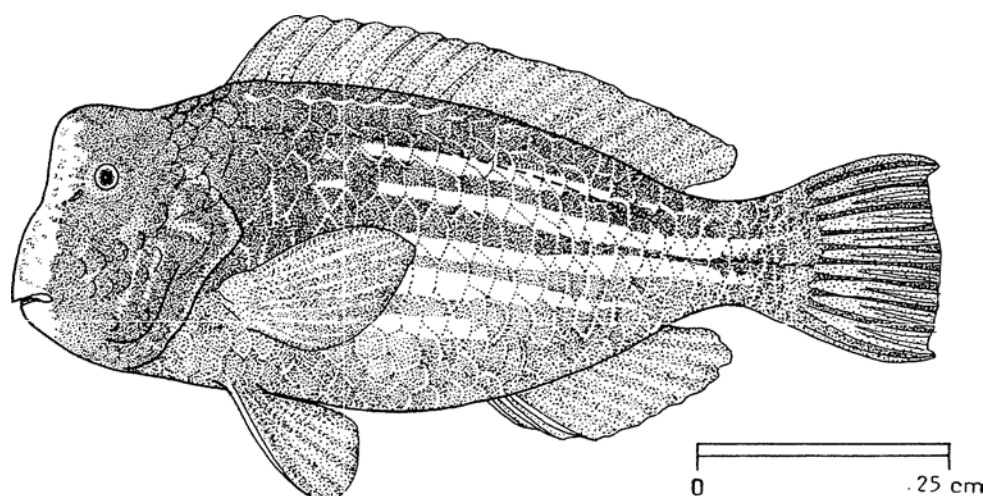


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCARIDAE

FISHING AREA 51
(W. Indian Ocean)Bolbometopon muricatum (Valenciennes, 1840)

OTHER SCIENTIFIC NAMES STILL IN USE: None



VERNACULAR NAMES:

FAO : En - Green humphead parrotfish
 Fr - Perroquet bossu vert
 Sp - Loro cototo verde

NATIONAL:

DISTINCTIVE CHARACTERS:

Body and head very deep, the body depth contained 2 to 2.5 times in standard length, less in large individuals. With increasing size, a hump develops on forehead and the anterior profile becomes increasingly vertical; teeth fused in upper and lower jaws to form dental plates; plates rough to touch, the individual teeth easily discernible over entire surface of plates; no canines on dental plates; upper jaw enclosing lower jaw; lips covering about 1/2 of upper dental plates and about 3/4 of lower dental plates; 2 to 4 median predorsal scales (development of hump may obscure predorsal scales); 2 rows of cheek scales, the rows becoming indistinct with progressive deepening of head associated with growth; 4 to 6 cheek scales in dorsal row and 3 to 6 scales in ventral row (in addition 1 or 2 scales can be imbedded on preopercular flange); posterior nostril large and oval. Pectoral fins with 14 (occasionally 13) branched rays; caudal fin rounded in small individuals, the lobes becoming slightly produced in larger individuals but centrally the fin still rounded).

Colour: there appears to be a single adult colour phase; bright green-blue ground colour over fins, body and head; anterior margin of head pink, merging to green; 6 faint dull purple stripes on body which correspond to scale striations; dental plates white; small specimens (less than 30 cm) uniform dull green-brown, sometimes with 2 longitudinal rows of whitish spots on dorsal half of body.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Cetoscarus bicolor: no development of hump on forehead: branched pectoral fin rays 12 or occasionally 13 (14, occasionally 13 in B. muricatum); terminal phase very brightly coloured; caudal fin lunate.

No other species of Scaridae with fused teeth has rough surfaces to its dental plates.

SIZE:

Maximum: about 120 cm total length, 95 cm standard length; probably in excess of 50 kg; humping of the head becomes pronounced around 40 cm standard length. The largest of all parrotfishes.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Red Sea, East African coast to at least 14°S and the Seychelles. Elsewhere, in the Eastern Indian Ocean/Western Central Pacific. Associated with coral reefs close to deeper channels.

A mobile species forming large schools and grazing heavily on live corals, but also feeding on algae.

PRESENT FISHING GROUNDS:

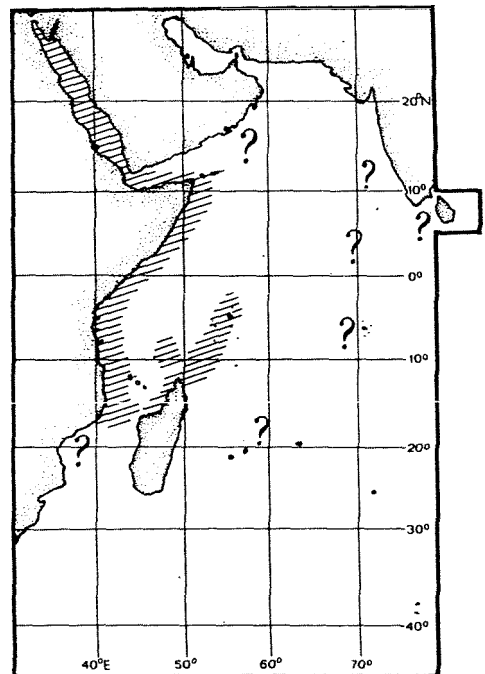
Probably caught throughout most of its range.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Harpooned from surface on shallow coral flats, some netted.

Marketed mostly fresh.

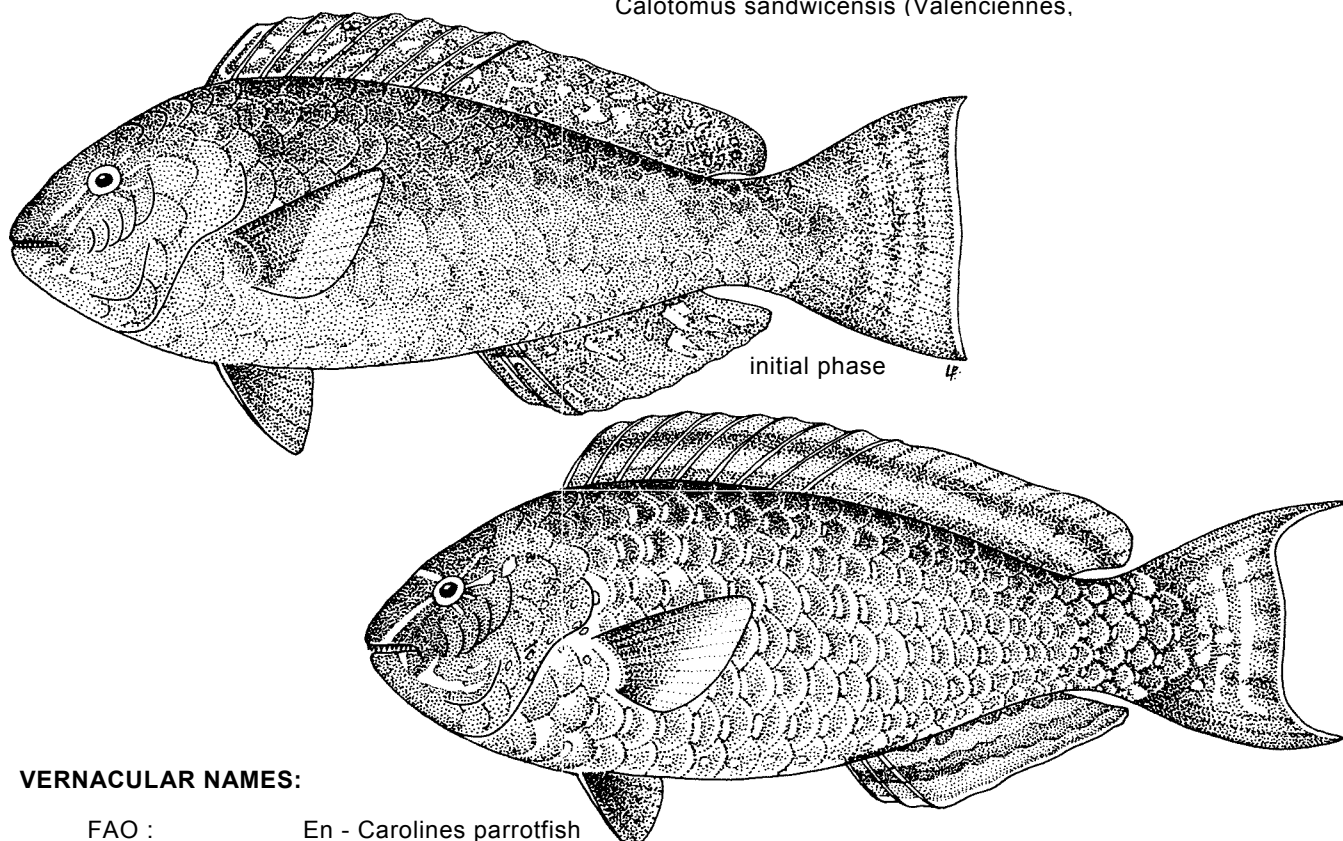


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCARIDAE

FISHING AREA 51
(W. Indian Ocean)Calotomus carolinus (Valenciennes, 1840)

OTHER SCIENTIFIC NAMES STILL IN USE:

Calotomus spinidens by Schultz 1958, 1969
Calotomus sandwicensis (Valenciennes,

VERNACULAR NAMES:

FAO : En - Carolines parrotfish
Fr - Perroquet des Carolines
Sp - Loro de Carolinas

NATIONAL:

DISTINCTIVE CHARACTERS:

Body somewhat compressed, body depth contained about 2.2 to 2.7 times in standard length. Teeth not fused, but individual teeth closely applied; upper and lower jaws directly opposing with mouth closed; 1 to 3 canines on each upper jaw of both colour phases (canines larger in terminal phase). 1 row of 4 or 5 cheek scales below eye; 3 or 4 (usually 4) median predorsal scales. Pectoral fins with 11 (occasionally 12) branched rays; caudal fin truncate in small specimens, becoming concave with increasing size and deeply concave in large specimens.

Colour: 2 adult colour phases; **initial base** - dull olive head and body, scales faintly stippled with black; lines may radiate from around orbit; chin and lower opercle with dull reddish blotches; dark pigment at anus; dorsal fin dark greenish with paler irregular blotches and a black blotch on the first interspinous membrane; anal fin similar, but lacking black blotch; scaled portion of caudal fin similar to body, unscaled portion dull greenish with a broad whitish posterior margin; pectoral fins with dull brownish base and leading spines and rays for about 2/3 of their length, remainder pale; pelvic fins dark brownish green with paler blotches; teeth of both colour phases white; **terminal phase** - dark green with pink bar on centres of body scales; head with reddish pink stripes radiating from orbit; chin with 1 or 2 irregular bars and several small blotches in reddish pink; dark pigment

around anus: dorsal fin greenish with 2 dull orange irregular bands; one at free margin; the other basally above scale sheath and a black blotch on first interspinous membrane; anal fin similar to dorsal fin but outer band submarginally situated and free margin narrowly green: scaled portion of caudal fin similar to body, with pink bars reduced to spots, unsealed portion dull greenish with irregular pale blotches which may form 3 or 4 curved near-vertical bands; pectoral fins greenish basally and medially becoming pale toward posterior margins; pelvic fins dark greenish with paler blotches.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Calotomus spinidens: caudal fin rounded at all sizes; no white edge to caudal fin; no dark pigment around anus; usually less than 12 cm standard length.

C. viridescens: predominantly green; opercle and pectoral region with numerous small black spots.

Other genera of Scaridae: teeth fused to form dental plates.

SIZE:

Maximum: about 40 cm standard length; terminal phase usually longer than 20 cm standard length.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Within the area, along the east coast of African to nearly 30°S, eastward to Madagascar, the Seychelles, Mauritius and the Chagos Archipelago. Elsewhere, in the Eastern Indian Ocean/Western Central Pacific to Eastern Pacific.

Widely distributed in shallow inshore waters, around sea-grass beds and coral reefs. Usually found shallower than 20 m.

Feeds on seagrasses and algae.

PRESENT FISHING GROUNDS:

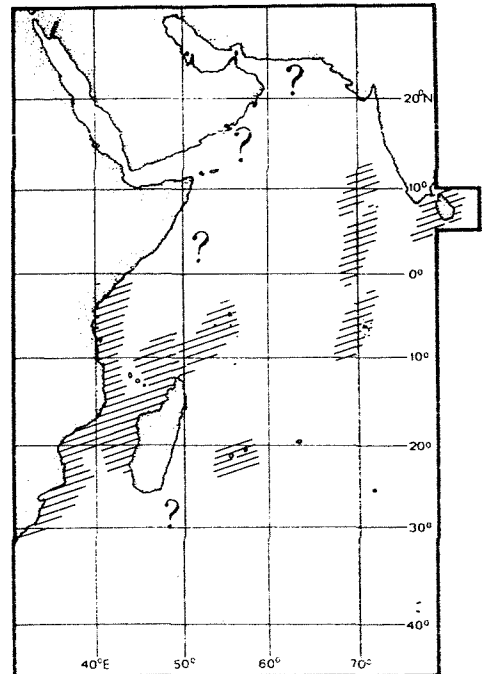
Probably caught throughout most of its range.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

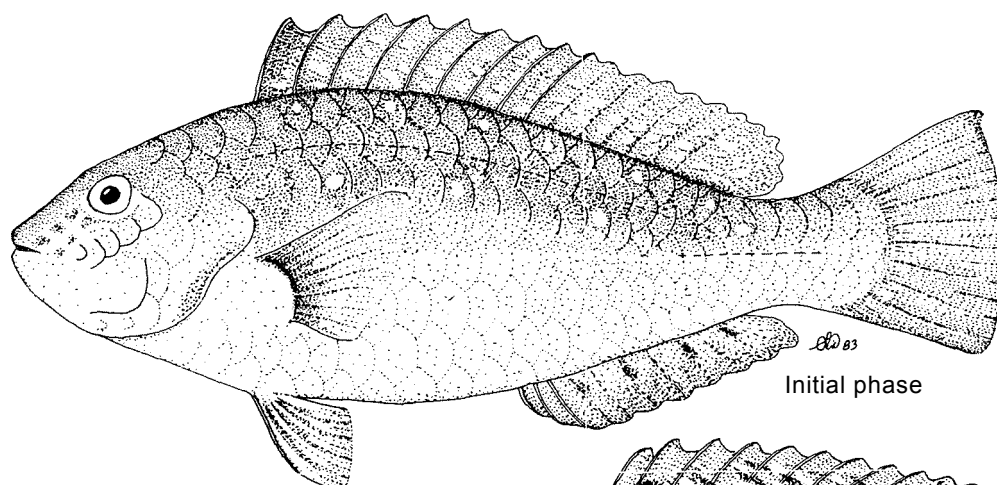
Caught mainly with traps, nets and other kinds of artisanal gear.

Marketed mostly fresh.

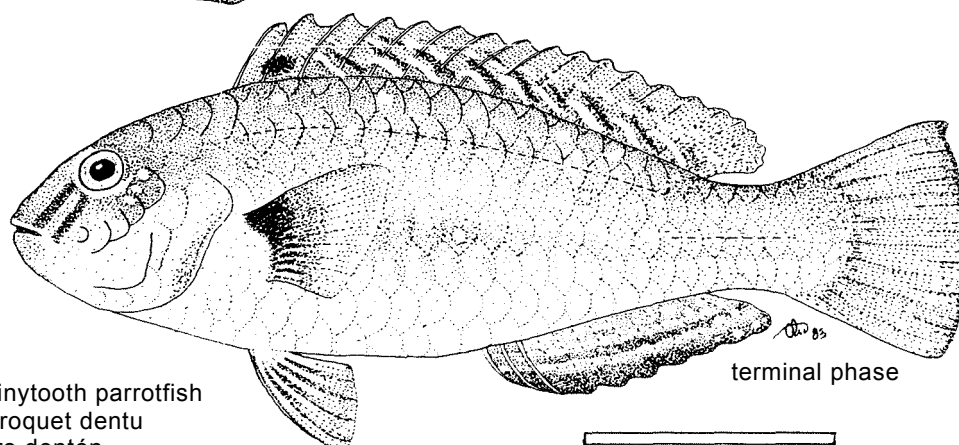


FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCARIDAE

FISHING AREA 51
(W. Indian Ocean)Calotomus spinidens (Quoy & Gaimard, 1824)OTHER SCIENTIFIC NAMES STILL IN USE : Calotomus japonicus by Schultz 1958, 1969 in part

Initial phase



terminal phase



VERNACULAR NAMES:

FAO : En - Spinytooth parrotfish
Fr - Perroquet dentu
Sp - Loro dentón

NATIONAL:

DISTINCTIVE CHARACTERS:

Body depth contained about 2.5 to 3.2 times in standard length. Teeth not fused, but individual teeth closely applied; 1 or 2 canines on lateral edges of upper jaw; upper and lower jaws directly opposing with mouth closed; 1 row of 4 or 5 (usually 5) cheek scales below eye; 4 median predorsal scales. Pectoral fins with 11 (occasionally 10 or 12) branched rays; caudal fin rounded at all sizes.

Colour: 2 adult colour phases; **initial phase** - general body colour greenish brown, paler ventrally, the belly being dull rose to yellow; a pale whitish stripe sometimes apparent on midside; 2 irregular reddish bars across chin interspaced by pale yellow; dorsal and anal fins with pale membranes and darker blotches on spines and rays; scaled portion of caudal fin similar to body, unscaled portion with irregular near vertical narrow, unpigmented lines interspaced with pigmented lines, posterior caudal margin narrowly unpigmented; pectoral fins hyaline; pelvic fins hyaline except for numerous small white spots and some reddish blotches; teeth of both colour phases white; **terminal phase** - head and body greyish black with pale speckling dorsally, grading to reddish below the midline and whitish ventrally (whitish speckling may form a pale horizontal stripe along midline; cheeks pale rose; 2 irregular dull rose bars across chin interspaced by white; dorsal fin pale but heavily speckled with darker

pigmentation and a very prominent irregular black blotch on second dorsal spine and following membrane; anal fin basally with an irregular reddish band, followed by a pale brown band and a broad black band distally (more conspicuous posteriorly); scaled portion of caudal fin similar to body, unscaled portion with narrow vertical pigmented and unpigmented bars (posterior margin unpigmented); pectoral fin bases black, pectoral fins yellowish basally, the remainder of the fin whitish hyaline; pelvic fins unpigmented except for whitish speckling and irregular reddish blotches basally.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA:

Calotomus carolinus: differs in coloration; a broad, white posterior margin to caudal fin, caudal fin rounded to double emarginate, dark pigment around anus.

C. viridescens: differs in coloration; area circumscribed by pectoral fins with numerous small black spots; caudal fin rounded to double emarginate; dark pigment around anus.

All other species of Scaridae occurring in the area: teeth fused to form dental plates.

SIZE:

Maximum: about 15 cm standard length.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

East Africa, south to at least Mozambique, eastward to Madagascar, the Seychelles, the Chagos Archipelago, Sri Lanka; not recorded from the Red Sea. Elsewhere, in the Eastern Indian Ocean/Western Central Pacific.

Usually associated with marine grassbeds, feeding on the fronds of these plants. Appears to be confined to shallow water, usually less than 10 m.

PRESENT FISHING GROUNDS:

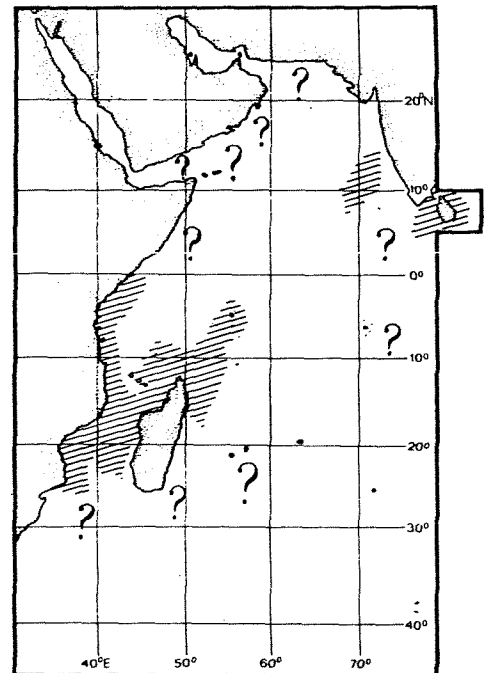
Probably caught throughout most of its range.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

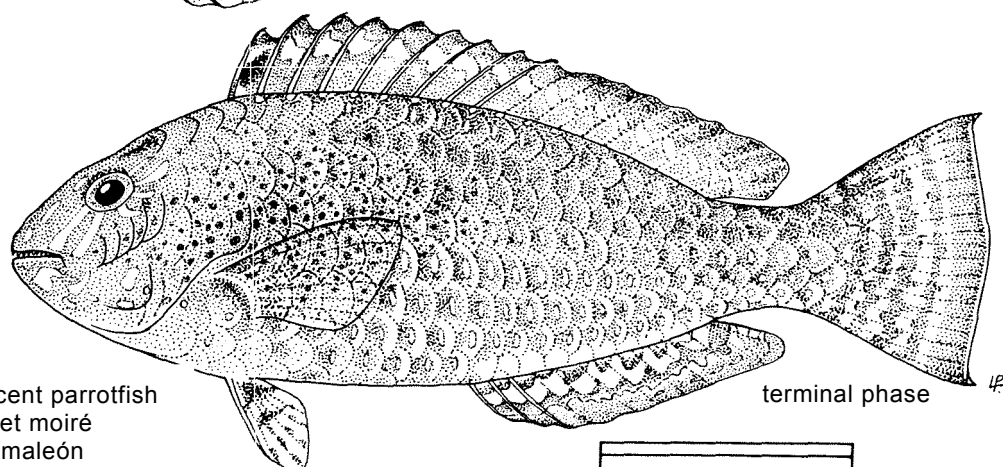
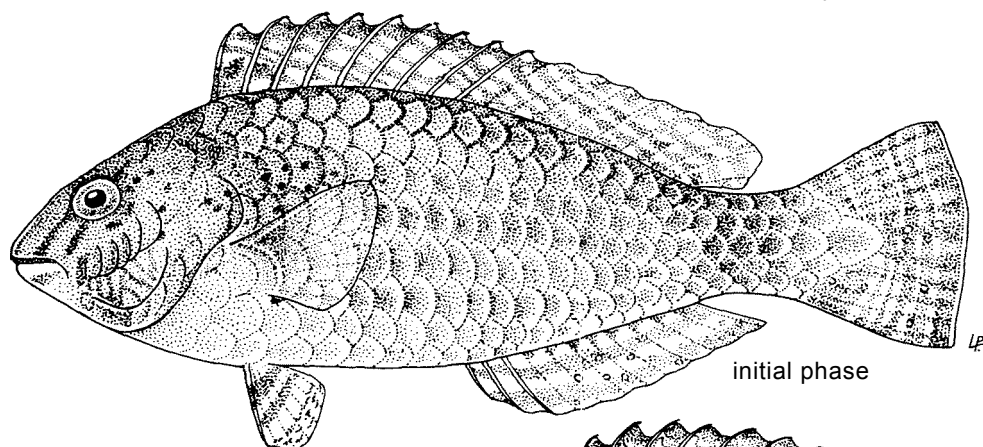
Caught mainly with traps, nets and other kinds of artisanal gear.

Marketed mostly fresh.



FAO SPECIES IDENTIFICATION SHEETS

FAMILY: SCARIDAE

FISHING AREA 51
(W. Indian Ocean)*Calotomus viridescens* (Rüppell, 1828)OTHER SCIENTIFIC NAMES STILL IN USE : *Calotomus spinidens* by Schultz 1958, 1969 in part

0 5 cm

VERNACULAR NAMES:

FAO : En - Viridescent parrotfish
Fr - Perroquet moiré
Sp - Loro camaleón

NATIONAL:

DISTINCTIVE CHARACTERS:

Body depth contained 2.3 to 2.6 times in standard length. Teeth not fused to form dental plates, but individual teeth closely applied; 1 or 2 canines on lateral edges of upper jaws; upper and lower jaws directly opposing with mouth closed; 1 row of 4 or 5 cheek scales below eye; 4 (occasionally 3) median predorsal scales. Pectoral fins with 11 (occasionally 10) branched rays; caudal fin truncate in small individuals, double emarginate in large terminal phase fish, caudal lobes never greatly produced.

Colour: 2 adult colour phases; **initial phase** - head and body grey-brown with darker scale edges, underside of head and body paler, scales on opercle and region circumscribed by pectoral fin with numerous small black spots; a dark blotch on body below posterior dorsal fin base; dark pigment around anus; dorsal fin similar to body with reddish brown marks and a dark blotch on interspinous membrane between spines 1 and 2; anal fin with reddish brown markings forming an irregular basal band, spotted basally with black and distally with irregular yellow markings; scaled portion of caudal fin similar to body, unsealed portion reeish with small irregular yellowish spots and 3 narrow irregular whitish unpigmented lines, the posteriormost on caudal margin; pectoral fins yellowish at base, the remainder unpigmented; pelvic fins pale with 2 reddish bars; teeth in both colour phases

white; **terminal phase** - head and body dark greenish grey shading to pale grey ventrally, scales with numerous very small whitish spots; numerous small black spots more conspicuous and larger than those of initial phase on opercle and area circumscribed by pectoral fins; body scales with reddish margins; 6 short dull reddish marks radiate from eye; dark pigment around anus; dorsal fin mottled with green, red and pale brown; interspinous membrane between spines 1 and 2 with a large dark blotch (sometimes a dark blotch at bases of posteriormost rays); anal fin with a green basal band, a reddish central band, another green band and a reddish distal margin; scaled portion of caudal fin similar to body, unsealed region paler with irregular narrow reddish bars and some whitish spots posteriorly, posterior caudal margin narrowly unpigmented; pectoral fins with dark bases; becoming pale yellowish and then pigmented distally, pelvic fins pale, rays slightly darker with 2 faint reddish bars.

DISTINGUISHING CHARACTERS OF SIMILAR SPECIES OCCURRING IN THE AREA::

Calotomus carolinus: differs in coloration; caudal fin rounded to deeply concave with a broad white posterior margin; no black spots on pectoral region.

C. spinidens: differs in coloration; caudal fin always truncate (rounded when spread); no black spots on pectoral region, no dark pigment around anus.

All other species of Scaridae occurring in the area: teeth fused to form dental plates.

SIZE:

Maximum: about 21 em standard length.

GEOGRAPHICAL DISTRIBUTION AND BEHAVIOUR:

Probably confined to the Red Sea.

Found from the intertidal zone to at least 30 m depth, associated with coral reefs and grass beds.

PRESENT FISHING GROUNDS:

Probably caught occasionally throughout most of its range.

CATCHES, FISHING GEAR AND FORMS OF UTILIZATION:

Separate statistics are not reported for this species.

Caught mainly with traps, nets and other kinds of artisanal gear.

Marketed mostly fresh.

