

The Radula of *Zierliana woldemarii* (KIENER, 1839)

BY

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(3 Text figures)

THE GENUS *Zierliana* GRAY, 1847 is quite different morphologically from most other mitrid forms, except for the presence of typical columellar folds. Some of its species have such un-mitrid characters as prominent denticles on the labrum, a distinct posterior notch or canal, and in some cases – as in the type species, for example – a clearly atypical shape for a mitrid. Some of the species have whorls that are smooth as in Mitrinae [*Zierliana anthracina* (REEVE, 1844), ? *Z. quoyi* (DESHAYES, 1844)], or weakly spirally ribbed [*Z. woldemarii* (KIENER, 1839)]. At least one form [*Z. aethiops* (REEVE, 1845)] has vexillid axial ribbing on the body whorl, while another has a combination of both axial and spiral ribs [*Z. ziervogeliana* (GMELIN, 1791)]. All of these factors have led to a certain amount of conjecture as to the correct systematic position of the genus.

For some time I had tried to secure preserved specimens for further study of the radula and soft parts, but without success. There are only a few species in the genus, probably not more than six or seven; most of these seem relatively rare in collections and are seldom seen preserved with animal intact. Recently my mention of this

taxonomic problem led Mrs. Virginia Orr Maes of the Academy of Natural Sciences of Philadelphia to extract and mount the radula of a specimen of *Zierliana woldemarii* from the Academy's collection (Text figure 1). This

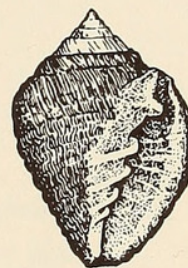


Figure 2

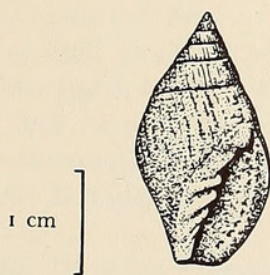
Zierliana ziervogeliana (GMELIN, 1791), type species

Figure 1

Zierliana woldemarii (KIENER, 1839)

species is quite similar in form to the type species, *Z. ziervogeliana* (Text figure 2), and it can probably be safely assumed that the radulae of both species would be relatively similar also. Mrs. Maes sent me the slide she had prepared, together with the two halves of the shell from which the radula had been extracted. I am grateful to her for her quick and practical response to my casual mention of the problem.

As may readily be seen from the drawing (Text figure 3), the radula of *Zierliana woldemarii* is definitely of vexillid type, with a multicuspid rachidian and sickle-shaped lateral teeth, similar to the radulae of *Vexillum cadaverosum* (REEVE, 1844), *V. exasperatum* (GMELIN, 1791) and *V. semifasciatum* (LAMARCK, 1811). However, it is proportionately a good deal smaller, and possesses rounded rachidians, whereas the cusps of the other species are sharply pointed, as illustrated by CERNOHORSKY (1966, p. 119).

It would seem, therefore, that this evidence supports the previously tentative placement of the genus *Zierliana*

in the Vexillinae. Its morphological characters are distinct enough from other vexillid forms, however, to warrant retaining *Zierliana* as a full genus apart from those forms having closely similar radulae.

The accompanying text figures were drawn by Mrs. Emily Reid of the Veliger staff.

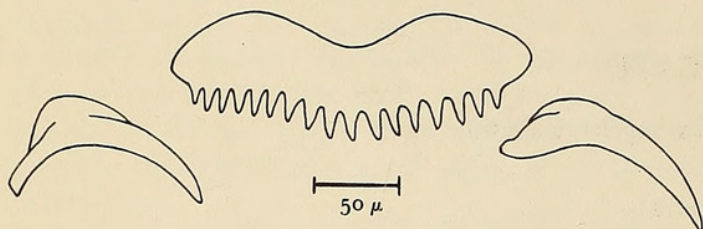


Figure 3

Zierliana woldemarii (KIENER, 1839)
Radula. Preparation by V. O. Maes, ANSP.

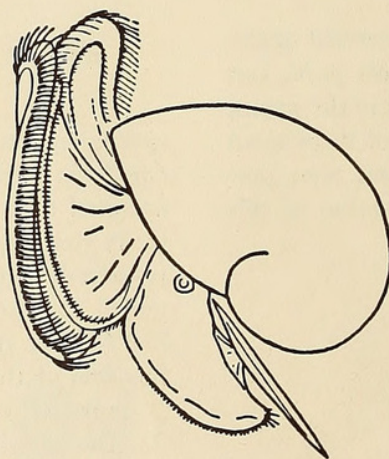
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