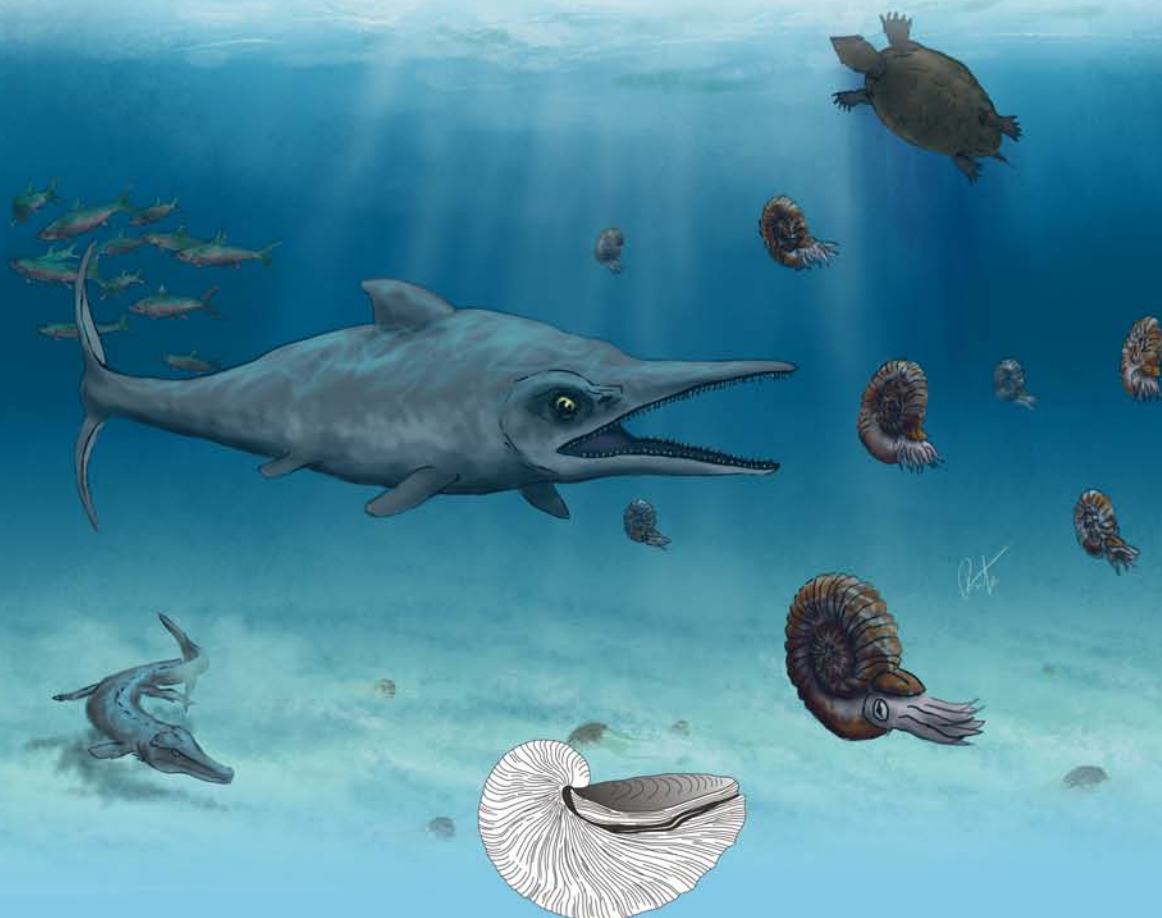




XIIth Jurassica Conference

Workshop of the ICS Berriasian Group and IGCP 632

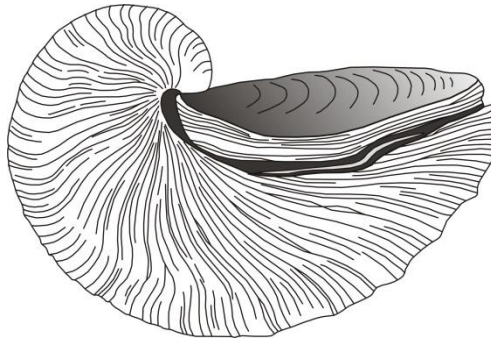
Field Trip Guide and Abstracts Book



Smolenice, Slovakia, April 19–23, 2016

Earth Science Institute, Slovak Academy of Sciences
Bratislava
2016

XIIth Jurassica Conference



Field Trip Guide and Abstracts Book

**April 19–23, 2016,
Smolenice, Slovakia**

Edited by: Jozef Michalík and Kamil Fekete

Earth Science Institute, Slovak Academy of Sciences
Bratislava 2016

- Guzhikov A.Y. 2013. Solving unsolvable problems in stratigraphy (Comments on the paper “New data on the magnetostratigraphy of the Jurassic—Cretaceous boundary interval, Nordvik Peninsula (northern east Siberia)” by Bragin et al.). *Russ. Geol. Geophys.* 54, 349–354.
- Houša V., Pruner P., Zakharov V.A., Košťák M., Chadima M., Rogov M.A., Šlechta S. & Mazuch M. 2007: Boreal–Tethyan correlation of the Jurassic–Cretaceous boundary interval by magnetoand biostratigraphy. *Stratigr. Geol. Correl.* 15, 297–309.
- Schnabl P., Pruner P., Wimbledon W.A.P. 2015. A review of magnetostratigraphic results from the Tithonian–Berriasian of Nordvik (Siberia) and possible biostratigraphic constraints, *Geol. Carpath.* 66, 6, 489–498.

Kashpir section (Volga River, Russia), the proposed auxiliary section for the J/K interval in Subboreal Realm

EVGENIJ YU. BARABOSHKIN¹, MIKHAIL A. ROGOV², ANDREY YU. GUZHNIKOV³, OXANA S. DZYUBA⁴, O.S. URMAN⁴, BORIS N. SHURYGIN⁴, ELENA B. PESTCHEVITSKAYA⁴ and A.G. MANIKIN³

¹*Lomonosov Moscow State University, Geological Faculty, Vorobjovy Gory, 119234, Moscow, Russia; EJBaraboshkin@mail.ru*

²*Geological Institute of Russian Academy of Sciences, 119017, Pyzhevsky Pereulok, 7, Moscow, Russia; russianjurassic@gmail.com*

³*Chernyshevsky Saratov State University, Geological Faculty, Astrakhanskaya Str. 83, 410012, Saratov, Russia; aguzhikov@yandex.ru*

⁴*Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of Russian Academy of Sciences, Koptyug ave. 3, 630090, Novosibirsk, Russia; dzyubaos@ipgg.sbras.ru; shuryginbn@ipgg.sbras.ru*

Kashpir reference section is located to the south of Syzran' town near Kashpir Village, on the right bank of Volga River (N 53°01'56", E 48°27'05"), where Middle Volgian – Hauterivian deposits are exposed (Fig. 1). Kashpir is one of historical sections of the Volgian Stage, which was reported in numerous publications and was proposed as the stratotype of Kashpurian Stage by I.G. Sasonova and N.T. Sasonov. The Jurassic – Cretaceous transition interval of the section has been re-described recently (Rogov et al., 2015) and characterised by ammonites (Rogov et al., 2015; Baraboshkin et al., 2015), belemnites and Buchias (Dzyuba, Urman, Shurygin, 2015), palynomorphs (Harding et al., 2011; Pestchevitskaya, Lebedeva, Ryabokon, 2011), ostracods (Kolpenskaya, 1995), stable isotopes (Gröcke et al., 2003, the Ryazanian only), palaeomagnetic and mineralogical data (Baraboshkin et al., 2015; Ruffell et al., 2002). Therefore, Kashpir section is one of the most

well-studied sections in Subboreal Realm. Even if it is highly condensed, it contains a number of potential direct markers (ammonites, belemnites, buchiids and dinocysts; palaeomagnetic reversal and stable isotope data), which could be used for interregional correlation of J/K boundary interval (Figs. 1, 2). Unfortunately only stable isotopes and palaeomagnetic reversals one may use for the direct Boreal–Tethyan correlation of the both Tithonian/Volgian and Berriasian / Ryazanian. It needs additional study. Nevertheless, Kashpir section could be proposed as auxiliary section in Subboreal Realm to the GSSP, which hopefully will be chosen in the future.

This study has been supported by RFBR grants № 14-05-31152, 13-05-00745a, 16-05-00207a, 15-05-03149a, 12-05-00196a, program 30 of the Presidium of the RAS, and the RF Ministry of Education and Sciences in the scientific field (project 1757, 1582).

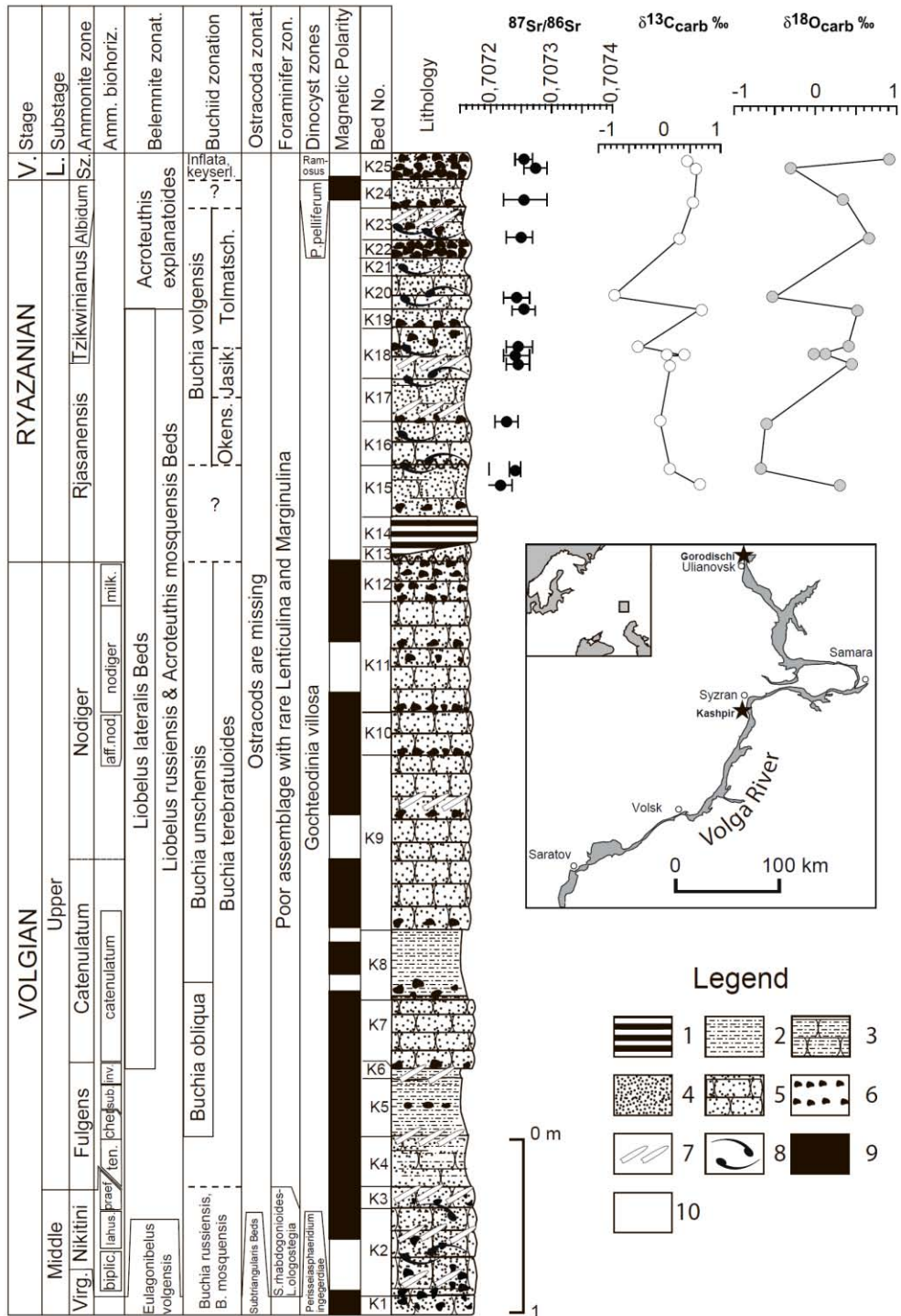


Fig. 1. Composite stratigraphy of Kashpir section (Based on Yakovleva, 1985; Kolpenskaya, 1995; Gröcke et al., 2003; Harding et al., 2011; Baraboshkin et al., 2015; Dzyuba, Urman, Shurygin, 2015; Rogov et al., 2015). The map demonstrates the location of Kashpir and Gorodishchi sections. Legend: 1 – oil shales; siltstones: 2 – poorly cemented; 3 – Ca-cemented; sandstones: 4

– poorly cemented; 5 - Ca-cemented; 6 – phosphorite pebbles and nodules; 7 – belemnite horizons; 8 – shell (mainly *Buchia*) debris; geomagnetic polarity: 9 – normal; 10 – reversal.

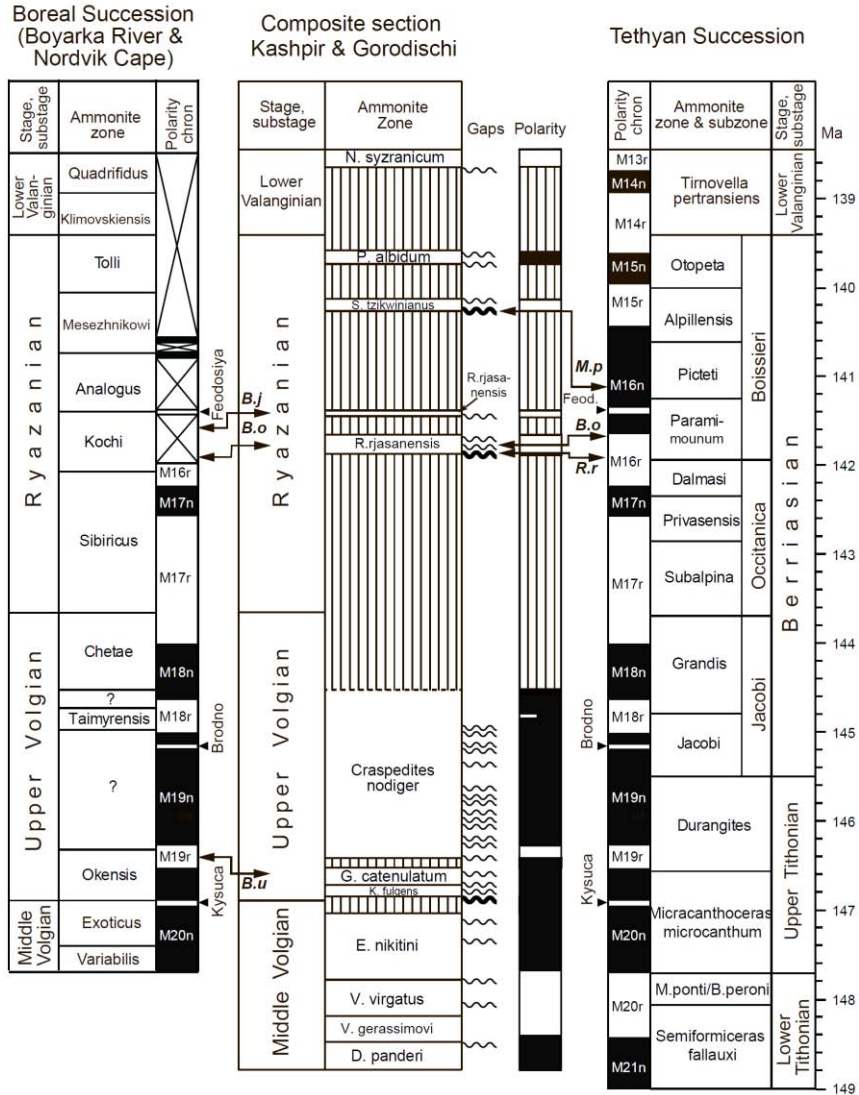


Fig. 2. Magnetostratigraphic correlation of the Jurassic-Cretaceous boundary composite succession of the Middle Volga region with other regions (after Baraboshkin et al., 2015, with changes; Rogov, Alifirov, Igolnikov, 2015). Thick wavy lines – discontinuities, recognized by (Harding et al., 2011); vertical lines - discontinuities. FADs of some Boreal / Tethyan markers: *M.p* – *Meiourogonyaulax pertusa* (Pestchevitskaya, Lebedeva, Ryabokon, 2011); *R.r* – *Riasanites rjasanensis*; *Buchia*: *B.j* – *B. jaskovi*; *B.o* – *B. okensis*; *B.u* – *B. unschensis*. The legend and the position of Gorodishchi section see at Fig. 1.

References:

Baraboshkin, E.Yu., Guzhikov, A.Yu., Manikin, A.G., Pimenov, M.V. 2015. Bio- and magnetostratigraphic data on the Jurassic-Cretaceous boundary of the Kashpir and Gorodishchi sections (Volga region, Russia). In: Baraboshkin, E.Yu., Bykov, D.E. (Eds.), *The International Scientific Conference on the Jurassic/Cretaceous boundary*. Proceedings volume. Kassandra, Togliatti, 25–31.

- Dzyuba, O.S., Urman, O.S., Shurygin, B.N. 2015. Belemnites and bivalves from the Jurassic-cretaceous boundary interval of the Kashpir Section, Middle Volga Basin, Russia: implications for biostratigraphy and panboreal correlation. In: Baraboshkin, E.Yu., Bykov, D.E. (Eds.), *The International Scientific Conference on the Jurassic/Cretaceous boundary*. Proceedings volume. Kassandra, Togliatti, 36–41.
- Gröcke, D.R., Price, G.D., Ruffel, A.H., Mutterlose, J., Baraboshkin, E.J. 2003. Isotopic evidence for Late Jurassic - Early Cretaceous climate change. *Palaeogeography, Palaeoclimatology, Palaeoecology* 202, 1-2., 97–118.
- Harding, I.C., Smith, G.A., Riding, J.B., Wimbledon, W.A.P. 2011. Inter-regional correlation of Jurassic/Cretaceous boundary strata based on the Tithonian-Valanginian dinoflagellate cyst biostratigraphy of the Volga Basin, western Russia. *Review of Palaeobotany and Palynology* 167., 82–116.
- Kolpenskaya, N.N. 1995. Ostracods and their biostratigraphic significance for the Upper Jurassic deposits of the Russian Platform. Abstract of the unpublished PhD Thesis, Sankt-Petersburg, 16 p. (In Russian).
- Pestchevitskaya, E., Lebedeva, N., Ryabokon, A. 2011. Uppermost Jurassic and lowermost Cretaceous dinocyst successions of Siberia, the Subarctic Urals and Russian Platform and their interregional correlation. *Geologica Carpathica* 62, 3., 189–202.
- Rogov, M.A., Alifirov, A.S., Igolnikov, A.E. 2015. Revised ammonite succession of the Upper Volgian of Nordvik section: zonal boundaries and uncertainties. In: Baraboshkin, E.Yu., Bykov, D.E. (Eds.), *The International Scientific Conference on the Jurassic/Cretaceous boundary*. Proceedings volume. Kassandra, Togliatti, 70–76.
- Rogov, M.A., Baraboshkin, E.Yu., Guzhikov, A.Yu., Efimov, V.M., Kiselev, D.N., Morov, V.P., Gusev, V.V. 2015. The Jurassic-Cretaceous boundary in the Middle Volga region. *Field guide to the International meeting on the Jurassic/Cretaceous boundary*. September 7–13, 2015, Samara (Russia). Samara State Technical University, Samara, 130 p.
- Ruffel, A.H., Price, G.D., Mutterlose, J., Kessels, K., Baraboshkin, E., Gröcke, D.R. 2002. Palaeoclimate indicators (clay minerals, calcareous nannofossils, stable isotopes) compared from two sections in the late Jurassic of the Volga Basin (SE Russia). *Geological Journal* 37., 17–33.
- Yakovleva, S.P. 1985. Peculiarities of foraminifera distribution in the Volgian deposits of the European part of the USSR. In: *Stratigraphy and correlation of the Upper Jurassic of the USSR*. Moscow, GIN AN SSSR, p.104–111. (In Russian).

Complex stratigraphy, lithology and magnetic proxies of the J/K boundary interval in the Pieniny Klippen Belt (Western Carpathians, Slovakia)

JOZEF MICHALÍK¹, DANIELA REHÁKOVÁ², JACEK GRABOWSKI³, OTÍLIA LINTNEROVÁ⁴, ANDREA SVOBODOVÁ⁵, JÁN SCHLÖGL², KATARZYNA SOBIEN³ and PETR SCHNABL⁶

¹Institute of Earth Sciences of the Slovak Academy of Sciences, Dúbravská cesta 9, P.O.Box 106, 840 05 Bratislava, Slovakia; geolmich@savba.sk;

²Department of Geology and Palaeontology, Faculty of Natural Sciences, Comenius University, Mlynská dolina G-1, 811504 Bratislava, Slovakia; rehakova@fns.uniba.sk

³Polish Geological Institute – National Research Institute, Rakowiecka 4, 00-975 Warsaw, Poland; jgra@pgi.gov.pl; katarzyna.sobien@pgi.gov.pl

⁴Department of Economic Geology, Faculty of Natural Sciences, Comenius University, Mlynská dolina G-1, 811 04 Bratislava, Slovakia; lintnerova@fns.uniba.sk

⁵Faculty of Science, Charles University, Albertov 6, Prague, Czech Republic, asvobodova@gli.cas.cz ;

⁶Geological Institute, Czech Academy of Science, Rozvojová 269, 165 00 Prague, Czech Republic; schnabl@gli.cas.cz

The most complete and well preserved Jurassic /Cretaceous sequences occur in the Pieniny Klippen Belt (Outer Carpathians) and

in the Krížna Unit of the Central Carpathians. Plankton (calpionellid-, calcareous dinocyst- and nannoplankton) and O and C isotope fluc-