

(Manuscript received on 19 June 1984)

**AMMONICERA ANGULATA SP. NOV. FROM LAING ISLAND,
PAPUA NEW GUINEA, WITH COMMENTS
ON THE GENUS AMMONICERA VAYSSIÈRE, 1893
(MOLLUSCA : GASTROPODA)**

**Leopold III Biological Station, Laing Island,
Contribution n° 69**

by

W. J. SLEURS

Koninklijk Belgisch Instituut voor Natuurwetenschappen
Recent Invertebrates Section
Vautierstraat 29, B-1040 Brussels (Belgium)

SUMMARY

A new marine Omalogyrid species, *Ammonicera angulata* sp. nov., found in the lagoon of Laing Island, is described. The genus *Ammonicera* VAYSSIÈRE, 1893 is discussed.

Keywords : Gastropoda, *Ammonicera*, Papua New Guinea.

Ammonicera angulata sp. nov. de l'île de Laing,
Papouasie Nouvelle-Guinée, avec des commentaires
sur le genre *Ammonicera* VAYSSIÈRE, 1893
(Mollusca : Gastropoda)

RÉSUMÉ

Une nouvelle espèce de Gastéropodes Omalogyridés, *Ammonicera angulata* sp. nov., trouvée dans le lagon de l'île de Laing, est décrite. Le genre *Ammonicera* VAYSSIÈRE, 1893 est discuté.

INTRODUCTION

During several expeditions to Laing Island, North coast of Papua New Guinea, many marine microgastropods have been sampled. In a previous paper (SLEURS, 1984) two new species of Omalogyridae, *Omalogyra nodicarinata* SLEURS, 1984 and *O. vangoethemi* SLEURS, 1984 were described, and *O. japonica* (HABE, 1972) was reported. A fourth, rarely found, and so far undescribed species can be added to the list of Omalogyrid species from Laing Island, and is described here.

MATERIAL

The following list gives a description of the sampling-sites at Laing Island, where *Ammonicera angulata* sp. nov. has been collected.

- PNG 77/94 : Laing Island (Madang Province), lagoon, on *Halimeda*-algae, at — 6 m; leg. J. VAN GOETHEM on May 5th, 1977 : 1 spec.
- PNG 77/245 : Laing Island (Madang Province), lagoon, inner side of outer reef, on *Halimeda*-algae growing between living and dead coral at — 3 to — 4 m; leg. J. VAN GOETHEM on May 30th, 1977 : 2 spec.
- PNG 78/70 : Laing Island (Madang Province), southern end of the lagoon, on *Halimeda* and other algae growing between dead branches of *Acropora*-staghorn coral at — 7 m; leg. J. VAN GOETHEM on May 15th, 1978 : 3 spec.
- PNG 78/174 : Laing Island (Madang Province), lagoon, inner edge of outer reef, on *Halimeda*-algae growing on dead coral at — 1 m; leg. J. VAN GOETHEM on May 28th, 1978 : 1 spec.
- PNG 78/225 : Laing Island (Madang Province), lagoon, top of the outer reef, on *Halimeda*-algae, at — 3 to — 4 m; leg. J. VAN GOETHEM on June 4th, 1978 : 5 spec.

The holotype and six paratypes are in the collections of the Recent Invertebrates Section of the « Koninklijk Belgisch Instituut voor Natuurwetenschappen » (K.B.I.N.) in Brussels. One paratype has been sent to the « Australian Museum » (A.M.) in Sydney and another paratype to the « Muséum National d'Histoire Naturelle » (M.N.H.N.) in Paris.

RESULTS

Ammonicera angulata sp. nov. (Pl. I, A-F)

Derivatio nominis — Referring to the strongly angulate last whorl.

Type-locality : Papua New Guinea, Hansa Bay, Madang Province, Laing Island (4° 10' S, 144° 52' E); lagoon at depths from 1-7 m, on *Halimeda*-algae, growing on coral reefs.

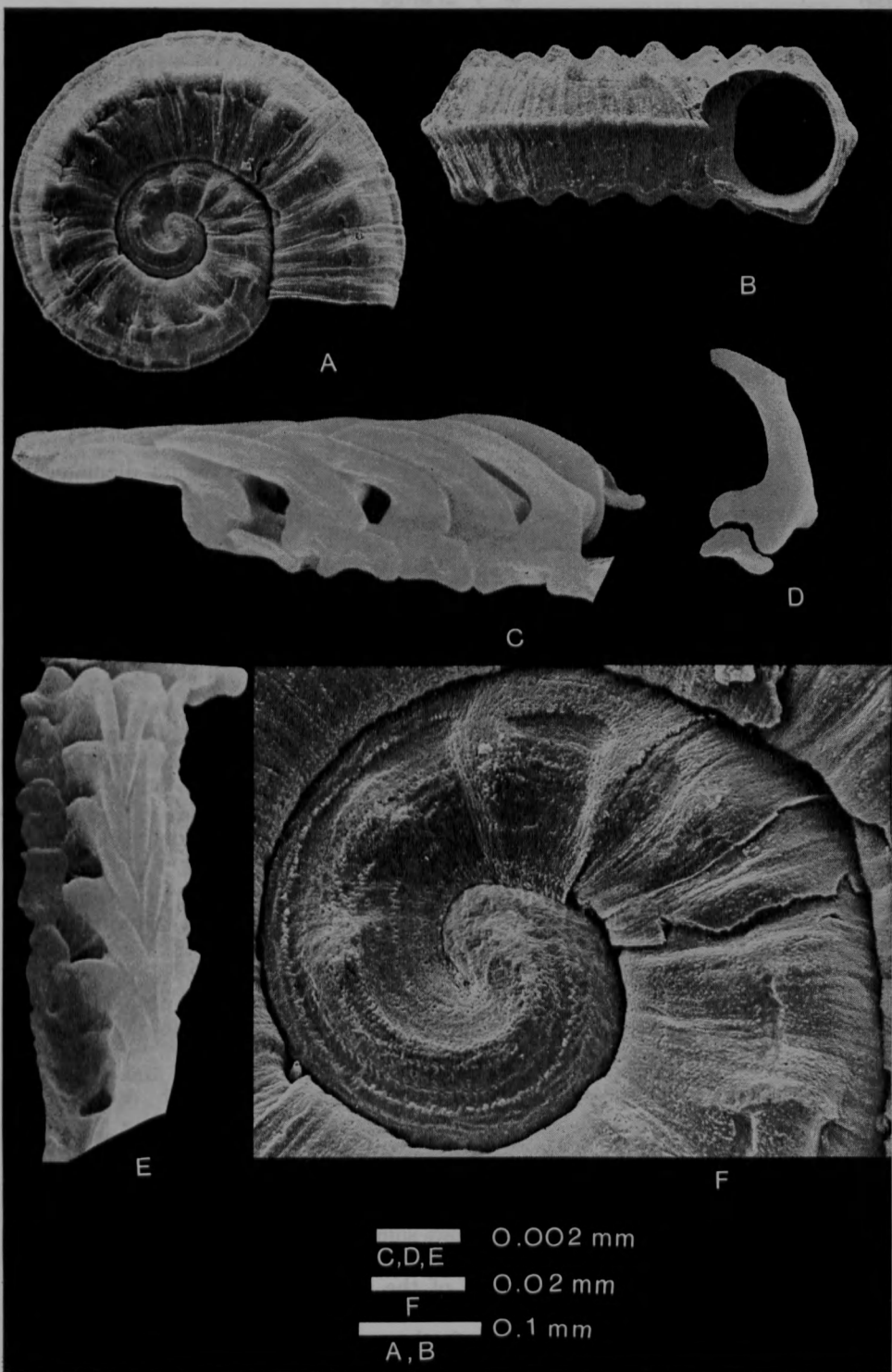
Holotype : A specimen with soft parts.

Paratypes : Two adult specimens with soft parts, two adult empty shells and one juvenile empty shell in the collections of the « K.B.I.N. » in Brussels. One adult shell with soft parts in the « A.M. » and one adult empty shell in the « M.N.H.N. » in Paris.

Diagnosis : Last whorl strongly angulate at the periphery; carina on upper and lower side of the shell weakly nodular; shell transparent, colourless.

PLATE I. — *Ammonicera angulata* sp. nov.

- A. Dorsal view of the shell (Paratype from station PNG78/70).
- B. Apertural view of the shell (Paratype from station PNG78/70).
- C. Lateral view of the radula.
- D. Isolated lateral and marginal radular teeth.
- E. Dorsal view of the radula.
- F. Protoconch of the specimen in A.



Description : Shell extremely small, transparent.

Protoconch : of about 3/4 whorl; first half with one sharp central ridge; last quarter with three strong nodules; one, rather deep, spiral groove at the outer side, near the suture; transition to the teleoconch indistinct.

Teleoconch : of about 1 1/4 whorl; upper and lower side with a relatively broad carina, and one rounded, smooth carina at the periphery; weak axial plications on the uppermost and lower part of the shell, forming about 15-18 nodules, where intersecting the carinae; inconspicuous growth lines between the axial plications; shell strongly angulate in apertural view; suture obvious and strongly constricted; peristome continuous; inner and outer lip thin, the former clasping the periphery of the previous whorl; juvenile specimens with less than 3/4 whorl, lacking the carina on the periphery.

Colour : transparent, colourless.

Shell-dimensions (in mm) :

	Station	Maximum diameter
Holotype	PNG 78/225	0.35
Paratypes		
Pl. I B	PNG 78/70	0.45
Pl. I A	PNG 78/70	0.38
	PNG 78/70	0.41
	PNG 78/174	0.38
	PNG 78/225	0.35
	PNG 78/225	0.27
		(juvenile spec.)
M.N.H.N.	PNG 78/225	0.34
A.M.	PNG 77/245	0.38

Operculum : horny, subcircular, paucispiral; nucleus central; inner side slightly convex.

Radula : formula : 1-1-0-1-1; each radular row consisting of two dagger-like teeth, the latter articulating at their outer side with one very small marginal tooth; basal part of the dagger-like teeth with one very long, pointed and strongly projecting central cusp, and with two small lateral projections; basal part of the marginal teeth subrectangular and flat-sided, presenting a short and blunt cusp, the latter articulating with the outer lateral projection of the dagger-like tooth.

Material : The type-material.

Occurrence : Laing Island, lagoon.

DISCUSSION

Ammonicera angulata sp. nov. is the fourth species of the Omalogyridae, reported from Papua New Guinea. This species shows some superficial resemblance to *Ammonicera nodicarinata* (SLEURS, 1984), but differs from the latter in having weaker nodules on the ventral and dorsal side of the shell, the interspaces between the peripheral carina and respectively the dorsal and ventral carina being flat-sided instead of concave as in *A. nodicarinata*; furthermore the shell of *A. angulata* sp. nov. is colourless, while it is brown in *A. nodicarinata*.

A. angulata sp. nov. has been assigned to the genus *Ammonicera* VAYSSIÈRE, 1893, because of its striking resemblance to the type-species *A. fischeriana* (MONTEROSATO, 1869). The radular characters of *A. fischeriana* have been described and depicted by VAYSSIÈRE (1893); both the description and the figures show the presence of one row of plate-like median teeth, flanked at each side by one row of lateral teeth, the latter having one long and pointed cusp; the protoconch features show a striking resemblance to *A. angulata* sp. nov. A strongly related species of *A. fischeriana* is *A. rota* (FORBES and HANLEY, 1853), the latter occurring from the Norwegian Coast to the Mediterranean; the radula of the latter species has the same structure as observed in *A. angulata* sp. nov. (personal observation); so we believe VAYSSIÈRE has misinterpreted the radular features of *A. fischeriana*, and possibly he considered the marginal teeth as the median teeth; therefore a further examination of the radular features of *A. fischeriana* is necessary to make a definite genus-assignment for *A. angulata* sp. nov.

The characters of the protoconch and of the radula of *A. rota* and *A. angulata* sp. nov. differ strongly from *Omalogyra atomus* (PHILIPPI, 1841), the type-species of the genus *Omalogyra* JEFFREYS, 1860; the latter has a smooth protoconch and the radula consists of a single row of dagger-like teeth (personal observation). We conclude therefore that *A. rota* and *A. angulata* sp. nov. must be separated from *O. atomus* at least on genus level; possibly *Omalogyra* and *Ammonicera* belong to different families, the resemblance of overall shell-shape, as observed in both genera, being a case of convergence.

ACKNOWLEDGEMENTS

I am especially indebted to Dr. J. VAN GOETHEM and Prof. L. VAN DE POEL for helpful criticism and for reading the manuscript. I wish to thank Mr. J. CILIS for the assistance with the scanning electron microscope and Mr. W. VANMAELE for developing the photographs.

REFERENCES

- FORBES, E. and S. HANLEY (1849-53) — A history of British Mollusca and their shells. Vol. 3. John Van Voorst, London, x + 616 pp.
- HABE, T. (1972) — The Japan's smallest Gastropod, *Ammonicera japonica* sp. nov., *Venus*, Kyoto, **31** (3), 115-116.
- JEFFREYS, G. (1860) — Sur le Mollusque désigné par MM. FORBES et HANLEY sous le nom de *Skenea nitidissima*. *J. Conch.*, Paris, **8**, 108-111.
- MONTEROSATO, T. A. (1869) — Description d'espèces nouvelles de la Méditerranée. *J. Conch.*, Paris, **42**, 274-277.
- PHILIPPI, A. (1841) — Uber das Genus *Truncatella*. *Arch. Naturgesch.*, **7** (1), 51-55.
- SLEURS, W. (1984) — The Marine Microgastropods from the Northern Coast of Papua New Guinea (Mollusca : Gastropoda). I. Family : Omalogyridae (with Description of Two New Species). *Bull. Inst. r. Sci. nat. Belg.*, **55** (2), 1-11.
- VAYSSIÈRE, A. (1893) — Observations zoologiques et anatomiques sur l'*Ammonicera*, nouveau genre de Gastéropode Prosobranché. *Annls. Fac. Sci. Marseille*, **3**, 15-28.