

## CATACOELOCERAS TETHYSI N. SP. (CEPH.) FROM THE UPPER LIASSIC OF CSERNYE\*

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Although highly similar in shape to Lower Pliensbachian *Coeloceras pettos*, *Catacoeloceras tethysi* n. sp., described from the Toarcian of Csernye, bears no demonstrable phylogenetic relation to the former.

Studying the Jurassic ammonites collected by HANTKEN from the Tűzkövesárok ravine near Csernye (Bakony Mountains, Transdanubia), PRINZ determined a small ammonite, *Coeloceras pettos* QUENST. (1904, p. 95, Textf. 12). HANTKEN had identified this specimen, as PRINZ did not fail to point out, with the upper Liassic species *Coeloceras crassus*, whereas PRINZ himself, on the grounds of *Coeloceras pettos* being a Lower Pliensbachian species, placed it into the Middle Liassic. The revision of the Csernye fauna by the present author has confirmed HANTKEN's opinion: The undivided internal umbilical lobe of the specimen described by PRINZ proved it to be a *Catacoeloceras* rather than a *Coeloceras* (cf. SCHINDEWOLF, p. 563, 1962). As the specimen in question was a single one of poor preservation, and collected without an exact record of its position in the succession of strata, it would have been unjustified to give a specific determination. In 1965, however, the large-scale works of exposure initiated by the Direction of the Hungarian Geological Institute led to the disclosure of Toarcian strata in the lower section of the Tűzkövesárok, near the rim of the abandoned quarry, probably near the point where HANTKEN had collected his classic fauna. In facies, layers No. 62 and 63, of 43 and 37 cm thickness, respectively, consisting of an ill-consolidated red clayey nodular marl relatively poor in fossils, correspond to the Adneth beds or to the marly facies of the "calcare ammonitico rosso". The age of these beds is unequivocally fixed by the ammonites collected by L. KOC SIS:

Layer No. 62:

*Phylloceras* cf. *loczyi* PRINZ, 1904

*Phylloceras* sp.

*Calliphylloceras beatricis* (BONARELLI, 1897)

*Calliphylloceras mediojurassicum* (PRINZ, 1904)

*Calliphylloceras aveyronense* (MENEHINI, 1867-1881)

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*Calliphylloceras* sp.

*Lytoceras* cf. *subfrancisci* STURANI, 1964

*Hildoceras semipolitum* BUCKMAN, 1902

*Phymatoceras fabale* (SIMPSON, 1885)

*Phymatoceras* sp.

*Pseudomercaticeras* cf. *rotaries* MERLA, 1933

*Hammatoceras* sp. aff. *insigne* (ZIETEN, 1831)

Layer No. 63: *Phylloceras* n. sp.

*Phylloceras* sp.

*Calliphylloceras mediojurassicum* (PRINZ, 1904)

*Calliphylloceras aveyronense* (MENECHINI, 1867—1881)

*Calliphylloceras beatricis* (BONARELLI, 1897)

*Calliphylloceras virginiae* (BONARELLI, 1897)

*Calliphylloceras* sp.: 2

*Lytoceras* cf. *subfrancisci* STURANI, 1964

*Lytoceras* sp.

*Trachylitoceras?* *sepositum* (MENECHINI, 1867—1881)

*Trachylitoceras?* sp. aff. *sepositum* (MENECHINI, 1867—1881)

*Peronoceras* sp.

*Dactylioceras?* sp.

*Polyplectus* cf. *pluricostatus* (HAAS, 1913)

*Polyplectus* cf. *subexaratus* (BONARELLI, 1897)

*Polyplectus* sp.

*Hildoceras sublevisoni* FUCINI, 1919

*Hildoceras* sp. aff. *bifrons* (BRUGUIÈRE, 1789)

*Hildoceras semipolitum* BUCKMAN, 1902

*Mercaticeras mercati* (HAUER, 1856)

*Mercaticeras umbilicatum* BUCKMAN, 1913

*Phymatoceras* sp.

In the zonation according to DONOVAN (1958, p. 43) of the Mediterranean Toarcian, this fauna corresponds to a transition between the *Mercaticeras mercati* Zone and the *Phymatoceras erbaense* Zone. Each bed has yielded one specimen of “*pettos*”, thus affording a sufficient basis for establishing the new species.

### **Catacoeloceras tethysi n. sp.**

Textf. 1—4

v. 1904 *Coeloceras pettos* QUENST. — PRINZ, p. 95, Textf. 12.

Number of specimens: Three

Type: Specimen No. 8001.

**Stratum typicum:** clay marl of the Toarcian

**Derivatio nominis:** the name refers to the Mediterranean occurrence.

**Dimensions (Specimen No. 8001.):**

Diameter:	24 mm
Height:	11 mm (45.8%)
Width:	18.5 mm (77%)
Umbilicus:	8 mm (33.3%)

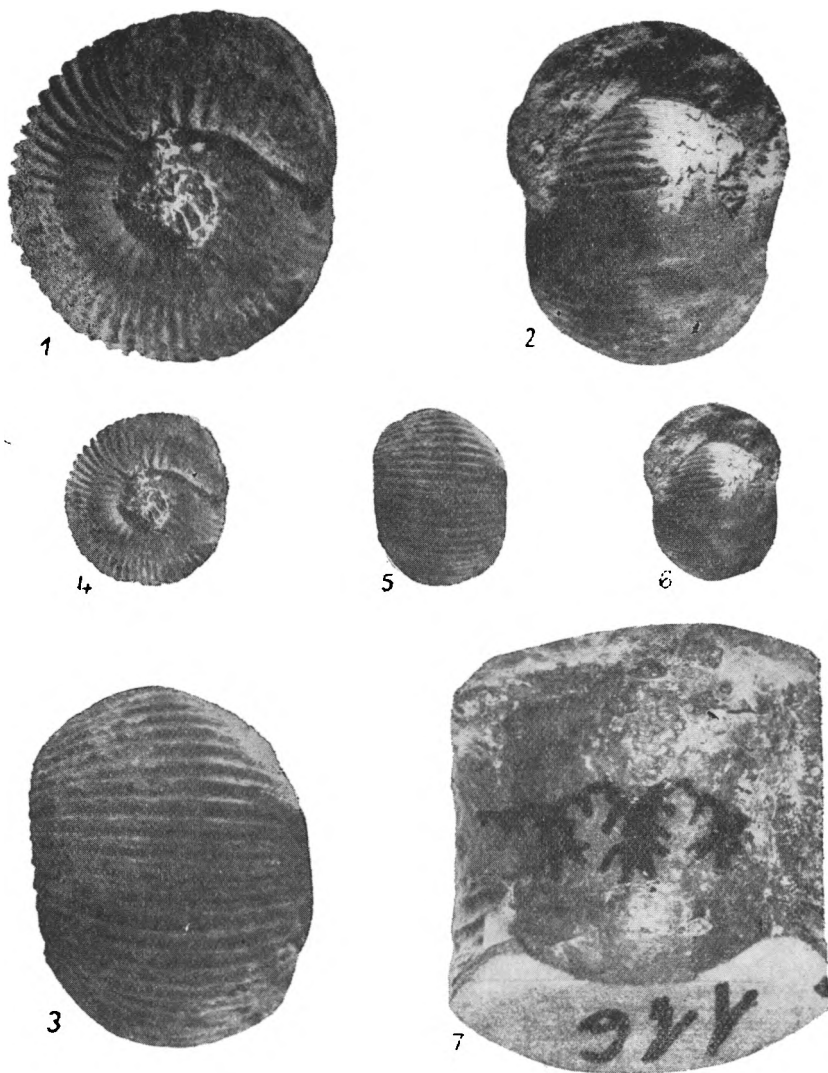
**Diagnosis:** Very wide, flattened whorls; fine, dense ornament.

**Material:** Three small casts of medium and poor preservation.

**Description:** Umbilicus narrow and very deep. Steeply divergent up to the shoulder, the whorl-sides are hardly swollen. Shoulder rounded. Venter very broad, uniformly swollen. Section of the very low whorls trapezoidal; greatest width at shoulder. Ornament very fine and dense. Issuing at the umbilical seam, the primary ribs are rectiradiate, straight. On the septate whorls, the primary ribs end in small, low tubercles at the shoulder. There are no tubercles on the body chamber. On the septate whorl, the ribs bi- and sometimes trifurcate at the tubercles. On the early part of the body chamber, the primary ribs bifurcate: on its late part, bifurcation is replaced by the regular intercalation of secondary ribs. On the venter, all ribs are equal, much narrower than the intercostal spacing and bending very slightly forward. The body chamber bears 20 secondary ribs to 10 primary ribs; the last whorl bears 25 primary ribs. There is almost a full whorl of body chamber. Owing to a constriction of the stomatal part of the body chamber, the umbilicus is somewhat eccentric. Peristome unknown.

**Suture line:** E is almost as long as nearly symmetrical L. The internal umbilical lobe of the paratype described by PRINZ is divided.

**Remarks:** The genus *Catacoeloceras* was set up within the family of the Dactylioceratids by BUCKMAN (1923, p. 413) who gave a brief characterization in 1927 (p. 44). BUCKMAN's diagnosis was completed by ARKELL (1957, p. 254), DONOVAN (1958, p. 47) and HOWARTH (1962, p. 408). According to these authors, *Catacoeloceras* is characterized by small size, flattened whorls, primary ribs not coalescing at the shoulder, and partly bifurcating, and an eccentric umbilicus. The novel species exhibits all these features. However, the species known so far of *Catacoeloceras* differ from the novel one, even disregarding their much coarser ornament, in their thinner whorls. Their test is sphaerocone, whereas that of the novel species is cadicone. It is worth while to compare the width proportion (77%) of the novel species with those of the other species of *Catacoeloceras*. *C. confectum*, the type species of the genus, possesses, according to BUCKMAN (1923, Pl. 413), a whorl width of 44% for a diameter of 25 mm. The diameter of the type of *C. foveatum*



1—3. *Catacoeloceras tethysi* n. sp. Type.  $2 \times$

4—6. *Catacoeloceras tethysi* n. sp. Type. Natural size

7. *Catacoeloceras tethysi* n. sp. Inner whorl of paratype with the internal lobe

(SIMPSON, 1855) is, according to BUCKMAN (1913, p. 69), 34 mm, its width being 56%. The diameter of the type of *C. crassum* (YOUNG and BIRD, 1828) is, according to BUCKMAN (1918, p. 119) 56 mm; its width is 45%. When refiguring *C. crosbyi* (SIMPSON, 1843) and *C. puteolum* (SIMPSON, 1855), BUCKMAN (1912, pp. 60, 61) did not state the dimensions of the types but his figures show beyond doubt that the width of both is far less than that of the new

species. The broad "cadicone" shape of the novel species as well as its fine ornament much resemble the species *Ammonites pettos* described by QUENSTEDT in 1843 (p. 178) which, apart from the fundamental difference in the suture line, differs from the novel species in that the secondary ribbing is rather vague on its venter. The species *pettos*, placed into the family *Poly-morphitidae* (or *Eoderoceratidae*), is a typical element of the *Jamesoni* Zone, whereas the new species belongs to the late Toarcian: hence, the formal similarity of the two does not justify the assumption of a direct genetic relationship.

An occurrence of *Coeloceras pettos* has been indicated by RENZ (1910, p. 565) from the Upper Liassic of Greece. Lately, *Coeloceras* cf. *pettos* has been encountered by BEHMEL and GEYER (1966, p. 18) in the Lower Toarcian of Spain. It would be worth while to subject the "*Coeloceras*" species of the Toarcian localities of the West and East Mediterranean regions to a close scrutiny to see whether they are indeed late descendants of *Coeloceras pettos* or typical *Catacoeloceras* species like the one from Csernye.

**Distribution in space and time:** According to BUCKMAN (1927, p. 45), the genus *Catacoeloceras* is a typical element of the *Variabilis* Hemera. According to HOWARTH (1962, p. 408), the genus is restricted to the *Braunianus* Subzone and the *Haugia variabilis* Zone. DONOVAN (1958, p. 46) indicates the occurrence of the genus *Catacoeloceras* in the *Pseudomercaticeras* (*Crassiceras*) *latum* Subzone. Hence, from a chronological point of view, the novel species is equivalent to the rest of the *Catacoeloceras* species.

#### REFERENCES

- ARKELL, W. J.: Mesozoic Ammonoidea, in *Treatise on Invertebrate Paleontology*. Part L. Mollusca 4, Cephalopoda, Ammonoidea. Edit. R. C. Moore, 1-490, Kansas and New York, 1957.
- BEHMEL, H.—GEYER, O. F.: Stratigraphie und Fossilführung im Unterjura von Albarracin (Provinz Teruel). *N. Jb. Geol. Paläont. Abh.* **124**, 1-52, 1966.
- BUCKMAN, S. S.: Yorkshire type Ammonites, Vol. 1 and 2; Type Ammonites, Vol. 3-7. Edit. W. Wesley London, 1909-1930.
- DONOVAN, D. T.: The Ammonite Zones of the Toarcian (Ammonitico Rosso Facies) of Southern Switzerland and Italy. *Ecl. Geol. Helv.* **51**, 33-60, 1958.
- HOWARTH, M. K.: The Jet Rock Series and the Alum Shale Series of the Yorkshire Coast. *Proc. Yorks Geol. Soc.* **33**, 381-422, 1962.
- PRINZ, GY.: Die Fauna der älteren Jurabildungen im nordöstlichen Bakony. *Mitt. Jahrb. k. Ung. Geol. Anst.* **15**, 1-142, 1904.
- QUENSTEDT, F. A.: *Das Flözgebirge Württembergs*. Edit. Laupp. Tübingen, 1843.
- RENZ, C.: Stratigraphische Untersuchungen im griechischen Mesozoikum und Paläozoikum. *Jahrb. k. k. Geol. Reichsanst.* **60**, 1910.
- SCHINDEWOLF, O. H.: Studien zur Stammesgeschichte der Ammoniten. Lief. 2. *Abh. Math. Naturwiss. Kl. Wiesbaden, N. R.* **3**, 113-571, 1962.

САТАСОЕЛОЦЕРАС ТЕТХИСИ N. SP. (СЕРН.) ИЗ ВЕРХНЕГО ЛЕЙАСА  
УЩЕЛЬЯ ТЮЗФЬКЁВЕШАРОК У С. ЧЕРНЬЕ

В. ГЕЦИ

Резюме

Будучи очень сходным по форме раковины с видом *Coeloceras pettos* нижнеплинц-бахского возраста, вид *Catascoceloceras tethysi* n. sp., описанный из тоарских отложений местонахождения Черные, не обнаруживает никакой выявляемой филогенетической связи с предыдущим видом.