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SOME NEW FORAMINIFERA FROM THE MIDDLE TURONIAN OF THE KLIPPEN BELT OF WEST CARPATHIANS IN SLOVAKIA

NIEKTORÉ NOVÉ FORAMINIFERY ZO STREDNÉHO TURÓNU BRADLOVÉHO PÁSMU ZÁPADNÝCH KARPÁT NA SLOVENSKU

(Textfigs. 1–3a–c)

Abstract. Three new species of the genera *Stensiöina* Brotzen, 1942, *Globotruncana* Cushman, 1927, and *Praeglobotruncana* Bermudez, 1952, are recorded from Middle Turonian of the klippen belt of West Carpathians in Slovakia: *Stensiöina pokornyi* n. sp., *Globotruncana carpathica* n. sp. and *Praeglobotruncana klausii* n. sp.

During the years 1960–1961 the present author found some new species of the genera *Stensiöina* Brotzen, 1942, *Globotruncana* Cushman, 1927 and *Praeglobotruncana* Bermudez, 1952 in the variegated beds of the Middle Turonian age at the locality Horné Srnie (the Czorsztyn series, western Slovakia, Czechoslovakia). These species are not identical with any known species of the genera. They occur in the association which we regard as the Middle Turonian:

Globotruncana linneiana linneiana (d'Orbigny),
Globotruncana sigali Reichel,
Globotruncana schneegansi Sigal,
Praeglobotruncana imbricata (Mornod),
Praeglobotruncana hagni Scheibnerová,
Palmula elliptica Nilsson.

In the association of the described composition was never found *Praeglobotruncana helvetica* (Bolli), which is characteristic mainly for the Lower Turonian (the stratigraphic distribution of this species is Upper Cenomanian to Lower Turonian). With the stratigraphical value of this species I deal at other place (V. Scheibnerová, 1958, 1962).

Genus *Stensiöina* Brotzen, 1942*Stensiöina pokornyi* n. sp.

(Textfig. 1 a–c)

Holotyp. Specimen described in this paper, figured on the Textfig. 1 a–c; deposited in the Micropaleontological collection of the Department of Paleontology of the Faculty of Natural Sciences of J. A. Comenius University in Bratislava, No. KPUK 0576.

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Locus typicus. Horné Srnie, the road in the quarry of cement works, Western Slovakia, Czechoslovakia.

Stratum typicum. Middle Turonian, klippen belt of West Carpathians, Czorsztyń series.

Derivation nominis. The species is described and named to the honour of Prof. Dr. V. Pokorný.

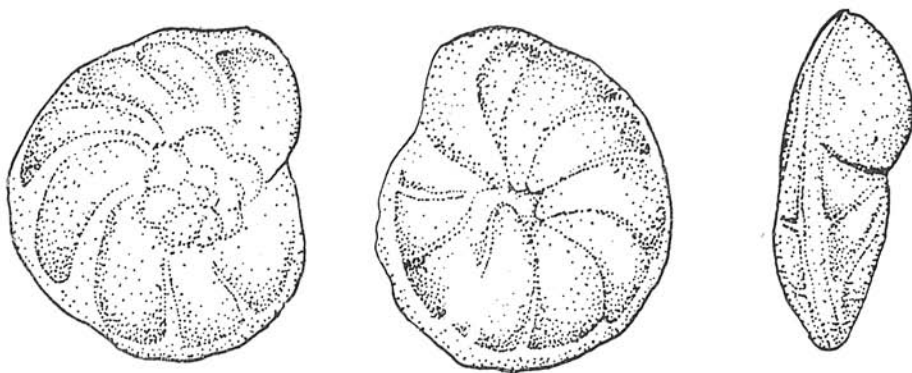


Fig. 1a-c. *Stensiöina pokornyj* n. sp., holotype. Horné Srnie, the road in the quarry of cement works, Middle Turonian, KPUK 0576, 138 $\times$.

Material: 25 specimens from the type locality.

Diagnosis. Free test biconvex with 10 chambers in the last whorl. In the centre of the spiral side characteristic perforated sculpture.

Description. Test biconvex with both the sides approximately equally convex. The periphery nearly rounded, only in some specimens we may see fine edge near the spiral side. In the last whorl there are 10 chambers. Sutures of the umbilical side are slightly depressed, more intensively toward the umbilicus. In the centre of the spiral side we may see characteristic perforated sculpture. The sutures on both the sides of the test are slightly arched.

Measurements of the holotype: longer diameter 0,327 mm, shorter diameter 0,302 mm, thickness 0,151 mm.

Remarks. The species resembles to some degree *Stensiöina dictyon* Pokorný, from which it differs in having a different sculpture on the spiral side of the test.

Genus *Globotruncana* Cushman, 1927

Globotruncana carpathica n. sp.

(Textfig. 2 a-c)

Holotyp. Specimen described and figured in this article on the Textfig. 2 a-c. Deposited in the Micropaleontological collection of the Department of Paleontology of the Faculty of Natural Sciences of J. A. Comenius University in Bratislava. No. NPUK 0629.

Stratum typicum. Middle Turonian, klippen belt of West Carpathians, Czorsztyń series.

Locus typicus. Horné Srnie, the road in the quarry of cement works, Western Slovakia.

Derivatio nominis. Carpathica — Latin transcription of carpathian.

Material. 20 specimens from the type locality.

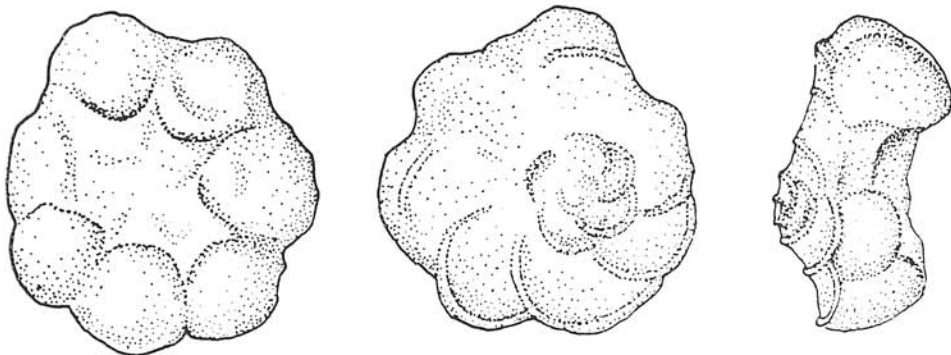


Fig. 2a-c. *Globotruncana carpathica* n. sp., holotype. Horné Srnie, the road in the quarry of cement works, Middle Turonian, KPUK 0629, 65 $\times$.

Diagnosis. Test trochospirally coiled, biconvex with more inflated umbilical side, single keeled.

Description. Test free, trochospiral, biconvex with more inflated umbilical side and central part of the spiral side. The spiral side smooth, umbilical one covered by protuberances, mainly in the centre of chambers. The few last chambers strongly inflated, inclined toward the umbilicus. In the last whorl there are 6–8 chambers. The umbilicus deep, broad. The aperture interiomarginal, in the umbilicus remains of the apertural flaps. Single keel nearer the spiral side of the test. Spiral sutures distinct, curved, raised, umbilical ones radial, depressed.

Measurements of the holotype: longer diameter 0,705 mm, shorter diameter 0,655 mm, thickness 0,504 mm.

Remarks. The species resembles to some degree *Praeglobotruncana helvetica* (Bolli) from which it differs in having 6–8 chambers in the last whorl and being much larger than *Praeglobotruncana helvetica* which usually has 5–6 chambers in the last whorl. *Praeglobotruncana helvetica* is true *Praeglobotruncana* while the new species possesses the signs of true *Globotruncana*. These two species have different stratigraphic ranges, *Globotruncana carpathica* n. sp. is younger.

Variability. The species varies mainly in the convexity of the umbilical side of the test, however this side always is more convex than the spiral one.

Genus *Praeglobotruncana* Bermudez, 1952

Praeglobotruncana klausi n. sp.

(Textfig. 3 a–c)

Holotyp. Specimen described and figured in this article on the Textfig. 3 a–c; deposited in the Micropaleontological collection of the Department of Pale-

ontology of the Faculty of Natural Sciences of J. A. Comenius University in Bratislava. No. NPUK 0593.

Locus typicus. Horné Srnie, the road in the quarry of cement works Western Slovakia, Czechoslovakia.

Stratum typicum. Middle Turonian, klippen belt of West Carpathians, Czorsztyn series.

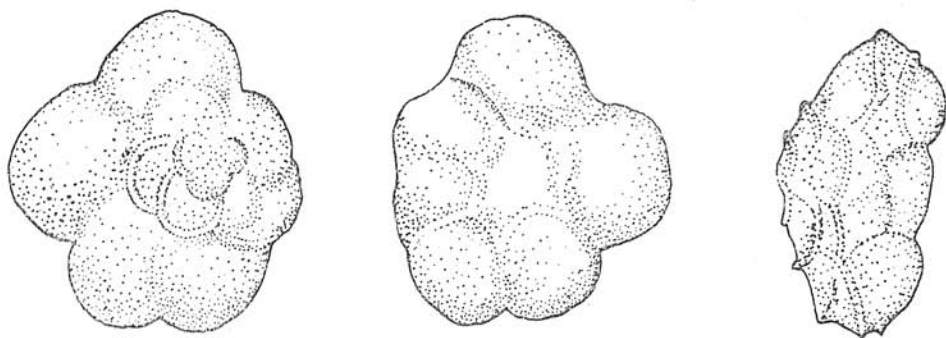


Fig. 3a-c. *Praeglobotruncana klausi* n. sp., holotype. Horné Srnie, the road in the quarry of cement works, Middle Turonian, KPUK 0593, 75 $\times$.

Derivatio nominis. The species is named to the honour of Dr. J. Klaus, the famous swiss geologist and micropaleontologist.

Material. About 15 specimens from the type locality.

Diagnosis. Trochospirally coiled biconvex test, two keeled with 5-6 chambers in the last whorl.

Description. Test free biconvex, with 5-6 chambers in the last whorl. The few last chambers rapidly increase in size. The spiral side slightly convex, smooth. The umbilical side with slightly inflated chambers covered by protuberances. The spiral sutures oblique, distinct, the umbilical sutures radial, depressed. Two keels quite closely spaced. The umbilicus deep, narrow. The aperture interiomarginal, accessory apertures not observed.

Measurements of the holotype: longer diameter 0,554 mm, shorter diameter 0,504 mm, thickness 0,352 mm.

Remarks. The species does not closely resemble any known species of *Praeglobotruncana*. To some degree resembles *Praeglobotruncana oraviensis* Scheibnerová. From this species it differs in having two distinct keels.

Variability. We have not at our disposal enough material to study the variability. We may say that this species varies in the number of the last whorled chambers and measurements of the test.

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Review by V. Pokorný.