

MILOŠ SIBLÍK*

NEW ANISIAN RHYNCHONELLID FROM SLOVAKIA

(Plate I—II, Text-figs. 1—8)

Abstract: The present paper contains the description of a new Upper Anisian rhynchonellid *Caucasorhynchia altaplecta acuticostata* ssp. n. from Slovakia.

Резюме: Содержанием работы является описание нового верхнеанизийского подвида *Caucasorhynchia altaplecta acuticostata* ssp. n. из Словакии.

During the last few years the author has been studying the Triassic brachiopods of Southern Slovakia, an area that has yielded a very interesting and varied Middle and esp. Upper Triassic brachiopod fauna. A good collection has been made from the Anisian locality Zakázané near the village of Silica, to which the author's attention was kindly brought by Dr. J. Bystričský (Geological Institute of Slovak Academy of Sciences in Bratislava) who had discovered it when studying the biostratigraphy and Algae of the area (1964).¹

The description of a new subspecies from this locality follows.

Superfamily *Rhynchonellacea* Gray, 1848

Family *Wellerellidae* Licharev, 1960

Subfamily *Cirpinae* Agér, 1965

Genus *Caucasorhynchia* Dągys, 1963

Caucasorhynchia altaplecta acuticostata ssp. n.

(Plate I, figs. 1—3, Plate II, figs. 1—4, Text-figs. 1—8)

Type specimen: The holotype is figured on Plate I, fig. 2 and deposited in the collection of the Geological Survey in Prague (MS-08).

Paratypes: The specimen figured on Plate I, fig. 1. is deposited in the same collection (MS-09). The other figured specimens are in the collection of the Geological Institute of the Academy of Sciences in Prague and Bratislava.

Derivatio nominis: Latin „acutus, -a, -um“, i. e. sharp, to indicate the character of the ribs as compared with those of *Caucasorhynchia altaplecta altaplecta* (Böckh, 1873).

Stratum typicum et locus typicus: Upper Anisian (Middle Triassic); the hillock Zakázané (Tilalmás) near the village of Silica in the „Slovak Kars“, Southern Slovakia.

* Dr. M. Siblík, CSc., Geological Institute of the Czechoslovak Academy of Sciences, Praha-Vršovice, 28, pluku 19.

¹The author is indebted to Dr. A. Childs (University of Oxford) for his help with the translation.

²Young specimens are held here to be those small specimens with a relatively lesser thickness, with only a slight plication and without a developed fold.

Material: 248 specimens consisting of casts with fragments of shell. The figured specimens are of the following dimensions (Tab. 1).

The variation in size of all measurable specimens, young specimens² excluded, is put down in the following tables 2—4 and text-figs. 1—5 (L = length, W = width, Th = thickness).

Table 1

Length	Width	Thickness	
12,9	14,0	9,8	Pl. II, fig. 3
12,9	13,3	8,8	Pl. I, fig. 2-holotype
? 12,5	12,0	8,9	Pl. II, fig. 2
? 11,5	11,3	7,8	Pl. I, fig. 3
11,1	12,8	6,3	Pl. II, fig. 1
10,4	13,0	9,7	Pl. I, fig. 1
? 7,0	7,6	4,4	Pl. II, fig. 4, young specimen

Table 2

Length in mm	Number of specimens
7,0 — 7,9	2
8,0 — 8,9	6
9,0 — 9,9	13
10,0 — 10,9	20
11,0 — 11,9	48
12,0 — 12,9	49
13,0 — 13,9	41
14,0 — 14,9	22
15,0 — 15,9	8
16,0 — 16,9	2
	211

Table 3

Width in mm	Number of specimens
8,0 — 8,9	5
9,0 — 9,9	10
10,0 — 10,9	15
11,0 — 11,9	39
12,0 — 12,9	40
13,0 — 13,9	44
14,0 — 14,9	24
15,0 — 15,9	10
16,0 — 16,9	3
17,0 — 17,9	2
	192

Table 4

Thickness in mm	Number of specimens
4,0 — 4,9	2
5,0 — 5,9	8
6,0 — 6,9	27
7,0 — 7,9	37
8,0 — 8,9	62
9,0 — 9,9	55
10,0 — 10,9	23
11,0 — 11,9	4
	218

Table 5

Number of costae near the anterior margin of the fold	3	4	5	6	7	8	9	10	Total of the studied specimens
Number of specimens	2	11	107	39	29	9	3	1	201

Description:

External characters: The medium sized rhynchonellid is of sub-trigonal or sub-pentagonal outline with greatest width situated in the anterior third of shell. The anterior margin is nearly semicircular in dorsal view while the posterolateral parts are mostly slightly concave. The convexity of the valves may be the same or the brachial valve may be a little more inflated. There are well delimited, large planareas situated posterolaterally and equally developed on both valves. The anterior commissure forms a strongly subangular uniplication, the fold being well developed in the anterior two thirds of the brachial valve. A low, suberect beak is present with weakly developed beak ridges. The small pedicle opening is of (?) submesothyridid character. The apical angle is near to, but smaller than, 90°. The inequality and branching of ribs over the whole surface of the valves is characteristic. There are 3 to 10 sharp ribs at the anterior margin of the fold, the middle one being the strongest and the only one reaching the umbo. Usually there is only one very strong lateral rib of subrounded character on each side of the fold; it is indistinctly bifurcate in about 60 specimens. It reaches the umbo and also forms the dorsal limitation of the lateral planarea.

Internal characters: The dental lamellae are subparallel or slightly ventrally converging. Their position is near to the sides of the shell thus forming relatively narrow lateral umbonal cavities as compared with the delthyrial cavity. The slightly crenulated hinge-teeth are usually inserted nearly vertically into the sockets; lateral denticula are usually present. There is no indication of a pedicle collar.

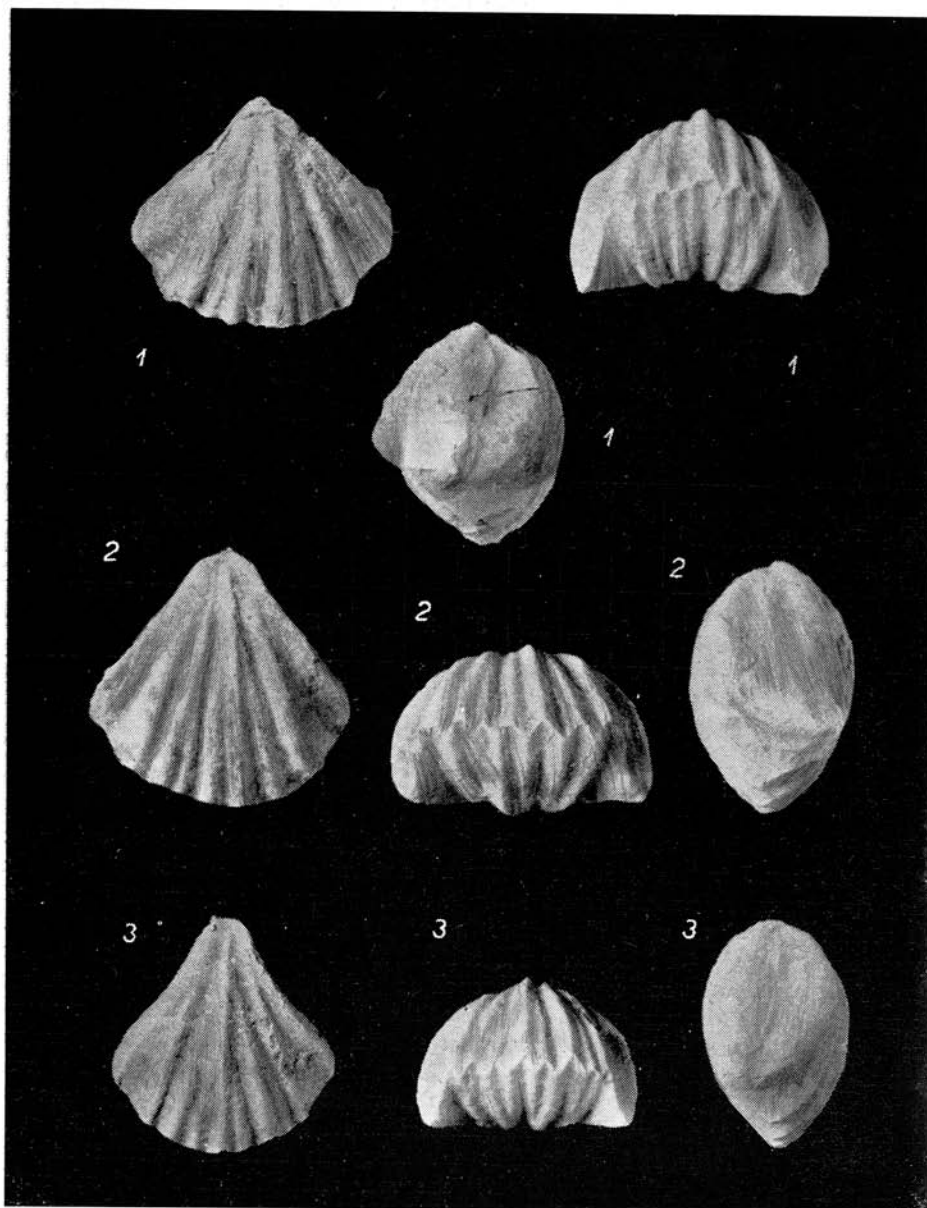


Plate I

Fig. 1. *Caucatorhynchia altaplecta acuticostata* ssp. n. Loc. Zakázané near Silica. Collection of the Geolog. Survey in Prague (MS-09), $\times 2.6$. — Fig. 2. *Caucatorhynchia altaplecta acuticostata* ssp. n. Holotype. Same locality and collection (MS-08), $\times 2.6$. — Fig. 3. *Caucatorhynchia altaplecta acuticostata* ssp. n. Same locality. Collection of the Geol. Inst. of the Slovak Acad. of Sc., Bratislava, $\times 2.6$. — Photos L. Záporožcová.

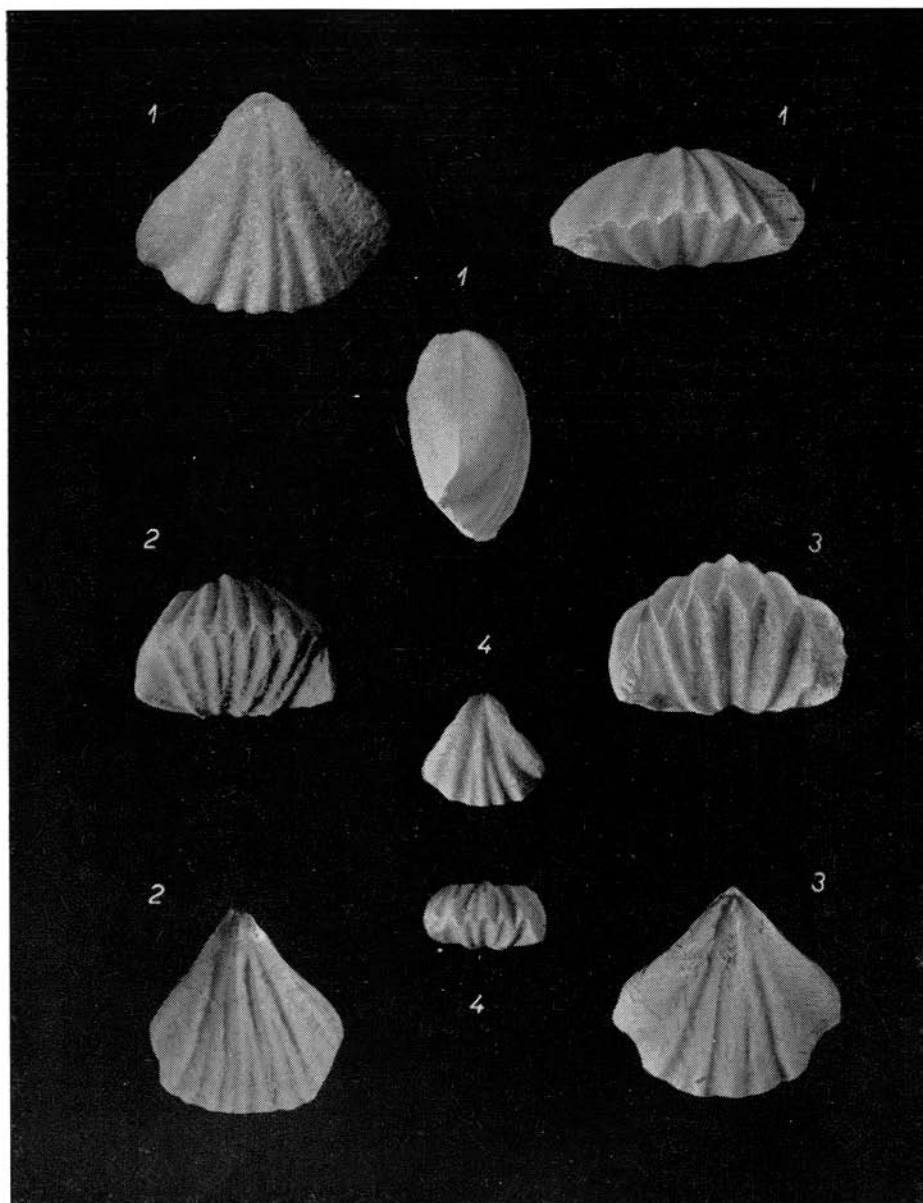
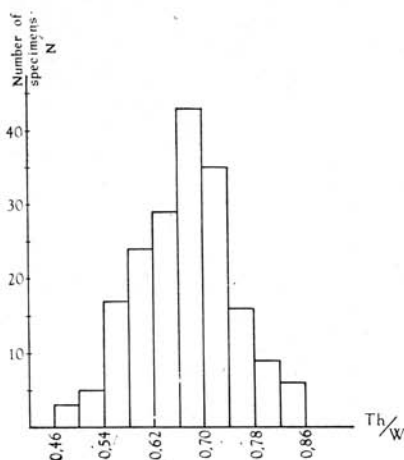


Plate II

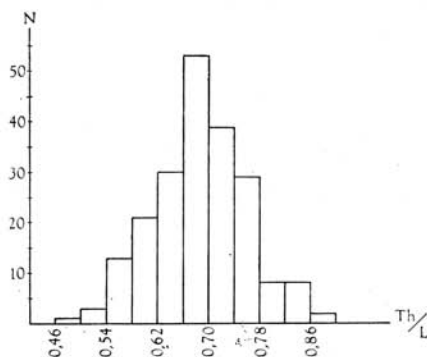
Fig. 1. *Caucasorhynchia altaplecta acuticostata* ssp. n. Loc. Zakázané near Silica, $\times 2,6$. — Fig. 2. *Caucasorhynchia altaplecta acuticostata* ssp. n. Same locality, $\times 2,2$. — Fig. 3. *Caucasorhynchia altaplecta acuticostata* ssp. n. Same locality, $\times 2,2$. — Fig. 4. *Caucasorhynchia altaplecta acuticostata* ssp. n. Same locality. Young specimen, $\times 2,2$. — Photo — fig. 1. L. Záporožcová, figs. 2–4. M. Páralová.

The inner structure of the brachial valve is somewhat variable. Most of the specimens sectioned lack the septalium, the ventrally arched hinge-plates being undivided. The median septum is then very short, immediately disappearing in these specimens. Very rarely a well-developed septalium and median septum is present (text-fig. 8). The large and relatively shallow sockets are always strongly crenulated. The outer socket ridges are usually better developed than the inner ones. The crural bases are hardly differentiated and give rise to crura which closely resemble the prefalcifer type. The muscle scars have not been observed.

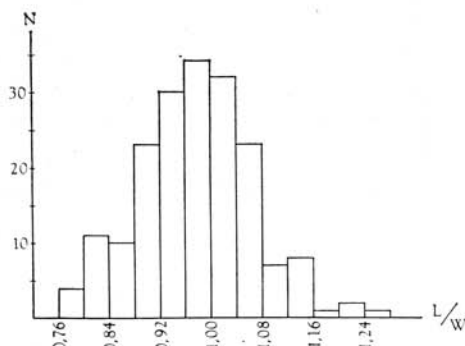
Remarks: The new subspecies here established differs from *Caucasorhynchia altaplecta altaplecta* (Böckh, 1873) that was described from the Hungarian Middle Anisian by its greater number of ribs, by their sharp character and frequent branching over the whole surface of the valves, and by well-developed more or less concave planareas. A. Bittner (1890) when studying the plentiful material of *Caucasorhynchia altaplecta altaplecta* ascertained that the most common number of ribs in the fold was 3, rarely 4, and 5 was quite exceptional. The branching of the ribs in the



Text-fig. 1.

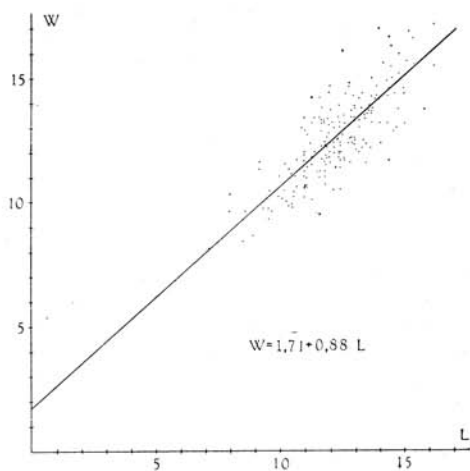


Text-fig. 2.

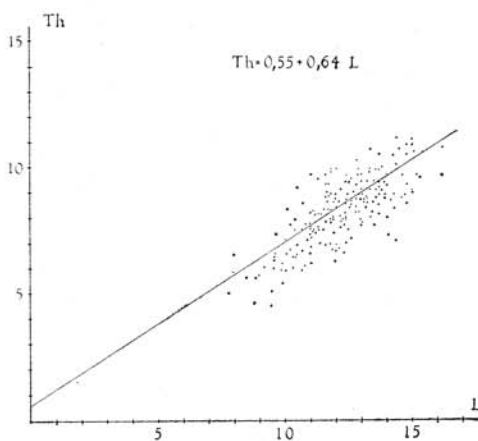


Text-fig. 3.

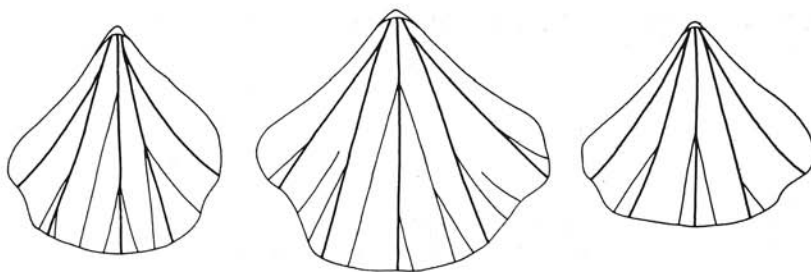
specimens of *Caucasorhynchia altaplecta altaplecta* deposited in the Geological Institute (Magyar Áll. Földt. Intézet) in Budapest is indistinct and, if present, usually is only visible on the posterior part of the shell.



Text-fig. 4.

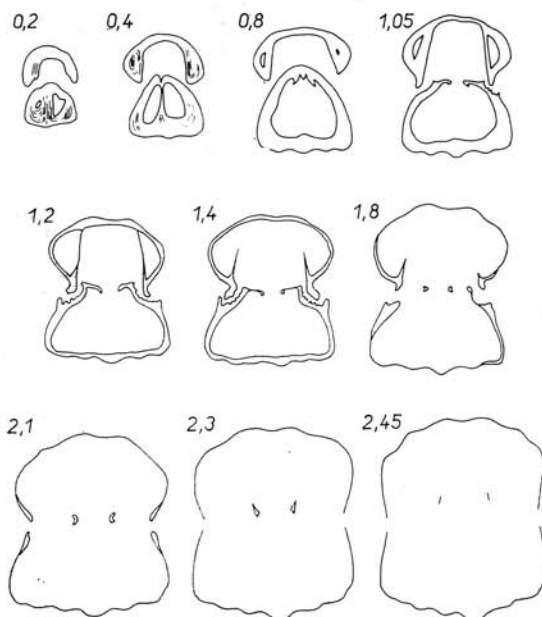


Text-fig. 5.

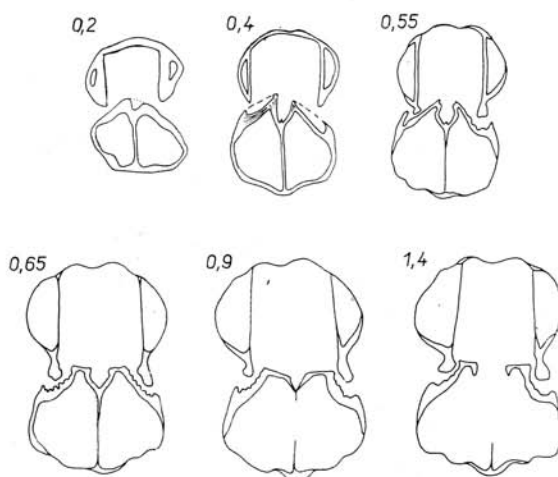


Text-fig. 6. Types of ribbing of *Caucasorhynchia altaplecta acuticostata* ssp. n. Loc. Zakázané near Silica, $\times 3$ approx.

Distribution and occurrence: The new subspecies was collected in the greyish and ochre-coloured crinoidal limestones forming the upper part of the Anisian in the locality Zakázané near the village of Silica in the southern Slovakia. The associated fauna only includes the brachiopods *Piarorhynchia trinodosi* (Bitt.), *Aulacothyris angusta* (Schlot.), *Pexidella marmorea* (Bitt.), *Tetractinella trigonella* (Schl.), *Koiveskallina koiveskalyensis* (Štúr), *Mentzelia mentzeli* (Dunk.), etc. The presence of *Piarorhynchia trinodosi* makes the Illyrian age (Zone of *Paraceratites trinodosus*) of this horizon in the locality probable. Another typical specimen of *Caucasorhynchia altaplecta acuticostata* ssp. n. was found by the author in the collection of the Dionýz Štúr Geological Institute in Bratislava. This specimen comes from the locality „Slovinská skala“ near the village of Slovinky in the Slovenské Rudohorie Mts; *Piarorhynchia trinodosi* also occurs in this assemblage.



Text-fig. 7. *Caucatorhynchia altaplecta acuticostata* ssp. n. Loc. Zakázané. A series of ten transversal sections through the posterior part of specimen. Original length 15,1 mm. All $\times 3$ approx.



Text-fig. 8. *Caucatorhynchia altaplecta acuticostata* ssp. n. Loc. Zakázané. A series of six transversal sections through the posterior part of another specimen. Original length 13,2 mm. All $\times 4,5$ approx.

REFERENCES

- Bittner A., 1890: Brachiopoden der alpinen Trias. Abhandl. der k. k. geol. Reichsanstalt 14, Wien. — Böckh J., 1873: Die geologischen Verhältnisse des südlichen Theiles des Bakony. I. Mitteilungen aus dem Jahrb. der kön. ungar. geol. Anstalt 2, Budapest. — Bystrický J., 1964: Slovenský kras. Stratigrafia a Dasycladaceae mezozoika Slovenského krasu. Bratislava. — Dagys A. S., 1963: The Upper Triassic Brachiopods of the Southern USSR (in Russian), Moscow.

Review by J. Bystrický.