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AEOLISACCUS TINTINNIFORMIS N. SP. FROM THE TRIASSIC OF THE WEST CARPATHIAN MTS.

(Pl. I, text-fig. 1)

Abstract: In the Middle and Upper Triassic limestones and dolomites of the West Carpathians an organism *incertae sedis* was found and attributed to the genus *Aeolisaccus*. The similarity with the *Tintinnidae* is considered as secondary. Several reasons against the former opinion that *Aeolisaccus* should be a pelagial organism are given.

Резюме: В средние и верхние триасовые известняках и доломитах Западных Карпат был найден организм *incertae sedis* и приурочен к роду *Aeolisaccus*.

Подобие с *Tintinnidae* считается вторичным. Приводятся несколько аргументов против более раннему мнению, что *Aeolisaccus* является пелагическим организмом.

During the study of the Triassic carbonate rocks the writer encountered microorganisms displaying some transitional features between *Aeolisaccus* and *Tintinnidae*. Detailed description is given with regard that they might play rôle also in other parts of the Tethys area.

Aeolisaccus Elliott, 1958

Author's description: „Small hollow thin-walled calcareous tubes gently tapering, open at both ends, the long axis slightly irregular or gently curved, walls irregularly annular.“

Aeolisaccus tintinniformis nov. sp.

Description: Small conical tubes with thin walls of fine-grained calcite (thickness of the wall 0,006—0,008 mm). The tube is widest at the oral end or closely to it. The average value of the external diameter of the tube is 0,045 mm — clear frequency maximum from 20 measurements (the extreme values were 0,065 mm and 0,090 mm respectively). The average length of 10 measurements was 0,260 mm (the maximum value 0,395 mm), but the tapering end is frequently not clear in consequence of recrystallization, or is missing since it was broken off. The possibility of a tube open on both ends (G. F. Elliott 1958) is less probable. The test are stright or very slightly curved. At the oral end there is a small annular thickening visible at the longitudinal section as a tiny ball, generally in a terminal position or a little shifted inside. An indistinct irregular segmentation of the test is rare and never accompanied with the thickening of the wall. Tests are resistant against recrystallization, well preserved specimens were found in dolomites, too.

Holotype: Specimen on the Pl. I, fig. 1; thin section No. 1871.

Paratypes: Pl. I, figs. 2—7.

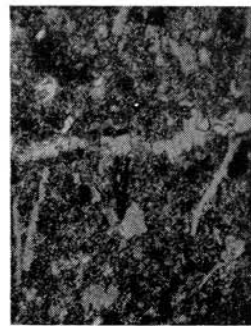
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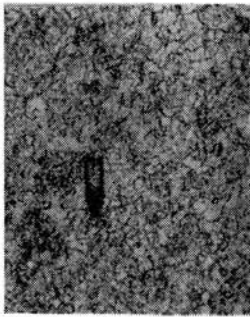
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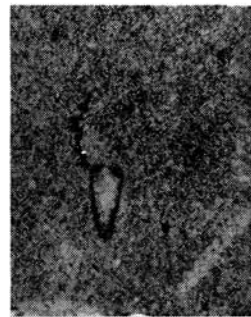
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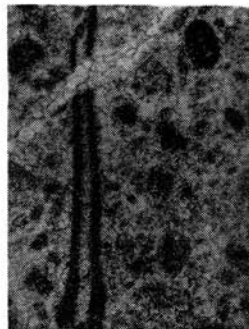
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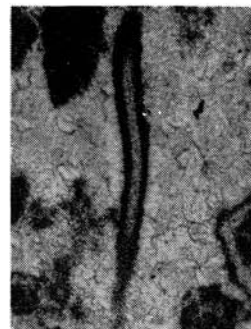
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Plate I

Fig. 1–7. *Acolisaccus tintinniformis* n. sp. — Fig. 1. Holotype from the Ladinian dolomites of the Križna nappe; Jergaly near Donovaly, Low Tatra (No. 1871). Magn. 43X. — Fig. 2. Gutenstein Limestone — Anisian of the Choč nappe; quarry Lisková near Ružomberok, Choč Mts. (No. 1708). Magn. 43X. — Fig. 3. Reifling Limestone — Ladinian of the Choč nappe; NW from Smrekovica, k. 1201,8 near Liptovský Hrádok, Low Tatra (No. 1840). Magn. 43X. — Fig. 4. Dolomite intercalations in Gutenstein limestone — Anisian of the Choč

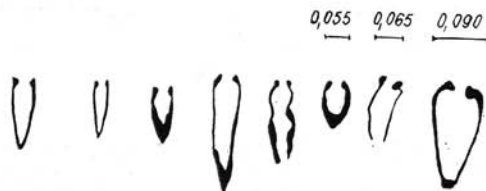
Derivatio nominis: Similarity with the lorica of *Tintinnidae*.

Stratum typicum: Middle Triassic, Ladinian.

Locus typicus: Jergaly near Donovaly, Low Tatra.

Occurrence: Anisian-Norian (Middle and Upper Triassic) of the Central West Carpathians. Localities in Gutensteiner Limestone — Anisian: Ružomberok, Demänová, Malužiná, Priechod, Lazany, Svarínka. Dolomites — Anisian: Moštenica. Dolomites — Ladinian: Donovaly. Reifling Limestones — Ladinian: Liptovský Hrádok, Hallstatt Limestone — Norian: Silická Brezová.

Text-fig. 1. *Aeolisaccus tintinniformis* n. sp. from the Middle Triassic carbonate rocks of the West Carpathians.



Discussion: The test of *Aeolisaccus tintinniformis* n. sp. is narrower, clearly shorter and with thinner walls than *A. dunningtoni* Elliott; *A. kotori* Radoičić, and *A. inconstans* Radoičić.

Comparison in microns:

	Diameter of tubes	Thickness of the wall	Maximum length
<i>A. dunningtoni</i> Elliott, 1958	100—130	10	1716
<i>A. kotori</i> Radoičić, 1959	320—800	20	780
<i>A. inconstans</i> Radoičić, 1967	230	15—30	1000
<i>A. tintinniformis</i> n. sp.	45—90 (65)	6—8	395

Stratigraphical span of the genus *Aeolisaccus* according to G. F. Elliott (1958), G. Sirna (1962) and R. Radoičić (1967) is Permian-Senonian (Dnaian). The occurrences of the Middle Triassic were lacking up till now, they are described here.

Systematic appartenance: G. F. Elliott (1958) inferred *Aeolisaccus dunningtoni* to the pteropods but with remark that the shells of recent pteropods are considerably longer. The test of *A. tintinniformis* is even shorter that of *A. dunningtoni*. *A. tintinniformis* was found mainly in typical shallow water facies (Gutenstein Limestone, dolomites) and the same may be said about *A. dunningtoni* which is a constant constituent of the Sphinctozoa — Tubiphytes bioherms of the Middle Triassic in West Carpathians. These facts do not support their attribution to the planctonic pteropods.

Tests of *A. tintinniformis* resemble those of *Tintinnidae* Bonet, but the loricas of

nappe; quarry 0,5 km S from Moštenica, Low Tatra (No. 1813). Magn. 43X. — Fig. 5. Middle Triassic limestones of the Choč nappe; Lazany, Small Fatra (No. 1846). Magn. 43X. — Fig. 6. The same (No. 1846). Magn. 43X. — Fig. 7. Hallstatt Limestone — Norian of the Gemeride unite; quarry near Silická Brezová (No. 2676). Magn. 43X.

Fig. 8—9. *Aeolisaccus dunningtoni* Elliott. — Fig. 8. Bioclastic limestone with Tubiphytes and Sphinctozoa, Middle Triassic of the Krížna unit; quarry 0,5 km ESE from Donovaly, Low Tatra (No. 709). Magn. 55X. — Fig. 9. The same (No. 400). Magn. 55X. Foto L. Osvald.

Tintinnidae are inflate, with parabolic or hemisphaeric termination, sometimes with a caudal prominence; they are symmetrical and resistant against compaction. On the contrary the tests of *A. tintinniformis* regularly taper on the aboral end, sometimes they are slightly curved and prone to deformation by compaction. They are two to five times longer than *Calpionella* or *Tintinnopsella*. The terminal thickening of the wall reminds the collar of the genus *Chitinoidea* D o b e n, but the typical brown colour of the organic matter of *Chitinoidea* was never found and the loricas of described *Chitinoidea* species (K. B o r z a 1966) are five times shorter than the studied material.

The question of the *Aeolisaccus* systematic affiliation remains open — *incertae sedis*.

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Review by K. B o r z a.