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A NEW ZONE WITH *PRAEORBULINA INDIGENA*
(FORAMINIFERIDA, GLOBIGERINIDAE) IN THE UPPER
BADENIAN (TORTONIAN S.S.) OF CENTRAL PARATETHYS

(2 Figs.)

*Nowy poziom z Praeorbulina indigena (Foraminiferida,
Globigerinidae) w górnym badenianie (tortonie s.s.) Centralnej
Paratetydy*

(2 fig.)

Abstract. It is suggested to introduce a zone with planktonic foraminifer *Praeorbulina indigena* for the Upper Badenian sediments in the Central Paratethys, in the area outside and inside of Carpathian Belt in Poland, USSR, Rumania and ČSSR. The inclusion of *Praeorbulina indigena* to the new genus *Velapertina* (Popescu 1969) is regarded as invalid.

Praeorbulina indigena (Łuczowska) was described in 1955 as *Globigerinoides* from Grabowiec Beds in the vicinity of Bochnia in Poland (Łuczowska, 1955). Later study showed its appearance also in Upper Badenian deposits of other areas of Poland, e. g. in the Upper Silesian (Alexandrowicz, 1963), in the Middle Carpathian Foredeep (personal communications by Z. Kirchner and W. Szotowa), in the Tarnobrzeg—Chmielnik area (Łuczowska, 1964, 1967). At the same time the occurrence of this species was noted from Upper Badenian of the Carpathian Basin in Czechoslovakia (Cicha, Zapletalová, Čtyrtek, 1968), from the Eastern Carpathian Foredeep in USSR (Phishvanova, 1968, erroneously called it *Globigerinoides dividens*, whereas this species name belongs to *Anomalinoides dividens*), from the Subcarpathian and Northern Transylvanian in Rumania (Popescu, 1969). It is evident, that the occurrences noted so far, include the area outside and inside of Carpathian Belt in Poland, USSR, Rumania and ČSSR. The species discussed is not very abundant, but its stratigraphical range is limited to the Upper Badenian only, thus it represents an important index fossil of this age. It is proposed therefore to introduce in the Central Paratethys a zone with planktonic foraminifer *Praeorbulina indigena* for the Upper Badenian in the area mentioned above.

The zone with *Praeorbulina indigena* is regarded as synchronic to the zones with benthonic foraminifera distinguished in the Upper Badenian

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sediments of Central Paratethys, e.g. the zone with *Cibicides crassisepatus* in Poland, the zone with *Bulimina* and *Bolivina* in CSSR and Vienna Basin, the zone with *Bogdanowiczia pocutica* and *Bulimina elongata* in USSR. It seems advisable to examine a possible occurrence of *Praeorbulina indigena* in the South of Central Paratethys in Bulgaria, Austria, Yugoslavia and Hungary.

There has been lately an attempt in Rumania (Popescu, 1969) to include *Praeorbulina indigena* to the new genus *Velapertina*, because of the presence of bullae covering apertures. After recent thorough reexamination of this species the present author comes to conclusion, that the additional structures of *Praeorbulina indigena* in Poland occur sporadically only in single specimens, representing a small percentage of the

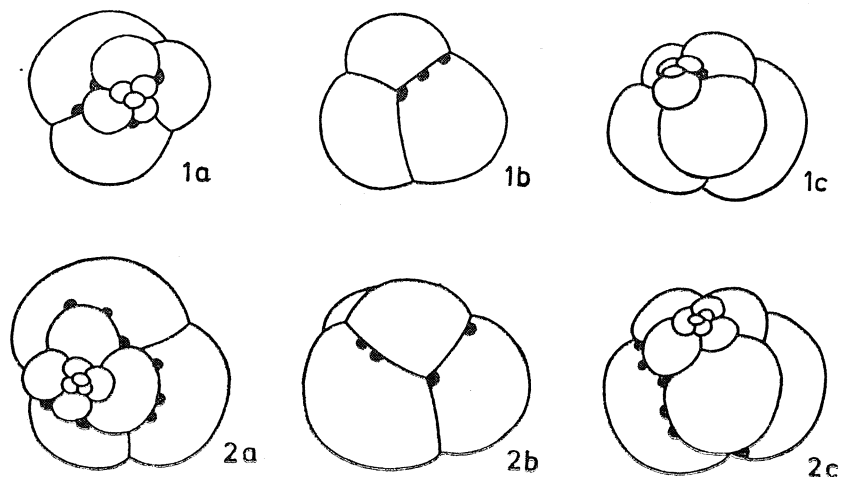


Fig. 1. *Praeorbulina indigena*, Grabowiec near Bochnia, Upper Badenian; 1 — holotype, 2 — paratype; a — dorsal view, b — ventral view, c — side view

Fig. 1. *Praeorbulina indigena*, Grabowiec koło Bochni, górny badenian; 1 — holotyp, 2 — paratyp; a — widok strony dorsalnej, b — widok strony wentralnej, c — widok z boku

whole population. These structures cannot be considered as a sufficient basis for including the species to the new genus, since they do not represent a constant feature. The structures vary in size, are irregular and placed in different positions on the test, which is indicative rather of a disturbance in the normal development of a particular specimen. Since the bullae appear with different planktonic and benthonic foraminifera (Cati, Borsetti, 1968), they cannot be regarded as a basis for classifying the species as *Velapertina*. Moreover, that other features correspond to the genus *Praeorbulina*.

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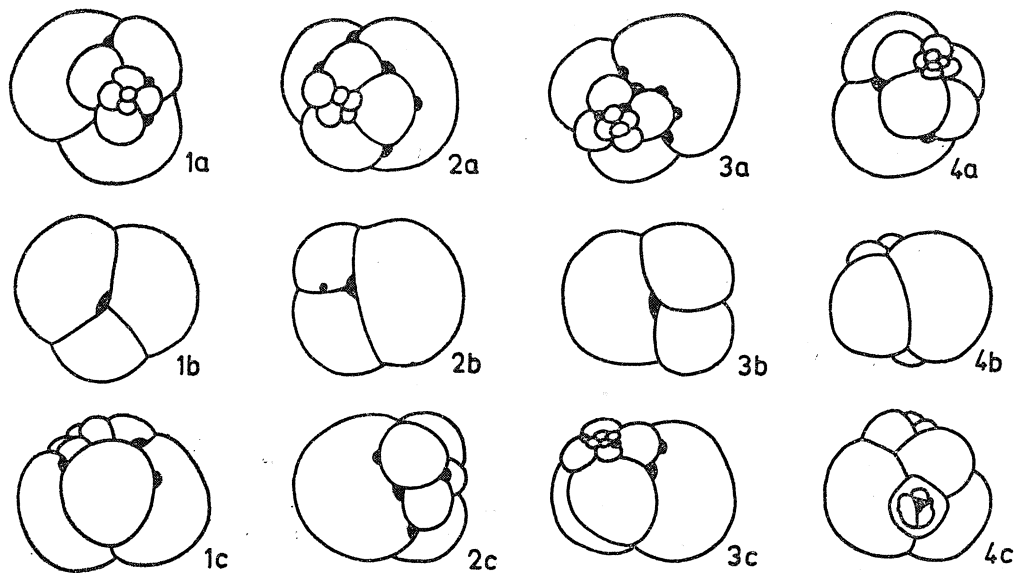
REFERENCES WYKAZ LITERATURY

- Alexandrowicz S.W. (1963), Stratigraphy of the Miocene deposits in the Upper Silesian Basin. *Pr. Inst. Geol.* 39, Warszawa.
Cati F., Borsetti A.M. (1968), The accessory structures in Tertiary planktonic Foraminifera. *Giorn. Geolog.* 35, II (1967), Bologna.

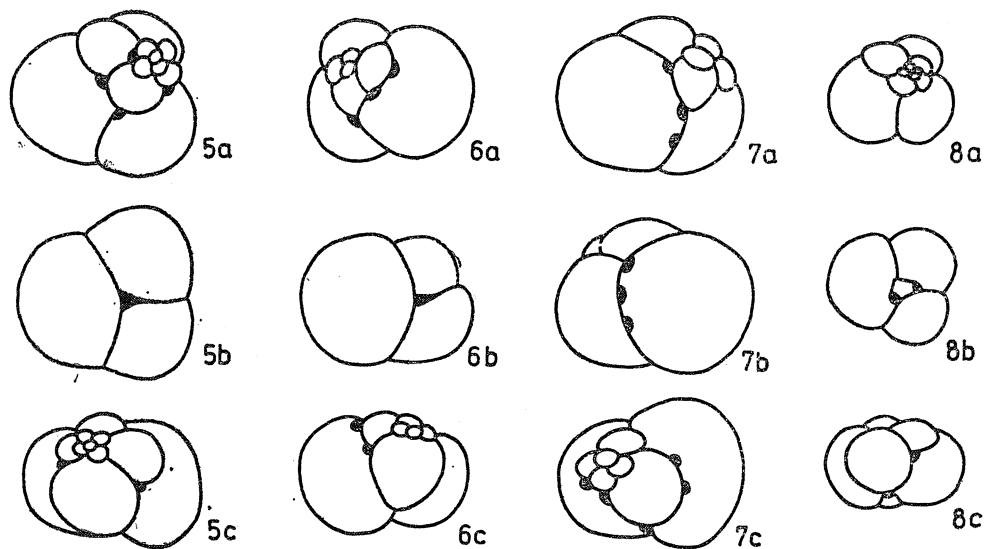
Cicha I., Zapletalová I., Čtyroká J. (1968), Planktonic Foraminifera of the Tortonian s.l. of the Central Paratethys. *Giorn. Geol.* 35, II (1967), Bologna.

Łuczowska E. (1955), Tortonian Foraminifera from the Chodenice and Grabowiec Beds in the vicinity of Bochnia. *Rocz. Pol. Tow. Geol.* 23 (1953), Kraków.

Łuczowska E. (1964), The micropaleontological stratigraphy of the Miocene in the region of Tarnobrzeg—Chmielnik. *Pr. geol. PAN, Kom. Nauk Geol. Oddz. w Krakowie*, Warszawa.



SPHERICAL SPECIMENS



FLATTENED SPECIMENS

Fig. 2. Morphological variations of *Praeorbulina indigena*, boring Kłaj-1, 320—326 m, situated about 10 km to the West from Grabowiec; 1—3, 5—7 — specimens without bullae; 4, 8 — specimens with bullae covering the sutural apertures between the three last chambers

Fig. 2. Zmienność morfologiczna *Praeorbulina indigena*, wiercenie Kłaj-1, głęb. 320—326 m, usytuowane w odległości około 10 km na zachód od Grabowca; 1—3, 5—7 — okazy bez bulli; 4, 8 — okazy z bullą przykrywającą ujście między trzema ostatnimi komorami

- Łuczowska E. (1967), Paleoecology and micropaleontological stratigraphy of the Miocene in the vicinity of Grzybów near Staszów. *Acta geol. pol.* XVII, 1, Warszawa.
- Olsson R. K. (1964), *Praeorbulina* Olsson, a new foraminiferal genus. *J. Paleont.* 38, 4, USA.
- Pishvanova L. S. (1968), On the zonation of the Miocene by means of planktonic Foraminifera. *Giorn. Geol.* 35, III (1967), Bologna.
- Popescu Gh. (1969), Some new Globigerina (Foraminifera) from the Upper Tortonian of the Transylvanian Basin and the Subcarpathians. *Rev. Roum. Géol., Géophys., Géogr., Série de Géologie*, 13, 1, Bucarest.

STRESZCZENIE

W oparciu o ograniczony zasięg stratygraficzny gatunku planktonicznego *Praeorbulina indigena* (Łuczowska), proponuje się wydzielenie poziomu z *Praeorbulina indigena* w osadach górnego badenianu (ortonu s.s.) na obszarze Centralnej Paratetydy w Polsce, ZSRR, Rumunii i Czechosłowacji. Poziom ten odpowiadałby chronologicznie poziomom wyróżnianym dla osadów tego wieku na podstawie otwornic bentonicznych, mianowicie poziomowi z *Cibicides crassiseptatus* w Polsce, poziomowi z *Bulimina* i *Bolivina* w Czechosłowacji i w Basenie Wiedeńskim oraz poziomowi z *Bogdanowiczia pokutica* i *Bulimina elongata* w ZSRR. Zaliczenie *Praeorbulina indigena* do nowego rodzaju *Velapertina* (Popescu, 1969) uważa się za mało uzasadnione.

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