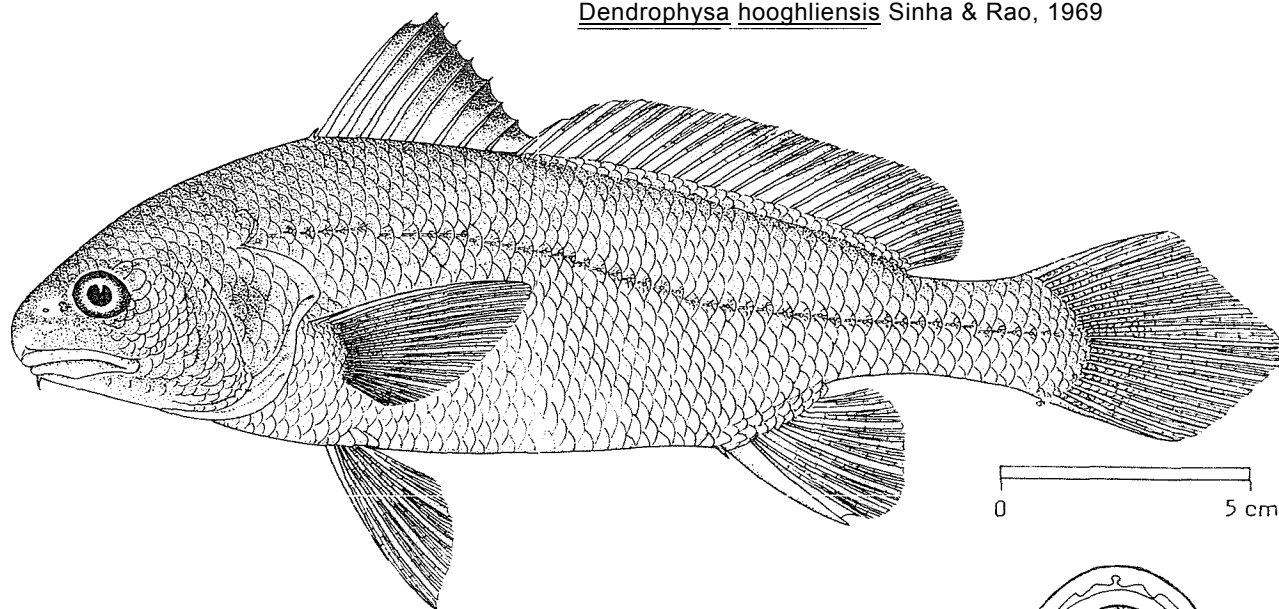


## FAO SPECIES IDENTIFICATION SHEETS

FAMILY : SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)Nibea albida (Cuvier, 1830)

## OTHER SCIENTIFIC NAMES STILL IN USE :

Sciaena albida: Day, 1876Daysciaena albida: Talwar, 1970: Trewavas, 1971, 1977Dendrophysa hooghliensis Sinha & Rao, 1969

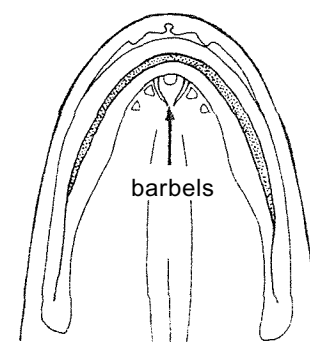
## VERNACULAR NAMES:

FAO: En - Two-bearded croaker  
Fr - Courbine  
Sp - Corvina de dos barbas

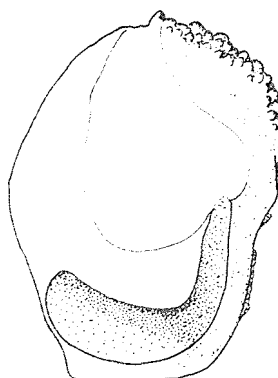
NATIONAL:

## DISTINCTIVE CHARACTERS:

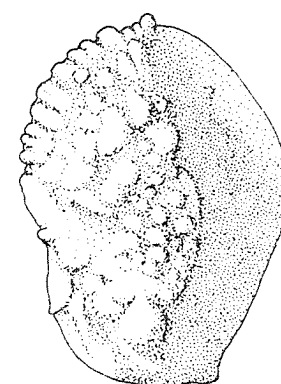
A fairly large species, with an oblong body, its depth 3 to 4 times in standard length. Snout rounded and projecting only slightly beyond tip of upper jaw; mouth terminal or only slightly inferior; rostral pores 5, marginal pores 5; mental pores 5; a pair of small tapering barbels on chin; teeth differentiated into large and small, especially in upper jaw, the large ones forming the outer series (inner series in lower jaw); no canine teeth; sagitta (large earstone) with a tadpole-shaped impression, of which the "tail" is sharply curved at about a right angle and ending close to the ventral edge; gillrakers on lower limb of first arch 7 to 9, with several toothed plates below. Dorsal fin with 9 to 10 spines, followed by a deep notch, second part of the fin with 1 spine and 23 to 26 soft rays; pectoral fins moderately long, about 3/4 of head length; anal fin with 2 spines and 7 soft rays, the second spine long and strong, up to half of head length; caudal fin bluntly rhomboid in adults. Scales cycloid (smooth) on front part of head, elsewhere ctenoid (rough to touch); lateral-line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, with about 17 to 19 pairs of appendages, one posterior simple, the rest arborescent, the anteriormost sending some of its twiglets into the head.



underside of head



inner surface



outer surface

sagitta

Colour : back grey, belly silvery ; faint oblique lines along scale rows ; spinous part of dorsal fin black, upper margin of second part of dorsal fin dusky.

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

Other Nibe species: no barbels on chin. Furthermore, 28 to 31 soft dorsal fin rays in N. soldado and a characteristic colour patten of dark blotches in N. maculata.

Dendrophysa russelli mouth inferior and only a single barbel on chin.

Umbrina species with barbel on chin: a pore at tip rather than at base of barbel; also, swimbladder without appendages.



Dendrophysa russelli

#### **SIZE:**

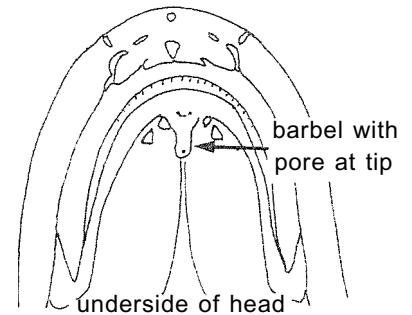
Maximum: 36 cm; common to 25 cm.

#### **GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

Coasts of India and Sri Lanka. Eastwards possibly extending to Borneo.

Inhabits shallow coastal waters and estuaries.

Feeds on prawns, small fishes and other benthic organisms.



Umbrina

#### **PRESENT FISHING GROUNDS:**

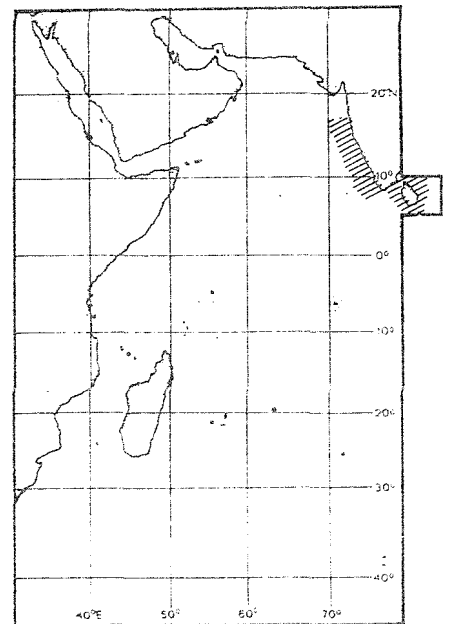
Coastal waters throughout its range.

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

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

Caught with bottom trawls, gillnets and handlines.

Marketed fresh; also dried salted; swimbladder dried



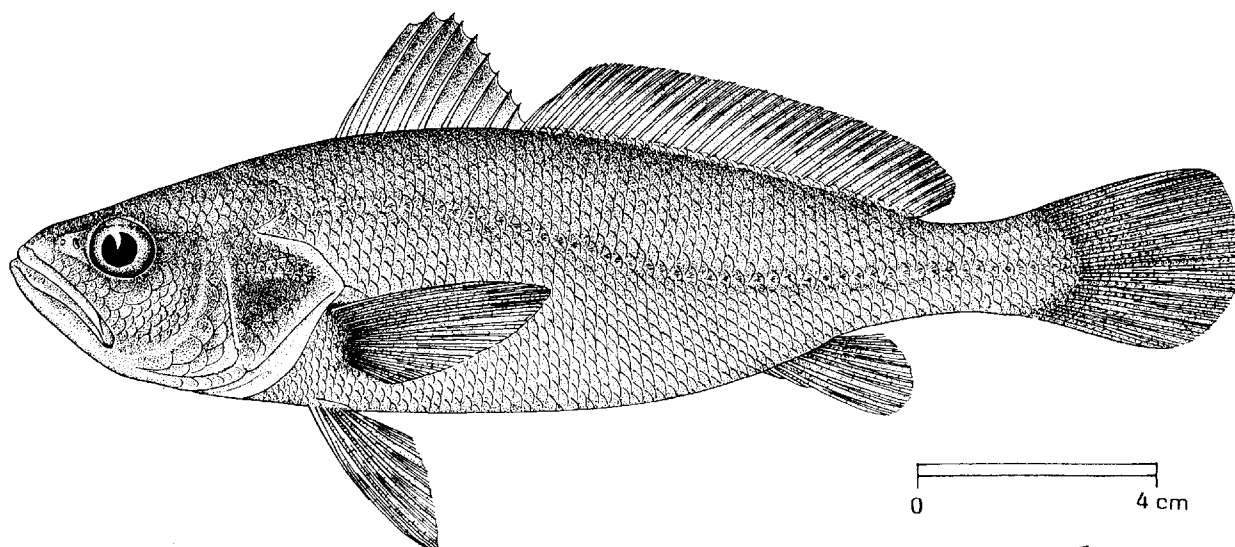
## FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)

<i>Otolithes cuvieri</i> Trewavas., 1974
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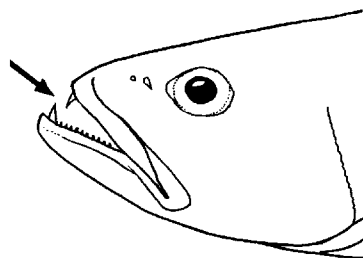
OTHER SCIENTIFIC NAMES STILL IN USE: None



## VERNACULAR NAMES:

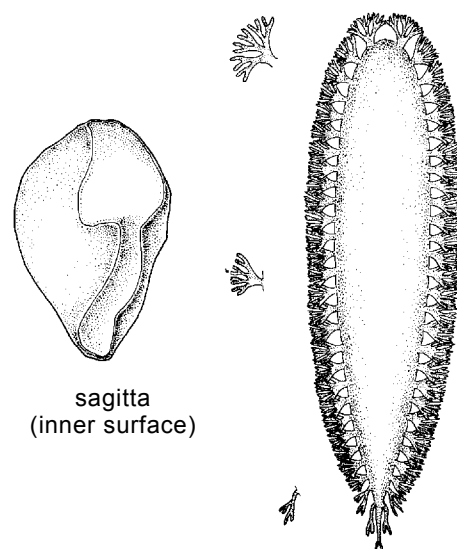
FAO :           En - Lesser tigertooth croaker  
                  Fr - Verrue tigre  
                  Sp - Bombache tigre

NATIONAL:



## DISTINCTIVE CHARACTERS:

A fairly slender species, the body depth  $3 \frac{1}{4}$  to  $4 \frac{1}{2}$  times in standard length. Snout a little longer than eye diameter, its upper profile rising evenly to dorsal fin origin but a little concave over eye; mouth large, terminal; lower jaw projecting; rostral pores absent, marginal pores 5, mental pores usually indistinct; teeth in a single series in lower jaw (sometimes part of a second series present); 1 or 2 pairs of strong canines in upper jaw and 1 pair at tip of lower jaw; sagitta (large earstone) with a tadpole-shaped impression, of which the "tail" is only slightly curved, ending in a disc near the posterior edge; gillrakers on lower limb of first arch 12 to 17, with some toothed plates anteriorly. Dorsal fin with 10 spines, followed by a notch, second part of the fin with 1 spine and 29 to 32 soft rays; anal fin with 2 spines and 7 or 8 soft rays, the second spine short and weak, its base beginning behind middle of soft part of dorsal fin; caudal fin rhomboid, but with tip pointed. Scales cycloid smooth on head, elsewhere ctenoid (rough to touch); lateral-line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, with about 28 pairs of arborescent appendages, somewhat swollen at their bases; none entering the head.



Colour: brown/pink above, yellow/gold or silver on flanks; spinous part of dorsal fin edged in grey/black, soft part of dorsal fin and anal fin edged in grey; pectoral and pelvic fins yellow.

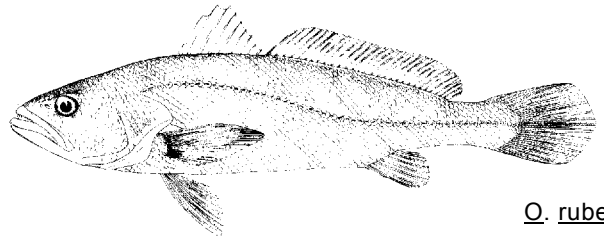
swimbladder

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

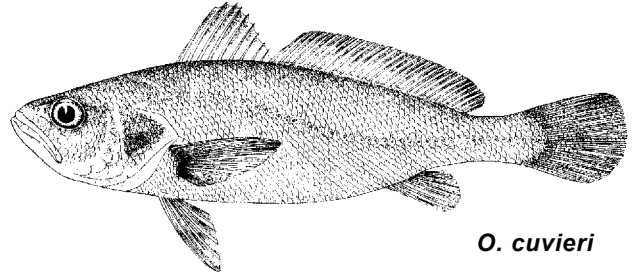
Otolithes ruber: 32 to 35 swimbladder appendages (about 28 in O. cuvieri) lower gillrakers 8 to 11 (12 to 17 in O. cuvieri); body more slender (depth 4 to 5 times in, standard length.  $3\frac{1}{4}$  to  $4\frac{1}{2}$  times in O. cuvieri).

Chrysochir aureus: lower jaw without canines; mouth inferior; lower gillrakers 8 or 9; lower jaw sensory pores distinct (in Otolithes sp. the lower jaw sensory pores not distinct).

All other Indo-Pacific croakers: lack such strong canine teeth in both jaws.



O. ruber



O. cuvieri

## SIZE:

Maximum: 30 cm; common to 20 cm.

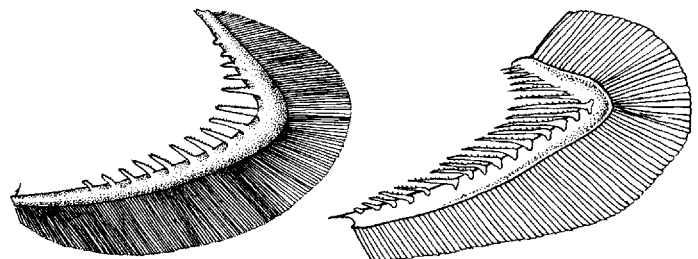
## GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Coasts of India and Pakistan.

Inhabits inshore and coastal waters.

## PRESENT FISHING GROUNDS:

Coastal waters throughout its range; forms a fishery on the northwest coast of India.



O. ruber

O. cuvieri

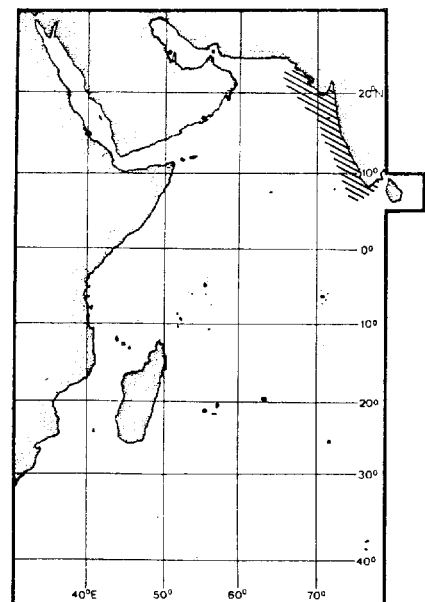
first gill arch

## CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

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

Caught with bottom trawls, gillnets and bag-nets.

Marketed fresh; also dried salted.

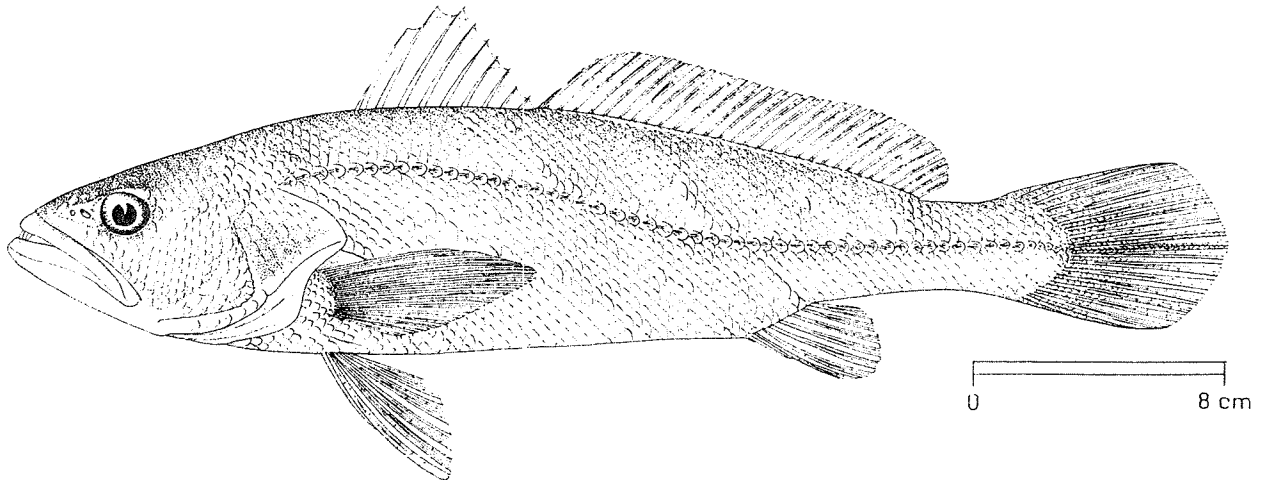


## FAO SPECIES IDENTIFICATION SHEETS

FAMILY : SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)Otolithes ruber (Schneider, 1801)

## OTHER SCIENTIFIC NAMES STILL IN USE :

Otolithus argenteus Cuvier, 1830 (quoted in Day, 1876)Otolithes argenteus: Chu, Lo & Wu, 1963

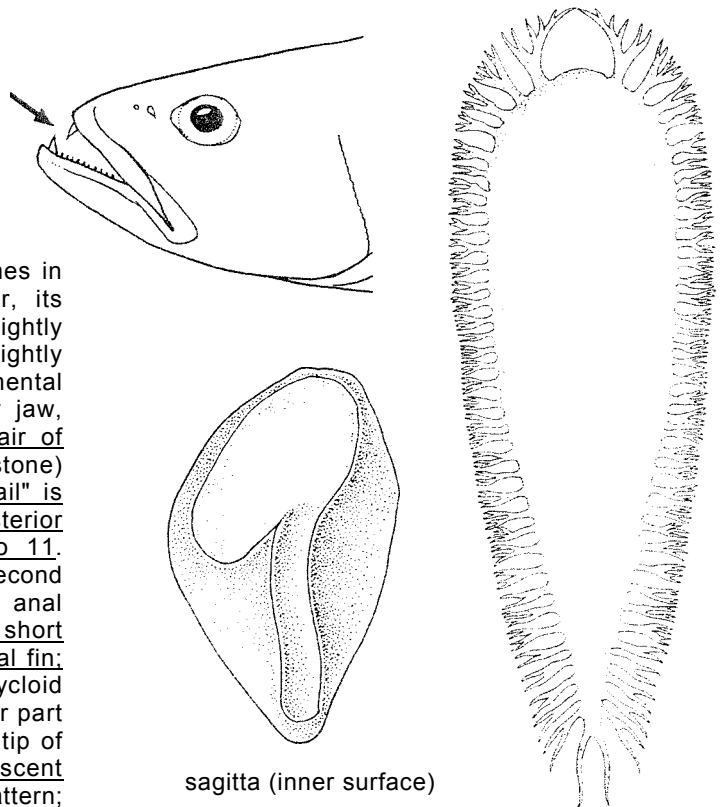
## VERNACULAR NAMES :

FAO :           En - Tigertooth croaker  
                  Fr - Grande verrue tigre  
                  Sp - Bombache tigre major

NATIONAL:

## DISTINCTIVE CHARACTERS:

A slender species, the body depth 4 or 5 times in standard length. Snout longer than eye diameter, its upper profile rising evenly to dorsal fin origin or slightly concave before eye; mouth large, terminal, slightly upturned; rostral pores absent, marginal pores 3, mental pores rather indistinct; teeth in 2 series in upper jaw, with 1 or 2 pairs of strong canines at front; a pair of canine teeth at tip of lower jaw; sagitta (large earstone) with a tadpole-shaped impression, of which the "tail" is only slightly curved, ending in a disc near the posterior edge; gillrakers on lower limb of first arch 8 to 11. Dorsal fin with 9 or 10 spines, followed by a notch, second part of the fin with 1 spine and 27 to 30 soft rays; anal fin with 2 spines and 7 soft rays, the second spine short and weak its base behind middle of soft part of dorsal fin; caudal fin rhomboid (pointed in juveniles). Scales cycloid (smooth), but a few ctenoid (rough to touch) on lower part of hind end of body; lateral-line scales reaching to tip of caudal fin. Swimbladder with 32 to 36 arborescent appendages in adults, branching in a very regular pattern; none entering head.



sagitta (inner surface)

swimbladder

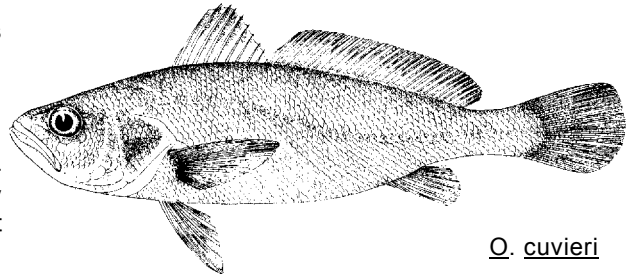
Colour: brownish above, silvery with a golden sheen on flanks and belly, often with oblique dark streaks dorsally.

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

*Otolithes cuvieri*: about 28 swimbladder appendages (32 to 36 in *O. ruber*) gillrakers 12 to 17 (8 to 11 in *O. ruber*); body deeper, 3 1/4 to 4z times in standard length 74 to 5 times in *O. ruber*).

*Chrysochir aureus*: snout prominent and canines present only in upper jaw; mouth inferior; lower jaw sensory pores distinct (in *Otolithes* sp. lower jaw sensory pores not distinct).

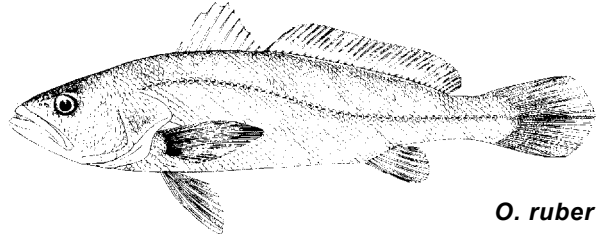
All other Indo-Pacific croakers: lack such strong teeth in both jaws.



*O. cuvieri*

**SIZE:**

Maximum: 70 cm; common to 40 cm.



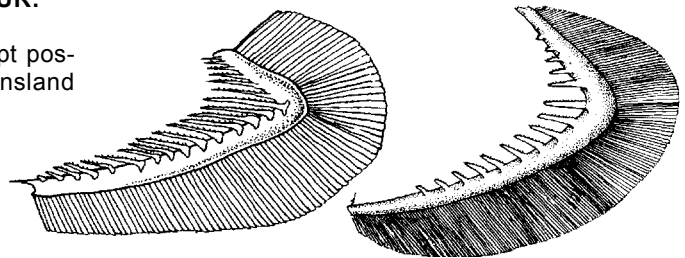
*O. ruber*

**GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:**

Throughout the Western Indian Ocean, except possibly the Red Sea. Eastward extending to Queensland (Australia) and Japan.

Inhabits coastal waters, down to 40 m depth.

Feeds on fishes and invertebrates.



*O. cuvieri*

*O. ruber*

first gill arch

**PRESENT FISHING GROUNDS:**

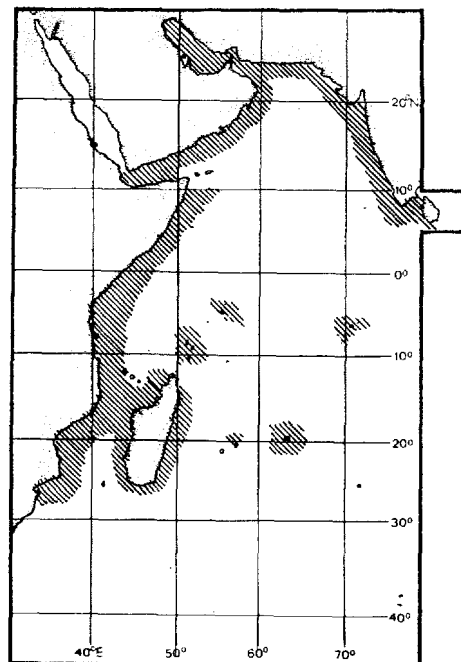
Coastal waters throughout its range.

**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.

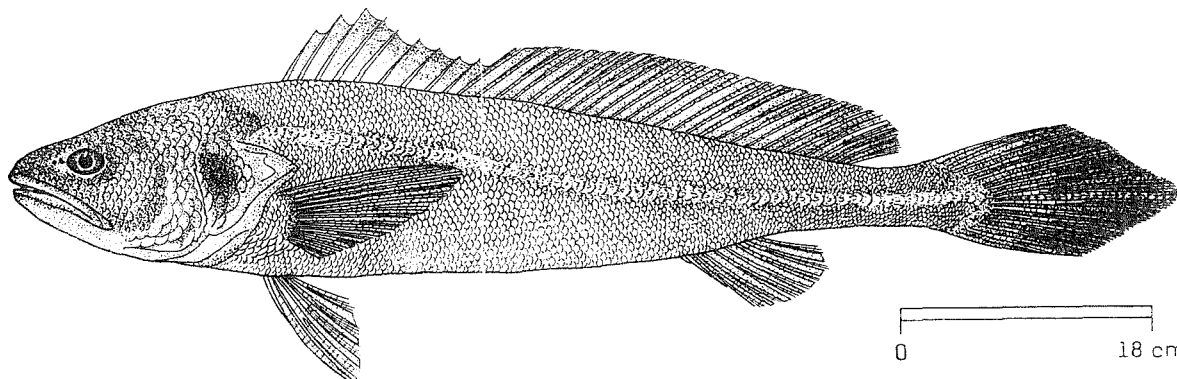


## FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCIAENIDAE

FISHING AREA 51  
(W. Indian Ocean)Otolithoides biauritus (Cantor, 1850)

OTHER SCIENTIFIC NAMES STILL IN USE : Otolithus brunneus Day, 1873  
Sciaenoides brunneus: Day, 1876  
Otolithoides brunneus: Fowler, 11333; Chu, Lo & Wu, 1963



## VERNACULAR NAMES:

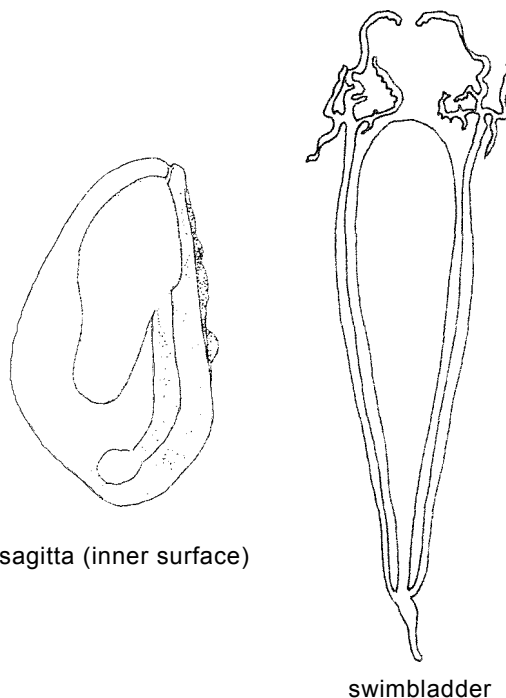
FAO : En - Bronze croaker  
 Fr - Verrue bronzée  
 Sp - Bombache bronzado

NATIONAL :

## DISTINCTIVE CHARACTERS:

A large species with a fairly pointed snout and a terminal mouth. Upper jaw reaching back well beyond eye; rostral pores 3, marginal pores 5; mental pores in 2 pairs, the first pair small and at front of chin; teeth strong and spaced in both jaws, sometimes with one upper pair of large canines; a few smaller teeth also present; sagitta (large earstone) with a tadpole-shaped impression comprising a big, pouched "head" and a "tail" only slightly curved and ending in a disc; lower gillrakers 10 or 11. Dorsal fin with 8 or 9 spines, followed by a low notch, second part of the fin with 1 spine and 27 to 32 soft rays; pectoral fins moderately long, about 3/4 of head length; anal fins with 2 spines and 7 or 8 soft rays, the second spine weak; caudal fin acutely pointed. Scales cycloid (smooth) on head and on upper part of front of body, elsewhere ctenoid (rough to touch); lateral line scales reaching to tip of caudal fin. Swimbladder carrot-shaped, with a single pair of appendages arising from posterior end of bladder and running forward beside main body of bladder and in front of it into the head, where they branch under the skull.

Colour: head and back green/grey, flanks gold/orange, paler toward belly, minutely dotted with brown. Lateral line golden yellow; dorsal, anal and caudal fins brown/yellow to pale orange, pelvic fins pale orange, pectoral fins brown with a black spot at base.



sagitta (inner surface)

swimbladder

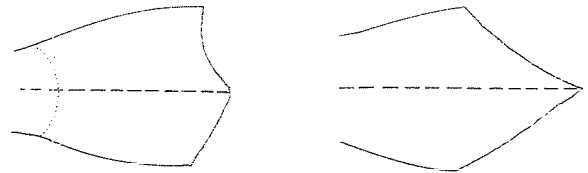
## DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

*Otolithoides pama*: inside Fishing Area 5 only one (possibly dubious) record from Karachi: 40 to 45 soft rays in dorsal fin (27 to 32 in *O. biauritus*); also, pectoral fins as long as head (3/4 of head length in *O. biauritus*).

*Argyrosomus hololepidotus*. Caudal fin biconcave, canine teeth never present in upper jaw.

*Protonibea diacanthus*: soft dorsal fin rays 22 to 25.

Most other large species of Sciaenidae: caudal fin less pointed; also, swimbladder with many appendages attached to front or sides of bladder, not solely at posterior end.



*Argyrosomus hololepidotus*

***O. biauritus***

caudal fin

## SIZE :

Maximum: 160 cm; common to 90 cm.

## GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Northwest coast of India and Sri Lanka. Also found in the Indo-Australian Archipelago.

Inhabits coastal and inshore waters.

Feeds on small fishes and invertebrates.

## PRESENT FISHING GROUNDS :

Coastal waters throughout its range; forms a fishery on the northwest coast of India.

## CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

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

Caught with bottom trawls.

Marketed fresh; also dried salted; swimbladder dried.

