

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

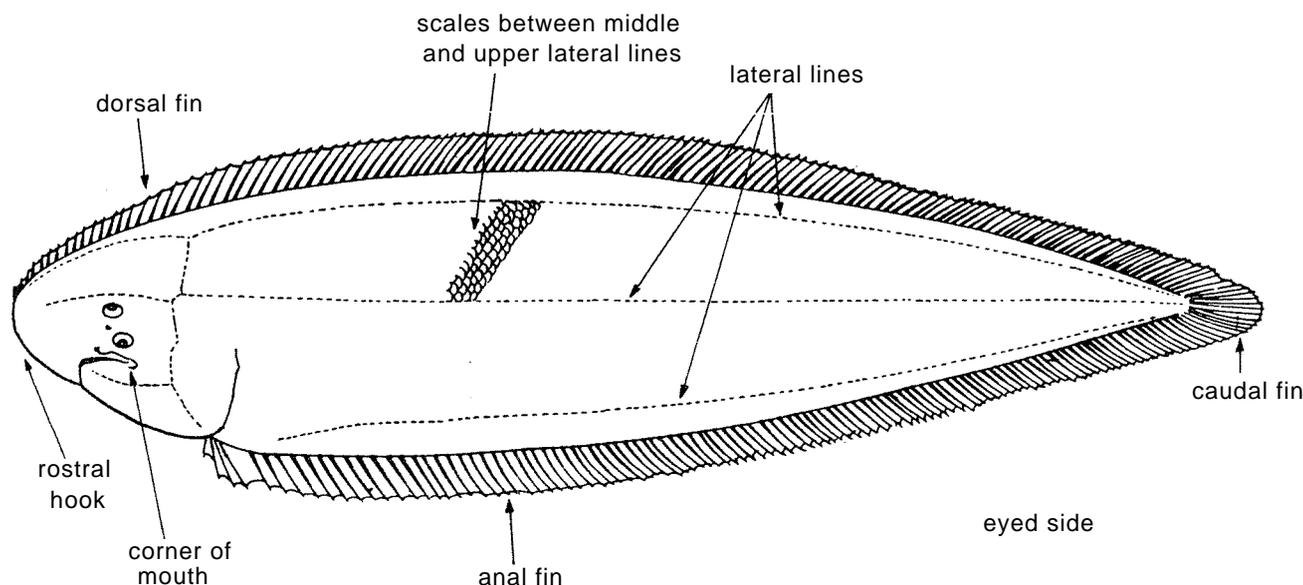
CYNOGLOSSIDAE

Tonguesoles

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 present on blind side only; a 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 present 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.

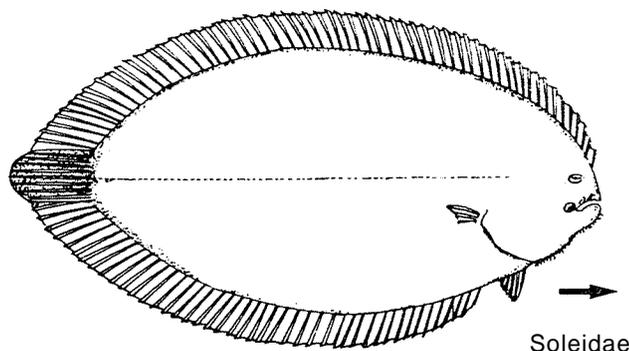
Colour: usually brownish, sometimes with indistinct cloudy patches or darker spots united into irregular crossbands on eyed side, lighter on blind side; fins greyish. Colour highly variable according to substratum.

Small to medium-sized benthic fishes, found mainly on muddy bottoms of shelf areas. The reported catch of tongue soles from Fishing Area 51 totalled about 1 000 t in 1981 (all taken by Pakistan).

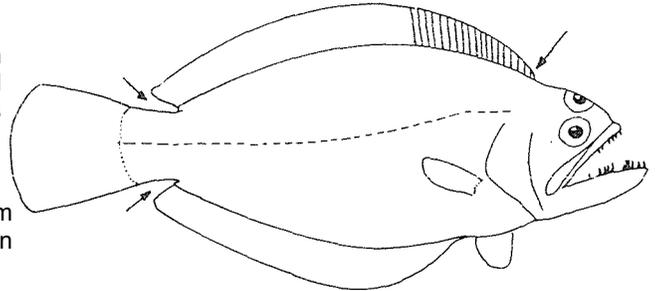


SIMILAR FAMILIES OCCURRING IN THE AREA:

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).

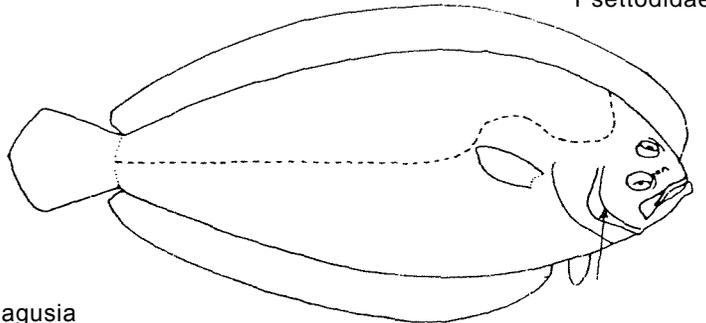


Psettodidae: dorsal and anal fins separate from caudal fin, dorsal fin not extending onto head and spiny rays present in dorsal and pelvic fins (no spiny rays in Cynoglossidae).



Psettodidae

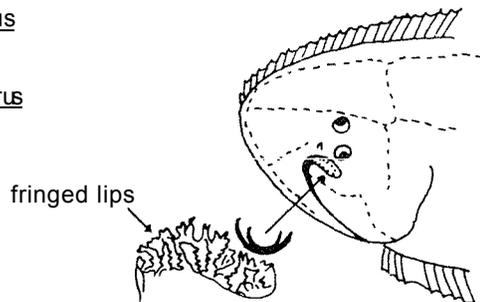
Pleuronectidae, Bothidae: margin of preoperculum free and distinct (no free margin, preoperculum hidden beneath skin in Cynoglossidae).



Pleuronectidae

KEY TO GENERA OCCURRING IN THE AREA:

- 1a. Two or 3 lateral lines on eyed side
 - 2a. Lips fringed Paraplagusia
 - 2b. Lips not fringed Cynoglossus
- 1b. No lateral line on eyed side Symphurus



Paraplagusia

LIST OF SPECIES OCCURRING IN THE AREA:

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

<u>Cynoglossus acutirostris</u> Norman, 1939	CYNO Cyno 13
<u>Cynoglossus arel</u> Schneider, 1801)	CYNO Cyno 5 (= <u>C. macrolepidotus</u> , Areas 57/71)
<u>Cynoglossus attenuatus</u> Gilchrist, 1905	
<u>Cynoglossus bilineatus</u> (Lacepède, 1802)	CYNO Cyno 2
<u>Cynoglossus capensis</u> Kaup, 1858)	
<u>Cynoglossus carpenteri</u> Alcock, 1889	CYNO Cyno 14
<u>Cynoglossus dispar</u> Day, 1877	CYNO Cyno 15
<u>Cynoglossus dubius</u> Day, 1873	CYNO Cyno 16
<u>Cynoglossus dullfusi</u> (Chabanaud, 1931)	
<u>Cynoglossus durbanensis</u> Regan, 1921	
<u>Cynoglossus ecaudatus</u> Gilchrist, 1908	
<u>Cynoglossus gilchrist</u> Regan, 1920	
<u>Cynoglossus kopsi</u> (Bleeker, 1851)	
<u>Cynoglossus lida</u> (Bleeker, 1851)	
<u>Cynoglossus lachneri</u> Menon, 1977	CYNO Cyno 17
<u>Cynoglossus marleyi</u> Regan, 1921	
<u>Cynoglossus macrostomus</u> Norman, 1928	CYNO Cyno 6
<u>Cynoglossus micro</u> microphthalmus (Bonde, 1922)	
<u>Cynoglossus puncticeps</u> Richardson, 1846)	CYNO Cyno 7
<u>Cynoglossus sealarki</u> Regan, 1908	
<u>Cynoglossus sinus arabici</u> (Chabanaud, 1931)	
<u>Cynoglossus zanzibarensis</u> Norman, 1939	CYNO Cyno 18

Paraplagusia bilineata (Bloch, 1784)

CYNO Para 1

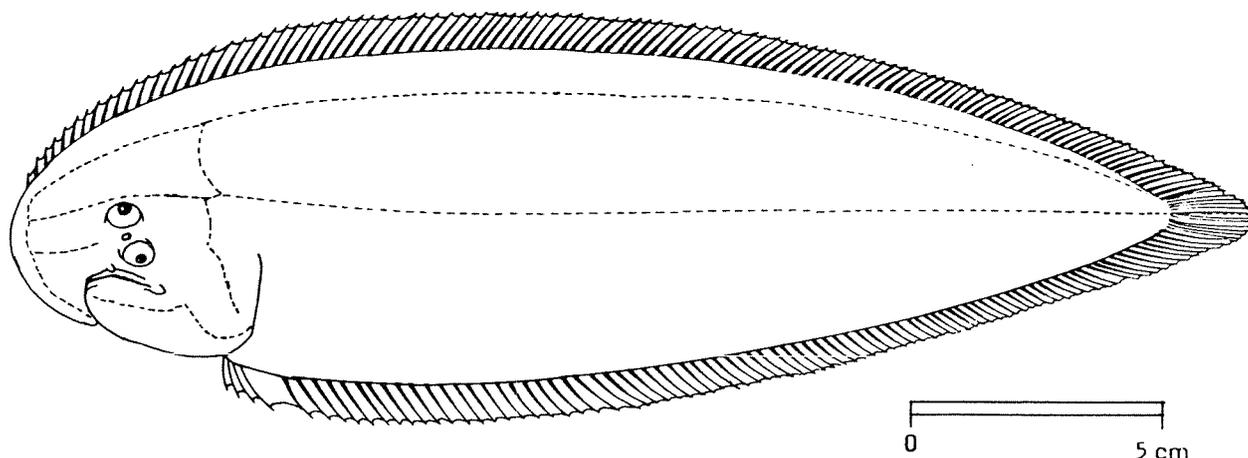
- *Symphurus arabicus Chabanaud, 1954
- Symphurus gilesii (Alcock, 1889)
- Symphurus macrophthalmus Norman, 1939
- Symphurus ocellatus Bonde, 1922
- Symphurus sayademalensis Chabanaud, 1956
- Symphurus seychellensis Chabanaud, 1955
- Symphurus septemstriatus (Alcock, 1891)
- Symphurus strictus Gilbert, 1905
- Symphurus trifasciatus (Alcock, 1894)
- Symphurus woodmasoni (Alcock, 1889)

Prepared by A.G.K. Menon, Zoological Survey of India, Madras, India

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

FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

FISHING AREA 51
(W. Indian Ocean)Cynoglossus bilineatus (Lacepède, 1802)OTHER SCIENTIFIC NAMES STILL IN USE : Cynoglossus quadrilineata (Bleeker, 1851)

VERNACULAR NAMES:

FAO : En - Fourlined tonguesole
 Fr - Langue à quatre lignes
 Sp - Lengua de cuatro lineas

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

C. attenuatus: 2 lateral lines on blind side but larger scales 10 or 11 scale rows between lateral line on eyed side

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

Paraplagusia species: have fringed lips.

Symphurus species: no lateral line on eyed side (2 in C. bilineatus).

SIZE :

Maximum: 35 cm; common to 30 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

In the area, found off Pakistan, the west coast of India and Sri Lanka. Elsewhere, from the east coast of India and Malaysia, the Philippines, Indonesia and the north and east coasts of Australia.

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

Feeds predominantly on bottom living invertebrates.

PRESENT FISHING GROUNDS:

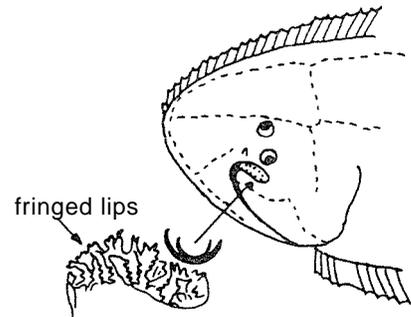
Trawling grounds on the continental shelf down to deeper waters (to about 400 m depth).

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION :

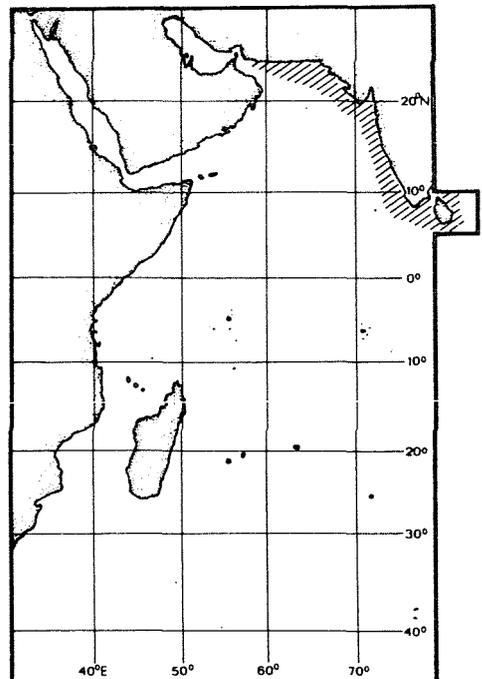
Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh and frozen; also dried salted.

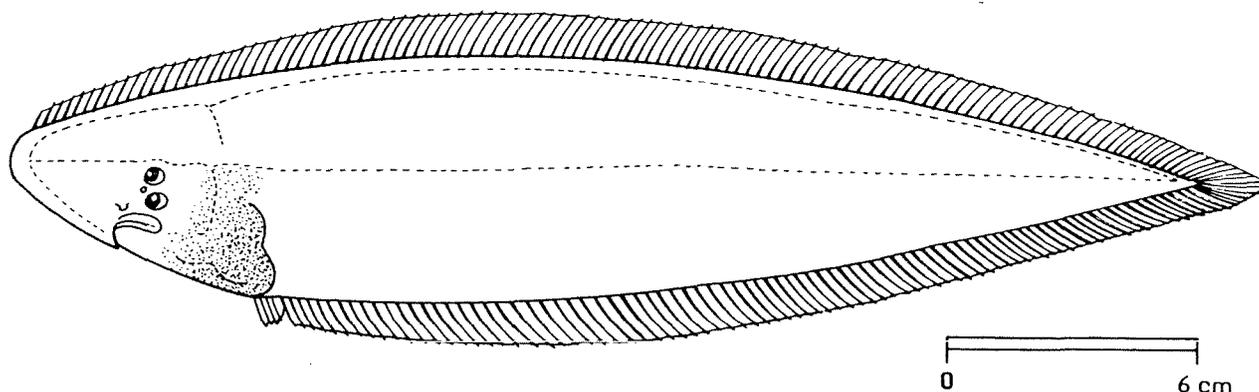


Paraplagusia



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

FISHING AREA 51
(W. Indian Ocean)*Cynoglossus arel* (Schneider 1801)OTHER SCIENTIFIC NAMES STILL IN USE: *Cynoglosses macrolepidotus* (Bleeker, 1801)

VERNACULAR NAMES:

FAO : En - Largescale tonguesole
 Fr - Langue à grandes écailles
 Sp - Lengua escamuda

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. Two 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 scale rows between lateral lines on eyed side.

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

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus bilineatus, *C. attenuatus*, *C. dispar* and *C. lachneri*: 2 lateral lines on blind side (none in *C. arel*).

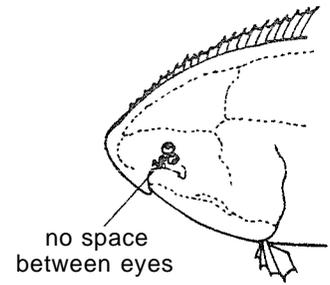
C. dubius: one lateral line on blind side.

C. ecaudatus, C. kopsi, C. macrostomus and C. sinusarabici: 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. arel).

Paraplagusia species: have fringed lips.

Symphurus species: no lateral line on eyed side (2 in C. arel).



C. macrostomus

SIZE:

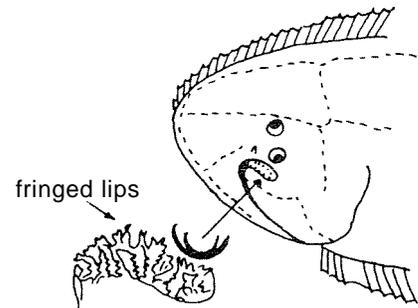
Maximum: 38 cm; common to 30 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR :

In the area, from the "Gulf" to the west coast of India and Sri Lanka. Elsewhere, from India to the Philippines and Indonesia.

Inhabits muddy and sandy bottoms of the continental shelf.

Feeds predominantly on bottom living invertebrates.



Paraplagusia

PRESENT FISHING GROUNDS :

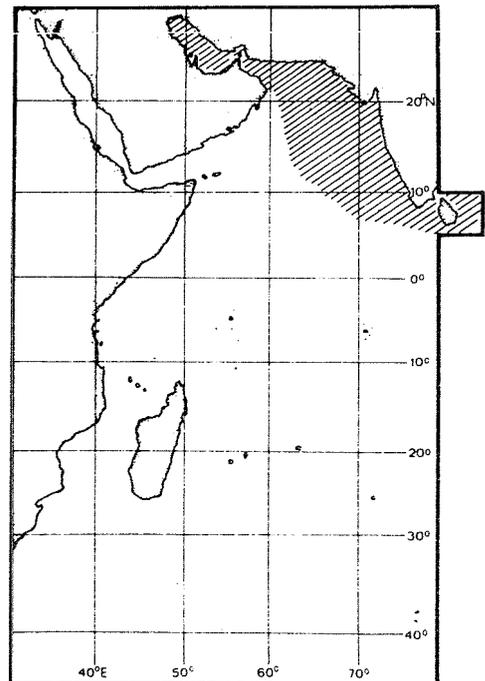
Trawling grounds on the continental shelf down to 125 m.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION :

Separate statistics are not reported for this species.

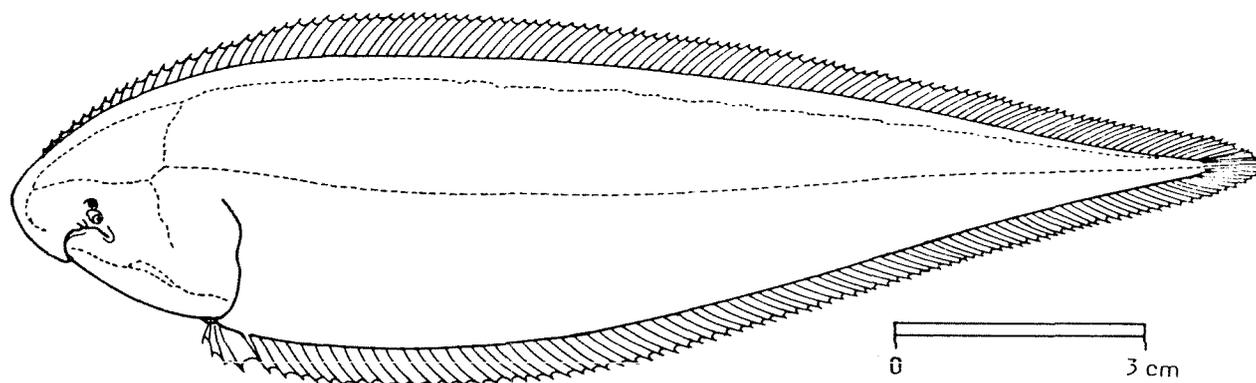
Caught mainly with bottom trawls.

Marketed mostly fresh and frozen; also dried salted.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

FISHING AREA 51
(W. Indian Ocean)Cynoglossus macrostomus Norman, 1928OTHER SCIENTIFIC NAMES STILL IN USE: Cynoglossus luctosus Chabanaud, 1947

VERNACULAR NAMES:

FAO : En - Malabar tonguesole
 Fr - Langue malabar
 Sp - Lengua malabárica

NATIONAL:

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. Two lateral lines on eyed side but none on blind side. Scales ctenoid (rough to touch) on both sides of body, moderately sized, 14 to 16 scale rows between lateral lines on eyed side.

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

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

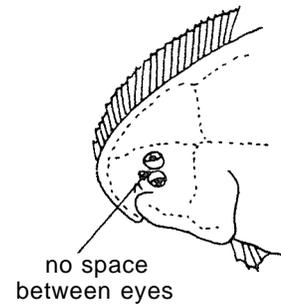
Cynoglossus kopsi and C. ecaudatus: also no space between eyes, but scales larger, 7 to 12 rows between lateral lines on eyed side in C. kopsi and 10 to 12 in C. ecaudatus (14 to 16 in C. macrostomus).

C. capensis: also no space between eyes but 3 lateral lines on eyed side (2 in C. macrostomus).

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

Paraplagusia species: have fringed lips.

Symphurus species: no lateral line on eyed side.



C. kopsi

SIZE:

Maximum: 15 cm; common to 15 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR :

Found along the west coast of India where it forms the object of an important fishery. Elsewhere, restricted to the east coast of India.

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 mostly on bottom living invertebrates, especially worms.

PRESENT FISHING GROUNDS:

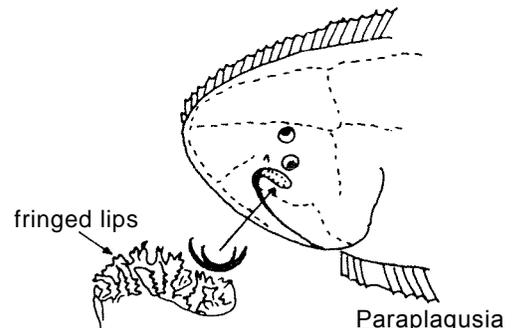
Trawling grounds on the continental shelf, mainly between depths of 15 and 25 m.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

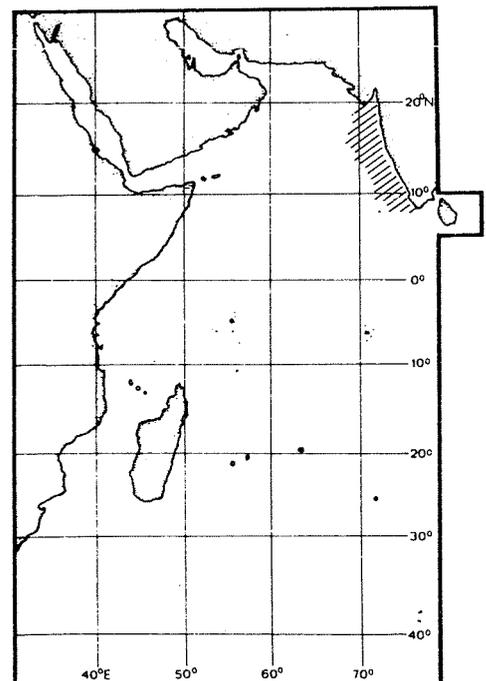
Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh or frozen; also dried salted.



Paraplagusia

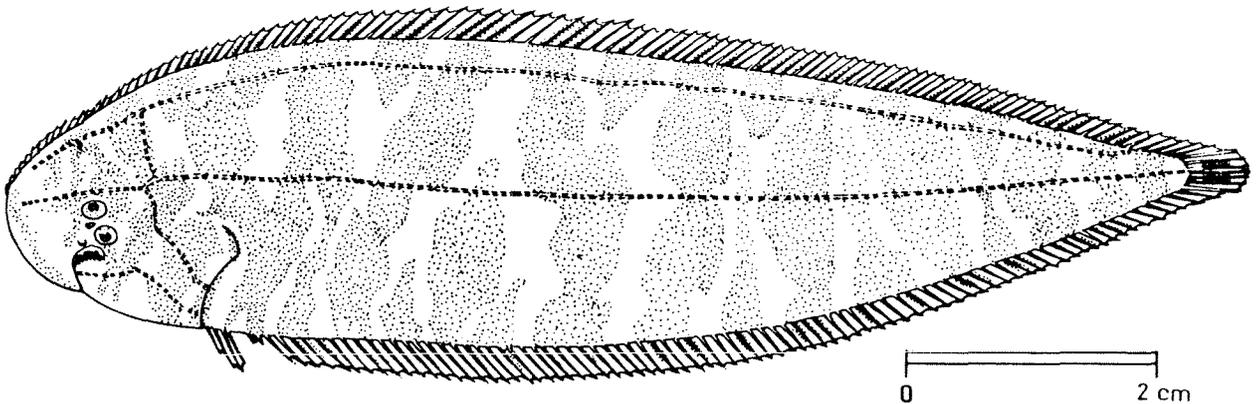


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

FISHING AREA 51
(W. Indian Ocean)*Cynoglossus puncticeps* (Richardson, 1846)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Speckled tonguesole

Fr - Langue tachetée

Sp - Langue moteada

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 very short, corner of mouth not reaching beyond lower eye, a little nearer to tip of snout than to gill opening. Two lateral lines on eyed side, none on blind side. Scales ctenoid (rough to touch) on both sides of body, 15 to 19 scale rows between lateral lines on eyed side.

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

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

The distinct colour pattern readily distinguishes *C. puncticeps* from other *Cynoglossus* species occurring in the area.

Paraplagusia species: have fringed lips.

Symphurus species: no lateral line on eyed side.

SIZE:

Maximum: 18 cm; common to 10 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR :

In the area, found only along the coasts of India. Elsewhere, from the east coasts of India to Malaysia, the Philippines, Indonesia and northwest coast of Australia.

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

Feeds mostly on bottom living invertebrates.

PRESENT FISHING GROUNDS:

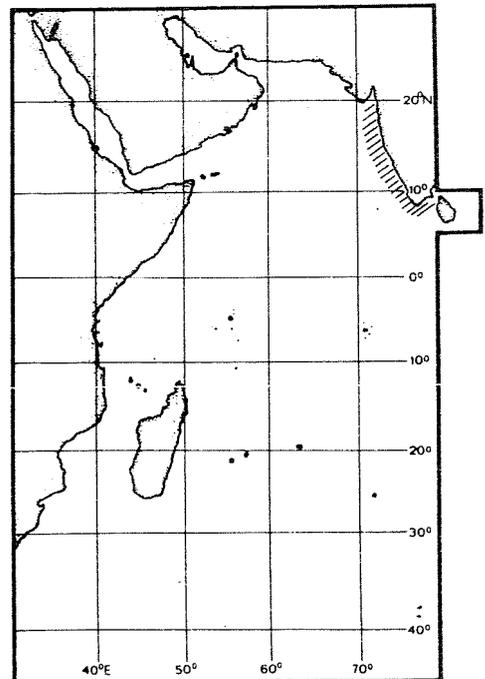
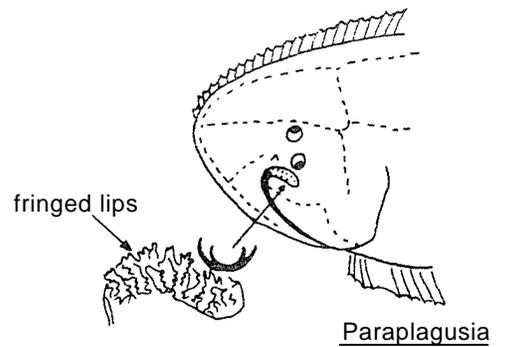
Trawling grounds of the continental shelf, down to 140 m depth; also in estuaries.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls and beach seines.

Marketed mostly fresh or frozen; also dried salted.

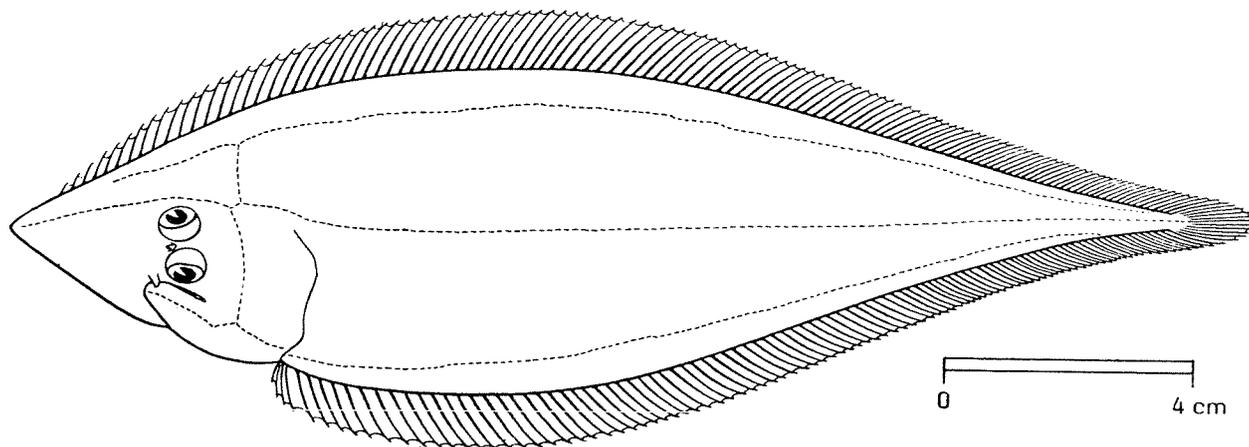


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: CYNOGLOSSIDAE

FISHING AREA 51
(W. Indian Ocean)*Cynoglossus acutirostris* Norman, 1939

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Sharpnose tonguesole
 Fr - Langue poignard
 Sp - Lengua picuda

NATIONAL:

DISTINCTIVE CHARACTERS:

Body flat and elongate, with dorsal and anal fins joined to caudal fin. Eyes on the left side of body, with a rather narrow space between them; snout acutely pointed, rostral hook long, reaches below anterior border of lower eye; corner of mouth reaching beyond lower eye, much nearer to gill opening than to tip of snout. Three lateral lines on ocular side; no lateral line on blind side. Scales on eyed side cycloid (smooth to touch) anteriorly, ctenoid rough posteriorly; scales on blind side cycloid; 18 to 20 rows of scales between upper and middle lateral lines.

Colour: upper side uniformly brownish, lower whitish.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cynoglossus carpenteri and *C. marleyi*: also have 3 lateral lines on eyed side but snout shorter, 33 and 42% of head length (43% in *C. acutirostris*). Furthermore, scales larger, 15 to 19 rows between upper and middle lateral line in *C. carpenters* (18 to 20 in *C. acutirostris*) and all scales ctenoid on eyed side in *C. marleyi* (cycloid, at least anteriorly, in *C. acutirostris*).

C. capensis, *C. microphthalmus*, *C. sealarki* and *C. zanzibarensis*: also have 3 lateral lines on eyed side but have only 1 nostril on eyed side 2 in *C. acutirostris*.

Other Cynoglossus species: have 1 or 2 lateral lines on eyed side.

Paraplagusia species: have fringed lips.

Symphurus species: have no lateral line on eyed side.

SIZE:

Maximum: 25 cm; common to 19 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR :

Found only in the north western part of the area (Gulf of Aden).

Inhabits sandy bottoms in waters beyond 200 m depth.

Feeds on bottom living invertebrates.

PRESENT FISHING GROUNDS :

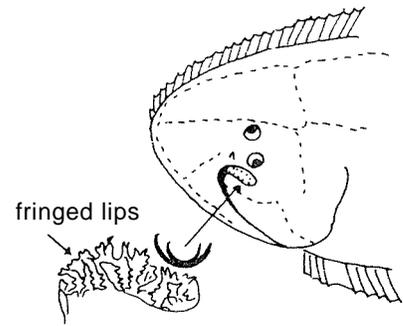
Trawling grounds at the edge of the continental shelf down to about 200 m depth.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with bottom trawls.

Marketed mostly fresh and frozen.



Paraplagusia

