

CORRESPONDENCE

ANTIQUATONIA MOLARUM NOM. NOV. PRO PRODUCTUS ROTUNDUS GARWOOD

SIR,—Muir-Wood and Cooper (1960, p. 271) having shown that *Productus rotundus* Garwood, 1913 (p. 569, pl. li, figs. 3a, b), a species referred by them to the genus *Antiquatonia* Miloradovich 1945, is preoccupied by *Productus rotundus* Pander, 1830 (p. 85, pl. xxi, figs. 6a–d), the name *Antiquatonia molarum* is here substituted for the former (*molae*, feminine plural, a mill, in reference to Fawcett Mill, Shap District, Westmorland, whence Garwood described his species).

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REFERENCES

- GARWOOD, E. J., 1913. The Lower Carboniferous succession in the north-west of England. *Quart. Journ. Geol. Soc.*, lxxviii, 449–582.
MUIR-WOOD, H., and COOPER, G. A., 1960. Morphology, classification and life habits of the Productoidea (Brachiopoda). *Geol. Soc. Amer., Mem.* no. 81.
PANDER, C. H., 1830. *Beiträge zur Geognosie des russischen Reiches*. St. Petersburg.

INHALANT AND EXHALANT FEEDING CURRENT SYSTEMS IN RECENT BRACHIOPODS

SIR,—In his recent article on feeding mechanisms of spire bearing brachiopods Dr. M. J. S. Rudwick (1960) divided spirolophes into two groups, one possessing an inhalant filter feeding current-system and the other characterized by an exhalant system. He noted (pp. 380, 381) that the exhalant type is unknown in living brachiopods. In subsequent correspondence Professor Alwyn Williams (1960, p. 516) considered that the absence of an exhalant system in any living species may reflect a fundamental disadvantage of the system and reiterated his views on the deuterolophous nature of the atrypaeid and spiriferoid lophophore.

It is not the purpose of the present communication to enter into the discussion on the nature of the lophophores of fossil spire bearers or into the vexed question of the function of the jugum, but to consider the probable nature of the current system of the recent genus *Discinisca* and its implications.

As Rudwick and Williams rightly point out an exhalant system has not been noted in any recent genus and from what is known of the morphology of other recent articulate genera which have not been examined experimentally, such a system is unlikely to occur. This does not appear to be the case in the inarticulate genus *Discinisca*, which is represented in the sea to-day by several species. The gross morphology of the lophophore of this genus is known in some detail through Blochmann's studies (1900), but the lophophore has not been examined functionally.

From Blochmann's figures and description it is seen that the lophophore of *Discinisca* is spirolophous but differs from that of *Crania* in having the apices of its cones ventrally directed (cf. figs. 1a, 1b). As in the case of *Atrypa* and *Spirifer* described by Rudwick this difference is more fundamental than it might appear initially. Looking up the left spirulum from its base towards the apex, the lophophore is coiled anti-clockwise in *Crania* and clockwise in *Discinisca*. Thus *Discinisca*, in terms of its direction of coiling of the lophophore, belongs to Rudwick's "*Spirifer* group."

Rudwick (p. 373) has shown that the filaments of the left brachium, when viewed along the brachial axis towards the tip of the brachium, filter in a clockwise direction and those on the right brachium in an anti-clockwise