

FAO SPECIES IDENTIFICATION SHEETS

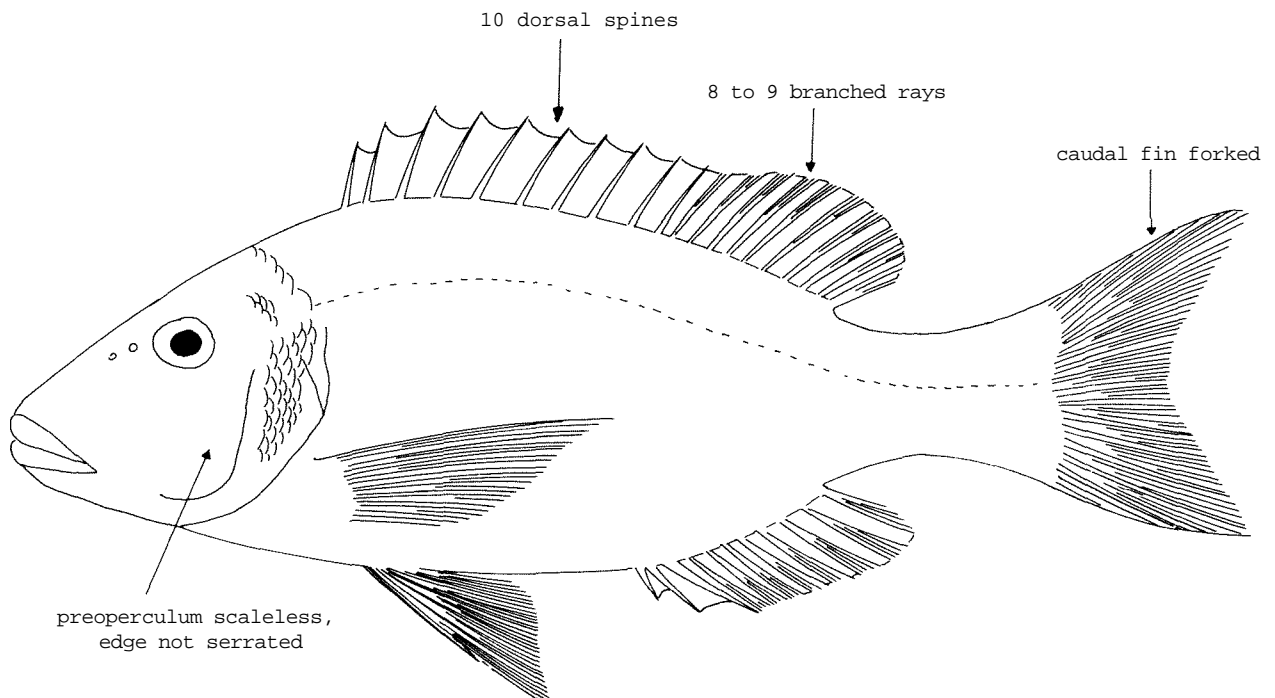
FISHING AREAS 57,71
(E Ind. Ocean)
(W Cent. Pacific)

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:

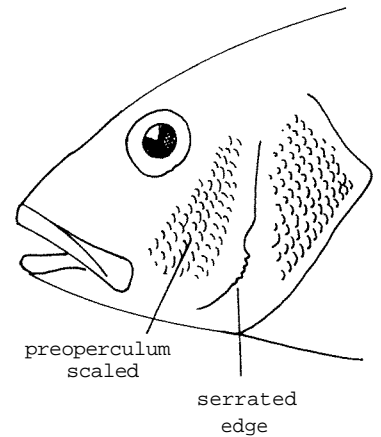
Pentapodidae: scales present on preoperculum.

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)

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

* List tentative; no critical revision exists.

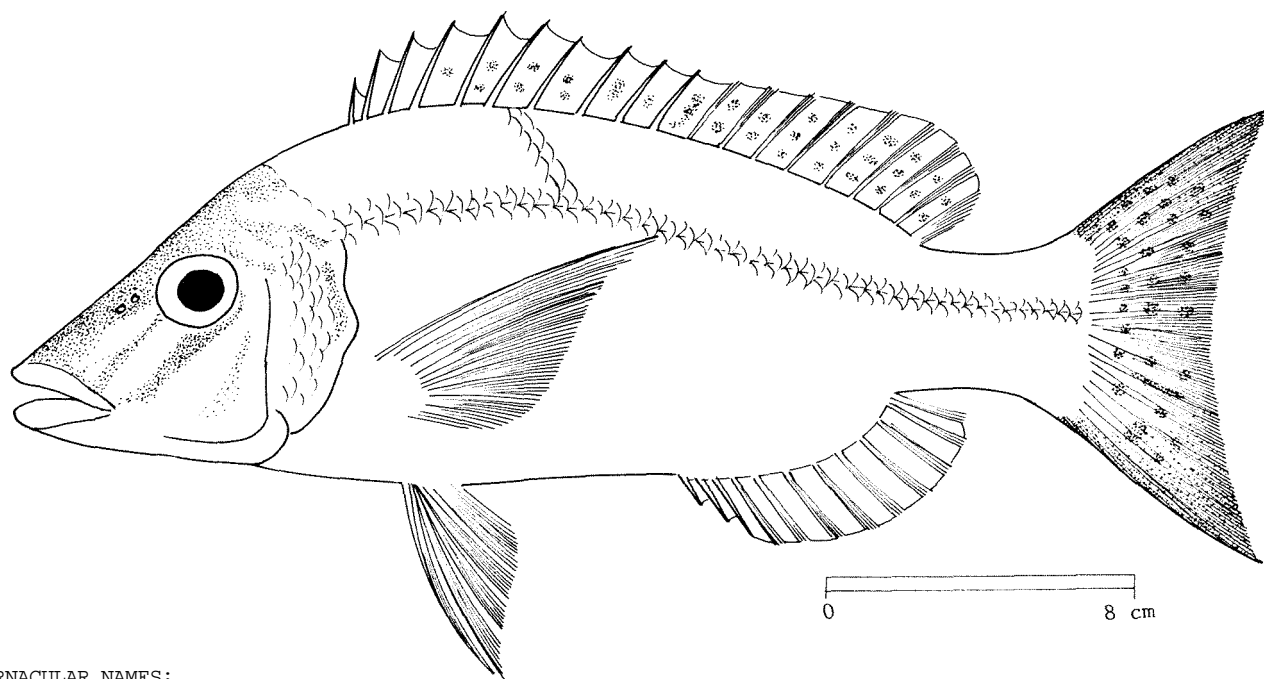
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

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

Lethrinus choerorynchus Bloch & Schneider, 1801

SYNONYMS STILL IN USE: None



VERNACULAR NAMES:

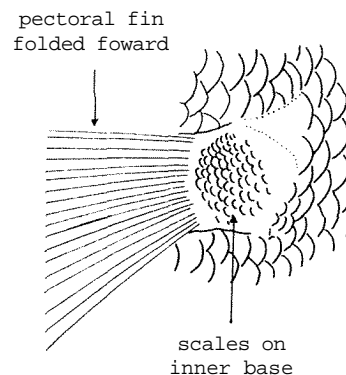
FAO: En - Bluestreak emperor
Fr -
Sp -

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.



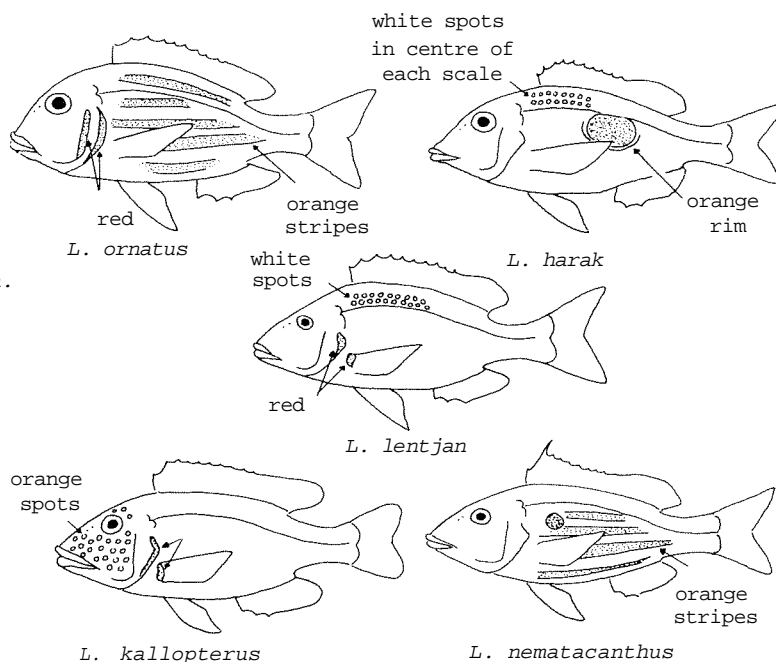
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

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:

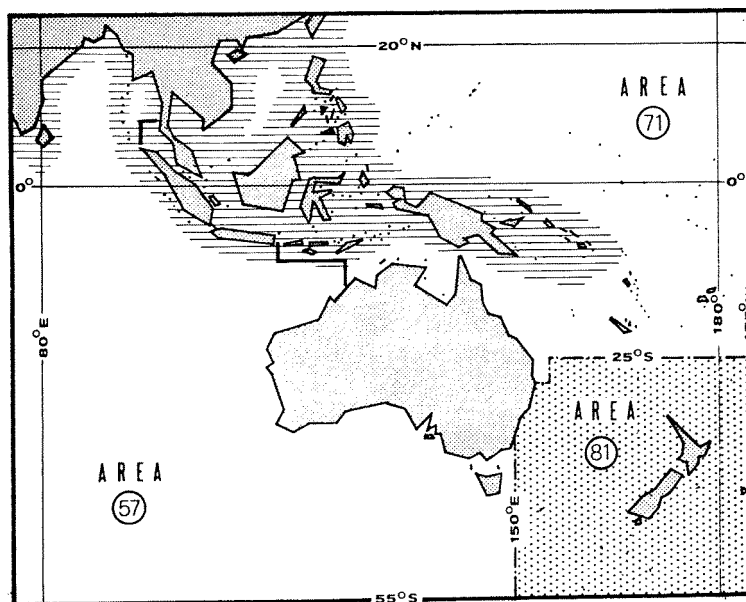
Throughout most of northern part of area, but perhaps not to Australia. One of the commonest of *Lethrinus* species in Thailand.

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:

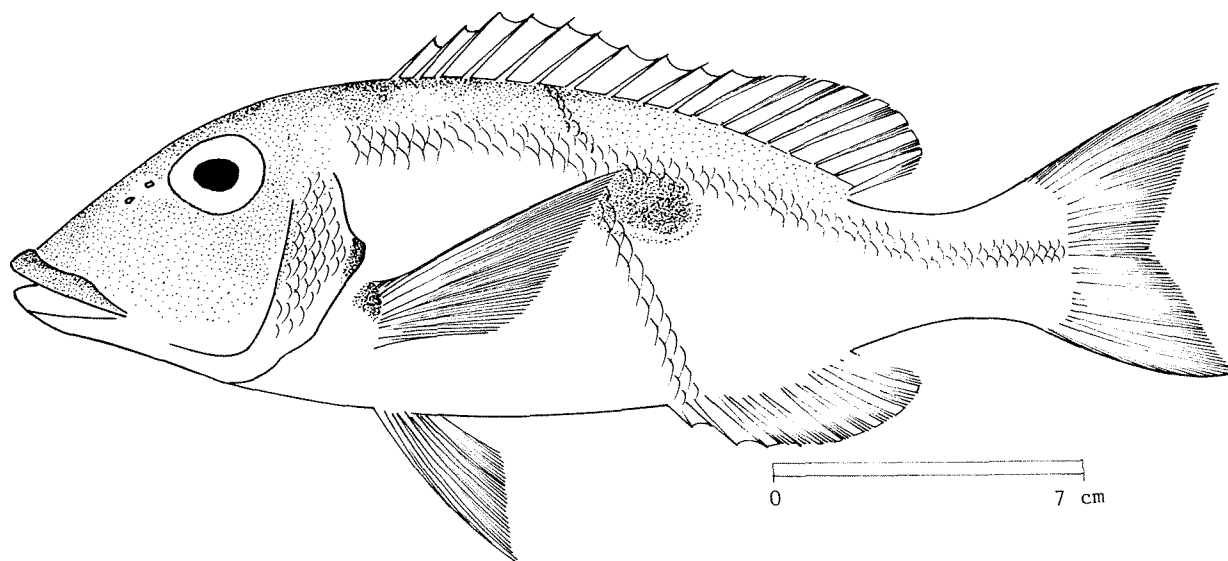
Separate statistics are not reported for this species.

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

Marketed mostly fresh.

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: LETHRINIDAE

FISHING AREAS 57,71
(E Iad. Ocean)
(W Cent. Pacific)*Lethrinus harak* (Forsskål, 1775)SYNONYMS STILL IN USE: *Lethrinus rhodopterus* Bleeker, 1852

VERNACULAR NAMES:

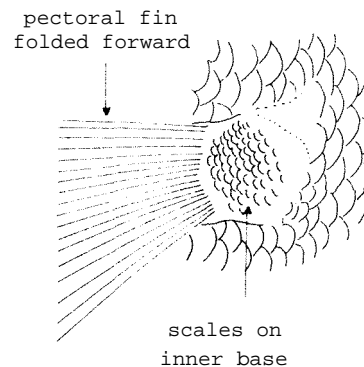
FAO: En - Blackspot emperor
Fr -
Sp -

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.

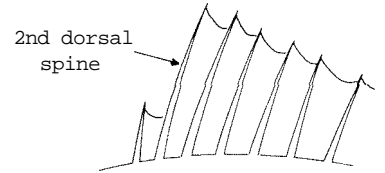
Colour: olive/green above, paler below; a large black blotch with an orange rim on body near tip of pectoral fin. Each scale on back sometimes with a white centre. Vertical fins mottled or striped with pink or red, the margins and softer parts being brighter; pectoral fins pale orange, pelvic fins paler.



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 1st 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, Pomadasysidae).



L. nematacanthus



SIZE:

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

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

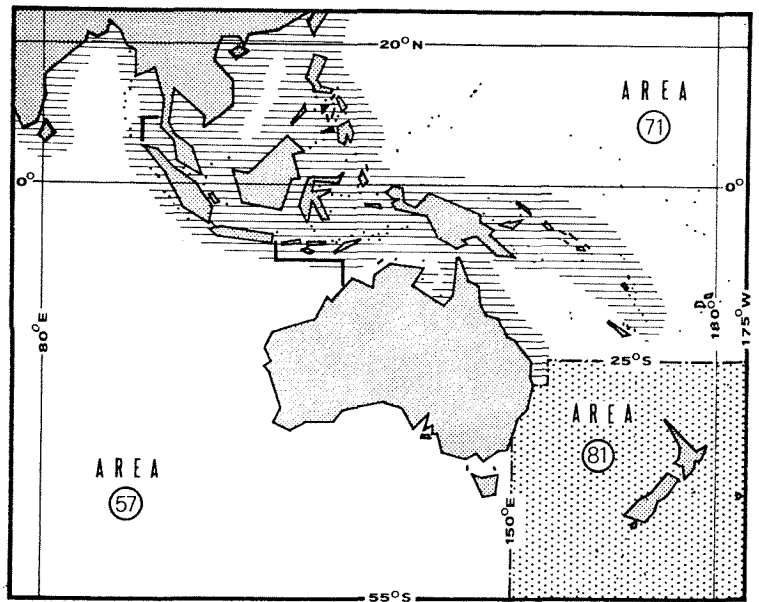
Throughout most of area southward to New South Wales, but not western or southern coasts of Australia; also, westward to Red Sea and East Africa, and northward to the Amami Islands (Japan).

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.

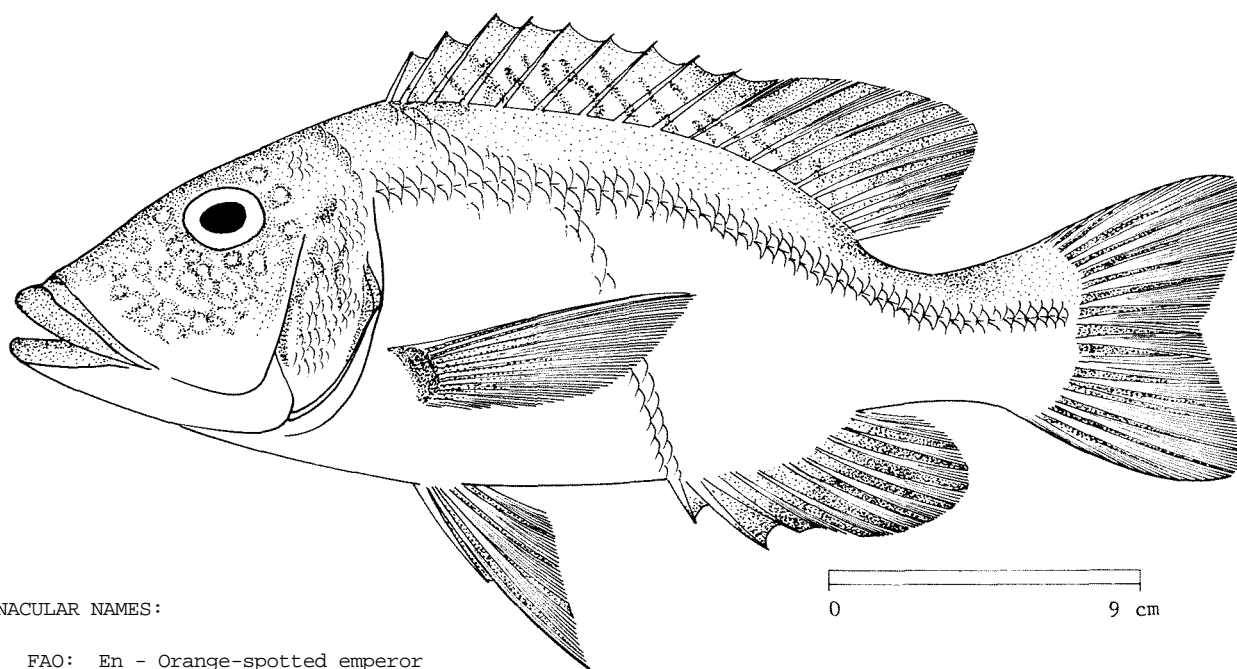
FAD SPECIES IDENTIFICATION SHEETS

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 -

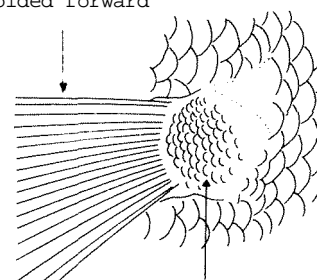
NATIONAL:

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.

pectoral fin folded forward

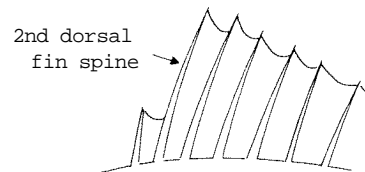


scales on inner base

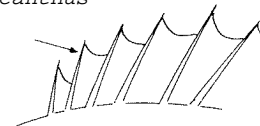
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

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 preoperculum; 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:

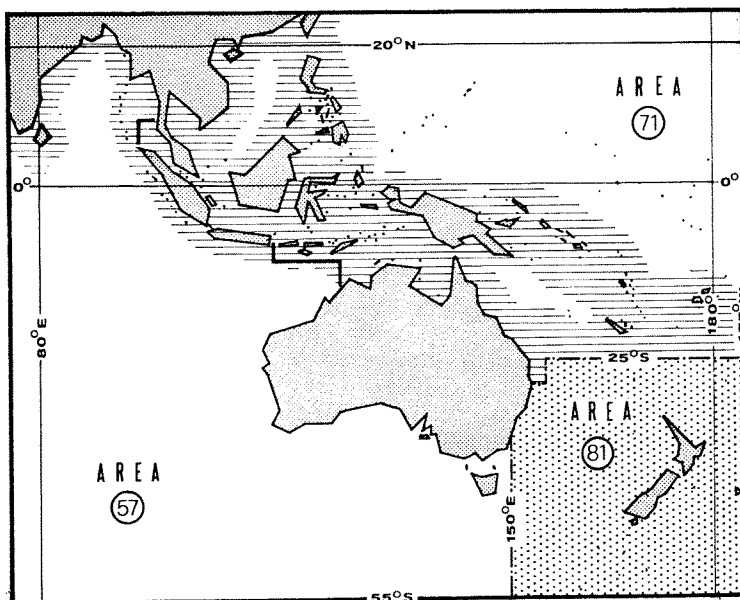
Throughout most of area, except perhaps western and southern coasts of Australia; also, westward to East Africa and northward to the Ryukyu Islands (Japan).

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.

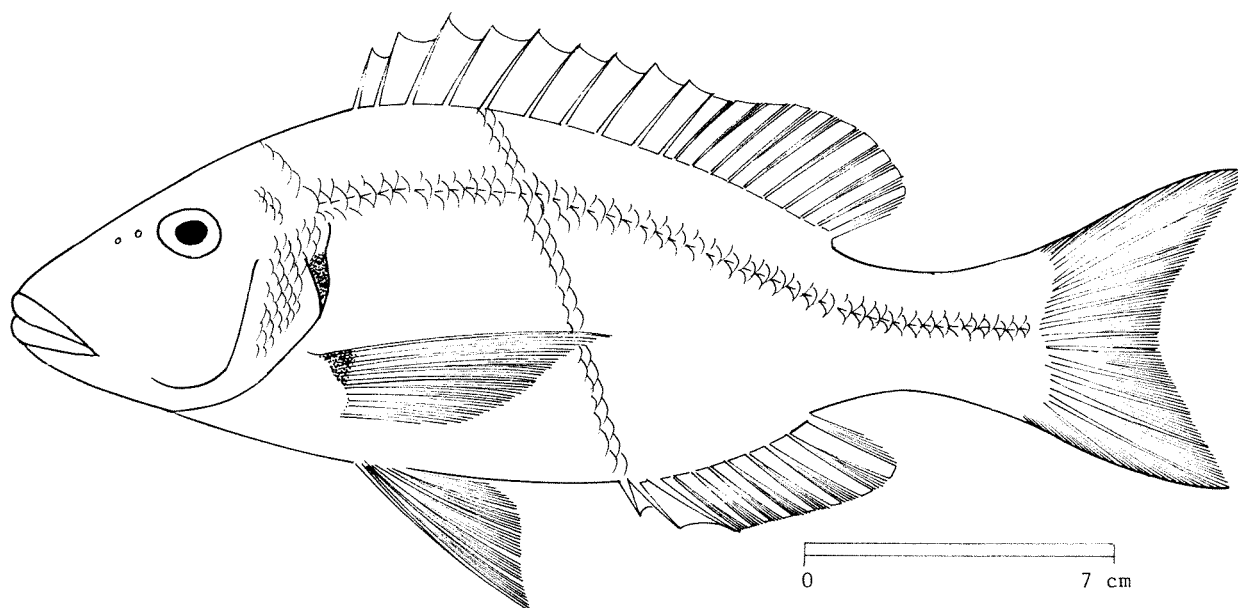
Marketed mostly fresh.

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.

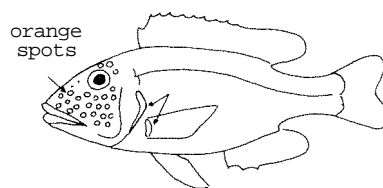
Colour olive/green above, paler below. A *bright red spot on posterior edge of operculum and often another on outer pectoral fin base*. Each scale on back sometimes with a white centre. Dorsal and caudal fins mottled or striped with orange.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

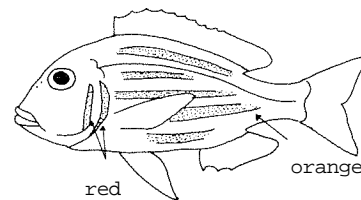
L. kallopterus, *L. ornatus* and *L. variegatus*: also have a red patch on edge of operculum, but only 4 to 5 scale rows between lateral line and mid-dorsal fin spines; also, inner pectoral fin base densely covered with scales, and different colour pattern in *L. kallopterus* and *L. ornatus*.

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).

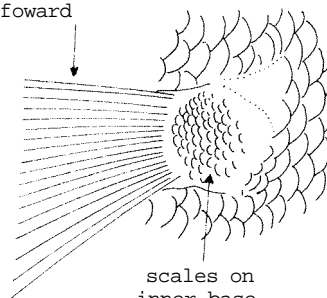


L. kallopterus



L. ornatus

pectoral fin folded forward



L. kallopterus

L. ornatus

L. variegatus

scales on inner base

SIZE:

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

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

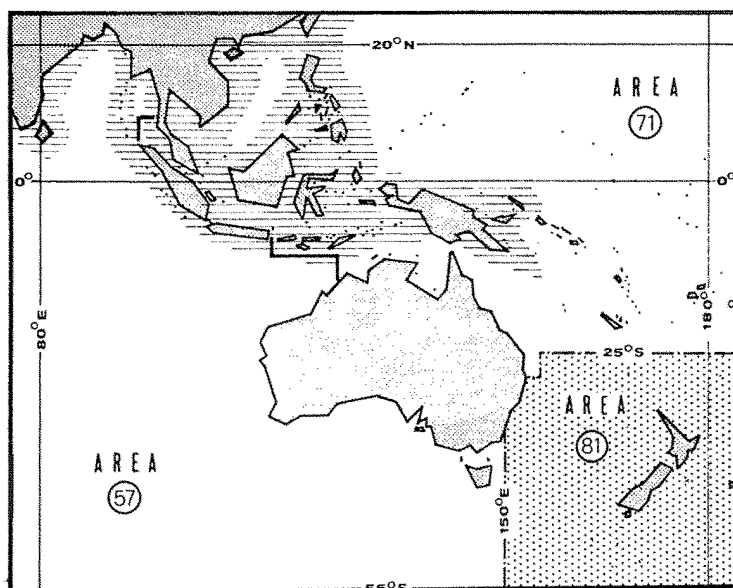
Throughout most of northern part of area but not to Australia; also, westward to East Africa and northward to the Ryukyu Islands (Japan).

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:

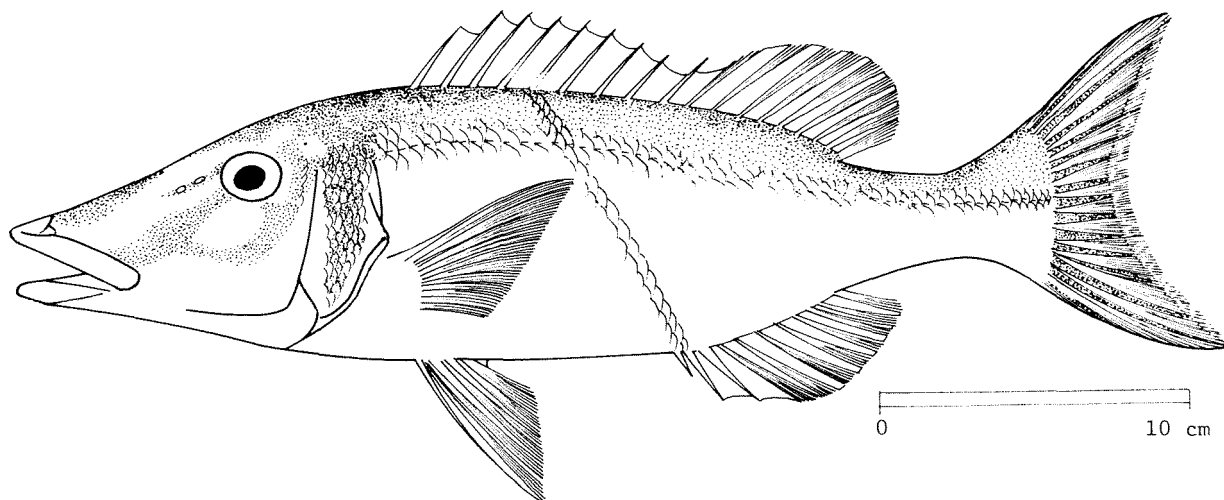
Separate statistics are not reported for this species.

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:

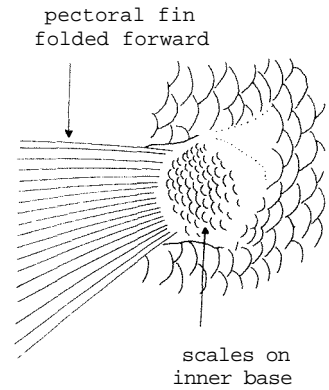
Body fairly compressed but slender; head (especially snout) very long, much longer than body depth. Interorbital area sometimes flat, sometimes convex. Mouth reaching to vertical before or below anterior nostril. Postero-lateral teeth conical; no teeth on tongue or palate. Dorsal fin continuous but with 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:

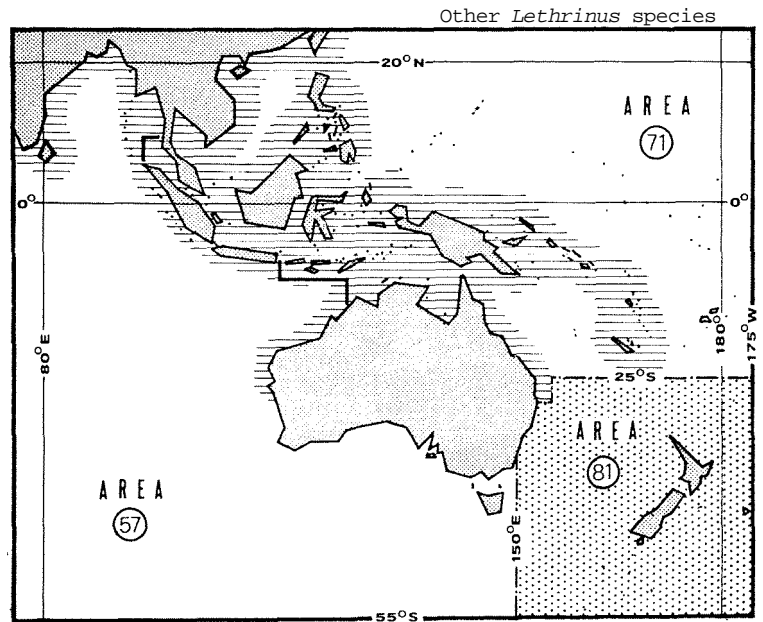
Coastal waters, mainly trawling grounds.

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.



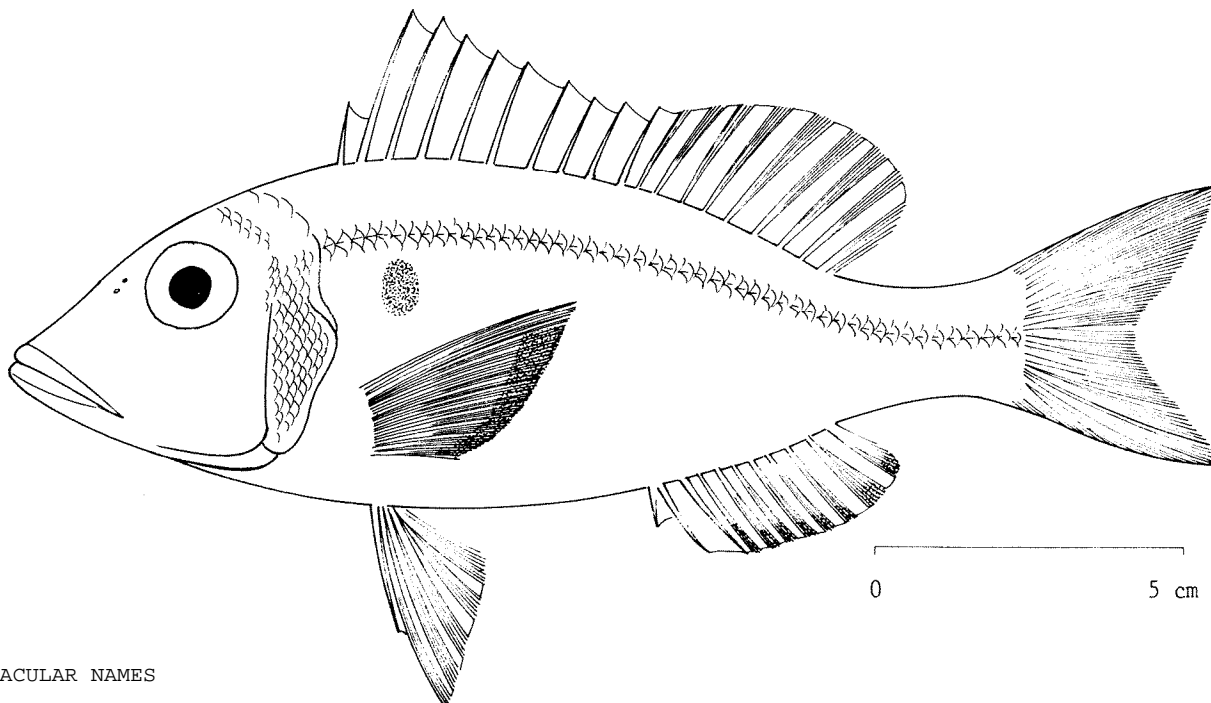
FAO SPECIES IDENTIFICATION SHEETS

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 -

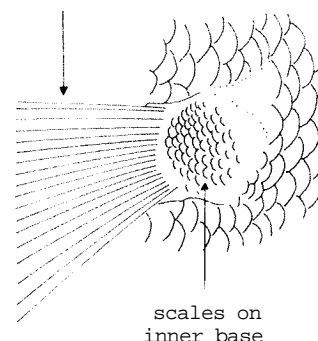
NATIONAL:

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.*

pectoral fin
folded forward

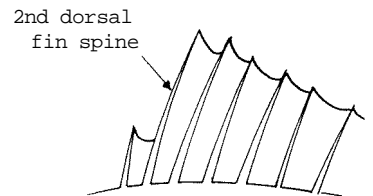


scales on
inner base

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

All other *Lethrinus* species: 2nd dorsal spine only a little longer than 1st.

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).



L. nematacanthus



Other *Lethrinus* species

SIZE:

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

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

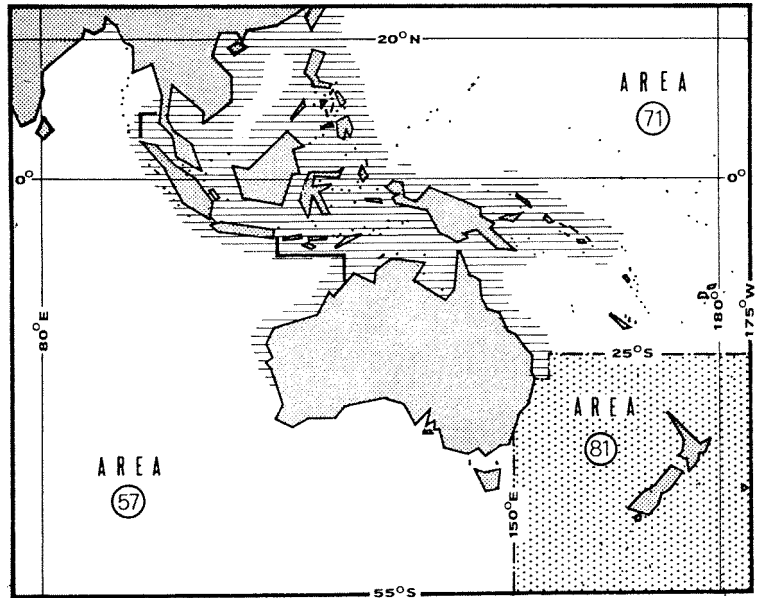
Throughout most of northern part of area and southward to Queensland and New South Wales (Australia).

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.

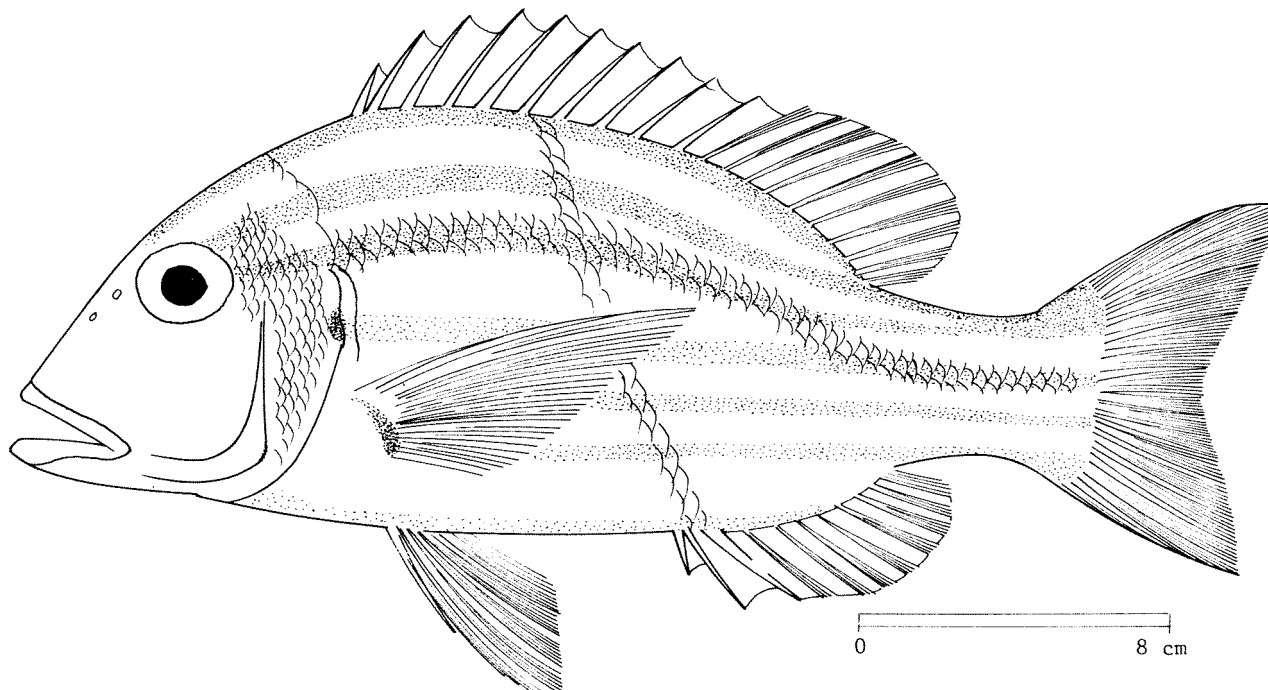
FAO SPECIES IDENTIFICATION SHEETS

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 -

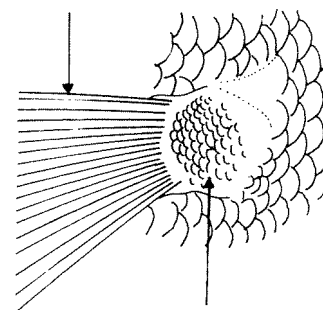
NATIONAL:

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.

pectoral fin
folded forward



scales on
inner base

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:

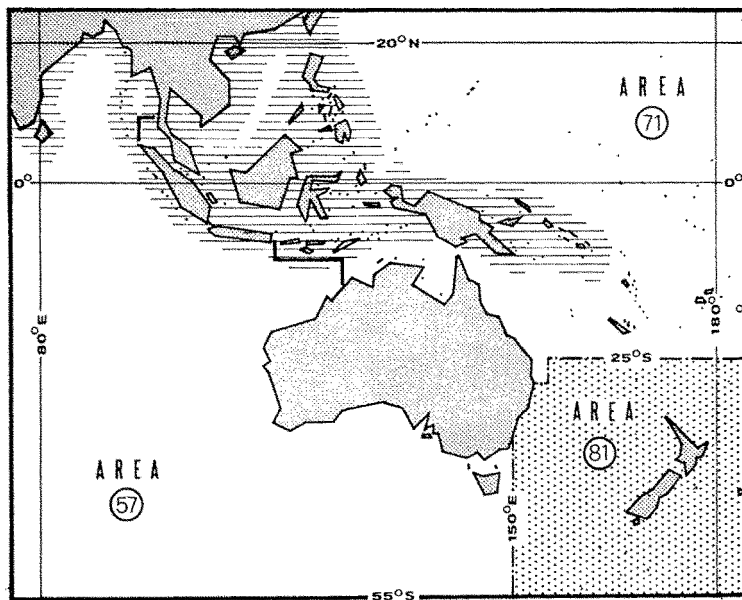
Throughout most of northern part of area, but perhaps not to Australia; northward to Ryukyu Islands (Japan).

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.