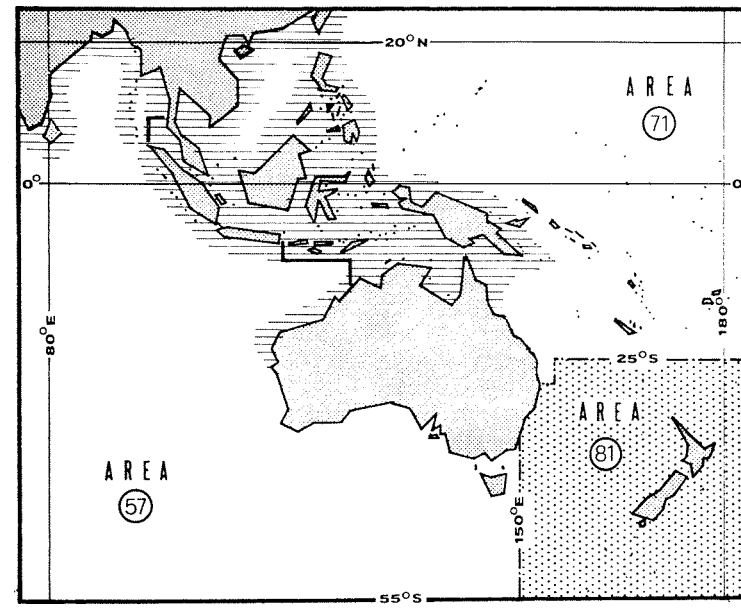
Setipinna: 1st pectoral fin ray filamentous.

lycothrissa: canine teeth present in jaws.

Papuengraulis: strongly keeled scutes present only before pectoral fin base.

SIZE:

Maximum: 20 cm; common: about 17 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, southward to North Queensland (Australia).

A pelagic species, occurring in large shoals.

Feeds on plankton organisms.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; Philippines: 33 300 tons)

Caught with purse seines, beach seines and bamboo-stake traps.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce or fish balls.

ENGR Thrys *5*

1974

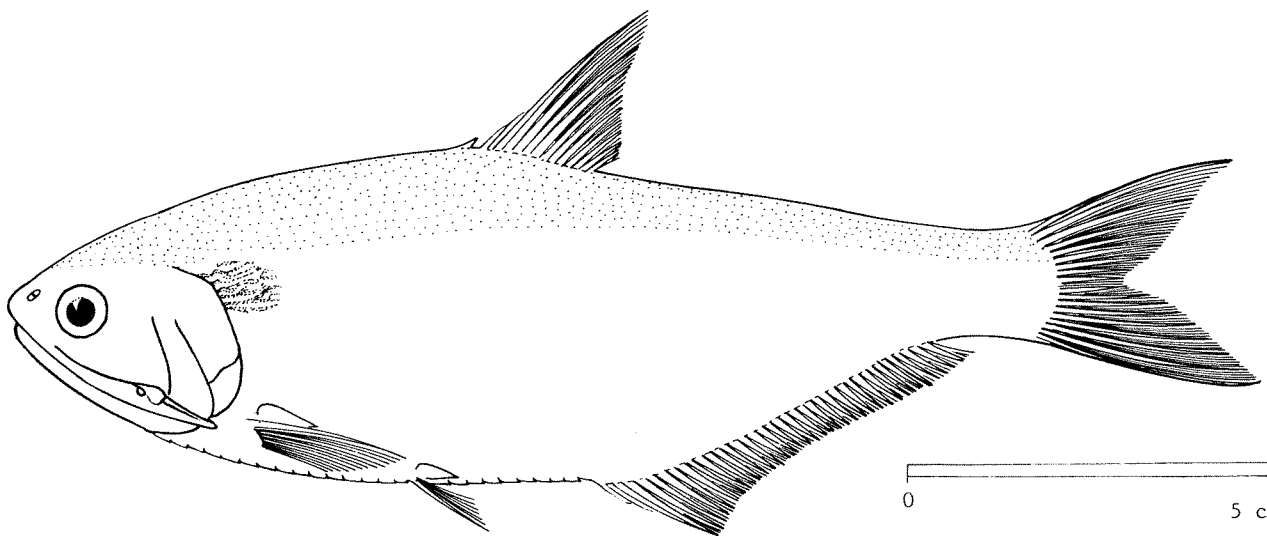
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: ENGRAULIDAE

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

Thryssa malabarica (Bloch, 1795)

SYNONYMS STILL IN USE: *Thrissocles malabarica:* Fowler, 1941
Thrissocles scratchleyi: (Ramsey & Ogilby, 1886)



VERNACULAR NAVIES:

FAO: En - Malabar thryssa
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, fairly strongly compressed; belly keeled, with 15 to 17 scutes in front of pelvic fin base, and 9 to 10 scutes behind; a small, sharp spine before dorsal fin origin. Snout fairly prominent, bluntly pointed; *maxilla reaching only a little beyond gill opening,* not to pectoral fin base; mouth not strongly oblique; *lower gi1l rakers 16 to 20. Anal fin rays 38 to 43.*

Colour: back brown or blue, flanks silvery; dark venulose area on shoulder.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Thryssa kammalensis: 27 to 29 lower gill rakers (16 to 20 in *T. malabarica);* only 34 rays in anal fin (38 to 43 in *T. malabarica*).

Thryssa hamiltonii: only 12 to 14 lower gill rakers (16 to 20 in *T. malabarica).*

Other *Thryssa* species: maxilla longer, reaching at least to base of 1st pectoral fin ray.

Thrissina: no scutes immediately before pectoral fin base.

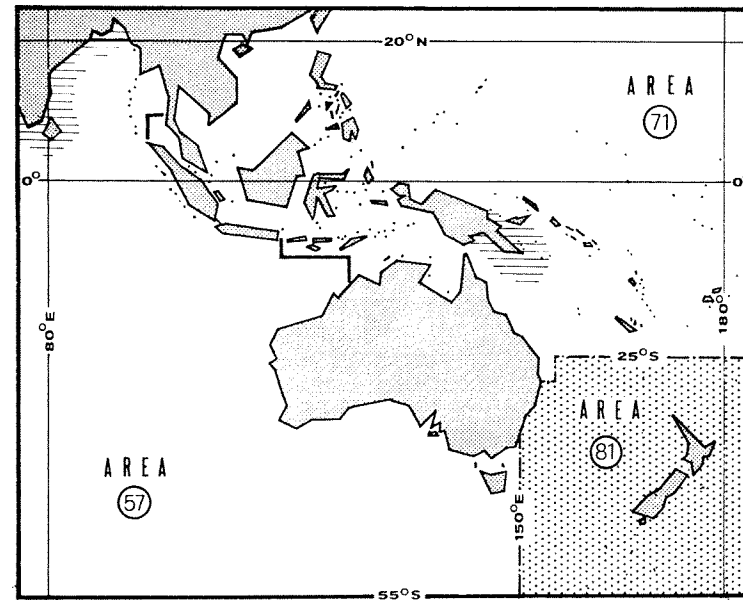
Setipinna: lst pectoral fin ray filamentous.

Lycothrissa: canine teeth present in jaws.

Papuengraulis: strongly keeled scutes present only before pectoral fin base.

SIZE:

Maximum: 35 cm (as *T. scratchleyi),*
20 cm (as *T. malabarica);*
common: about 17 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Pakistan to Indian coasts, and (as *T. scratchleyi)* New Guinea.

Inhabits coastal waters and estuaries.

PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not. reported for this species. The total catch of Engraulidae in 1972 was:

area 57 (Eastern Indian Ocean): 12 800 tons (Australia: 100 tons; India: 12 700 tons)
area 71 (Western Central Pacific): 33 500 tons (Malaysia: 200 tons; *Philippines:* 33 300 tons)

Caught with beach seines, bamboo-stake traps, and possibly with gill nets; also incidentally with bottom trawls.

Marketed fresh, dried, dried-salted or made into fish meal, fish sauce and fish balls.

EPHIP

1974

FAO SPECIES IDENTIFICATION SHEETS

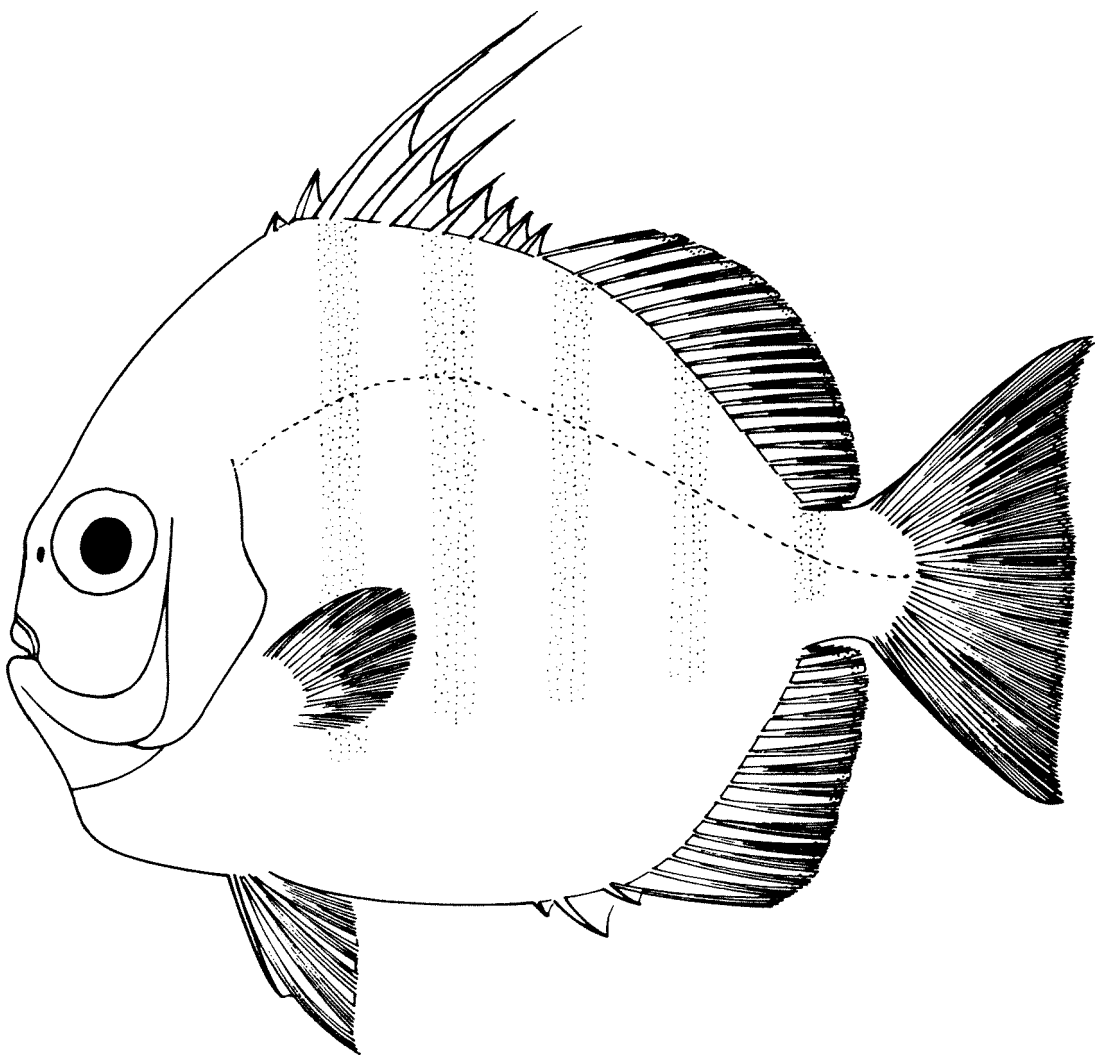
FISHING AREAS 57,71
(F Ind. Ocean)
(W Cent. Pacific)

EPHIPPIDAE

Spadefishes
(Some authors place in this family the Drepanidae and Platacidae)

Body deep, almost circular, and strongly compressed; head fairly short with steep upper profile; scales dense but irregular on head,but absent on part of operculum and near mouth; *mouth very small, terminal but not protractile;* teeth small and setiform. Dorsal fin with 10 spines (the 1st forward pointing and visible only in the young), the *spinous part separated from the soft part by a deep notch; pectoral fins small, rounded;* pelvic fins present; anal fin with 3 spines; caudal fin somewhat emarginate, Scales of moderate size, smooth; lateral line angularly arched.

Colour: 4 to 5 vertical black bands on body from dorsal fins almost to belly; margins of soft dorsal, pelvic, anal and caudal fins dusky black.



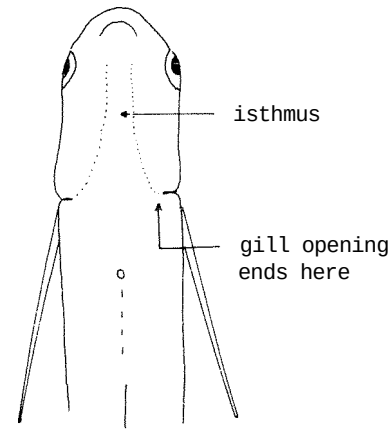
SIMILAR FAMILIES OCCURRING IN THE AREA:

Drepanidae: pectoral fins long and flacate and mouth protractile, forming a downward-pointing tube; also, dorsal fin spines shorter.

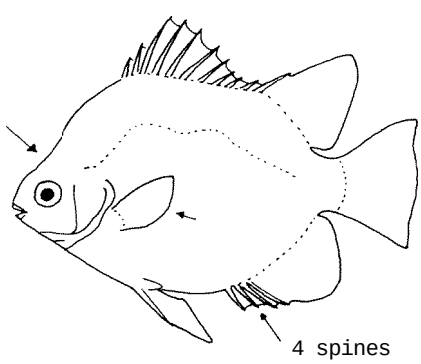
Platacidae: spines in dorsal fin increasing in length posteriorly and not separated from soft part of fin by a notch.

Stromateidae (deep-bodied species): no pelvic fins in adults and gill membranes broadly united to isthmus (gill openings mere lateral slits).

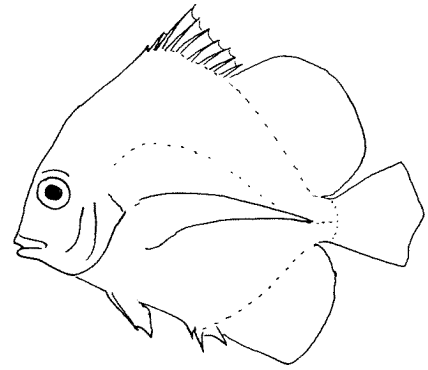
Scatophagidae: 4 anal fin spines and snout profile concave.



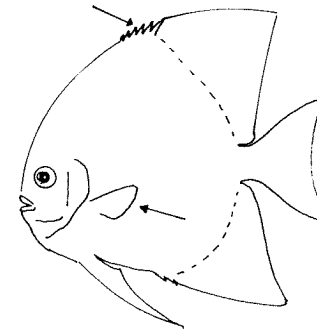
Stromateidae



Scatophagidae



Drepanidae



Platacidae

Key to Genera

Ephippus only

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

Ephippus orbis EPHIP Ephip 1

EPHIP Ephip 1

1974

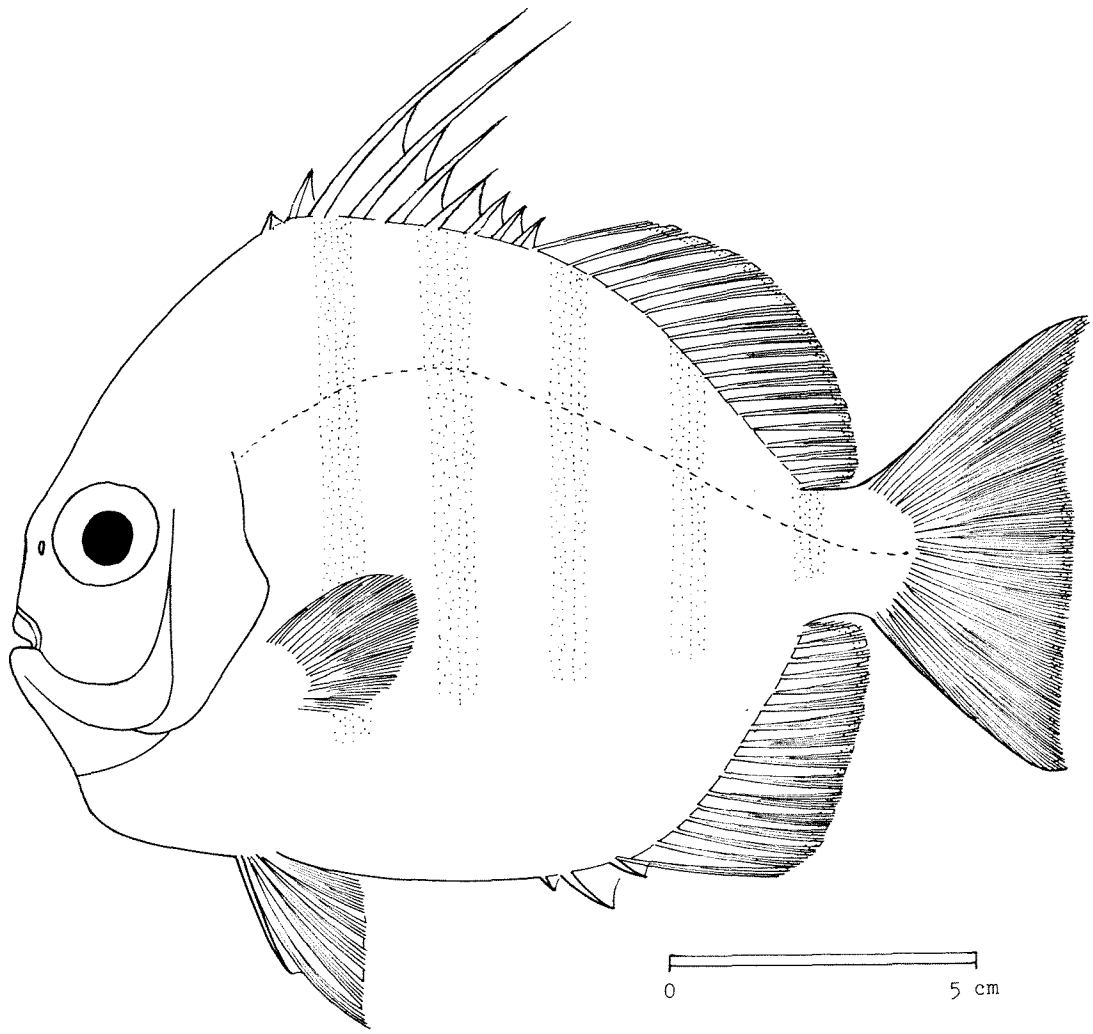
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: EPHIPPIDAE

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

Ephippus orbis (Bloch, 1787)

SYNONYMS STILL IN USE: *Chaetodon orbis* Bloch, 1787



VERNACULAR NAMES:

FAO: En - Spadefish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body deep, nearly circular, strongly compressed, not angular at dorsal and anal fin origins. Mouth small, terminal, not protactile; teeeth in bands, setiform, none on palate. Operculum covered with scales almost to its ventral edge. First dorsal fin with 1 forward-pointing spine (visible only

in young specimens) and 9 normal spines and 19 to 20 soft rays, the 4th dorsal spine longest; pectoral fins short and rounded, anal fin with 3 spines and 15 to 16 soft rays.

Colour: 4 to 5 vertical black bands on body from dorsal fins almost to belly; margins of soft dorsal, pelvic, anal and caudal fins dusky black.

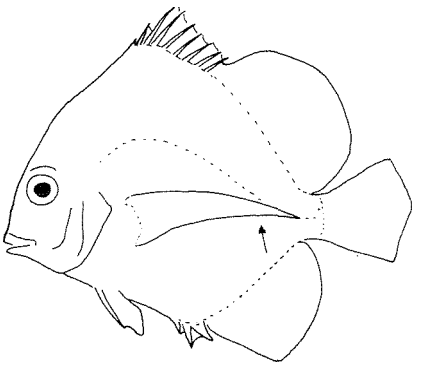
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA

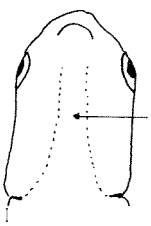
Drepane species: pectoral fins long, falcate; mouth protractile, forming a downward-directed tube; also, dorsal fin spines shorter.

Platax species: spines of dorsal fin increasing in length posteriorly; no notch between spinous and soft parts of dorsal fin.

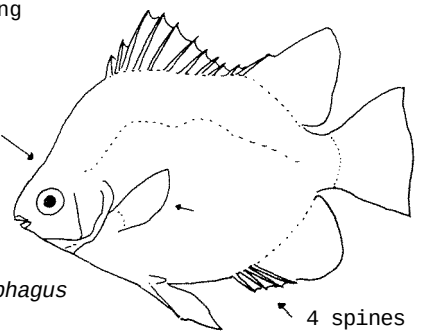
Pampus species: no pelvic fins in adults and gill membranes broadly united to isthmus (gill openings mere lateral slits).

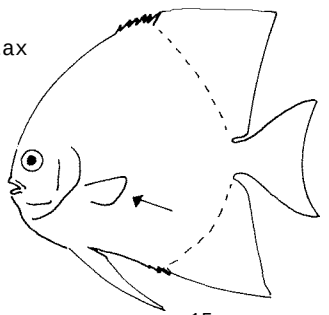
Scatophagus species: 4 anal spines; also, head profile concave above snout.





Pampus gill opening ends here





SIZE:

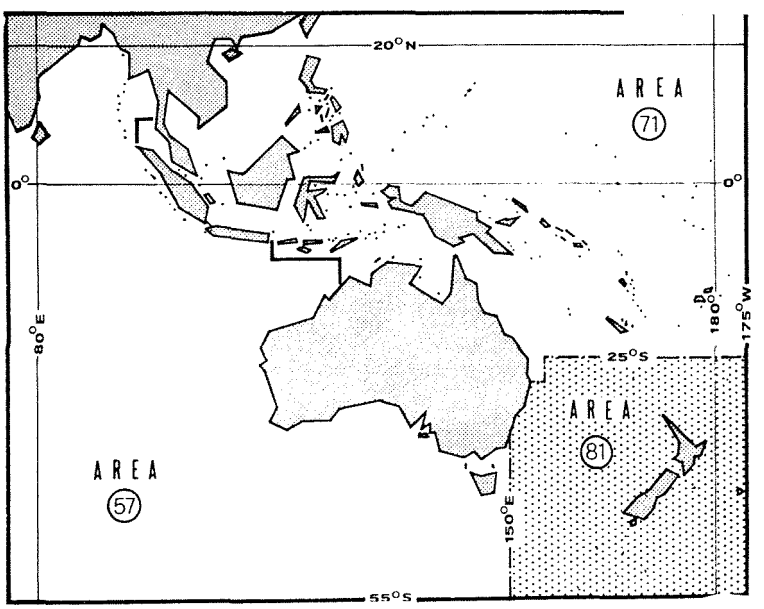
Maximum: 25 cm; common: 15 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to East Africa.

Found in shallow water at depths of 10 to 30 m.

Feeds on bottom-living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Throughout its range.

CATCHES, MAIN FISHING AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls and traps.

Marketed fresh and dried-salted.

click for previous page

F

G

FORM
1474

FAD SPECIES IDENTIFICATION SHEETS

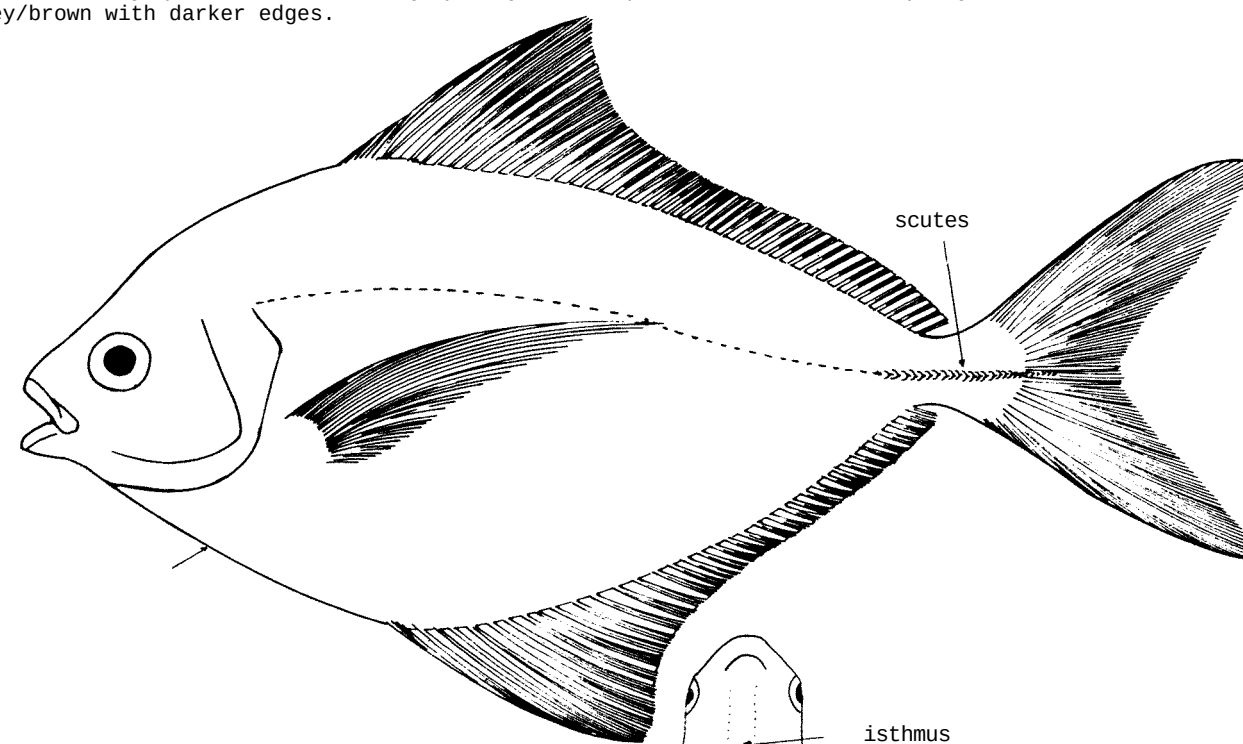
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

FORMIONIDAE

Black pomfrets
(termed Apolectidae by some authors, included in Stromateidae by others)

Body deep and compressed. Mouth fairly small; teeth in each jaw in a single series, extremely minute, disappearing with age. Gill membranes not united to isthmus, *gill openings extending to underside of head. Dorsal and anal fins very long*, spines present only in small individuals; pectoral fins falcate; *pelvic fins small, near throat, absent in adults;* caudal fin forked. *Caudal peduncle keeled, with scute-like scales.* Scales small, covering vertical fins.

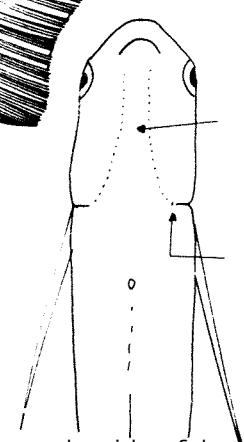
Colour: grey/brown with a blue/grey tinge; lower portion of head and body lighter. Fins grey/brown with darker edges.

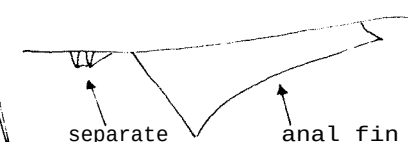


SIMILAR FAMILIES OCCURRING IN THE AREA:

Stromateidae: no scutes on caudal peduncle and gill membranes broadly united to isthmus, the gill openings not reaching to under throat.

Carangidae: 2 detached spines before anal fin.





Key to Genera

Formio only

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

Formio niger FORM Form 1

FORM Form 1

1974

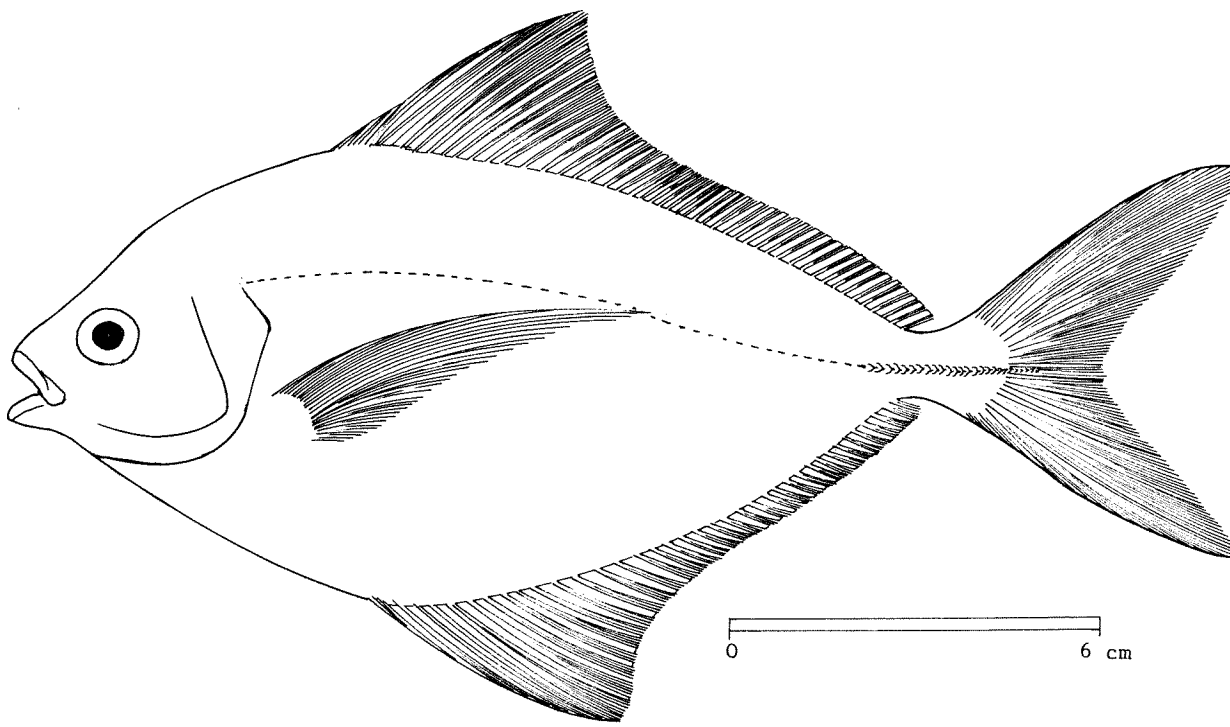
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: FORMIONIDAE

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

Formio niger (Bloch, 1795)

SYNONYMS STILL IN USE: *Parastromateus niger* (Bloch, 1795)
Apolectus niger (Bloch, 1795)



VERNACULAR NAMES:

FAO: En - Black pomfret
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

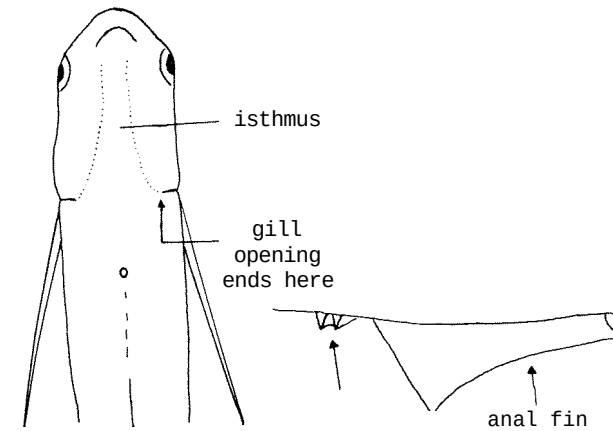
Body fairly deep, compressed. Gill membranes not united to isthmus; gill opening extending to underside of head. Dorsal and anal fins long, spines present only in small individuals; pectoral fins long, falcate; *pelvic fins absent in adults;* caudal fin forked. *Scales of lateral line scute-like on caudal peduncle.*

Colour: Grey/brown with a blue/grey tinge; lower portion of head and body lighter. Fins grey/brown with darker edges.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Stromateidae: no scutes on caudal peduncle; gill membrane broadly united to isthmus, gill openings not reaching to under throat.

Carangidae: 2 detached spines before anal fin.



SIZE:

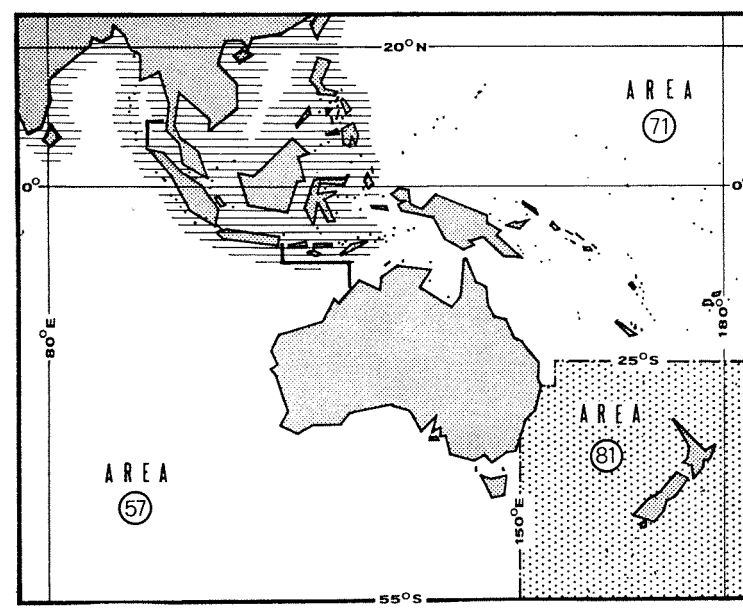
Maximum: 30 cm; common: 10 to 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Most of northern part of area, but not New Guinea or Australia.

Inhabits midwaters near coast over the continental shelf, down to 100 m.

Feeds on crustaceans and small fishes.



PRESENT FISHING GROUNDS:

Coastal waters and trawling grounds.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION

Separate statistics are not collected for this species.

Caught with drift gill nets, lift nets, seines, traps and bottom trawls.

Marketed fresh or dried-salted; flesh firm.

GERR

1974

FAO SPECIES IDENTIFICATION SHEETS

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

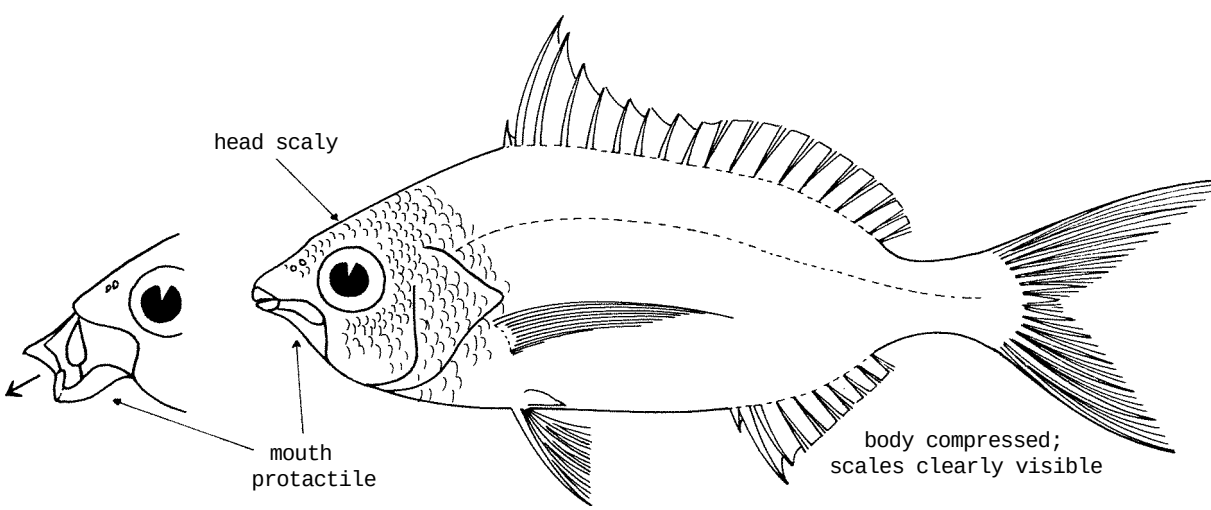
GERREIDAE

Mojarras, silver-biddies

Small to medium-sized fishes, body more or less compressed, oblong, sometimes rather deep. *Mouth strongly protractile, pointing downward when protracted; small teeth in both jaws, none on* roof of mouth. A *long dorsal fin with spines and soft rays;* dorsal and anal fin bases with a rather high scaly sheath into which the fin can be folded; *pectoral fins long and pointed;* pelvic fin origin below or somewhat behind pectoral fin base and bearing a long, scale-like, axillary process. *Head and body entirely covered with clearly visible scales.*

Colour: head and body usually silvery, often with faint markings, such as spots or lines. Fins mostly colourless, but in some cases yellow or with black margins.

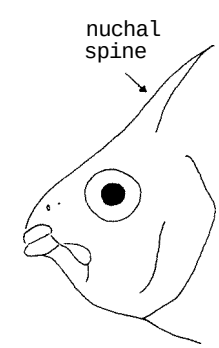
Gerreidae live in coastal waters of all warm seas. Found predominantly in shallow water, some species entering brackish water or even freshwater.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Leiognathidae: have a nuchal spine on nape and no scales on head (but small scales on cheek in *Leiognathus elongatus*)

Other fish families: lack the characteristic protractile mouth; also, 2 detached spines before anal fin in Carangidae.

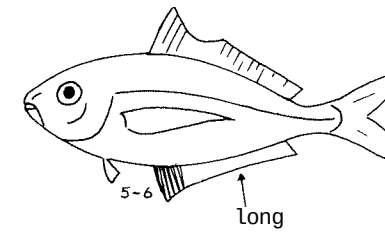


Leiognathus

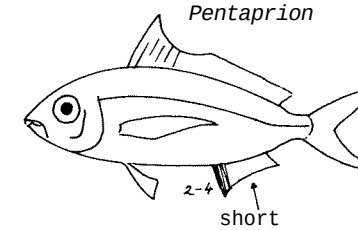
Key to Genera

1 a. Anal fin longer than soft part of dorsal fin;
5 to 6 spines and 12 to 1 rays in anal fin ... *Pentaprion*

1 b. Anal fin shorter than soft part of dorsal fin;
2 to 4 spines and 7 to 10 rays in anal fin ..... *Gerres*



Pentaprion



Gerres

List of Species occurring in the Area*

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

Gerres abbreviatus	GERR Gerr 1	*Gerres melbournensis ?*	
Gerres acinaces		*Gerres oblongus*	
Gerres argyreus (? = oyena)		*Gerres ovatus*	
Gerres australis ?		*Gerres oyena*	GERR Gerr 3
Gerres baconensis		*Gerres philippinus*	
Gerres carinatus ?		*Gerres poieti*	
Gerres cheverti ?		*Gerres profundus ?*	
Gerres darnleyensis		*Gerres rostrata*	
Gerres filamentosus	GERR Gerr 2	*Gerres setifer*	
Gerres kapas		*Gerres splendens ?*	
Gerres limbatus ?		*Gerres subfasciatus ?*	
Gerres longicaudus ?			
Gerres macracanthus			
Gerres macrosoma		*Pentaprion longimanus*	GERR Pent 1

* This list is in no way complete and contains many doubtful species. The family is in urgent need of revision.

GERR Gerr 1

1974

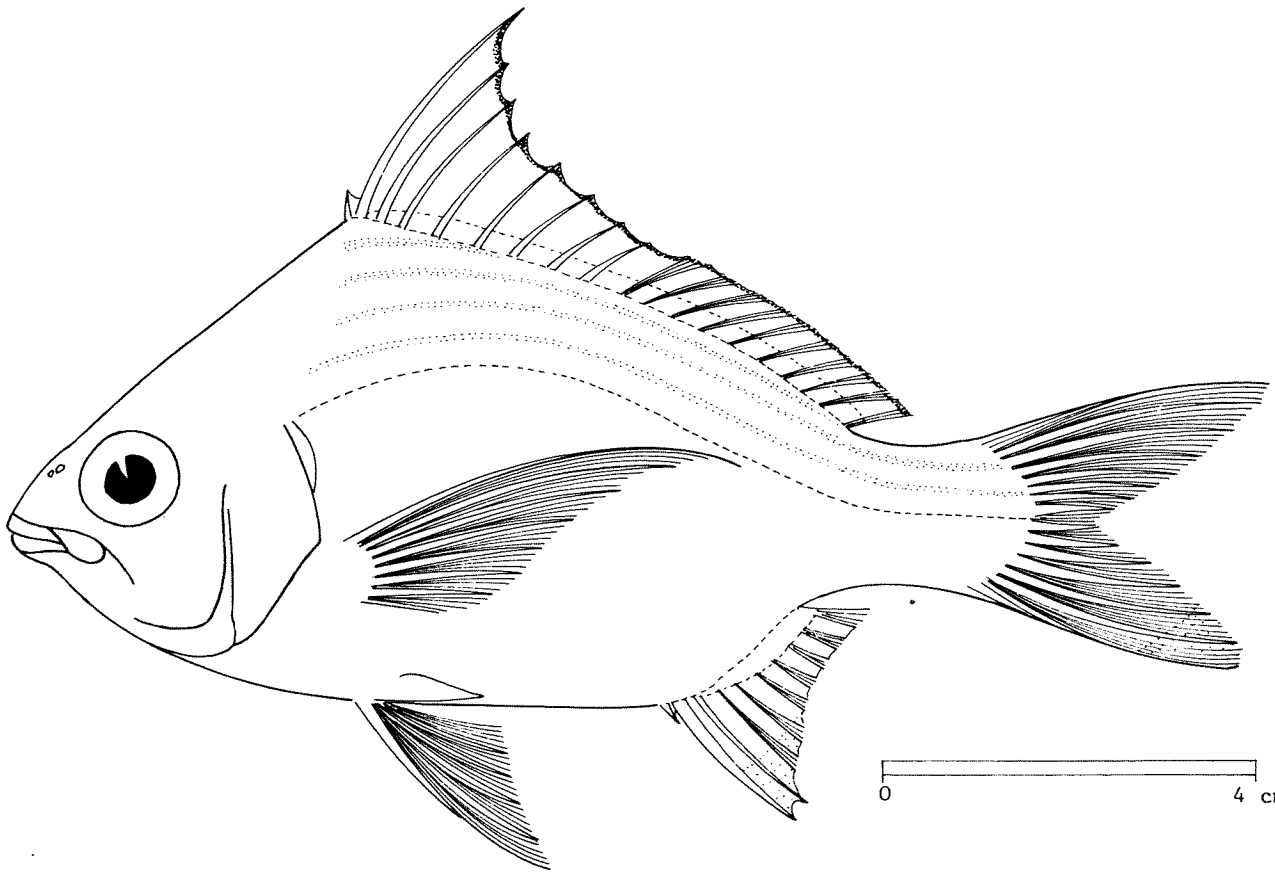
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GERREIDAE

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

Gerres abbreviatus Bleeker, 1850

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Deepbody mojarra
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body deep, its depth 2 to 2.2 times in standard length, forming a sharp angle at dorsal fin origin. Mouth strongly protractile. Pectoral fins long, reaching at least to anal fin origin. Head and body completely covered with *scales which are firmly attached.*

Colour: body silvery, with *indistinct longitudinal lines along scale rows; dorsal fin with thin black margin; pelvic fins sometimes yellowish; tips of anal fin and lower caudal fin lobe white.*

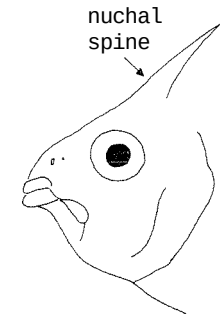
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gerres filamentosus: 2nd dorsal spine elongated; also, numerous dark blotches on body.

Gerres setifer: pectoral, pelvic and anal fins yellow.

Other Gerreidae: body more slender, its depth more than 2.2 times in standard length, or scales easily detached.

Leiognathidae: nuchal spine present on nape, no scales on head (but small scales on cheek in *Leiognathus elongates).*



Leiognathus

SIZE:

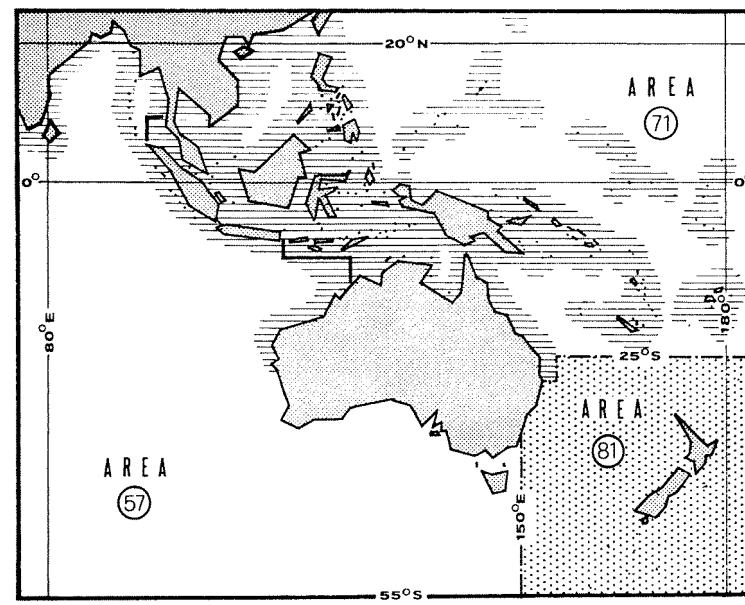
Maximum: 23 cm; common: 12 to 16 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to western coasts of India.

Inhabits coastal waters down to depths of about 40 m, near the bottom; usually found in small schools.

Feeds mainly on bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with traps.

Marketed usually fresh.

GERR Gerr 2

1974

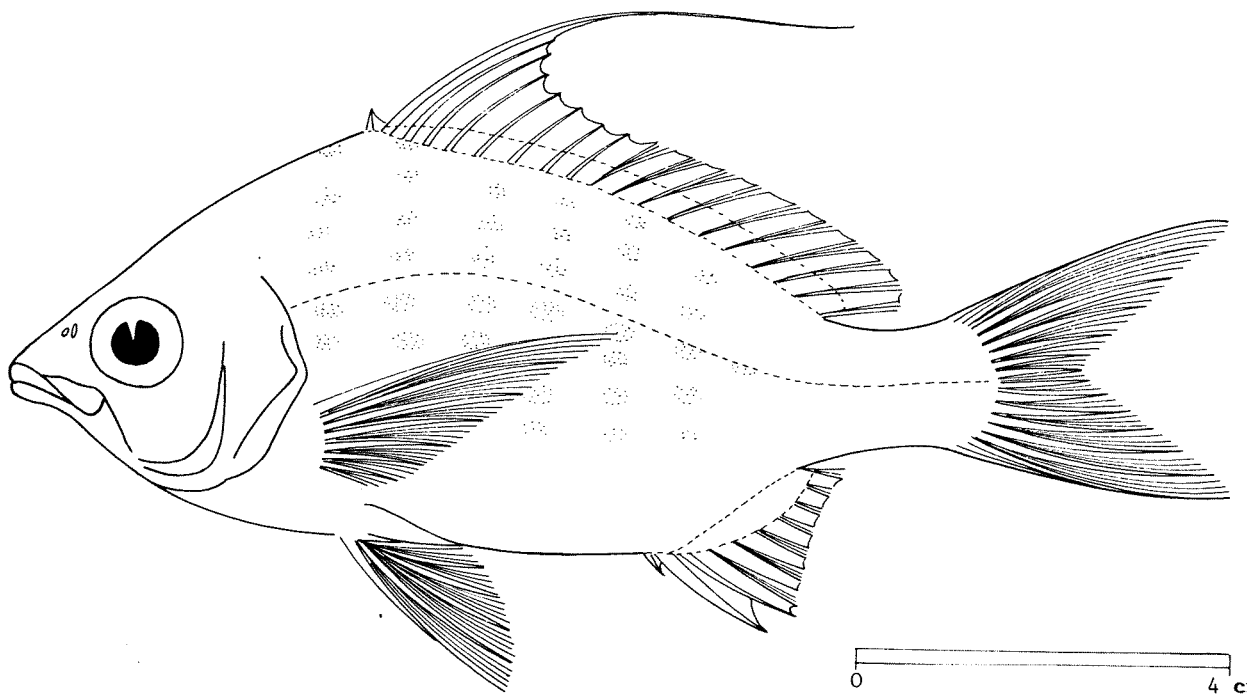
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GERREIDAE

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

Gerres filamentosus Cuvier, 1829

SYNONYMS STILL IN USE: *Gerres punctatus* Cuvier, 1830
Gerres macracanthus Bleeker, 1854
Pertica filamentosa: Munro, 1955



VERNACULAR NAMES:

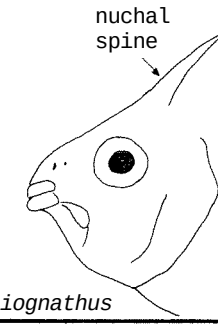
FAO: En - Whipfin mojarra
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, its depth 2 to 2.5 times in standard length, slightly compressed. Mouth strongly protractile. *2nd dorsal fin spine elongated* (longer than head); pectoral fins long, reaching to or beyond anal fin origin. Head and body completely covered with *scales which are firmly attached.*

Colour: body silvery, with a series of darker blotches forming vertical or horizontal bars on back and sides.



Leiognathus

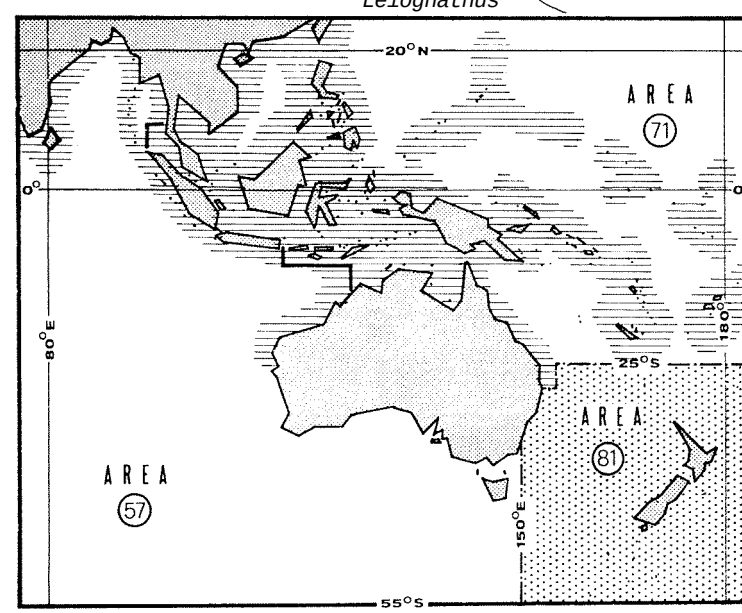
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other Gerreidae: 2nd dorsal spine not forming a long filament.

Leiognathidae: nuchal spine present on nape, no scales on head (but small scales on cheek in *Leiognathus elongatus).*

SIZE:

Maximum: 25 cm; common: about 15 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to East and South Africa.

Inhabits shallow waters, down to depths of 30 m, near the bottom; usually found in schools.

Feeds mainly on bottom-living animals.

PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with traps.

Marketed usually fresh.

GERR Gerr 3

1974

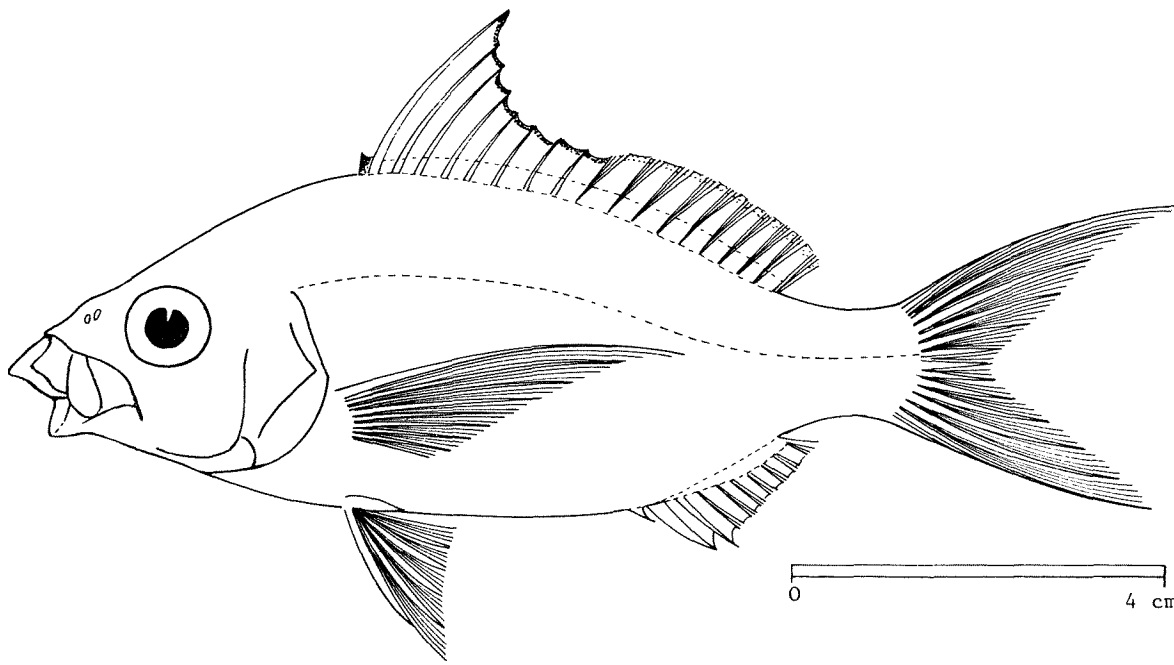
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GERREIDAE

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

Gerres oyena (Forsskål, 1775)

SYNONYMS STILL IN USE: *Gerres argyreus* (Bloch & Schneider, 1801)



VERNACULAR NAMES:

FAO: En - Common mojarra
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, its depth 2-5 to 3 times in standard length, slightly compressed; mouth strongly protractile. *Spines in fins slender;* last dorsal spine shorter than first soft ray; pectoral fins long, reaching beyond anal fin origin. Head and body completely covered with *scales which are very easily shed.*

Colour: *back greenish with dots forming faint longitudinal lines along scale rows*; belly silvery. Spinous part of dorsal fin with blackish margin and brown spots on base which are concealed by a scaly sheath.

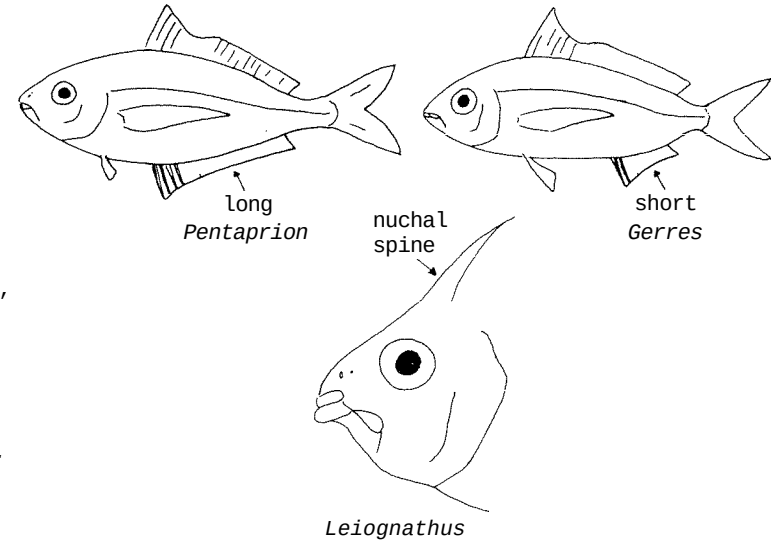
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gerres oblongus: body elongate (depth at least 3 times in standard length).

Gerres poieti: very strong and broad dorsal and anal spines and shorter pectoral fins (not reaching anal fin origin).

Pentaprion longimanus: anal fin base longer than soft part of dorsal fin; also, anal fin with 5 to 6 spines and 12 to 14 soft rays (2 to 4 and 7 to 10 in *Gerres).*

Leiognathidae: nuchal spine present on nape, no scales on head (but small scales on cheek in *Leiognathus elongatus).*



SIZE:

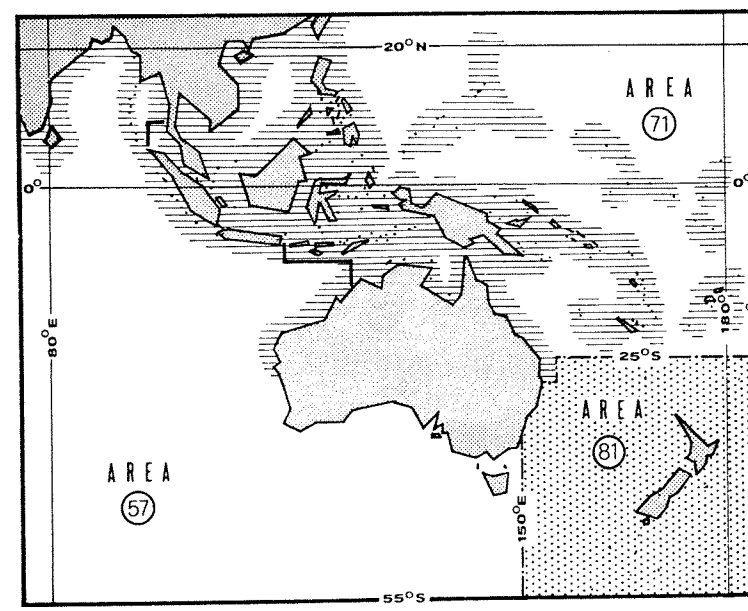
Maximum: 20 cm; common: 15 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to East and South Africa.

Inhabits shallow waters down to depths of 30 m near the bottom; usually found in schools.

Feeds mainly on bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed fresh; also used for fish meal and as duck food.

GERR Pent 1

1974

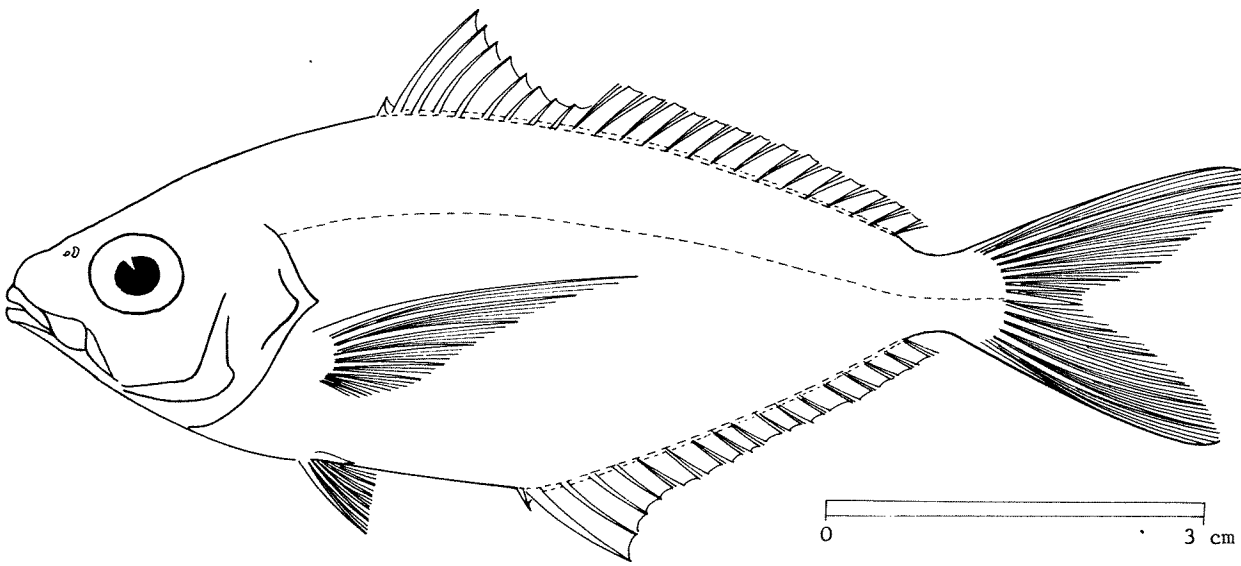
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GERREIDAE

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

Pentaprion longimanus (Cantor, 1850)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Longfin mojarra
Fr -
Sp -

NATIONAL:

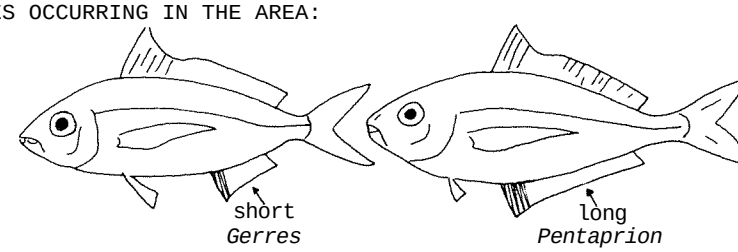
DISTINCTIVE CHARACTERS:

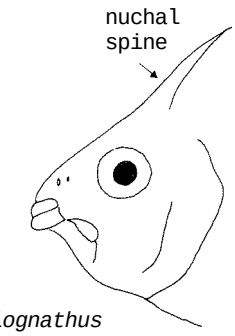
A small and elongate species. *Mouth strongly protractile.* Pectoral fins long and pointed, reaching well beyond origin of anal fin; *anal fin base longer than soft part of dorsal fin.* Head and body completely covered with *scales which are easily shed* (market specimens have usually lost their scales and appear pale and shabby.

Colour: live specimens silvery, market specimens pale and fleshy.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Gerres species: anal fin base shorter than soft part of dorsal fin *(Gerres:2-4* spines, 7 to 8 soft rays; *Pentaprion:* 5 spines, 13 to 14 soft rays).





Leiognathus

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathid species: nuchal spine present on nape, no scales on head (but small scales on cheek in *Leiognathus elongatus).*

SIZE:

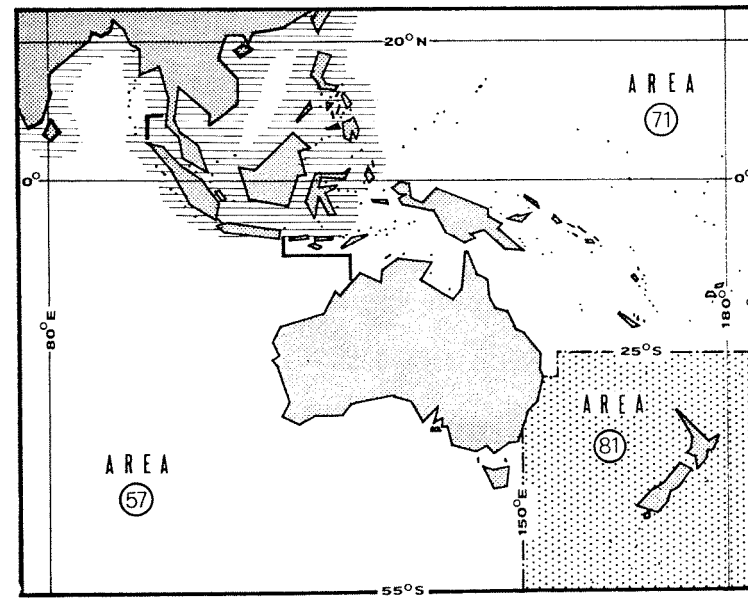
Maximum: 13 cm; common: 7 to 11 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area, but not to New Guinea or coasts of Australia; also, westward to western coasts of India.

Inhabits coastal waters down to depths of 30 m, near the bottom; usually found in large schools at depths between 10 and 30 m.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Used in large quantities for fish meal and as duck food.

GLAUC

1974

FAO SPECIES IDENTIFICATION SHEETS

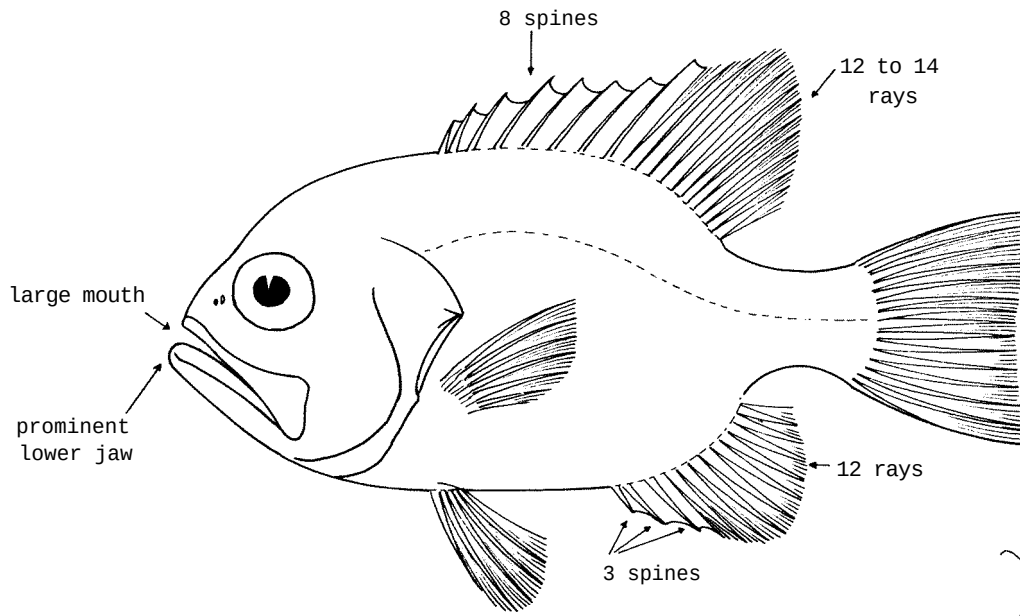
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

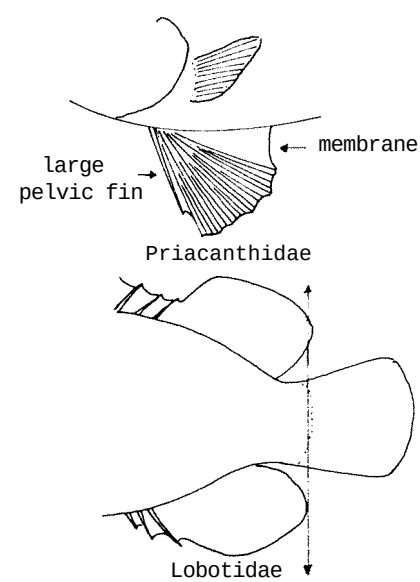
GLAUCOSOMIDAE

Bigmouth breams

Body robust, deeply ovate, compressed; head large, well scaled. Mouth large, oblique, terminal, protractile; lower jaw prominent. Teeth in jaws in narrow bands, some canines. *Dorsal fin with 8 spines and 12 to 14 soft rays, the latter much higher than the spines*. Pectoral fins short, blunt; pelvic fin base just below pectoral base; anal fin with 3 short spines and 12 soft rays; caudal fin truncate or lunate. Scales moderate or small, adherent, ctenoid (rough), lateral line present.

Colour: dark grey overall, or paler with darker longitudinal or oblique bands.





SIMILAR FAMILIES OCCURRING IN THE AREA:

Priacanthidae, Pentapodidae, Kuhlidae: 10 dorsal spines; also, pelvic fins united to body and larger than pectoral fins in Priacanthidae; caudal fin forked in Pentapodidae.

Lobotidae: 12 dorsal spines; also, soft part of dorsal and anal fins rounded and reaching back beyond caudal peduncle.

Pomadasyidae: 9 to 15 dorsal spines and 2nd anal spine larger than 3rd.

Sparidae: 10 to 13 dorsal spines and molar teeth present in jaws.

Key to Genera

Glaucosoma only

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

Glaucosoma	*burgeri*	GLAUC Glauc 1	*Glaucosoma magnificum*
Glaucosoma	*fauveli*		*Glaucosoma scapulare*
Glaucosoma	*hebraicum* (*? = burgeri*)		*Glaucosoma taeniatus*

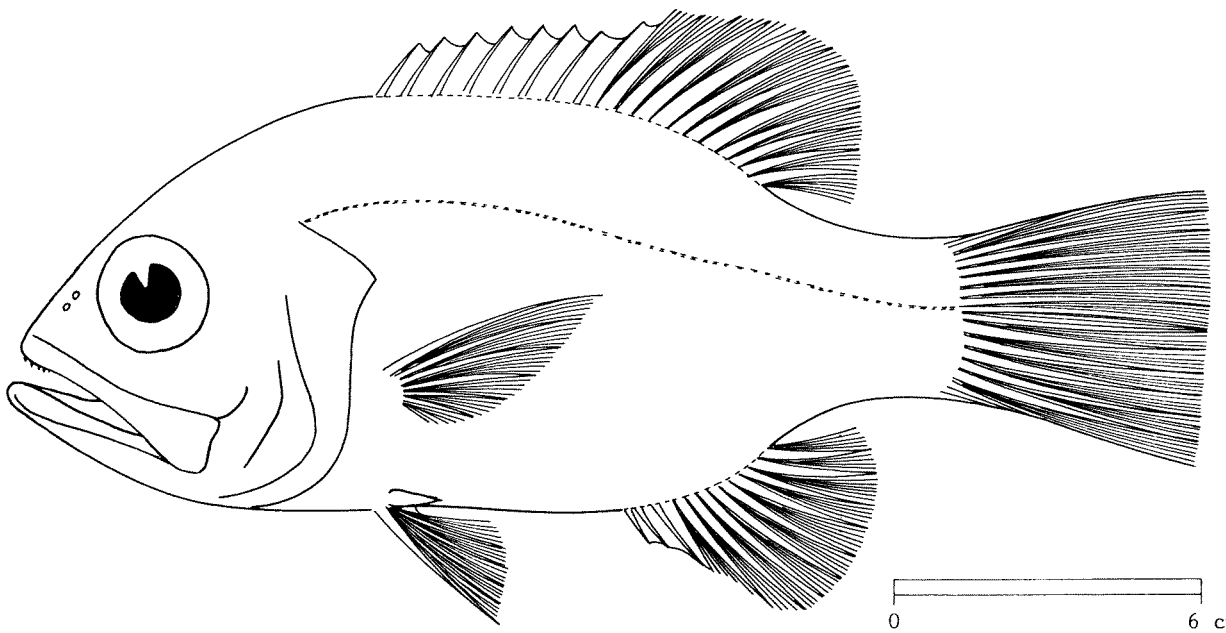
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: GLAUCOSOMIDAE

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

Glaucosoma burgeri Richardson,1844

SYNONYMS STILL IN USE: None



VERNACULAR NAMES

FAO: En - Grey bigmouth bream
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body robust, ovate, compressed; *head*, entirely scaled, *very large*, its length almost l/3 of total length. *Mouth very large, oblique, with two rows of teeth in upper jaw*, canines in outer row at front; *lower jaw with only 1 row of teeth except at front. Eye very large. Dorsal fin with 8 strong spines which increase in length from 1st to last*, and 12 soft rays longer than the spines: anal fin with 3 strong spines and 10 soft rays; caudal fin very slightly emarginate, or truncate. *Base of dorsal and anal fins scaly. Lateral line almost straight.*

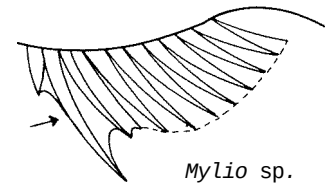
Colour: *dark grey overall, with bronze reflections,* only slightly paler on belly.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Glaucosoma scapulare: body silvery with numerous small brown spots; a blue/black blotch behind upper part of gill cover; recorded from eastern Australia and Torres Strait.

G. fauveli(? = young of G. burgeri): dark longitudinal bands on body.

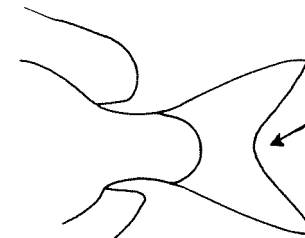
Mylio species: 2nd spine in anal fin much longer and stouter than 3rd spine; caudal fin forked; also, more than 8 dorsal fin spines.



Mylio sp.
anal fin

Gymnocranius griseus: caudal fin forked; also, more than 8 dorsal fin spines.

Priacanthidae, Pentapodidae, Kuhlidae, Lobotidae, Pomadasyidae, Sparidae: more than 8 dorsal fin spines.



Cymnocranius sp.

SIZE:

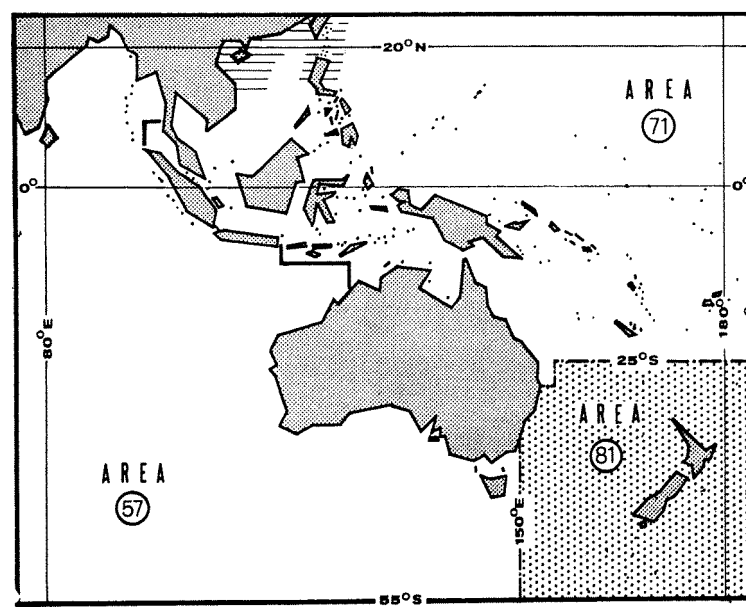
Maximum: 45 cm; common: 20 to 35 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Northern part of South China Sea, possibly to Philippines; also, northward to Japan.

Bottom-living, in moderate depths on the continental shelf, particularly close to reefs or rough bottoms.

A carnivorous species.



PRESENT FISHING GROUNDS:

Not particularly sought, but taken with other fish in moderate depths.on the continental shelf, 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 and lines.

Marketed fresh; small amounts are dried-salted.

click for previous page

H

K

HARP

1974

FAO SPECIES IDENTIFICATION SHEETS

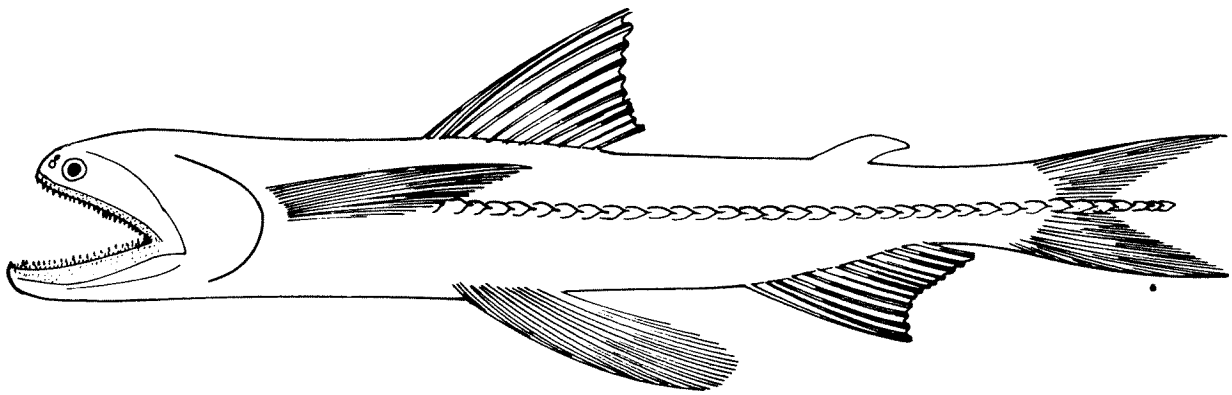
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

HARPADONTIDAE

Bombay-ducks

Elongate, rather compressed fishes, usually *with adipose fin* (absent in *H. translucens) and trilobed caudal fin.* Head short, not depressed, *with very short, rounded snout.* Cleft of mouth very wide, bordered above by long, slender pre-maxillary; maxillary absent. Jaw teeth unequal and slightly curved, awl-shaped, and depressible; *inner teeth of lower jaw enlarged and conspicuously hastate* (like spear-head). Similar teeth in one or two rows on vomer, palatines and pterygoids, as also on tongue and on branchial arches. Pectoral fins longer than head. *Pelvic fins extremely long.* Gill openings very wide, covered by membranous opercles. Branchiostegal rays 17 to 29, extending beyond gill cover.

Colour: generally greyish.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Synodontidae: have a forked caudal fin (trilobed in Harpadontidae) and pigmented body (semitransparent in Harpadontidae).

Key to Genera

Harpadon only

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

Harpadon microchir (deep water form)
Harpadon nehereus HARP Harp 1
Harpadon translucens (deep water form)

HARP Harp 1

1974

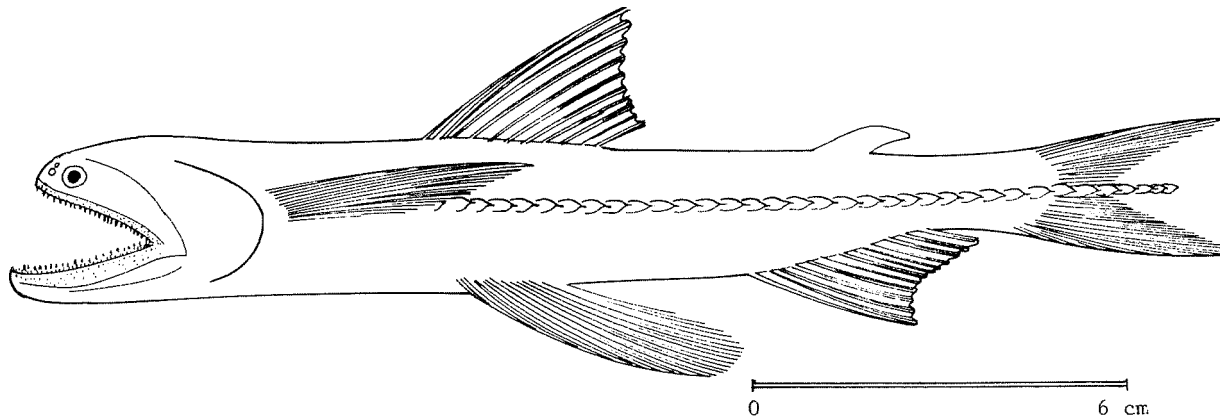
FAD SPECIES IDENTIFICATION SHEETS

FAMILY: HARPADONTIDAE

FISHING AREAS 37,71
(E Ind. Ocean)
(W Cent. Pacific)

Harpadon nehereus (Hamilton-Buchanan, 1822)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Bombay-duck
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body elongate and compressed, eyes small, snout very short. *Mouth very wide, armed with slender, re-curved and depressible teeth of unequal size;* palatine teeth also large and depressible; lower jaw longer than upper. Dorsal fin followed by a conspicuous adipose fin; pelvic fins very long. *Lateral line extending onto pointed median lobe of caudal fin.*

Colour: uniform light grey; semitransparent appearance.

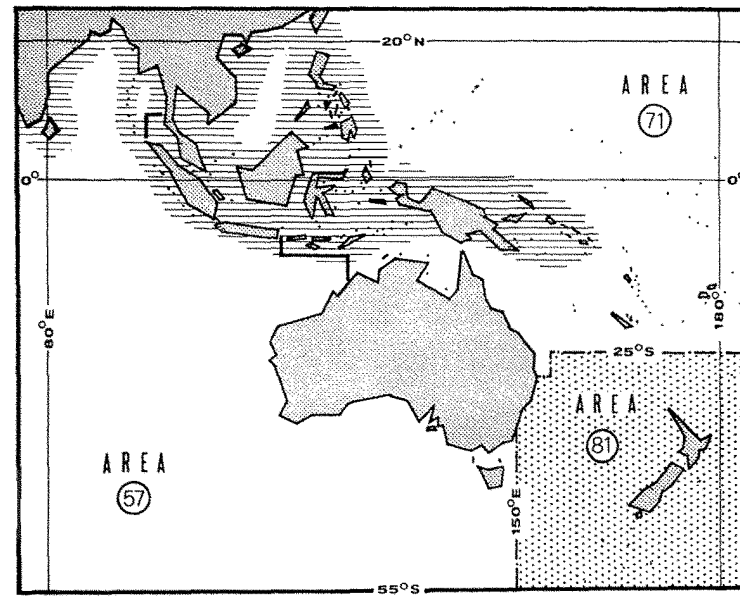
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Harpadon translucens: lacks an adipose fin.

Species of Synodontidae (lizard fishes): have the lateral line confined to the body and not extending as a median lobe of caudal fin.

SIZE:

Maximum: over 40 cm;
common: 10 to 25 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area; also, westward to East Africa.

Inhabits coastal waters and estuaries.

Feeds on small fishes.

PRESENT FISHING GROUNDS:

Shallow grounds in inshore waters and estuaries, mainly on the west Indian coast.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not collected for this species.

Caught with bottom trawls.

Marketed fresh, salted, dried or smoked; extensively used as a relish with curry.

click for previous page

L

LACT

1974

FAO SPECIES IDENTIFICATION SHEETS

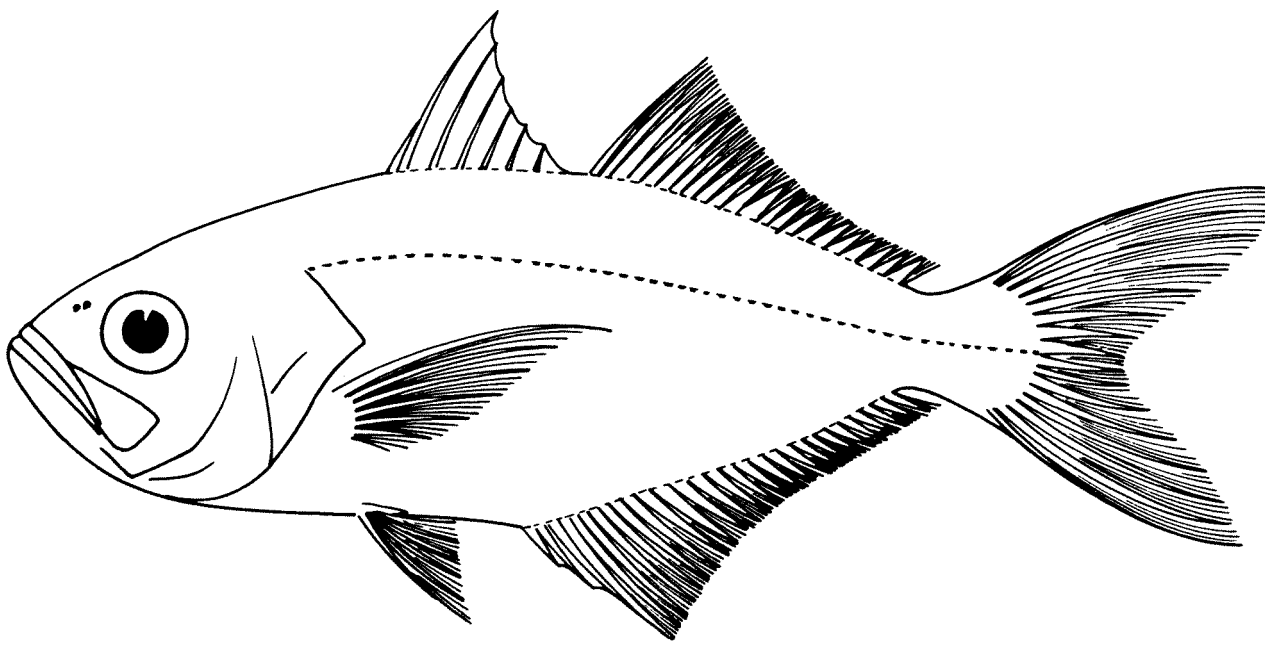
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

LACTARIIDAE

False trevallies, milk trevallies

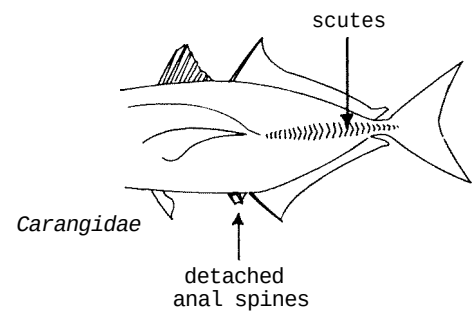
Body oval, compressed, slightly deeper than head, upper and lower profiles similar. *Mouth large, oblique and with 2 small, sharp canine teeth at front of each jaw. Two dorsal fins, the first spiny, the 2nd with 1 spine and 20 to 22 soft rays;* pelvic fins set a little behind pectoral fins; *anal fin with 3 spines and 25 to 28 soft rays; caudal fin forked. Scales large, cycloid (smooth), easily shed.*

Colour: silvery grey, with yellow fins.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Carangidae: have 2 short spines in front of and separate from anal fin; also (in most genera), numerous spiny scutes along posterior part of lateral line.



Key to Genera

Lactarius only

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

Lactarius lactarius LACT Lact 1

LACE- Lact 1

1974

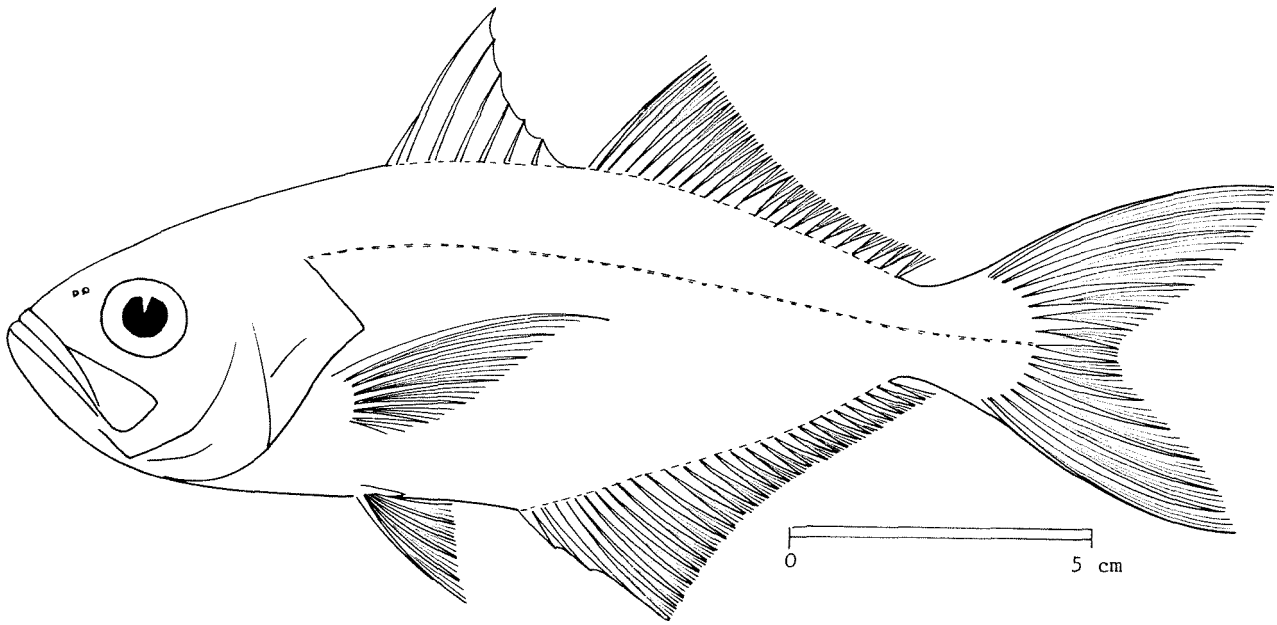
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LACTARIIDAE

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

Lactarius lactarius (Bloch & Schneider, 1801)

SYNONYMS STILL IN USE: *Lactarius delicatulus* Valenciennes, 1833



VERNACULAR NAMES:

FAO: En - False trevally
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oblong, strongly compressed; head large. *Mouth Large and oblique, with prominent lower jaw;* one pair of small, sharp canine teeth at front of each jaw. *Two dorsal fins of about equal height, the 1st with 7 to 8 spines, the 2nd with 1 spine and 20 to 22 soft rays;* pectoral fins ton and pointed; pelvic fins just below pectoral fin base; *anal fin with 3 spines and 25 to 28 rays, its base Longer than that of 2nd dorsal fin; caudal fin forked. Scales medium-size, cycloid (smooth), very easily shed (market specimens often lack almost all scales).*

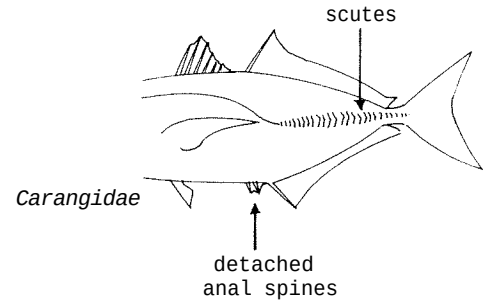
Colour: immediately after death *silvery grey with blue iridescence above and silvery white below. A dusky black spot on upper part of gill cover*. Fins all pale yellow; dorsal and caudal fin sometimes with dusky margins. The blue iridescence and sometimes the yellow of the fins is lost some hours after death.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Carangidae: 2 short spines in front of and separate from the anal fin; also, in most cases numerous spiny scutes along the posterior part of the lateral line.

SIZE:

Maximum: 40 cm; common: 15 to 30 cm.

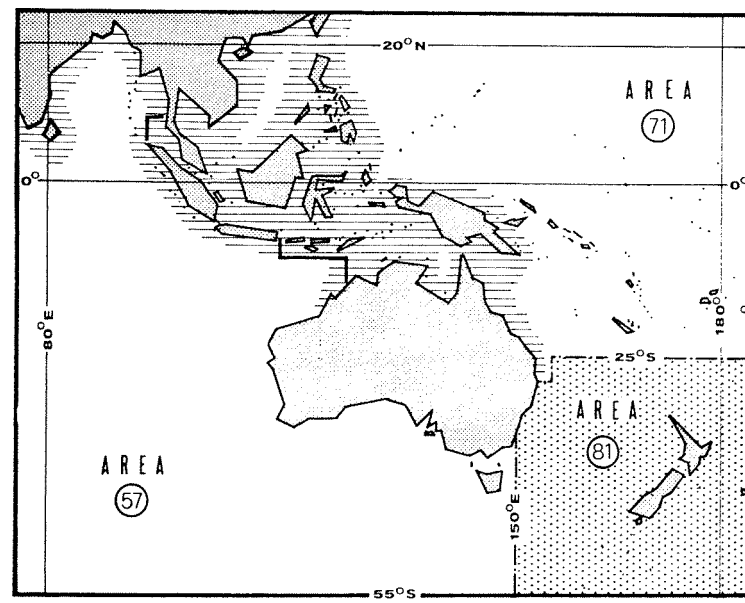


GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southward to northern Queensland (Australia).

Occurs in water shallower than 100 m on a range of bottom types. In some areas shows seasonal changes in catch rates.

Feeds on a range of bottom-living animals.



PRESENT FISHING GROUNDS:

Coastal waters to depths of 100 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

The total reported catch in 1972 was:

area 57 (Eastern Indian Ocean): 2 500 tons (India only)
area 71 (Western Central Pacific): 300 tons (Malaysia only)

Caught mainly with bottom trawls and traps.

Marketed mostly fresh; also dried-salted.

LEIOG

1974

FAO SPECIES IDENTIFICATION SHEETS

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

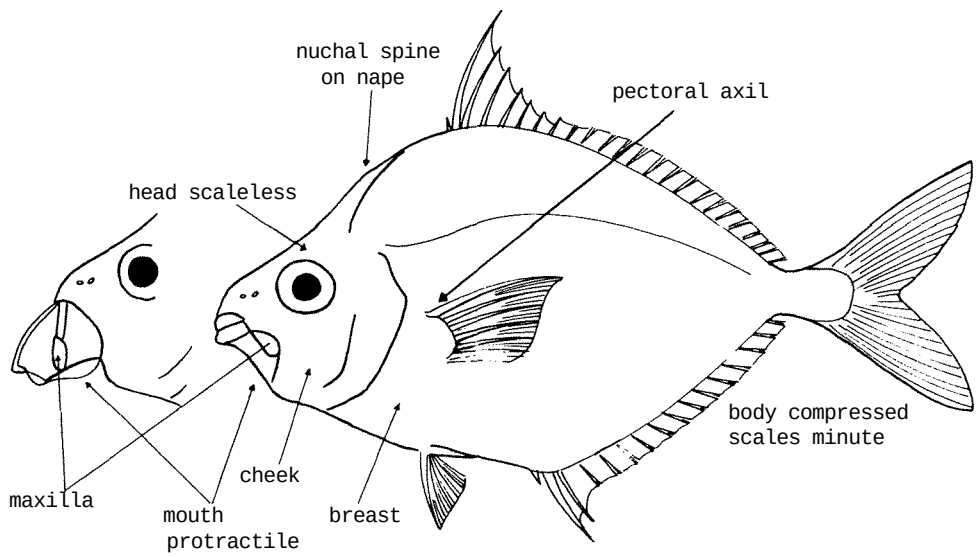
LEIOGNATHIDAE

Ponyfishes, slipmouths

Small to medium-sized fishes, body *moderately to very strongly compressed.* Eye large; *mouth small, extremely protractile.* A long dorsal fin with 7 to 8 spines and 15 to 17 rays; long anal fin with 3 spines and 13 to 15 rays. Head scaleless, with some bony ridges ending in a nuchal spine on nape. Scales small, barely visible.

Colour: silvery, often with characteristic coloured markings on body and fins.

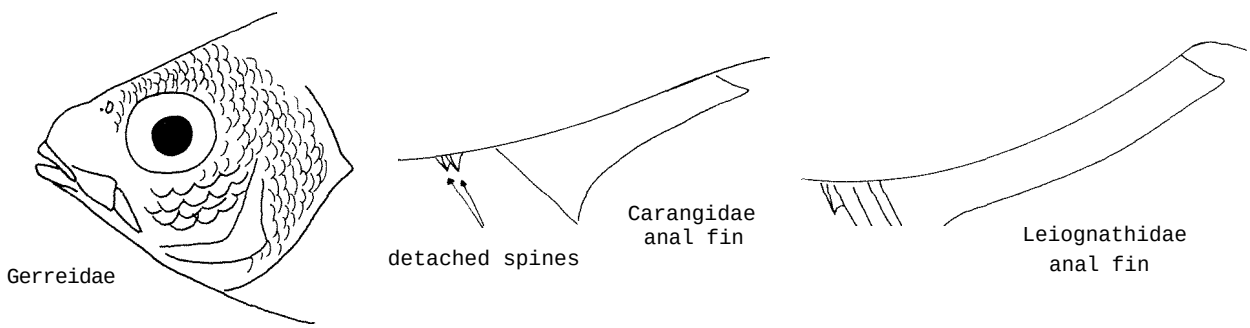
Leiognathidae live in schools in coastal waters, and several species enter brackish water or even freshwater.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Gerreidae: lack a nuchal spine on nape, but Scales present on head (minute scales on cheek in *Leiognathus elongatus* only).

Carangidae: have 2 detached spines before anal fin, and mouth not strongly protractile.



Key to Genera

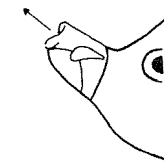
1 a Distinct canine teeth present; protracted mouth points forward ..... *Gazza*

1 b. No canine teeth

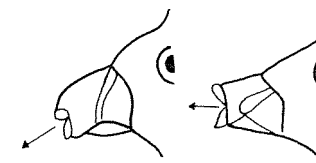
2 a. Protracted mouth points upward ..... *Secutor*

2 b. Protracted mouth points forward or downward ..... *Leiognathus*

Gazza



Secutor



Leiognathus

List of species occurring in the area *

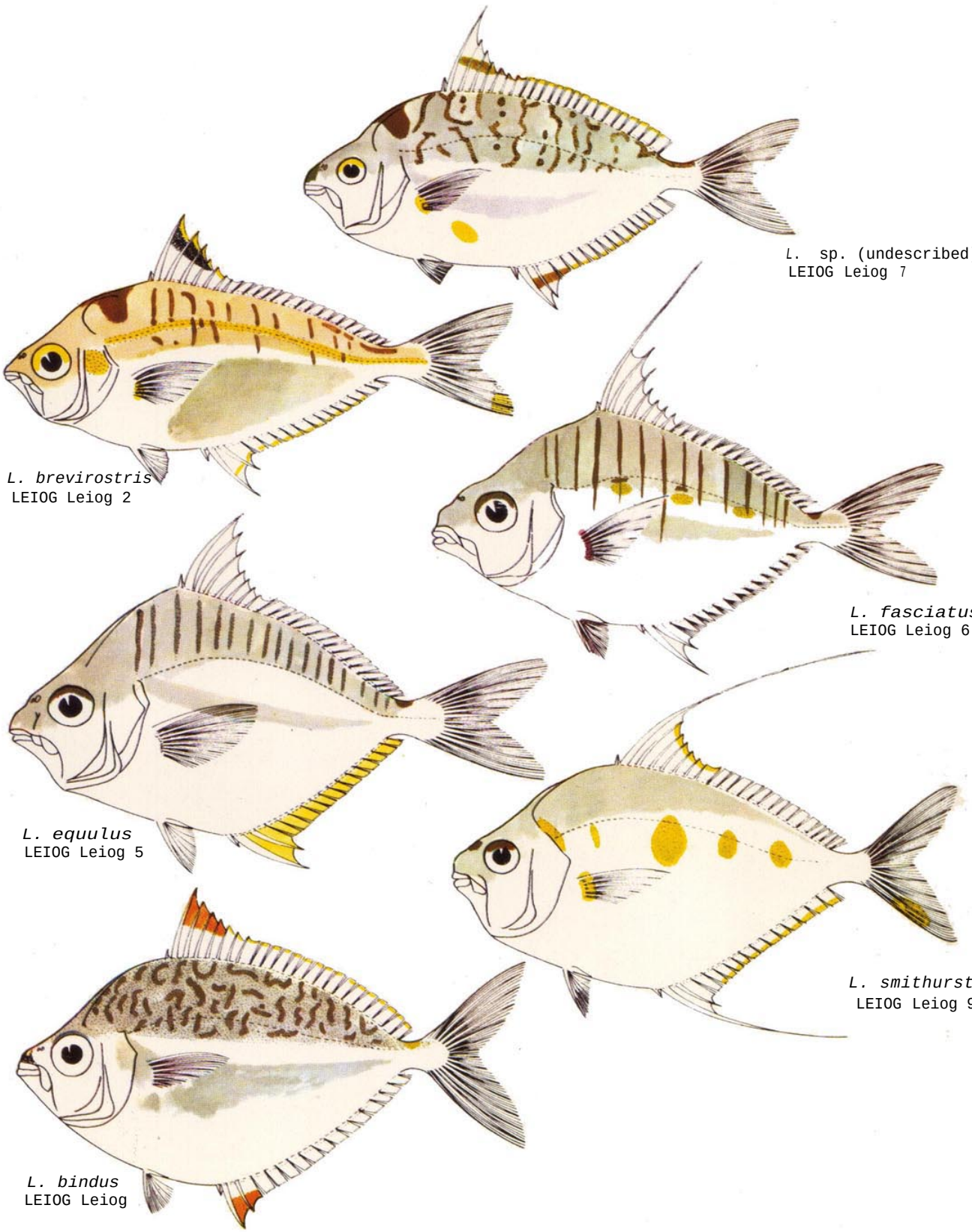
(Code numbers are given for those species for which Identification Sheets are included)

Gazza minuta	LEIOG Gaz 1	*Leiognathus interruptus*	
		Leiognathus leuciscus	LEIOG Leiog 8
Leiognathus asinus		*Leiognathus lineolatus*	
Leiognathus berbis		*Leiognathus moretoniensis*	
Leiognathus bindus	LEIOG Leiog 1	*Leiognathus novaehollandiae*	
Leiognathus blochii		*Leiognathus nuchalis*	
Leiognathus brevirostris	LEIOG Leiog 2	*Leiognathus ovalis*	
Leiognathus daura	LEIOG Leiog 3	*Leiognathus profundis*	
Lsiognathus decorus		*Leiognathus rapsoni*	
Leiognathus devisi		*Leiognathus simplex*	
Leiognathus dispar		*Leiognathus smithursti*	LEIOG Leiog 9
Leiognathus dussumieri		*Leiognathus splendens*	LEIOG Leiog 10
Leiognathus elongatus	LEIOG Leiog 4	*Leiognathus stercorarius*	
Leiognathus equulus	LEIOG Leiog 5		
Leiognathus fasciatus	LEIOG Leiog 6	*Secutor insidiator*	LEIOG Sec 1
Leiognathus sp. (undescribed) **	LEIOG Leiog 7	*Secutor ruconius*	LEIOG Sec 2
Leiognathus hastatus			

* This list cannot be considered final. The family is in urgent need of revision.

** New species to be described by G. Kühlmorgen-Hille.

FAO Sheets PLATE I Fishing Areas 57,71



L. sp. (undescribed)
LEIOG Leiog 7

L. brevirostris
LEIOG Leiog 2

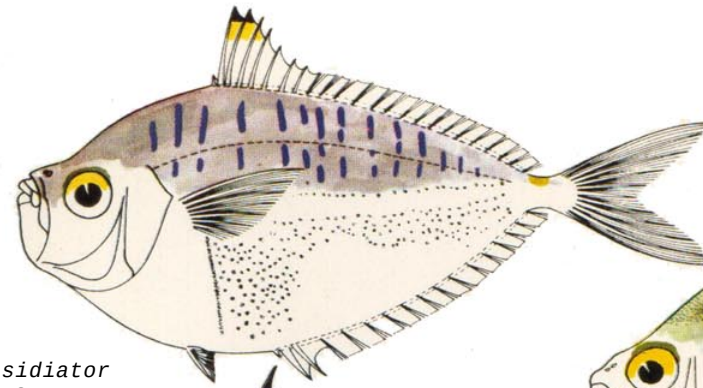
L. fasciatus
LEIOG Leiog 6

L. equulus
LEIOG Leiog 5

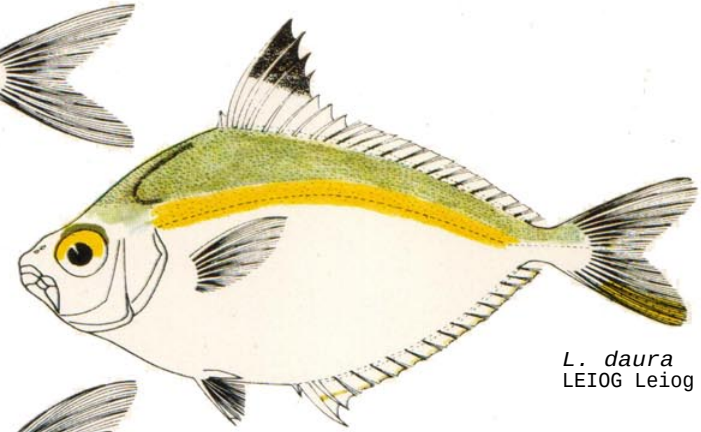
L. smithursti
LEIOG Leiog 9

L. bindus
LEIOG Leiog

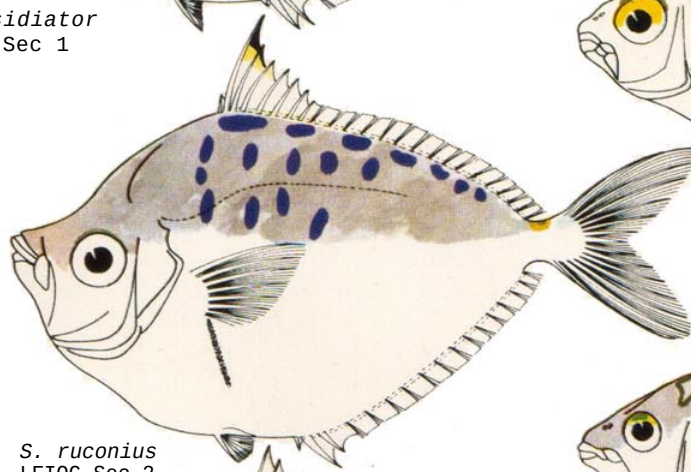
FAO Sheets PLATE II Fishing Areas 57,71



S. insidiator
LEIOG Sec 1

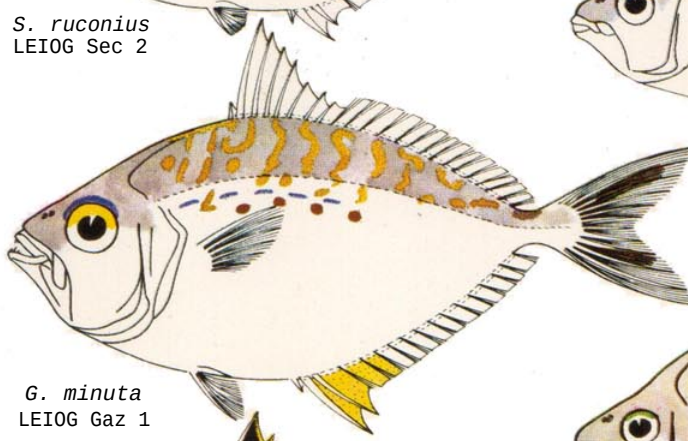


L. daura
LEIOG Leiog 3

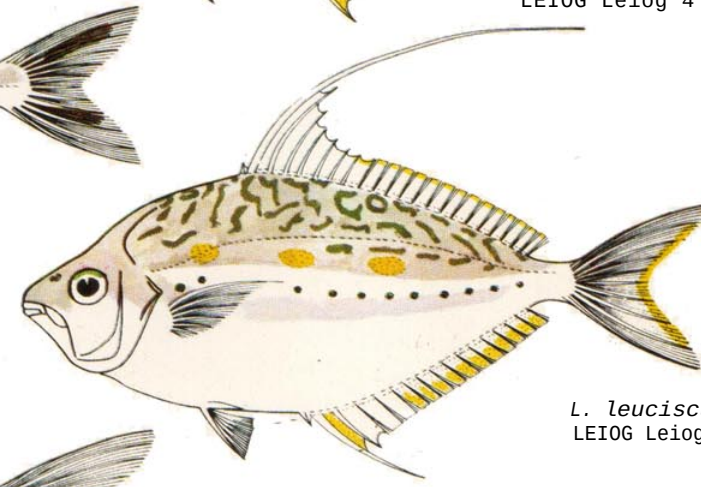


S. ruconius
LEIOG Sec 2

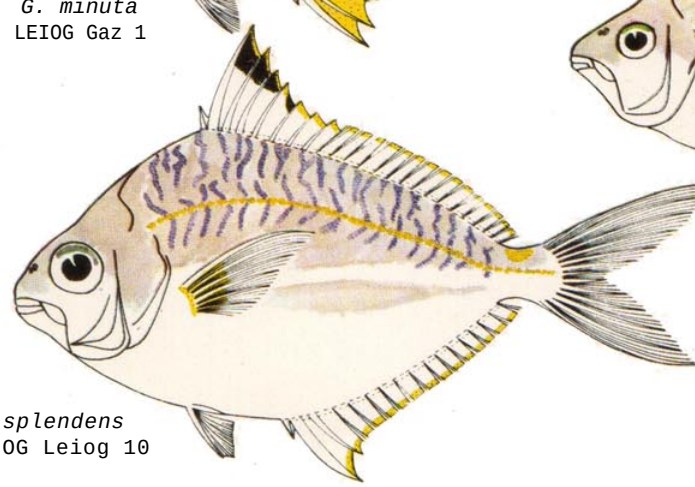
L. elongatus
LEIOG Leiog 4



G. minuta
LEIOG Gaz 1



L. leuciscus
LEIOG Leiog 8



L. splendens
LEIOG Leiog 10

LEIOG Gaz I
1974

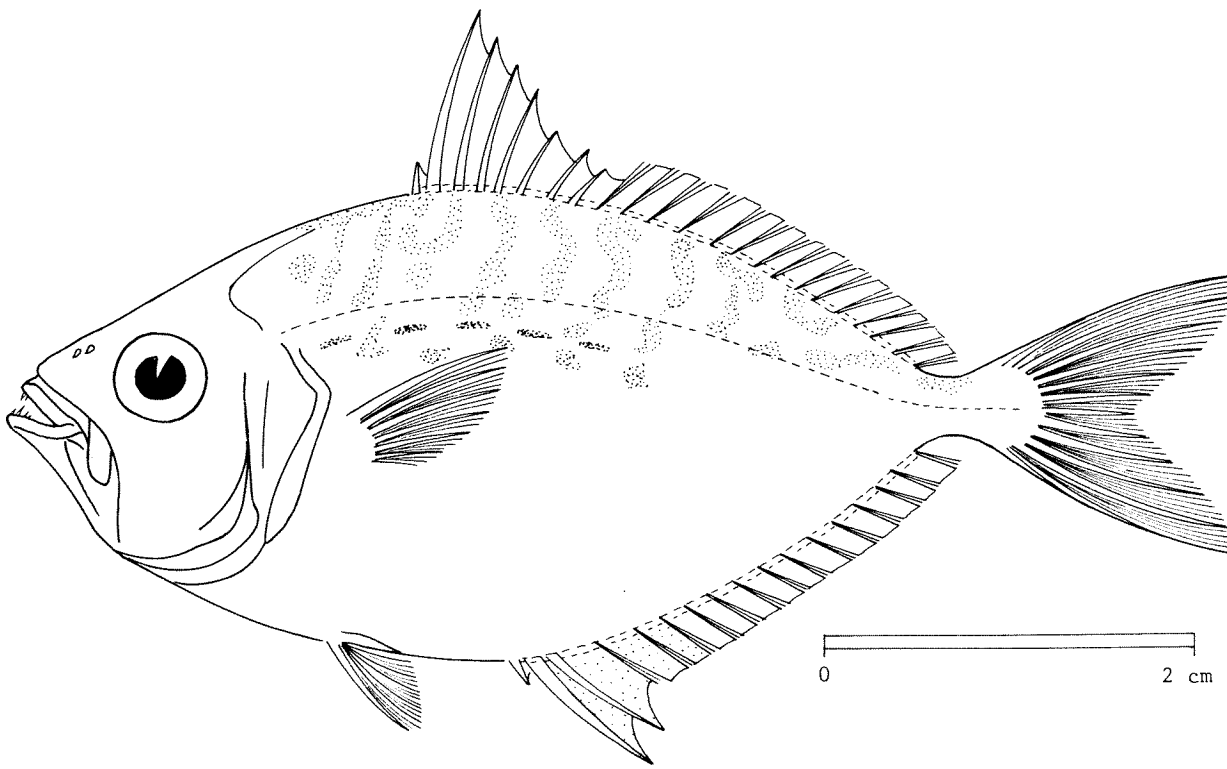
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Gazza minuta (Bloch, 1797)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

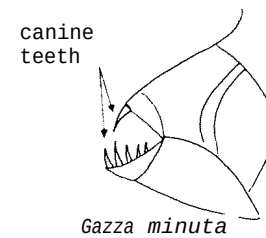
FAO: En - Toothed ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oval and somewhat compressed. Bony ridges on head ending in a *nuchal spine;* no scales on breast and head; *mouth pointing forward when protracted; distinct canine teeth in both jaws.*

Colour: body silvery, with *brownish/golden wavy lines on upper half* (becoming dark after death) and red and blue marks above pectoral fin; pectoral axil black (covered by fin). Front part of anal fin yellow; dorsal, pectoral and pelvic fins colourless; caudal fin with two dark streaks.

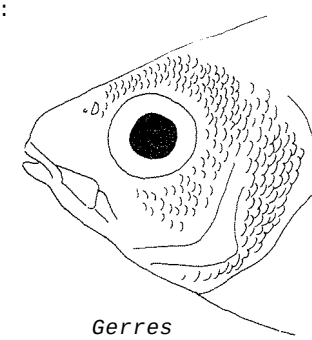


Gazza minuta
mouth protracted

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other leiognathid species: no canine teeth in jaws.

Gerreidae: scales present on head, but no bony ridges or nuchal spine.



Gerres

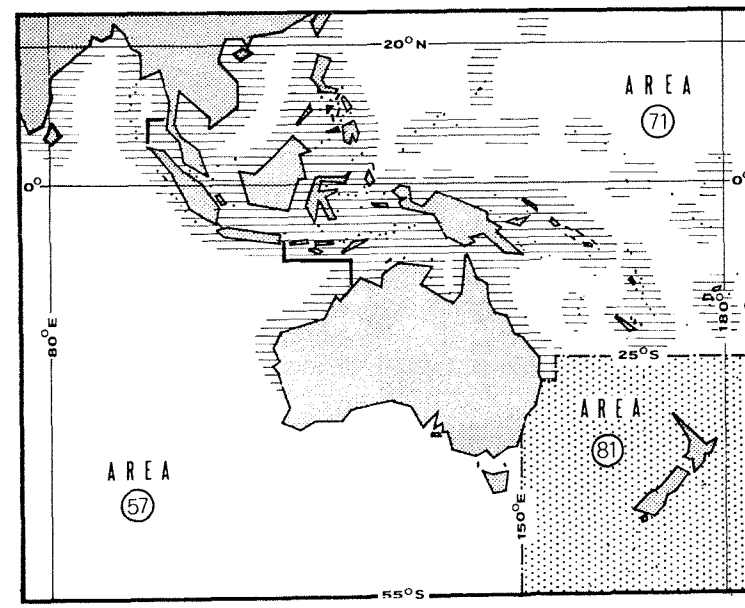
SIZE:

Maximum: 15 cm; common: 6 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to East Africa.

Inhabits coastal waters down to depths of about 40 m, predominantly near the bottom; usually found in schools; enters brackish waters.



PRESENT FISHING GROUNDS

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

LEIOG Leiog 1

1974

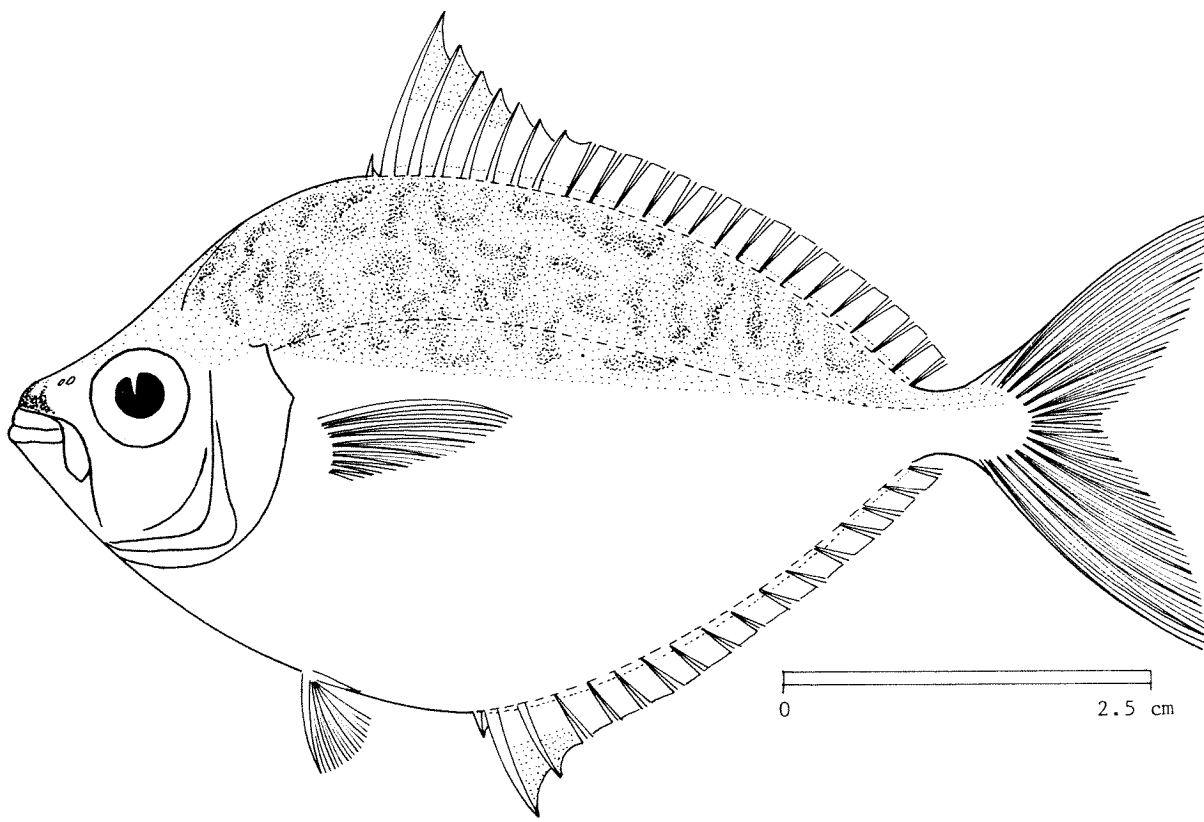
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus bindus (Valenciennes, 1835)

SYNONYMS STILL IN USE: *Leiognathus virgatus* Fowler, 1904



VERNACULAR NAMES:

FAO: En - Orangefin ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body deep and strongly compressed, particularly lower part. Head naked, nuchal spine present. *Mouth pointing forward when protracted.* Small scales on breast.

Colour: body silvery with dark grey pattern on back; pectoral axil with dark dots (covered by fin); a dark band on snout, especially when mouth protracted (missing in young specimens); *tips of dorsal and anal fins orange.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

All other *Leiognathus* species: no orange tips to dorsal and anal fins; also, in many species mouth points downward when protracted.

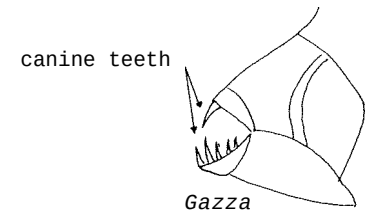
Secutor species: mouth points upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.

Leiognathus bindus *Secutor*

mouth protracted



Gazza

SIZE:

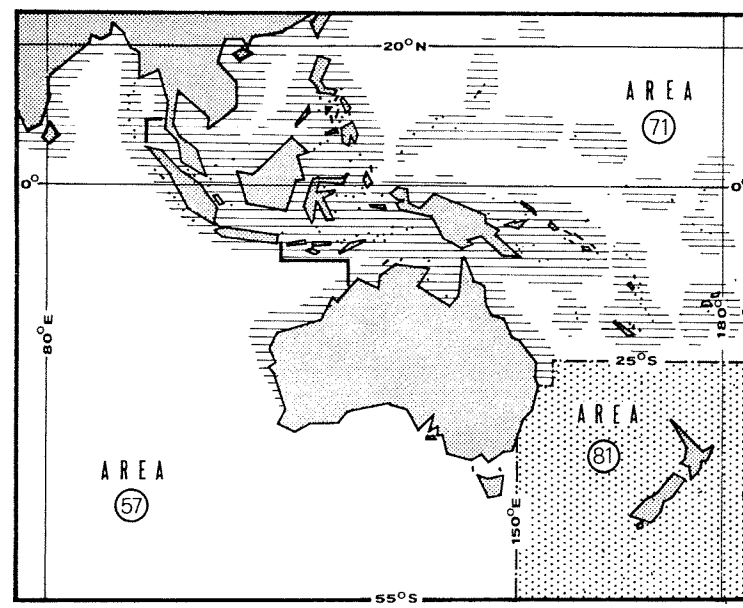
Maximum: 11 cm; common: 5 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern Australia; also, westward to East Africa.

Inhabits shallow waters down to depths of 35 m, predominantly near the bottom; usually found in schools.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore craters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

LEIOG Leiog 2

1974

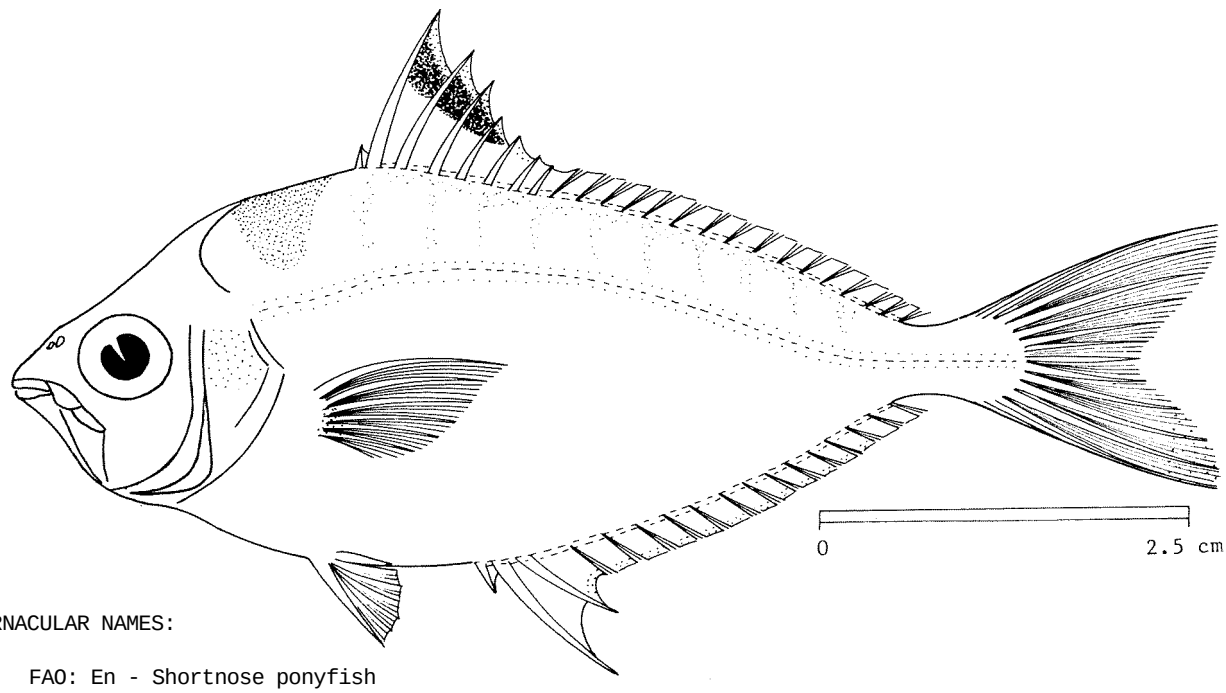
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus brevirostris (Valenciennes, 1835)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Shortnose ponyfish
Fr -
Sp -

NATIONAL:

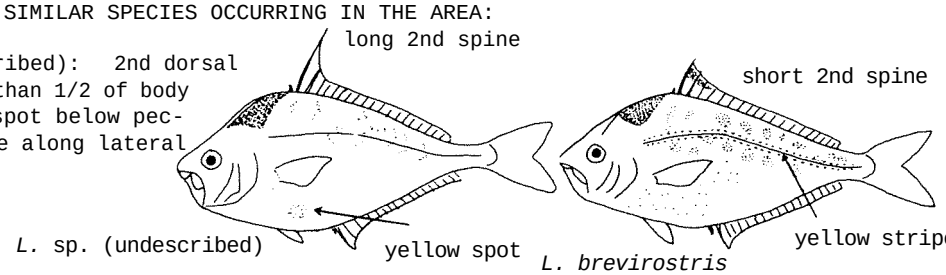
DISTINCTIVE CHARACTERS:

Body oval and compressed. Head naked; nuchal spine present; *mouth pointing downward when protracted. 2nd dorsal spine not longer than 1/3 of body depth.*

Colour: body silvery, with *brownish vertical bands on back and a dark saddle on the nape* (indistinct when alive); *a narrow yellow stripe along lateral line*; tip of dorsal fin black with yellow margin; pectoral axil with a yellow spot (partly covered by fin); tip of lower caudal fin lobe yellow. *Live or fresh specimens with a golden gleam all over the body.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus sp. (undescribed): 2nd dorsal spine long, somewhat longer than 1/2 of body depth, an additional yellow spot below pectoral fin and no yellow stripe along lateral line.



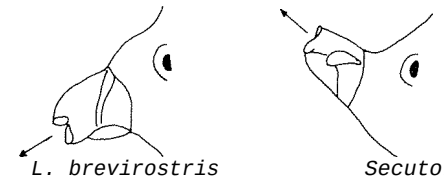
Leiognathus splendens: no dark saddle on nape and yellow band narrow, confined to lateral line scales.

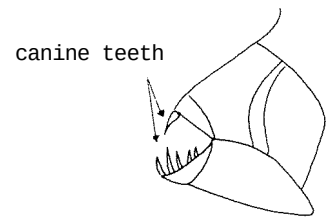
Other *Leiognathus* species: no dark saddle on nape.

Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.





SIZE:

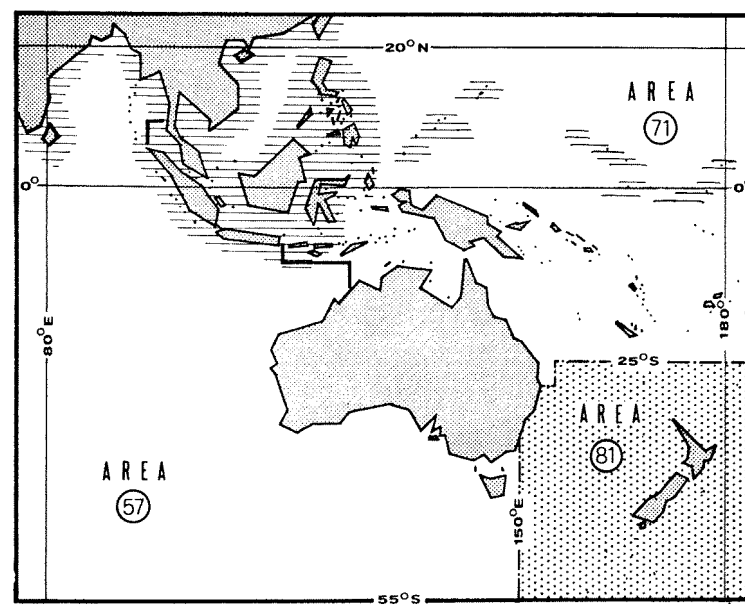
Maximum: 12 cm; common: 6 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area, but not southward to New Guinea or Australia; also, westward to western coasts of India.

Inhabits very shallow waters, predominantly near the bottom; usually found in schools; often enters brackish waters.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, near estuaries.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

LEIOG Leiog 3

1974

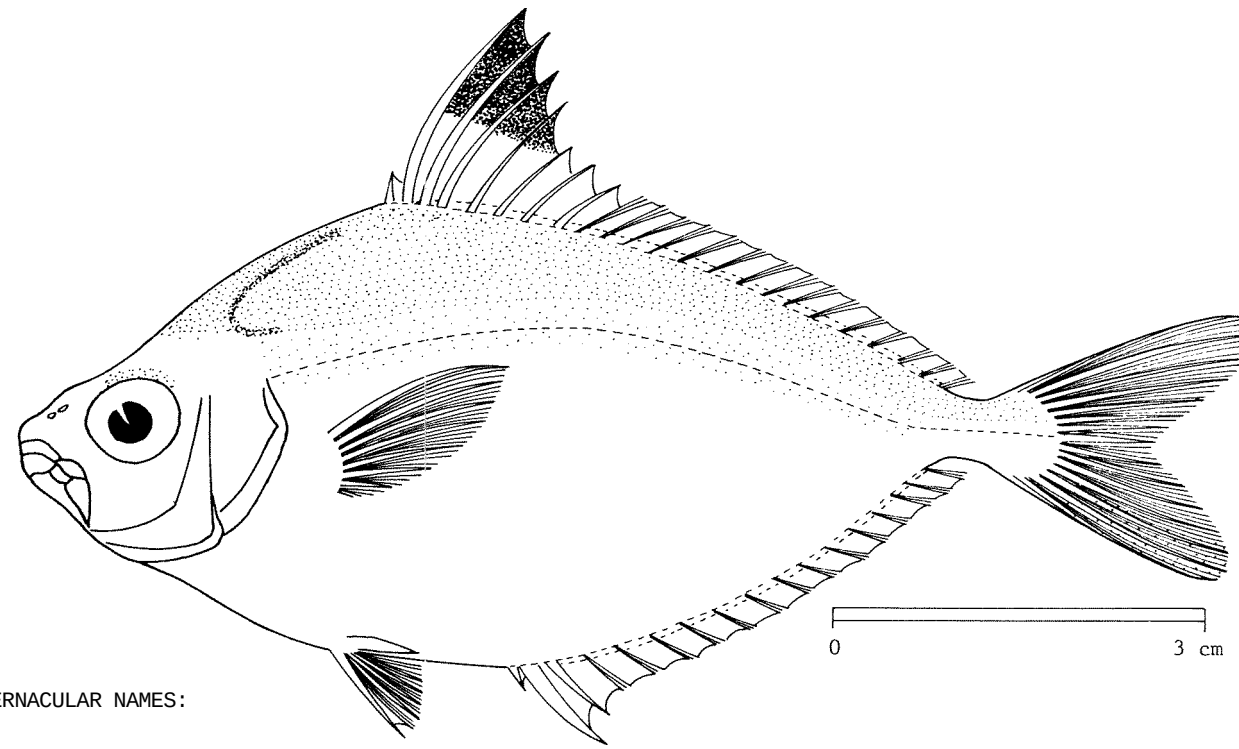
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus daura (Cuvier, 1829)

SYNONYMS STILL IN USE: *Leiognathus gerroides* (Bleeker, 1851)



VERNACULAR NAMES:

FAO: En - Goldstripe ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

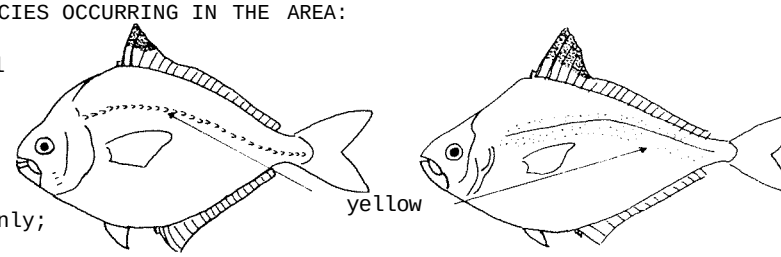
Body rhomboid and compressed. Head naked; nuchal spine present; *mouth pointing downward when protracted.*

Colour: body silvery, *back greenish; a yellow band along lateral line; upper half of spinous part of dorsal fin black;* tip of lower caudal fin lobe yellow; pectoral axil black (covered by fin).

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus splendens: spinous dorsal fin black on upper third only, yellow on lateral line scales only, and back not green.

Other *Leiognathus* species: at most, spinous part of dorsal fin black at: tip only; also, back not a uniform green.

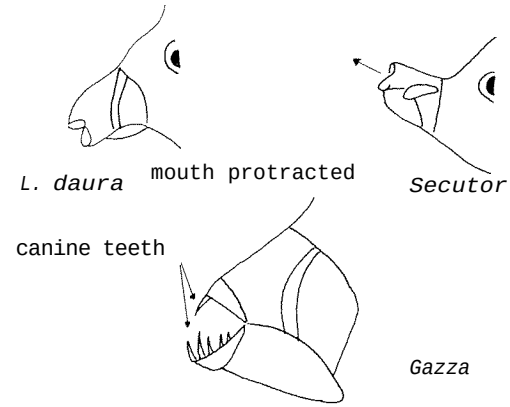


L. splendens *L. daura*

Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.



SIZE:

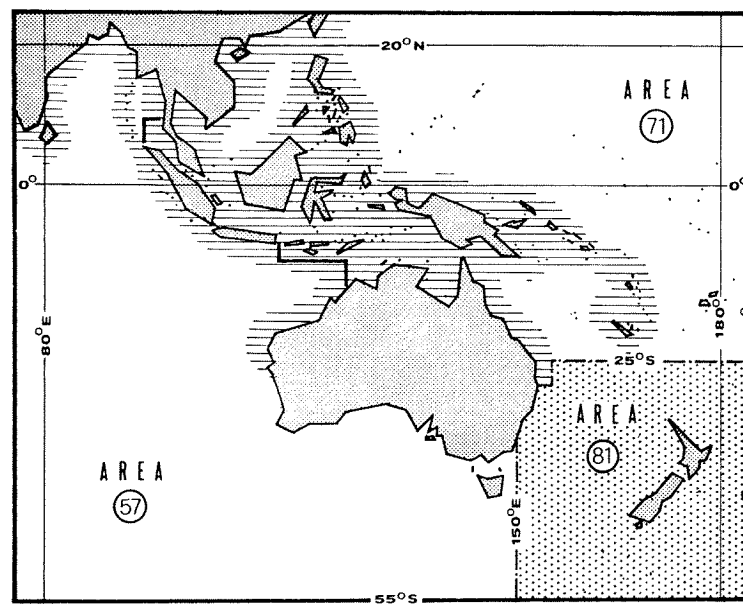
Maximum: 11 cm; common: 7 to 11 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southward to northern coasts of Australia; also, westward to East Africa.

Inhabits shallow waters down to depths of 15 m, predominantly near the bottom over muddy grounds; usually found in schools.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

LEIOG Leiog 4

1974

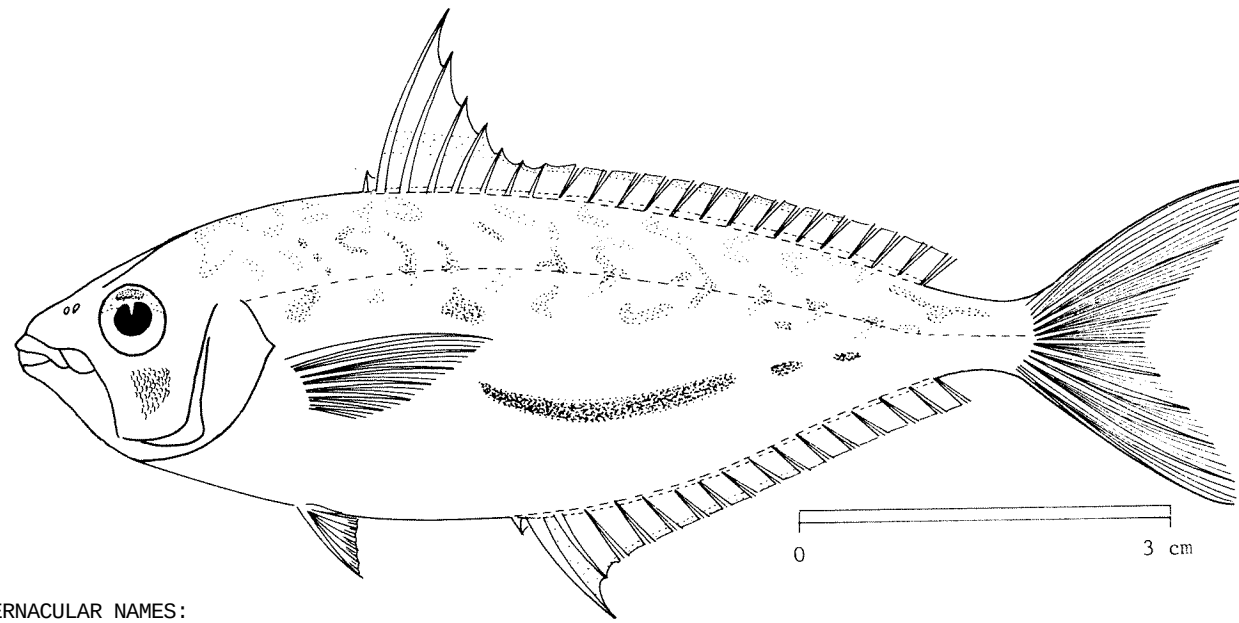
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

FISHING AREAS 37,71
(E Ind. Ocean)
(W Cent. Pacific)

Leiognathus elongatus (Günther, 1874)

SYNONYMS STILL IN USE: *Leiognathus stercorarius* (Evermann & Seale, 1907)



VERNACULAR NAMES:

FAO: En - Slender ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body slender, slightly compressed. Head naked, *but cheek and breast covered with small scales;* nuchal spine present, mouth pointing downward when protracted.

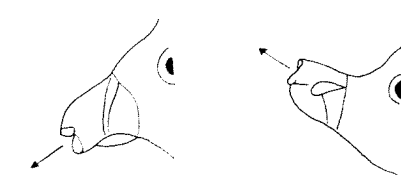
Colour: body silvery; *back with irregular green and dark marbling. Front of dorsal fin with. a horizontal yellow band, most of margin of hind part orange; pectoral axil with minute dark dots or dusky* (covered by fin); anal fin between 2nd and 3rd spines yellow, as also margin of anterior part of fin. Males have bluish longitudinal stripes on belly.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA

Other *Leiognathus* species: body deeper and no scales on cheek.

Secutor species: mouth points upward when protracted.

Gazza species: canine teeth present in jaws.

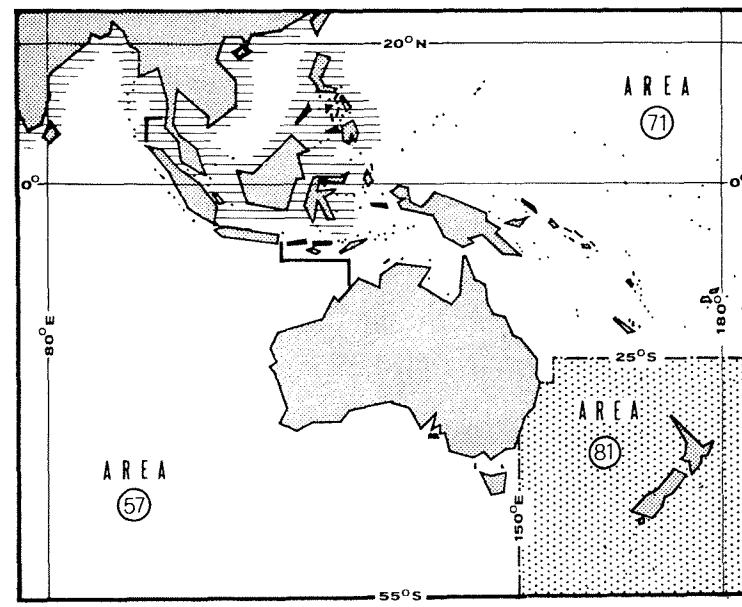


mouth protracted

Gerreidae: large scales present on most of head, including operculum (minute scales only on cheek in *L. elongatus);* also, no nuchal spine.

SIZE:

Common: 12 cm; common: 6 to 10 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

From western coast of India to the Philippines and Indonesia, but not to New Guinea or Australia.

Inhabits shallow waters down to depths of 20 m, predominantly near the bottom; usually found in schools.

Feeds mainly on small bottom-living animals.

PRESENT FISHING GROUNDS:

Inshore waters, throughout its range, at all seasons.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 1010 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 1001 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used fog fish meal and duck food.

LEIOG Leiog 5
1974

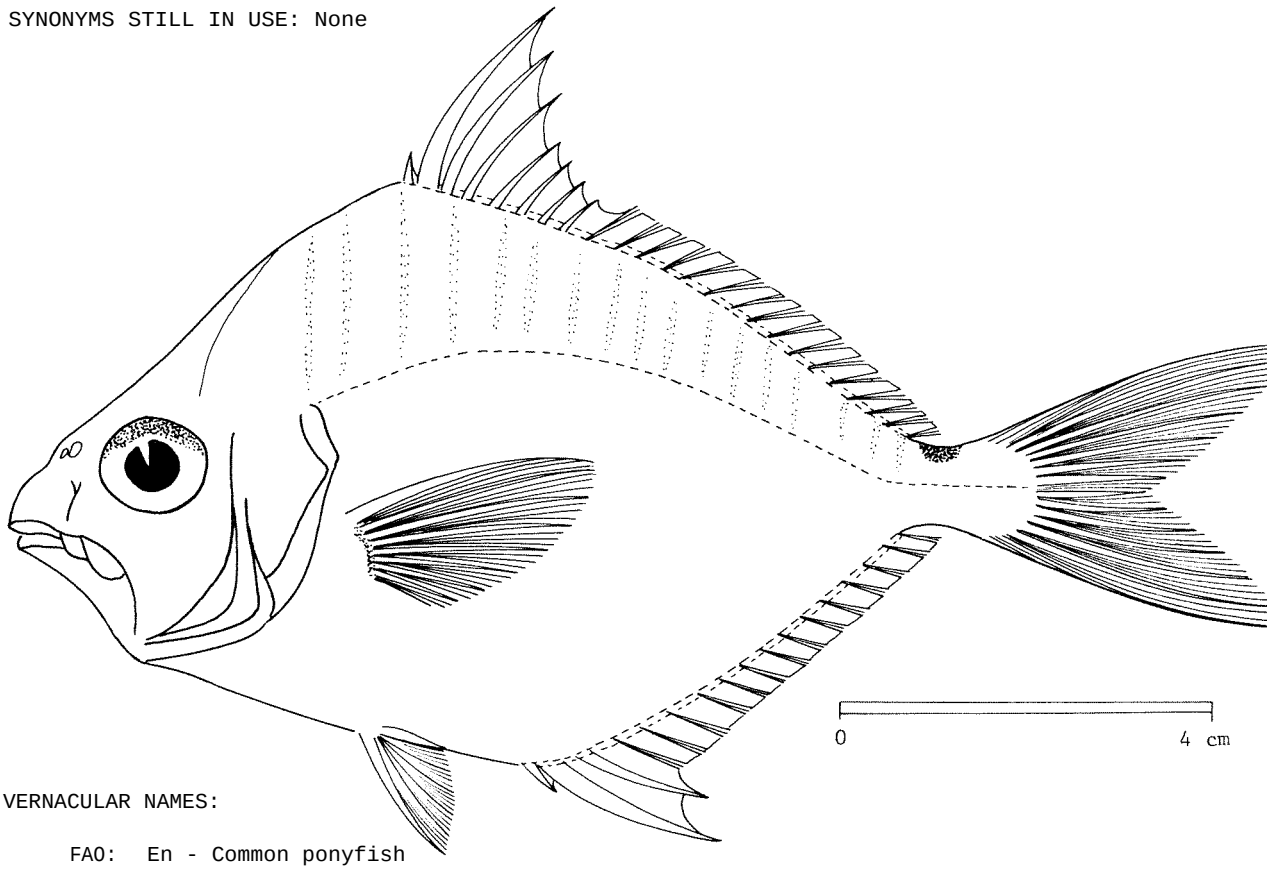
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus equulus (Forsskål, 1775)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

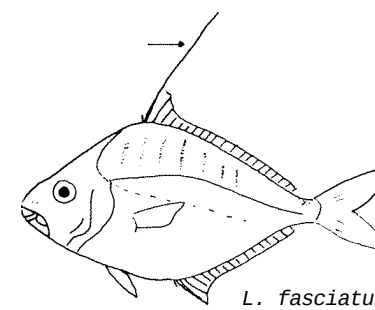
FAO: En - Common ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

The largest leiognathid; body deep and compressed, with *strongly arched (almost angular) back.* Head naked; nuchal spine present; *mouth pointing downward when protracted.* Pelvic fins reaching to anal fin origin or nearly so.

Colour: body silvery, with *faint, narrow, vertical lines on back;* a small brown saddle on caudal peduncle. Dorsal fin colourless (transparent); pectoral fin axil dusky (covered by fin); anal fin yellowish.


L. fasciatus

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus fasciatus: 2nd dorsal spine greatly elongated, pectoral fin axil brown, anal fin colourless and stripes more widely spaced on back.

Leiognathus splendens: lateral line scales yellow, snout shorter than eye and pelvic fins not reaching to anal fin base.

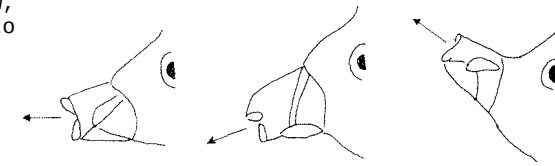
Leiognathus bindus: dorsal and anal fin tips orange and mouth pointing forward when protracted.

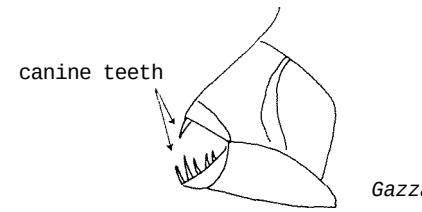
Other *Leiognathus* species: either more slender or with a dorsal or anal fin spine elongated.

Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.





SIZE:

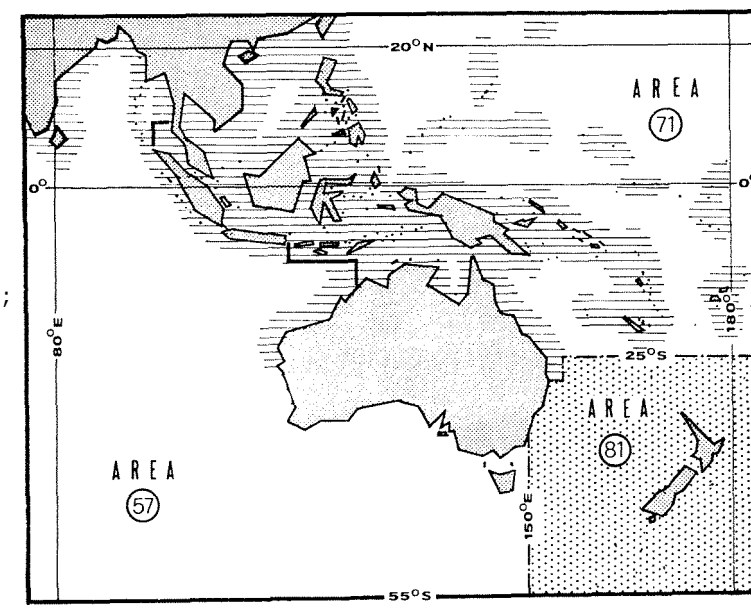
Maximum: 22 cm; common: 12 to 16 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to coasts of East Africa.

Inhabits shallow waters down to depths of about 30 m, predominantly near the bottom; usually found in schools; enters brackish waters.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh.

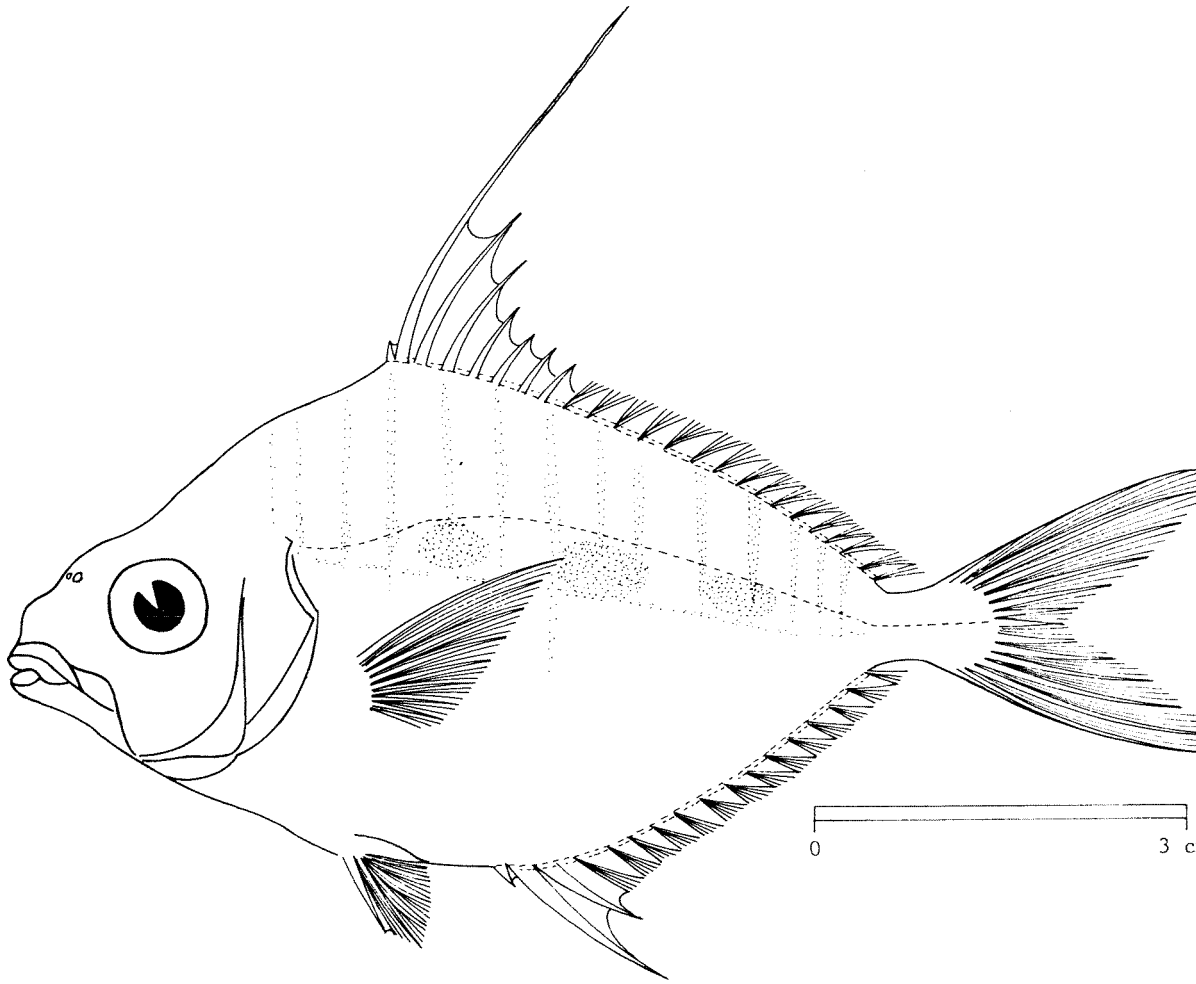
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus fasciatus (Lacepède, 1803)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

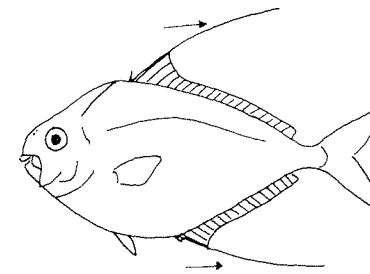
FRO: En - Striped ponyfish
Fr -
Sp -

NATIONAL:

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Body compressed and rather deep. Head naked, nuchal spine present; *mouth pointing when protracted.* Scales on breast very thin. *2nd dorsal spine distinctly elongated;* pelvic fins not quite reaching to anal fin origin.

Colour: body silvery with *dark irregular vertical stripes on back; some greenish yellow and some dark dots below lateral line; a small dark saddle on caudal peduncle;* pectoral fin axil brown (partly concealed by fin).



L. smithursti

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus smithursti: 2nd anal as well as 2nd dorsal spine distinctly elongated, and no dark vertical stripes on body.

Leiognathus leuciscus: body more slender and a greenish fish-bone pattern on back.

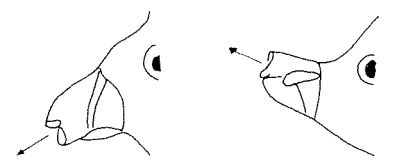
Leiognathus equulus: no elongated dorsal spine; body deeper and more angular and no greenish yellow and dark spots below lateral line.

Other *Leiognathus* species: either more slender, or without dark vertical stripes or an elongated dorsal fin spine.

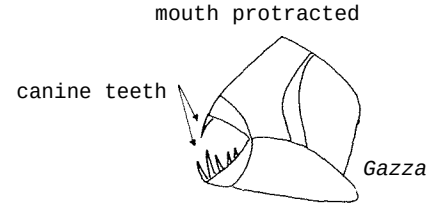
Secutor species: mouth points upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.

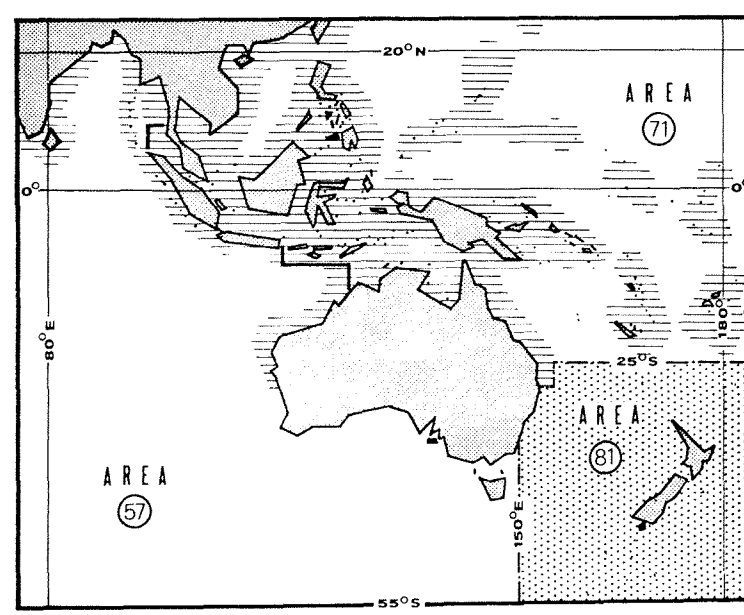


L. fasciatus *Secutor*
mouth protracted



SIZE:

Maximum: 15 cm; common: 7 to 12 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to coasts of East Africa.

Inhabits shallow waters down to depths of about 25 m, predominantly near the bottom usually found in schools.

Feeds on small bottom-living animals.

PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

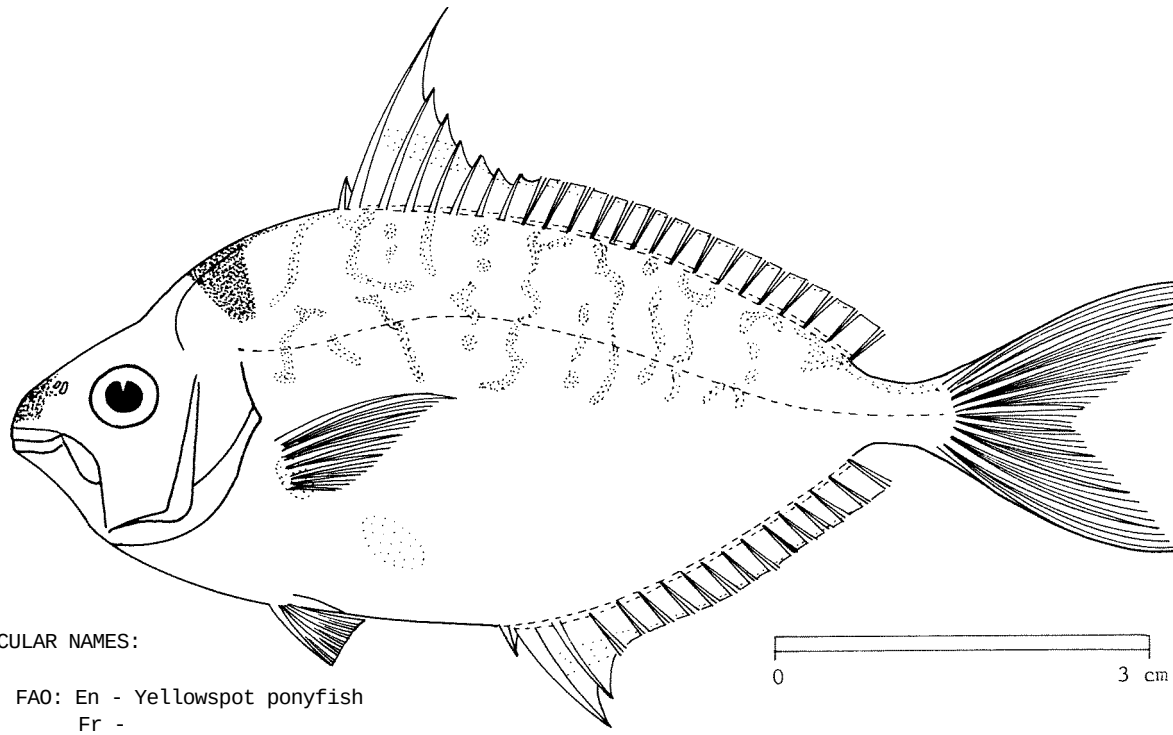
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus sp. (undescribed)

(to be described shortly
by G. Kühlmorgen-Hille)



VERNACULAR NAMES:

FAO: En - Yellowspot ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

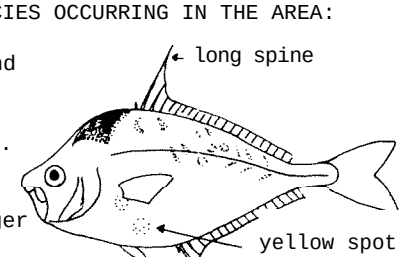
Body oval, compressed and rather high. Head naked; nuchal spine present; *mouth pointing downward when protracted.* Breast without scales. *2nd dorsal spine strong and about 1/2 of body depth.*

Colour: body silvery, with *a pattern of brown irregular lines on back; a dark brown saddle on nape,* very distinct in live or fresh specimens; tip of snout brown; a dark line beneath hind edge of operculum. *High parts of dorsal and anal fins with a brown or yellow horizontal band,* and margins of low parts yellow; pectoral fin axil with dark dots and a yellow blotch; *a second yellow blotch well below pectoral fin.*

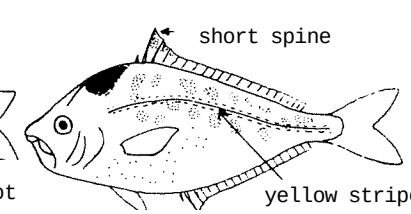
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus brevirostris: shorter 2nd dorsal spine, less than 1/2 of body dept; no yellow spot below pectoral fin; and a narrow yellow stripe along lateral line.

Leiognathus blochii: breast covered with scales and 2nd dorsal spine not longer than 1/2 of body depth.



L. sp. (undescribed)



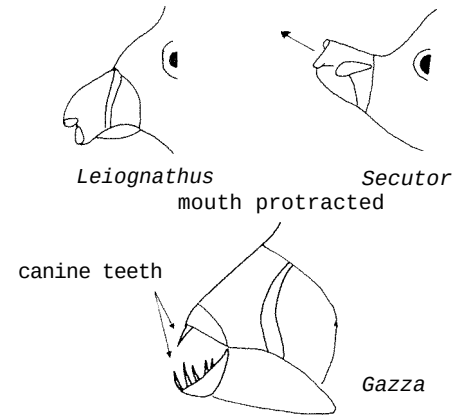
L. brevirostris

Other *Leiognathus* species: either body much deeper, or 2nd dorsal or anal spine greatly elongated, or no dark saddle on nape.

Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaled and no nuchal spine.



SIZE:

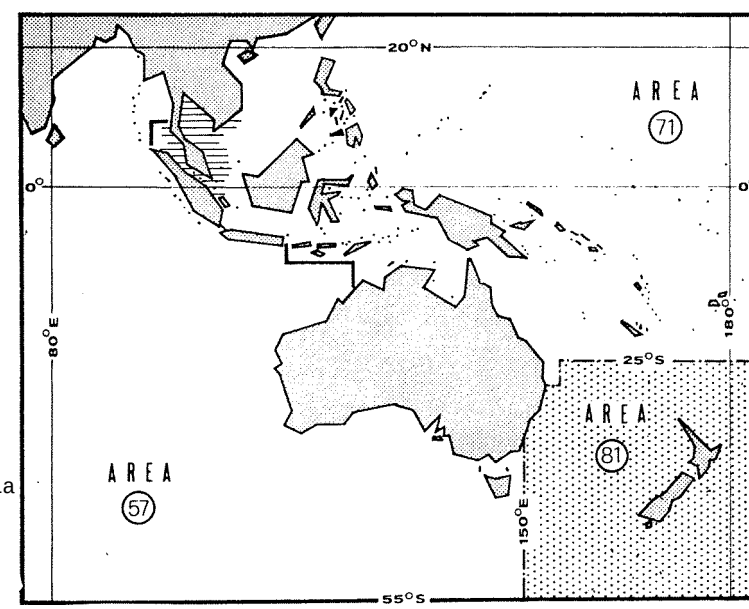
Maximum: 14 cm; common: 8 to 12 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Gulf of Thailand and along the east and west coasts of the Malay peninsula.

Inhabits shallow waters down to depths of 20 m, predominantly near the bottom; usually found in schools; abundant.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters around the Malay peninsula and in the Gulf of Thailand, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons, Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

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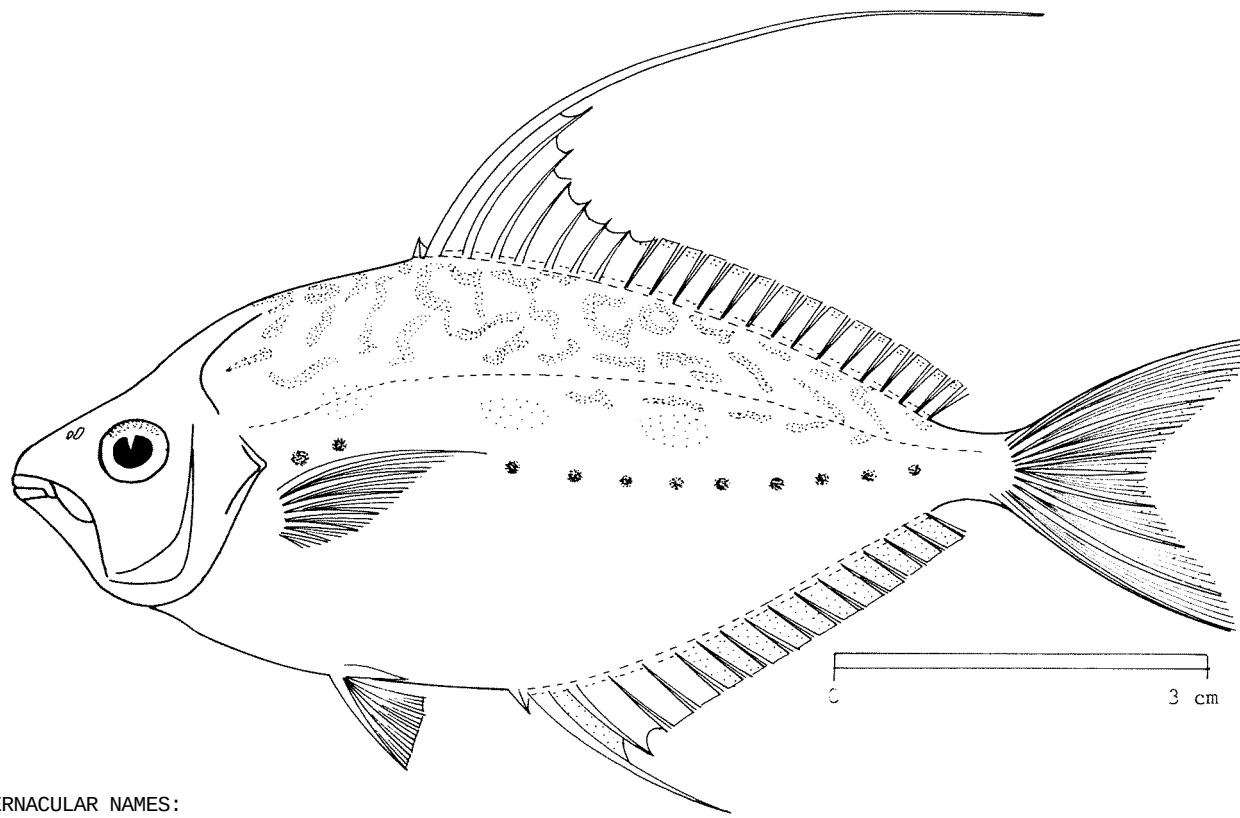
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus leuciscus (Günther, 1860)

SYNONYMS STILL IN USE: ? *Equulites novaehollandiae:* Munro, 1967



VERNACULAR NAMES:

FAO: En - Whipfin ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body compressed and rather elongate. Head naked, nuchal spine present; *mouth pointing downward when protracted. Second dorsal spine distinctly elongated;* second anal spine slightly elongated.

Colour: body silvery, with a *greenish vermicular pattern on back*; eye greenish; large specimens show yellow spots below lateral line and sometimes a line of small black dots below; soft portion of dorsal fin with fine yellow margin; most of anal fin yellow; pectoral axil with minute dark dots (covered by fin); *hind margin of caudal fin yellow*; males usually have a triangular bluish patch on side of belly.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus fasciatus: body deeper, dark vertical stripes on back, a brown pectoral fin axil and no yellow on caudal fin.

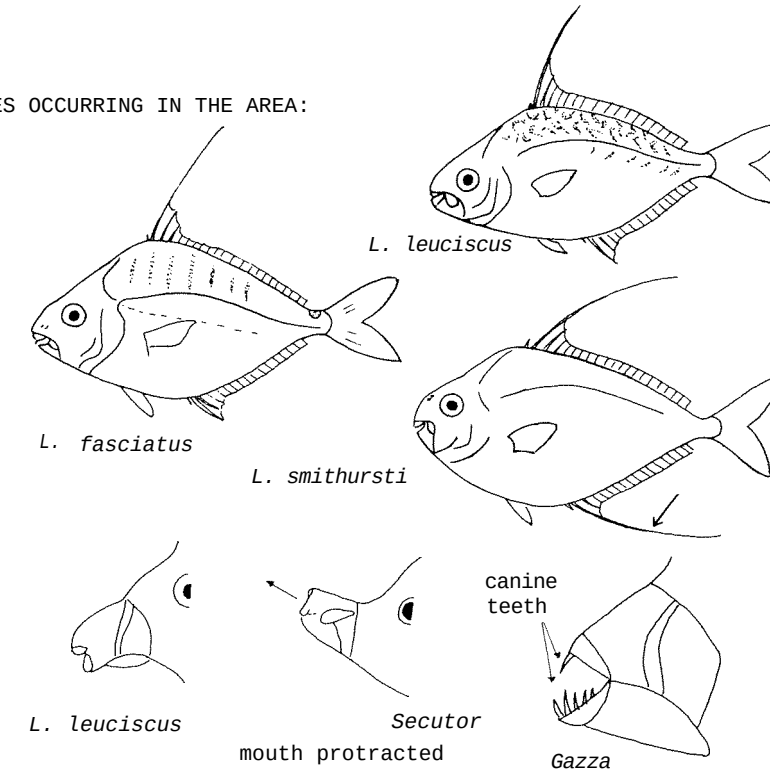
Leiognathus smithursti: 2nd anal spine also greatly elongated.

Other *Leiognathus* species: no elongated dorsal or anal fin spines.

Secutor species: mouth points upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.



SIZE:

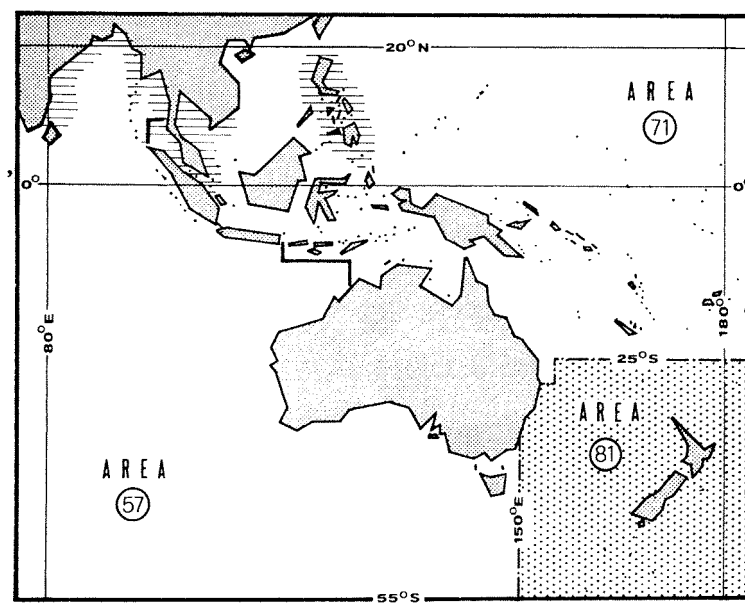
Maximum: 12 cm; common: 6 to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Bay of Bengal, Malaysia and Philippines, but apparently not southward to Indonesia.

Inhabits shallow waters down to depths of 20 m, predominantly near the bottom; usually found in schools.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

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1974

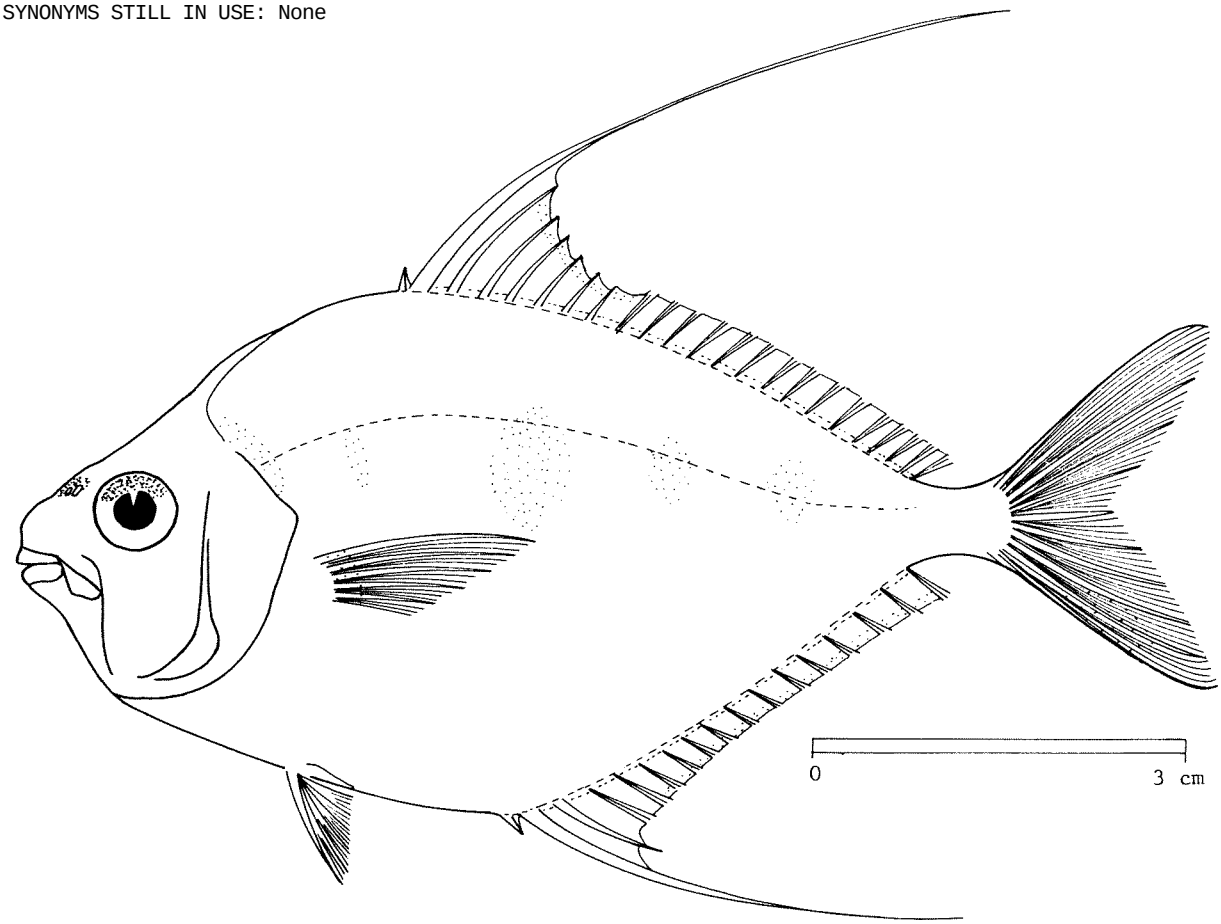
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

FISHING AREAS 37,71
(E Ind. Ocean)
(W Cent. Pacific)

Leiognathus smithursti (Ramsay & Ogilby, 1886)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Smithurst's ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body oval and compressed. Head naked, nuchal spine present; *mouth pointing downward when protracted.* No scales on breast. *2nd dorsal and 2nd anal spines greatly elongated, sometimes reaching to caudal fin.*

Colour: body silvery; *3 greenish yellow spots below lateral line;* pectoral fin axil yellow (partly covered by fin).

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

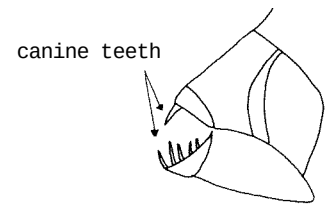
Other *Leiognathus* species: no greatly elongated anal spine; also, colour pattern different.

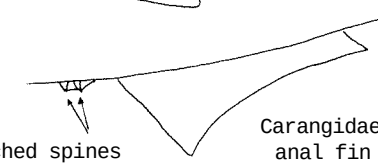
Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine.

Carangid species with long fin rays or spines: have bony scutes on caudal peduncle, no nuchal spine and 2 detached spines in front of anal fin.





SIZE:

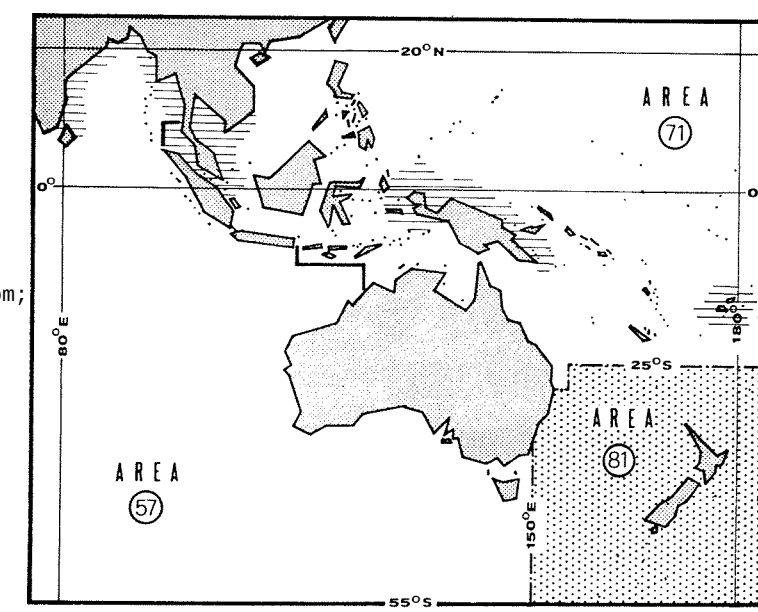
Maximum: 16 cm; common: 8 to 12 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Bay of Bengal to New Guinea and Fiji Islands, but not recorded from Indonesia or from Australia; also, westward to western coasts of India (but not Ceylon).

Inhabits shallow waters down to depths of about 25 m, predominantly near the bottom; usually found in schools.

Feeds mainly on small bottom-living animals.



PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean): 22 100 tons (India only)
area 71 (Western Central Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; smaller specimens are used for fish meal and duck food.

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1974

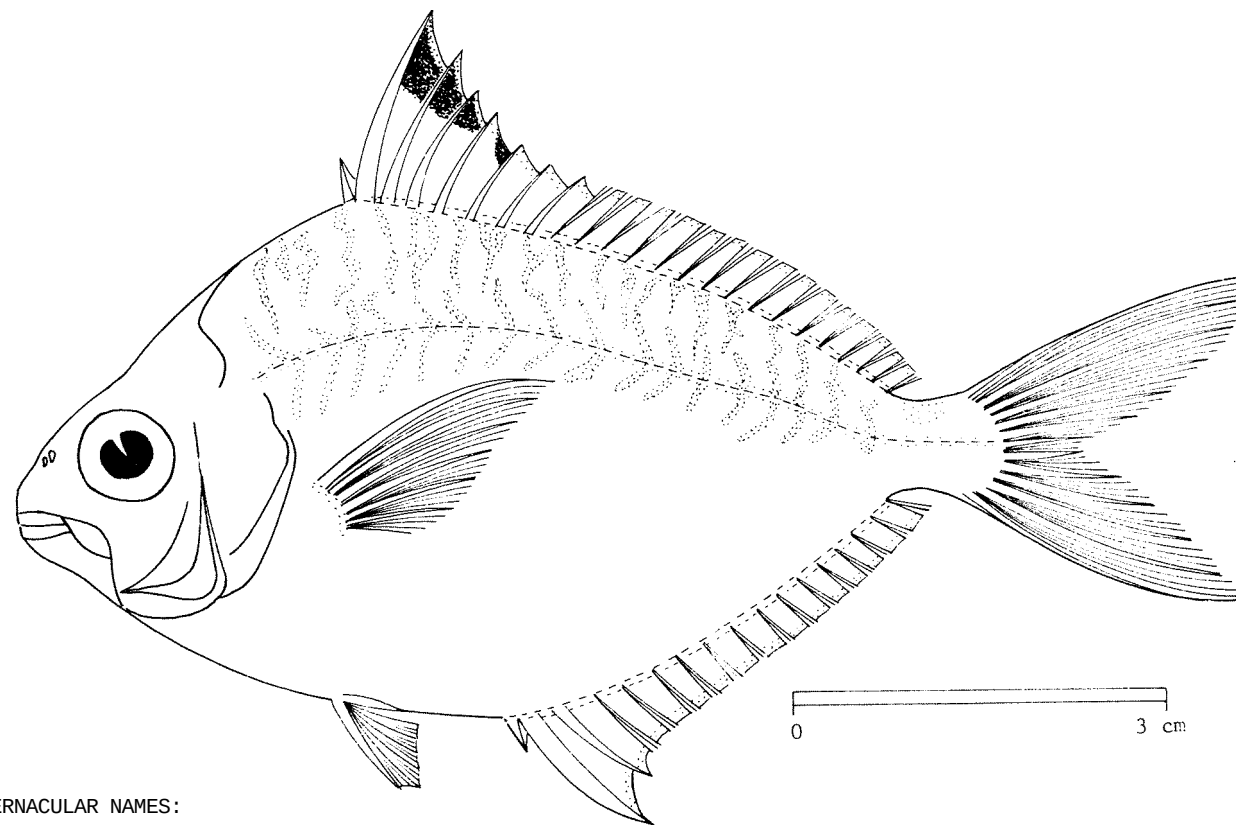
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Leiognathus splendens (Cuvier, 1829)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Splendid ponyfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body compressed and rather deep. Head naked, nuchal spine present; *snout short* (shorter than eye diameter). *Mouth pointing slightly downward when protracted*. Pelvic fins not reaching to anal fin origin.

Colour: body silvery; *scales of lateral line*, bases of pectoral fins, margins of dorsal and anal fins *bright yellow;* sometimes, a black spot on upper third of spinous portion of dorsal fin.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Leiognathus daura, L. brevirostris: a yellow band along lateral line, but not on scales of line itself; also, upper half of spinous portion of dorsal fin black.

Leiognathus bindus: orange tips to dorsal and anal fins;, also, mouth pointing forward when protracted.

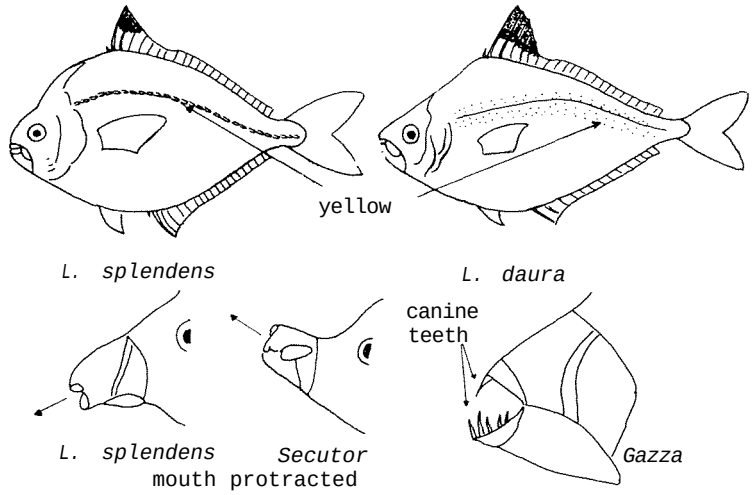
Leiognathus equulus: lateral line scales not yellow, snout about equal to eye, and pelvic fins reaching to anal fin base.

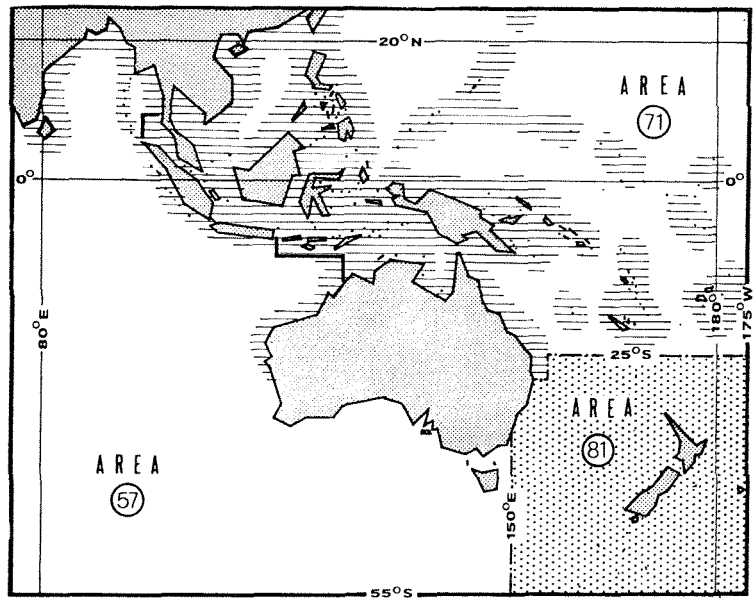
Other *Leiognathus species:* either body more slender (*L. elongatus, L. brevirostris)* or a dorsal or anal spine elongated (*L. leuciscus, L. smithursti, L. fasciatus)* and none has yellow lateral line scales.

Secutor species: mouth pointing upward when protracted.

Gazza species: canine teeth present in jaws.

Gerreidae: head scaly and no nuchal spine





SIZE:

Maximum: 14 cm; common: 6 to 12 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to coasts of East Africa.

Inhabits shallow waters down to depths of about 20 m, predominantly near the bottom; usually found in schools.

Feeds mainly on small bottom-living animals.

PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are rot reported for this species. The total reported catch of *Leiognathus* species in 1972 was:

area 57 (East Indian Ocean). 22 100 tons (India only)
area 71 (Western Centra1 Pacific): 87 500 tons (Philippines: 85 200 tons; Malaysia: 2 200 tons; Singapore: 100 tons)

Caught mainly with bottom trawls; also with traps.

Marketed mostly fresh; also used for fish meal and duck food.

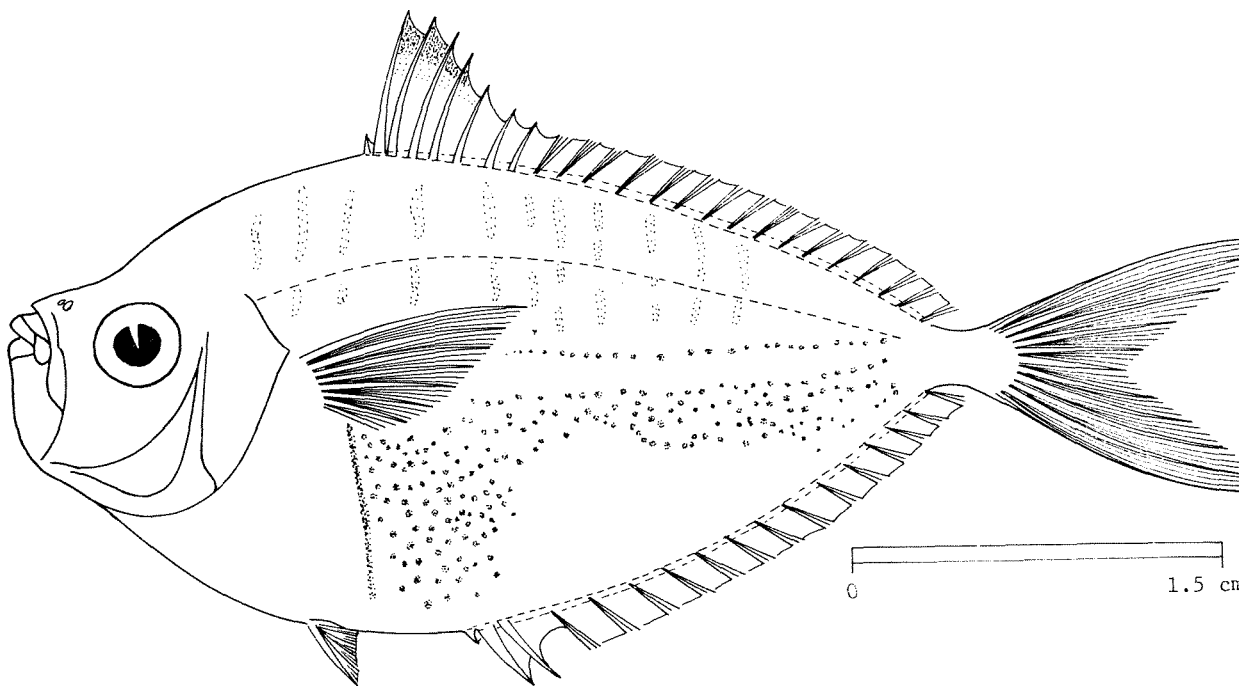
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Secutor insidiator (Bloch, 1787)

SYNONYMS STILL IN USE: *Leiognathus insidiator:* Sleeker, 1865



VERNACULAR NAMES:

FAO: En - Pugnose ponyfish
Fr -
Sp -

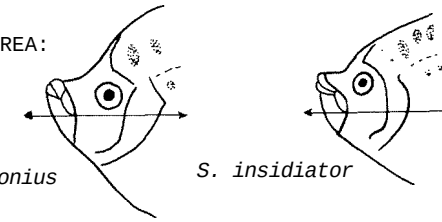
NATIONAL:

DISTINCTIVE CHARACTERS:

Body oval and compressed, *its depth twice or slightly more in standard length.* Head naked; nuchal spine present; *maxilla tip reaching well below level of lower margin of eye; mouth pointing upward when protracted.* Lateral line ending a little before end of dorsal fin.

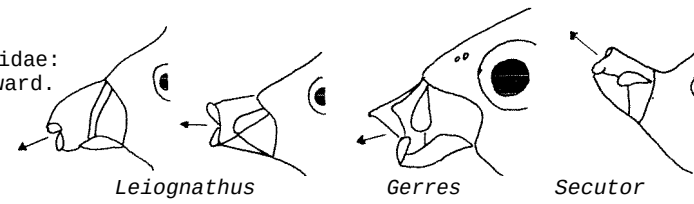
Colour: *body silvery with blue spots on back, forming vertical bands in both young and adult specimens; lower flanks silvery, often with minute dark. dots;* tip of dorsal fin black, with yellow band below; pectoral axil yellowish, with dark dots, sometimes appearing black (covered by fin).

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:



Secutor ruconius: body much deeper, its depth less than twice in standard length; maxilla tip reaching to about level of lower margin of eye and lateral line ending below about middle of soft part of dorsal fin; also, in adults blue spots on flanks more irregular.

Leiognathus and *Gazza* species, also Gerreidae: mouth when protracted pointing forward or downward.



SIZE:

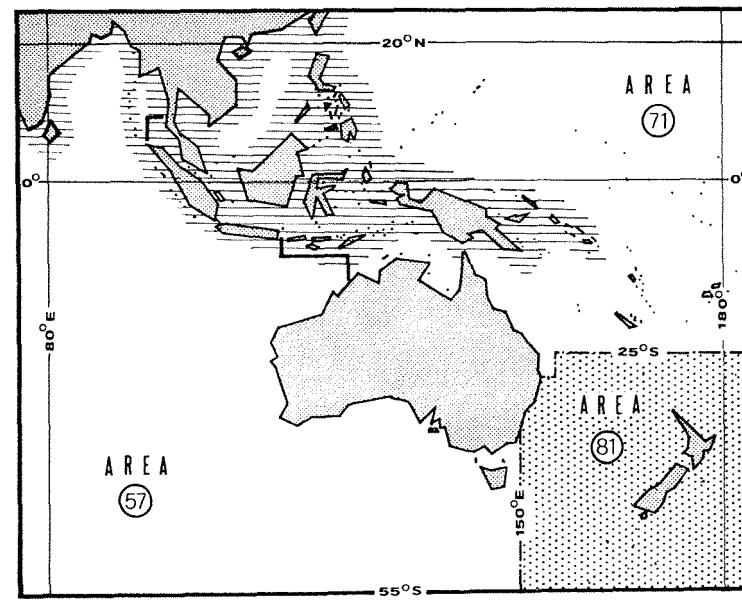
Maximum: 10 cm; common: 4 to 6 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southward to New Guinea, but not to northern coasts of Australia; also, westward to East Africa.

Inhabits shallow waters down to depths of about 15 m, predominantly near the botto usually found in schools.

Feeds mainly on plankton organisms.



PRESENT FISHING GROUNDS:

Inshore waters.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with traps.

Used mostly for fish meal and duck food.

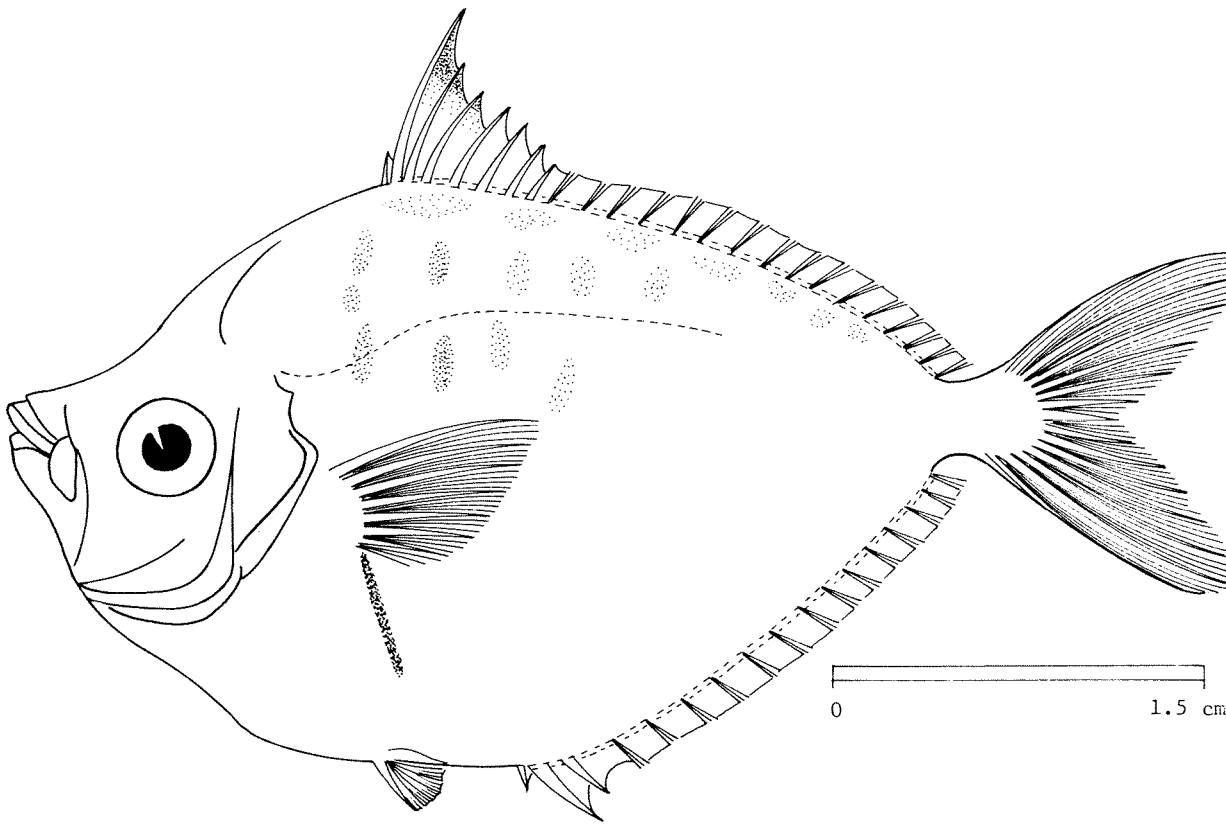
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LEIOGNATHIDAE

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

Secutor ruconius (Hamilton-Buchanan, 1822)

SYNONYMS STILL IN USE: *Leiognathus ruconius:* Weber & de Beaufort, 1931



VERNACULAR NAMES:

FAO: En - Deep pugnose ponyfish
Fr -
Sp -

NATIONAL:

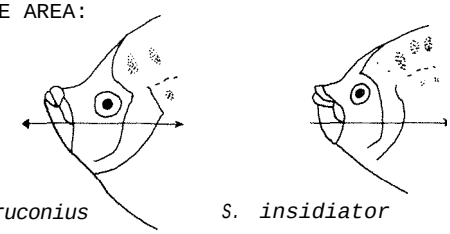
DISTINCTIVE CHARACTERS:

Body strongly compressed and *deep,* its depth less than twice in standard length. Head naked; nuchal spine present; *maxilla tip reaching to about level of lower margin of eye; mouth pointing upward when protracted.* Lateral line ending below about middle of soft part of dorsal fin.

Colour: body silvery, *with blue spots on upper half* (forming vertical bands in young specimens); *belly usually uniform silvery;* tip of dorsal fin black, with a yellow band below; pectoral axil black (covered by fin).

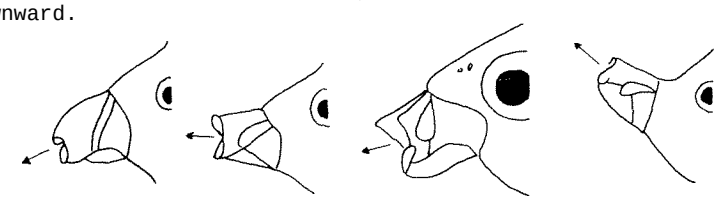
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

S. insidiator: body more slender, its depth more than twice in standard length, maxilla tip reaching well below level of lower margin of eye and lateral line ending a little before end of dorsal fin.



S. ruconius *S. insidiator*

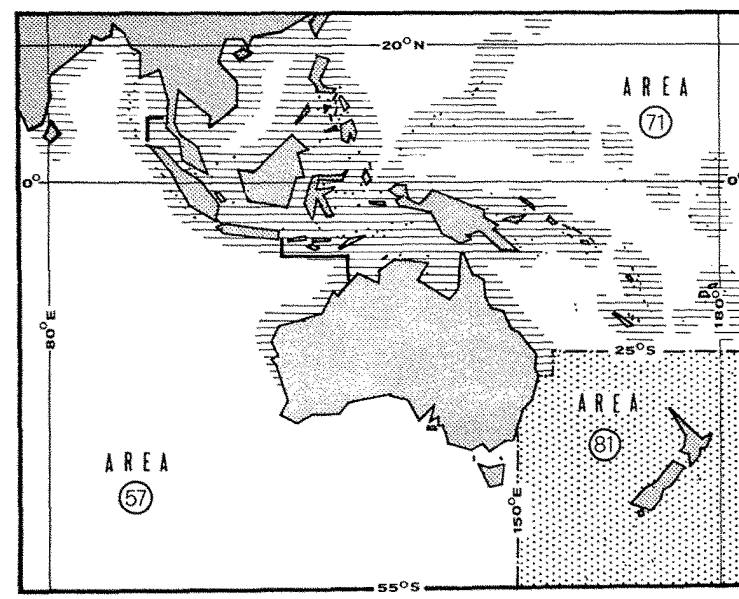
Leiognathus and *Gazza* species, also Gerreidae: mouth when protracted pointing forward or downward.



Leiognathus *Gerres* *Secutor*

SIZE:

Maximum: 8 cm; common: 3 to 6 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to northern coasts of Australia; also, westward to coasts of East Africa.

Inhabits shallow waters down to depths of about 15 m; predominantly near the bottom; usually found in schools; often enters brackish waters.

Feeds mainly on planktonic organisms.

PRESENT FISHING GROUNDS:

Inshore waters, throughout the year.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls; also with traps.

Used mostly for fish meal and duck food.

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1974

FAO SPECIES IDENTIFICATION SHEETS

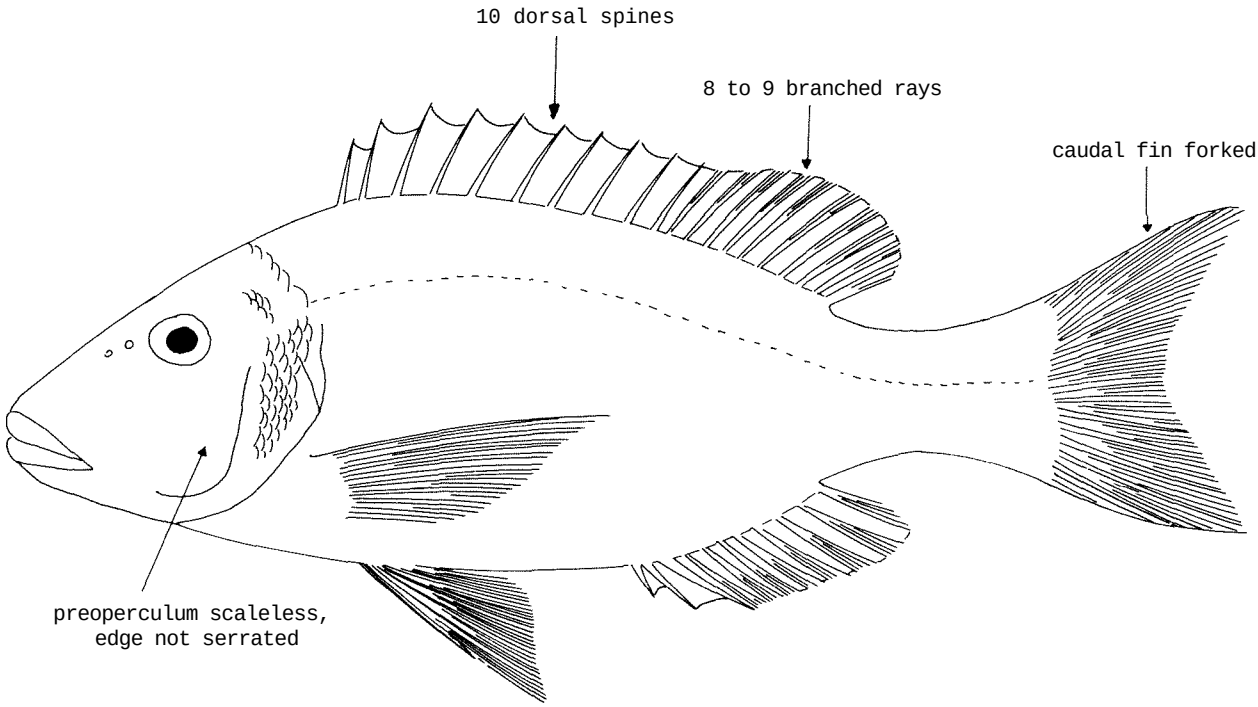
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

LETHRINIDAE

Emperors, scavengers

Moderate-sized perch-like fishes with a large head; suborbital space deep, *preoperculum without serrated hind edge and entirely scaleless, as also top of head;* the snout more or less pointed. Mouth moderate, terminal, slightly protractile; *lips thick and fleshy.* Maxilla covered by suborbital skin, with no supplementary bone. Nostrils paired, anterior one with fleshy rim. Anterior teeth of jaws cardiform, with 2 or 3 enlarged canines outside; lateral teeth in a single row, conical or molar-like; palate toothless. Gill membranes broadly united to each other, but separated from isthmus. Pseudobranch present. *Gill rakers mostly reduced, knob-like. A single continuous dorsal fin, with 10 spines and 8 to 9 branched rays,* base of spinous part longer than base of soft part; anal fin base equal to base of soft part of dorsal fin; pectoral fin long and pointed; pelvic fin thoracic with a scaly axillary process; caudal fin emarginate. A single, continuous lateral line with simple tubes. *Scales ctenoid* (rough), of moderate size on body, gill cover, supratemporal bones and postorbital area; other parts of head scaleless. Inner base of pectoral fin with or without scales.

Colour: ground colour of body and head grey or brown with a tint of red, pink, yellow or green. While alive pale, or with inconspicuous colouration; when excited, or after death, the majority of species show colour patterns or markings of deep red, yellow, green, blue or purple. Usually lips, fins, mouth and gill cavity red or reddish. Besides bright colour pattern and markings, all species have dark patterns which may disappear in a moment, according to emotional state. Littoral, carnivorous fishes.



SIMILAR FAMILIES OCCURRING IN THE AREA:

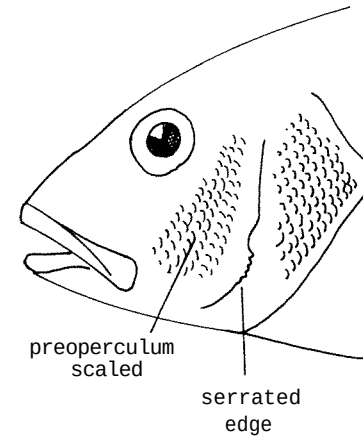
Pentapodidae: scales present on preoperculum.

Lutjanidae: preoperculum scaled and with serrated edge; also, teeth present on palate.

Pomadasyidae: preoperculum scaled and with serrated edge; also, dorsal fin spines long and robust.

Sparidae: scales present on preoperculum, mouth small, upper head profile often very steep, and 10 or more soft dorsal fin rays.

Labridae: caudal fin generally rounded, not forked (outer fin rays elongated to make a lunate tail in some species); scales cycloid (smooth)



Key to Genera

Lethrinus only

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

Lethrinus amboinensis	
Lethrinus atkinsoni	
Lethrinus choerorynchus	LETH Leth 1
Lethrinus chrysostomus	
Lethrinus cinnabarinus	
Lethrinus cutambi	
Lethrinus cyanoxanthus	
Lethrinus devisianus	
Lethrinus fasciatus	
Lethrinus flaviscens	
Lethrinus fletus	
Lethrinus fusciceps	
Lethrinus genivittatus	
Lethrinus glyphodon	
Lethrinus haematopterus	
Lethrinus harak	LETH Leth 2
Lethrinus hypselopterus	
Lethrinus imperialis	
Lethrinus insulindicus	
Lethrinus kallopterus	LETH Leth 3
Lethrinus laticaudus	
Lethrinus lentjan	LETH Leth 4
Lethrinus leutjanus	
Lethrinus mahsena	
Lethrinus mahsenoides	
Lethrinus microdon	
Lethrinus miniatus	LETH Leth 5
Lethrinus nematacanthus	LETH Leth 6
Lethrinus nebulosus	
Lethrinus opercularis	
Lethrinus ornatus	LETH Leth 7
Lethrinus punctatus	
Lethrinus ramak	
Lethrinus reticulatus	
Lethrinus rhodopterus	
Lethrinus rostratus	
Lethrinus similis	
Lethrinus variegatus	
Lethrinus xanthochilus	

* List tentative; no critical revision exists.

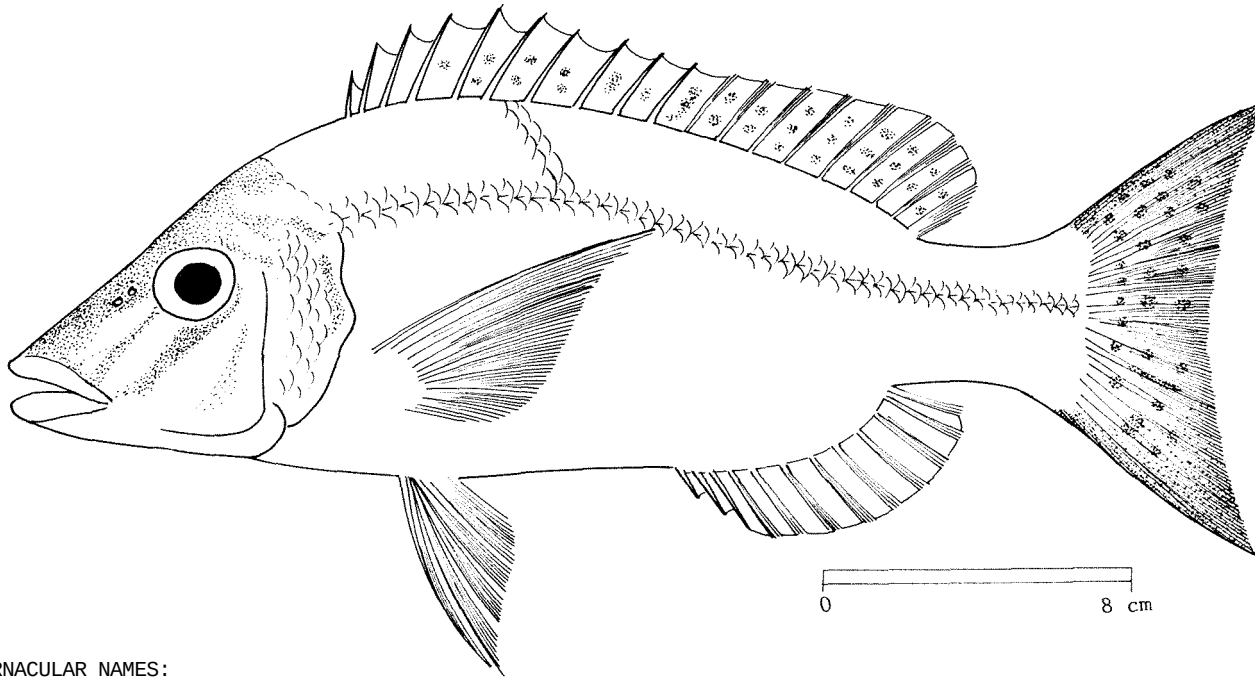
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus choerorynchus Bloch & Schneider, 1801

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

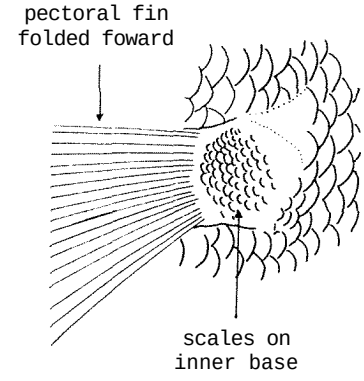
FAO: En - Bluestreak emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly compressed, its depth a little greater than head length. *Interorbital area convex.* Mouth reaching to vertical from anterior nostril. *Postero-lateral teeth in jaws small but distinct molars present in adults;* no teeth on tongue or palate. Dorsal fin continuous, without notch; second dorsal fin spine only a little longer than first; *inner base of pectoral fin densely covered with scales. 6 scale rows between lateral line and bases of mid-dorsal spines.*

Colour: olive/green above, paler below. *Often 2 to 3 blue streaks radiating from eye* and rows of white spots above and below lateral line. Upper margin of pectoral fin blue; pelvic fin dark.



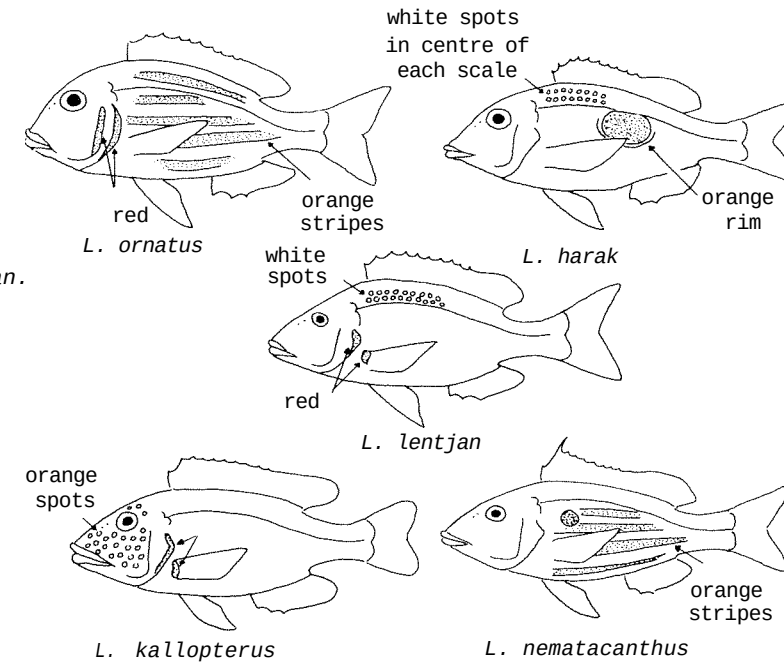
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Lethrinus miniatus: blue stripes also radiating from eye in some specimens but inner base of pectoral fins without scales; also, body more slender and snout long.

L. ornatus, L. harak, L. lentjan: also have 6 scale rows between lateral line and dorsal fin base, but different colour patterns; also, inner base of pectoral fin without scales in *L. lentjan.*

L. kallopterus, L. nematacanthus: 4 to 5 scale rows between lateral line and dorsal fin base, and different colour patterns.

Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 9 in Lethrinidae) or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



SIZE:

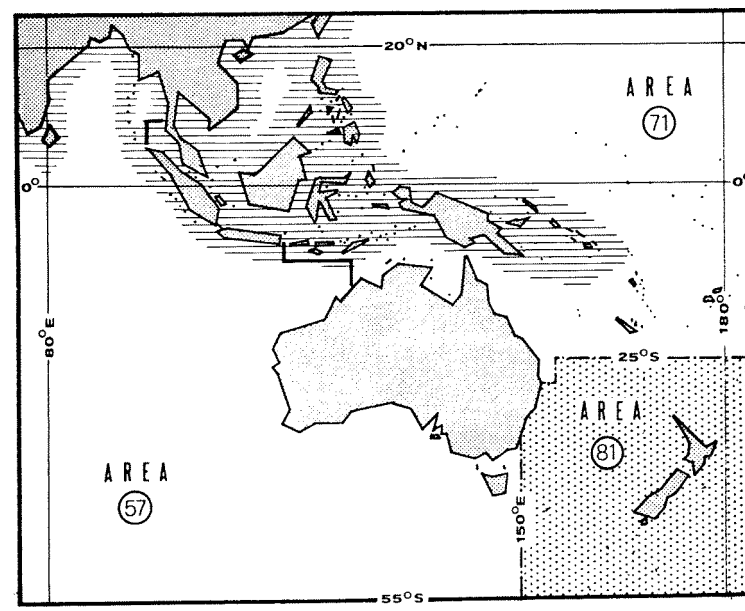
Maximum: 70 cm; common: 20 to 60 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area, but perhaps not to Australia. One of the commonest of *Lethrinus* species in Thailand.

Inhabits coastal waters, down to 50 m.

Feeds mainly on crustaceans and small fishes.



PRESENT FISHING GROUNDS:

Coastal waters, down to 50 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with hooks and lines, bottom trawls, trap nets and bottom longlines.

Marketed mostly fresh.

LETH Leth 2

1974

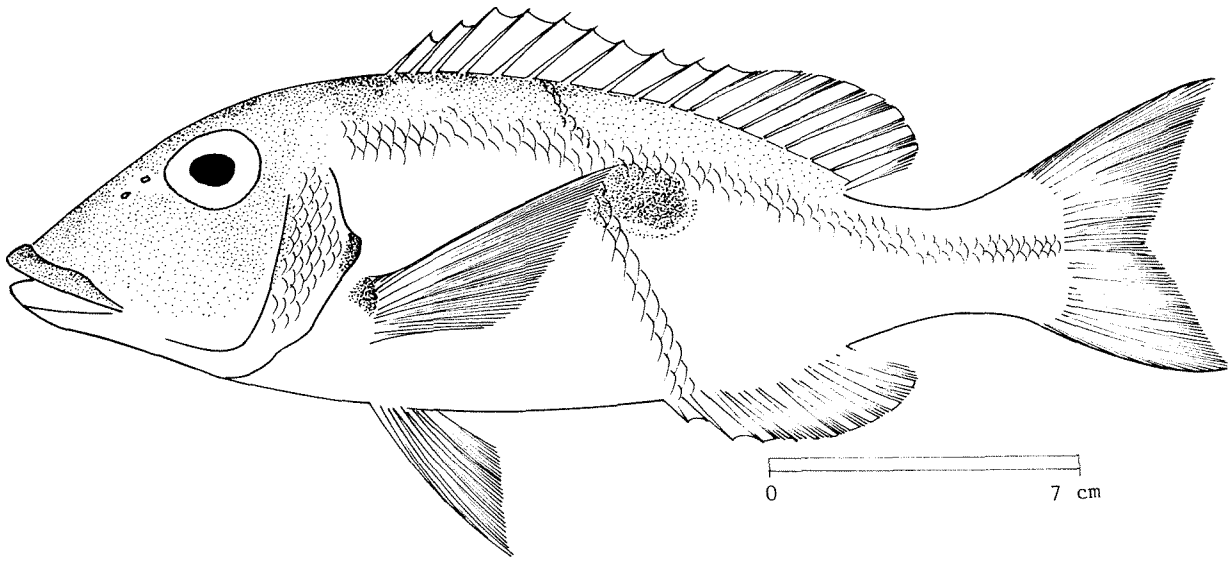
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus harak (Forsskå1, 1775)

SYNONYMS STILL IN USE: *Lethrinus rhodopterus* Bleeker, 1852



VERNACULAR NAMES:

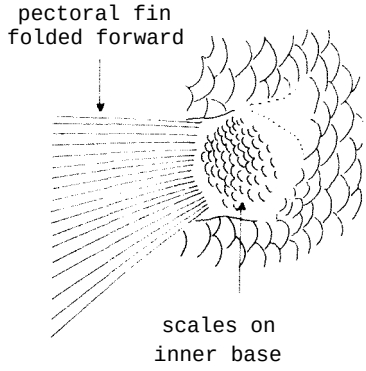
FAO: En - Blackspot emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly compressed, its depth a little greater than head length. Interorbital area moderately convex. Mouth reaching to vertical from anterior nostril. *Postero-lateral teeth in jaws molar-like in adults;* no teeth on tongue or palate. Dorsal fin continuous, with only a very slight notch; second dorsal fin spine only a little longer than first; *inner base of pectoral fin densely covered with scales. 6 scale rows between lateral line and bases of mid-dorsal spines.*

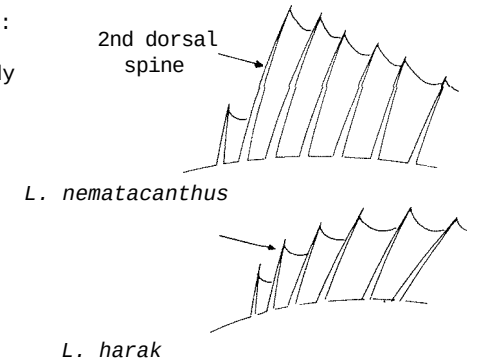
Colour: olive/green above, paler below; *a large black blotch with an orange rim on body near tip of pectoral fin.* Each scale on back sometimes with a white centre. Vertical fins mottled or striped with pink or red, the margins and softer parts being brighter; pectoral fins pale orange, pelvic fins paler.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

All other *Lethrinus* species: lack a large black blotch on body near tip of pectoral fin; also, 2nd dorsal fin spine much longer than lst in *L. nematacanthus* and head very long (its length much greater than body depth) in *L. miniatus.*

Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 9 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



SIZE:

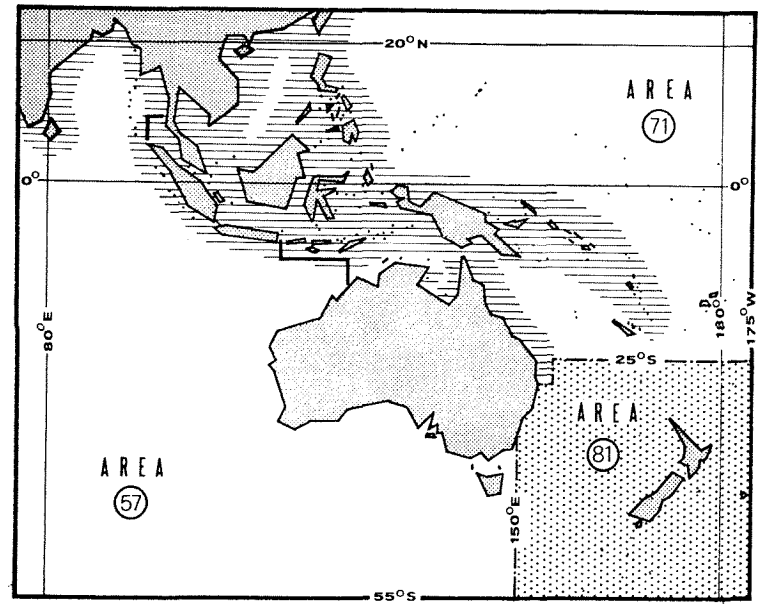
Maximum: 50 cm; common: 25 to 35 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area southward to New South Wales, but not western or southern coasts of Australia; also, westward to Red Sea and East Africa, and northward to the Amami Islands (Japan).

Inhabits coastal waters, usually over sandy bottoms, at depths of less than 50 m.

Feeds predominantly on crustaceans and small fishes.



PRESENT FISHING GROUNDS:

Coastal waters, down to 50 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls, handlines, longlines and trap nets.

Marketed mostly fresh.

LETH Leth 3

1974

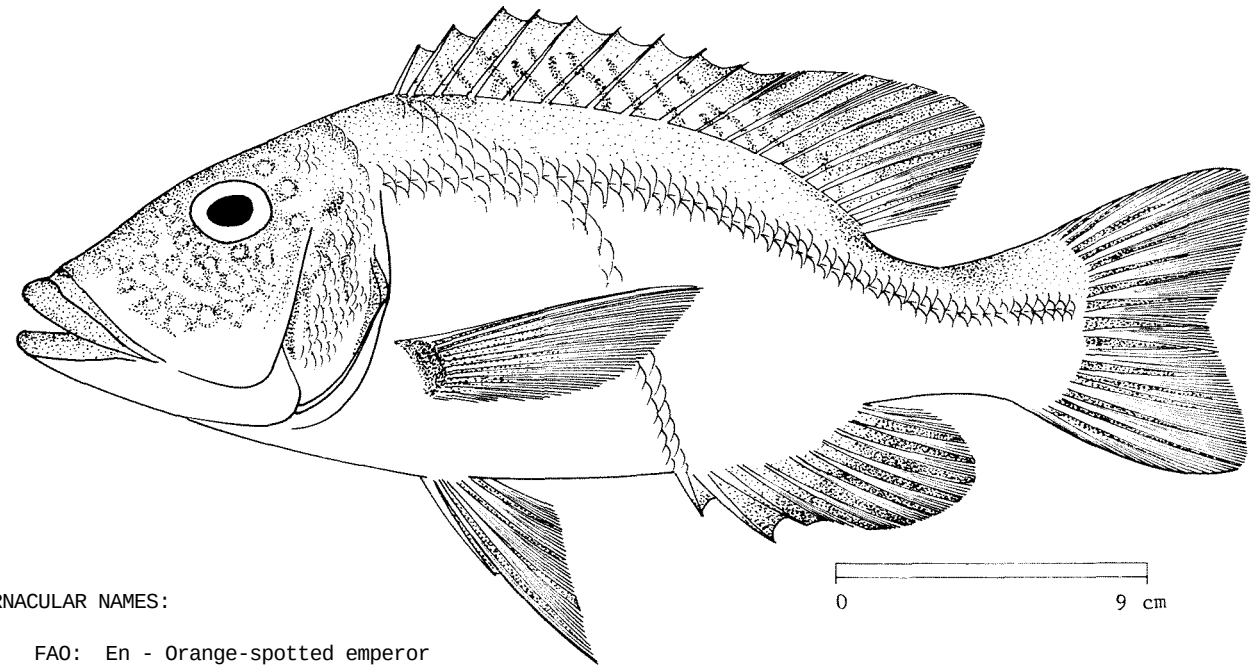
FAD SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus kallopterus Bleeker, 1856

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

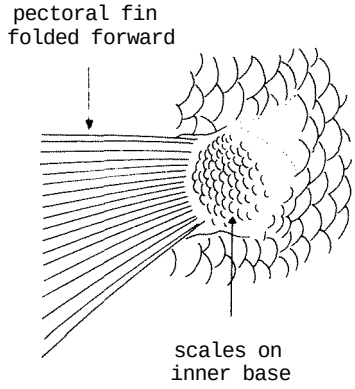
FAO: En - Orange-spotted emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly compressed, its depth a little greater than head length. Interorbital area convex. Mouth reaching to vertical from anterior rim of eye. *Postero-lateral teeth in jaws broadly rounded, but not distinctly molar-like,* no teeth on tongue or palate. Dorsal fin continuous, with only a very slight notch; 2nd dorsal fin spine only a little longer than 1st; *inner base of pectoral fin densely covered with scales; base of soft part of anal fin shorter than its longest ray; tips of caudal fin rounded. 4 to 5 scale rows between lateral line and base of mid-dorsal spines.*

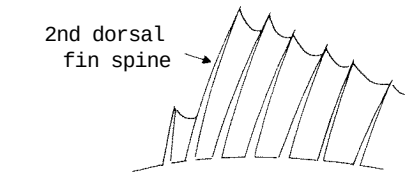
Colour: head dark brown with little orange spots; body and gill cover pale; edge of operculum and base of pectoral fin bright red or orange; *spinous part of dorsal fin yellow with orange spots;* soft part of dorsal, anal, caudal, pectoral and pelvic fins red or orange.



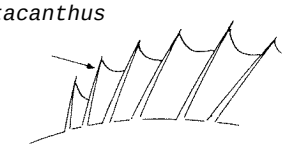
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

All other *Lethrinus* species in area: base of soft part of anal fin much longer than its longest ray; also, 2nd dorsal spine much longer than 1st in *L. nematacanthus* and 6 scale rows between lateral line and bases of mid-dorsal spines in *L. ornatus, L. harak* and *L. lentjan.*

Similar fishes of other families: scales present on pre-operculum; also, 10 or more soft dorsal rays in Sparidae (8 to 9 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



L. nematacanthus



L. kallopterus

SIZE:

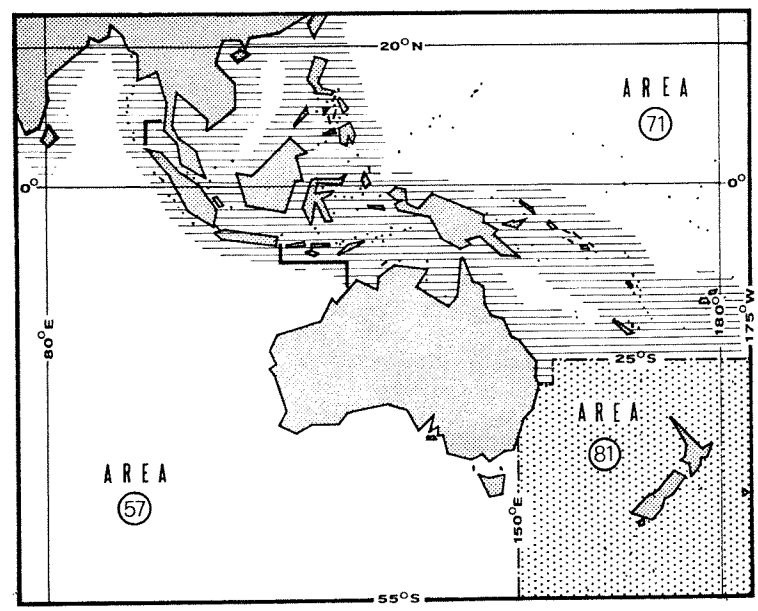
Maximum: 50 cm; common: 35 to 45 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of area, except perhaps western and southern coasts of Australia; also, westward to East Africa and northward to the Ryukyu Islands (Japan).

Inhabits coastal waters, somewhat deeper than the other species of *Lethrinus* occurring in the area.

Feeds on small animals living on or near the bottom.



PRESENT FISHING GROUNDS:

Deeper coastal waters.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with hooks and lines, bottom trawls and longlines.

Marketed mostly fresh.

LETH Leth 4

1974

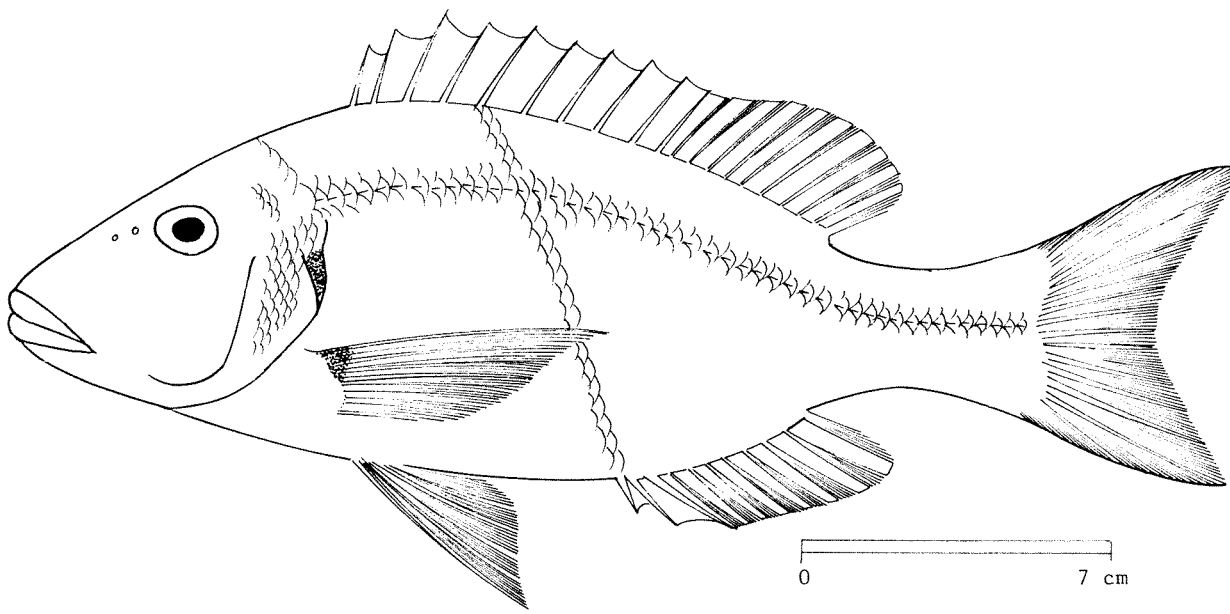
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus lentjan (Lacepède, 1802)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Redspot emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly compressed, its depth a little greater than head length. Interorbital area slightly or well convex. Mouth reaching to vertical from anterior or posterior nostril. *Postero-lateral teeth of jaws developed as strong molars in adults;* no teeth on tongue or palate. Dorsal fin continuous, with barely a notch; 2nd dorsal spine only a little longer than 1st; *inner base of pectoral fin with scales few or absent. 6 or 7 rows of scales between lateral* line *and bases of mid-dorsal spines.*

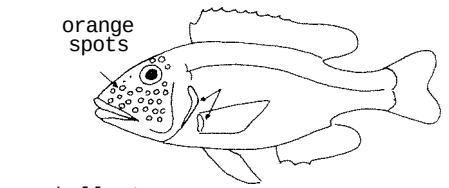
Colour olive/green above, paler below. *A bright red spot* on *posterior edge of operculun and often another on outer pectoral fin base.* Each scale on back sometimes with a white centre. Dorsal and caudal fins mottled or striped with orange.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

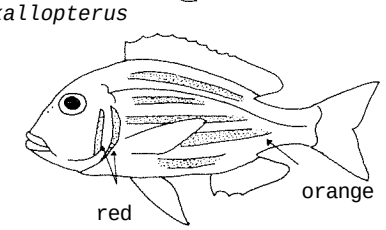
L. kallopterus, L. ornatus and *L. variegatus*: also have a red patch on edge of operculum, but only 4 to 5 scale rows between lateral line and mid-dorsal fin spines; also, inner pectoral fin base densely covered with scales, and different colour pattern in *L. kallopterus* and *L. ornatus.*

Lethrinus miniatus: head much longer than body depth, snout long and pointed,sometimes with several blue streaks.

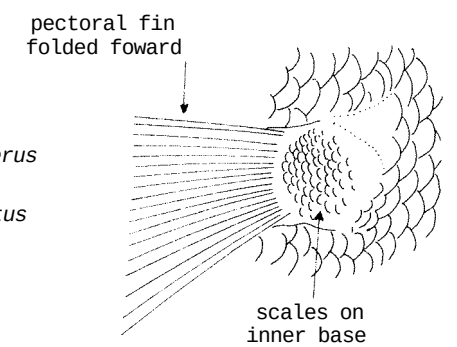
Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 9 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



L. kallopterus



L. ornatus



L. kallopterus
L. ornatus
L. variegatus

SIZE:

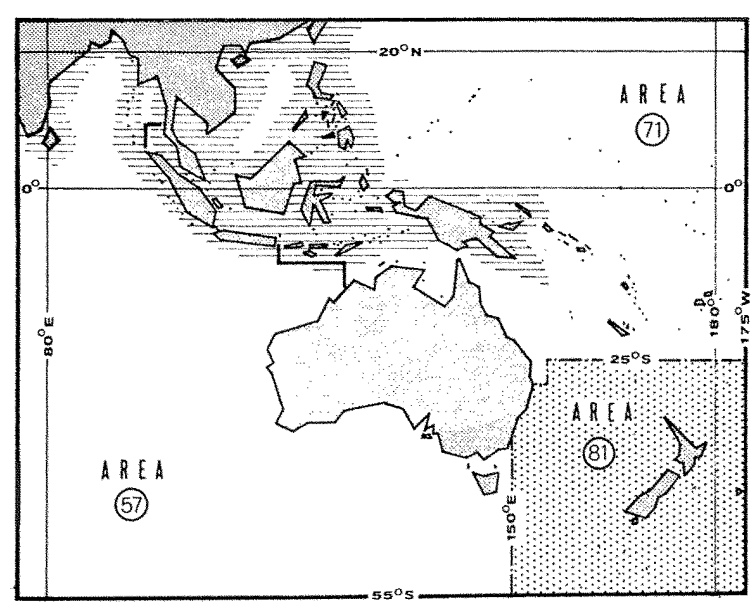
Maximum: 40 cm; common: 25 to 35 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area but not to Australia; also, westward to East Africa and northward to the Ryukyu Islands (Japan).

Inhabits sandy bottoms in coastal waters.

Feeds mainly on crustaceans, worms and fishes.



PRESET FISHING GROUNDS:

Coastal waters, down to 50 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with hooks and lines, bottom longlines, bottom trawls and trap nets.

Marketed mostly fresh.

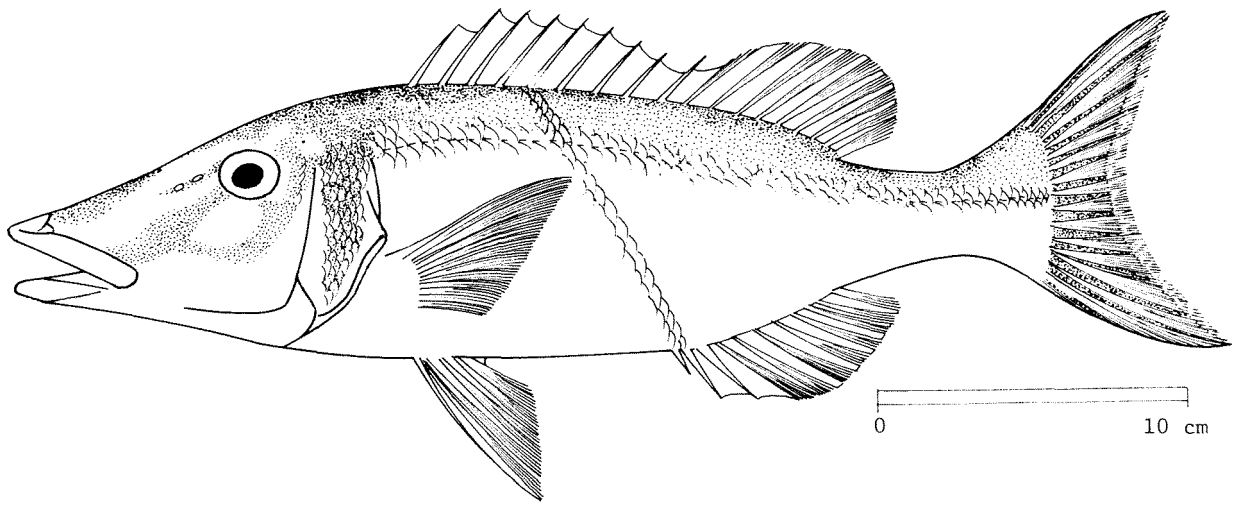
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus miniatus (Bloch & Schneider, 1801)

SYNONYMS STILL IN USE: *Lethrinus rostratus* Günther, 1859



VERNACULAR NAMES:

FAO: En - Longface emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

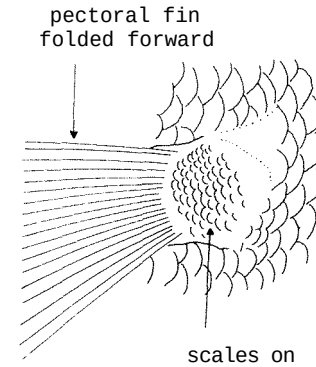
Body fairly compressed but slender; *head (especially snout) very long, much longer them bode depth.* Interorbital area sometimes flat, sometimes convex. Mouth reaching to vertical before or below anterior nostril. *Postero-lateral teeth conical;* no teeth on tongue or palate. Dorsal fin continuous but with slight notch; *2nd dorsal spine only a little longer than 1st, but about equal to 3rd; inner base of pectoral fin without scales. 6 scale rows between lateral line and bases of mid-dorsal spines.*

Colour: blue/grey to brown above, sometimes pink below. Occasionally, 2 to 3 blue streaks radiating from eye. Vertical fins pink to red, with brighter margins; paired fins yellow.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Most other *Lethrinus* species in area: head about equal to body depth, snout moderate; also, scales often present on inner base of pectoral fin (absent in *L. miniatus*).

Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 9 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



SIZE:

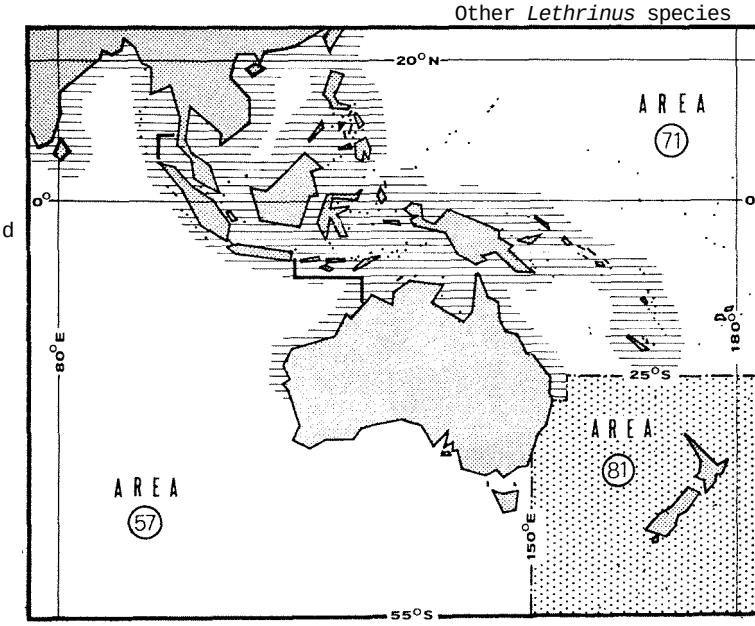
Maximum: 90 cm; common: 25 to 70 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and to northern coasts of Australia; also, westward to East Africa and northward to the Ryukyu Islands (Japan).

Inhabits sandy bottoms in coastal waters.

Feeds predominantly on crustaceans, worms and small fishes.



PRESENT FISHING GROUNDS:

Coastal waters, mainly trawling grounds.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls, bottom longlines, trap nets and gill nets.

Marketed mostly fresh.

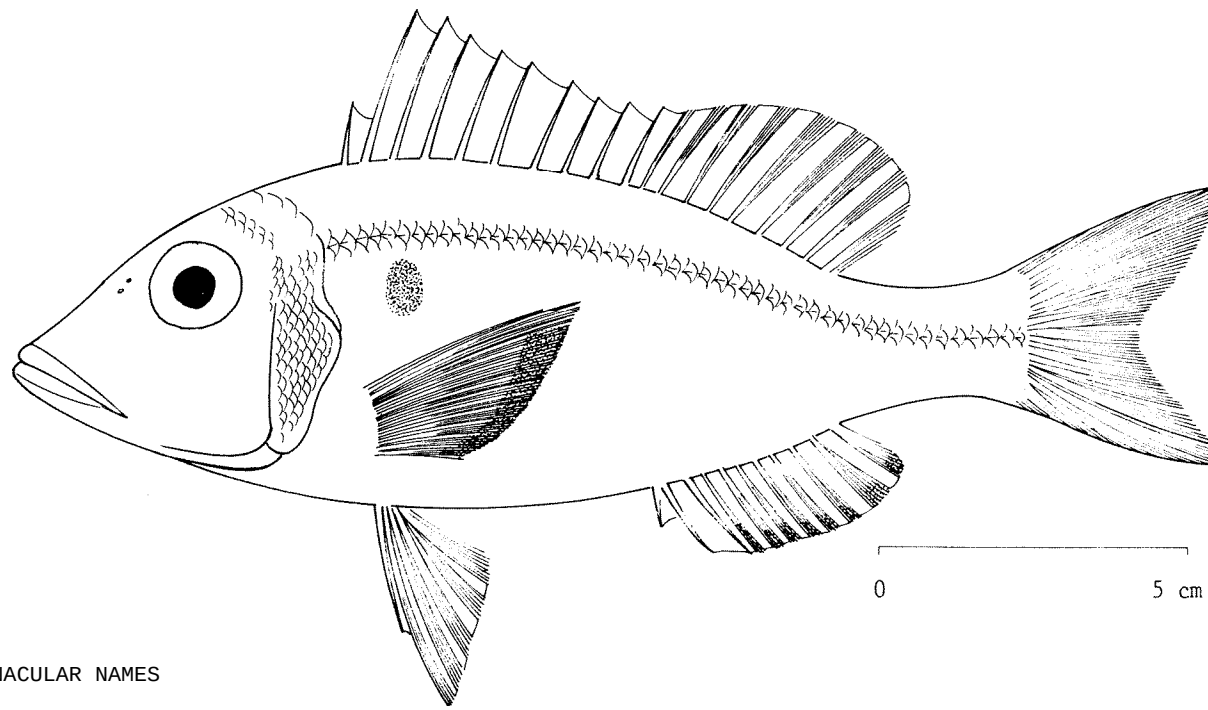
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus nematacanthus Bleeker, 1854

SYNONYMS STILL IN USE: None



VERNACULAR NAMES

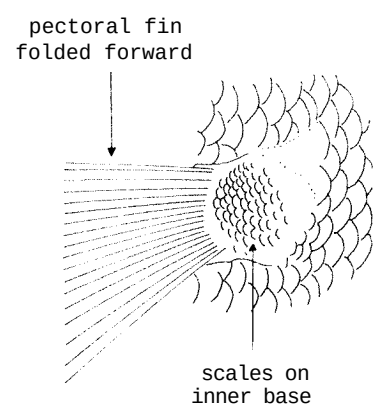
FAO: En - Longspine emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly compressed, its depth about equal to head length. Interorbital area flat or slightly convex. Mouth reaching to vertical from posterior nostril. *Postero-lateral teeth in a single row, conical or molar-like;* no teeth on tongue or palate. Dorsal fin continuous, with only a slight notch; *2nd dorsal spine the longest, much longer than 1st; inner base of pectoral fin densely covered with scales. 4 to 5 scale rows between lateral line and bases of mid-dorsal spines.*

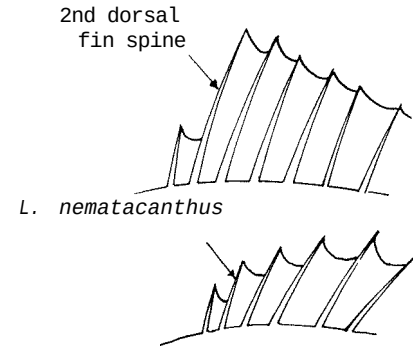
Colour: yellow/grey above, paler below. A black blotch (less than size of eye) above pectoral fin in most specimens. *Several bright orange longitudinal stripes along flanks* in most smaller specimens.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

All other *Lethrinus* species: 2nd dorsal spine only a little longer than lst.

Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 4 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).



SIZE:

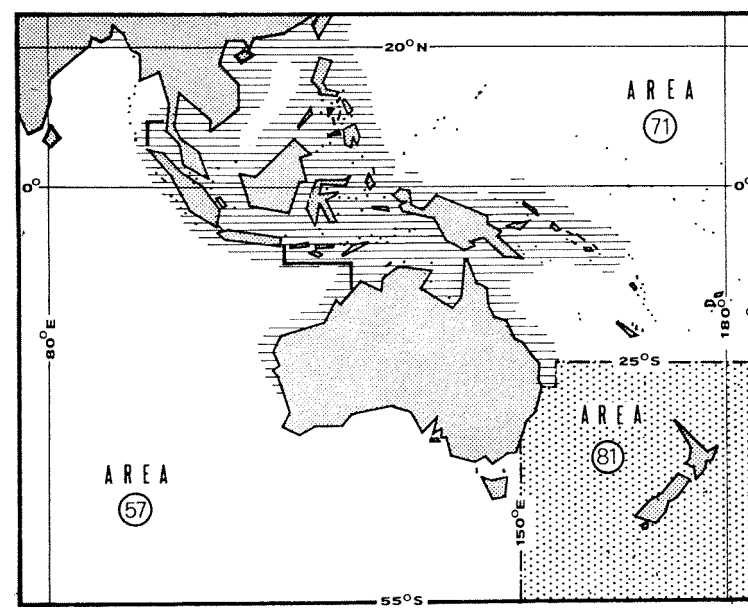
Maximum: 25 cm; common: 15 to 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area and southward to Queensland and New South Wales (Australia).

Inhabits coastal waters.

Feeds on small animals living on or near bottom.



PRESENT FISHING GROUNDS:

Coastal waters, down to 50 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with hooks and lines, bottom trawls and trap nets.

Marketed mostly fresh.

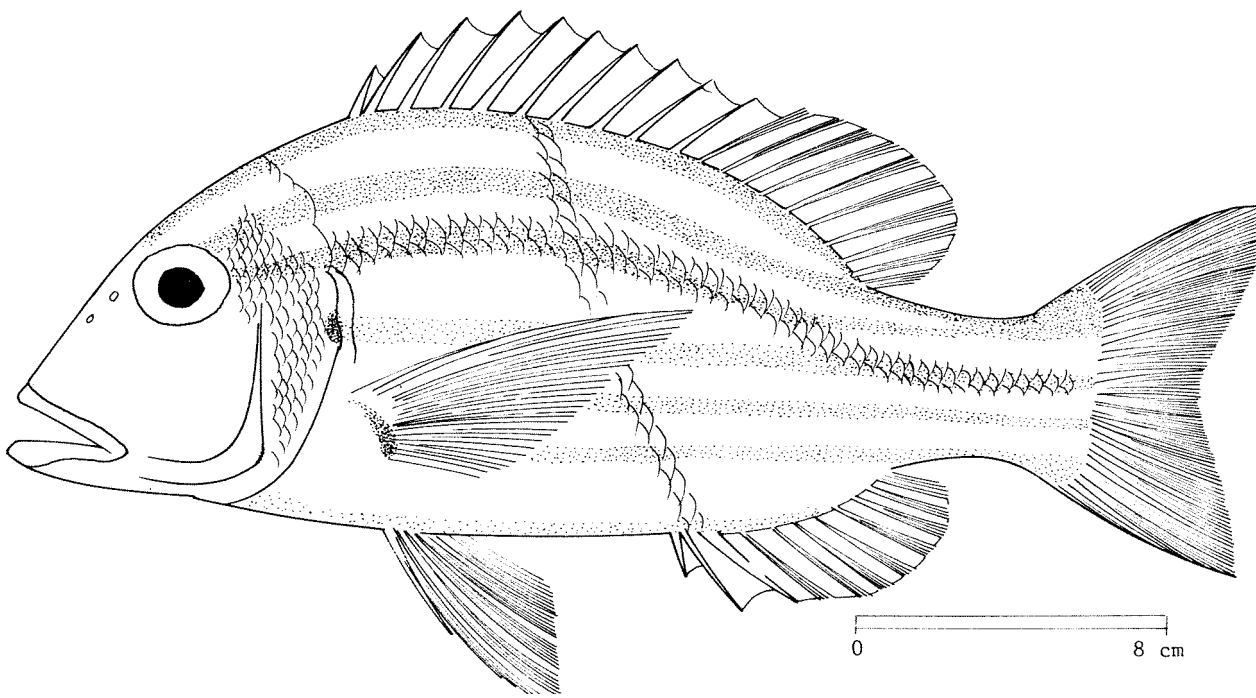
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus ornatus Valenciennes, 1830

SYNONYMS STILL IN USE: None



VERNACULAR NAMES

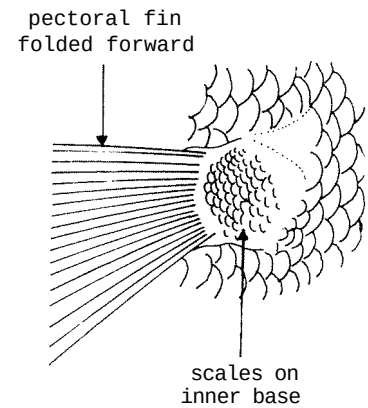
FAO: En - Ornate emperor
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fairly strongly compressed, its depth much greater than head length. Snout short, upper profile steep. Interorbital area a little convex. Mouth reaching to vertical from posterior nostril. *Postero-lateral teeth developed into strong molars;* no teeth on tongue or palate. Dorsal fin continuous, barely notched; 2nd dorsal spine only a little longer than 1st; *inner base of pectoral fin densely scaled. 6 rows of scales between lateral line and bases of mid-dorsal spines.*

Colour: head yellow/brown, *body pale green with 5 or 6 yellow longitudinal stripes.* Hind margin of operculum, and sometimes preoperculum, red.



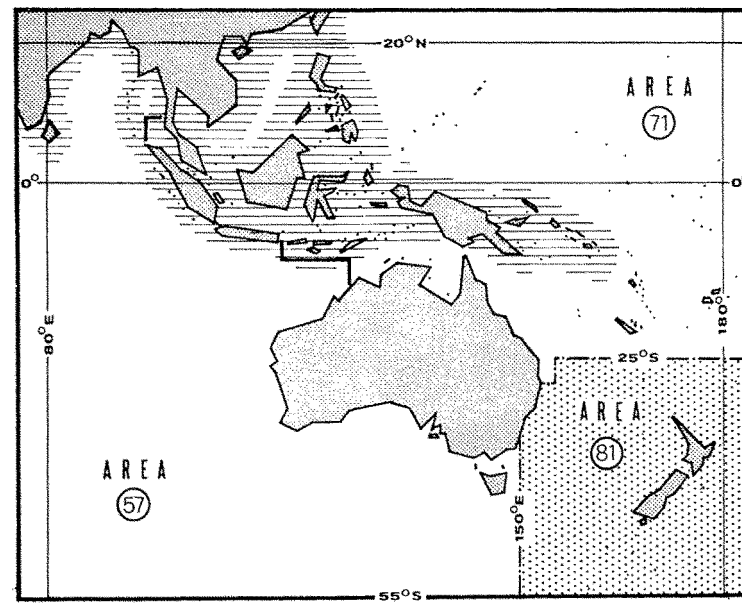
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Lethrinus* species in area: lack longitudinal stripes, or if stripes present, then jaw teeth not developed into strong molars.

Similar fishes of other families: scales present on preoperculum; also, 10 or more soft dorsal fin rays in Sparidae (8 to 9 in Lethrinidae), or preoperculum with serrated edge (Lutjanidae, Pomadasyidae).

SIZE:

Maximum: 45 cm; common: 20 to 25 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of northern part of area, but perhaps not to Australia; northward to Ryukyu Islands (Japan).

Inhabits coastal waters.

Feeds mainly on crustaceans, worms and and small fishes.

PRESENT FISHING GROUNDS:

Coastal waters.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom longlines, bottom trawls, trap nets and bottom-set gill nets.

Marketed mostly fresh.

FAO SPECIES IDENTIFICATION SHEETS

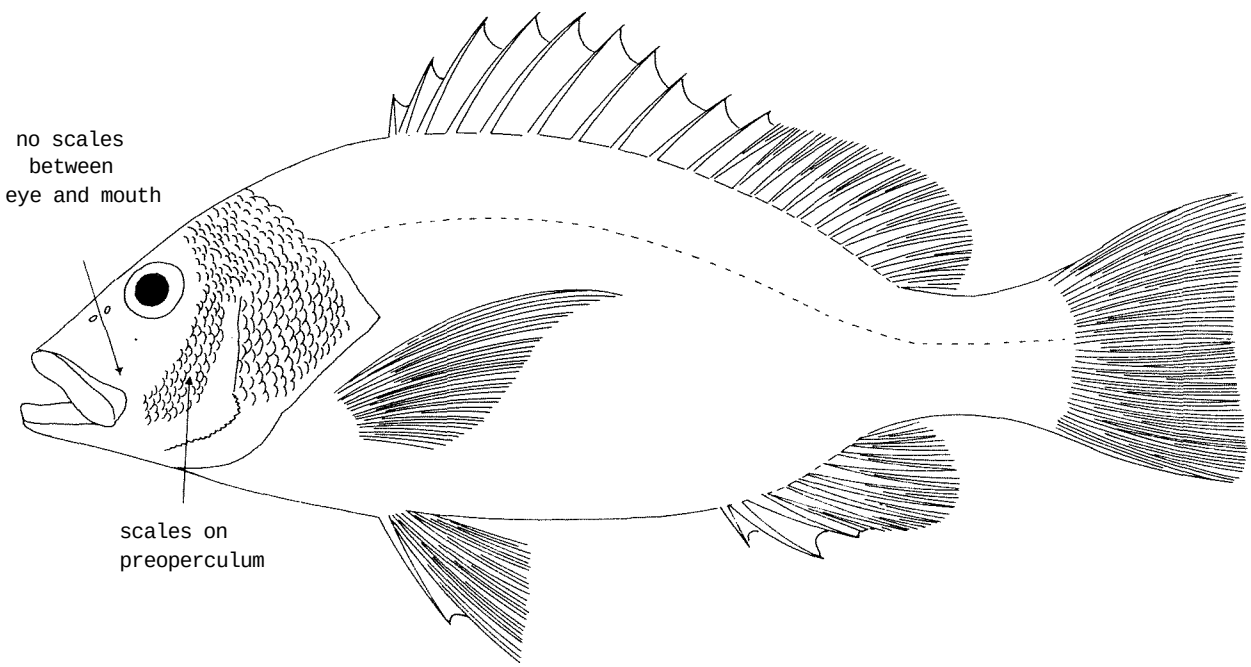
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

LUTJANIDAE

Snappers, jobfishes, fusiliers

Typical perch-like fishes, oblong in shape, moderately compressed, and covered with moderate or small ctenoid scales (rough to touch). Two nostrils on each side; *anterior part of head (snout, pre orbital area, and postorbital area) without scales; some rows of scales on preopereulum and on gill cover.* Lateral line complete, straight or gently curved. *Maxilla broadest posteriorly, sliding (at least partly) under the preorbital and postorbital for the greater part of its upper edge;* mouth terminal and fairly large, extending somewhat when opened (protrusible); *preoperculum usually serrate, often finely.* Jaw teeth usually in a few rows, conical and sharp, never molars; sometimes a few enlarged to form canines; teeth usually present on vomer and palatines (roof of mouth). Pelvic fin with 1 spine and 5 soft rays, set behind the pectoral fins; *dorsal fin usually single, with 9 to 13 spines and 9 to 17 soft rays; anal fin with 3 spines and 7 to 14 soft rays.* Internally characterized by having ocular ring of bones with an inward shelf under eye.

Colour: highly variable, mainly from yellow through red to blue, often with blotches, lines or other patterns.



SIMILAR FAMILIES OCCURRING IN THE AREA:

Lethrinidae: always lack scales on preoperculum and teeth on roof of mouth. Some have molar-like teeth in jaws.

Nemipteridae: lack teeth on roof of mouth, and have weak spines in dorsal and anal fins; also, a free suborbital shelf sometimes forming a spine posteriorly.

Pomadasyidae: lack teeth on roof of mouth, have long, robust spines in dorsal and anal fins, and scales present between mouth and eye.

Pentapodidae: have flaring canines at front of jaw and no scales on dorsal and anal fins; also, some genera have a denticulated maxilla.

Sparidae: have incisors or canines and molars or molar-like teeth in jaws, and usually strong and robust spines in dorsal and anal fins.

Key to Commercial Genera

1 a. Soft parts of dorsal and anal fins scaleless; pectoral fin with 16 to 17 soft rays; caudal fin deeply forked or with extended lobes (Fig. 1)

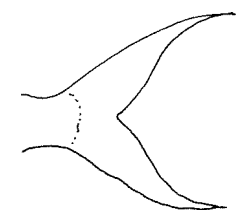


Fig. 1

2 a. Interorbital space flat

3 a. Dorsal fin deeply notched at last spines, which are markedly shortened ..... *Etelis*

3 b. Dorsal fin not deeply notched between spinous and soft parts, so that posterior spines are not distinctly shortened

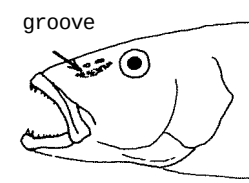


Fig. 2

4 a. Pectoral fins short, about equal to length of snout; a deep groove in front of eye (Fig. 2) ..... *Aprion*

4 b. Pectoral fins long, considerably longer than length of snout; no groove in front of eye

5 a. Roof of mouth toothless; teeth in jaws small, disappearing with age

6 a. Pectoral fins moderate, not falcate; 9 dorsal fin spines ... *Gymnocaesio*

6 b. Pectoral fins long, falcate; 10 dorsal fin spines ..... *Aphareus*

5 b. Roof of mouth toothed; teeth in jaws always present; gill filaments red

7 a. Last soft ray of dorsal and anal fins shorter than preceding rays, so that posterior profile of fins is rounded; tip of upper jaw with a thickened fleshy knob (Fig. 3) ..... *Tangia*

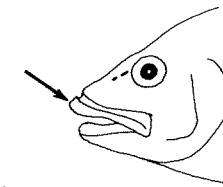


Fig. 3

7 b. Last soft ray of dorsal and anal fins extended, conspicuously longer than preceding rays; tip of upper jaw normal ..... *Pristipomoides*

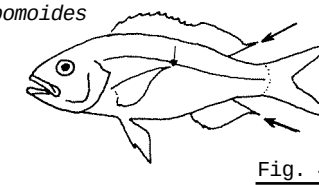


Fig. 4

2 b. Interorbital space convex, not flat

8 a. Last soft ray of dorsal and anal fins shorter than preceding rays, so that posterior profile of fins is rounded ..... *Paracaesio*

8 b. Last soft ray of dorsal and anal fins either distinctly extended or dis tinctly longer than preceding rays

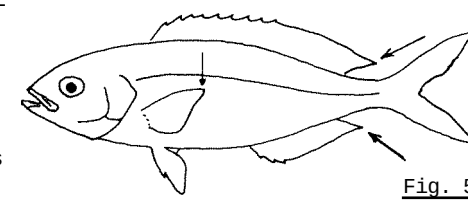


Fig. 5

9 a. Last soft ray of dorsal and anal fins extended forming a short filament (Fig. 4); pectoral fins long, pointed, extending to below posterior spines of dorsal fin ... *Tropidinius*

9 b. Last soft ray of dorsal and anal fins not extended, only forming an angulate posterior profile (Fig. 5); pectoral fins short, not pointed at their tips, extending to below 4th to 5th spines of the dorsal fin ..... Aspilus

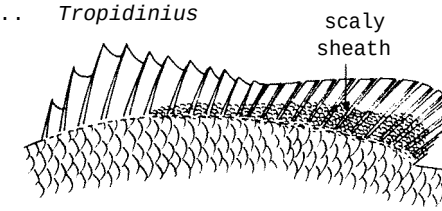


Fig. 6

1b. Soft parts of dorsal and anal fins scaled, or with a low scaly sheath (Fig. 6)

10 a. Caudal fin only slightly forked, often truncate, emarginate or lunate (Fig. 7); pectoral fins with 15 to 17 soft rays

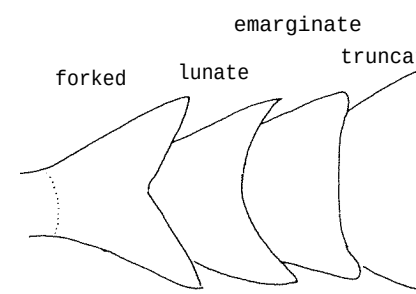


Fig. 7

11 a. Soft parts of dorsal and anal fins with scales on their bases

12 a. Caudal fin slightly forked, with shallow but broadly rounded lobes; soft parts of dorsal and anal fins forming long, pointed lobes (Fig. 8) ..... *Macolor*

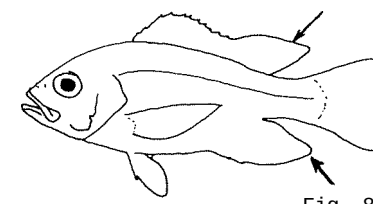


Fig. 8

12 b. Caudal fin truncate, emarginate or lunate; soft parts of dorsal and anal fins not forming long, pointed lobes

13 a. Caudal fin lunate; eye at mid-level of head behind tip of snout (Fig. 9) ..... *Pinjalo*

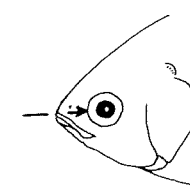


Fig. 9

13 b. Caudal fin truncate, emarginate or slightly forked, but not broadly lunate; eye not at mid-level of head behind tip of snout ..... *Lutjanus*

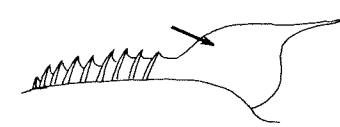


Fig. 10

11 b. Soft parts of dorsal and anal fins with only a low scaly sheath not attached to fins; spinous part conspicuously lower than soft part of dorsal fin (Fig. 10) ..... *Glabrilutjanus*

10 b. Caudal fin strongly forked, the lobes usually slender (Fig. 11)

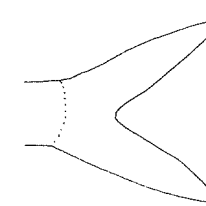


Fig. 11

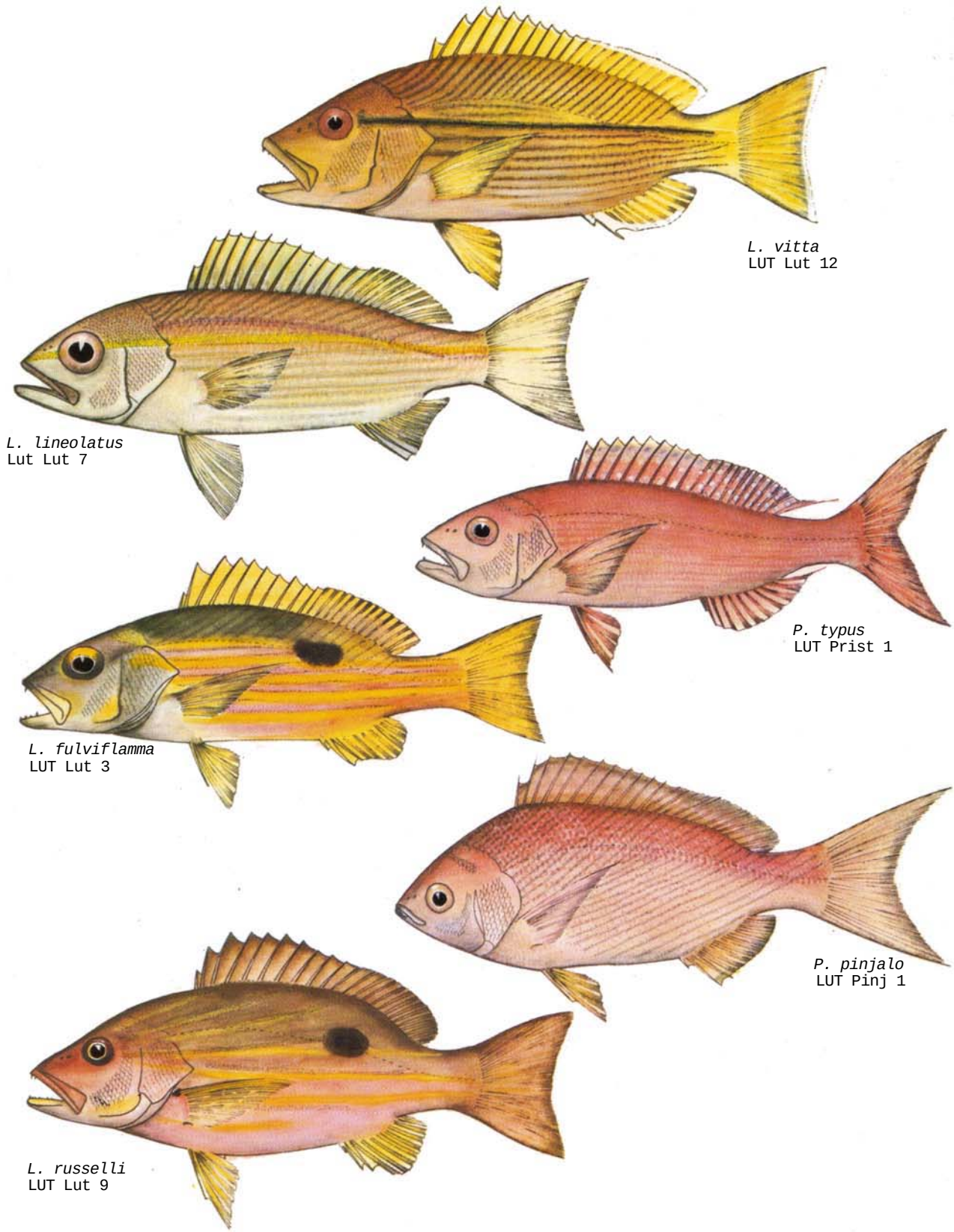
14 a. Lower jaw with median (symphysial) knob at tip; pectoral fins with 16 soft rays; dorsal and anal fins scaleless.. *Symphysanodon*

14 b. Lower jaw without knob; pectoral fins with 20 to 22 soft rays; scales present on soft parts of dorsal and anal fins ..... *Caesio*

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

Aphareus furcatus	
Aphareus rutilans	
Aprion virescens	LUT Apri 1
Apsilus fuscus	
Caesio caerulaureus	LUT Caes 1
Caesio chrysozona	LUT Caes 2
Caesio tuning (? = erythrogaster)	
Caesio diagramma	
Caesio erythrogaster	LUT Caes 3
Caesio lunaris	
Caesio pisang	
Caesio tile	
Caesio xanthonotus	
Etelis carbunculus	
Etelis marshi	
Glabrilutjanus nematophorus	LUT Glab 1
Gymnocaesio gymnopterus	
Lutjanus altifrontalis	
Lutjanus argentimaculatus	LUT Lut 1
Lutjanus biguttatus	
Lutjanus bohar	LUT Lut 2
Lutjanus carponotatus (= chrysotaenia)	
Lutjanus decussatus	
Lutjanus dodecanthoides	
Lutjanus ehrenbergi	
Lutjanus fulviflamma	LUT Lut 3
Lutjanus gibbus	LUT Lut 4
Lutjanus janthinuropterus	LUT Lut 5
Lutjanus johni	LUT Lut 6
Lutjanus kasmira (probably includes 3 species)	
Lutjanus lineolatus	LUT Lut 7
Lutjanus lunulatus	
Lutjanus lutjanus	
Lutjanus malabaricus	LUT Lut 8
Lutjanus maxweberi	
Lutjanus monostigma	
Lutjanus rangus	
Lutjanus rufolineatus	
Lutjanus russelli	LUT Lut 9
Lutjanus sanguineus	LUT Lut 10
Lutjanus sebae	LUT Lut 11
Lutjanus semicinctus	
Lutjanus vaigiensis (now *L. fulvus)*	
Lutjanus vitta	LUT Lut 12
Macolor niger	LUT Mac 1
Paracaesio coeruleus	
Paracaesio xanthurus	
Pinjalo pinjalo	LUT Pinj 1
Pristipomoides argyrogrammicus	
Pristipomoides filamentosus	
Pristipomoides microdon	
Pristipomoides microlepis	
Pristipomoides sieboldi	
Pristipomoides typus	UT Prist 1
Symphysanodon typus	
Tangia carnolabrum	
Tropidinius zonatus	

* This list cannot be considered complete; the family urgently needs full revision



L. vitta
LUT Lut 12

L. lineolatus
Lut Lut 7

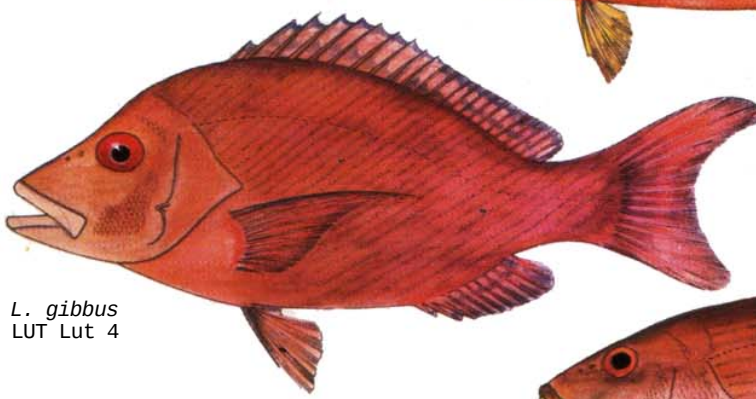
P. typus
LUT Prist 1

L. fulviflamma
LUT Lut 3

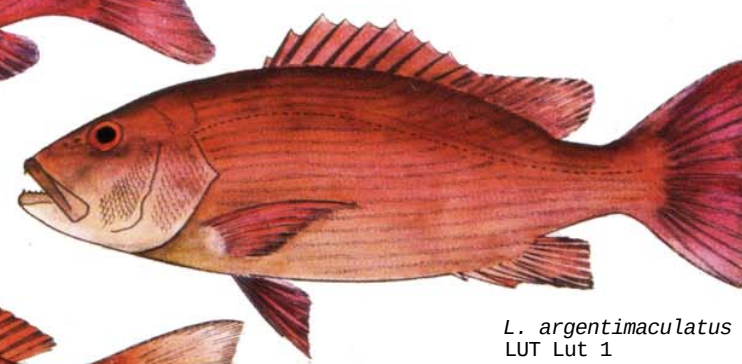
P. pinjalo
LUT Pinj 1

L. russelli
LUT Lut 9

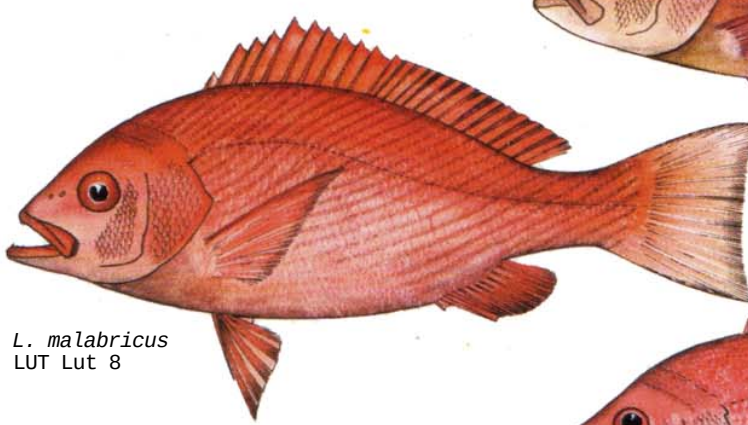
G. nematophorus
LUT Glab 1



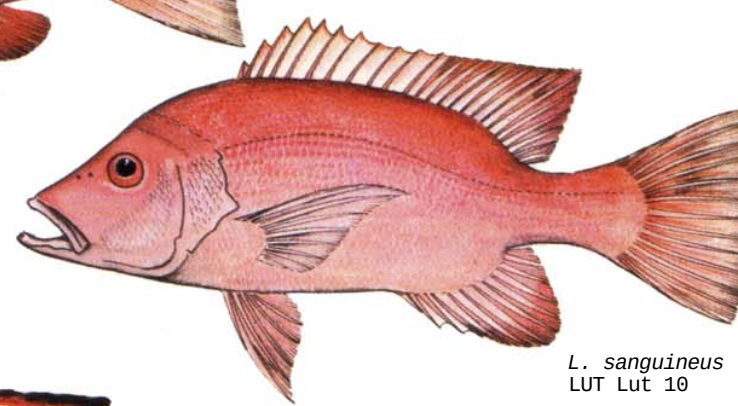
L. gibbus
LUT Lut 4



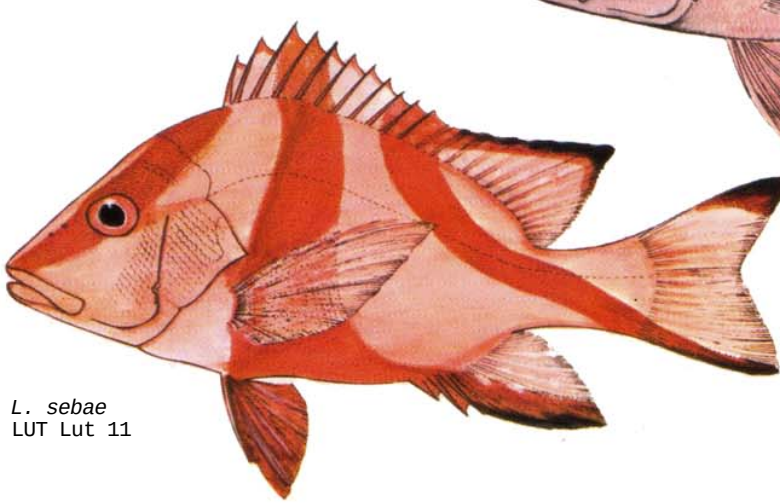
L. argentimaculatus
LUT Lut 1



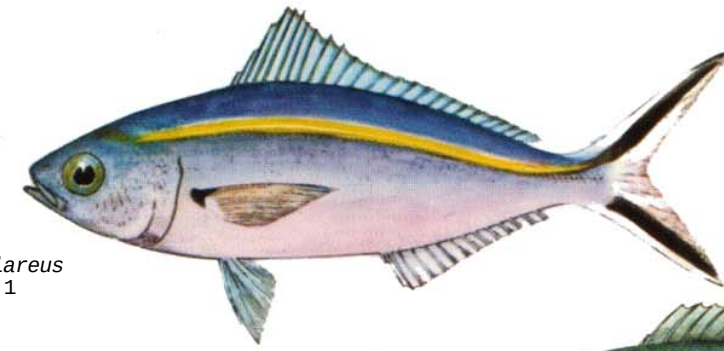
L. malabricus
LUT Lut 8



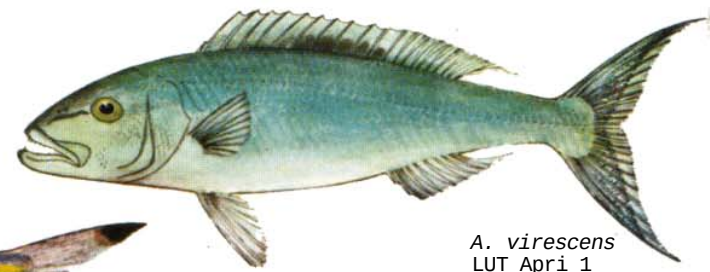
L. sanguineus
LUT Lut 10



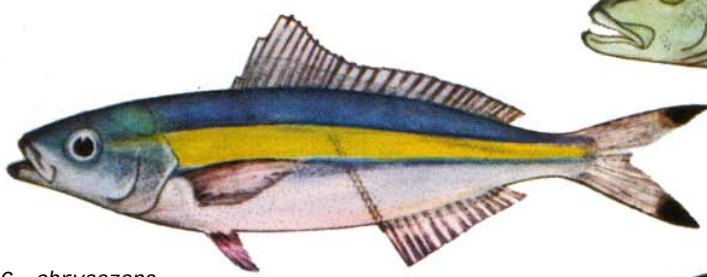
L. sebae
LUT Lut 11



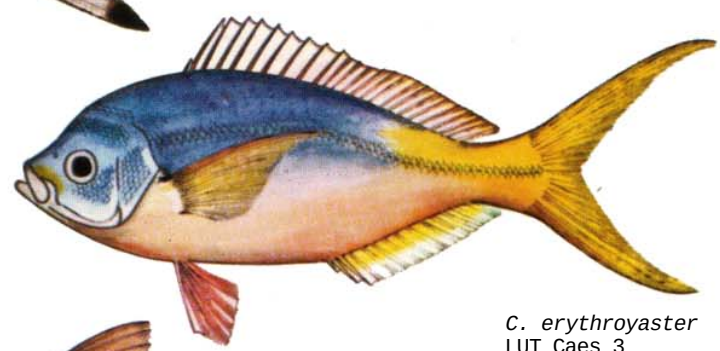
C. caerulareus
LUT Caes 1



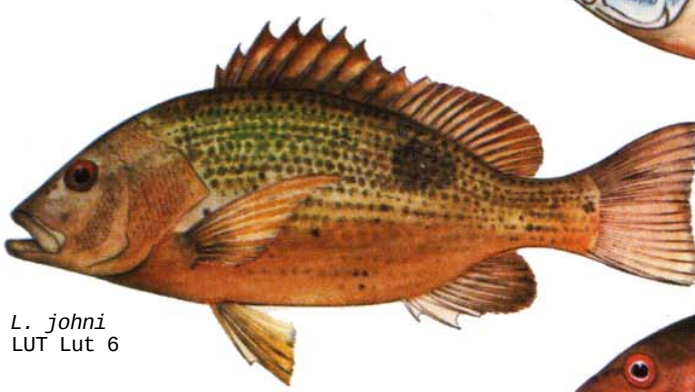
A. virescens
LUT Apri 1



C. chrysozona
LUT Caes 2

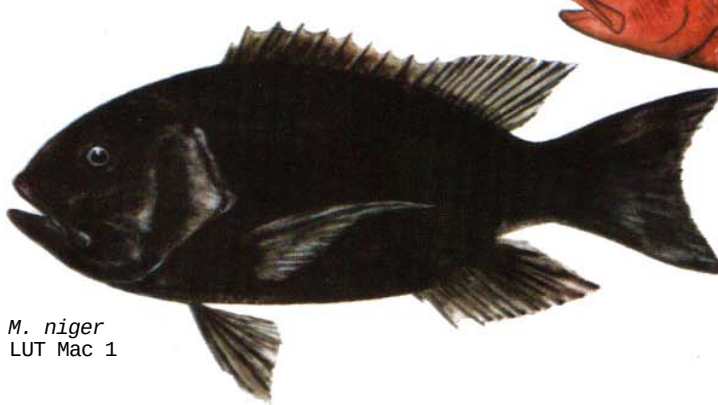


C. erythroyaster
LUT Caes 3



L. johni
LUT Lut 6

L. bohar
LUT Lut 2



M. niger
LUT Mac 1

LUT Apri 1
1974

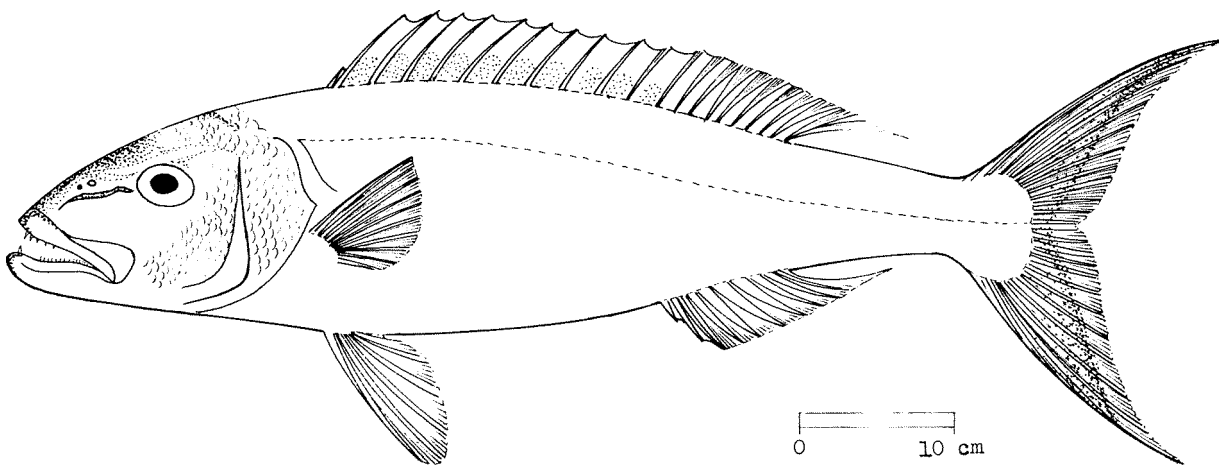
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Aprion virescens Valenciennes, 1830

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Green jobfish
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

An elongate, robust fish with a rounded body. Preopercular edge smooth, sometimes denticulated in juveniles; *a very distinct horizontal groove in front of eye.* Teeth in both jaws in bands, with 2 strong canines anteriorly; teeth on roof of mouth arranged in a crescent-shaped patch on vomer and an elongate patch on each of the palatines. Dorsal fin with 10 spines and 11 soft rays; anal fin with 3 spines and 8 soft rays; *pectoral fins short, rounded and equal to snout length; caudal fin deeply forked, with pointed lobes.* Scales on head begin above hind margin of eye; no scales on dorsal and anal fins.

Colour: dark green to blue/green.

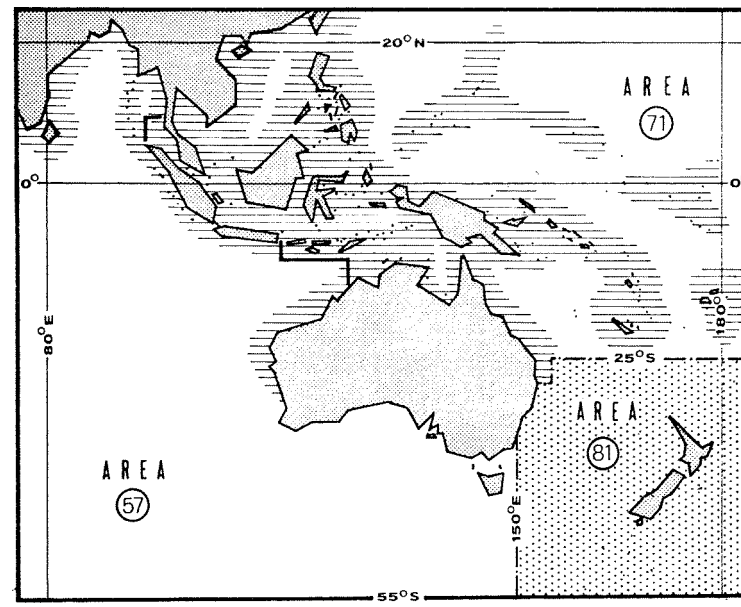
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Pristipomoides species: pectoral fins at least the length of snout, no groove in front of eye, and different colouration.

Other lutjanid species: pectoral fins longer, no groove in front of eye; also, many have scales on dorsal and anal fins.

SIZE:

Maximum: 80 cm; common: 65 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout the warm waters of the area; also, westward to South Africa.

Inhabits coastal waters, from the surface down to depths of 100 m.

Feeds on 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with trolled lures, handlines, bottom longlines and bottom trawls.

Marketed mostly fresh; also dried-salted.

LUT Caes 1

1974

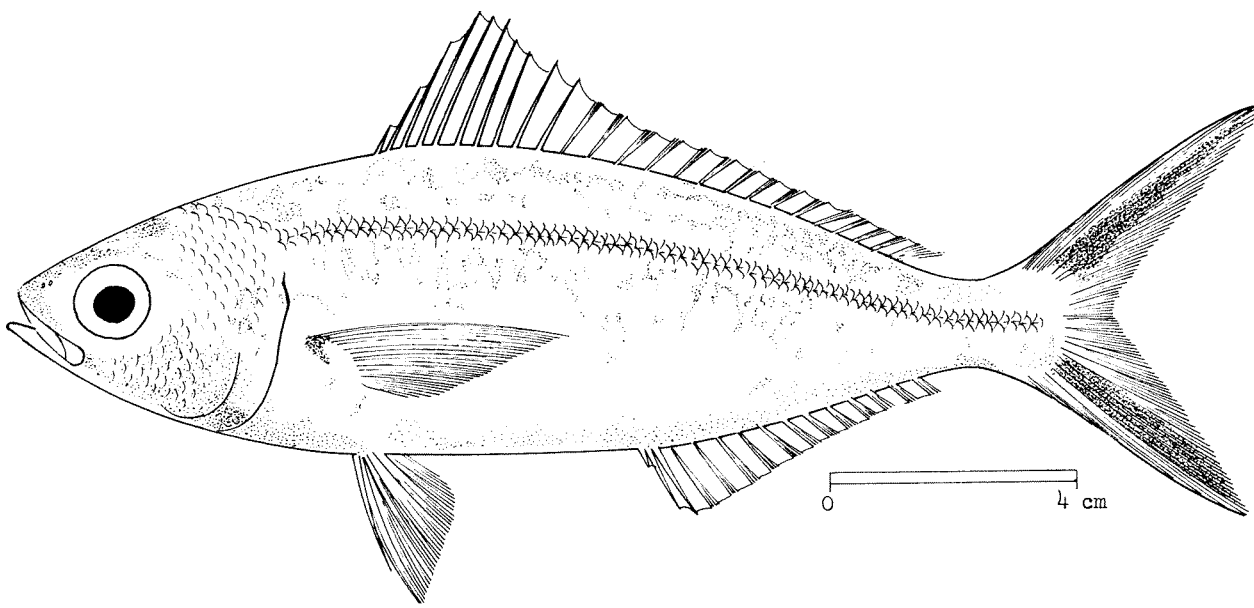
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Caesio caerulaureus Lacepède, 1802

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Blue and gold fusilier
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

A slender, fusiform, compressed fish with an oblique, small mouth and *a deeply forked caudal fin with slender, pointed lobes.* Dorsal and ventral profiles equally convex. *Eye moderately large, its diameter greater than snout Length, its lower margin close to upper jaw. Horizontal axis from tip of snout to middle of caudal fin cutting through middle of eye.* Teeth conical, in a single series in jaws; roof of mouth toothless. Dorsal fin with 10 slender, weak spines and 14 to 15 soft rays; anal fin with 3 slender, weak spines and 11 to 13 soft rays. Scales thin, 65 to 70 in lateral line; *Scale rows above and below Lateral line running horizontally; dorsal and anal fins almost completely scaled.*

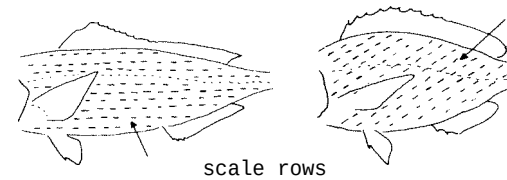
Colour: *bright metallic blue on back and head, silvery pink below; a broad, silvery yellow band from head to caudal fin (fading after death); a black blotch at upper base of pectoral fin; each lobe of caudal fin with a broad black band.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Caesio* species: lack the characteristic black band along each caudal fin lobe.

Pinjalo species: scale rows on body oblique, not horizontal.

Other lutjanid genera: either no scales on dorsal and anal fins, or caudal fin much less deeply forked, or a median (symphysial) knob present at tip of lower jaw.



SIZE:

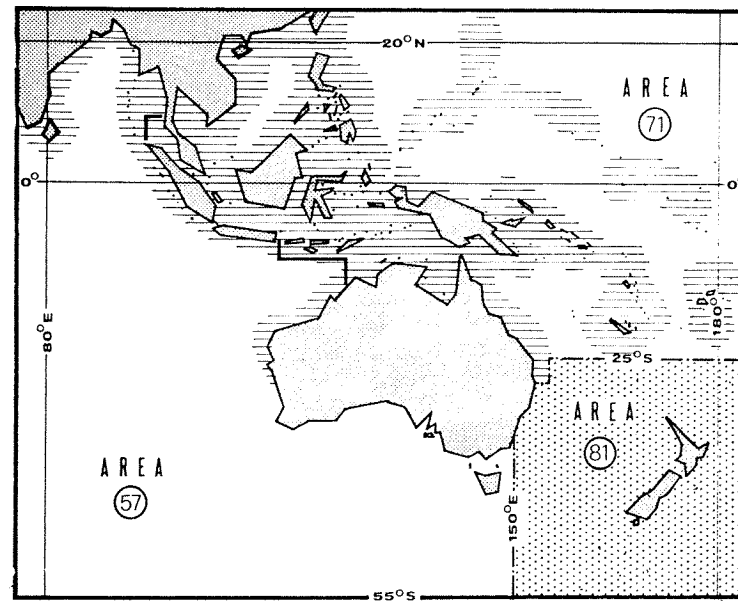
Maximum: 25 cm; common: 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to Queensland (Australia); also, westward to East Africa and northward to Japan.

Inhabits coastal waters and rocky and coral reef areas; a schooling fish.

Feeds on crustaceans and small 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. The total reported catch of Lutjanidae i1 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with purse seines and traps.

Marketed mostly fresh.

LUT Caes *2*

1974

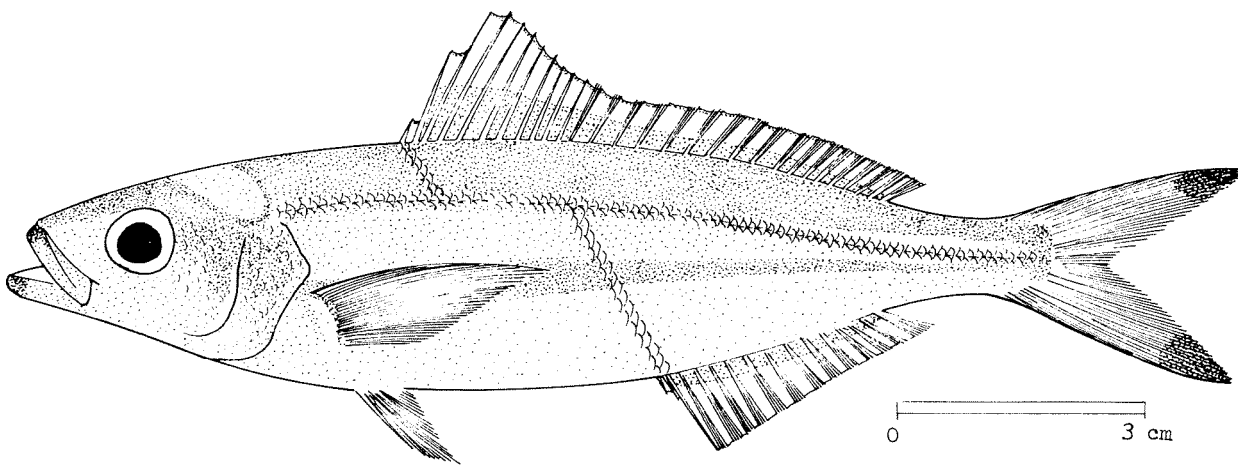
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Caesio chrysozona Cuvier, 1830

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Goldband fusilier
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

An elongate, fusiform, compressed fish with a small, oblique mouth and *a forked caudal fin with pointed lobes.* Dorsal and ventral profiles equally convex. *Eye moderately large, its diameter greater than snout length, its lower margin close to upper jaw. Horizontal axis from tip of snout to middle of caudal fin cutting through middle of eye.* Teeth minute, 1 to 3 rows in jaws; roof of mouth toothless. Dorsal fin with 10 slender, weak spines and 14 to 15 soft rays; anal fin with 3 slender, weak spines and 11 to 12 soft rays. Scales thin, 67 to 77 in lateral line; *scale rows above and below lateral line running horizontally; dorsal and anal fins half covered with scales.*

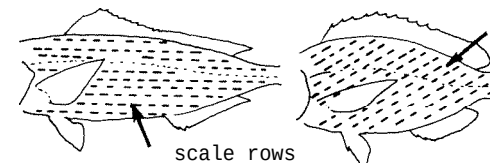
Colour: *upper part of head and body blue,* sides silvery, with *a yellow band along lateral line.* Fins silvery yellow or pinkish red; dorsal fin with a narrow black margin, *caudal fin with black-tipped lobes.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Caesio* species: either a black band along each caudal fin lobe (*C. caerulaureus)* or no black tips to caudal lobes, or no yellow band along sides.

Pinjalo species: scale rows on body oblique, not horizontal.

Other lutjanid genera: either lack scales on dorsal and anal fins, or caudal fin much less deeply forked, or a median (symphysial) knob present at tip of lower jaw.



Caesio *Pinjalo*

SIZE

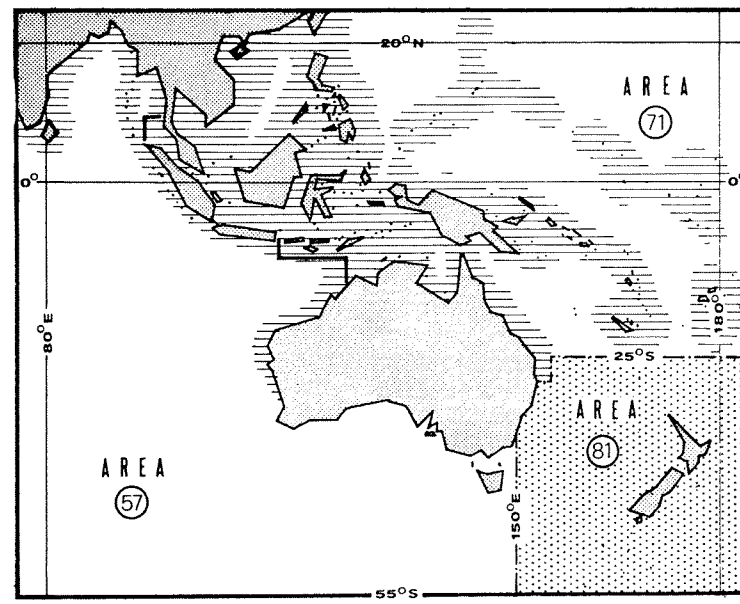
Maximum: 20 cm; common: 15 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to Queensland (Australia); also, westward to the Red Sea and northward to Japan.

Inhabits shallow waters and rocky and coral reef areas.

Feeds on small invertebrates.



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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific: 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with traps and purse seines.

Marketed mostly fresh.

LUT Caes 3

1974

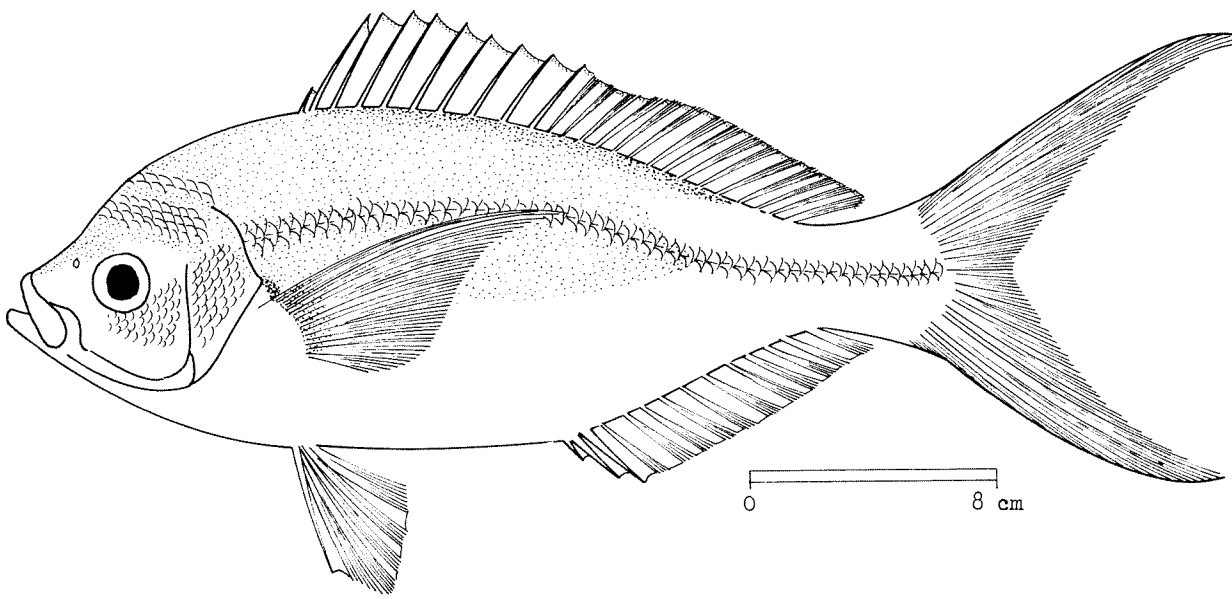
FAD SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Caesio erythrogaster Cuvier, 1830

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Yellowtail fusilier
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

A moderately deep-bodied, compressed fish with *a small, oblique mouth and a deeply forked caudal fin with pointed lobes. Dorsal profile concave in front of eye; eye moderately large; its diameter greater than snout length, its lower margin close to upper, jaw. Horizontal axis from tip of snout to middle of caudal fin cutting through centre of eye.* Teeth minute, pointed, in a few rows in jaws; 2 canines at symphysis of lower jaw; fine teeth on roof of mouth (vomer and palatines). Dorsal fin with 10 slender, weak spines and 15 soft rays; anal fin with 3 slender, weak spines and 11 soft rays. Scales thin, 52 to 58 in lateral line; *scale rows above and below lateral line run horizontally;* scales on head beginning over eye, none on snout and around eye; *basal halves of dorsal and anal fins scaled.*

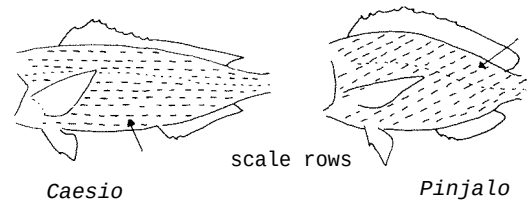
Colour: upper part of head and front part of back metallic blue; hind part of back, caudal peduncle, soft part of dorsal fin, anal fin and caudal fin yellow; lower part of head and body, pelvic fins and pectoral fins pink; dorsal fin with a narrow black edge and axil of pectoral fins black.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Caesio* species: lack the distinctive blue, yellow and pink colour pattern, or have black streaks or marks on caudal fin.

Pinjalo species: scale rows on body oblique, not horizontal.

Other lutjanid species: either lack scales on dorsal and anal fins, or caudal fin much less deeply forked, or a median (symphysial) knob present at tip of lower jaw.



SIZE:

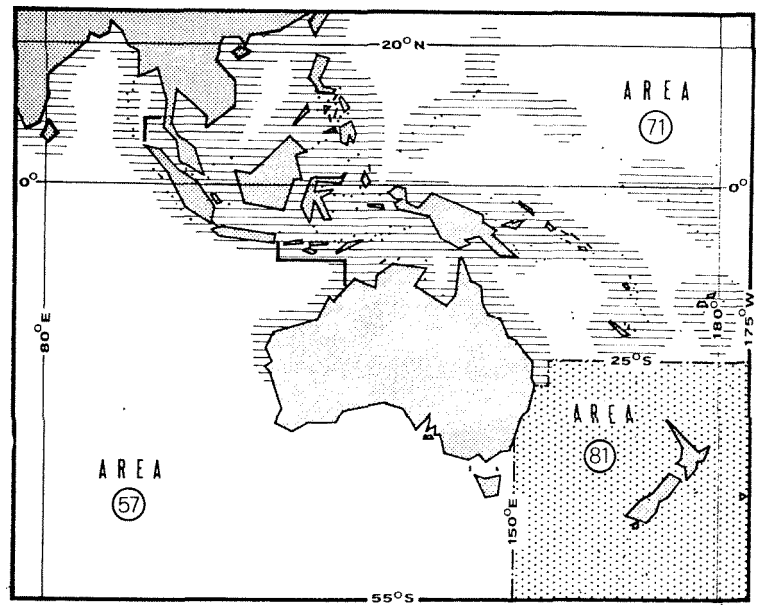
Maximum: 60 cm; common: 40 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to Queensland (Australia); also, northward to Ryukyu Islands (Japan).

Inhabits coastal waters and coral and rocky reefs.

Feeds on 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with gill nets and traps.

Marketed mostly fresh; also dried-salted.

LUT Glab 1

1974

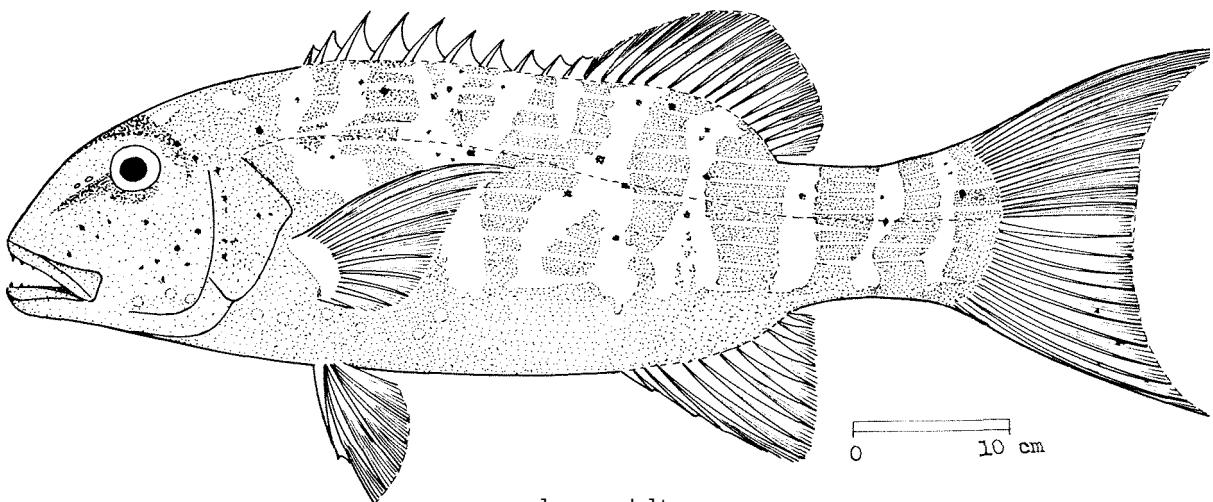
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Glabrilutjanus nematophorus (Bleeker, 1860)

SYNONYMS STILL IN USE: None



large adult

VERNACULAR NAMES:

FAO: En - Chinaman snapper
Fr -
Sp -

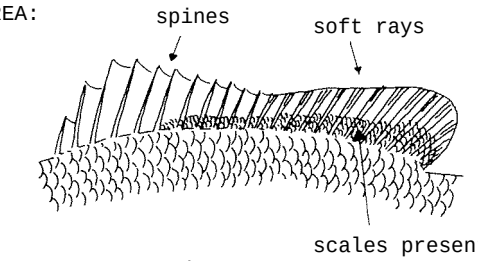
NATIONAL:

DISTINCTIVE CHARACTERS:

Body moderately deep and compressed, the eye well above mouth. A *deep groove running obliquely downward from eye to anterior nostril or a little beyond;* interorbital space flat and narrower than eye diameter; *preoperculum without a notch*. Dorsal fin with 10 spines and 15 soft rays, 4th to 7th rays extended into long filaments, except in large adults; *spinous part of dorsal fin distinctly lower than soft part;* anal fin with 3 spines and 9 soft rays; caudal fin emarginate or slightly forked. *Longitudinal scale rows above and below lateral line horizontal;* scales on head beginning behind eye; *no scales on base of soft parts of dorsal and anal fins, or at most a very low scaly sheath.*

Colour: *red with yellow, white or dark patches and with distinctive longitudinal pale streaks;* fins reddish.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:



Lutjanus dorsal fin

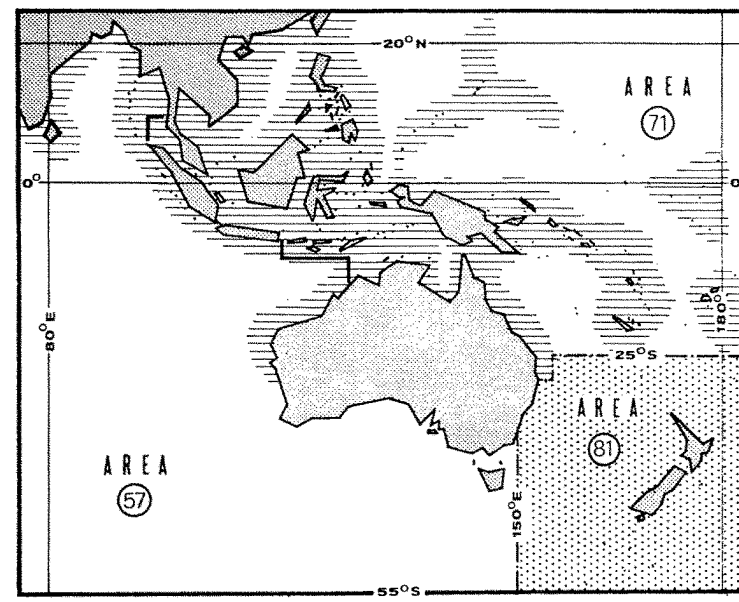
Lutjanus species: scales present on soft parts of dorsal and anal fins (at most a low sheath not attached to fins in *Glabrilutjanus*); also, spinous part of dorsal fin equal to or higher than soft part.

Aprion species: groove before eye also present, but spinous part of dorsal fin equal in height to soft part.

Other lutjanid species: spinous part of dorsal fin not lower than soft dorsal; caudal fin sometimes strongly forked; no groove before eye.

SIZE:

Maximum: 80 cm; common: 70 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area, and southward to Queensland (Australia).

Inhabits shallow coastal waters around rocky and coral reef areas.

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific: 5 800 tons (Malaysia: 4 800 tons;
Singapore: 1 000 tons)

Caught mainly with handlines and bottom gill nets.

Marketed mostly fresh; also dried-salted.

LUT Lut 1

1974

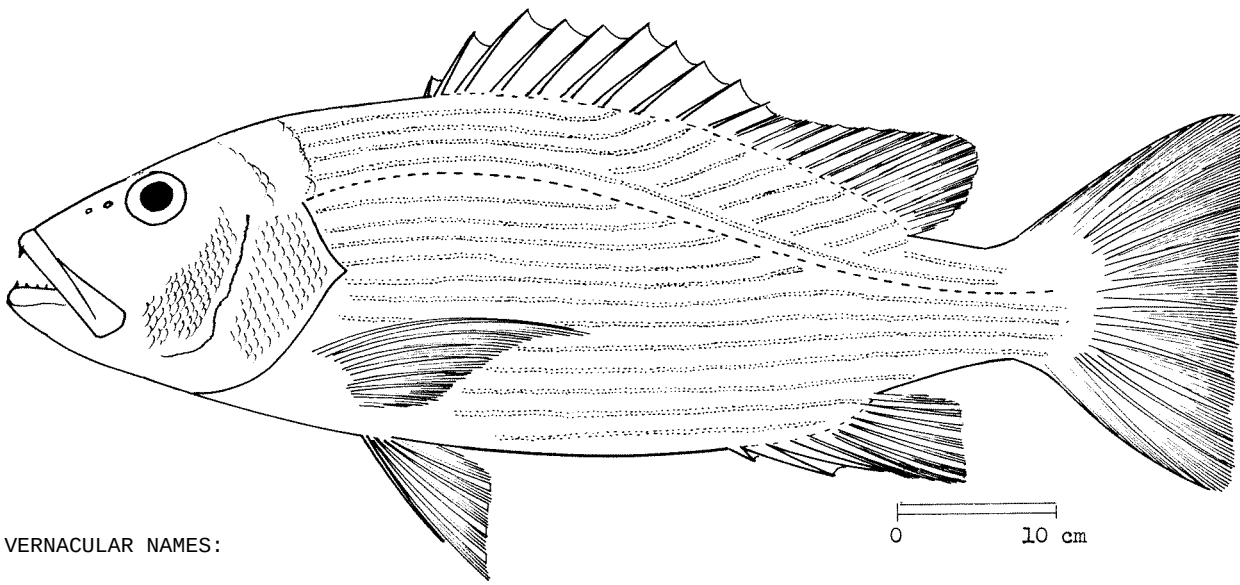
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus argentimaculatus (Forsskål, 1775)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Mangrove red snapper
Fr -
Sp -

NATIONAL:

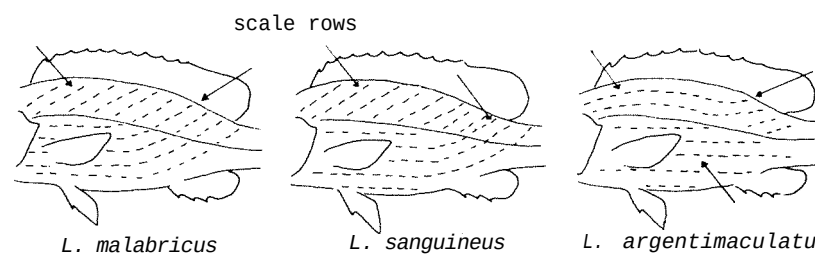
DISTINCTIVE CHARACTERS:

A red snapper with head profile straight or slightly convex; *preoperculum without a notch, or at most with a slight notch; interoperculum with no distinct knob;* vertical and horizontal margins of preoperculum finely serrated. Teeth in both jaws in bands with a strong outer row; upper jaw with a pair of strong canines. *Dorsal fin with 10 spines;* caudal fin truncate or slightly emarginate. *Longitudinal rows of scales above lateral line parallel to dorsal profile anteriorly, but appearing to rise obliquely under soft part of dorsal fin or under posterior part of spinous dorsal fin; scale rows below lateral line horizontal;* soft parts of dorsal and anal fins with a scaly sheath.

Colour: *red/brown; somewhat paler on belly; sometimes a silvery patch in the centre of each scale.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

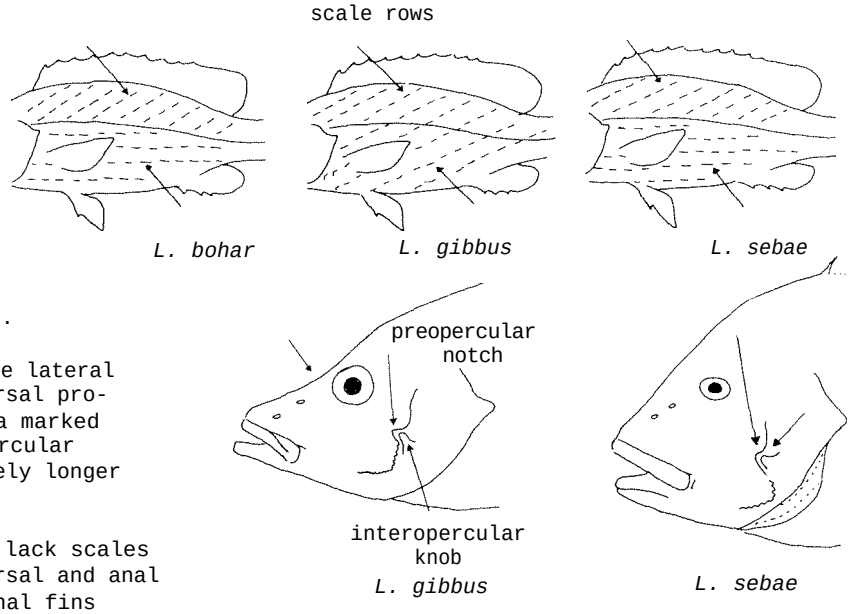
L. sanguineus and *L. malabaricus:* all scale rows above lateral line appear to run obliquely upward to dorsal profile; also, 11 dorsal fin spines (10 in *L. argentimaculatus).*



L. bohar: all scale rows above lateral line appear to run obliquely to dorsal profile, while those below lateral line appear horizontal.

L. gibbus: all scale rows above lateral line appear to rise obliquely to dorsal profile; also, snout profile concave; a deep preopercular notch and a marked interopercular knob present.

L. sebae: all scale rows above lateral line appear to rise obliquely to dorsal profile; also, 11 dorsal fin spines; a marked preopercular notch, and an interopercular knob present (becoming proportionately longer in bigger fish).



Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo)*.

SIZE:

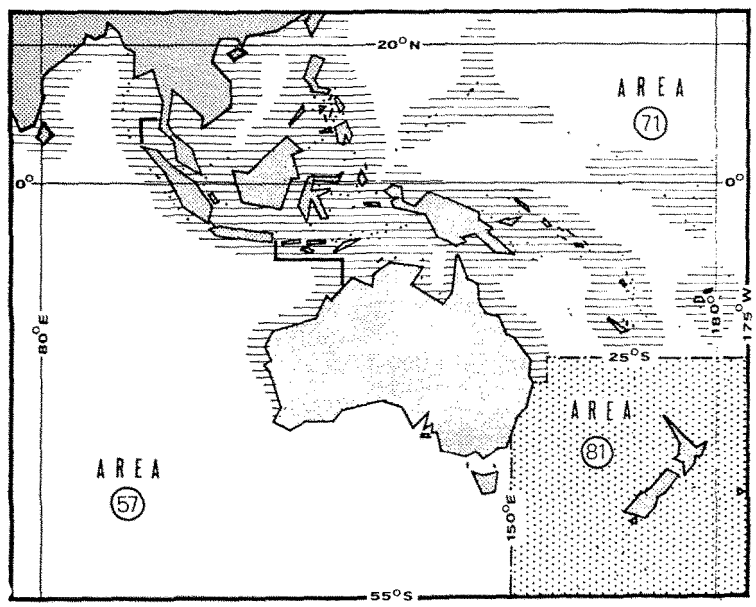
Maximum: 120 cm; common: 80 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Usually inhabits mangrove and shallow water areas, but sometimes found down to depths of 80 m.

Feeds mainly on crustaceans and fishes.



PRESENT FISHING GROUNDS:

Shallow waters, throughout its range; also, deeper waters off South China and Thailand.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics for this species are reported only from Malaysia (1972: 800 tons). The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, bottom longlines and bottom trawls.

Marketed mostly fresh; also dried-salted.

LUT Lut 2

1974

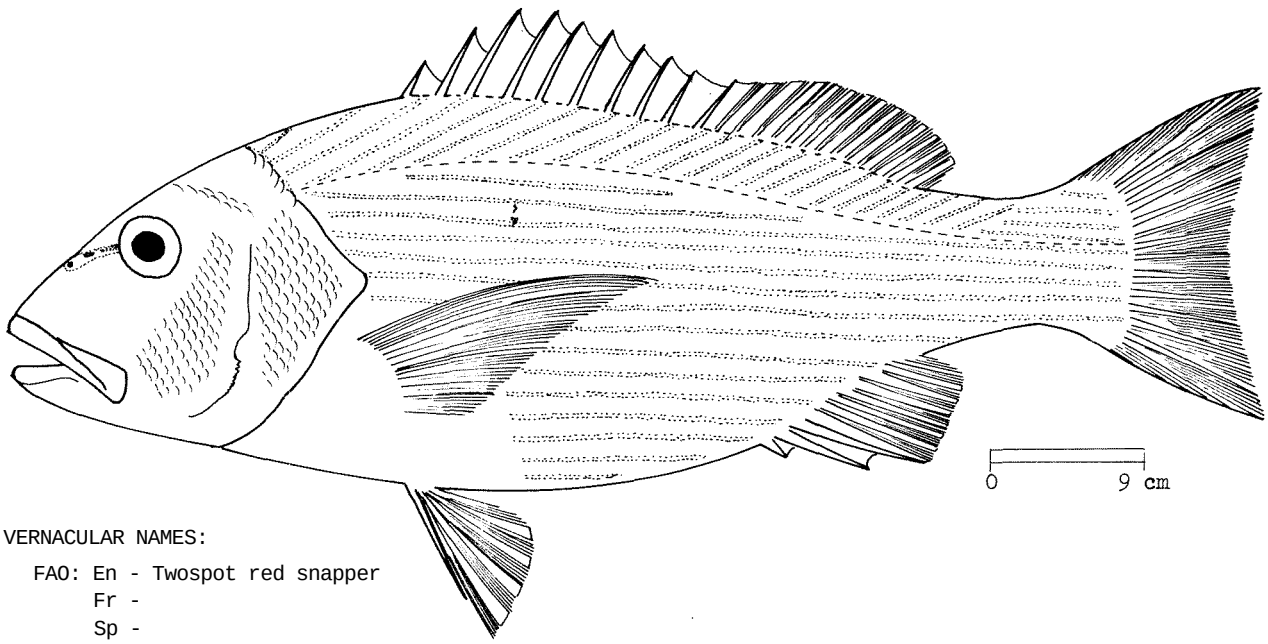
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus bohar (Forsskål, 1775)

SYNONYMS STILL IN USE: *Lutjanus coatesi* Whitley, 1934
Lutjanus civis (Valenciennes, 1840)



VERNACULAR NAMES:

FAO: En - Twospot red snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

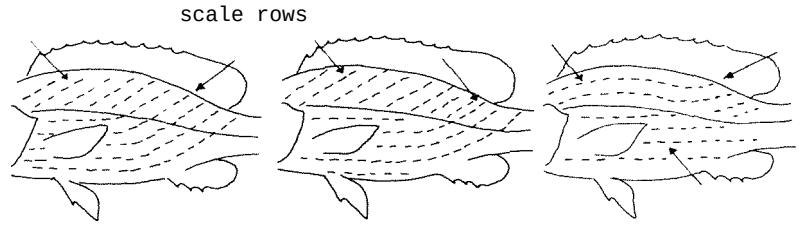
A heavy-bodied snapper with head profile slightly convex; preopercular margin with a distinct shallow notch and an interopercular knob; vertical and horizontal borders of preoperculum finely denticulate. *Dorsal fin with 10 spines (rarely 11) and 14 soft rays*; anal fin with 3 spines and 8 soft rays; caudal fin slightly forked. *Longitudinal rows of scales* (shown in above figure) *above lateral line appear to rise obliquely to dorsal profile and those below lateral run horizontally;* soft parts of dorsal and anal finswith a scaly sheath.

Colour: *red or purplish red;* juveniles and some adults with 2 distinct silvery spots on body between lateral line and dorsal profile; usually, centre of each scale silvery.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. sanguineus and *L. malabaricus:* 11 dorsal fin spines; scale rows below lateral line appear to run obliquely upward, except sometimes in their anterior part.

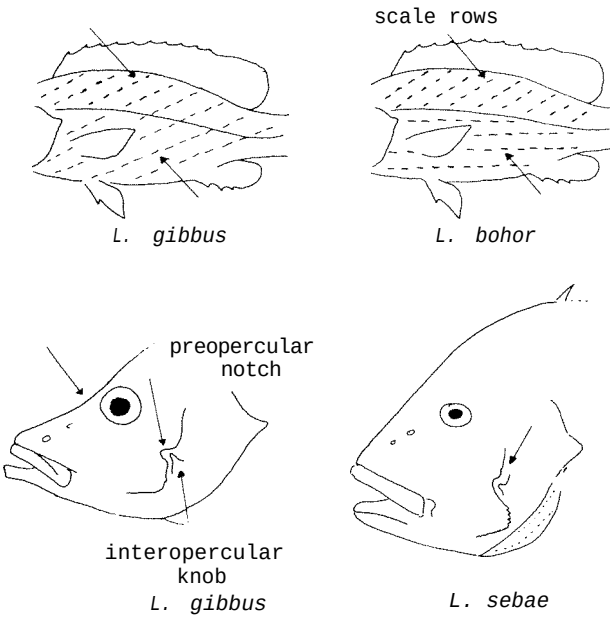
L. argentimaculatus: scale rows above lateral line appear parallel to dorsal profile over most of their length except below soft part of dorsal fin.



L. gibbus: scale rows below lateral line appear to run obliquely upward; also, a deep preopercular notch present, into which fits a long interopercular knob.

L. sebae: preoperculum with marked notch and interopercular knob; in juveniles and small adults, 3 broad red bars, one obliquely across head through eye, one from spinous part of dorsal fin to pelvic fin, and the third curving from junction of spinous and soft parts of dorsal fin to lower caudal fin.

Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes (*Macolor*); or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



SIZE:

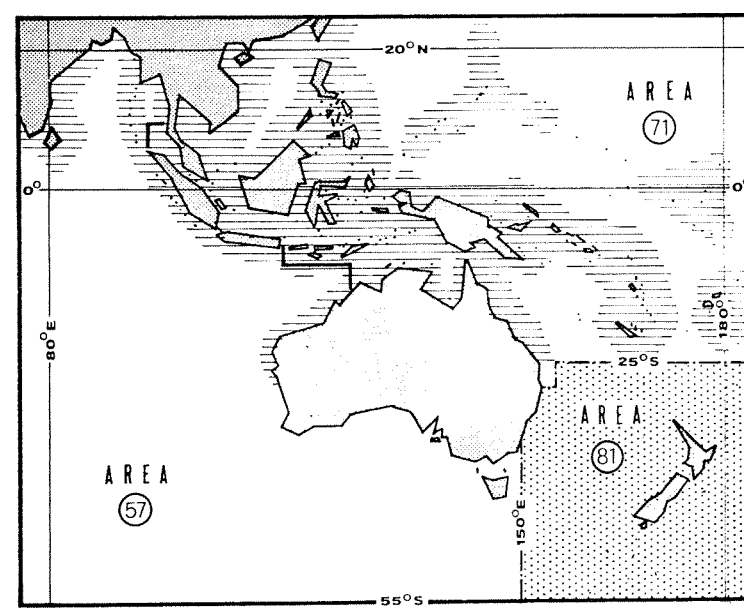
Maximum: 75 cm; common: 50 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Usually inhabits coral reef areas in shallow waters, but occasionally occurs down to depths of 70 m in rocky areas.

Feeds on crustaceans and fishes; large specimens feed predominantly on fishes.



PRESENT FISHING GROUNDS

Shallow coral reef areas; also caught at depths of 70 m in the South China China Sea on the Macclesfield Bank and off Pratas Reef.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and bottom longlines.

Marketed mostly fresh.

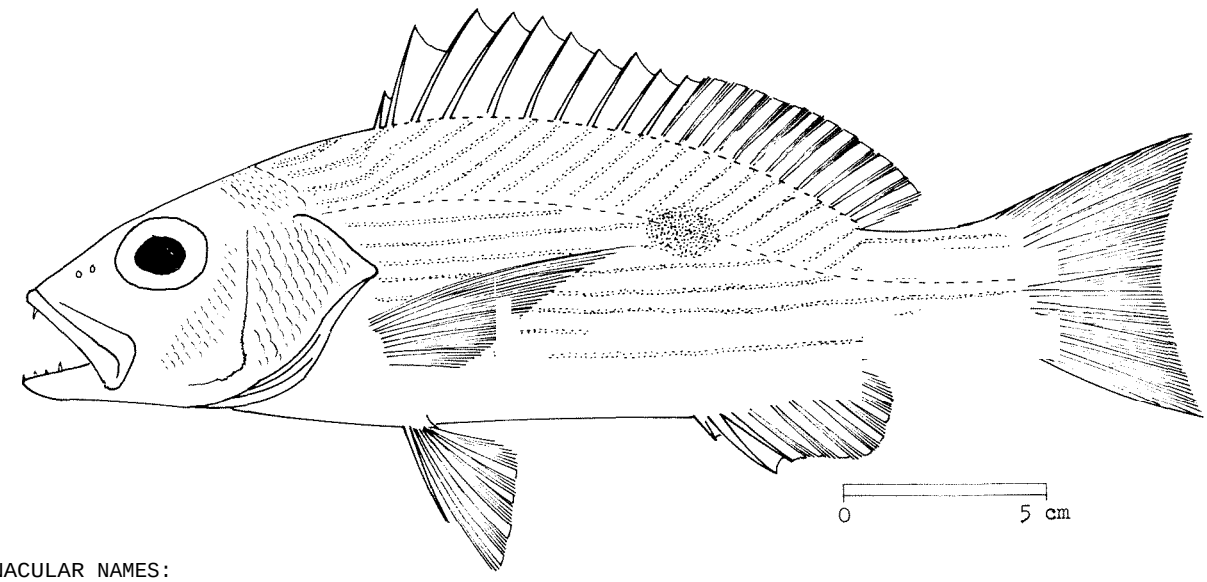
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus fulviflamma (Forsskå1, 1775)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Blackspot snapper
Fr -
Sp -

NATIONAL:

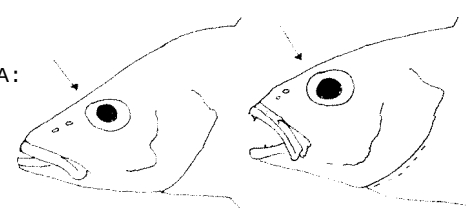
DISTINCTIVE CHARACTERS:

A small, robust snapper with head profile convex and interorbital space broad and flat; a slight preopercular notch and an indistinct interopercular knob; vertical and horizontal preopercular edges finely serrated. *Vomerine teeth* (on roof of mouth) *in an arrowhead patch with a long projection posteriorly. Dorsal finwith 10 spines and 12 to 13 soft rays;* anal fin with 3 spines and 7 to 8 soft rays. *Longitudinal scale rows* (shown in above figure) *above lateral line nearly parallel to dorsal profile from head to below anterior part of spinous dorsal fin, and then appearing to rise steeply to dorsal profile; those below lateral line parallel to dorsal profile;* scales on head begin behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: *yellow or green/yellow above, silvery pink below, sometimes with marked longitudinal golden stripes; a black blotch on lateral line below junction of soft and spinuos parts of dorsal fin, sometimes surrounded by a pearly border; fins yellowish.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. russelli: 14 to 15 soft dorsal fin rays (12 to 13 in *L. fulviflamma);* head profile straight or concave, interorbital space convex, and golden lines on upper part of body running obliquely upward to dorsal profile.

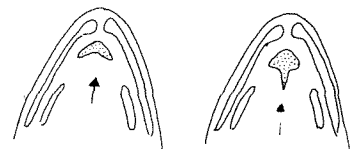


L. russelli *L. fulviflamma*

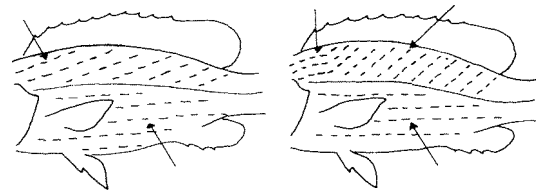
L. monostigma: vomerine teeth in a V-shaped band with no posterior projection; no horizontal golden lines on body.

All other *Lutjanus* species in area: anterior scale rows above lateral line appear either all horizontal or all oblique, not horizontal in front and oblique behind.

Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



vomerine teeth on roof of mouth
L. monostigma *L. fulviflamma*



scale rows
L. monostigma *L. fulviflamma*

SIZE:

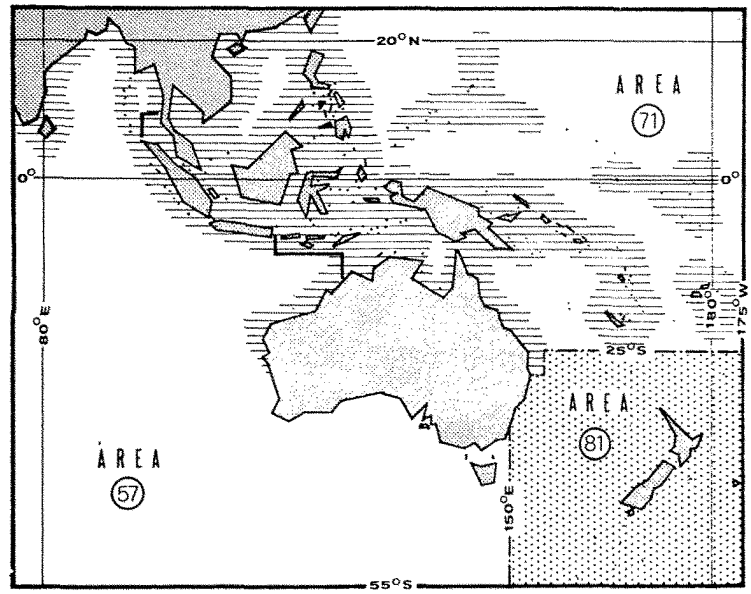
Maximum: 35 cm; common: 25 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Inhabits shallow waters around mangroves, muddy and rocky foreshores and coral reefs.

Feeds on invertebrates and small 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, traps and gill nets.

Marketed mostly fresh.

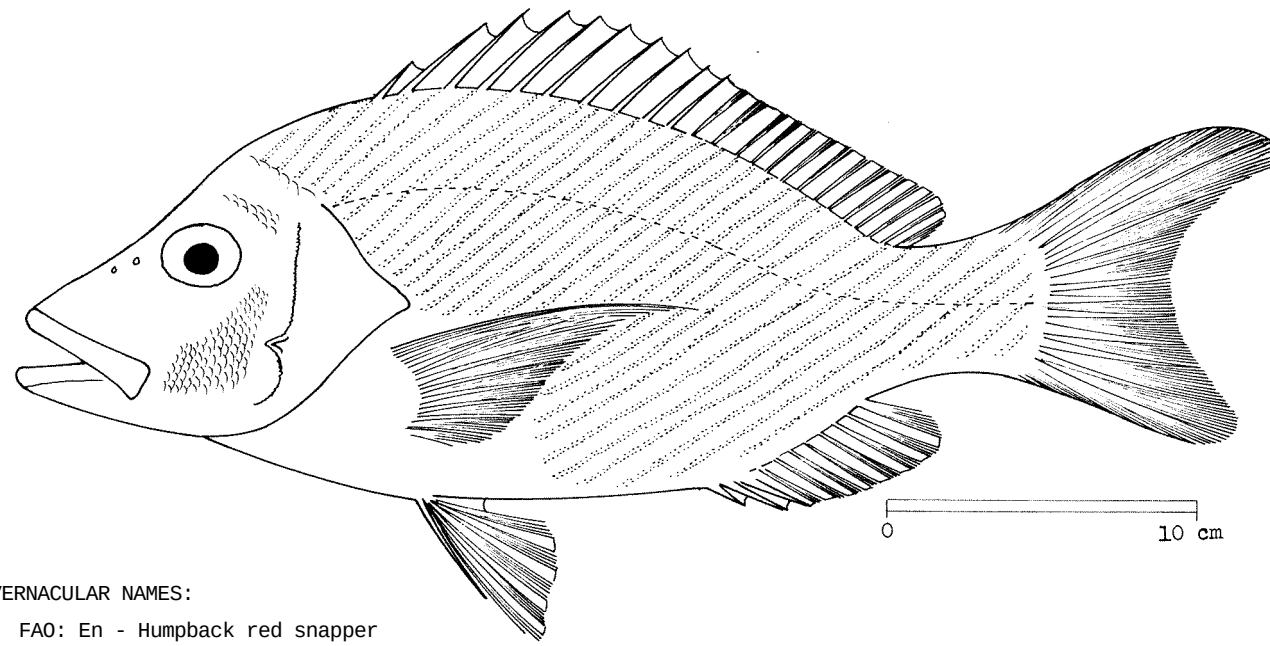
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus gibbus (Forsskål, 1775)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Humpback red snapper
Fr -
Sp -

NATIONAL:

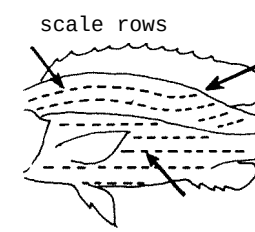
DISTINCTIVE CHARACTERS:

A small, *deep-bodied snapper. Preopercular notch deep and narrow, with a long interopercular knob fitting into it; vertical and horizontal edges of preoperculum denticulate.* Dorsal fin with 10 spines and 13 to 15 soft rays; anal fin with 3 spines and 8 to 9 soft rays; caudal fin becoming deeply forked with age, its upper lobe larger than lower lobe in adults, and distinctly rounded. *Longitudinal rows of scales* (shown on above figure) *above lateral line appear to rise obliquely upward to dorsal profile; rows below also apparently running obliquely upward;* scales on head beginning behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: deep red; juveniles with posterior part of caudal peduncle and caudal fin dark brown.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. argentimaculatus: scale rows above lateral line run parallel to dorsal profile for most of their length, scale rows below lateral line horizontal; also, head profile straight or slightly convex and no deep preopercular notch, or at most, a shallow, wide one.



L. argentimaculatus

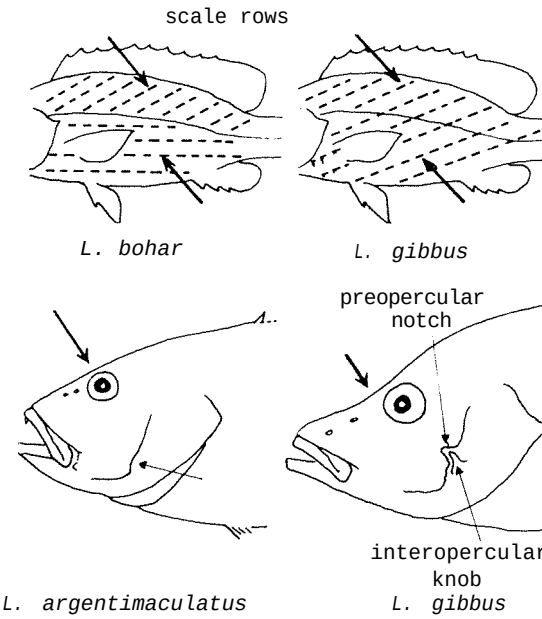
L. bohar: scale rows below lateral line horizontal; also, no deep preopercular notch, although a shallow notch may be present.

L. sanguineus and *L. malabaricus:* preopercular notch considerably less deep; also, 11 dorsal fin spines (10 in *L. gibbus).*

L. sebae: 11 dorsal fin spines and 15 to 16 soft dorsal rays and 10 to 11 soft anal rays (10, 13 to 15 and 8 to 9 respectively in *L. gibbus);* also, in juveniles and small adults, 3 dark red bands, one obliquely down head through eye, one from middle of spinous part of dorsal fin across body to pelvic fin, and one from junction of spinous and soft parts of dorsal fin to lower lobe of caudal fin.

Other *Lutjanus* species in area: scale rows below lateral line not appearing to rise obliquely, at least on anterior part of body.

Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes (*Macolor*); or caudal fin forked (*Caesio*); or eye on mid-level of head *(Pinjalo).*



SIZE:

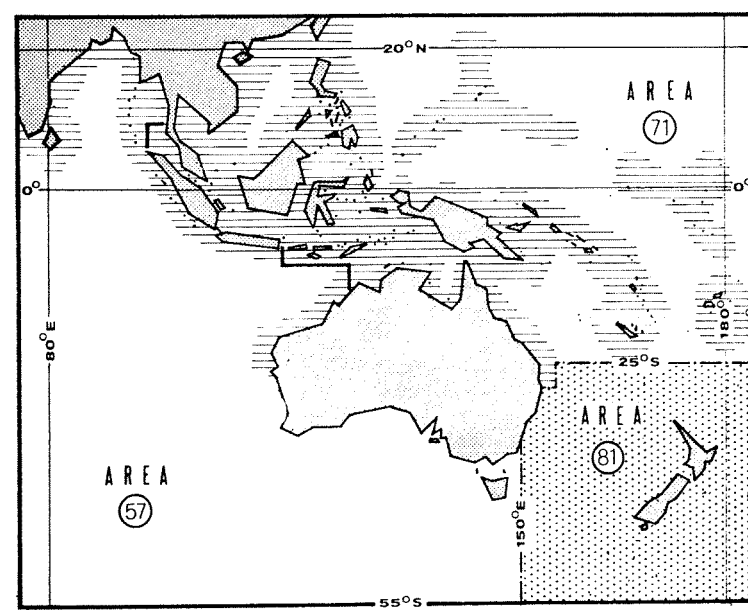
Maximum: 50 cm; common: 40 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Inhabits shallow waters in rocky and coral reef areas; also on rock bottoms at depths of 60 m; juveniles occur in mangrove areas.

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 -as:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and traps.

Marketed mostly fresh.

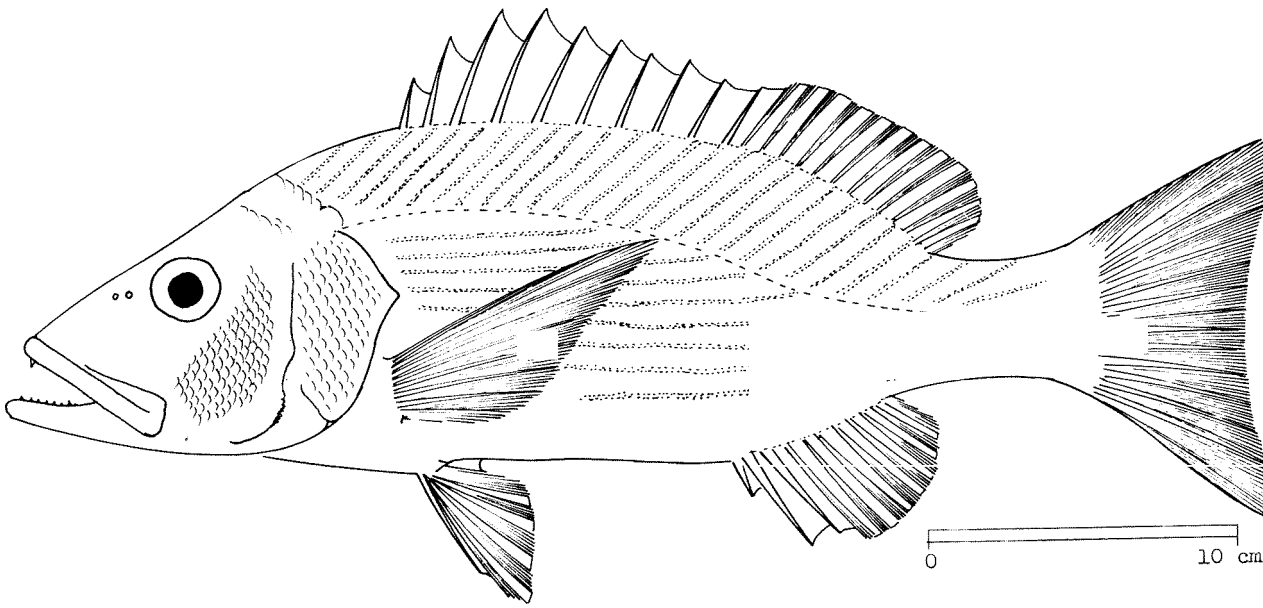
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus janthinuropterus (Bleeker, 1852)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Yellowstreaked snapper
Fr -
Sp -

NATIONAL:

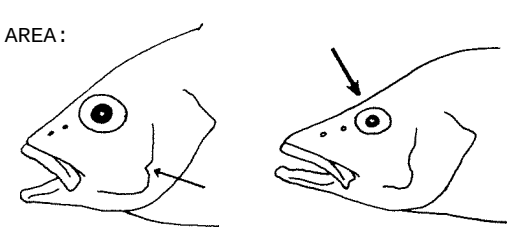
DISTINCTIVE CHARACTERS:

A moderate-sized snapper. Dorsal profile of head concave; eye diameter more than 5 times in head length; preopercular notch wide and shallow, but distinct; vertical and horizontal edges of preoperculum denticulate. *Vomerine teeth* (roof of mouth) *in a narrow V-shaped band.* Dorsal fin with 10 spines and 13 soft rays; anal fin with 3 spines and 8 soft rays. *All longitudinal scale* rows (shown on above figure) *above lateral line appear to rise obliquely upward to dorsal profile, those below run horizontally;* scales on head beginning behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: body pink or mauve; head (sometimes body) flecked with golden spots and short bars which may fade after death; fins red or pink.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. vaigiensis: 14 to 15 soft dorsal rays (13 in *L. janthinuropterus);* also, a narrow, deeper inter-opercular notch, a larger eye (less than 5 times in head length), and a distinct white margin to caudal fin.

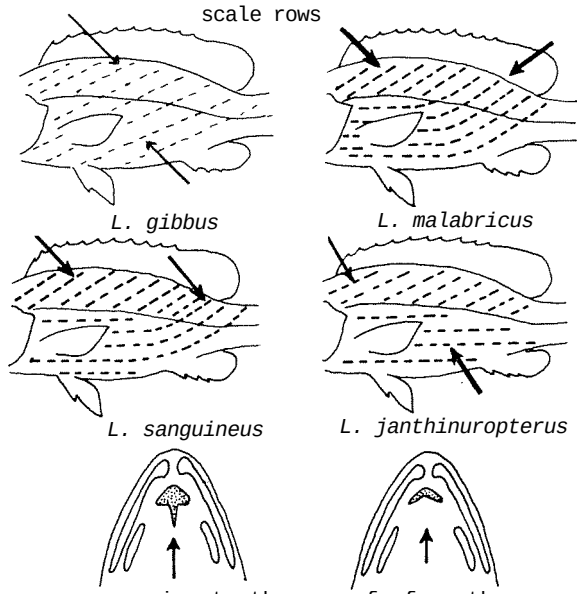


L. vaigiensis *L. janthinuropterus*

L. gibbus, L. malabaricus, L. sanguineus: scale rows below lateral line either wholly or posteriorly appearing to rise obliquely (horizontal in *L. janthinuropterus).*

L. fulviflamma, L.vitta, L.russelli: vomerine toothpatch triangular, with posterior extension; also, colour pattern different.

Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



SIZE:

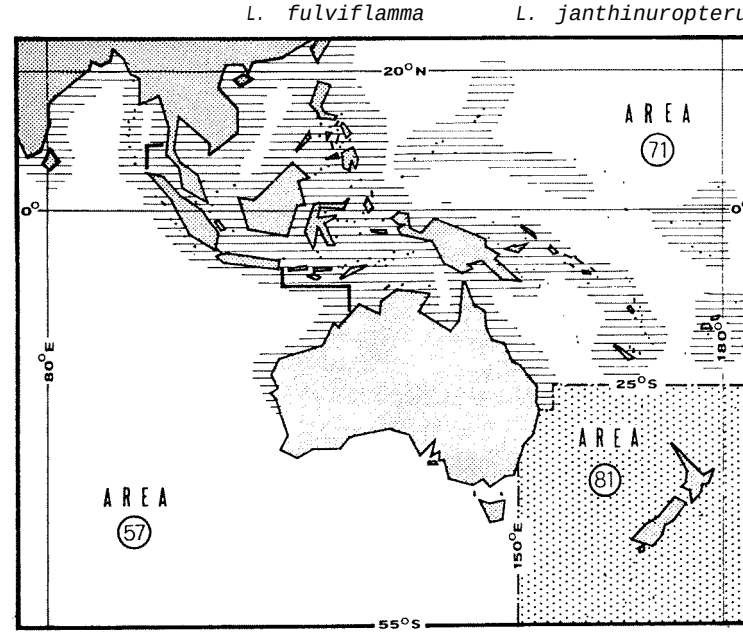
Maximum: 65 cm; common: 35 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Inhabits shallow coastal waters, down to depths of 80 m.

Feeds on bottom - living invertebrates and fishes.



PRESENT FISHING GROUNDS:

Coastal waters, throughout its range.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS 0F UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, traps and occasionally with bottom trawls.

Marketed mostly fresh; also dried-salted.

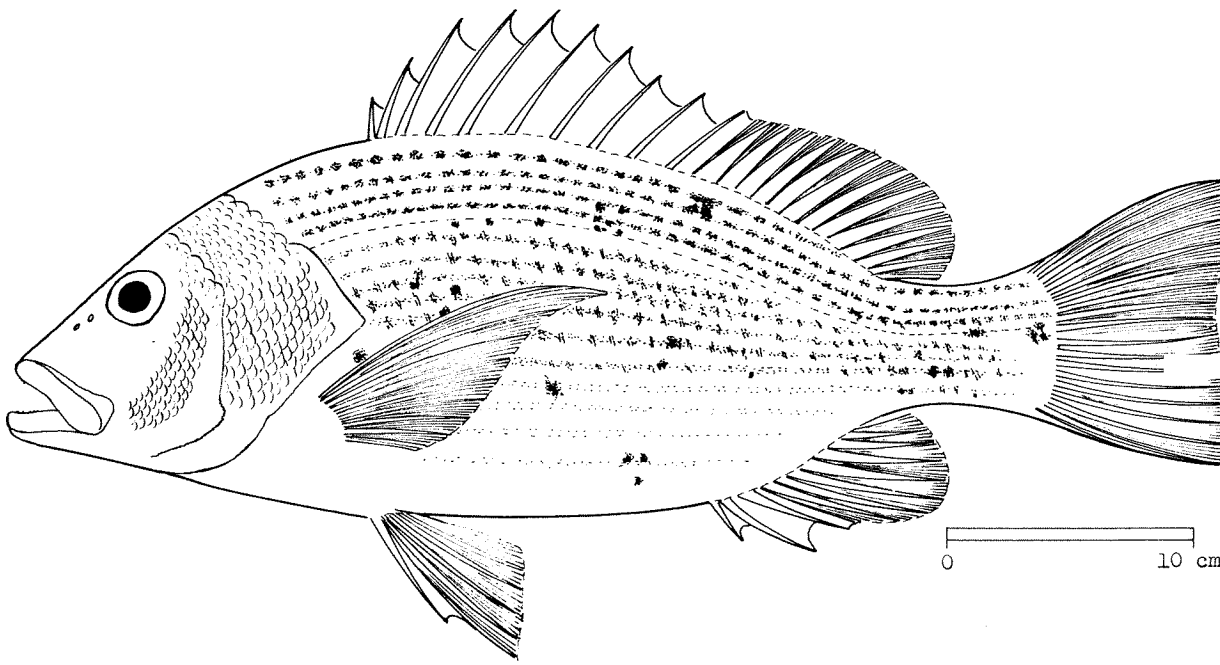
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus johni (Bloch, 1792)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - John's snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

A moderately deep-bodied snapper with head profile straight or slightly convex; a very slight preopercular notch and no interopercular knob. *Dorsal fin with 10 spines and 13 to 14 soft rays;* anal fin with 3 spines and 8 soft rays. *Longitudinal scale rows above lateral line parallel to it, and those below lateral line horizontal; scales on head beginning above middle of eye;* soft parts of dorsal and anal fins with a scaly sheath.

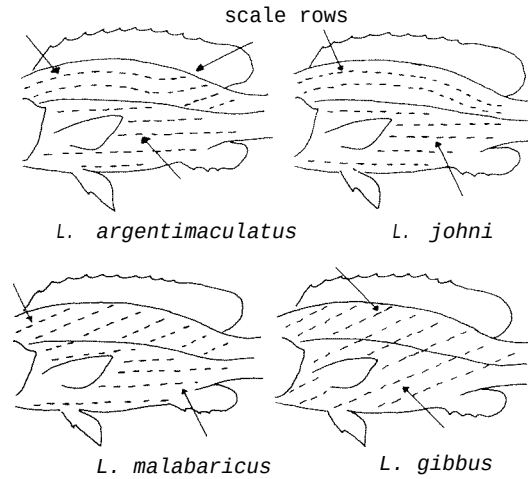
Colour: *body silvery green or bronze/red, with a distinct dark spot on each scale forming a length-wise series of dark streaks.* A large black blotch may be present above lateral line at junction of spinous and soft parts of dorsal fin and this is often surrounded by a silvery ring in juveniles.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Lutjanus argenticulatus: scale rows above lateral line appear to rise obliquely under soft part of dorsal fin; also, scales on head beginning behind eye, and colour deep red, with a silvery spot in the centre of each scale.

Other *Lutjanus* species in area: scale rows above lateral line (and sometimes also below lateral line) appear to rise obliquely.

Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



SIZE:

Maximum: 70 cm; common: 50 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

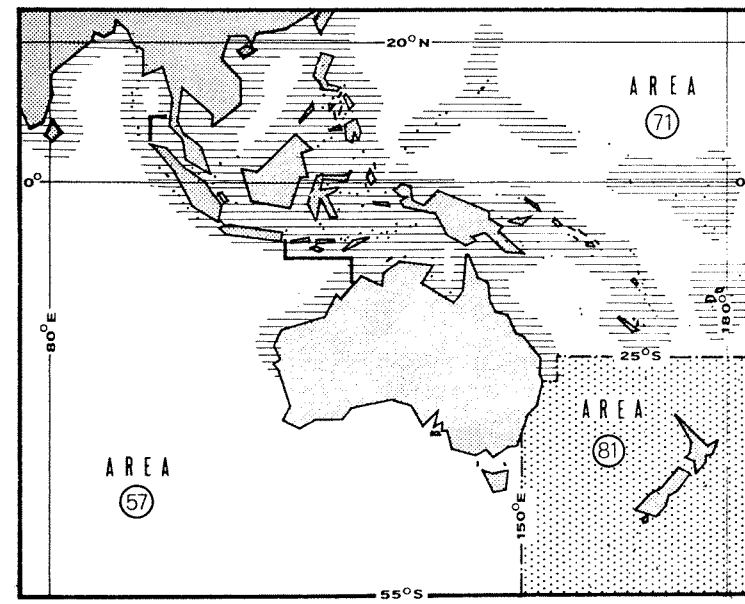
Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Inhabits shallow waters and mangrove areas; also found down to depths of 80 m.

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

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

Marketed mostly fresh; also dried-salted.

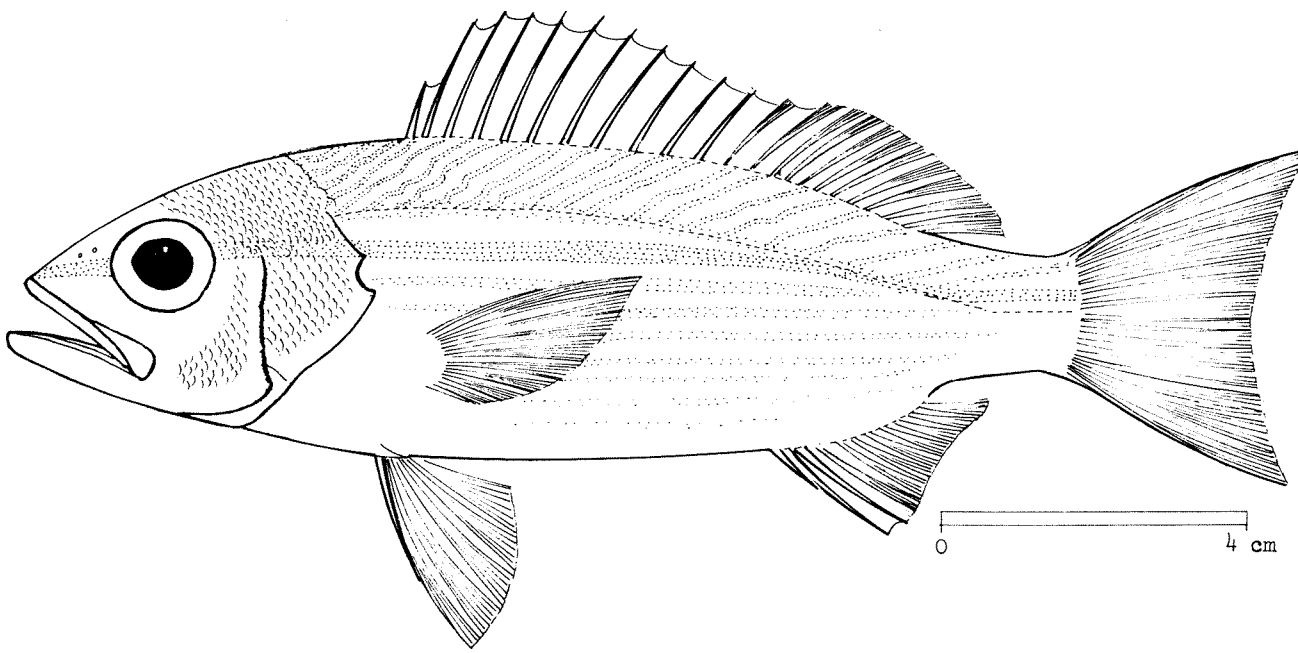
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus lineolatus (Rüppell, 1828)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Bigeye snapper
Fr -
Sp -

NATIONAL:

ISTINCTIVE CHARACTERS:

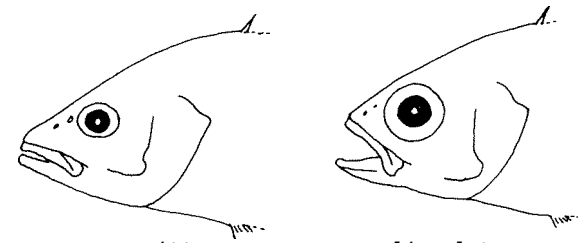
An elongate, large-eyed snapper with head profile moderately convex; interorbital space flat or slightly convex; *distance from eye to jaw approximately 1/3 of eye diameter.* Teeth in jaws in bands with a weak outer row of conical teeth and an enlarged pair of canines in upper jaw, and 2 to 3 enlarged canines half-way along lower jaw. Dorsal fin with 11 spines and 11 to 12 soft rays; anal fin with 3 spines and 8 soft rays; caudal fin slightly forked. *Longitudinal rows of scales above lateral Line appear to rise upward to dorsal profile* (shown in above figure); *scales below lateral line running horizontally, but curving slightly upward at base of caudal fin;* soft parts of dorsal and anal fins with a scaly sheath.

Colour: ground colour yellowish or pale brown, with orange/brown lines following the scale rows on back and sides. *One stronger, dark yellow line along sides from tip of snout through eye to caudal fin.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other *Lutjanus* species in area: eye smaller and space between eye and jaw larger than 1/3 of eye diameter; also, colour different.

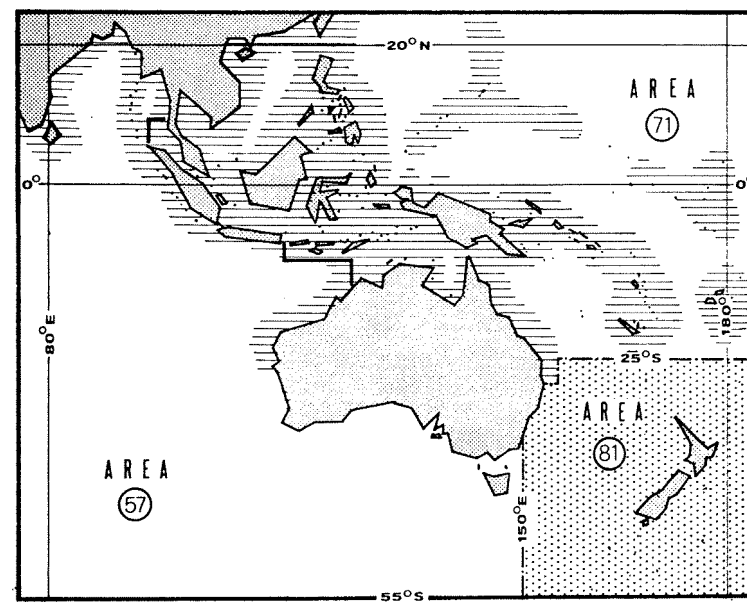
Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



L. vitta *L. lineolatus*

SIZE:

Maximum: 25 cm; common: 18 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical Australia; also, westward to South Africa.

Inhabits both shallow coral reef areas, and down to depths of 80 m.

Feeds on bottom-living invertebrates and small fishes.

PRESENT FISHING GROUNDS:

Shallow rocky and coral reef areas, down to depths of 80 m.

CATCHES, MAIN FISHING GEAR AND PRINCIPAL FORMS OF UTILIZATION:

Separate statistics are not reported for this species. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and with bottom trawls in some areas.

Marketed mostly fresh.

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1974

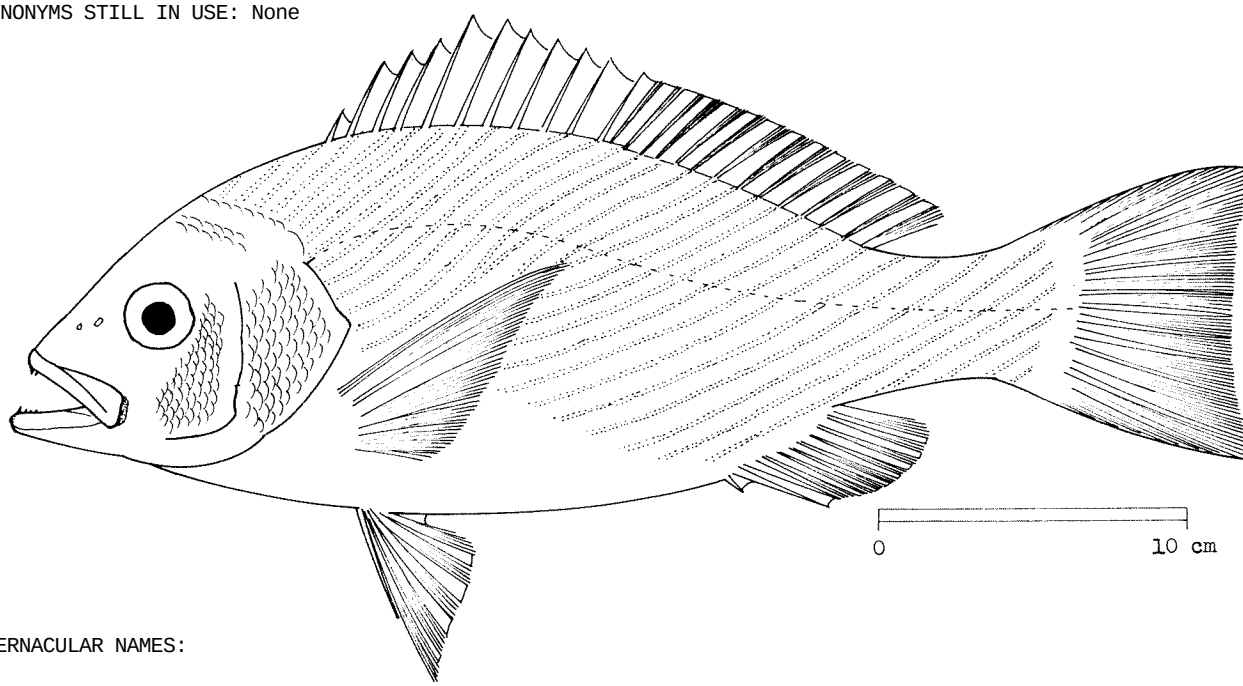
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus malabaricus (Bloch & Schneider, 1801)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Malabar red snapper
Fr -
Sp -

NATIONAL:

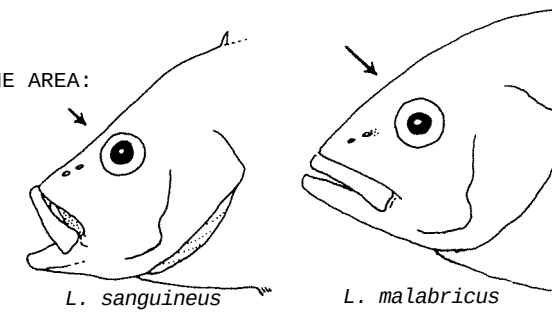
DISTINCTIVE CHARACTERS.

A deep-bodied snapper with head profile convex in adults; space between eyes strongly convex and 3.0 to 3.7 times in head length; edges of preoperculum finely serrated, without a deep notch, but sometimes with a small notch; no conspicuous interopercular knob. Teeth in both jaws in bands with an outer row of stronger teeth and 2 or 4 moderate canines in front of upper jaw. *Dorsal fin with 11 spines* and 14 soft rays; anal fin with 3 spines and 8 to 9 soft rays; caudal fin truncate or slightly emarginate. *Longitudinal rows of scales* (shown in above figure) *above and below lateral line appear to rise obliquely to dorsal profile;* soft parts of dorsal and anal fins with a scaly sheath.

Colour: crimson red.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. sanguineus: interorbital space narrower in adults, 4.4 to 5.0 times in head length (3.0 to 3.7 in *L. malabaricus);* also, a straight or concave head profile (the two species possibly not distinct).



L. bohar: 10 dorsal spines (11 in *L. malabaricus);* also, scale rows below lateral line horizontal.

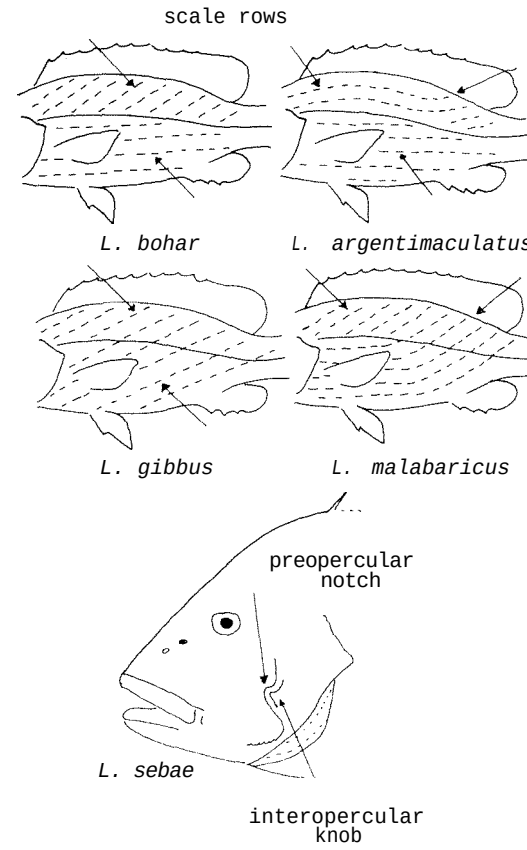
L. gibbus: all scale rows also appear oblique, but only 10 dorsal fin spines; also, a deep pre-opercular notch into which fits a strong inter opercular knob, and head profile concave.

L. argentimaculatus: 10 dorsal spines; also, scale rows above lateral line running parallel to dorsal profile anteriorly, but appearing to rise to dorsal profile below soft part of dorsal fin.

L. sebae: a distinct preopercular notch and interopercular knob, becoming proportionately larger in bigger fish; also, 15 to 16 soft dorsal rays and 10 to 11 soft anal rays (14 and 8 to 9 in *L. malabaricus).*

Other *Lutjanus* species in area: scale rows below lateral line appear horizontal, at least anteriorly.

Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes (*Macolor*); or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



SIZE:

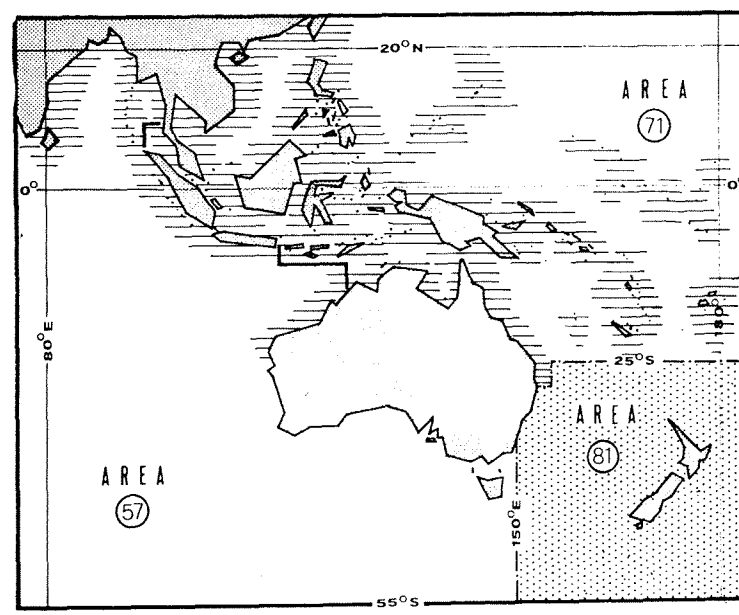
Maximum: 60 cm; common: 45 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia.

Inhabits shallow to moderately deep coastal waters, down to depths of at least 60 m.

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean) : negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and bottom trawls.

Marketed fresh or dried-salted.

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1974

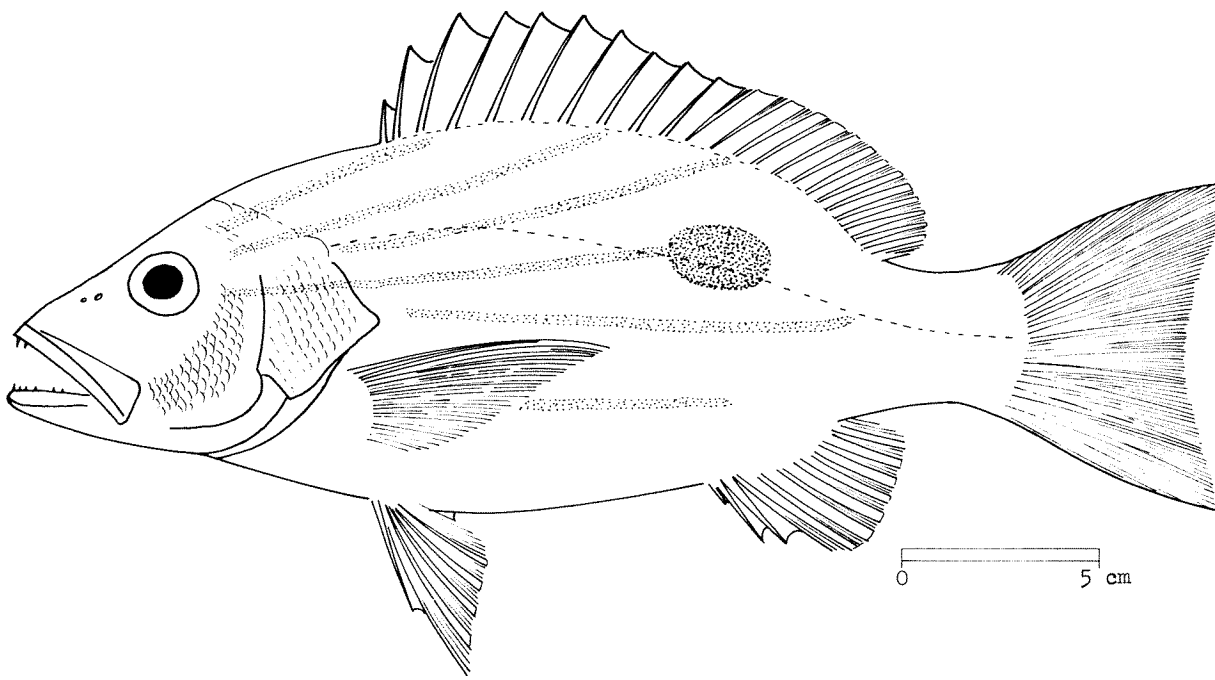
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus russelli (Bleeker, 1849)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES

FAO: En - Russell's snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

A moderately deep-bodied snapper with head profile a little concave. *Vomerine teeth* (on roof of mouth) *in a triangular patch with a posterior projection. Dorsal fin with 10 spines and 14 to 15 soft rays;* anal fin with 3 spines and 8 to 9 soft rays. *Longitudinal rows of scales above lateral Line appear to rise obliquely to dorsal profile, those below lateral line horizontal;* scales on head beginning behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: body reddish brown or silvery, with a *dark, variable black blotch above lateral line below junction of spinous and soft parts of dorsal fin. About 8 golden or light brown lines on body, lower ones horizontal and upper ones rising obliquely to dorsal profile; pelvic and anal fins yellow.*

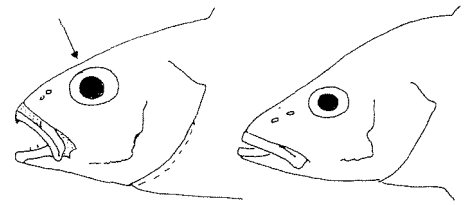
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. fulviflamma: 12 or 13 soft dorsal fin rays (14 or 15 in *L. russelli),* a convex dorsal head profile and a flat interorbital space; longitudinal golden lines (when present) run horizontally only.

L. monostigma: 13 soft dorsal fin rays; also, vomerine teeth in a V-shaped band.

Other *Lutjanus* species in area: either no black blotch on flank, or vomerine tooth patch a crescent, or some or all scale rows below lateral line appear to rise obliquely.

Other lutjanid genera: either lack scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



L. fulviflamma *L. russelli*

L. monostigma *L. russelli*
vomerine teeth

SIZE:

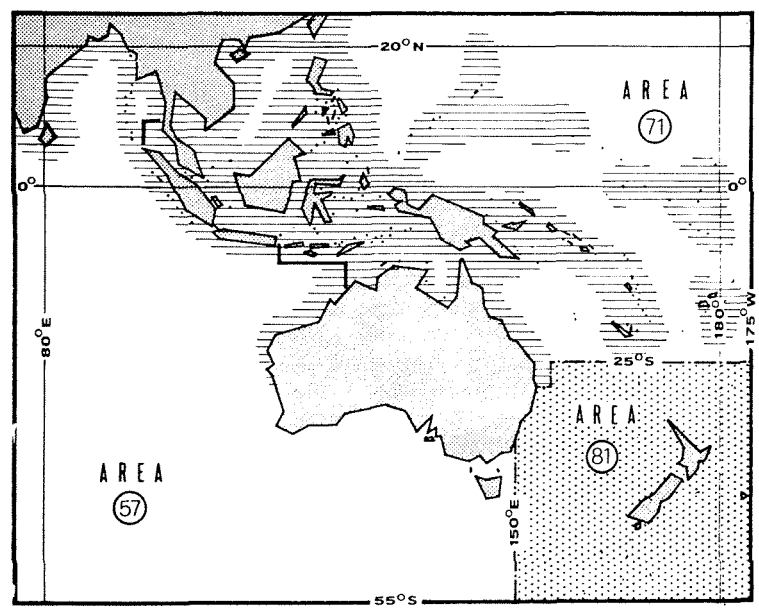
Maximum: 40 cm; common: 28 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Inhabits shallow waters in rocky and coral reef areas; juveniles found in mangrove areas.

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. The total reported catch o£ Lutjanidae in 1972 was:

area 57 (Eastern Indian ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and traps.

Marketed mostly fresh.

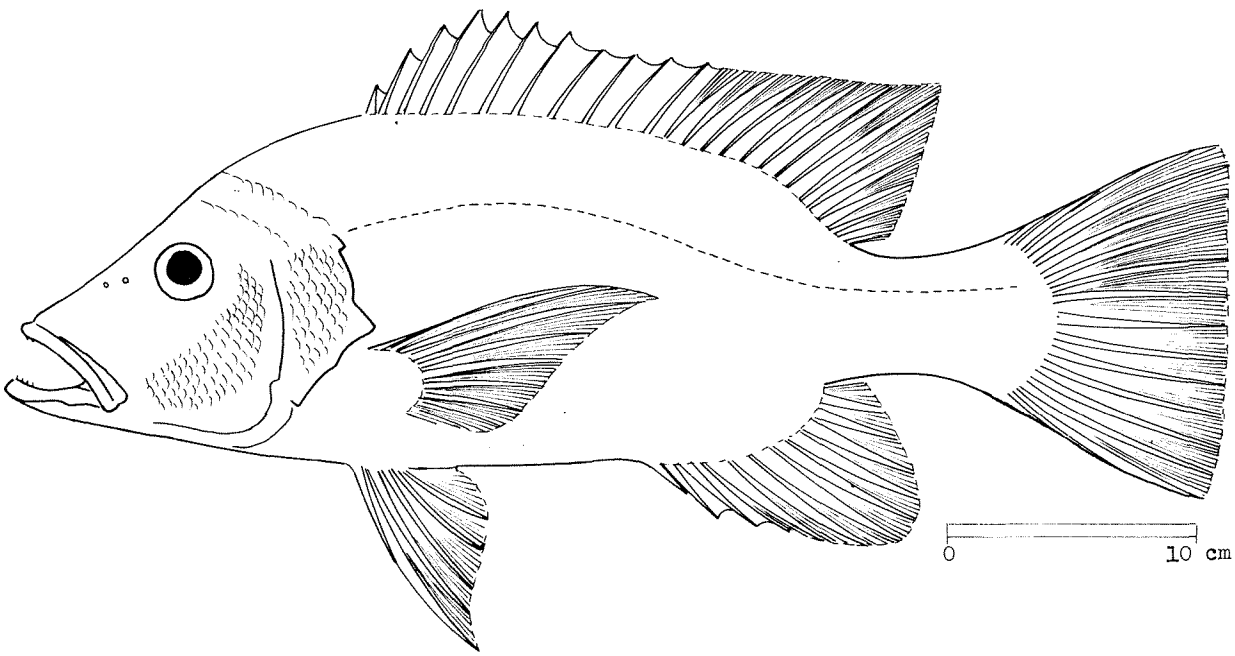
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus sanguineus (Cuvier, 1828)

SYNONYMS STILL IN USE: *Lutjanus annularis* (Cuvier, 1828)
Lutianus erythropterus (Bloch, 1790)



VERNACULAR NAMES:

FAO: En - Blood snapper
Fr -
Sp -

NATIONAL:

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA

A deep-bodied snapper with head profile straight or concave; *interorbital space 4.4 to 5.1 times in head length;* preopercular notch shallow; interopercular knob inconspicuous; ventral and horizontal edges of preoperculum finely serrated. Dorsal fin with 11 spines and 14 soft rays; anal fin with 3 spines and 8 to 9 soft rays. *Longitudinal rows of scales above lateral line appear to rise obliquely to dorsal profile, those below lateral line horizontal anteriorly but some turning obliquely upward posteriorly;* scales on head beginning behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: *deep red in adults;* juveniles red/brown above, silvery below, with dark longitudinal stripes on body following scale rows, a saddle-like black blotch on caudal peduncle surrounded by a silvery band, and a dark brown band down front of head.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. malabaricus: interorbital space broader in adults, 3.0 to 3.7 times in head (4.4 to 5.0 in *L. sanguineus*); also, head profile convex (the two species possibly not distinct).

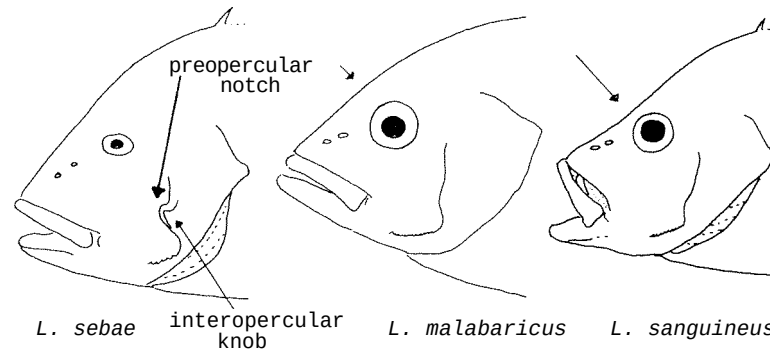
L. bohar: 10 dorsal fin spines (11 in *L. sanguineus);* also, scale rows below lateral line horizontal.

L. gibbus: all scale rows appear oblique, but only 10 dorsal fin spines and a deep preopercular notch which fits a strong interopercular knob.

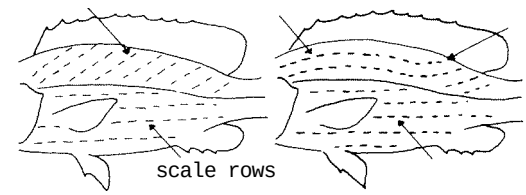
L. argentimaculatus: 10 dorsal fin spines; also, scale rows above lateral line running parallel to dorsal profile anteriorly but appearing to rise to dorsal profile below soft part of dorsal fin.

L. sebae: a distinct preopercular notch and interopercular knob, becoming proportionately larger in bigger fishes; also, 15 to 16 soft dorsal fin rays and 10 to 11 soft anal fin rays (14 and 8 to 9 in *L. sanguineus).*

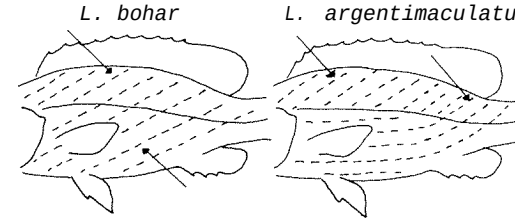
Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



L. sebae *L. malabaricus* *L. sanguineus*



L. bohar *L. argentimaculatus*


L. gibbus *L. sanguineus*

SIZE:

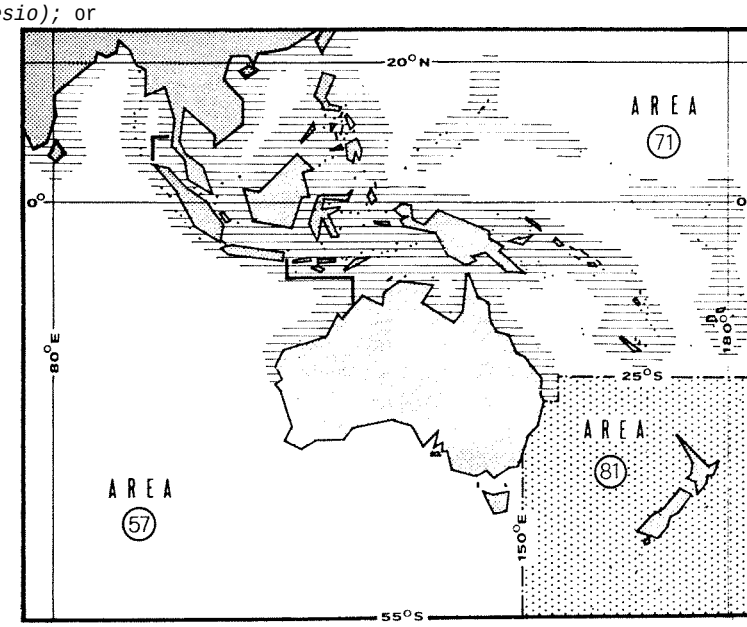
Maximum: 90 cm; common: 50 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Usually found in coastal waters down to depths of 100 m.

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught with handlines, bottom longlines and bottom trawls.

Marketed mostly fresh; also dried-salted.

LUT Lut 11

1974

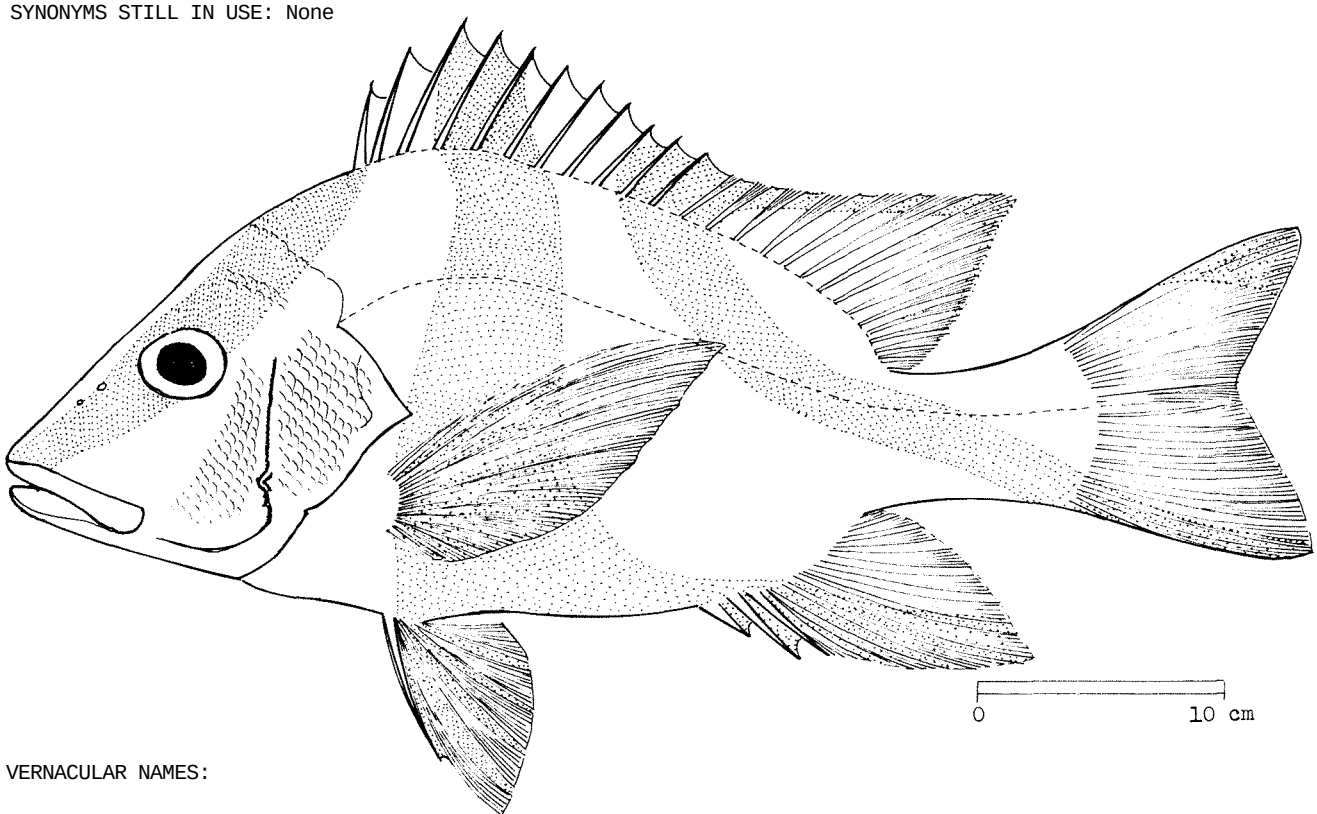
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus sebae (Cuvier, 1828)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Emperor red snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CIUUACTEUS:

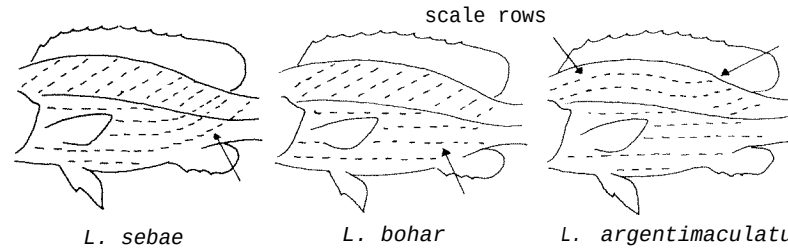
A deep-bodied snapper, with head profile straight or convex; *preopercular notch distinct and deep;* interopercular knob marked, increasing with age until it becomes a short spike in large adults; vertical and horizontal edges of preoperculum finely serrated. *Dorsal fin with 11 spines and 15 to 16 soft rays; anal fin with 3 spines and 10 to 11 soft rays;* soft parts of dorsal and anal fins pointed. *Longitudinal scale rows above lateral line appear to rise obliquely to dorsal profile, those below more or less horizontal anteriorly but appearing to rise obliquely posteriorly;* scales on head beginning behind eye; soft parts of dorsal and anal fins with a scaly sheath.

Colour: *deep red in adults; juveniles and smaller adults pink with a dark. red band from 1st dorsal spine through eye to tip of snout; a 2nd dark band from middle of spinous part of dorsal fin to pelvic fin; and a 3rd band running from base of last dorsal fin spines obliquely downward across caudal peduncle and along lower rays of caudal fin;* margin of soft part of dorsal, upper margin of caudal, and anterior rays of anal fins, dark.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. bohar: all scale rows below lateral line horizontal, and 10 dorsal fin spines (11 in *L. sebae).*

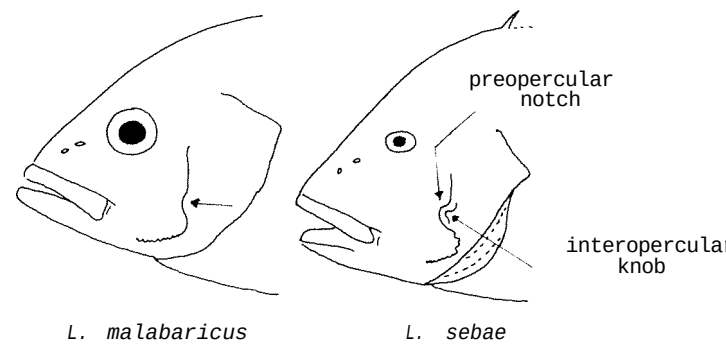
L. argentimaculatus: scale rows above lateral line running parallel to dorsal profile except under soft part of dorsal fin; also, 10 dorsal fin spines.



L. sanguineus and *L. malabaricus:* 14 soft dorsal fin rays and 8 or 9 soft anal fin rays (15 to 16 and 10 to 11 in *L. sebae);* also, no marked preopercular notch.

L. gibbus: 10 dorsal fin spines and upper caudal fin lobe longer than lower in adults; also, head profile strongly concave.

Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or, soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin strongly forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*



SIZE:

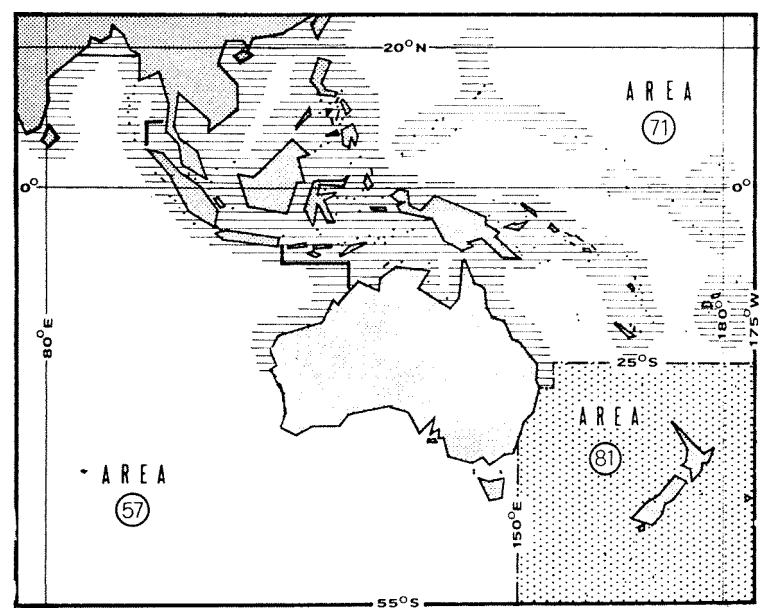
Maximum: over 100 cm;
common: 60 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, westward to South Africa.

Juveniles inhabit shallow mangrove and seagrass areas; adults are found down to depths of 100 m.

Feeds on crustaceans and bottom-living 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines and bottom trawls.

Marketed mostly fresh; also dried-salted.

LUT Lut 12
1974

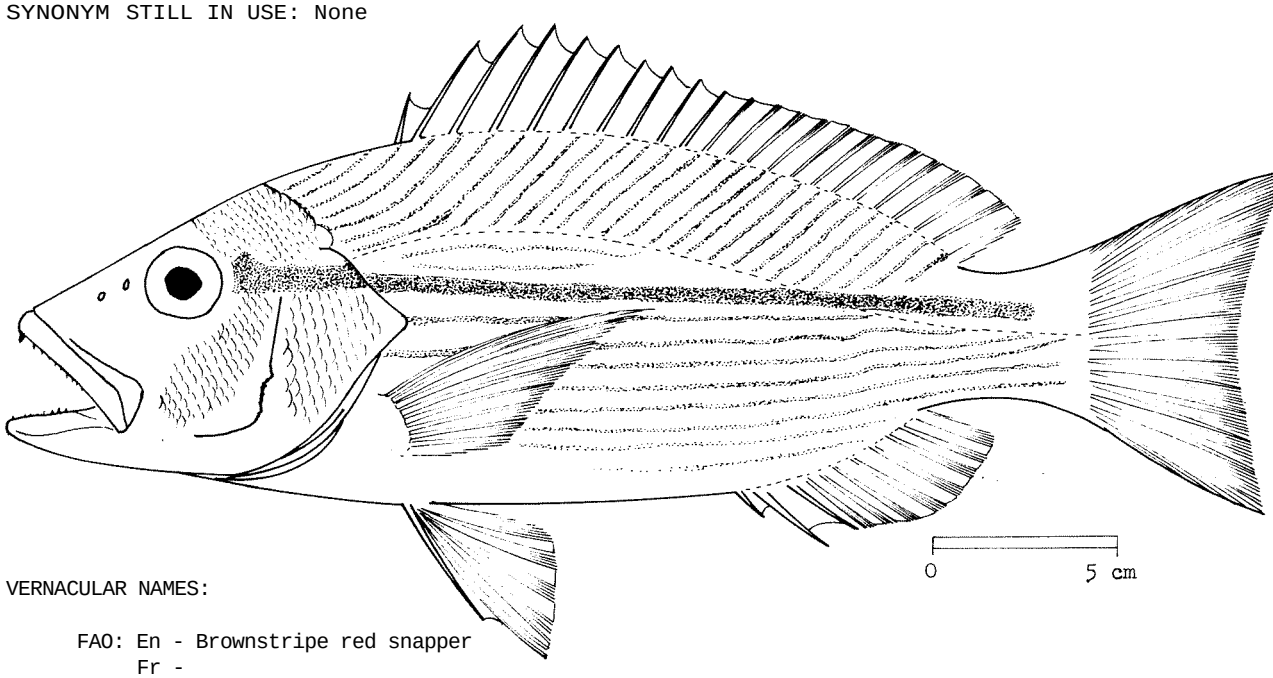
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Lutjanus vitta (Quoy & Gaimard, 1824)

SYNONYM STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Brownstripe red snapper
Fr -
Sp -

NATIONAL:

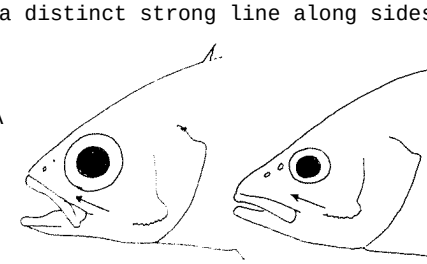
DISTINCTIVE CHARACTERS:

A small snapper with a broad space between eye and , jaw, equal to eye diameter in adults; eye diameter 1.2 times in snout length; preopercular notch distinct, but not deep; vertical and horizontal edges of preoperculum with fine serrations. Vomerine teeth (on roof of mouth) in a triangular patch, sometimes with a posterior projection. Dorsal fin with 10 spines and 13 soft rays; anal fin with 3 spines and 7 to 8 soft rays; caudal fin truncate or slightly emarginate. *Scale rows* (shown in above figure) *above lateral line appear to rise obliquely to dorsal profile, those below lateral line horizontal; scales on head beginning over middle of eye;* transverse scale rows on body 6 to 7 above and 16 to 18 below lateral line; soft parts of dorsal and anal fins with a scaly sheath.

Colour: upper part of body pale red/yellow with numerous oblique dark brown lines following scale rows; lower body silvery with horizontal light brown lines; a distinct strong line along sides *from eye to upper base of caudal fin;* fins yellowish.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA

L. lineolatus: eye much larger; distance from eye to jaw approximately 1/3 of eye diameter in adults.



L. lineolatus *L. vitta*

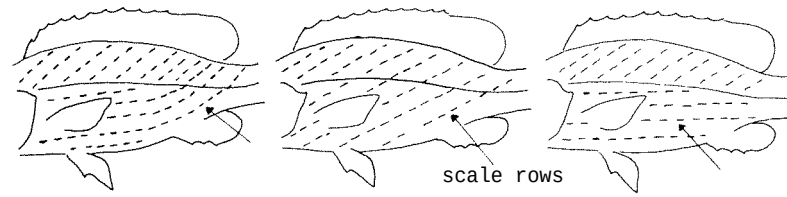
L. russelli, L. monostigma, L. janthinopterus and *L. johni:* vomerine tooth patch crescent-shaped or subtriangular, always without posterior projection; also, scale rows above lateral line horizontal in *L. johni.*

L. gibbus, L. sanguineus and *L. malabaricus:* scale rows below lateral line appear to rise obliquely upward, at least posteriorly.

Other lutjanid genera: either no scales or scaly sheath on soft parts of dorsal and anal fins; or soft parts of dorsal and anal fins forming pointed lobes *(Macolor);* or caudal fin strongly forked *(Caesio);* or eye on mid-level of head *(Pinjalo).*

vomerine teeth on roof of mouth

J. janthinuropterus *L. johni* *L. vitta*



L. sanguineus *L. gibbus* *L. vitta*

SIZE:

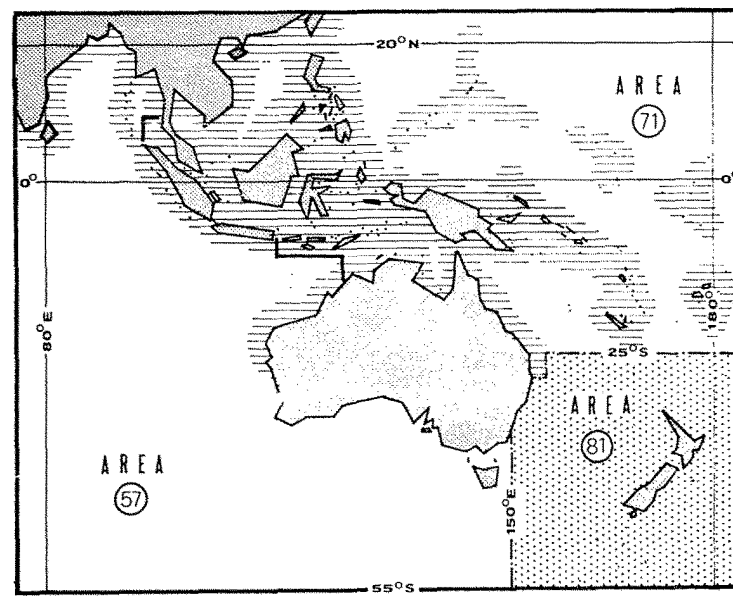
Maximum: 40 cm; common: 22 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia; also, northward to Japan.

Inhabits moderately shallow waters in rocky and coral reef areas.

Feeds on crustaceans and bottom 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, traps and bottom trawls.

Marketed mostly fresh.

LUT Mac 1

1974

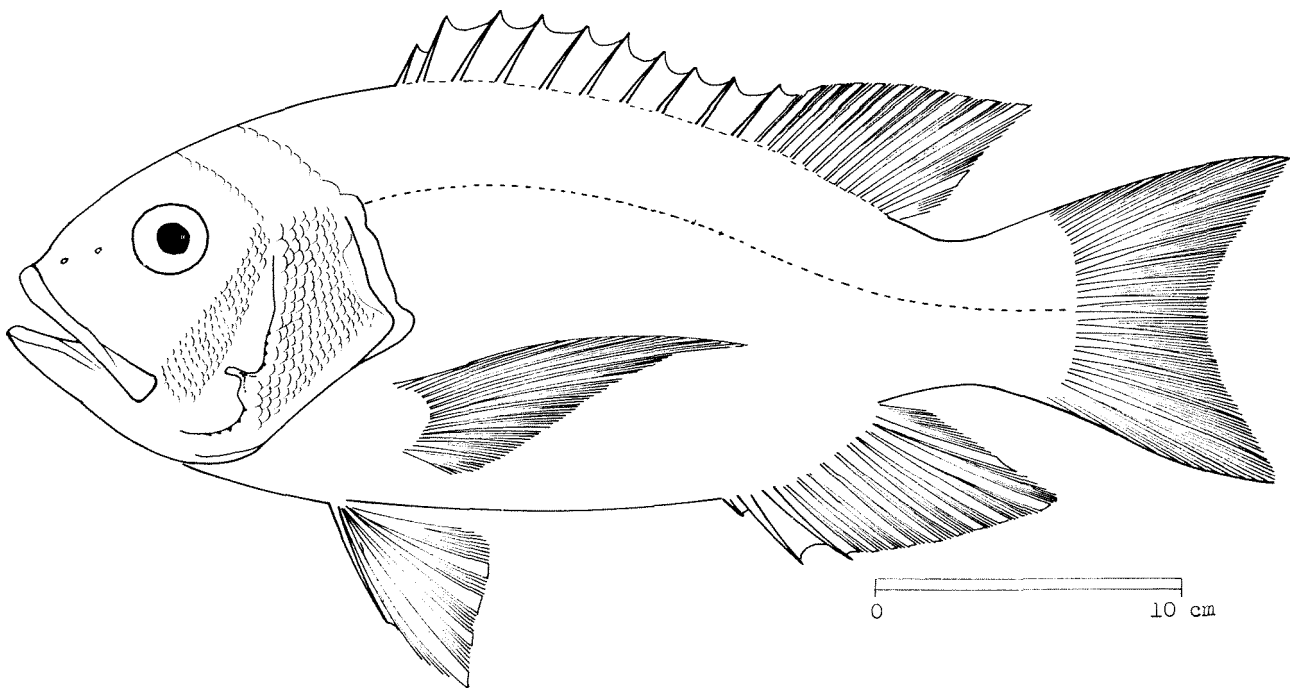
FAD SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Macolor niger (Forsskål, 1775)

SYNONYMS STILL IN USE: *Macolor macolor* (Lesson, 1827)



VERNACULAR NAMES:

FAO: En - Black-and-white snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

A deep-bodied snapper with a *markedly convex head profile. Preopercular notch deep and narrow,* with an elongate interopercular knob fitting into it. *Pectoral fins longer than head;* soft parts of dorsal and anal fins pointed posteriorly; *dorsal fin with 10 spines and 13 to 14 soft rays, anal fin with 3 spines and 11 soft rays;* caudal fin truncate or slightly emarginate.

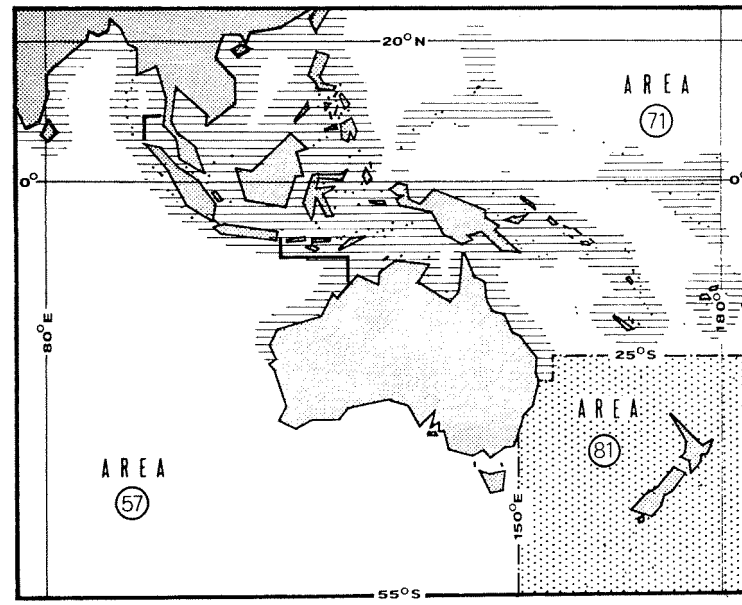
Colour: black and white round spots on back and 2 white horizontal bands, the first from operculum to middle of tail, the second along sides of belly; white also on nape, in front of eye and in front of pectoral and pelvic fins. Posterior dorsal fin spines, last soft rays of dorsal and anal fins, and tips of caudal fin also white. *Adults may became completely black.*

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other deep-bodied lutjanid species: soft parts of dorsal and anal fins not forming pointed lobes posteriorly, head usually less strongly convex, soft anal fin rays usually less than 11 (but 11 in *Lutjanus sebae);* also, different colouration (black and white colour pattern of *Macolor niger* is distinctive).

SIZE:

Maximum: 60 cm; common: 35 cm.



GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia.

Usually inhabits shallow coral reef areas.

Feeds on bottom-living invertebrates and small 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, gill nets and traps.

Marketed mostly fresh.

LUT Pinj 1

1974

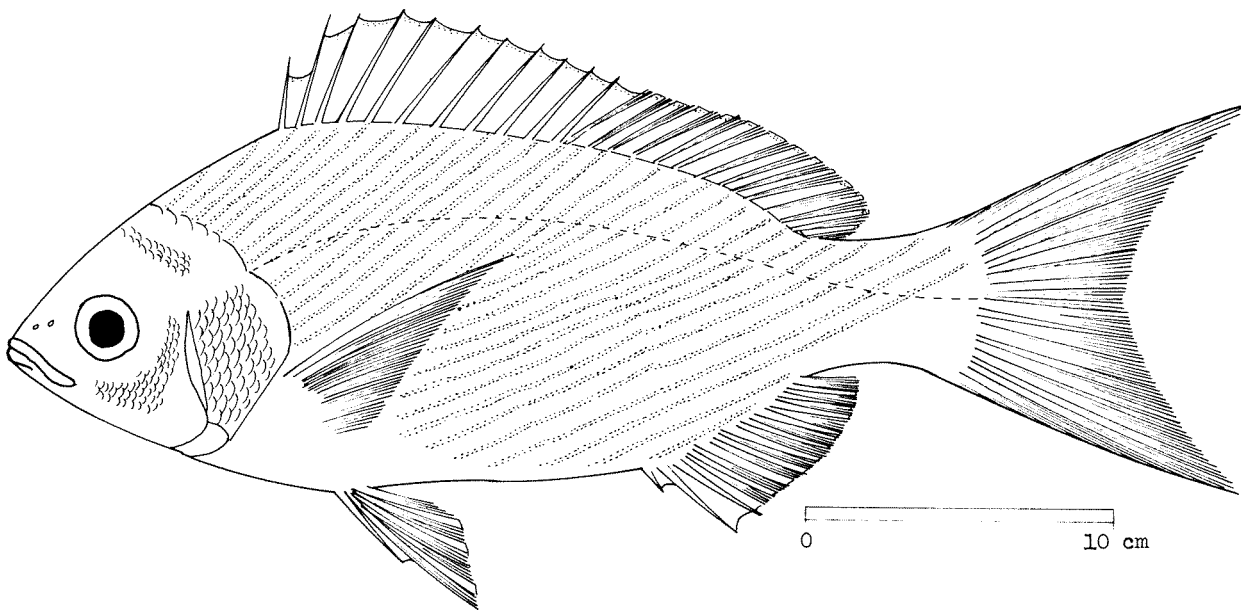
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LUTJANIDAE

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

Pinjalo pinjalo (Bleeker, 1850)

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

FAO: En - Pinjalo snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

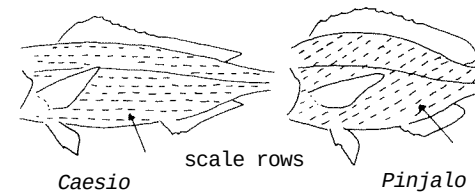
A compressed, deep-bodied fish with an *oblique, small mouth*. Dorsal profile of head high and convex. *Distance from eye to jaw much shorter than eye diameter; eye with an adipose lid. Horizontal axis from snout tip to middle of caudal fin cuts through pupil of eye.* Dorsal fin with 11 spines and 14 soft rays; anal fin with 3 spines and 10 soft rays; caudal fin deeply lunate. *Body covered with fine scales (65 to 68 in lateral line); scale rows* (shown in above figure) *both above and below lateral line appear to rise obliquely toward dorsal profile;* scales begin on head above middle of eye.

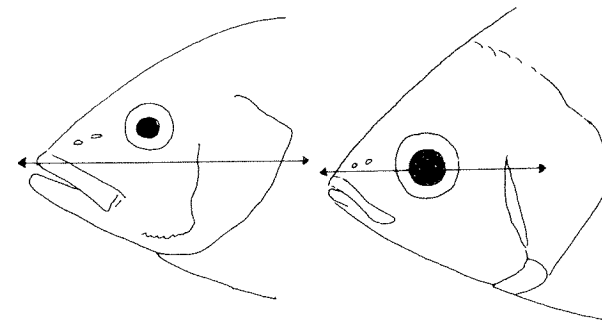
Colour: pink or red; pelvic and anal fins yellow to pink; dorsal fin with a dark margin.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Caesio species: scale rows above and below lateral line horizontal.

Other lutjanid genera: pupil of eye above axis from snout tip to middle of caudal fin.





SIZE:

Maximum: 80 cm; common: 60 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

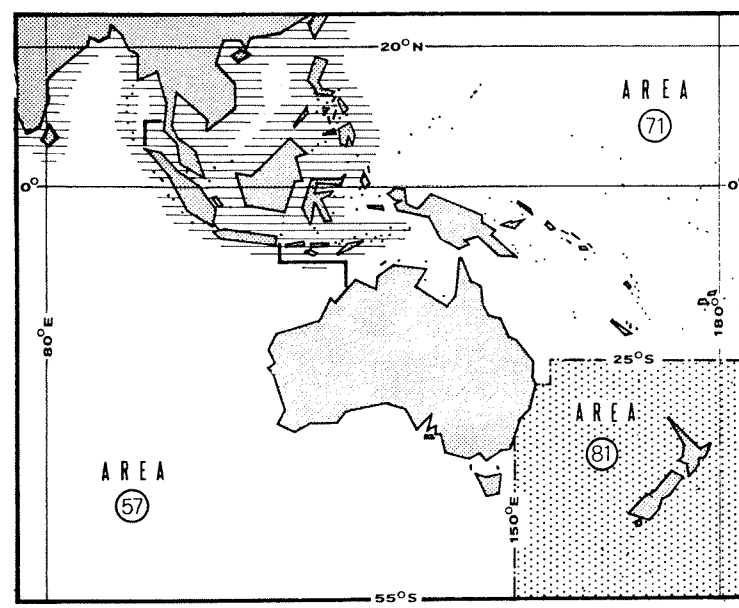
Throughout most of northern part of area; not yet recorded from New Guinea or Australia; but probably occurs south ward in tropical waters.

Inhabits moderately shallow waters down to depths of 60 m.

Feeds on bottom-living invertebrates and possibly on 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

Caught mainly with handlines, traps and bottom trawls.

Marketed mostly fresh; also dried-salted.

LUT Prist 1

1974

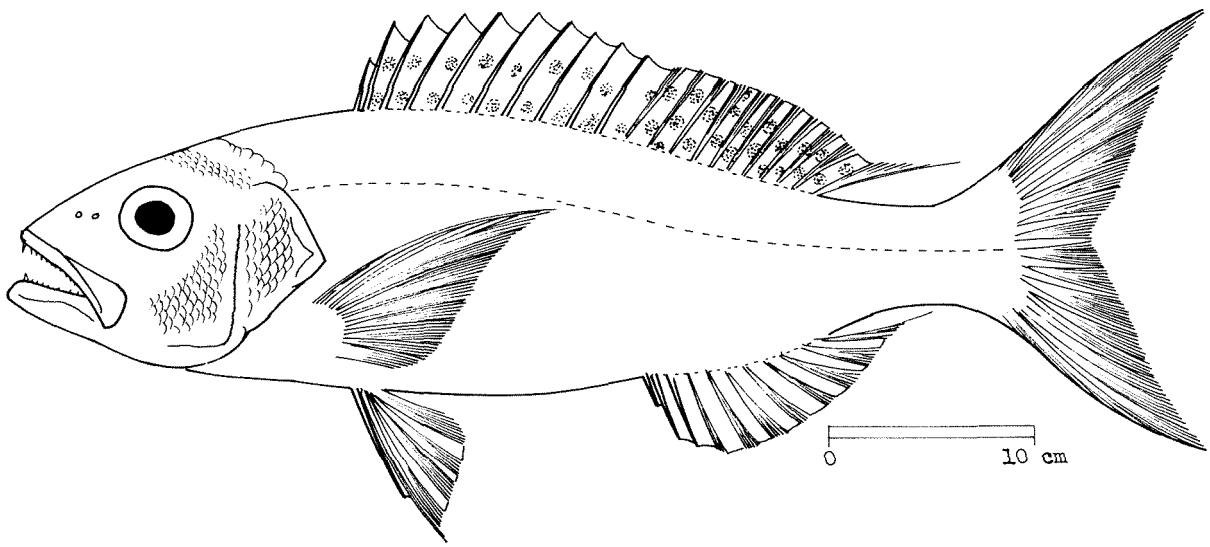
FAO SPECIES IDENTIFICATION SHEEFS

FAMILY: LUTJANIDAE

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

Pristipomoides typus Bleeker, 1852

SYNONYMS STILL IN USE: *Pristipomoides argyrogrammicus:* misidentification



VERNACULAR NAMES:

FAO: En - Sharptooth snapper
Fr -
Sp -

NATIONAL:

DISTINCTIVE CHARACTERS:

An elongate, robust snapper. Interorbital space flat. Teeth in jaws in bands with an outer row of distinct canines. Dorsal fin with 10 spines and 11 soft rays; anal fin with 3 spines and 8 soft rays; l*ast soft rays of dorsal and anal fins extended into short filaments; pectoral fin long (equal to head length) and slightly falcate; caudal fin deeply forked.* No scales on dorsal and anal fins.

Colour: body rosy, fins with a yellow tinge; dorsal fin with paler spots or a rosy reticulate pattern.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

P. sieboldi: no spots on fins; body olive above, silvery below.

P. microdon: no spots on fins, which are pale brown; body red/brown.

P. microlepis: no spots on fins, which are pale brown; body olive/brown.

Tropidinius species: last dorsal and anal fin rays also filamentous, but interorbital space convex.

Apsilus species: last dorsal and anal fin rays not filamentous, interorbital space convex.

Other lutjanid genera: either scales or a scaly sheath on soft parts of dorsal and anal fins *(Lutjanus, Caesio,* etc.); or interorbital space convex; or palate toothless (toothed in *Pristipomoides).*

SIZE:

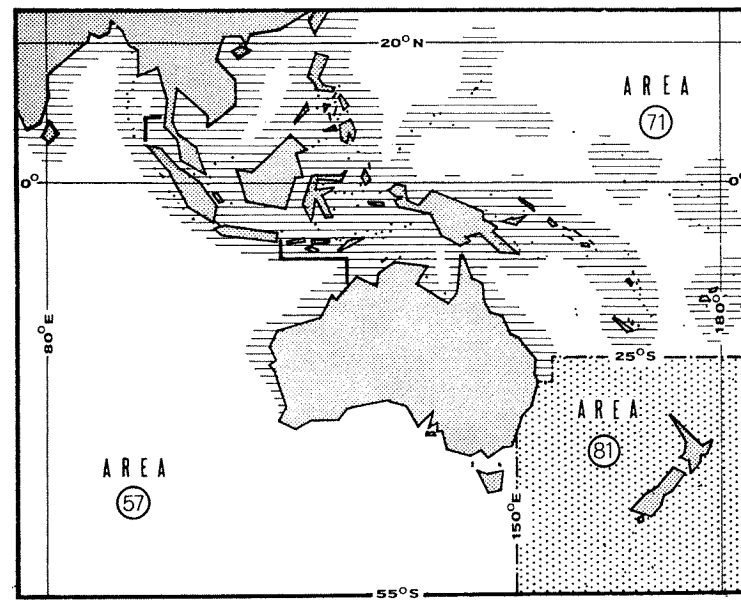
Maximum: 70 cm; common: 50 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout northern part of area and southward to tropical coasts of Australia.

Found in coastal areas in moderately deep waters (40 to 80 m).

Feeds on bottom-living invertebrates 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. The total reported catch of Lutjanidae in 1972 was:

area 57 (Eastern Indian Ocean): negligeable quantities (Australia only)
area 71 (Western Central Pacific): 5 800 tons (Malaysia: 4 800 tons; Singapore: 1 000 tons)

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

Marketed mostly fresh.