

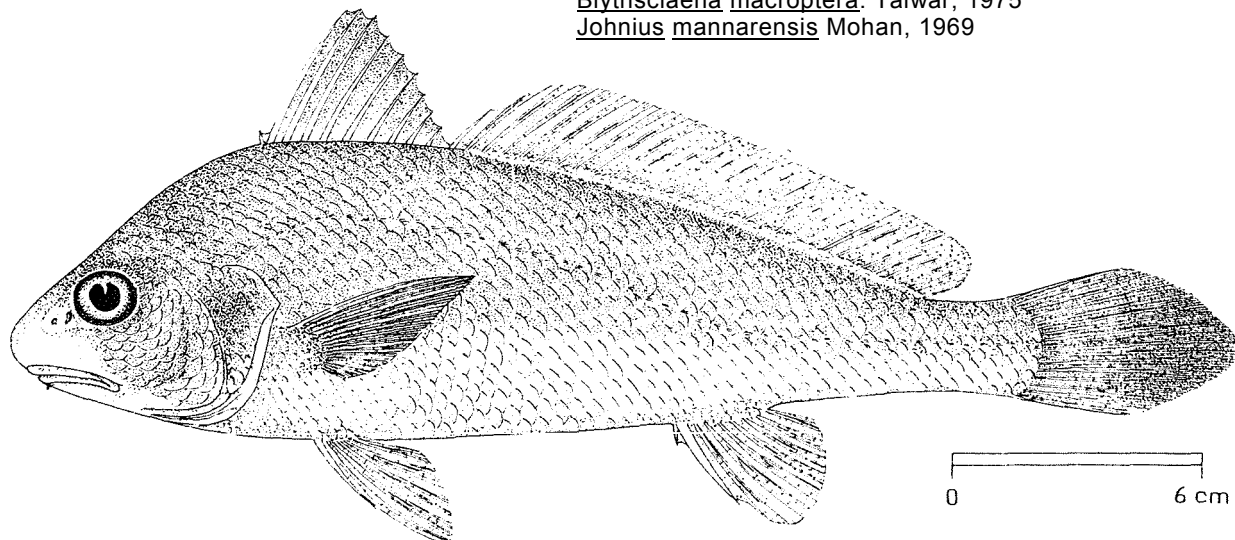
## FAO SPECIES IDENTIFICATION SHEETS

FAMILY : SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)Johnius macropterus (Bleeker, 1853)

## OTHER SCIENTIFIC NAMES STILL IN USE:

Umbrina macroptera: Day, 1876  
Sciaena macropterus: Munro, 1955  
Dendrophysa macroptera: Trewavas, 1964  
Blythia macroptera: Talwar, 1972  
Blythsciaena macroptera: Talwar, 1975  
Johnius mannarensis Mohan, 1969



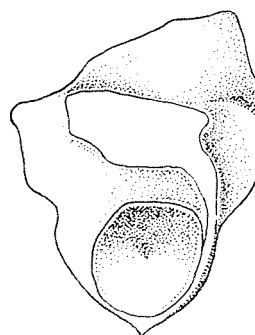
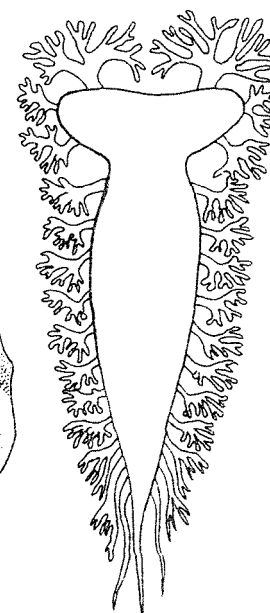
## VERNACULAR NAMES:

FAO : En - Largefin croaker  
 Fr - Courbine à grande  
 Sp - Corvina aletona

NATIONAL:

## DISTINCTIVE CHARACTERS:

A small-sized species with a rounded, slightly projecting snout. Mouth inferior, its cleft horizontal; rostral peres 3 to 5, marginal pores 5, the marginal ones dividing the edge into lobes; mental pores 5; a short, stiff, short barbel behind the median pore; teeth differentiated into large and small in upper jaw, outer upper row slightly enlarged, not widely spaced; teeth in lower jaw small, uniform; sagitta (large earstone) with a tadpole-shaped impression of which the "head" lies obliquely and the "tail" is expanded and deepened as a hollow cone, connected with the "head" by a narrow groove; gillrakers 8 to 11 on lower limb of first arch. Dorsal fin with 10 spines, followed by a notch, second part of fin with 1 spine and 27 to 34 soft rays; anal fin with 2 spines and 7 or 8 soft rays; pectoral fins about 2/3 of head length; caudal fin rhomboid. Scales cycloid (smooth) on snout, below eye and on breast, elsewhere ctenoid (rough to touch); lateral line scales reaching to tip of caudal fin. Swim-bladder hammer-shaped, with 12 to 15 pairs of arborescent appendages, the first branching in the head.

sagitta  
(inner surface)swimbladder of  
*Johnius* sp.

Colour: back dark brown, flanks and belly whitish with silvery reflections; spinous part of dorsal fin darkish; pectoral fins hyaline.

#### DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

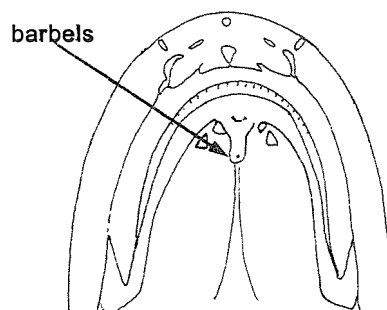
Johnius dussumieri: cycloid (smooth) scales on body: lower gill-rakers 6 to 9 (8 to 11 in J. macropterus); soft dorsal fin rays 23 to 26 (27 to 34 in J. macropterus).

Other Johnius and Johnieops species: no barbel on chin.

Umbrina species: a pore at tip of barbel; no appendages on swimbladder.

#### SIZE:

Maximum: 25 cm; common to 18 cm.



underside of head  
Umbrina sp.

#### GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Natal and coasts of India and Sri Lanka. Eastward to the Malay Peninsula and Indo-Australian archipelago as far as New Guinea.

Inhabits coastal waters down to 30 m depth.

Feeds on benthic worms and small crustaceans.

#### PRESENT FISHING GROUNDS:

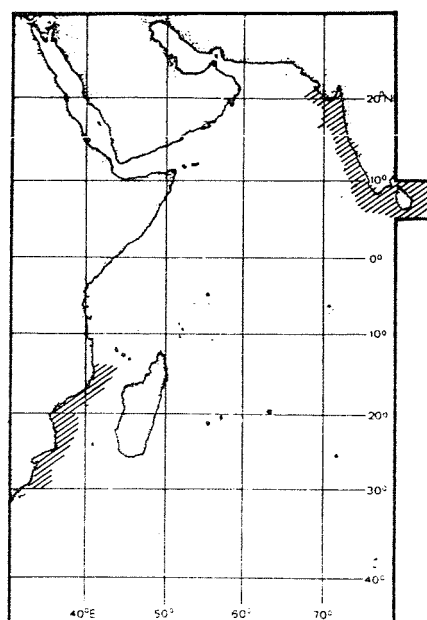
Coastal waters throughout its range.

#### CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not recorded for this species within the area.

Caught with bottom trawls, boat seines and shore seines.

Marketed fresh; also dried salted.



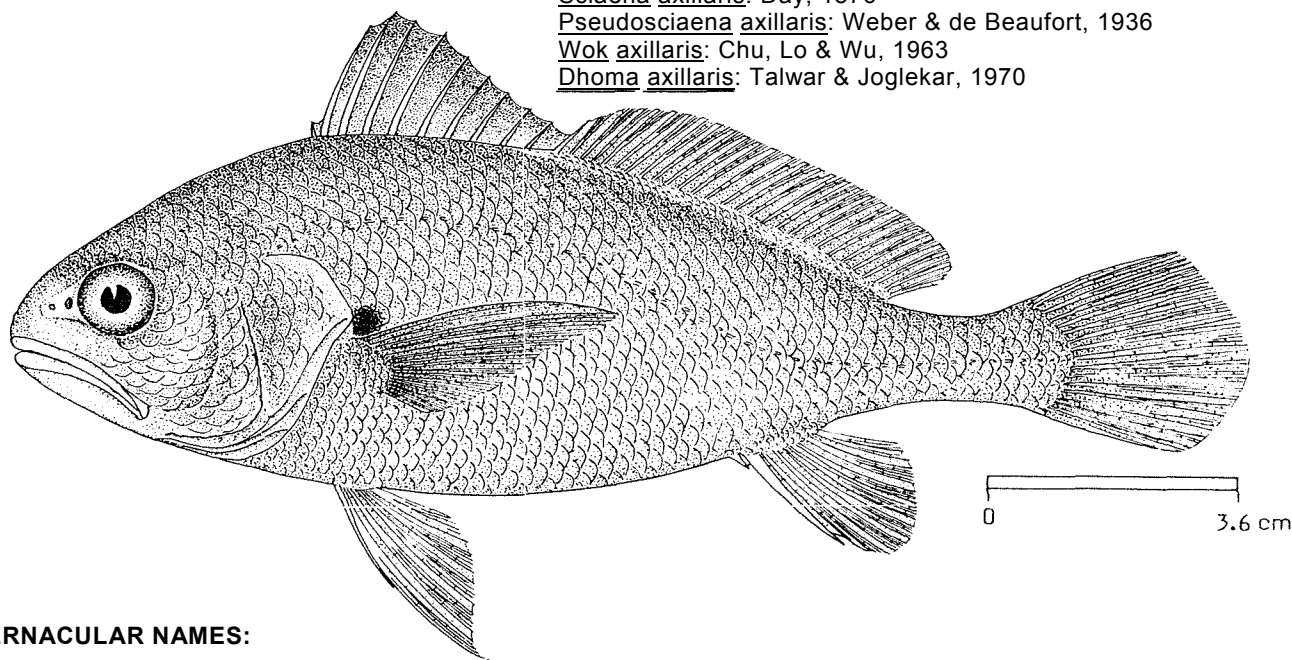
## FAO SPECIES IDENTIFICATION SHEETS

FAMILY : SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)

*Kathala axillaris* (Cuvier, 1830)

## OTHER SCIENTIFIC NAMES STILL IN USE:

*Corvina axillaris* Cuvier, 1830*Sciaena axillaris*: Day, 1876*Pseudosciaena axillaris*: Weber & de Beaufort, 1936*Wok axillaris*: Chu, Lo & Wu, 1963*Dhoma axillaris*: Talwar & Joglekar, 1970

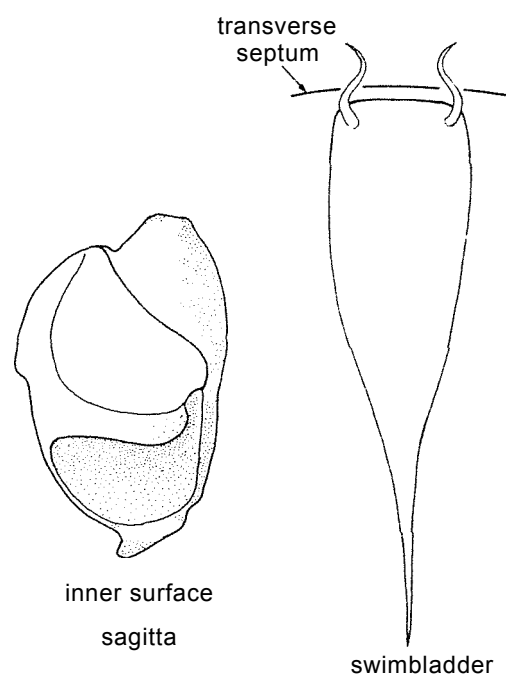
## VERNACULAR NAMES:

FAO: En - Kathala croaker  
Fr - Courbine kathala  
Sp - Corvina catala

NATIONAL

## DISTINCTIVE CHARACTERS:

A medium-sized species with a fairly deep body, its depth about 3 times in standard length. Snout rounded; mouth terminal and oblique; rostral pores 3, very small, marginal pores 5, the outer pair in a feeble notch; mental pores in 3 pairs, the first pair small and at front of chin; teeth differentiated into large and small in both jaws; the large teeth not canine-like forming the outer series in upper jaw and the inner series in lower jaw. Sagitta with a tadpole-shaped impression, the "tail" of which is broad, deeply excavated, ending close to the edge and connected to the "head" by a narrow stem; gillrakers slender and finely denticulate, 19 to 23 on lower limb of first arch. Dorsal fin with 9 or 10 spines, followed by a deep notch, second part of the fin with 1 spine and 26 to 29 soft rays; pectoral fins moderately long, about 3/4 of head length; anal fin with 2 spines and 7 soft rays; caudal fin rhomboid. Scales cycloid (smooth) on head and nape, elsewhere ctenoid (rough to touch); scales present on anterior half of soft part of dorsal fin; lateral-line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, with only one air of appendages (simple, short, curved tubes) arising from the broad anterior end and passing through the transverse septum into the head.



Colour: grey/green on back, flanks yellow/silver; a black blotch on pectoral fin axil; spinous part of dorsal fin black.

**DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:**

All other Indo-Pacific croakers have fewer gillrakers (20 to 23 in *K. axillaris*) and a dissimilar form of swimbladder; most of them are more slender-bodied.

**SIZE:**

Maximum: 27 cm; common to 18 cm.

**GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

Coasts of India and Sri Lanka.

Inhabits shallow coastal waters.

**PRESENT FISHING GROUNDS:**

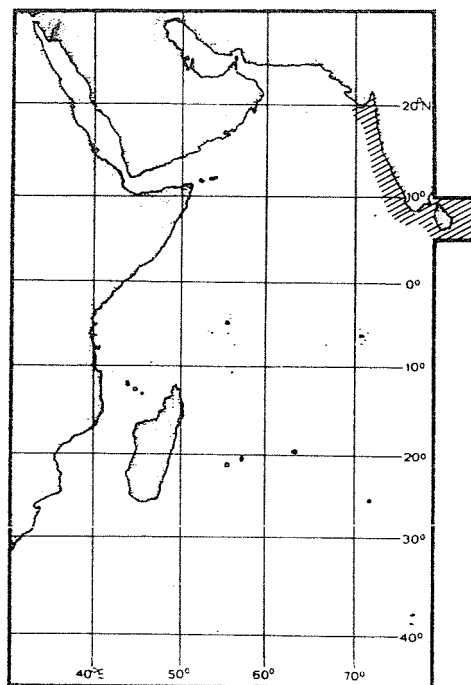
Coastal waters throughout its range.

**CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:**

Separate statistics are not reported for this species within the area.

Caught with bottom trawls, gill nets and handlines.

Marketed fresh; also dried salted.

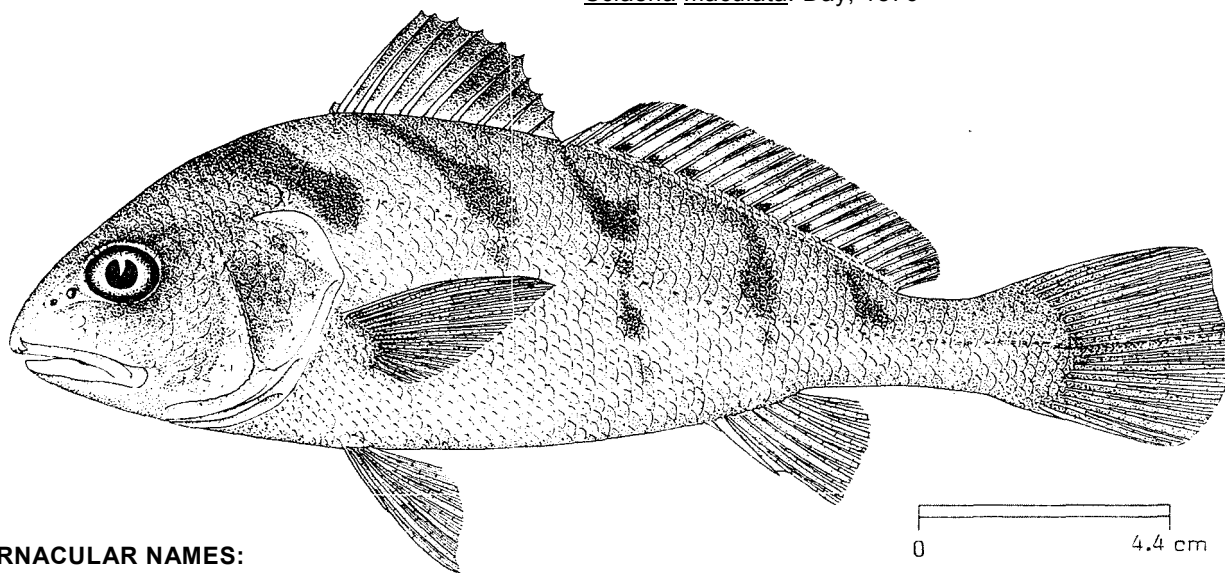


## FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)*Nibea maculata* (Schneider, 1801)

## OTHER SCIENTIFIC NAMES STILL IN USE:

*Johnius maculatus*: Fowler, 1933; Weber & de Beaufort, 1936*Sciaena maculata*: Day, 1876

## VERNACULAR NAMES:

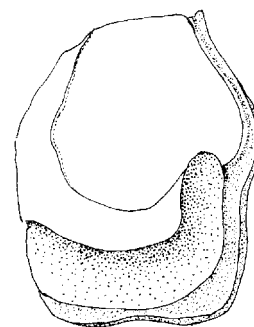
FAO :           En - Blotched croaker  
                  Fr - Courbine tachetée  
                  Sp - Corvina manchada

NATIONAL:

## DISTINCTIVE CHARACTERS:

A medium-sized species with a prominent snout, projecting beyond upper jaw. Mouth inferior: rostral pores 3, marginal pores 5, notching the edge to produce 3 lobes; mental pores 5; teeth differentiated into large and small, the large ones forming the outer series in upper jaw and the inner row in lower jaw; no canines; sagitta (large earstone) with a tadpole-shaped impression, the "tail" of which is sharply curved and cutting into the ventral edge; gillrakers on lower limb of first arch 6 to 8, with toothed plates below. Dorsal fin with 10 spines followed by a notch, second part of fin with 1 spine and 22 to 26 soft rays; anal fin with 2 spines and 7 soft rays, the second spine strong, about 1/3 of head length; caudal fin with a slightly convex hind margin, often angular above and rounded below. Scales cycloid (smooth) on snout and below end behind eye, elsewhere ctenoid (rough to touch); lateral-line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, with 19 to 21 pairs of appendages, the first longer, extending into head and branching there, last two simple parallel to the tubular end of the bladder, the others arborescent.

Colour: a distinctive colour pattern of 5 dark bars extending obliquely from the back to the lower part of flanks and a sixth dark blotch on top of caudal peduncle; first bar broadest, from nape obliquely backwards, lower parts of bars narrower and often discontinuous. Spinous part of dorsal fin black except along base, soft. part of dorsal fin with a black margin.

sagitta (inner  
surface)

**DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:**

Other *Nibe* species lack the distinctive colour pattern of *N. maculata* and have a rhomboid caudal fin. Furthermore, mouth terminal and more than 27 soft dorsal fin rays in *N. soldado* (22 to 26 in *N. maculata*); a pair of small barbets on chin and only 17 to 19 pairs of swimbladder appendages in *N. albida* (19 to 21 in *N. maculata*).

*Protonibea diacanthus*: dark blotches less well defined, totally absent in adults; pores on chin of the "false five" pattern, those of first pair close together behind tip of jaw and united by a groove.

**SIZE:**

Maximum: 30 cm; common to 22 cm.

**GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

Coasts of India and Sri Lanka. Eastwards probably extending to the Malay Peninsula.

Inhabits coastal waters.

**PRESENT FISHING GROUNDS:**

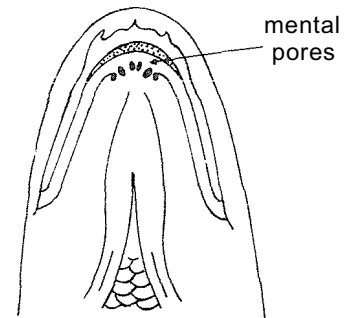
Coastal waters throughout its range; forms an important constituent of trawl catches in the Gulf of Mannar.

**CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:**

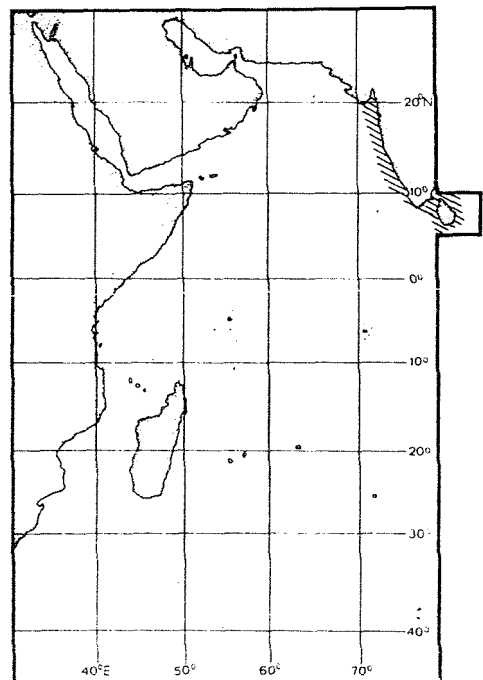
Separate statistics are not reported for this species within the area.

Caught with bottom trawls, gillnets and boat seines.

Marketed fresh; also dried salted.



underside of head  
*Protonibea diacanthus*

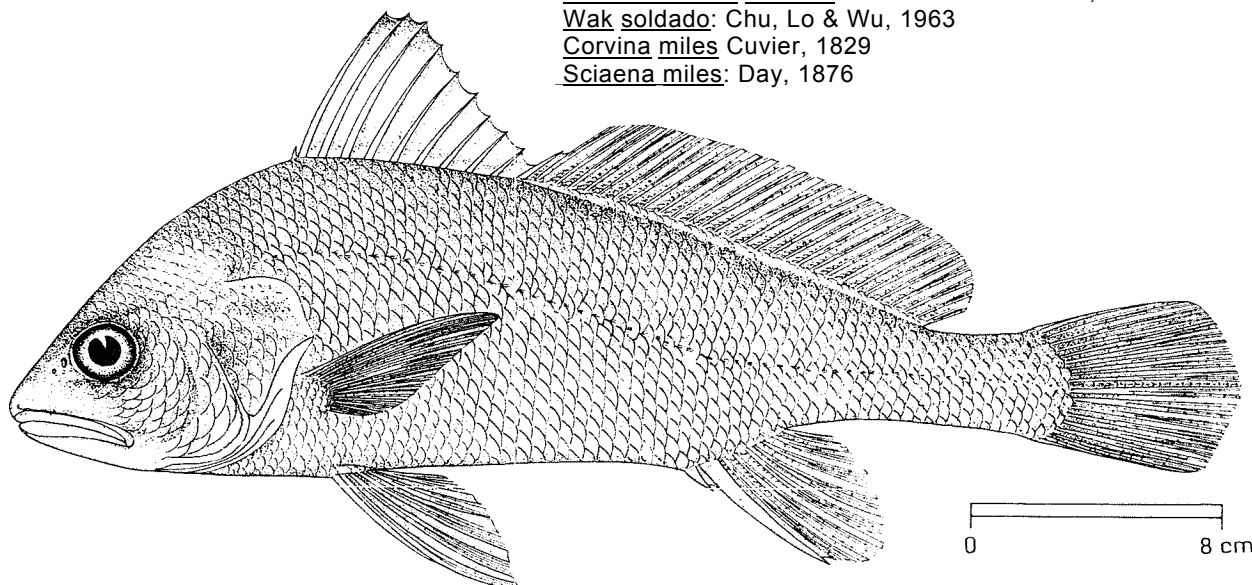


## FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)Nibea soldado (Lacepède, 1802)

## OTHER SCIENTIFIC NAMES STILL IN USE:

Johnius soldado: Fowler, 1933Pseudosciaena soldado: Weber & de Beaufort, 1936Wak soldado: Chu, Lo & Wu, 1963Corvina miles Cuvier, 1829Sciaena miles: Day, 1876

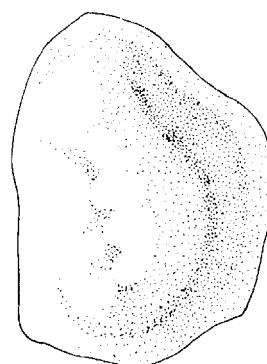
## VERNACULAR NAMES:

FAO: En - Soldier croaker  
Fr - Courbine soldat  
Sp - Corvina soldado

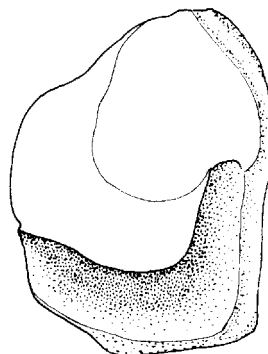
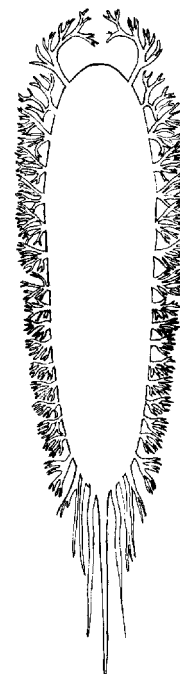
NATIONAL:

## DISTINCTIVE CHARACTERS:

A fairly large species with an arched back and deep body. Mouth terminal and at a low angle to the horizontal; rostrum pores 3, very small, marginal pores 5; mental pores 5, the median composed of two united by a crescentic groove just behind the symphysis; teeth well differentiated into large and small in both jaws; sagitta (large earstone) with a tadpole-shaped impression the "tail" of which is deeply grooved, cutting into the ventral edge; gillrakers on lower limb of first arch 8 or 9. Dorsal fin with 9 or 10 spines, followed by a deep notch, second part of fin with 1 spine and 28 to 31 soft rays; pectoral fins short, about 2/3 of head length; anal fin with 2 spines and 7 soft rays, the second spine very strong and nearly half of head length; caudal fin rhomboid. Scales cycloid (smooth) on head and chest, elsewhere ctenoid (rough to touch); lateral-line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, abruptly constricted posteriorly to its tubular end, with about 18 to 22 pairs of appendages, the first long, entering the head and branching below the occipital region, the two last simple and parallel to tubular end of bladder, the rest arborescent with no dorsal limb.



outer surface

inner surface  
sagitta

swimbladder

Colour: silvery with faint series of oblique stripes along scale rows; margin of soft part of dorsal fin dark, pectoral and pelvic fins with a yellowish tinge.

**DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:**

*Nibea albida*: lower jaw with a pair of mental barbels; soft dorsal fin rays 23 to 26 (28 to 31 in *N. soldado*).

*Paranibea semiluctuosa*: lower gillrakers 5 to 8 (8 or 9 in *N. soldado*); teeth in lower jaw uniform in size; body and fins less dark.

**SIZE :**

Maximum: 60 cm; common to 40 cm.

**GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

Coasts of India and Sri Lanka. Eastwards extending to Queensland (Australia).

Found in coastal waters down to 40 m depth.

Feeds on small fishes and invertebrates.

**PRESENT FISHING GROUNDS:**

Coastal waters throughout its range.

**CATCHES, FISHING GEAR AND FORMS OF UTILIZATION :**

Separate statistics are not reported for this species within the area.

Caught with bottom trawls, gillnets and handlines.

Marketed fresh; also dried salted.

