1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

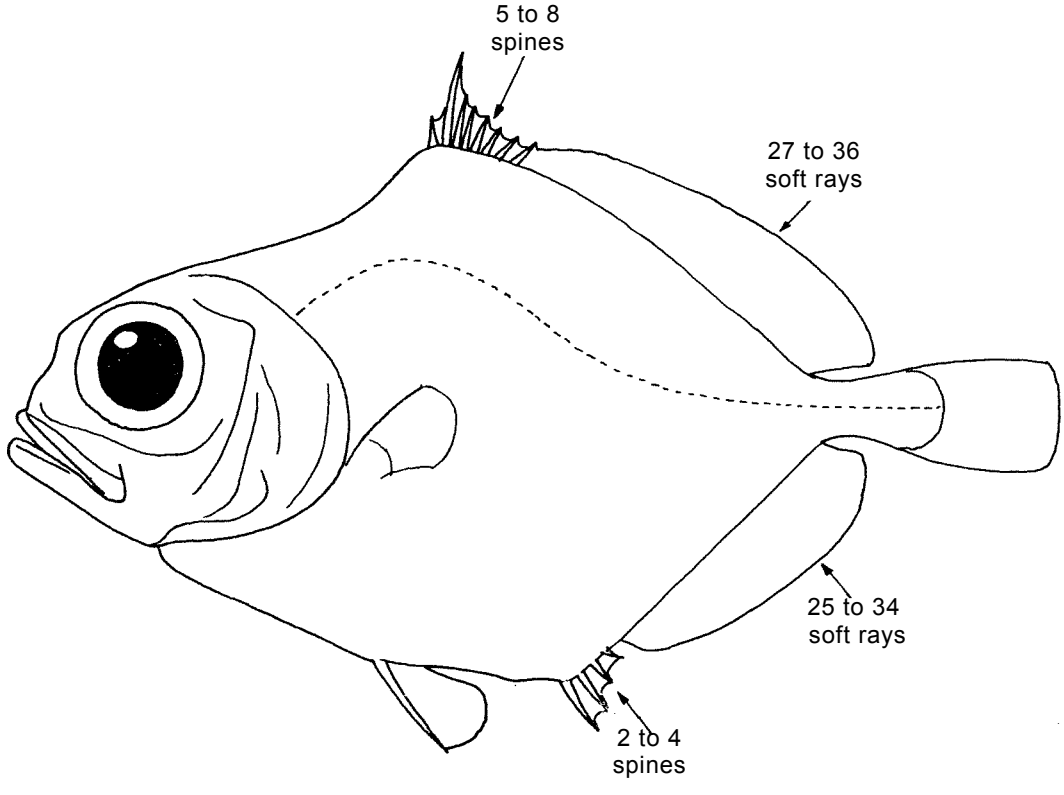
OREOSOMATIDAE

Oreo dories

Compressed, deep-bodied fishes. Predorsal profile nearly straight to strongly concave; head large, with ridges or spines; mouth terminal, moderately protractile; eyes large to enormous. Dorsal fin with 5 to 8 spines and 27 to 36 soft rays, the spinous part separated from the soft part by a deep notch; pectoral fins small, rounded, with 17 to 22 soft rays; pelvic fins with 1 spine and 5 to 7 soft rays; anal fin with 2 to 4 spines and 25 to 34 soft rays; caudal fin truncate to slightly rounded with 13 (rarely 12) principal rays; vertebrae 35 to 43. A single curved lateral line. Body covered with small, cycloid (smooth to touch) or ctenoid (rough) scales; cycloid scales deciduous (easily shed), ctenoid scales moderately to extremely tenacious. Juveniles with enlarged abdominal area, often with prominent cones, plates or fleshy proturberances on abdomen and occasionally also below base of spiny part of dorsal fin.

Colour: when fresh, dull grey, when preserved brownish grey, fins dark grey or black; juveniles usually with dark spots.

Moderate-sized fishes (to about 50 cm in total length), probably worldwide in distribution, although apparently most abundant in southern temperate oceans. Adults inhabit very deep waters (from about 500 m to over 1 200 m), juveniles are pelagic. Only 3 species Pseudocyttus maculatus, Neocyttus rhomboidalis and N. acanthorhynchus have been recorded from Fishing Area 51, but it is very likely that Allocyttus verrucosus and Oreosoma atlanticum are also present. Flesh of larger species is of good quality although there are no reports of oreos being commercially fished in the area.



SIMILAR FAMILIES OCCURRING IN THE AREA:

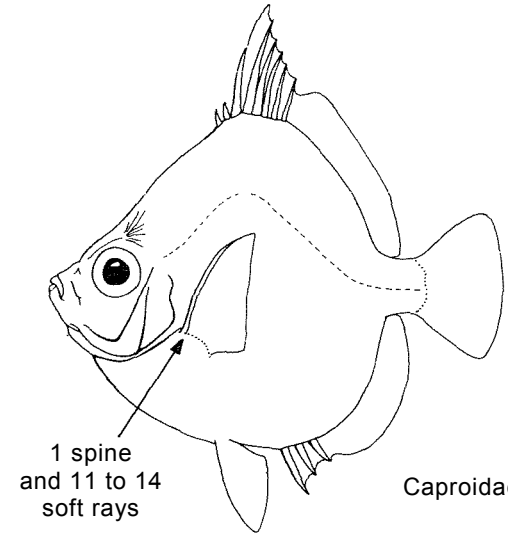
Caproidae: pectoral fins with 1 spine and 11 to 14 soft rays (no spine and 17 to 22 soft rays in Oreosomatidae); mouth small, the upper jaw shorter than snout length (upper jaw longer than snout in Oreosomatidae).

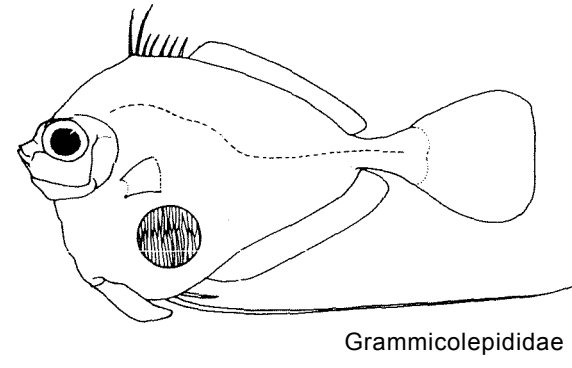
Grammicolepididae: mouth small; scales linear, dorsoventrally elongated.

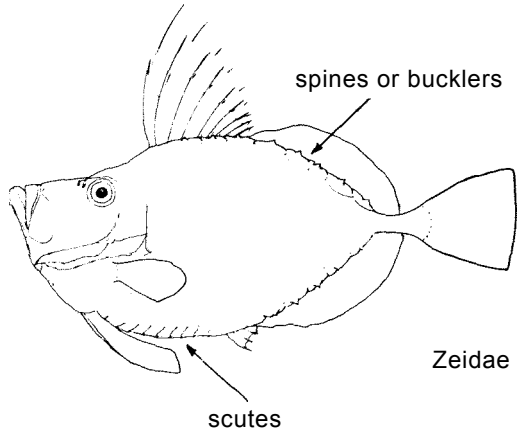
Parazenidae: anal fin with one spine (2 to 4 spines in Oreosomatidae); caudal fin with 11 principal rays (13, rarely 12 in Oreosomatidae); 2 lateral lines (1 in Oreosomatidae).

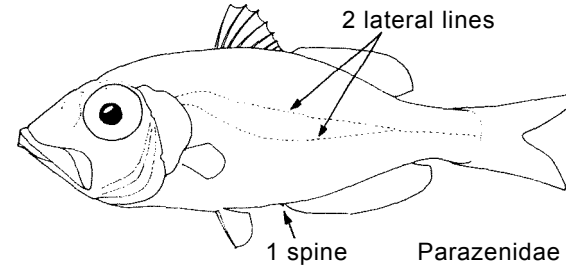
Zeidae: small spines or bucklers along bases of dorsal and anal fins; scutes along ventral part of abdomen; scales small, rudimentary or absent; some species with filamentous extensions of dorsal spines.

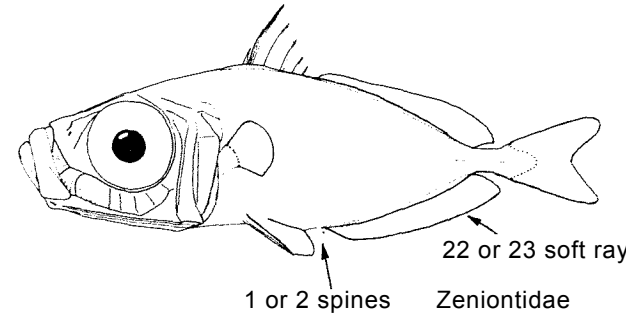
Zeniontidae: anal fin with 1 or 2 spines and 22 or 23 soft rays (2 to 4 spines and 25 to 34 soft rays in Oreosomatidae); vertebrae 27 (35 to 43 in Oreosomatidae). A single species Zenion leptolepis (Gilchrist & von Effonde) has been recorded from Fishing Area 51.











KEY TO SPECIES (ADULTS) OCCURRING IN THE AREA:

1a. First dorsal spine longer than second; pelvic fins with 1 spine and 5 soft rays; opercle fully scaled, without strong ridges or crests; vertebrae 40 to 43 ..... Pseudocyttus maculatus
Smooth oreo

1b. First dorsal spine shorter than second; pelvic fins with 1 spine and 6 or 7 (rarely 5) soft rays; opercle not fully scaled, with strong crests or radiating ridges; vertebrae 35 to 40

2a. Scales on sides of body cycloid, deciduous (easily removed); eye diameter 52% to 60% of head length ..... Oreosoma atlanticum
Oxeye oreo

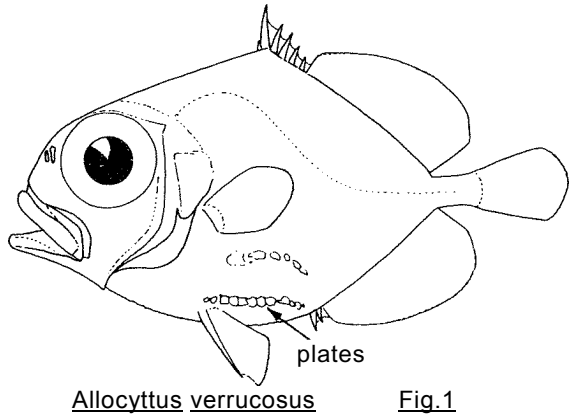
2b. Scales on sides of body ctenoid (rough to touch), moderately to strongly tenacious (hard to remove); eye diameter 41% to 52% of head length

3a. Plates present on sides of abdomen; predorsal profile convex, nearly straight, or slightly concave; origin of pelvic fins midway along abdomen, pelvic spine not reaching anus (Fig.1) ..... Allocyttus verrucosus
Warty oreo

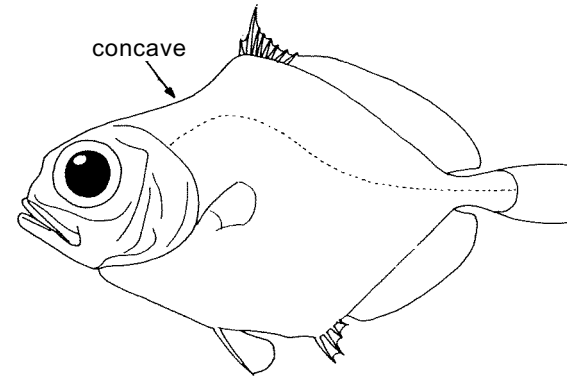
3b. Abdominal plates or protuberances absent; predorsal profile strongly concave, rising sharply before dorsal fin; origin of pelvic fins closer to origin of anal fin than to isthmus, pelvic spine extends to or beyond anus (Fig.2)

4a. Anal fin spines and rays 33 to 36, commonly 34 or 35; dorsal fin spines and rays 38 to 42, commonly 40 or 41; snout fully scaled; no prominent spines on preorbitals (Fig.2) ..... Neocyttus rhomboidalis
Spiky oreo

4b. Anal fin spines and rays 31 to 33; dorsal fin spines and rays 38 or 39; no scales on snout; 2 strong spines or spinous lumps on front of preorbital bones ..... Neocyttus acanthorhynchus



Allocyttus verrucosus Fig.1



Neocyttus rhomboidalis Fig.2

LIST OF SPECIES OCCURRING IN THE AREA:

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

Allocyttus verrucosus Gilchrist

Neocyttus acanthorhynchus Regan
Neocyttus rhomboidalis Gilchrist

Oreosoma atlanticum Cuvier

Pseudocyttus maculatus Gilchrist

Prepared by G.D. James, Fisheries Research Division, Ministry of Agriculture and Fisheries, Wellington, New Zealand

OSTR

1983

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

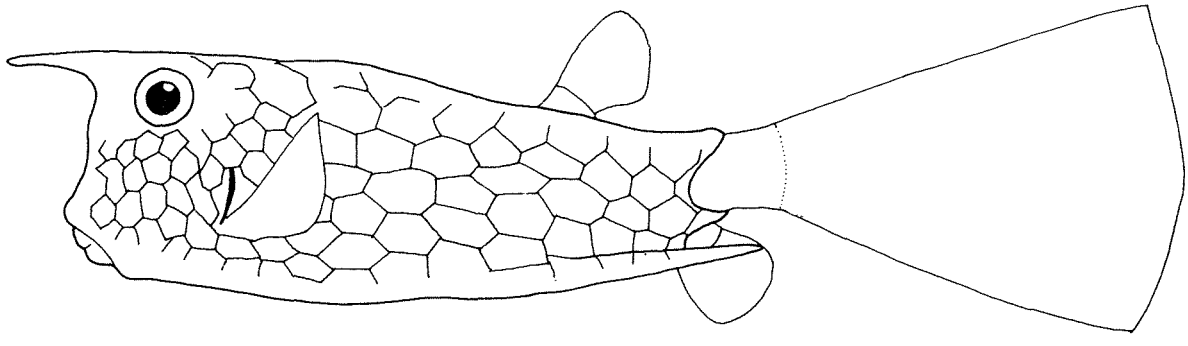
OSTRACIIDAE

Boxfishes, cowfishes

Small fishes (up to 40 cm in length), the body almost completely encased in a bony shell, or carapace formed of enlarged, thickened scale plates, usually hexagonal in shape and firmly sutured to one another. The carapace has openings for mouth, eyes, gill slits, pectoral, dorsal and anal fins and for the flexible caudal peduncle, and is either triangular in cross senction, rectangular or pentangular. Scale-plates often have surface granulations and in some species these are prolonged into prominent carapace spines over eye or along ventrolateral or dorsal angles of the body. Gill openings relatively short, vertical to oblique slits in front of pectoral fin bases; mouth small, terminal, with fleshy lips; teeth moderate, conical, usually less than 15 in each jaw. Spinous dorsal fin absent; most dorsal, anal and pectoral fin rays branched; pelvic fins absent. Lateral line inconspicuous.

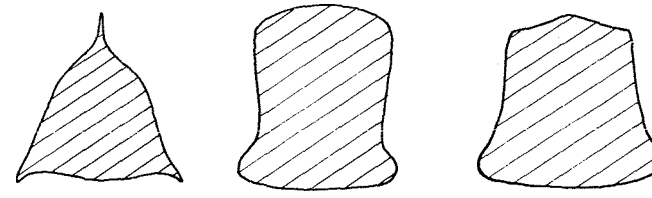
Colour: variable, with general ground colours of either grey, green, yellow or brown, usually with darker or lighter spots, blotches, lines and reticulations.

Slow-swimming benthic-dwelling fishes occurring on rocky and coral reefs and over sand, weed or sponge-covered bottoms to depths of 100 m. Taken either by trawls, other types of nets or traps. Many species are reported to have toxic flesh and are also able to secrete a substance when distressed that is highly toxic, both to other fishes and themselves in enclosed areas such as holding tanks.



SIMILAR FAMILIES OCCURRING IN THE AREA:

No other family of fishes possesses the characteristic bony carapace formed of enlarged, thickened, usually hexagonal plates.



a) Tetrosomus b) Ostrascion c) Rhyncostrascion and Lactoria

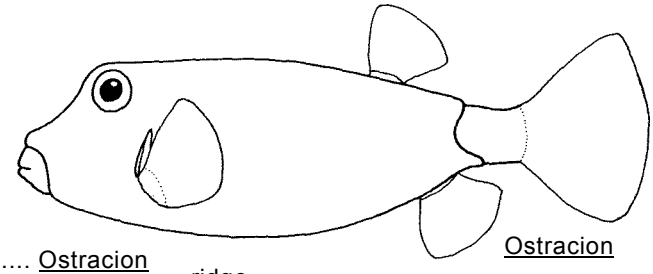
cross section of body

Fig.1

KEY TO GENERA OCCURRING IN THE AREA:

1a. Carapace 3 or 5-angled (low dorsolateral ridges may be present), roughly triangular in cross section (Fig.1a)..... Tetrosomus

1b. Carapace 4 or 5-angled, not triangular in cross section (Fig.lb,c)

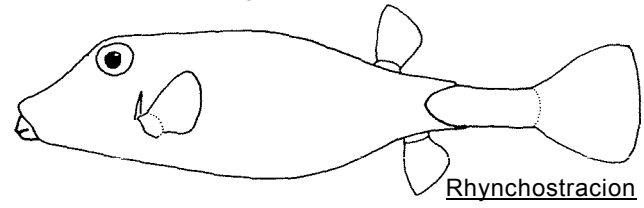


Ostracion Fig.2

2a. Carapace 4-angled, no ridge along midline of back (Fig.1b); no spines on carapace (Fig.2) ..... Ostracion

ridge

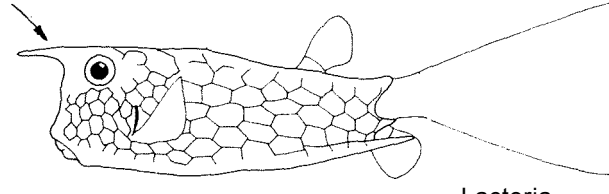
2b. Carapace 5-angled, a central ridge along back (Fig.1c); spines either present or absent



Rhynchostracion Fig.3

3a. No spines on carapace (Fig.3) ..... Rhynchostracion

3b. Spines present on carapace projecting anteriorly from eye, posteriorly from rear end of ventrolateral ridge; a spine on dorsal ridge may or may not be present (Fig.4) ..... Lactoria



Lactoria Fig.4

LIST OF SPECIES OCCURRING IN THE AREA:

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

Lactoria cornuta (Linnaeus, 1758) OSTR Lactor 1
Lactoria diaphana (Bloch, 1765)
Lactoria fornasini (Bianconi, 1846)

Ostracion cubicus Linnaeus, 1756
Ostracion meleagris Shaw, 1796
Ostracion trachys Randall, 1975

Rhynchostracion nasus (Bloch, 1785)
Rhynchostracion rhinorhynchus (Bleeker,1852)

Tetrosomus concatenatus (Bloch, 1785)
Tetrosomus gibbosus (Linnaeus, 1758) OSTR Tetro 1

Prepared by B. Hutchins, Western Australian Museum, Perth, Australia

Revised by James C. Tyler, Division of Environmental Biology, National Science Foundation, Washington, D.C., USA

OSTR Lactor 1

1983

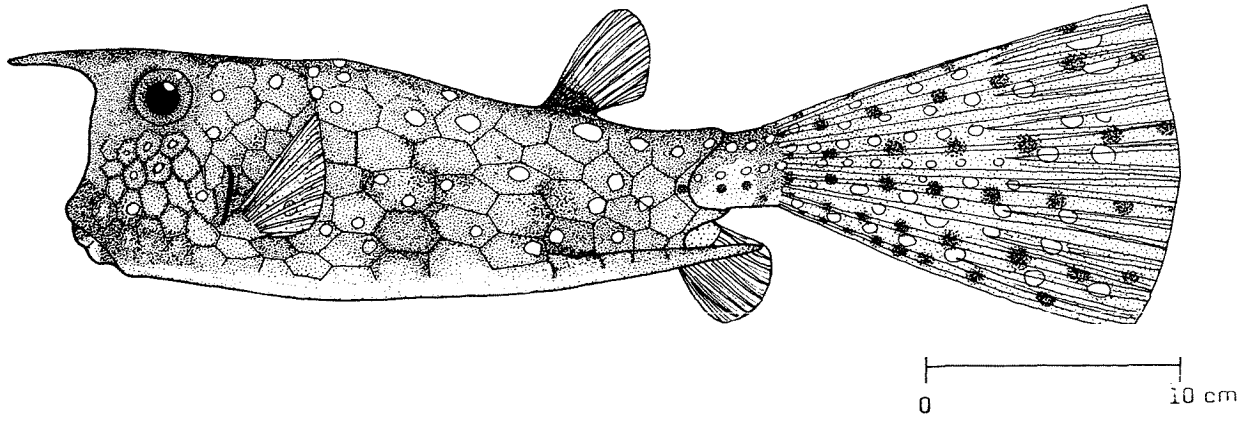
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: OSTRACIIDAE

FISHING AREA 51
(W. Indian Ocean)

Lactoria cornuta (Linnaeus, 1758)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Longhorn cowfish
Fr - Coffre buffle
Sp - Torito cornudo

NATIONAL:

DISTINCTIVE CHARACTERS:

Body deep, with 5 ridges, almost square in cross section, wider ventrally than dorsally; anterior end of each dorsolateral ridge continued as a prominent horn-like spine projecting forward from eye and a similar spine projecting posteriorly from rear end of each ventrolateral ridge; dorsal ridge low, with a small spine in juveniles, disappearing in adults. Carapace complete behind dorsal and anal fins; interorbital area prominently concave. Caudal fin long, increasing in length with age until about two thirds of carapace length.

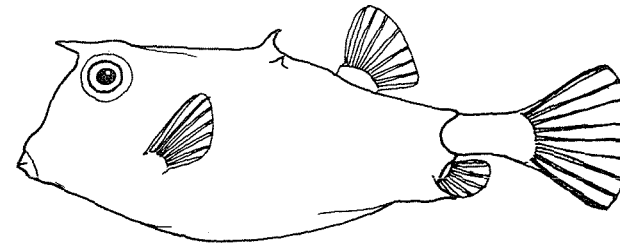
Colour: yellowish brown, with scattered bluish or blackish spots, about one to each scale plate; caudal fin yellow with scattered blackish spots, the leading edges and the posterior third dusky; a blackish ring around mouth.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Lactoria diaphana: caudal fin not elongate; spines on carapace short; lower half of carapace transparent in small specimens.

L. fornasini: caudal fin not elongate; a high flat spine on dorsal ridge, other carapace spines not greatly elongate.

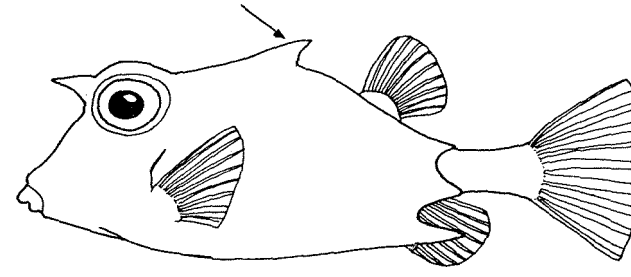
Other genera of Ostraciidae: no forward projecting spines over eyes.



Lactoria diaphana

SIZE:

Maximum: 50 cm; common to 40 cm.



Lactoria fornasini

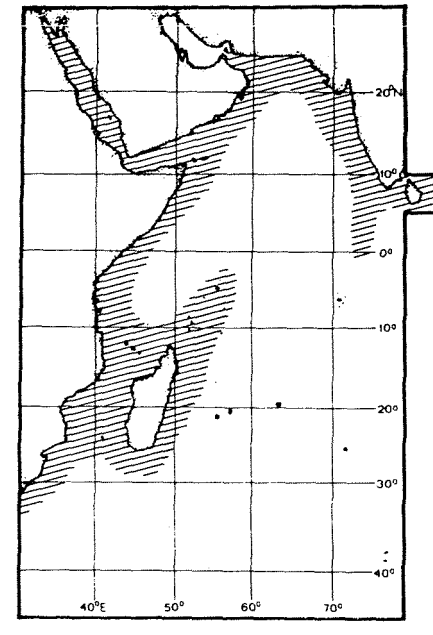
GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout the area, but possibly absent from the "Gulfs" between the Arabian Peninsula and Iran; also found in most other regions of the Indo-West Pacific.

Benthic, found in depths to 100 m.

PRESENT FISHING GROUNDS:

Caught commonly throughout its range.



CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly by bottom trawls.

Generally considered as trashfish; not consumed.

OSTR Tetro 1

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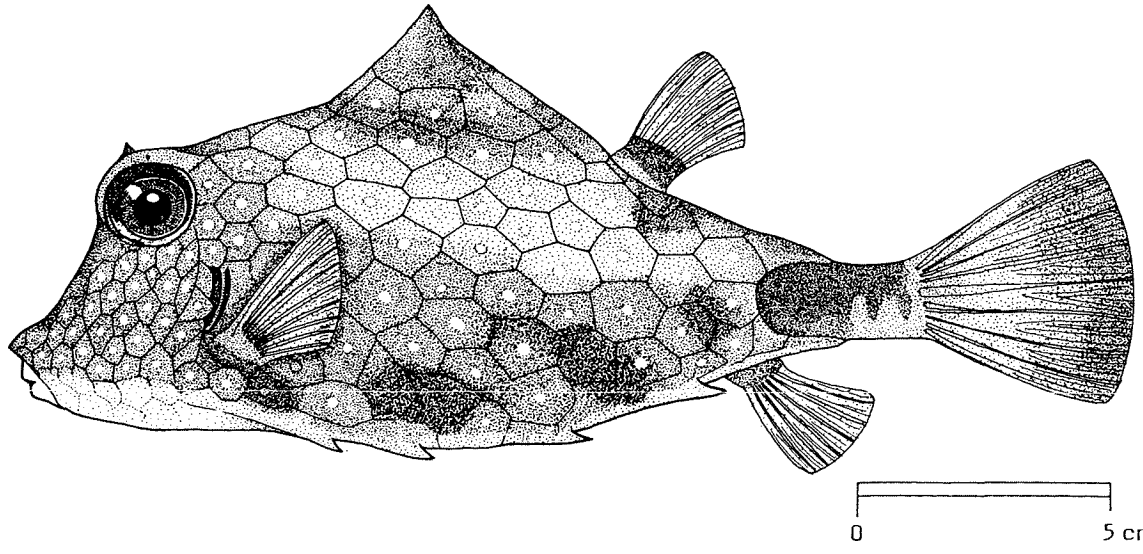
FAO SPECIES IDENTIFICATION SHEETS

FAMILY: USTRACIIDAE

FISHING AREA 51
(W. Indian Ocean)

Tetrosomus gibbosus (Linnaeus, 1758)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Hunchback boxfish
Fr - Coffre bossu
Sp - Cofre jorobado

NATIONAL:

DISTINCTIVE CHARACTERS:

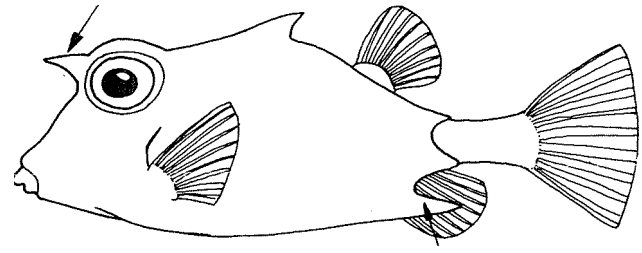
Body deep and very wide ventrally, triangular in cross section, with 5 ridges, although the two dorsolateral ones may be low and insidtinct; a large triangular, flat spine on dorsal ridge usually with an acute tip; a small upward and backward-directed spine above each eye and 4 or 5 acute, flat spines along each ventrolateral ridge. Carapace complete behind dorsal and anal fins; interorbital area prominently concave; a small bony projection above mouth.

Colour: olive brown, with several ill-defined dark blotches and scattered blue spots on sides; dorsal, anal and caudal fins yellowish, the caudal dusky posteriorly.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

L. fornasini: spine above each eye projecting forward and a similar spine projecting rearward at posterior end of each ventrolateral ridge.

Other genera of Ostraciidae: no large, flat triangular spine on dorsal ridge.



Lactoria fornasini

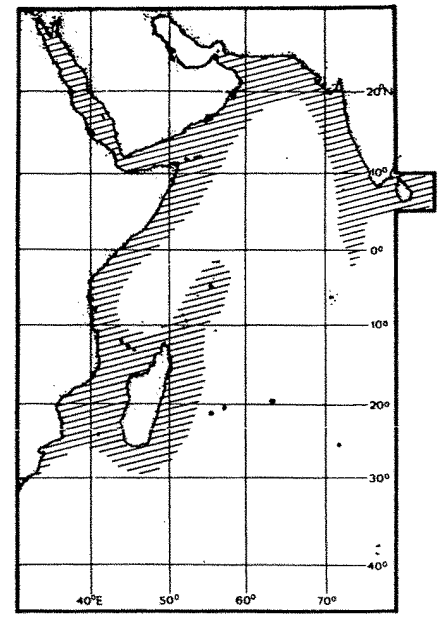
SIZE:

Maximum: 30 cm; common to 20 cm.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Throughout the area, but possibly absent from the "Gulf" between the Arabian Peninsula and Iran; also found in most other regions of the Indo-West Pacific.

Found in depths to 50 m.



PRESENT FISHING GROUNDS:

Taken incidentally as bycatch.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly by bottom trawls.

Generally considered as trashfish; not consumed.