Boll. Malacologico	29 (1993)	(1-4)	17-30	Milano 30-6-1993

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DESCRIPTION OF THREE NEW SPECIES AND ONE NEW SUBSPECIES OF MURICIDAE (MURICINAE AND MURICOPSINAE) FROM WEST AFRICA. (**)

KEY WORDS: Gastropoda, Muricidae, n. sp., West Africa.

Abstract

Hexaplex saharicus ryalli n.subsp. is described from Ivory Coast and from Ghana. *Dermomurex (Trialatella) sepositus* n.sp. is described from off Cameroun, and compared with *D. (D.) scalaroides* (de Blainville, 1829). *Attiliosa goreensis* n.sp., from Senegal, is related to the western Atlantic *A. aldridgei* (Nowell-Usticke, 1968). *Muricopsis (Risomurex) gofasi* n.sp., from Angola, is compared with *M. (R.) fusiformis* (Gmelin, 1791) from Senegal and its subspecies *punctata* Houart, 1990 from Angola.

Riassunto

Vengono descritti: *Hexaplex saharicus ryalli* n. subsp. della Costa d'Avorio e dal Ghana; *Dermomurex (Trialatella) sepositus* n.sp. dal Camerun, che viene confrontato con *D. (D.) scalaroides* (de Blainville, 1829); *Attiliosa goreensis* n.sp. del Senegal, che ha attinenza con *A. aldridgei* (Nowell-Usticke, 1968) dell'Atlantico occidentale; *Muricopsis (Risomurex) gofasi* n.sp. dell'Angola, messo a confronto con *M. (R.) fusiformis* (Gmelin, 1791) del Senegal e la sua sottospecie *punctata* Houart, 1990 dell'Angola.

Introduction

In the course of a revision of the West African muricids (GOFAS & HOUART, in prep.), I had the opportunity to examine a considerable amount of material from many localities. A number of species were already described in previous papers (HOUART, 1984, 1989, 1990 and VOKES & HOUART, 1986). Other material is still under study and will be dealt with in the revision. The purpose of the present paper is to present the descriptions of four additional new taxa from the continental shelf of West Africa.

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(**) Lavoro accettato il 15 marzo 1993

Systematics

Family Muricidae Rafinesque, 1815
Subfamily Muricinae Rafinesque, 1815
Genus *Hexaplex* Perry, 1810

Hexaplex saharicus ryalli n.subsp.
Figs 1-4, 17, 20-21

TYPE MATERIAL

Holotype and 1 paratype , respectively 41.2 mm X 38 mm and 40 mm X 36.5 mm, off Abidjan, Ivory Coast, MNHN; 1 paratype 34 mm X 28 mm, off Mpatano, Ghana, 40–50 m, NM L210/T864; 1 paratype 37.1 X 27.4 mm, off Adjua, Ghana, 60 m, BMNH 1993019; 1 paratype 34 mm X 24 mm, off Mpatano, Ghana, 40–50 m, coll. R. Houart; 1 paratype 44 mm X 30.5 mm, off Adjua, Ghana, 50 m, coll. R. Houart; ; 1 paratype 45 mm X 37.2 mm, off Adjua, Ghana, 45 m, coll. P. Ryall; 1 paratype 38.1 mm X 39.5 mm, off Mia–Mia, West Ghana, 50 m, coll. P. Ryall.

OTHER MATERIAL

Mpatano, Ghana, 60 m (1 sp.); Elmina, Ghana, 60 m (1 sp.); Sekondi, Ghana, 50 m (1 sp.), all coll. P. Ryall.

TYPE LOCALITY

Off Abidjan, Ivory Coast, West Africa.

DESCRIPTION

Shell small for the genus, up to 45 mm in length at maturity, spinose, lightly built. Spire high, consisting of a protoconch of 2.5 – 3 whorls, and up to 5 broadly convex teleoconch whorls with impressed suture. Protoconch whorls rounded, last whorl and portion of penultimate whorl with strong axial ribs. Terminal varix indistinct. Axial sculpture of first teleoconch whorl consisting of 10-12 ribs; second whorl with 5-7 ribs and starting varices, or with 4 or 5 varices with 1 axial rib between each varix; third to fifth teleoconch whorls with 4 varices and one axial rib between each pair of varix. Varices of last teleoconch whorl bearing a long, open shoulder spine followed abapically with 4 short, open, approximately same sized spines. Spiral sculpture of numerous, squamous cords and threads. Aperture rounded. Columellar lip narrow, smooth, adherent. Anal notch narrow, deep, delineated by small node. Outer lip crenulate, smooth within. Siphonal canal long, narrow, abaperturally bent at tip, with 2 or 3 short, open spines. Shell ochre or brownish, inside of spines and aperture white. Radula consisting of a rachidian tooth and narrow, sickle shaped laterals. Rachidian tooth with a strong central cusp, 2 small lateral denticles and 2 strong marginal cusps.

DISCUSSION

Hexaplex saharicus ryalli differs from *H. saharicus saharicus* (Locard, 1897) (Figs 5-7) in the protoconch and teleoconch morphology. The last,

and a portion of the penultimate protoconch whorl of *H. saharicus ryalli*, bears strong axial ribs, and the transition protoconch/teleoconch is gradual, without apparent terminal varix in all examined specimens. In *H. saharicus saharicus* the protoconch is entirely smooth with an apparent, raised terminal varix. The siphonal canal is proportionally longer and narrower in *H. saharicus ryalli*, the intervaricial axial sculpture is stronger, and there are no short spines between the abapical apertural spine and the adapertural spine of the siphonal canal.

Hexaplex saharicus saharicus is known from Morocco (Tanger and off Larache) to Senegal. One specimen in coll. R. Houart is said to have been collected in Guinea, but with no other data, and the locality is considered doubtful. All examined specimens from MNHN, IRSNB and coll. R. Houart have a smooth protoconch. No records of *H. saharicus saharicus* or *H. saharicus ryalli* are known from between Senegal (except the doubtful specimen from Guinea) and Ivory Coast. It is not excluded, considering the differences between both forms, that a specific status could be given subsequently for the new subspecies, if the gap between both geographical distribution is confirmed.

ETYMOLOGY

Named for Mr Peter S. RYALL, Austria, who send the specimens and other material for examination.

Genus *Dermomurex* Monterosato, 1890
Subgenus *Trialatella* Berry, 1964

Dermomurex (Trialatella) sepositus n.sp.
Figs 8-9, 24-25

TYPE MATERIAL

Holotype 9 mm X 5.1 mm, MNHN, Cameroun, R.V. *Nizery*, stn CC 119, 03°37' N - 09°0.3' E, 54 m, soft mud with shell debris, J. Monteillet coll. et leg., 1991.

DESCRIPTION

Shell small for the subgenus, 9 mm in length, shouldered. Spire high, with 1.5 protoconch whorls and 4.25, broad, strongly shouldered teleoconch whorls with impressed suture. Protoconch whorls rounded, smooth, glossy. Terminal varix heavy, raised, weakly curved. Axial sculpture consisting of small flanges on first teleoconch whorls: 6 weak flanges on first teleoconch whorl, 7 on second and third, last teleoconch whorl with 5 strong, high varices, more prominent on shoulder. Shell entirely covered with a thick, white, minutely spirally striate intritacalx. No visible spiral sculpture. Aperture roundly-ovate. Columellar lip weakly flared, smooth, partially erect, adherent at adapical extremity. Anal notch obsolete. Outer lip smooth. Siphonal canal short, narrow, weakly abaperturally bent, open, smooth. Shell white.

Discussion

Dermomurex (Trialatella) sepositus is different from *Dermomurex (Dermomurex) scalaroides* (de Blainville, 1829) in its intritacalx which is minutely spirally striate, while it is more dense and crossed with very fine axial striae in *D. (T.) scalaroides*. The shell of *D. scalaroides* is more nodose with usually 3 or 4 low, but apparent spiral cords on the last teleoconch whorl. The shell is more convex, not shouldered as in *D. sepositus*, with less prominent axial ribs on shoulder. Specimens of *D. scalaroides*, a Mediterranean species, are also known from Dakar, Senegal (MNHN), but to my knowledge not further south.

Species of *Dermomurex* from the western Atlantic region have been revised (Vokes, 1975, 1992), but none of them is similar to *D. sepositus*.

Species of *Trialatella* are known to have 3 varices on the last teleoconch whorl, but as seen in other species, and as supposed in Vokes (1992:80) for *D. leali* Houart, 1991, a Brazilian species, it is most probable that specimens of *Dermomurex sepositus* with 6 teleoconch whorls would have 3 varices on the last whorl, therefore its classification here in *Trialatella*.

Etymology

sepositus (Latin) = apart, distinct.

Genus *Attiliosa* Emerson, 1968

Attiliosa goreensis n.sp.
Figs 11-13, 18-19, 26-27

Type material

Holotype 14.2 mm X 9 mm, and 2 paratypes, respectively 15.5 X 10 mm and 15.4 X 9 mm, MNHN, ex M. Pin.

Type locality

Gorée, Senegal, 20-25 m.

Description

Shell medium sized for the genus, up to 15.5 mm in length at maturity, heavy, tuberculate. Spire high, with 1.5 protoconch whorls and 5 broad, weakly shouldered, spineless teleoconch whorls with impressed suture. Protoconch whorls rounded, smooth. Terminal varix heavy, raised. Axial sculpture consisting of strong, rounded varices: 8 on first teleoconch whorl, 10 on second, 9 or 10 on third and fourth whorl, last teleoconch whorl with 7 varices. Spiral sculpture of squamous cords: 2 on first teleoconch whorl, 3 on second, 4 or 5 on third and fourth whorls, with 3 or 4 additional cords on shoulder, last teleoconch whorl with 10-12 cords and 7 or 8 fainther cords on shoulder. Aperture roundly-ovate. Columellar lip smooth, rim partially erect, adherent at adapical extremity. Anal notch weak, broad. Outer lip erect, crenulate, with 7 strong lirae extending with-

in the aperture. Siphonal canal short, broad, straight, open, with 3 rounded spiral cords. Shell light brown to pale orange with a narrow darker line encircling the shell adapically of shoulder. Radula consisting of a rachidian tooth and broad, sickle shaped lateral tooth on each side. The rachidian tooth bears 5 cusps: one broad, long triangular one, 2 narrower laterals, and 2 long marginals.

DISCUSSION

There are 4 species of *Attiliosa* known to date: *A. nodulosa* (A. Adams, 1855) from the eastern Pacific, *A. philippiana* (Dall, 1889) from Florida, *A. aldridgei* (Nowell-Usticke, 1969) from different localities in the western Atlantic, *A. nodulifera* (Sowerby, 1841) and its subspecies *caledonica* Jousseaume, 1881 from the Indo-West Pacific. The historical account of these species is largely commented on in VOKES (1976, 1980, 1992), RADWIN & D'ATTILIO (1978) and VOKES & D'ATTILIO (1982). Their classification in the Muricinae is essentially based on radular morphology.

Attiliosa goreensis differs from *A. aldridgei*, the most related species, in having more shouldered whorls, more regular and equal sized spiral cords, but mainly in having early whorls with more rounded and more numerous varices: 8-10 in *A. goreensis* while only 5 or 6 on first teleoconch whorl and 6 to 8 on second and third teleoconch whorl in *A. aldridgei*.

Attiliosa philippiana has a narrower and much smoother shell.

ETYMOLOGY

Named after the type locality, an island off the Cape Verde Peninsula.

Subfamily Muricopsinae Radwin & D'Attilio, 1971
Genus *Muricopsis* Bucquoy & Dautzenberg, 1882
Subgenus *Risomurex* Olsson & McGinty, 1958

Muricopsis (Risomurex) gofasi n.sp.
Figs 15-16, 28

TYPE MATERIAL

Holotype and 4 paratypes, respectively 13 mm X 6 mm, 13 mm X 5.9 mm, 11.8 mm X 5.2 mm, 10.8 mm X 5.2 mm, 10.3 X 5 mm, MNHN; 1 paratype 11 mm X 5 mm, coll. R. Houart, all from Praia das Conchas, prov. Namibe, Angola, rocky platform with tide pools, S. Gofas coll., September 1984; 2 paratypes 9 mm X 3.6 mm and 8.5 mmm X 3.8 mm, MNHN, Praia Amelia, Namibe, Angola, infralittoral rocks, S. Gofas coll., February 1983; 1 paratype 10.5 mm X 4.6 mm, MNHN, Barra do Dande, Prov. Bengo, Angola.

TYPE LOCALITY

Praia das Conchas, Prov. Namibe, Angola, West Africa.

Description

Shell medium sized for the subgenus, up to 13 mm in length at maturity, heavy, tuberculate. Spire very high with 1.75 protoconch whorls and up to 6 strongly convex teleoconch whorls with a weakly impressed suture. Protoconch whorls smooth, strongly keeled with a duplicate spiral keel. Terminal varix shallow. Axial sculpture consisting of 10 or 11 low, rounded ribs on first to third teleoconch whorls, 9 or 10 on fourth and fifth, and 8 or 9 on last teleoconch whorl. Last teleoconch whorl with 6 or 7 strong spiral cords with 2 or 3 spiral threads between each pair of cords. Other whorls with 3-5 cords. Aperture ovate. Columellar lip with 2 weak denticles abapically, otherwise smooth, partially erect abapically, adherent at adapical extremity. Anal notch broad, deep. Outer lip undulate, smooth, with 5 strong denticles within. Siphonal canal short, weakly abaperturally bent, narrowly open, with 3 or 4 rounded spiral cords. Greyish or light brown with small brown blotches on spiral cords. One specimen is entirely light orange (MNHN).

Discussion

Several new species or subspecies of *Risomurex* from West Africa have been named recently (Vokes & Houart, 1986; Houart, 1990; Rolan & Fernandes, 1991), however, *M. (R.) gofasi* is only related with *M (R.) fusiformis* (Gmelin, 1791), and its subspecies *punctata* Houart, 1990. *M. gofasi* differs from the nominal subspecies in being more shouldered, smaller and narrower, and in having a narrower aperture, less and narrower spiral cords, broader and flatter axial ribs, and comparatively smaller, narrower protoconch. *M. fusiformis fusiformis* is known only from Senegal. From *M. fusiformis punctata*, with which it is sympatric, *M. gofasi* differs in being comparatively larger with a same number of teleoconch whorls, stouter, and more shouldered. It also has fewer and broader axial ribs and broader spiral cords.

Etymology

Named after Serge Gofas (MNHN), who collected that species among other important material from Angola for the Musum national d'Histoire naturelle, Paris.

Acknowledgments

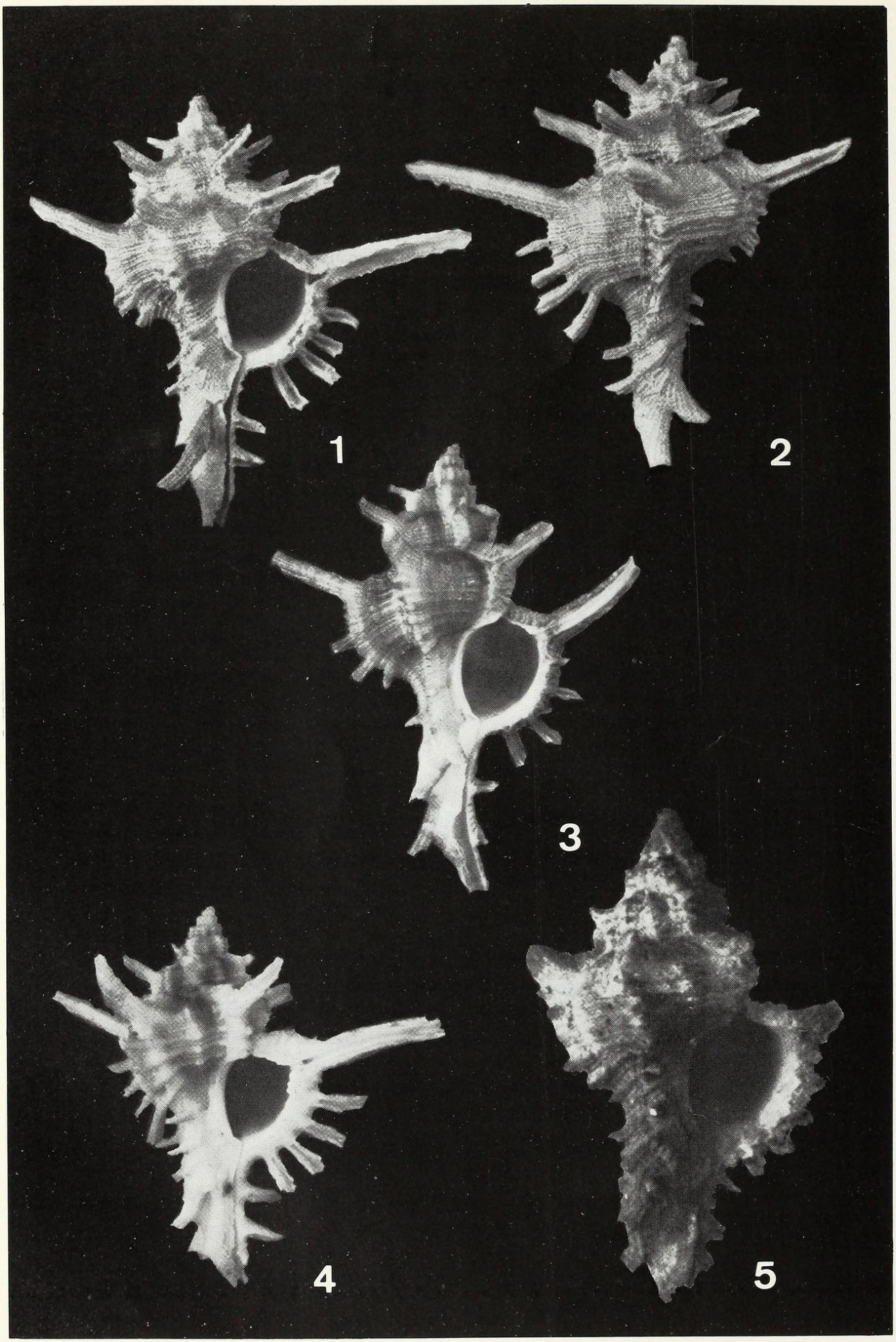
I am most indebted to the people who collected the material studied herein, namely S. Gofas (Muséum national d'Histoire naturelle, Paris), J. Monteillet (Mission française de Coopération au Cameroun), M. Pin (Senegal) and P. Ryall (Austria). I am also grateful to Dr. A. Waren (Natural History Museum, Stockholm) who mounted the radulae, and to Dr. P. Bouchet (Muséum national d'Histoire naturelle, Paris) for SEM work. Thanks also to Prof. E.H. Vokes (Tulane University) for comparison material for *Attiliosa goreensis*, and to P. Bouchet, S. Gofas, and E.H. Vokes for reading the manuscript.

Figures

1-4. *Hexaplex saharicus ryalli* n.subsp.
1-2. Off Abidjan, Ivory Coast, holotype MNHN, 41.2 mm.
3. Off Adjua, Ghana, paratype coll. P. Ryall, 45 mm.
4. Off Mia–Mia, West Ghana, paratype coll. P. Ryall, 38.1 mm.
5-7. *Hexaplex saharicus saharicus* (Locard, 1897).
5. Cap Blanc, Sahara, holotype MNHN, 28.8 mm.
6. Senegal, coll. R. Houart, 68 mm.
7. Morocco, coll. R. Houart, 51.2 mm.
8-9. *Dermomurex (Trialatella) sepositus* n.sp. Cameroun, holotype MNHN, 9 mm.
10. *Dermomurex (Dermomurex) scalaroides* (de Blainville, 1829), Toulon, France, MNHN, 12.5 mm.
11-13. *Attiliosa goreensis* n.sp.
11-12. Gorée, Senegal, holotype MNHN, 14.2 mm.
13. Gorée, Senegal, paratype MNHN, 15.9 mm.
14. *Attiliosa aldridgei* (Nowell-Usticke, 1969), Costa Rica, Tulane University, TU R-369, 19.9 mm.
15-16. *Muricopsis (Risomurex) gofasi* n.sp.
15. Namibe, Angola, holotype MNHN, 13 mm.
16. Namibe, Angola, paratype MNHN, 10.3 mm.
17. Radula of *Hexaplex saharicus ryalli* n.subsp., Ghana, coll. R. Houart, scale bar 100 μm.
18-19. Radula of *Attiliosa goreensis* n.sp., Gorée, Senegal, paratype MNHN.
18. Scale bar 50 μm; 19. Scale bar 20 μm.

Protoconchs (scales bars 5 mm).

20-21. *Hexaplex saharicus ryalli* n.sp.
22-23. *Hexaplex saharicus saharicus* (Locard, 1897).
24-25. *Dermomurex (Trialatella) sepositus* n.sp.
26-27. *Attiliosa goreensis* n.sp.
28. *Muricopsis (Risomurex) gofasi* n.sp.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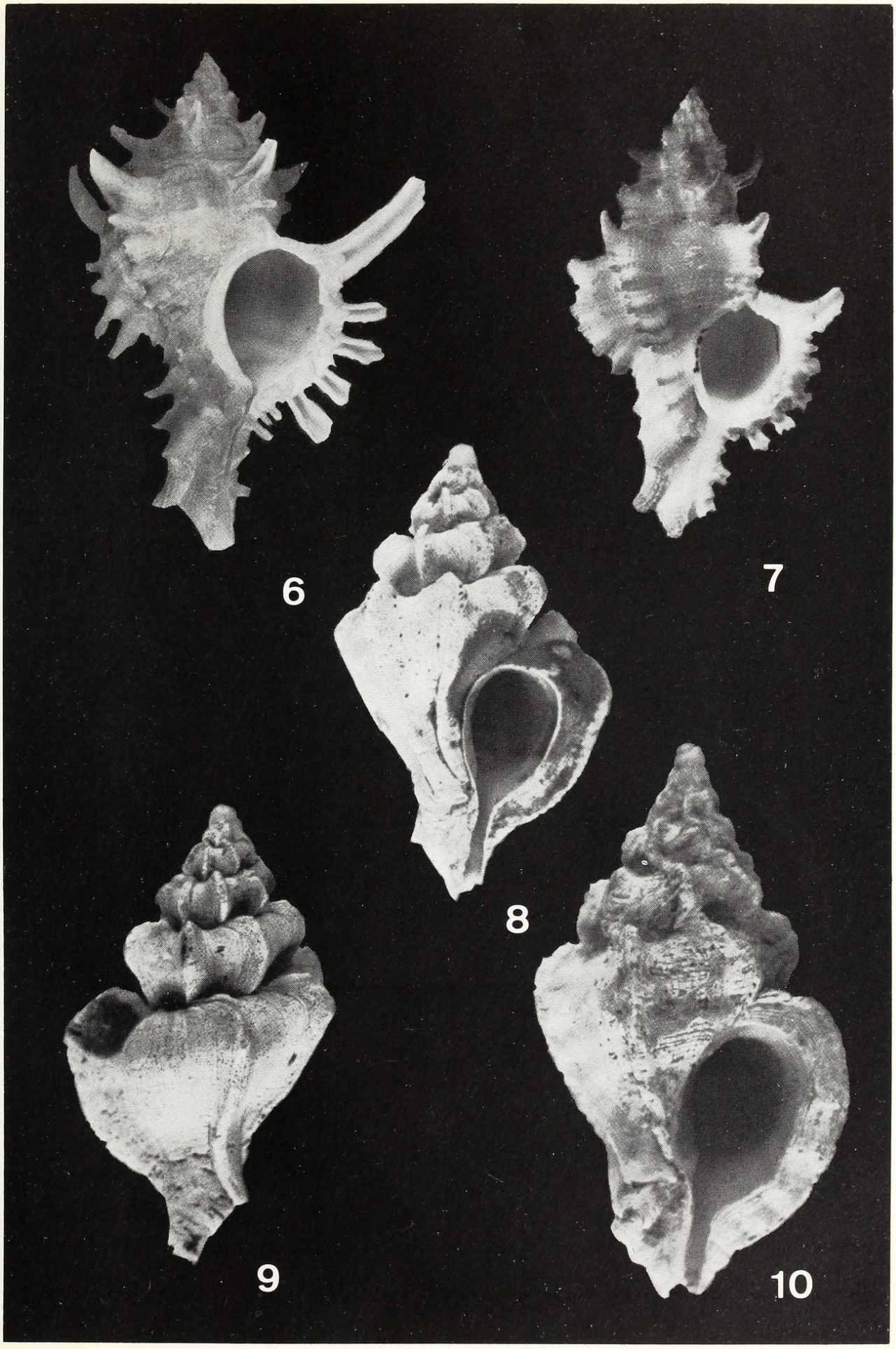
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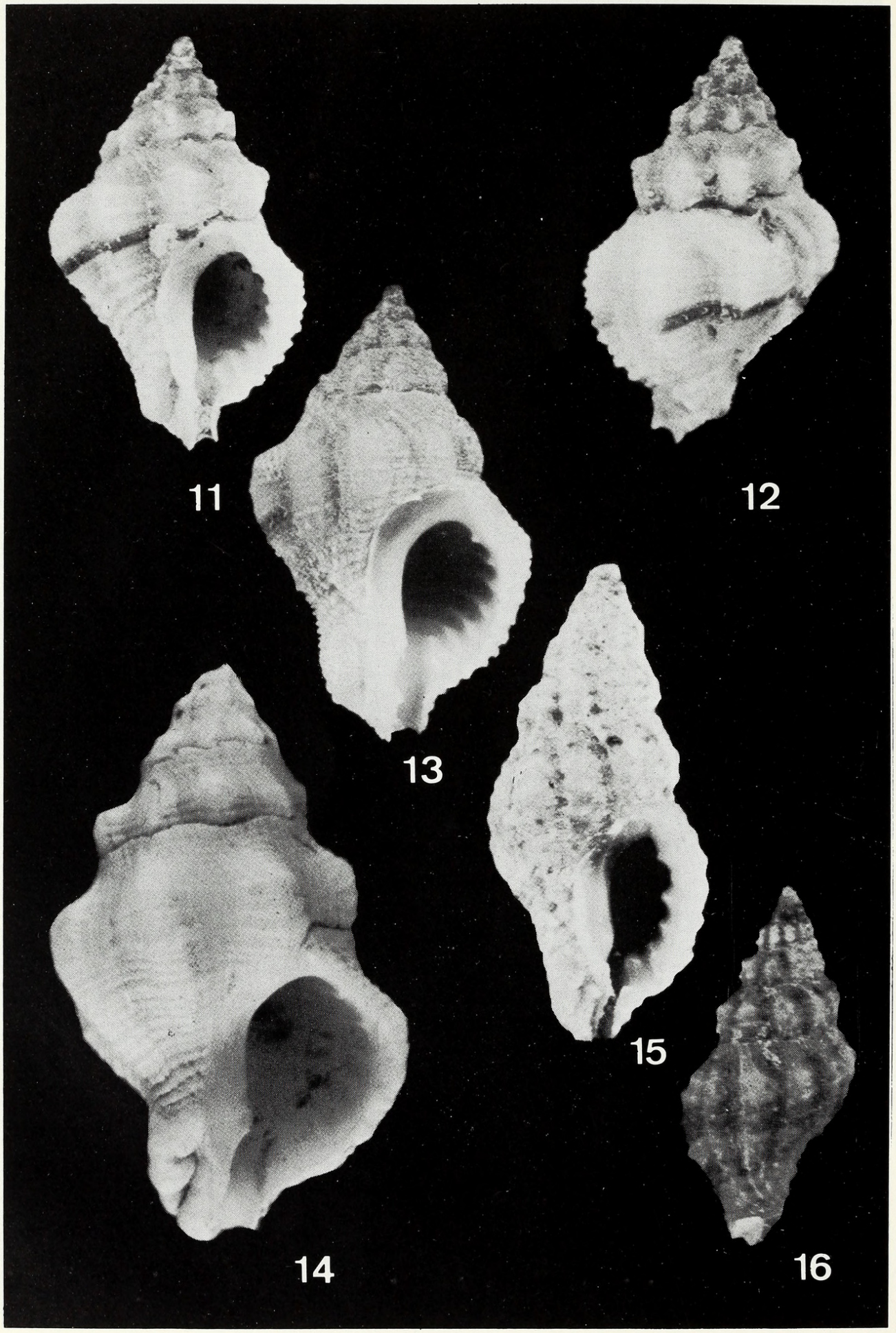
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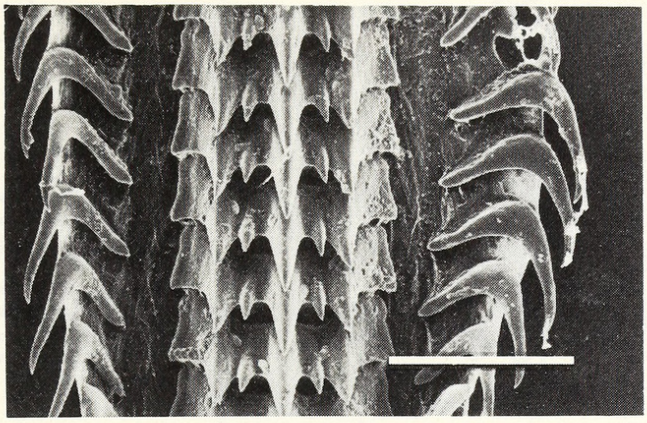

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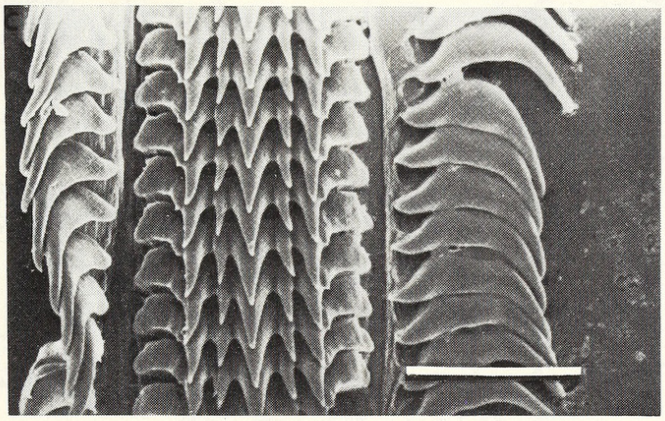

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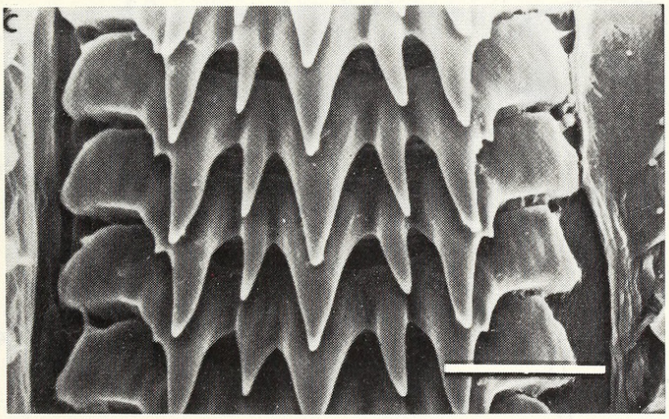

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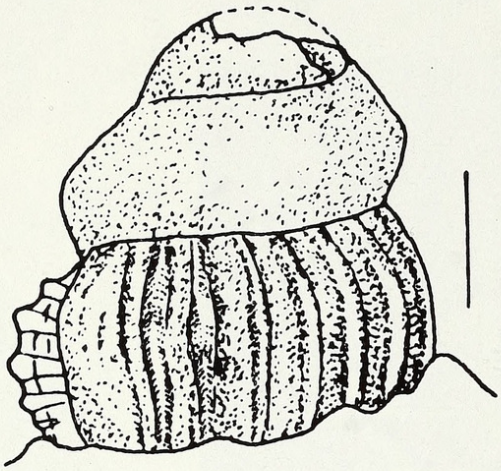

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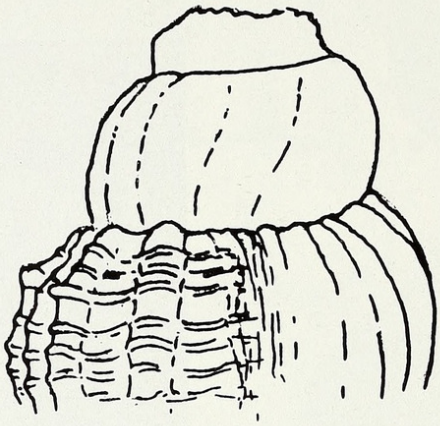

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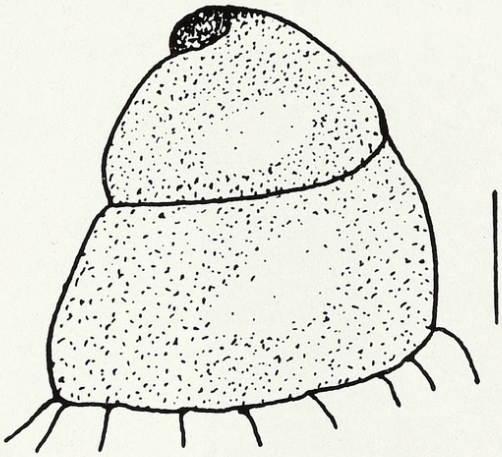

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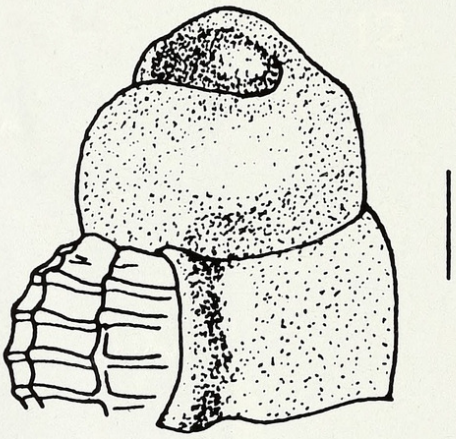

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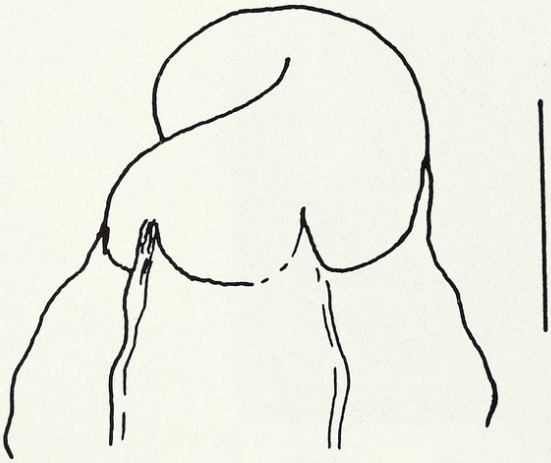

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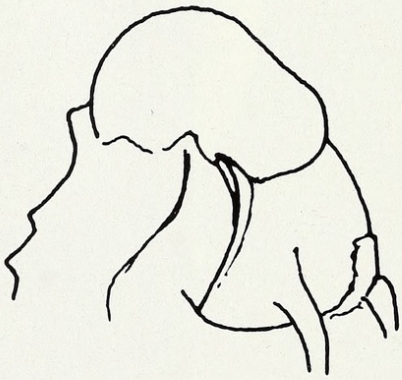

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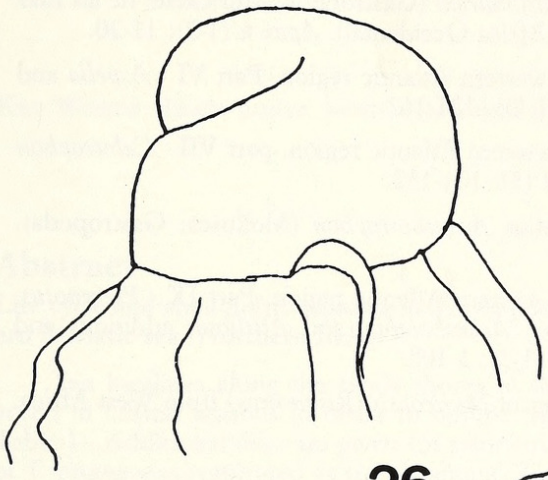

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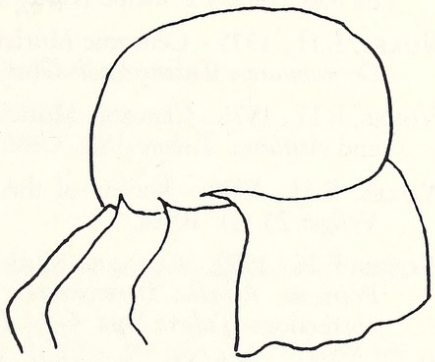

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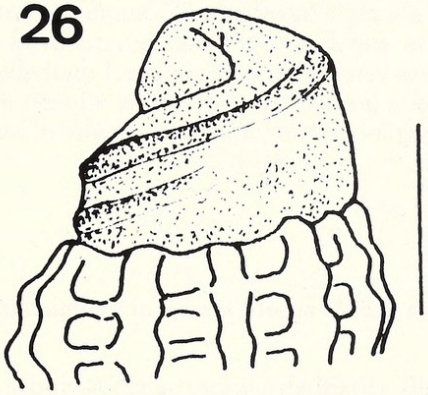

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