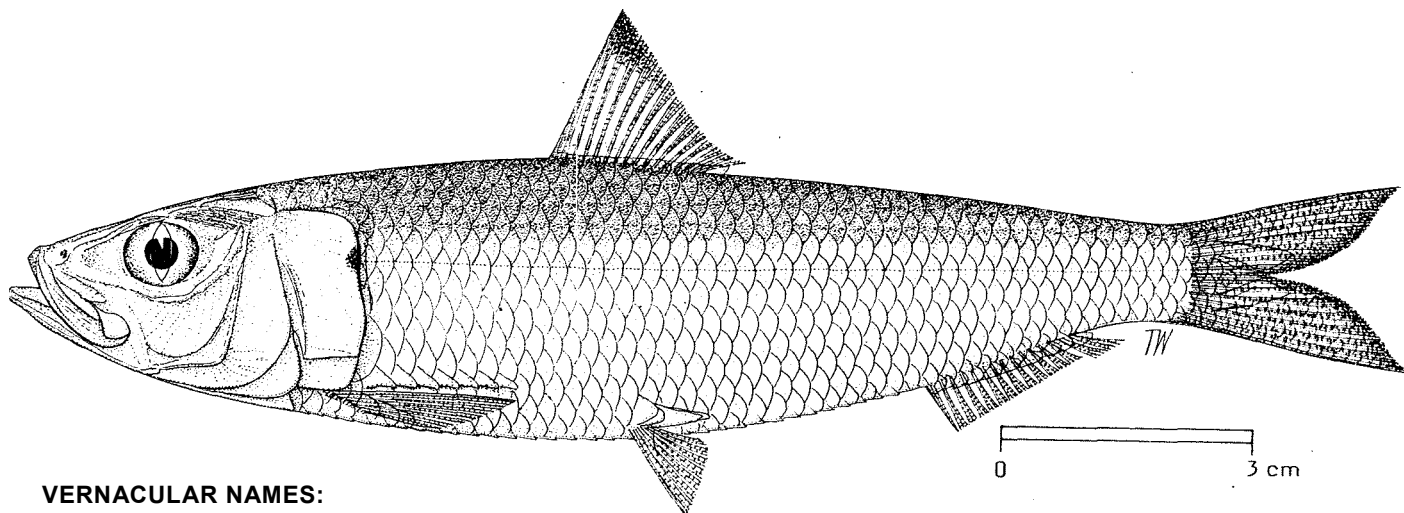


FAO SPECIES IDENTIFICATION SHEETS

FAMILY : CLUPEIDAE

FISHING AREA 51
(W. Indian Ocean)Sardinella longiceps Valenciennes, 1847

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

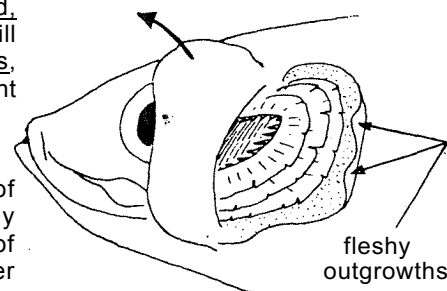
FAO : En - Indian oil-sardinella
 Fr - Sardinelle indienne
 Sp - Sardinela aceitera

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, elongate, subcylindrical in cross section; belly rounded, with a low keel of scutes. Head long, 29 to 35% of standard length; gill openings with 2 fleshy outgrowths posteriorly; gillrakers long and numerous, 150 to 255 on lower limb of first gill arch. Dorsal fin origin before mid-point of body, pelvic fin with 9 rays, anal fin set far behind dorsal fin base.

Colour: back blue/green, flanks silvery. A black spot on hind edge of gill cover (absence of underlying silver pigment) and a golden patch on body behind it; gold also on upper part of preopercle. Dorsal fin tip dusky, bases of caudal fin lobes and margin of fin dusky, with ;s clear band in between; other fins clear.



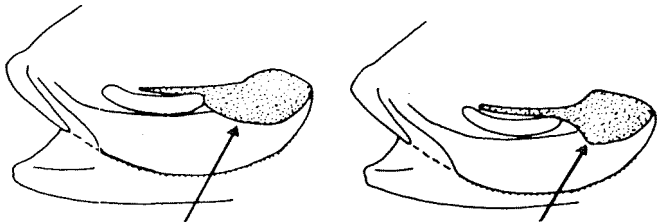
DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Sardinella neglecta: head shorter, 27 to 29% of standard length (29 to 35% in S. longiceps); also, found only off the East African coast.

Other Sardinella species: only 8 pelvic fin rays (9 in S. longiceps) and 32 to 133 gillrakers (150 to 255 in S. longiceps).

Herklotsichthys species: fewer fronto-parietal striae on top of head; paddle-shaped 2nd supra-maxilla asymmetrical, the lower half longer; also, only 29 to 52 gillrakers.

Other species of Clupeidae: gill opening smoothly rounded, without two fleshy outgrowths.



Herklotsichthys

Sardinella

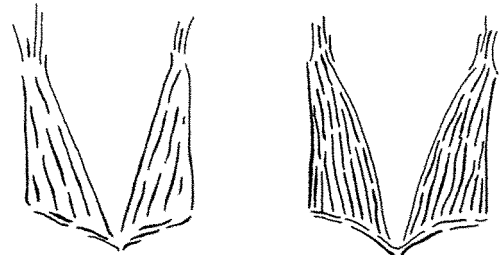
2nd supra-maxilla

SIZE:

Maximum: 20, possibly 23 cm; common to 16 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Northern part of the area (possibly including the Red Sea), but apparently replaced off the East African coasts by Sardinella neglecta; elsewhere, eastward to eastern coasts of India (replaced by S. lemura in South-east Asia).



Herklotsichthys

Sardinella

fronto-parietal striae on top of head

Pelagic in coastal waters, forming very large shoals. Spawning fishes enter coastal waters about June or July (at the beginning of the S.W. monsoon), with intensive spawning in August to September.

Feeds on phytoplankton (especially diatoms such as Fragilaria); also on crustaceans and algae.

PRESENT FISHING GROUNDS:

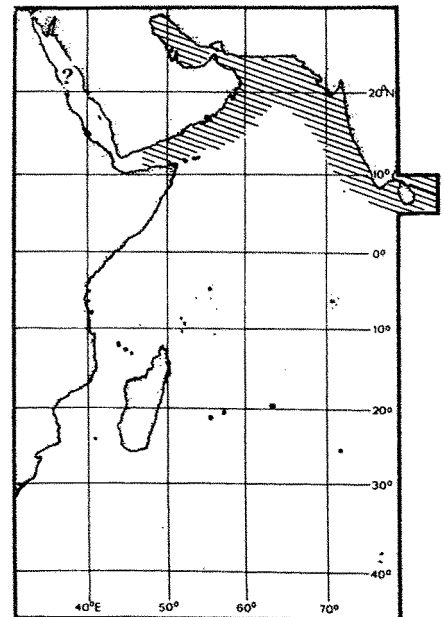
Throughout its range, but chiefly off the western coasts of India (Kerala to Maharashtra) in a 16 km strip of coastal water, reaching a peak in August to September; juveniles dominate the fishery from November to January; the fishery terminates by March or April.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

The total reported catch from the area was 210 000 t in 1980, of which the major part (200 000 t) came from Indian and Pakistan waters.

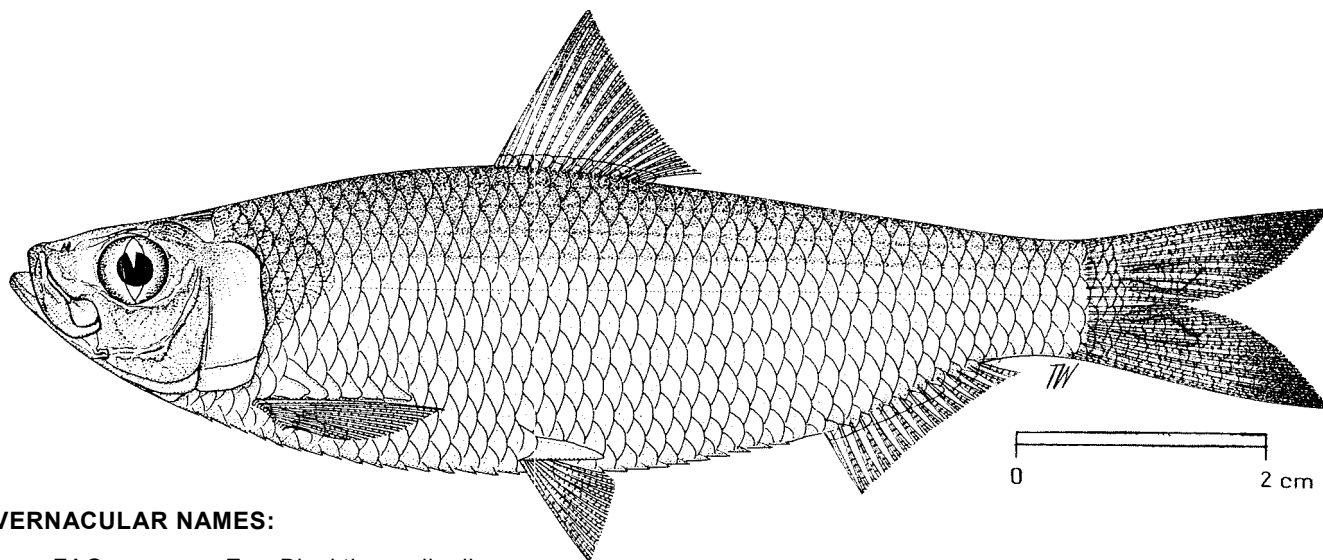
Caught with boat seines or gillnets; also shore seines and cast nets.

Marketed fresh, frozen or canned; oil used in the jute, leather, soap and other industries and for protecting canoes against shipworm; this fish is also used as manure.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CLUPEIDAE

FISHING AREA 51
(W. Indian Ocean)*Sardinella melanura* (Cuvier,

VERNACULAR NAMES:

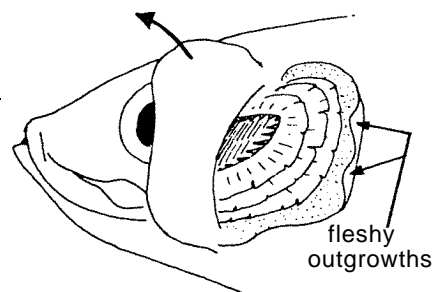
FAO : En - Blacktip sardinella
 Fr - Sardinelle queue noire
 Sp - Sardinela rabo negro

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, moderately compressed; belly with a sharp keel, total scutes usually 28 to 30. Gillrakers 38 to 74 on lower limb of first arch. Scales with vertical striae not meeting at centre of scale; no perforations on posterior part.

Colour: back blue/green, flanks silvery. Tips of caudal fin black (character retained in preserved specimens).



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Other species of *Sardinella*: hind margin of caudal fin often dusky, but caudal tips never so distinctly black.

Other species of Clupeidae: caudal fin tips not black, also, gill opening smoothly rounded, without two fleshy outgrowths (except in *Amblygaster* and *Herklotsichthys*, but caudal tips at most dusky).

SIZE:

Maximum: 12 cm; common to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Probably throughout the area; elsewhere, eastward to Southeast Asia as far as Samoa.

Pelagic in coastal waters.

PRESENT FISHING GROUNDS:

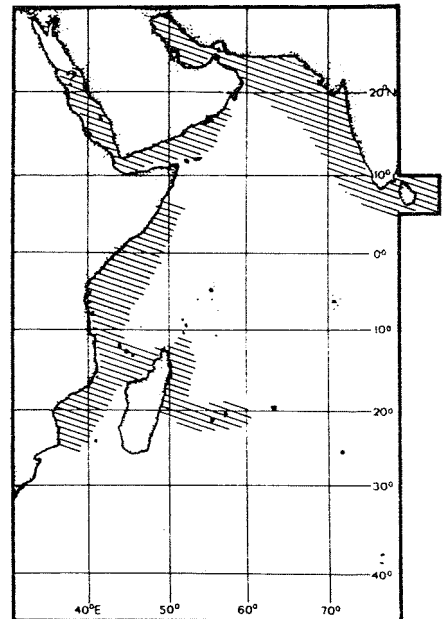
Throughout its range; a minor fishery off the southwest coast of India in December.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with seines, gillnets and trawls in shallow waters.

Marketed fresh and dried salted.

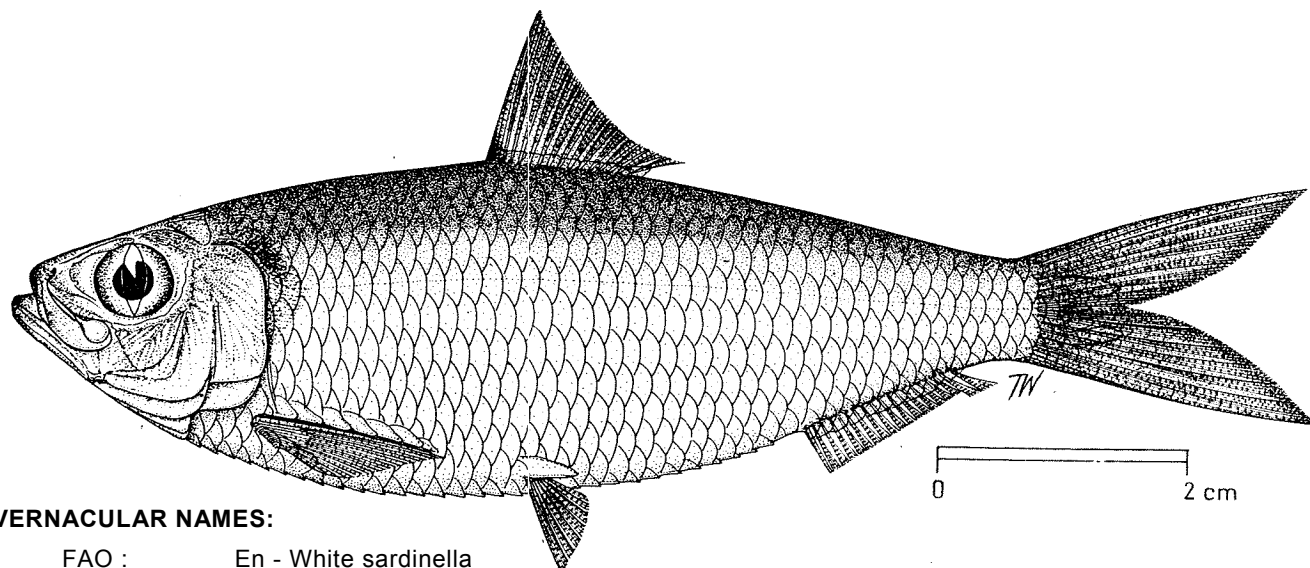


FAO SPECIES IDENTIFICATION SHEETS

FAMILY : CLUPEIDAE

FISHING AREA 51
(W. Indian Ocean)Sardinella albella (Valenciennes, 1847)

OTHER SCIENTIFIC NAMES STILL IN USE:

Sardinella bulan (Bleeker, 1849)
Sardinella perforata (Cantor, 1850)
Harengula dollfusi Chabanaud, 1933

VERNACULAR NAMES:

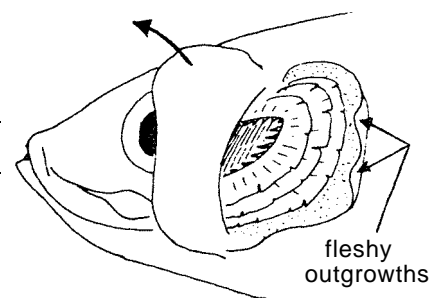
FAO : En - White sardinella
Fr - Sardinelle blanche
Sp - Sardinela blanca

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, moderately compressed, its depth very variable (25 to 40% of standard length); belly with a sharp keel, total number of scutes 30 to 32. Gill opening with 2 fleshy outgrowths posteriorly; gillrakers 41 to 68 on lower limb of first gill arch. Scales with vertical striae not meeting at centre of scale, posterior part with small perforations.

Colour: back blue/green, flanks silvery.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

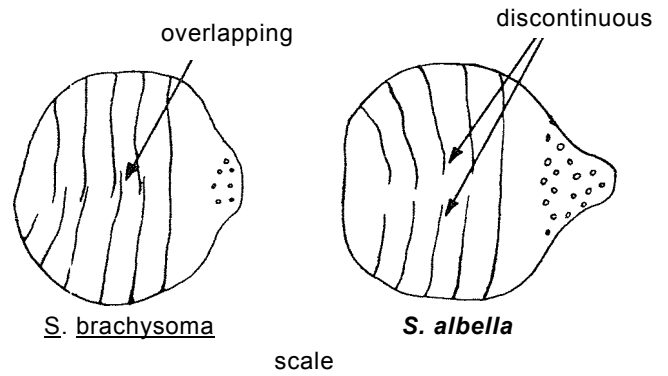
Sardinella fimbriata and S. dayi: more gillrakers on lower limb of first arch, 54 to 82 and 88 to 126 respectively only 41 to 68 in S. albella.

S. jussieui, S. sindensis and S. gibbosa: total number of scutes on belly 30 to 34, usually 32 to 34 (30 to 32 in S. albella; also, gillrakers 88 to 101 in S. jussieui).

S. brachysoma and S. melanura: scale striae overlapping or joined at centre of scale; also, tips of caudal fin black in S. melanura

Herklotsichthys species: fewer fronto-parietal striae on top of head; also, paddle-shaped 2nd supramaxilla asymmetrical, the lower half longer; scale striae joined at centre, and no perforations on exposed portion of scales.

Other species of Clupeidae: gill opening smoothly rounded, without two fleshy outgrowths.



SIZE:

Maximum: 14 cm; common to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout most of the area; elsewhere, eastward to Taiwan, Papua New Guinea, northeast and west coasts of Australia.

Pelagic in coastal waters. A very common species in most areas, usually occurring with S. gibbosa and apparently with a similar biology.

PRESENT FISHING GROUNDS:

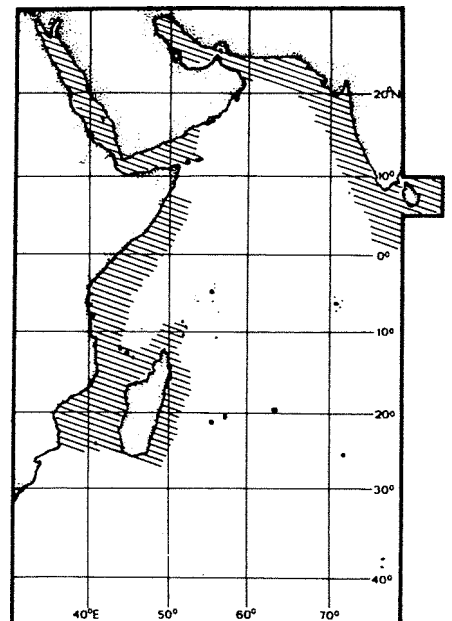
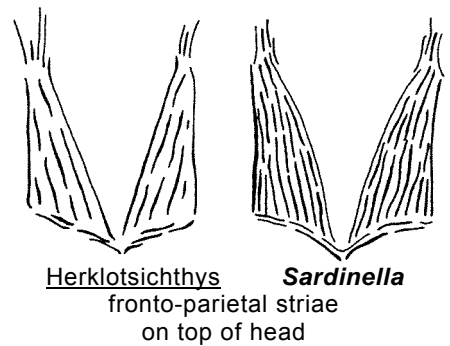
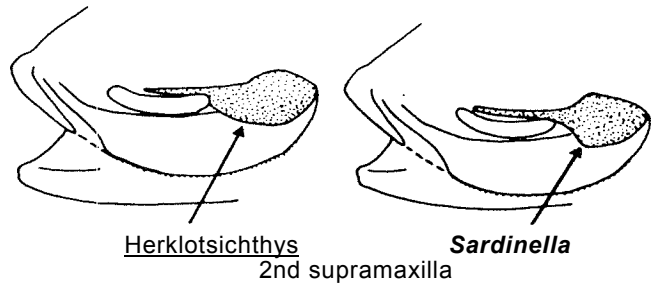
Throughout its range, but no special fishery.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with seines, gillnets, lift nets and trawls in shallow waters.

Marketed fresh and dried salted.

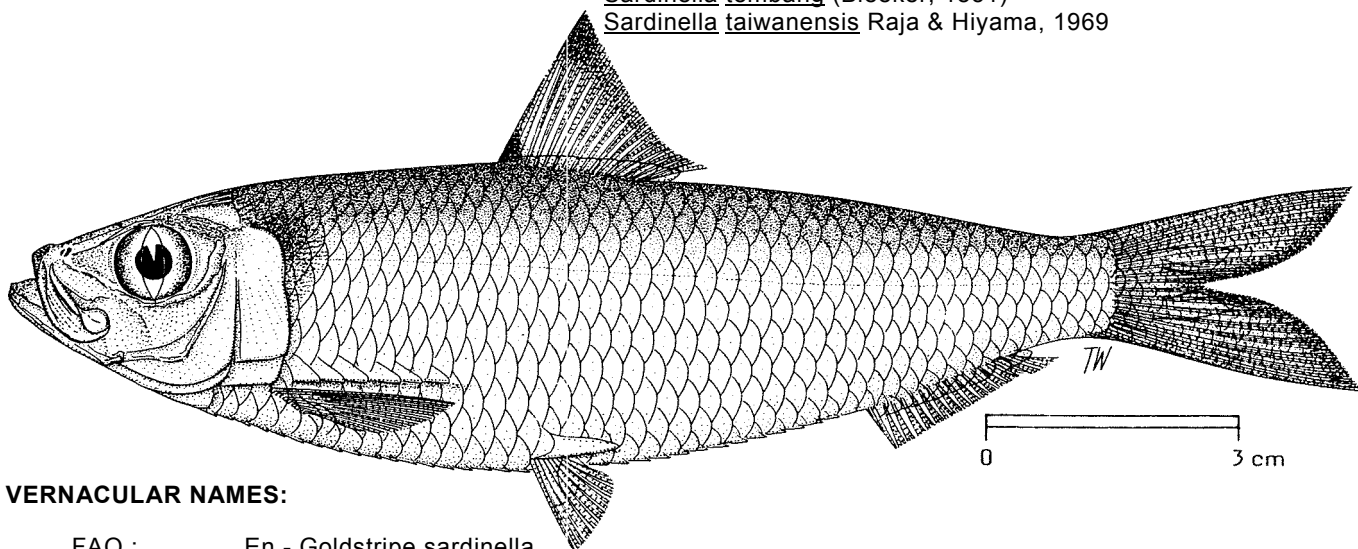


FAO SPECIES IDENTIFICATION SHEETS

FAMILY : CLUPEIDAE

FISHING AREA 51
(W. Indian Ocean)Sardinella gibbosa (Bleeker, 1849)

OTHER SCIENTIFIC NAMES STILL IN USE:

Sardinella jussieu (Lacepède, 1803) (nomen dubium)Sardinella tembang (Bleeker, 1851)Sardinella taiwanensis Raja & Hiyama, 1969

VERNACULAR NAMES:

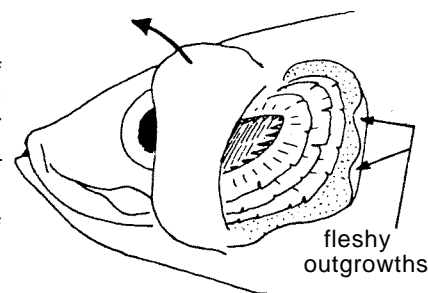
FAO : En - Goldstripe sardinella
Fr - Sardinelle dorée
Sp - Sardinela dorada

NATIONAL:

DISTINCTIVE CHARACTERS:

Body fusiform, moderately compressed, its depth variable (22 to 32% of standard length); belly with a sharp keel, total number of scutes 32 to 34. Gill openings with 2 fleshy outgrowths posteriorly; gillrakers 40 to 68 on lower limb of first arch. Scales with vertical striae not meeting at centre of scale, posterior part with many small perforations.

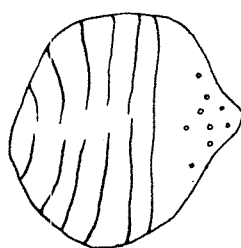
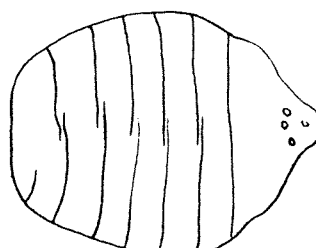
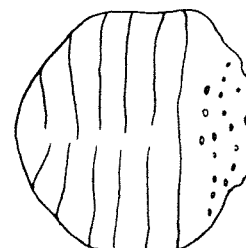
Colour: back blue/green, flanks silvery; tip of dorsal fin and margin of caudal fin dusky, remainder of caudal very faintly yellow, other fins clear.



DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Sardinella sindensis: rather few perforations on exposed portion of scale; also, confined to northern part of the Arabian Sea, and the Arabian Gulf.

Sardinella fimbriata, S. dayi and S. albella: fewer total scutes, usually 29 to 32 (32 to 34 in S. gibbosa); also, more gillrakers in S. fimbriata and S. dayi (54 to 89 and 88 to 132, respectively) only 40 to 68 in S. gibbosa.

S. sindensisS. brachysomaS. gibbosa

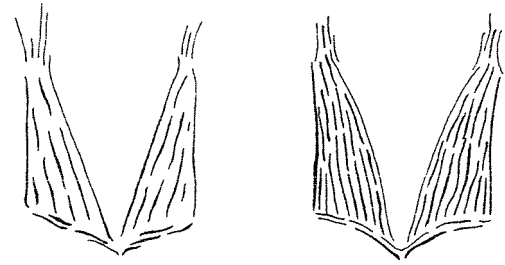
scale

Sardinella Jussieui: more gillrakers on lower limb of first gill arch (88 to 101); also, body deeper (30 to 34% of standard length; only 22 to 32 in S. gibbosa), and recorded only from Mauritius.

Sardinella brachysorra, S. melanura: scale striae overlapping or joined at centre of scale; also, black caudal fin tips in S. melanura.

Herklotsichthys species: fewer fronto-parietal striae on top of head; also, paddle-shaped 2nd supra-maxilla asymmetrical, the lower half larger; scale striae joined at centre and no perforations on exposed portion of scale.

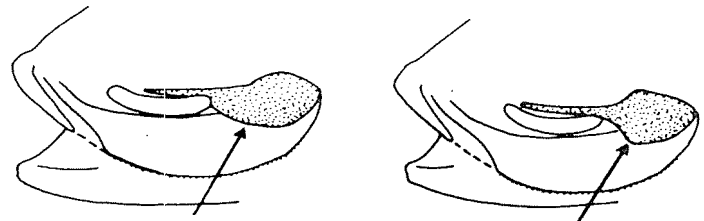
Other species of Clupeidae: gill opening smoothly rounded, without two fleshy outgrowths.



Herklotsichthys **Sardinella**
fronto-parietal striae
on top of head

SIZE:

Maximum: 17 cm; common to 15 cm.



Herklotsichthys **Sardinella**
2nd supra-maxilla

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout the area (but no certain records from the Red Sea or Mauritius); elsewhere, eastward to Taiwan, eastern and western Australia.

Pelagic in coastal waters. A very common species in most areas; spawns mainly in February to April.

Feeds on zooplankton (crustaceans, larval molluscs) and on phytoplankton (especially Trichodesmium).

PRESENT FISHING GROUNDS:

Throughout its range; from November to April off the western coasts of India (especially off the Tamil Nadu coast).

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught with seines, gillnets and trawls in shallow waters.

Marketed fresh and dried salted.

