



Kazan Golovkinsky Stratigraphic Meeting

2017



Kazan Federal University  
Institute of Geology and Petroleum Technologies

# Kazan Golovkinsky Stratigraphic Meeting – 2017

and

Fourth All-Russian Conference “Upper Palaeozoic of Russia”

**Upper Palaeozoic Earth systems  
high-precision biostratigraphy,  
geochronology and petroleum resources**

## **Abstract Volume**

19–23 September 2017, Kazan, Russia



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# PERMIAN CONCHOSTRACA FROM CONTINENTAL DEPOSITS IN EASTERN EUROPE (VOLGA–KAMA REGION) – FIRST TAXONOMIC RESULTS

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Permian conchostracans from continental deposits of the Volga-Kama region are not completely investigated so far and previous studies (Novozhilov, 1950, 1970) in Eastern Europe resulted in large numbers of taxonomical synonyms, which reduce their practicability for biostratigraphy. Currently, the Middle Permian continental deposits are studied for conchostracan taxonomy and biostratigraphic implications. Therefore, a new collection of conchostracans was sampled in the Middle to Late Permian Cheremushka Ravine and Monastyrski Ravine sections during Russian-German field work in 2013–2016.

Four conchostracan species in the Cheremushka Ravine (55°46'48.8"N; 048°55'32.2"E) and two species in the Monastyrski Ravine (55°01'40.3"N; 048°53'05.1"E) are preliminary determined (Fig. 1). Conchostracans from the Cheremushka Ravine section were found in four levels of the Sulitsa and Isheevo formations (Urzhumian Regional Stage). The species *Pseudestheria* cf. *itiliana* (Novozhilov, 1950) occurs in all four levels, in the outcrop P03, beds 17–20, P04, beds 37–39, 68 and outcrop P09, bed 128. The species *Palaeolimnadiopsis* cf. *lundongaense* (Novozhilov, 1970) (Fig. 1E, F) was also found in the deposits of the Sandy-Argillaceous Member, outcrop P04, beds 37–39. Additionally, three specimens of *Hemicycloleaia* cf. *rhodendorfi* (Novozhilov, 1952) with prominent radial ribs were collected from the outcrop P04, bed 68. Well-preserved *Curvacornutus meshaensis* Novozhilov, 1970 with a longish sculpture on the umbo (Fig. 1C) were collected from the same bed. The first results show that conchostracans of the genus *Pseudestheria* Raymond, 1946 were found in four different levels from the First Formation to the Forth Formation (Urzhumian to Severodvinian Regional Stages; Wordian to Capitanian) in the Monastyrski Ravine section. It is important that the species *Pseudestheria* cf. *itiliana* Novozhilov, 1950 (Fig. 1A, B) was found in the Urzhumian deposits in the Cheremushka and Monastyrski ravine sections, which made it possible to correlate these sections by using the conchostracan fauna. Some conchostracans from the outcrop M08, bed 54, of the Monastyrski Ravine have deformations on the anterior-ventral and posterior-ventral margins of the valve (Figs. 1I–L) which were previously wrongly regarded as a taxonomic characteristic of the genus *Ulugkemia* Novozhilov, 1955. Additionally, some specimens show partially preserved body elements. These conchostracan specimens were determined as *Pseudestheria exigua* (Eichwald, 1860) (Fig. 1G–M).

The taxonomic determination of conchostracans from the Cheremushka and Monastyrski ravines will help to improve the knowledge of the conchostracan faunas in Middle Permian continental deposits. The Cheremushka and Monastyrski ravines studied here are proposed to serve as regional reference sections for Middle Permian continental deposits on the East European platform (Silantiev *et al.*, 2015; Mouraviev *et al.*, 2015).

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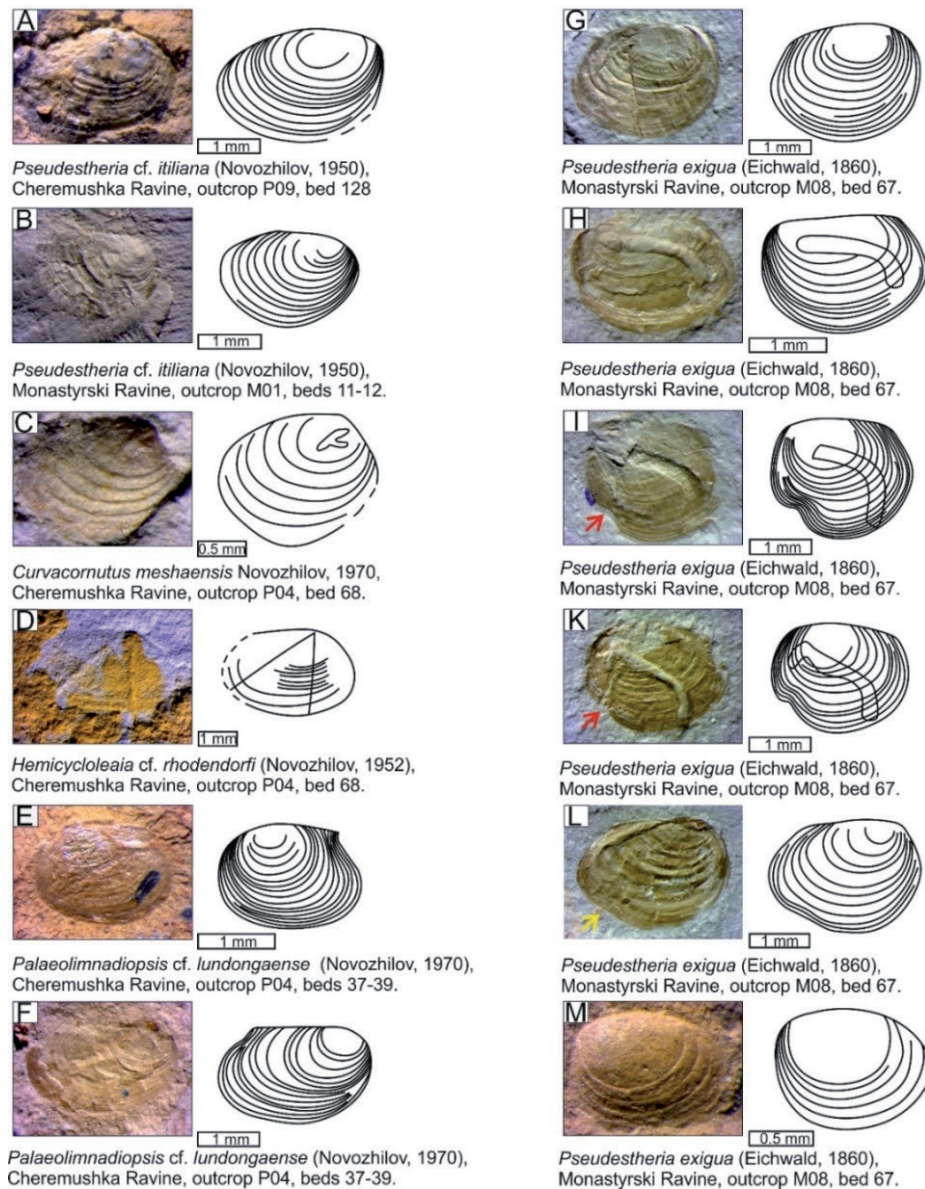


Fig. 1. Conchostracans from the Urzhumian to Severodvinian Regional Stages (middle Middle Permian to early Late Permian) of the Cheremushka and Monastyrski ravine sections (Zharinova, 2017). A–B: well preserved internal casts. C: fine radial sculpture at the larval valve D: valve with two prominent radial ribs E–F: slender and stout morphotypes. G: valve with well-preserved shell substance. H: body elements preserved as internal cast. I: body elements preserved as impression. K: body elements preserved as internal cast. Red arrows mark concave bending caused by deformation at the anterior ventral margin. L: the yellow arrow marks the same deformation at the posterior ventral margin. M: juvenile individual of the same species

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