

MICROPALAEONTOLOGY NOTEBOOK

The lectotype of *Spiroplecta rosula* Ehrenberg, 1854 – the type species of *Bolivinopsis* Yakovlev, 1891 (Foraminifera)M. A. KAMINSKI^{1,*} & D. B. LAZARUS²¹Department of Earth Sciences, UCL, Gower Street, London WC1E 6BT, UK²Museum für Naturkunde, Berlin, Humboldt Universität zu Berlin, Invalidenstrasse 43, 10115 Berlin, Germany

*Corresponding author (e-mail: m.kaminski@ucl.ac.uk)

INTRODUCTION

The Ehrenberg collection of microfossils in the Natural History Museum, Berlin contains the original reference material for a single genus of agglutinated foraminifera – *Bolivinopsis* Yakovlev, 1891. Among the foraminiferal specimens preserved in the collection, a single specimen was selected and illustrated by Ehrenberg (1854) as *Spiroplecta rosula*. This species was subsequently designated by Kisselman (1964) as the senior synonym of *Bolivinopsis capitata* Yakovlev, 1891, making it the type species of *Bolivinopsis* by virtue of synonymy. According to Kisselman (1964), the type specimens of *B. capitata* were deposited in the Central Geological Museum in St Petersburg, and were lost during the war. Indeed, the name *B. capitata* is not used in the Soviet literature, and such forms are consistently attributed to *B. rosula*. As part of the work undertaken for a Catalogue of Agglutinated Foraminiferal Genera, we undertook a search of the Ehrenberg Collection in order to establish the status of the type specimen(s) of *Spiroplecta rosula*.

MATERIAL AND METHODS

The Ehrenberg collection of microfossils at the Museum für Naturkunde in Berlin consists of innumerable specimens embedded in Canada Balsam mounted on small mica disks that served as microscope slides. Small paper rings pressed onto the surface of the disks were used by Ehrenberg to mark specimens of importance, such as illustrated in Ehrenberg's (1854) book *Mikrogeologie*. A catalogue of the collection was compiled originally by Ehrenberg's daughter Clara and has been supplemented by new collection databases. We used these sources to locate and examine all the micas from the Prairie Limestone locality in order to search for the illustrated type (and additional specimens, if any) of *Spiroplecta rosula*.

The original sample containing *Spiroplecta rosula* was sent to Ehrenberg by Prof. J. W. Bailey (US Military Academy), and is labelled 'Prairie Limestone, or calcareous marl containing the Polythalamia of Chalk from a Cretaceous formation on the upper waters of the Mississippi River'. Loeblich & Tappan (1962) assigned this sample to the type locality of the Prairie Bluff Chalk, at Prairie Bluff, Wilcox County, Alabama, which is of Early Maastrichtian age. The Ehrenberg collection still holds a very small fragment of the original sample (less than 5 g), which, unfortunately, is too small to be processed for foraminifera.

RESULTS

The micas holding specimens from the Prairie Limestone locality are in a relatively good state of preservation, though the Canada

Balsam has yellowed and cracked over the years. The lectotype of *Spiroplecta rosula* (Figs 1, 2) is undoubtedly the same specimen as the one illustrated by Ehrenberg (1954, pl. 32, fig. 26), and is preserved in mica strip 230405, labelled 'Mississippi-5'. The lectotype specimen designated herein is on mica nr. 1 (from the left), and is circled by a blue ring. There are no labels on the cardboard mount holding the mica slips, but many specimens are ringed, indicating that the mica slides were examined carefully by Ehrenberg.



Fig. 1. *Bolivinopsis rosula* (Ehrenberg). Maastrichtian, Prairie Bluff chalk, Wilcox County, Alabama. Original drawing of *Spiroplecta rosula* Ehrenberg on drawing sheet nr. 2440, from the Ehrenberg collection, Museum für Naturkunde, Berlin, copied and published in Ehrenberg's (1854) *Mikrogeologie*; magnification not given.

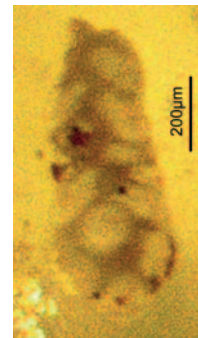


Fig. 2. *Bolivinopsis rosula* (Ehrenberg). Maastrichtian, Prairie Bluff chalk, Wilcox County, Alabama. Lectotype (designated herein) of *Spiroplecta rosula* Ehrenberg, from the Ehrenberg Collection, sample 230405, Museum für Naturkunde, Berlin; scale bar is 200 μm.

SYSTEMATIC PALAEOLOGYFamily **Spiroplectamminidae** Cushman, 1927Genus *Bolivinopsis* Yakovlev, 1891*Bolivinopsis* Yakovlev, 1891, p. 349.*Spiroplectoides* Cushman, 1927, p. 77

Type species. *Spiroplecta rosula* Ehrenberg, 1854, p. 24, pl. 32, fig. 26; OD.

Description. Test elongate, narrow, early stage with large planispiral coil of a diameter greater than the early part of the following biserial stage, which is of nearly constant width throughout, sutures commonly oblique in the later stage. Wall finely agglutinated, imperforate, with calcareous cement. Aperture an interiomarginal arch.

Remarks. Kisselman (1964) discussed the synonymy of the type species *Bolivinopsis capitata* Yakovlev with *Spiroplecta rosula* Ehrenberg and emended the genus accordingly. According to Kisselman, the type specimens of *B. capitata* were deposited in the Central Geological Museum in St Petersburg, and were lost during the war. Indeed, the name *B. capitata* is not used in the Soviet literature, and such forms are consistently attributed to *B. rosula*.

The lectotype of *Spiroplecta rosula* (designated herein) is housed in the Ehrenberg collection in the Museum für Naturkunde, Berlin in Drawer K23, folder 4 (left side of folder). The Ehrenberg collection of foraminifera from the 'Prairie Limestone' consists of numerous specimens embedded in

Canada Balsam mounted on small mica disks that served as microscope slides. The lectotype is undoubtedly the same specimen as the one illustrated by Ehrenberg (1954, pl. 32, fig. 26), and is preserved in mica strip 230405, labelled 'Mississippi-5'. The lectotype specimen is on mica nr. 1 (from the left), and is circled by a blue ring.

CONCLUSIONS

We herein designate a lectotype for *Spiroplecta rosula* Ehrenberg, 1854, the type species of *Bolivinopsis* Yakovlev, 1891, housed in the micropalaeontological collections of the Natural History Museum, Berlin. The type species of *Bolivinopsis* by original designation [*B. capitata* Yakovlev, 1891] is regarded to be a junior synonym of *S. rosula* Ehrenberg.

Manuscript received 28 January 2009

Manuscript accepted 17 August 2009

REFERENCES

- Ehrenberg, C.G. 1854. *Microgeologie*. Leopold Voss Verlag, Leipzig, 374 pp.
- Kisselman, E.N. 1964. Otryad Textulariida. In: Subbotina, N.N. (Ed.), *Foraminifery Melovykh i Paleogenovykh otlozhenii Zapadno-Sibirskoi Nizmennosti*. Trudy VNIGRI, **234**: 153–192.
- Loeblich, A.R. & Tappan, H. 1962. Type localities of some American Cretaceous foraminiferal genotype species described by Ehrenberg. *Journal of Paleontology*, **36**(2): 352–354.
- Yakovlev, V. 1891. Opisanie neskol'kikh vidov Melovykh foraminifer [Description of some species of Cretaceous foraminifera]. *Trudy Khar'kovskogo Obshchestva Ispytateley Prirody (1890)*, **24**: 341–364.