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Craspeditidae (Ammonoidea) of the Russian Platform at the Jurassic–Cretaceous Boundary. I. Genus *Praesurites* Mesezhnikov et Alekseev

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Abstract—The type species of the genus *Praesurites, P. elegans* Mesezhnikov et Alekseev, was described from the basal Berriasian of the Subpolar Urals (Sosva River basin). Finds of species of this genus in other regions are of importance for the interregional correlation of the Jurassic–Cretaceous boundary interval. The taxonomic composition and stratigraphic distribution of the Central Russian species of the genus *Praesurites* from the Volgian–Ryazanian boundary interval (the top of *Craspedites nodiger* Zone–*Riasanites rjasanensis* Zone) are revised. The revised diagnosis of the genus *Praesurites* and redescriptions of *P. tryptychus* (Nikitin), *P. unshensis* (Nikitin) (including *P. nikitini* Gerasimov et Mitta, as a junior subjective synonym) and *P. craspeditoides* (Girmounski) are presented.

Keywords: ammonites, Craspeditidae, *Praesurites*, Volgian Stage, Berriasian Stage, Russian Platform
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INTRODUCTION

M.S. Mesezhnikov and S.N. Alekseev (Mesezhnikov et al., 1983) were the first to describe the monotypic genus *Praesurites,* with the type species *P. elegans* Mesezhnikov et Alekseev, in the family Craspeditidae from the *Chetaites sibiricus* Zone in the Maurynya River basin, a tributary of the Northern Sosva River (eastern slope of the Subpolar Urals). The *sibiricus* Zone is the basal zone of the Berriasian [=Ryazanian] Stage of the Cretaceous System in the regional stratigraphic schemes of Siberia and the Boreal Standard (*Resheniya*..., 2004; Shurygin et al., 2011; Zakharov et al., 1997). Later, the species *P. nikitini* Gerasimov et Mitta from the central areas of the Russian Platform was also assigned to the genus *Praesurites*. The typical group of this species originates from the condensation horizons at the top of the Volgian Stage–the base of the Ryazanian Stage in the Unzha River basin (Kostroma Region) and the *Riasanites rjasanensis* Zone of the Ryazanian Stage exposed in the Lopatino Phosphorite Mine in the Moscow Region (Mitta, 2004).

The data on the taxonomic composition and stratigraphic distribution of species of the genus *Praesurites* are of great importance for interregional correlation of the Jurassic–Cretaceous boundary deposits. Through fieldwork during the last decades, the author has been able to considerably expand ammonite collections from the Jurassic–Cretaceous boundary interval of the Russian Platform, and to define more exactly both the taxonomic composition of Craspeditidae and their stratigraphic distribution. This work presents the results of a revision of the Central Russian representatives of the genus *Praesurites*.

MATERIAL

The main material used for the studies, was collected by the author between 1980 and 2017 from geological sections in the Kostroma, Moscow, and Ryazan regions. The collections of original samples supporting the works of S.N. Nikitin, A.M. Girmounsky and P.A. Gerasimov, and materials housed in museums were also taken into consideration. In addition, ammonites from the Stupachenko private collection, most of which were collected during joint fieldwork, were studied. Images of some of these ammonites are presented in this work. The original samples are stored at the Borissiak Paleontological Institute of the Russian Academy of Sciences (PIN, Moscow), Vernadsky State Geological Museum of Russian Academy of Sciences (SGM, Moscow), Chernyshev Central Research Geological Museum (TsNIIGR Museum, St. Petersburg) and the Mining Museum of St. Petersburg Mining University (GM).

DISCUSSION

In the early 1880s, Nikitin, one of the prominent geologists–paleontologists of that time, organized the geological survey within Kostroma Province by order of St. Petersburg Mineralogical Society (Starodubtseva, 2013). One of the results of these studies was the first description of the Jurassic–Cretaceous boundary deposits in the lower reaches of the right bank of the Unzha River, well exposed at the segment between the villages of Kozlovo and Korshunskoe[1]. It is from these outcrops that Nikitin described numerous fossils, including the new ammonite species *Olcostephanus tryptychus* and *O. unshensis* from the phosphorite plate at the top of the Volgian Stage ("horizon with *Olcostephanus nodiger*") (Nikitin, 1884 (1885), 1885a, 1885b).

Girmounsky (1914) studied Jurassic and Cretaceous deposits in the lower reaches of the Unzha River in detail, and described a new species *Polyptychites craspeditoides* Girmounsky from the "Neocomian black phosphorite sandstone with brown ferruginous inclusions". This author clearly stated that the new species and *Olcostephanus unshensis* Nikitin originates from the horizon overlying the Upper Volgian *Nodiger* Zone and it should be ascribed to the lower zone of the Neocomian.

Gerasimov (1969, p. 21) provides a short description of the Upper Volgian interval of the section at the right bank of the Unzha River between the villages of Efimovo and Ogarkovo, and images of a few specimens of *Craspedites tryptychus* (Nikitin) among others from the *Nodiger* Zone and *Surites unshensis* (Nikitin) from the *Tzikwinianus* Zone. In addition, images of two specimens of "*Surites nikitini*, sp. nov." from the same area, with reference to a holotype, but without the correct description, are provided by Gerasimov (1969). Later in Mitta (2004), the species *Praesurites nikitini* Gerasimov et Mitta was described and, according to the International Code of Zoological Nomenclature, this name is accepted as valid.

A short description of the results of multi-year field studies of the Jurassic and Cretaceous deposits in the lower reaches of the Unzha River, with clarification of their biostratigraphic subdivision, is given by Mitta (2015). The study of new collections and re-examination of museum materials suggest that previous conclusions on the composition of the genus *Praesurites* need to be emended. All the species listed above (*unshensis, tryptychus, craspeditoides,* and *nikitini*) have very similar morphology of young whorls. At a diameter of 30–35 mm they have prominent, mainly bipartite, relatively widely spaced ribs. Based on this feature, one can distinctly distinguish the above group of species from representatives of the genus *Craspedites*, the early whorls of which are covered by thinner, denser ribs with a large number of branches. Consequently, the entire group of species under discussion can be assigned to the genus *Praesurites*.

At present, the author's collection includes more than 90 specimens of the genus *Praesurites*, including specimens from the outcrops in the Oka River basin (Ryazan Region). Almost half of this collection is represented by juvenile specimens or samples with a degree of preservation unsuitable for reliable species-level identification. Nevertheless, the study of all the material available shows that all specimens previously assigned to *P. nikitini* (Mitta, 2004, 2005) (including the holotype), belong in part to *P. unshensis,* and in part to *P. craspeditoides*. The species *P. tryptychus* was not found in the *Rjasanensis* Zone s. str. and it is likely that this species is older than the two discussed above.

As previously mentioned, the genus *Praesurites* was established by Mesezhnikov and Alekseev, and they restricted its composition to the type species *P. elegans*. The type series includes 15 well-preserved specimens. Although adult whorls are often used in descriptions of genus and species, based on the measurement table and images (Mesezhnikov et al., 1983, p. 123, pl. 6, figs. 3, 6, 10; pl. 7, figs. 3, 4; text-fig. 8), it appears that these authors had only phragmocones or young shells (up to 43 mm in diameter). Consequently, the diagnosis of the genus was based on insufficiently mature shells. The statement that *Praesurites* often have "multipartite ribs on the inner whorls, whereas intermediate and adult whorls have evident biplicate ornamentation" (Mesezhnikov et al., 1983, p. 122) is only partly true if the inner whorls of juvenile shells of less 10 mm in diameter are considered (Mesezhnikov et al., 1983, pl. 6, fig. 6). The evident occurrence of tripartite ribs on "adult" whorls at D = 35–40 mm in the paratypes (Mesezhnikov et al., 1983, pl. 7, figs. 3, 4) refutes the second part of the statement cited above. An enhanced diagnosis, with an added account of the variations in the composition of the genus, is given below.

SYSTEMATIC PALEONTOLOGY

Superfamily Perisphinctoidea Steinmann, 1890

Family Craspeditidae Spath, 1924

Subfamily Craspeditinae Spath, 1924

Genus *Praesurites* Mesezhnikov et Alekseev, 1983

Type species. *Praesurites elegans* Mesezhnikov et Alekseev in Mesezhnikov et al., 1983; Maurynya River; Berriasian, Chetaites sibiricus Zone. Holotype is housed in the museum of All-Union Geological Oil Exploration Institute (VNIGRI) (St. Petersburg), no. 13632/634 (Mesezhnikov et al., 1983, pl. VI, fig. 3).

[1] This segment covers the right bank of the Unzha River (upstream) between the villages of Kozlovo, Ivanovo, Ogarkovo, Efimovo, Voloshnovo, Mikushino and Korshunskoe (now Sokornovo). Nikitin notes that the best outcrops, past and present, are exposed between the villages of Efimovo and Ogarkovo.

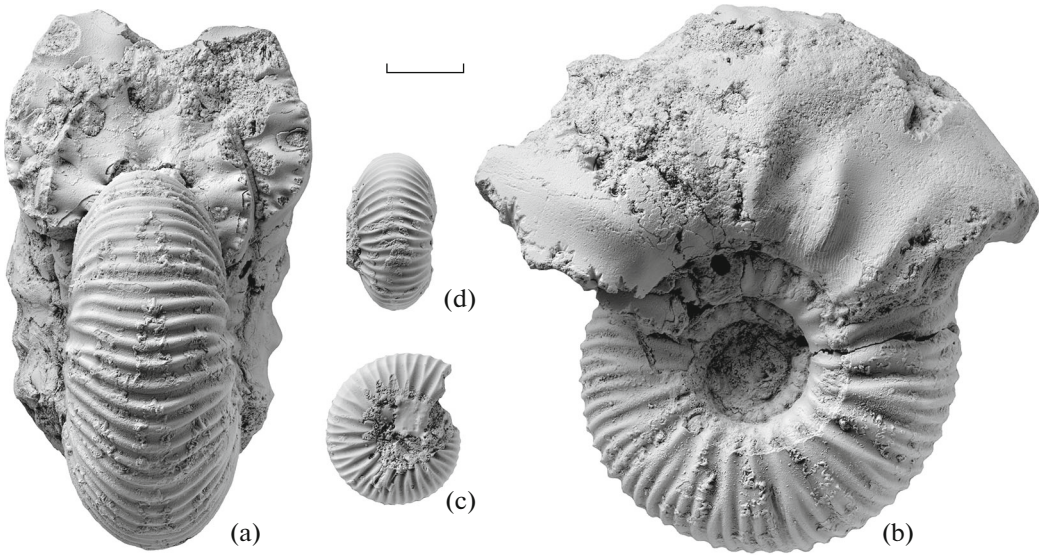


Fig. 1. *Praesurites tryptychus* (Nikitin), specimens from the type series: (a, b) lectotype GM, no. 142/50: (a) apertural view, (b) lateral view; (c, d) paralectotype GM, no. 143/50: (c) lateral view, (d) ventral view; Kostroma Region, Makariev District, the Unzha River right bank between villages of Ogarkovo and Efimovo; phosphorite plate at the top of the Volgian Stage–the bottom of the Ryazanian Stage. Scale bar 10 mm.

D i a g n o s i s. Shell is involute with whorls from inflated to medium width; the cross section varies from low subtrapezoidal to suboval, tapering ventrally. The prominent ribs, predominantly bipartite at early stages, change with age to tri- or quadripartite. Consequently, some branches lose the connection with the main rib. As a result, intercalating, bipartite, and simple ribs develop. As the shell grows, ribs on the adult body chamber also fade beginning from the outer part of the flanks and the venter. The umbilical parts of ribs are preserved only as more or less defined carinate elevations or ribs–folds.

S p e c i e s c o m p o s i t i o n. Except of the type species, *P. tryptychus* (Nikitin), *P. unshensis* (Nikitin) (including *P. nikitini* Gerasimov et Mitta, as a subjective synonym), and *P. craspeditoides* (Girmounsky); Subpolar Urals: North Sosva River basin (*Sibiricus* Zone) and central areas of the European Russia: basins of the Unzha and Oka rivers (the top of the *Nodiger* Zone–*Rjasanensis* Zone).

C o m p a r i s o n. The studied genus is different from the genus *Craspedites* Pavlow, 1892 in relatively sparse prominent bipartite ribs at the early stages (D = 10–30 mm) and usually in the secondary ribs fading later in ontogeny. It differs from the genus *Surites* Sasonov, 1951 in the relatively weak curvature of the ribs on the venter.

R e m a r k s. The studied genus is a transitional link between the predominantly Late Jurassic Craspeditinae Spath, 1924 and the Early Cretaceous Tolliinae Spath, 1952. Despite the small number of species, this genus is of fundamental importance for understanding the further evolution of its descendants, the genera *Surites* and *Caseyceras*, and their numerous descendants during the Berriasian and Valanginian.

***Praesurites tryptychus* (Nikitin, 1884)**

Olcostephanus tryptychus: Nikitin, 1884, p. 49, pl. 6, figs. 25, 26; Nikitin, 1885a, p. 61, pl. 6, figs. 25, 26; 1885b, p. 135.

Craspedites tryptychus: Gerasimov, 1969, p. 92, pl. 29, figs. 1, 2, 4; pl. 31, fig. 7.

L e c t o t y p e. Specimen illustrated by Nikitin (Nikitin, 1884, pl. 6, fig. 25); GM, no. 142/50; Kostroma Region, Makariev District, the Unzha River right bank between the villages of Kozlovo and Korshunskoe (now Sokornovo; phosphorite plate at the top of the *Craspedites nodiger* Zone (Volgian Stage). Designated by Gerasimov (1969, p. 92); an image is provided for the first time in this paper, Figs. 1a, 1b.

D e s c r i p t i o n (Figs. 1–3). The phragmocone has inflated whorls, width slightly exceeding height, round–trapezoidal in cross section, tapering ventrally. The umbilicus is moderately wide at all stages; the umbilical wall is low; the umbilical shoulder is rounded. The body chamber is moderately wide. Until D = 35–40 mm, the ribs are prominent and are subdivided into two branches. With age, they are subdivided into three and, rarely, four branches, and the number of branches increases by repeated separation of the posterior branch. The rib branches on the venter are very weakly bent forward. At a diameter of greater than 60 mm, the ornamentation faded become carinate. However, the prominence of these ribs, which are well developed on the mold become less conspicuous on the thick shell. This can be clearly seen in specimen 3990/447, where the shell is almost completely pre-

Fig. 2. *Praesurites tryptychus* (Nikitin), specimen PIN, no. 3990/448, lateral view; Kostroma Region, Makariev District, the Unzha River right bank below the village of Efimovo; phosphorite plate at the top of the Volgian Stage, 0.05 cm below the top of the bed; author's collections, 2015. Scale bar 10 mm.

served on one side (Fig. 3a), except for a chipped area at the bottom left.

Measurements (mm) and ratios:

Specimen no.	Dm	WH	WW	Du	WH/D	WW/D	UW/D
PIN 3990/448	63	24	24	19.5	0.38	0.38	0.31
	54	20	~21	18.5	0.37	0.39	0.34
GM142/50, lectotype	51	19.6	22.5	15	0.38	0.44	0.29
GM 143/50, paralectotype	20.8	~8	11	~6.5	0.38	0.53	0.31

Remarks. As was correctly stated by Nikitin, this species is very similar to *Craspedites nodiger* (Eichwald) in the ornamentation of and the evolution as a general matter. At this, it differs in the juvenile and intermediate whorls of the phragmacone. It should be noted that one of the specimens of *P. tryptychus* (Fig. 2) was found at almost the same level as *C. nodiger*. This suggests that the species *tryptychus* originates from the species *nodiger* (correspondingly: phyletic line of *Craspedites* → *Praesurites*) and all other *Praesurites* originate from *P. tryptychus*.

When designating the type (lectotype), Gerasimov (1969, p. 92) did not recognize that the juvenile specimen illustrated by Nikitin (1884, pl. 6, fig. 2b) belonged to this species. It is probable that he was misled by the inaccurate drawing in Nikitin's work; an image of this specimen is given in Figs. 1c, 1d. In our opinion, it is quite likely that this specimen belongs to the species *tryptychus*, considering the data on the variability of early whorls in *Praesurites*.

Material. Except for the museum material, four specimens from outcrops in the Unzha River basin between the villages of Efimovo and Ogarkovo (topotypes).

***Praesurites unshensis* (Nikitin, 1884)**

Plate 4, figs. 1–6; Plate 5, figs. 1–5

Olcostephanus unshensis: Nikitin, 1884, p. 45, pl. V, fig. 23 (only); Nikitin, 1885a, p. 57; 1885b, p. 133.

Surites unschensis: Gerasimov, 1969, p. 93, pl. 29, fig. 5 (only).

Surites nikitini (nom. nud.): Gerasimov, 1969, p. 93, pl. 300, figs. 1, 2.

Praesurites nikitini: Mitta, 2004, p. 19, pl. 2, figs. 1, 3 (only); 2005, pl. I, fig. 6 (only).

non *Olcostephanus unshensis*: Nikitin, 1884, pl. 5, fig. 24 [=Nikitin, 1885a; 1885b] (= *Surites* sp. juv.).

non *Surites unschensis*: Gerasimov, 1969, p. 93, pl. 29, fig. 3 (pathological specimen *Craspedites nodiger*).

Lectotype. Specimen illustrated by Nikitin (Nikitin, 1884, pl. V, fig. 23); TsNIGR Museum, no. 3/1726; Kostroma Region, Makariev district, right bank of Unzha River between the villages of Kozlovo and Korshunskoe [=Sokornovo]; phosphorite slab at the top of the *Craspedites nodiger* Zone (Volgian Stage). Designated here; image is given here for the first time, Fig. 4.

Description (Figs. 4, 5). The shell with average-sized or slightly inflated oval whorls; juvenile whorls narrow noticeably to the ventral side. Umbilicus is moderately wide; the umbilical side, rather steep at the early stages of development, becomes flatter. Bipartite ribs are replaced by tripartite at 50–60 mm in diameter. Subsequently, the interior and posterior branches of the shell lose their link with the main rib and simple and inserted ribs appear. Ribs on the flanks and on the venter of the body chamber become smooth; umbilical parts of ribs are expressed as long folds.

Measurements (mm) and ratios:

Spec. no.	Dm	WH	WW	UW	WH/D	WW/D	UW/D
PIN 3990/459	77	~24	~30	–	0.31	0.39	–
GGM II-117/910	64	29	28	–	0.45	0.44	–
GGM 1385 (holotype	61.7	27.5	28	~16	0.45	0.45	0.25
P. nikitini)	50	~24	24	~12	0.48	0.48	0.24
PIN 3990/451	61.5	26	24	~19	0.42	0.39	0.31
3/1726, lectotype	58.3	23.5	23	19.2	0.40	0.39	0.33
	46.5	18.6	~19	~15	0.40	0.41	0.32
PIN 3990/456	52	21	24	14.5	0.40	0.46	0.28
PIN 3990/461	43	17	18	11.5	0.39	0.42	0.27
	36.5	15.3	14	10.5	0.42	0.38	0.29
PIN 3990/452	34	12.5	13	10.5	0.37	0.38	0.31

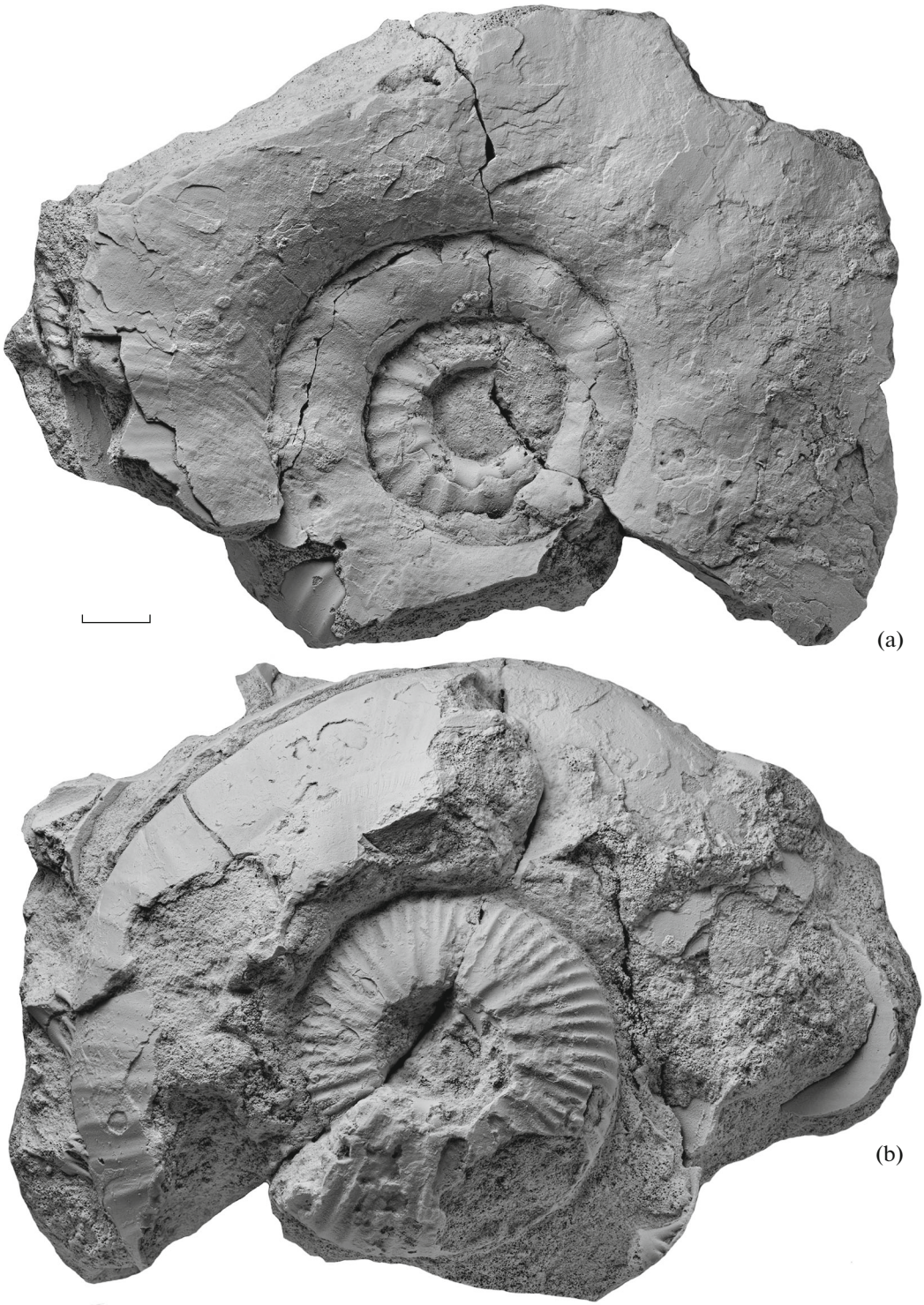


Fig. 3. *Praesurites tryptychus* (Nikitin), specimen with a body chamber fragment, PIN, no. 3990/447: (a) lateral view, chip on the shell (bottom left) with nacreous layer visible, (b) opposite side, eroded mold; Kostroma Region, Makariev District, right bank of Unzha River below village of Efimovo; phosphorite salb at the top of the Volgian Stage; author's collections, 2007. Scale bar 10 mm.

V a r i a b i l i t y. Mainly shown in the shape of the whorl cross section: ratios between width and height of a whorl and degree of the narrowing of the ventral side.

C o m p a r i s o n. This species differs from *P. tryptychus* in the less inflated whorls with a higher cross section, the occurrence of intercalating and simple

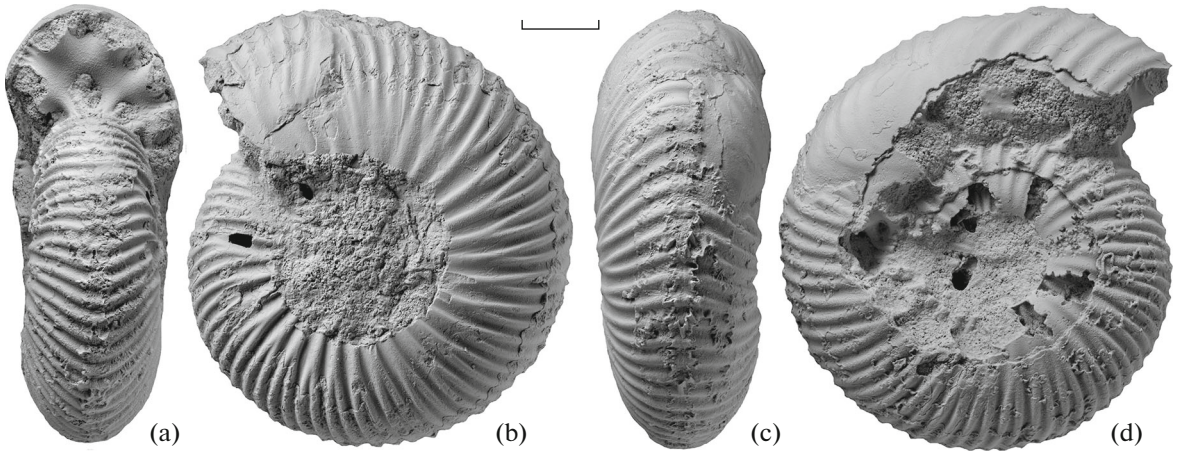


Fig. 4. *Praesurites unshensis* (Nikitin), lectotype TSNIGR Museum, no. 3/1726: (a) apertural view; (b, d) lateral view; (c) ventral view; Kostroma Region, Makariev District, the Unzha River right bank between villages of Ogarkovo and Efimovo; phosphorite plate at the top of the Volgian Stage–the bottom of the Ryazanian Stage. Scale bar 10 mm.

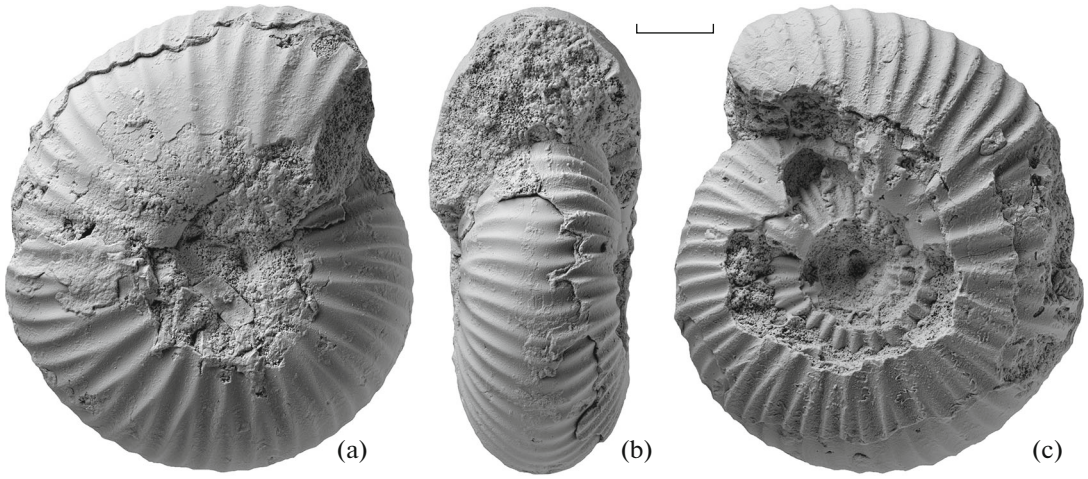


Fig. 5. *Praesurites unshensis* (Nikitin) (holotype *P. nikitini* Gerasimov et Mitta), specimen SGM, no. 1385: (a, c) lateral view, (b) apertural view; Kostroma Region, Makariev District, the Unzha River right bank between villages of Ogarkovo and Efimovo; phosphorite plate at the top of the Volgian Stage–the bottom of the Ryazanian Stage. Scale bar 10 mm.

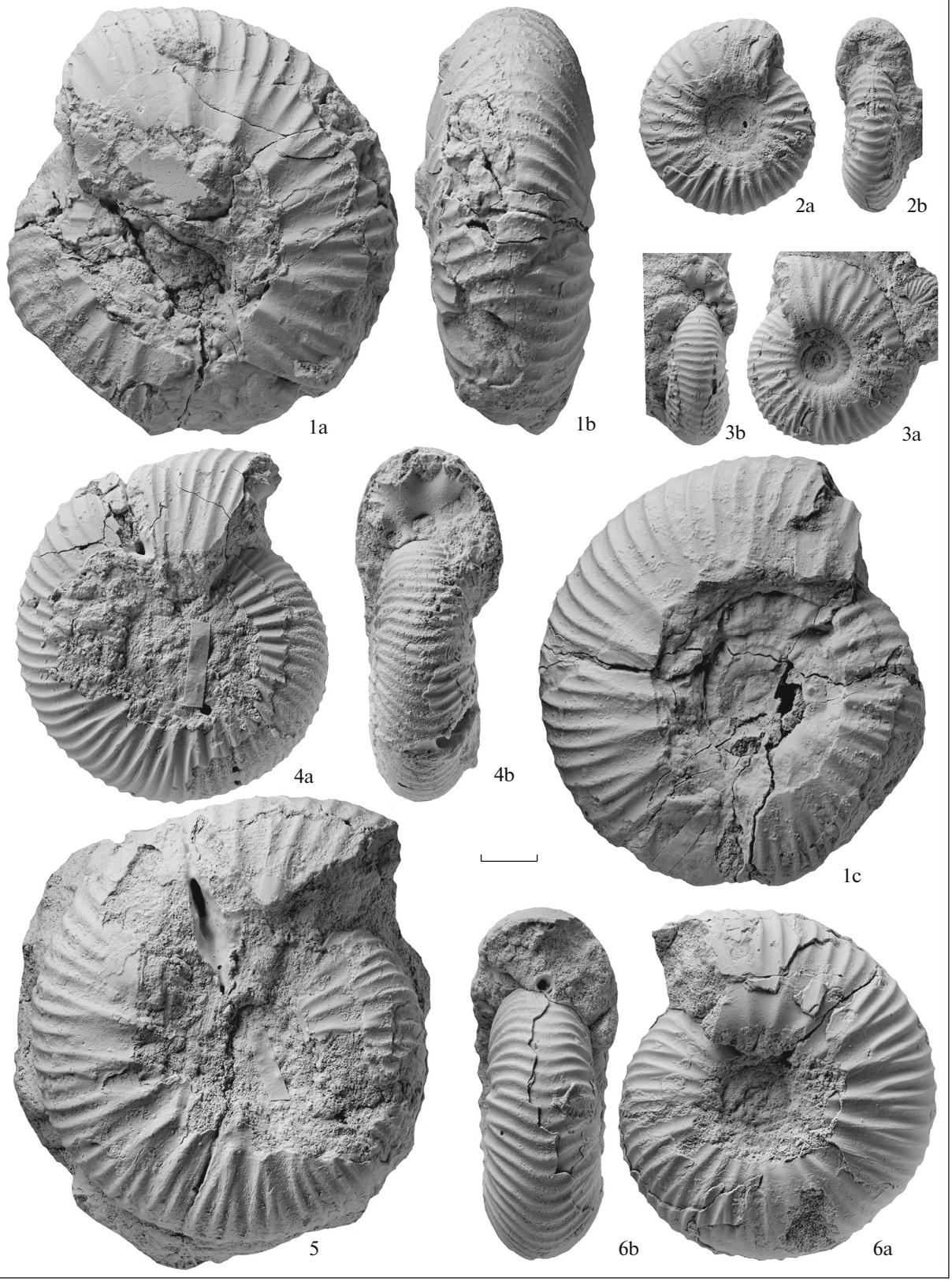
ribs and later smoothening of the sculpture. In addition, the bend of ribs frontward on the ventral side of the studied species is better defined. In terms of shell morphology, some topotypes (Pl. 5, fig. 2) are very similar to some paratypes of *P. elegans* (Mesezhnikov et al., 1983, pl. VII, figs. 3, 4). It differs in the later appearance of tripartite ribs.

R e m a r k s. Nikitin based his description of the new species on seven available specimens. Neither he, nor subsequent authors, provided type specimen descignation. Here, I designate the larger of the two phragmocones illustrated by Nikitin as the lectotype. In the anterior part of the last whorl of the lectotype one can see a healed injury, which distorted ornamen-

Explanation of Plate 4

Figs. 1–6. *Praesurites unshensis* (Nikitin): (1) specimen PIN, no. 3990/459: (1a, 1c) lateral view, (1b) ventral side; (2) specimen PIN, no. 3990/452: (2a) lateral view, (2b) apertural view; (3) specimen PIN, no. 3990/454: (3a) lateral view, (3b) apertural view; (4) specimen PIN, no. 3990/451: (4a) lateral view, (4b) apertural view; (5) specimen PIN, no. 3990/458, lateral view; (6) specimen SGM, no. II-117/910: (6a) lateral view, (6b) apertural view; Kostroma Region, Makariev District, the Unzha River right bank between villages of Ogarkovo and Efimovo; phosphorite plate at the top of the Volgian Stage–the bottom of the Ryazanian Stage. (1–5) collections of A.V. Stupachenko and V.V. Mitta, 1998–2015, (6) collections of A.M. Girmounsky, 1912. Scale bar 10 mm.

Plate 4



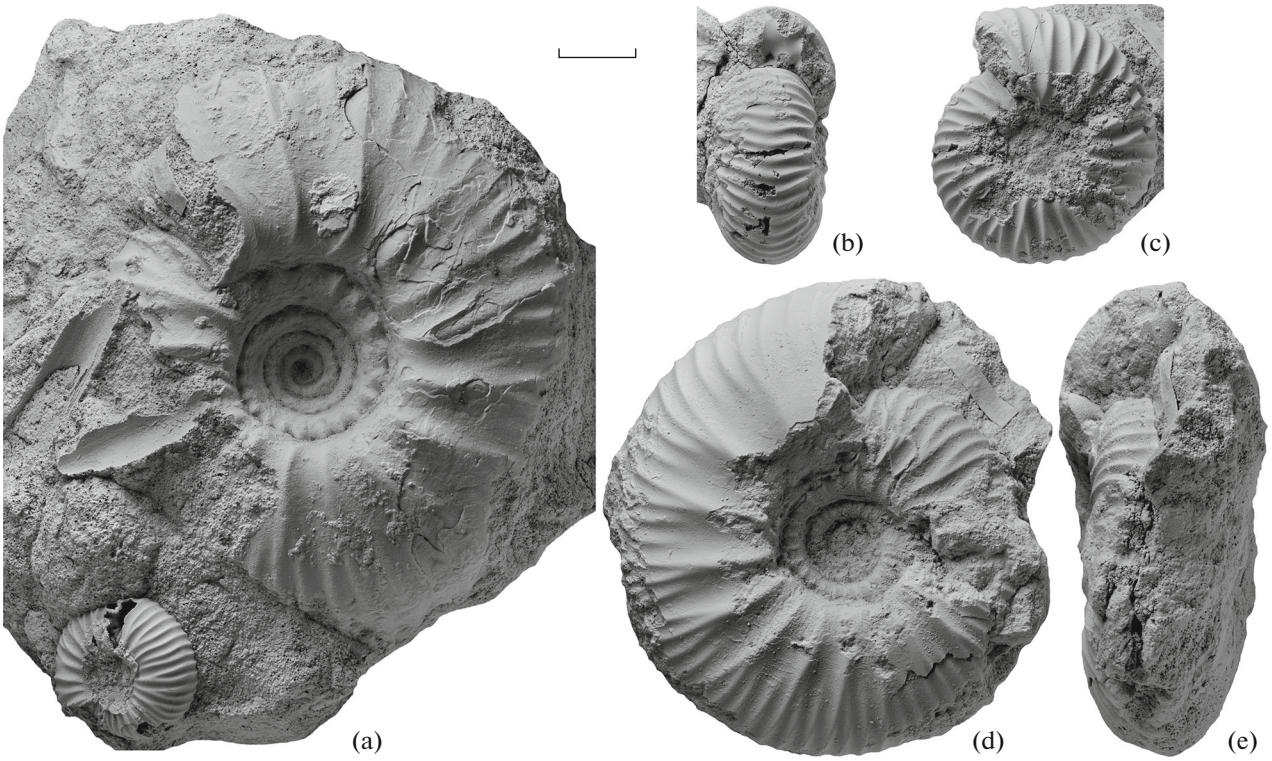


Fig. 6. *Praesurites craspeditoides* (Girmounsky):(a) specimen PIN, no. 3990/445, lateral view, mold with fragments of nacreous layer, at the bottom left, phosphorite mold of a juvenile specimen of the same species; (b, c) specimen PIN, no. 3990/453: (b) apertural view, (c) lateral view; (d, e) specimen PIN, no. 3990/446: (d) lateral view, (e) apertural view; Kostroma Region, Makariev District, right bank of the Unzha River between the Ogarkovo and Efimovo villages; phosphorite plate at the top of the Volgian Stage; collections of A.V. Stupachenko, 2002–2015. Scale bar 10 mm.

tation on one flank (Fig. 4b), while on the opposite flank it is expressed as a "patch" with faded ribbing (Figs. 4c, 4d). The smaller figured specimen from the type series is represented by a worn out calcite mold. The matrix, shell morphology, and ornamentation suggest that this specimen comes from the basal part of the Valanginian, *Delphinites undulatoplicatilis* Zone, and judging from its rounded state it was most likely found loose.

M a t e r i a l. About 30 specimens from the Kostroma Region (outcrops in the Unzha River basin between the villages of Ogarkovo and Efimovo), boundary interval between zones Nodiger and Tzikwinianus; 6 specimens from the Moscow Region (Lopatino Phosphorite Mine), Rjasanensis Zone (Ryazanian Stage).

***Praesurites craspeditoides* (Girmounsky, 1914)**

Polyptychites craspeditoides: Girmounsky, 1914, p. 73, pl. 5, figs. 1–3.

Praesurites craspeditoides: Mitta, 2017, text-fig. 3.

Praesurites nikitini: Mitta, 2004, p. 19, pl. 2, figs. 2, 4 (only); 2005, pl.1, fig. 5 (only).

H o l o t y p e (by monotypy). Specimen illustrated by Girmounsky (1914, pl. 5, figs. 1–3) (recent photographs are published by Mitta (2017)); SGM, no. VI-124/1; Kostroma Region, Makariev District, right bank of the Unzha River near the village of Ivanovo; "Neocomian, black phosphorite sandstone with brown Fe-rich inclusions" [=Ryazanian Stage, *Riasanites rjasanensis* Zone].

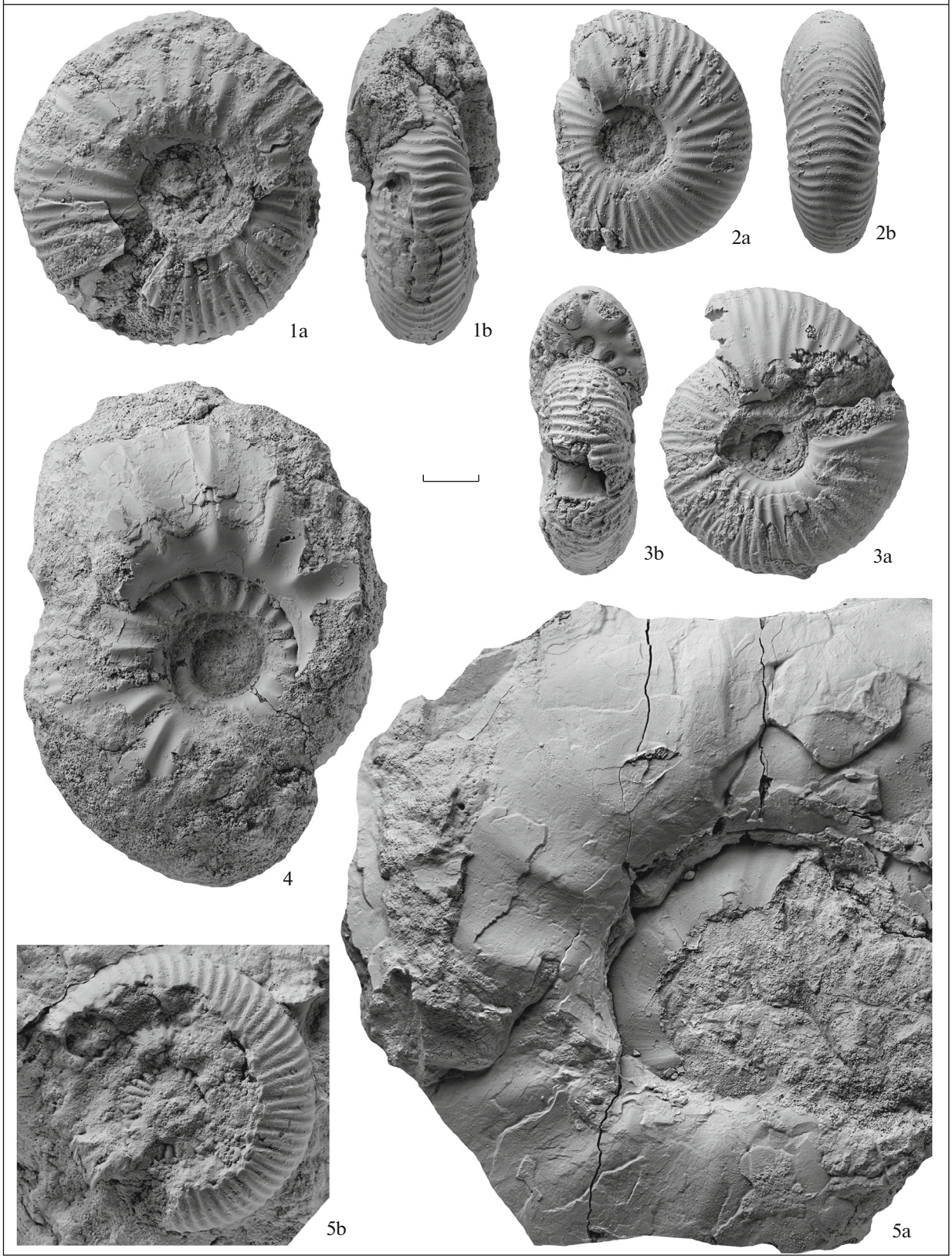
D e s c r i p t i o n (Fig. 6). The shell is composed of involute inflated whorls, broadly oval and rounded in cross-section. The whorl width is usually considerably

E x p l a n a t i o n o f P l a t e 5

Figs. 1–5. *Praesurites unshensis* (Nikitin): (1) specimen PIN, no. 3990/455: (1a) lateral view, (1b) apertural view; (2) specimen PIN, no. 3990/461: (2a) lateral view, (2b) ventral view; (3) specimen PIN, no. 3990/456: (3a) lateral view, (3b) apertural view; (4) specimen PIN, no. 3990/457, lateral view; (5) specimen PIN, no. 3990/450: (5a) lateral view, (5b), inner whorls from opposite side.

(1, 3–5) Moscow Region, Voskresensk District, quarries of the Lopatino Phosphorite Mine; Ryazanian Stage, Zone Riasanites rjasanensis; (2) Kostroma Region, Makariev District, right bank of Unzha River between villages of Ogarkovo and Efimovo; phosphorite plate at the top of the Volgian Stage– bottom of the Ryazanian Stage. Collections of V.V. Mitta, 1980–2016. Scale bar 10 mm.

Plate 5



larger than the height. The umbilicus is moderately wide. The umbilical wall is steep. The umbilical shoulder is rounded. The bipartite ribs developed until the Dm ca. 40 mm are replaced by tri- or quadripartite ribs. However, the anterior and posterior branches relatively quickly lose connection with the main ribs, which results in the appearance of intercalating and simple ribs.

Measurements (mm) and ratios:

Spcimen. no.	Dm	WH	WW	UW	WH/D	WW/D	UW/D
GGM VI-124/1,	134	51	60	40.5	0.38	0.45	0.30
holotype	111	46.5	54	33.5	0.42	0.49	0.30
PIN 3990/445	83	29	–	24.5	0.35	–	0.29
PIN 3990/446	63	25	27	17	0.40	0.43	0.27
PIN 3990/236	49	19	25	13.8	0.39	0.51	0.28
	41.5	18	17	11.5	0.43	0.41	0.28
PIN 3990/245	48	20	23	14	0.42	0.48	0.29
	40	15	19	12.6	0.37	0.47	0.31
PIN 3990/453	35	14	19	8.5	0.4	0.54	0.24
	30.5	13	15	~8	0.43	0.49	0.26

Comparison. The species described by Girmounsky is similar to *P. tryptychus* in the low whorl cross-section, and, partly, in ornamentation, but in the species under description, fading of ornamentation begins considerably later. It differs from *P. unshensis* in the considerably stronger inflated whorls.

Material. Four specimens from outcrops in the Unzha River between the villages of Ogarkovo and Efimovo, the boundary interval between the Nodiger and Tzikwinianus zones; three specimens are from the Moscow Region (Lopatino phosphorite mine), Rjasanensis Zone (Ryazanian Stage).

CONCLUSIONS

The species Praesurites elegans was described from an interval assigned to the Chetaites sibiricus Zone, which is considered as the Lower Cretaceous basal zone in the regional stratigraphic schemes of Western and Central Siberia. In addition, other species of the family Craspeditidae, including species of the genera *Shulginites* and *Hectoroceras,* are recorded in association with (and above and below) the *P. elegans* Zone from the Maurynya River (Mesezhnikov et al., 1983). Although, the recent reexamination of the Maurynya River basin (Dzyuba et al., 2018) have not provided us with new finds of *Praesurites*, they have in general confirmed the conclusions of previous researchers concerning the biostratigraphic subdivision of the Jurassic–Cretaceous boundary deposits in this area.

The Central Russian species of the genus *Praesurites* occupy the stratigraphic interval from the upper part of the terminal zone of the Volgian Stage (*Craspedites nodiger*) to the basal zone (*Riasanites rjasanensis*) of the Ryazanian Stage, inclusive. In the same interval of the Russian Platform, representatives of the genus *Hectoroceras* (including *Shulginites*, as a subjective synonym) were found (Mesezhnikov et al., 1979; 1983; Mitta, 2005, 2007; Mitta and Sha, 2011; etc.).

The data obtained confirm the accuracy of the interregional correlation of the Jurassic/Cretaceous boundary between the Russian and Siberian platforms at the zonal level, achieved by Soviet geologists under the leadership of Mesezhnikov. The results of studying the taxonomy and stratigraphic distribution of the genus *Hectoroceras* Spath and similar taxa in the Russian Platform will be presented in the next article.

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