

**FLABELLINA EVELINAE, A NEW SPECIES OF EOLID
MOLLUSC FROM NIGERIA**

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RESUMO - Uma nova espécie de eolide (Mollusca, Nudibranchia) é descrita da Nigéria e nomeada em homenagem a Eveline Marcus, *Flabellina evelinae*.

ABSTRACT - A new species of eolid (Mollusca, Nudibranchia) is described from Nigeria and named in honour of Eveline Marcus, *Flabellina evelinae*.

INTRODUCTION

The eolid molluscs described in this paper were collected by Dr. Jim Wright near Port Harcourt, Nigeria and sent to me in April 1983. They appear to belong to a hitherto undescribed species.

The first of a long series of important taxonomic papers by Ernst and Eveline Marcus describing the opisthobranch molluscs of the Atlantic Ocean was published in 1955. Although under the authorship of Ernst Marcus, right from the start Eveline was involved in the work as the artist while Ernst delved into the relevant literature. In the 1960s numerous papers under joint authorship followed until Ernst's death, and it is to her credit that Eveline has continued the detailed and meticulous work right up to the present time. The papers followed the earlier work of Odhner (1939) and Macnae (1954), and quickly adopted a form of presentation of taxonomic information of a very high standard. Taxonomic papers can be tedious, but they are an essential foundation on which later ecological, behavioural and physiological studies are based. In consequence they must be well organised for quick reference to the relevant section, clearly illustrated for immediate comparison by future workers, comprehensive since future work may reveal some character of taxonomic importance which had hitherto been considered trivial, yet concisely worded to save wading through irrelevant detail. The Marcuses' papers took account of all these points and they now form the foundation of our knowledge of opistho

branches from west Atlantic warm waters. In the checklist published in 1977, 128 out of a total of 288 opisthobranchs from this area were first described by the Marcuses (44%). For the order Nudibranchia they have named 90 out of 143 species listed (63%). By contrast the fauna from the east Atlantic is much less well known. Some species occur in both east and west, but others do not (Edmunds, 1977, 1982), and it is a pleasure to name this previously undescribed species from the Atlantic in honour of Eveline Marcus.

FAMILY FLABELLINIDAE

The Flabellinidae and the Coryphellidae were for many years regarded as two distinct families of eolid molluscs, but in 1967 Marcus and Marcus recognised the difficulty of separating *Coryphella* from *Flabellina*, and so placed these two genera into the same family, the Flabellinidae. This initiative was followed by Miller (1971), Gosliner & Griffiths (1981) and Edmunds & Just (1983). Gosliner & Griffiths give a comprehensive comparison of the type species of *Coryphella* and *Flabellina* together with other species attributed to these genera. They conclude that the differences between the type species are small, and the differences between all of the species studied constitute a continuum with no clear gap suitable for generic separation. There can therefore be no justification for maintaining two genera, and *Coryphella* Gray, 1850, must be regarded as a junior synonym of *Flabellina* Voigt, 1834.

Flabellina evelinae n. sp.

Material: Two specimens preserved in formalin were collected by Dr Jim Wright in early 1983 subtidally on hydroids growing on pontoons at 'Borokiri', Port Harcourt, Nigeria, 4°45'N, 7°03'E. The larger animal is designated the holotype and is deposited in the British Museum (Natural History), holotype n° 1985161. The smaller animal with the radula mounted separately is a paratype n° 1985162.

Description: The animals were killed in formalin without prior narcotization so are rather contracted (Fig. 1B). They are 7 and 6.5 mm in length. Two colour prints of the living animals on a hydroid show that they have a long slender cream-coloured body and long transparent greyish oral tentacles with white tips (the distal third) Fig. 1A is drawn from one of the colour prints of a live animal. The cerata arise from stout, compound (i.e. branched) peduncles (Fig. 1C). Each ceras is long and slender with a bright orange-vermillion hepatic duct and a white tip (Fig. 1E). The smaller animal has 6 peduncles on each side, each of which contains spherical inclusions (Fig. 1C) similar to those in *Calmella sphaerifera* (Schmekel, 1965). The gonopore is just behind

the first peduncle, and the anus just in front of the second peduncle, both on the right side (Fig. 1B) The smaller animal has about 10 rings on each rhinophore, the larger animal has 15. The foot is longitudinally grooved with pointed processes at the front and a transverse anterior groove (Fig. 1D).

The jaw is rounded in outline (Fig. 1F), with a row of 32 complete teeth (and a few old broken teeth) on the cutting edge (Fig. 1G) There are also three or four rows of accessory denticles lateral to this main row of teeth, but these are not well developed and are only present towards the newest part (the tip) of the cutting edge. The radula has 22 rows of plates with two more in process of formation, and the formula is 1.1.1. The median plate usually has 5 denticles on each side of the cusp, while the lateral plates each have a single cusp and no serrations or denticles (Fig. 1H,I).

The reproductive system was not examined. The species appears to be easily recognised without recourse to dissection, and so it was considered unnecessary to damage one of the two specimens either by dissection or serial sectioning.

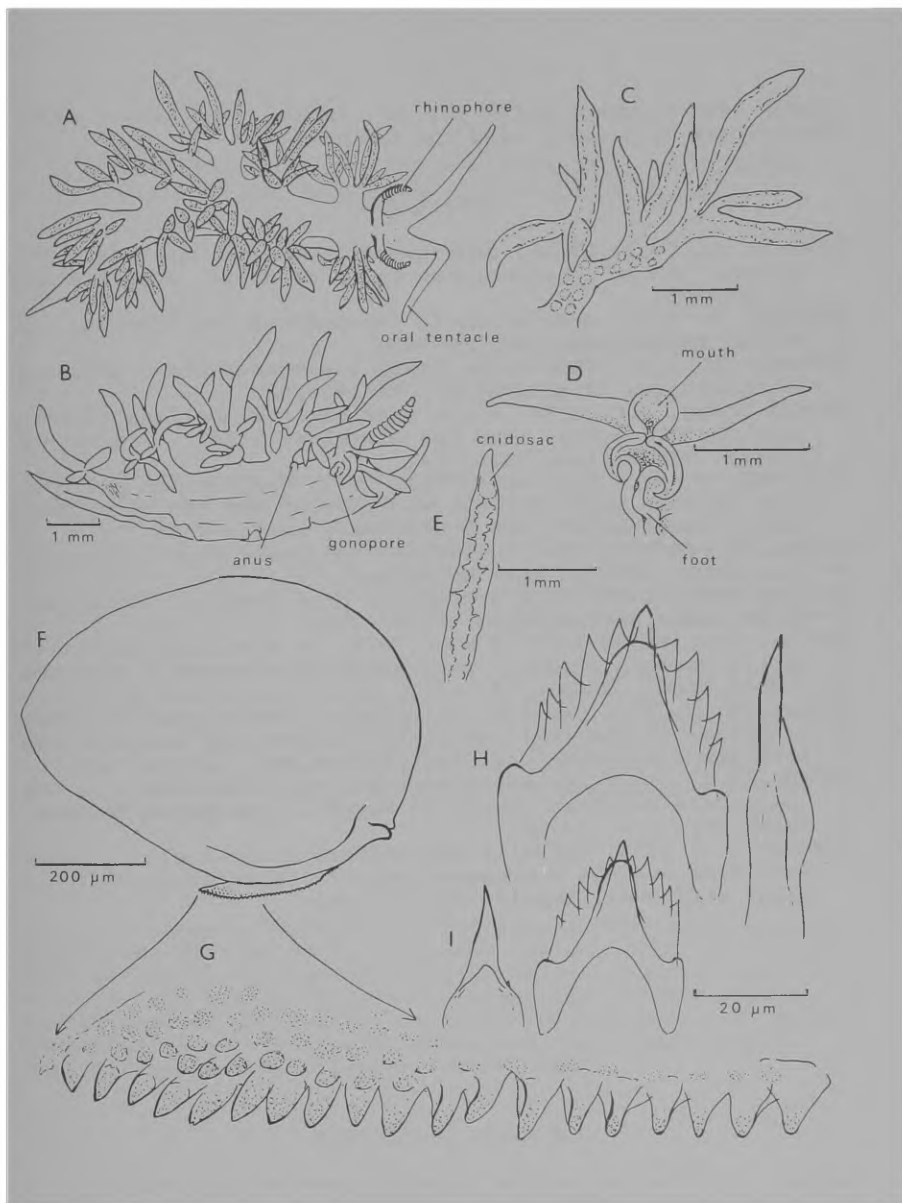
Ecology: The colour print shows the animals resting and apparently feeding on a gymnoblast hydroid which is possibly a species of *Eudendrium*. There are two egg strings that probably belong to this species, each comprising an irregular coiled string wrapped around the hydroid and similar though less compact to that illustrated for *Flabellina funeka* by Gosliner and Griffiths (1981) The animals were collected from pontoons and buoys among mangroves of the Bonny river in water of about 20‰ salinity. Several species of eolid are known to occur in harbours where salinities can be slightly lower than 35‰, but this species appears to live in quite exceptionally low salinity water. It would be interesting to know if the eggs and larvae can also withstand this low salinity.

DISCUSSION

Flabellina evelinae is characterised by creamy white body with orange-red cerata, compound peduncles to the cerata, annulate rhinophores, and smooth lateral radular plates. This combination of characters differs from the 46 species of *Flabellina* listed by Gosliner & Griffiths (1981) and from the more recently described *Flabellina baetica* from Spain (Garcia, 1984)

ACKNOWLEDGEMENTS - When I first studied west Atlantic opisthobranchs in 1961, Professor Ernst and Eveline Marcus quickly supplied copies of their early papers, and later on very helpful letters, and so it is a pleasure to thank Dr. Eveline Marcus for her comments and correspondence over more than 20 years. Dr. Jim Wright kindly sent me the 2 eolids des

Figure 1 - *Flabellina evelinae* n. sp. A, living animal traced from a colour print by Dr. J Wright; B, preserved animal, paratype, in side view; C, second group of cerata on right side of paratype, preserved, showing compound peduncle; D, head of paratype, preserved, in ventral view; E, ceras, preserved; F, jaw of paratype; G, cutting edge of jaw showing denticles near tip; H, nineteenth median and lateral radular plates of paratype; I, fifth lateral and median radular plates of paratype.



cribed here together with colour photos, and Dr. Janet Edmunds has critically read the manuscript.

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