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# *Cheloniceras natarius* sp. nov. (Ammonoidea) from the Lower Aptian of Ulyanovsk Povolzhye

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**Abstract**—A new species *Cheloniceras natarius* sp. nov. (Ammonoidea, Douvilleiceratidae) is described from the Lower Aptian of Ulyanovsk Povolzhye.

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*Key words*: Ammonoidea, Cretaceous, lower Aptian, Ulyanovsk Povolzhye.

## INTRODUCTION

The genus *Cheloniceras* Hyatt, 1903 is typical of the Lower Aptian and is found in most continents, except Australia. In Ulyanovsk and Saratov Povolzhye, mainly fragments or distorted specimens have previously been found. The description of *Cheloniceras natarius* significantly supplements the diagnosis of the genus *Cheloniceras*.

## SYSTEMATIC PALEONTOLOGY

Order Ammonitida

Suborder Ancyloceratina

Superfamily Douvilleiceratoidea Parona et Bonarelli, 1897

**Family Douvilleiceratidae Parona et Bonarelli, 1897**

**Subfamily Cheloniceratinae Spath, 1923**

**Genus *Cheloniceras* Hyatt, 1903**

*Cheloniceras*: Hyatt, 1903, p. 101; Roman, 1938, p. 426; Scott, 1940, p. 1005; Arkell et al., 1957, p. L385; Osnovy …, 1958, p. 116; Kudryavtsev, 1960, p. 336; Casey, 1961, p. 194; Dimitrova, 1967, p. 170; Kvantaliani, 1971, p. 105; Wright et al., 1996, p. 269; Sharikadze et al., 2004, p. 317; Atlas, 2005, p. 380.

Type species. *Ammonites cornuelianus* d'Orbigny, 1841; Lower Aptian of the Paris Basin.

Diagnosis. Shell large or medium-sized, less commonly small, inflated, semi-evolute, with whorls overlapping each other less by half of their height. Umbilicus relatively wide, umbilical wall steep. Whorl cross-section wide, cutting through nodes, angular, but rounded between nodes.

Ornamentation coarse, composed of ribs and two pairs of nodes. Small lower nodes located on transition from umbilical wall to flank. Upper larger nodes located in mid-flank. Primary ribs bifurcating from lateral nodes, anterior branch usually being somewhat more prominent than posterior. Ribs, apart from the above, simple and intercalating.

The adult suture and its morphogenesis were thoroughly studied in *Cheloniceras cornuelianum* (Fig. 1). Sutural morphogenesis traced beginning from fourth suture comprises five lobes: $VUU^1ID$. This number of lobes remains in eighth suture. From beginning of third whorl, lobe U subdivided into two unequal parts: deeper $U_1$ and smaller (raised) $U_2$. This combination continues to middle of fifth whorl. Lobe I similarly subdivided into two unequal parts $I \rightarrow I_2$ (shallower) and $I_1$ (deeper).

Ventral lobe bipartite in adults with high median saddle, deeper than remaining lobes. Separately positioned umbilical asymmetrically tripartite, $U_1$ deeper than $U_2$. Lobes $I_2$ and $I_1$ with similar proportions, but of smaller size. Dorsal lobe narrow, undivided. External saddle $V/U_1$ extremely high, dominating others.

Sutural formula: $VU_1U_2I_2\ I_1\ D$.

Species composition. This genus includes more than 20 species from the Lower Aptian of Russia (Northern Caucasus, Middle Povolzhye), Kazakhstan (Mangyshlak), Turkmenistan (Tuarkyr, Bolshoi and Malyi Balkhan, Kopet-Dag), Georgia, Azerbaijan, Armenia, Ukraine (Crimea), Bulgaria, Romania, Austria, Germany, France, United Kingdom, Egypt, Madagascar, Republic of South Africa, Iran, Japan, USA (California, Texas), Mexico and Colombia.

A new species is described below.

Comparison. This genus differs from the genus *Procheloniceras* Spath in the presence of prominent lateral and small umbilical nodes, and from the genus *Epicheloniceras* Casey in having two rather than three rows of nodes.

Remarks. The most complete synonymy list of the genus is published by Casey (1961) who thoroughly revised this genus.

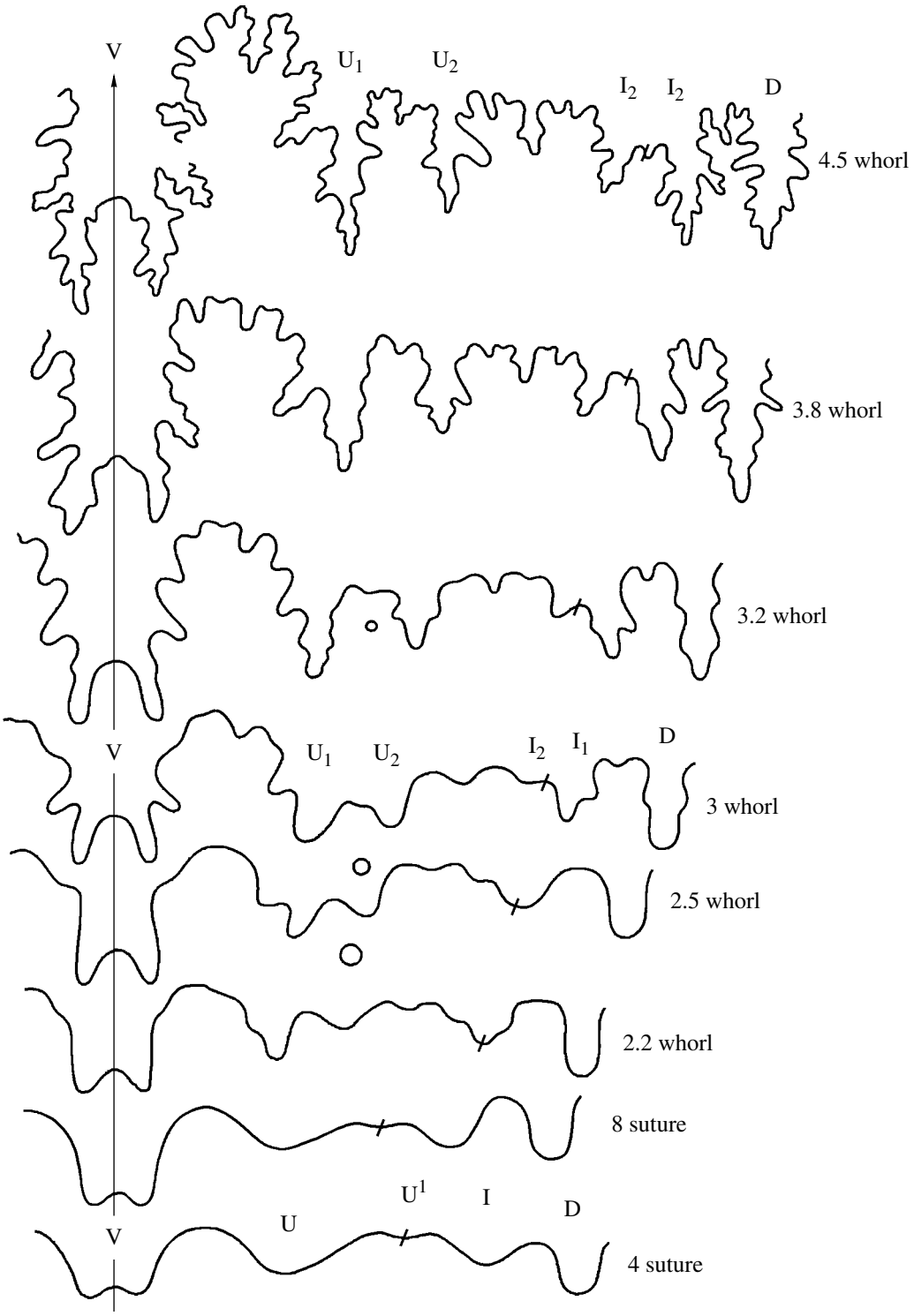



**Fig. 1.** Sutural outline of *Cheloniceras cornuelianum* (d'Orbigny), specimen PIN, no. 5265/56; Dagestan, Akusha Village; Early Aptian.

Previously, specimens from Ulyanovsk Povolzhye we identified as *Cheloniceras cornuelianum* (d'Or-bigny) (Baraboshkin and Mikhailova, 2002, pl. 4, fig. 3; Bogdanova and Mikhailova, 2005). Glazunova (1973, p. 156, pl. 121, figs. 1–3) described and figured two small specimens of *Cheloniceras meyendorfi* (d'Orbigny) from the vicinity of Saratov (Sokolova Gora) found in the same nodule. In addition, Glazunova (1973, p. 157, pl. 122, fig. 1) described and figured Cheloniceras (?) sp., found on the Guselka River near the village of Pristannoe.

Plate 5

Explanation of Plate 5

Fig. 1. *Cheloniceras natarius* sp. nov., holotype, "Simbirtsit" Museum of "Lita" company, specimen no. 1; lateral view, × 0.5.

***Cheloniceras natarius* I. Michailova sp. nov.**

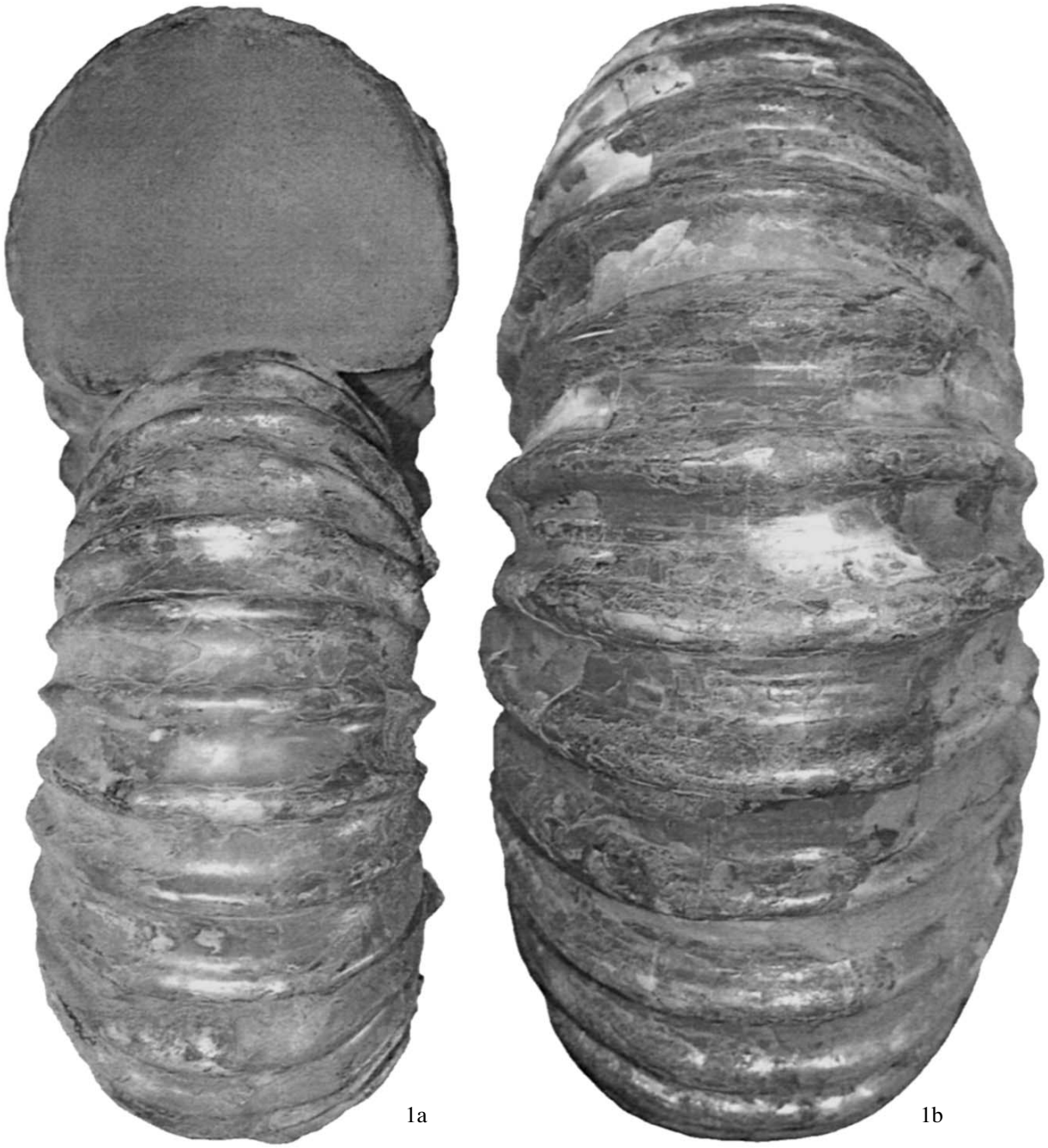
Plate 5, fig. 1; Plate 6, figs. 1a, 1b

Etymology: given as a noun in apposition in honor of the natural historian, and owner of the "Lita" company, A.M. Natarius.

Holotype. "Simbirtsit" Museum of "Lita" company, Ulyanovsk, specimen no. 1; Ulyanovsk Region, Volga River, near the village of Kriushi; Lower Aptian, *Deshayesites deshayesi* Zone.

Description. The shell is large, reaching 370 mm in diameter, with the whorl height of 115 mm,

Plate 6




Explanation of Plate 6

Fig. 1. *Cheloniceras natarius* sp. nov., holotype, × 0.5: (1a) apertural view, (1b) ventral view.

whorl width 140 mm, diameter of the umbilicus 135 mm. The middle whorls overlap each other by no more than one third, and by the end of the last whorl, the shell becomes almost evolute. The umbilicus is shallow, very wide; the umbilical wall is narrow and steep. The cross-section is rounded, its width exceeding its height. The venter is broadly rounded.

The ornamentation of the last whorl consists of 36 widely spaced ribs, which have the same appearance on the venter. At the beginning of this whorl, ribs diverge into two branches near the umbilical shoulder in the proximity of the lower umbilical nodes). Smaller lower and larger upper (lateral) nodes are clearly discernible on the last whorl.

The suture was not observed.

C o m p a r i s o n. This species is distinguished from the most similar species *P. cornuelianum* (d'Orbigny) by the more strongly evolute shell, a shallow and very wide umbilicus and larger size.

M a t e r i a l. Found by fishermen and purchased by the "Lita" company.

## ACKNOWLEDGMENTS

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