

Body and trace fossils in one

Bałuk W. & Radwański A. 1991. A new occurrence of fossil acrothoracican cirripedes: *Trypetesa polonica* sp. n. in hermit gastropod shells from the Korytnica Basin (Middle Miocene; Holy Cross Mountains, Central Poland), and its bearing on behavioral evolution of the genus *Trypetesa*. *Acta Geologica Polonica* 41, 1-2.

The Middle Miocene Korytnica Clays look like if it is an unlimited source of paleontological data. They yielded fossils of nearly all known skeletonized large animal groups of the Tertiary, usually of excellent preservation. The Korytnica assemblage may be regarded as the richest and most diversified one of that age in the world. The authors of the reviewed paper contributed the most to knowledge of the Korytnica Clays, both in terms of taxonomy of particular fossil groups as well as geology and paleoecology of the locality.

This time Bałuk and Radwański describe findings of quite peculiar trace fossils. There are borings of *Trypetesa* cirripedes in mollusc shells, often in shells inhabited by hermit crabs. The most peculiar feature of these borings made by soft bodied cirriped is that they mirror features of soft animal body so exactly as it permits application of biological criteria to taxonomical and paleoecological analysis. In effect the authors were able to assign them to a Recent genus established on living animal. One has to point, however, that according to the Article 23(9)(iii) of ICZN 'a name established for an ichnotaxon does not compete in priority with one established for an animal, even for one that may have formed the ichnotaxon'; from this rule one may conclude that the practice of giving animal names to the trace fossil is not entirely justified. I agree however with authors of the paper in their decision; one has to regard rather the described borings as more similar to outer ammonite shell, for example, than to typical trace fossil such as bivalve borings giving only a vague idea about animal itself. Thus despite the Code, the approach adopted by Bałuk and Radwański seems to be entirely justified, so more that *Trypetesa* secreted calcareous deposits in its aperture, it is thus not exactly just a trace fossil. It is clear that authors of ICZN have not envisaged such a peculiar case as that described in the reviewed paper.

The paper starts with an introduction to the locality, its age and geologic situation and remarks on its cirriped fauna. This is followed by a review of distribution of *Trypetesa* in the Korytnica Basin, discussion of all fossil and modern acrothoracican cirripedes and description of boring behaviour of modern *Trypetesa*. The main part of the paper is devoted to careful and detailed systematic description of the investigated material, which includes biological interpretation of some features typical of the considered Miocene borings. This part is followed by exhausting comparison of borings of modern species and *Trypetesa polonica*, with some speculations about their evolutionary relationships. Finally we find several chapters considering habitat and behavioural evolution of these cirripedes.

The highly integrated and careful approach, paleontological and biological, which is still not so common among papers by other authors, makes this paper very important and interesting not only to paleontologist but to biologists as well. Last but not least, one should mention excellent illustrations facilitating reading and understanding this rather complex subject. This paper may serve as leading example of the attitude which grants survival of paleontological, even taxonomical, investigations in the future.