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The present volume compiles short papers with new data on the Jurassic-Cretaceous boundary strata and their fauna of different regions of Russia (Volga region, Siberia, Crimea, Primorye) and of North America. Most papers are devoted to problems of biostratigraphy and paleontology of marine animals and their trace fossils. Besides this, some data on magnetostratigraphy, interregional correlations, history of defining J/K boundary in the Decisions of ISC, and eoomic value of the interval.

For geologists, paleontologists, stratigraphers, students of geological and geographical profiles.

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В сборнике опубликованы новые данные о пограничных отложениях юры и мела различных регионов России (Поволжье, Сибирь, Крым, Приморье) и Северной Америки. Большинство работ посвящено биостратиграфии и палеонтологии морских животных и следов их жизнедеятельности. Кроме того, приводятся сведения о магнитостратиграфии, межрегиональной корреляции, истории проведения границы юры и мела в постановлениях МСК, и экономической важности этого интервала.

Сборник представляет интерес для геологов, палеонтологов, стратиграфов, студентов геологического и географического факультетов.

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A FIRST FIND OF VERTEBRATE REMAINS IN THE BERRIASIAN OF THE SAMARA REGION

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***Abstract**. Berriasian deposits are very poor in any vertebrate remains. The longtanding monitoring of the Kashpir section brought no finds. For this reason the first finding of vertebrate remains in this section is of special interest.*

***Key words**: Berriasian, first finding, Kashpir, vertebrates, marine reptiles*

The Berriasian of Samara region is exposed at the surface over the relatively small area in the southwestern part of the region [3]. They make outcrops along the Volga river bank in Syzran' district nearby Novokahpirsky settlement, and along the valley of river Kashpirka. The most representative succession can be observed nearby the boat station, where the following beds are exposed (from the bottom up):

Jurassic system
Volgian Stage
Middle Volgian Substage
Dorsoplanites panderi Zone

Bed 1. Intercalation of bituminous clays and shales with imprints of Zaraiskites, Dorsoplanites, Buchia. Apparent thickness 4,5 m.

Virgatites virgatus Zone

Bed 2. Dark-brown glauconitic sandstone, with phosphorite nodules. Thickness 0,15 m.

Epivirgatites nikitini Zone

Bed 3. Grayish-green glauconitic sandstone. Thickness 0,35 m.

Upper Volgian Substage
Kashpurites fulgens Zone

Bed 4. Gray clayey siltstone, thin-bedded, with clay seams. Thickness 0,5 m.

Craspedites subditus Zone

Bed 5. Light-gray calcareous sandstone with glauconite clusters. Thickness 1,2 m

Craspedites nodiger Zone

Bed 6. Light-gray calcareous slabby siltstone, with lenses of ferrugineous limestone. Thickness 2,5 m.

Cretaceous system
Berriasian Stage
Riasanites rjasanensis Zone

Bed. 7. Compact-grained glauconitic sand, micaceous, with rare phosphorite pebbles. Thickness 0,2 m.

Bed 8. Bituminous shale, clayey, calcareous. No fossils found. Fractured surfaces demonstrate ichnofossils - burrows of crustaceans and other organisms. Thickness is highly variable, from 0,4 to 0,01 m.

Bed 9. Calcareous glauconitic sandstone, with large amout of *Buchia* shells and *Acroteuthis* rostra. Thickness 1,2 m.

Surites spasskensis Zone

Bed 10. Glauconitic micaceous sandstone, with rare phosphorite nodules, with agglomeration of *Buchia* shells in the upper part and with ammonite *Surites peckorensis* (Sason.). Thickness 0,5 m.

Valanginian Stage
Temnoptychites hoplitoides Zone

Bed 11. Conglomerate of dark-brown phosphorite pebbles, embedded into greenish-gray calciferous sandstone, containing ammonites *Temnoptychites* sp. and *Craspedites* sp., replaced by calcite. Thickness 0,2-0,4 m.

Monitoring of this locality since 1987 brought over 30 fragments of skeletons of marine reptiles [1]. However, Berriasian part of the succession brought no finds so far. So much the surprise was a message by M.A. Rogov in the summer of 2013 about a bone accumulation of unknown animal nearby township Kahspir. This finding was made by the staff of LLC “Sterkh” while preparing the data for the Field Trip Guide for the present meeting. The company collaborates with Undory Paleontological Museum in the popularization of paleontology and development of geological tourism. Vladimir Morov, an employee of the Scientific Research Institute of Ecology of Volga basin of RAS, guided us to the location of finding, situated nearby the boat station at the Volga river bank. The specimen was numbered as 1503.

Taphonomy. The specimen is embedded into dense light-gray calcareous glauconitic sandstone, located in the base of bed 9. Frements of skeleton (**Fig. 1**) are impressed into the underlying bed 8, represented by bituminous shale. The preservation of bones is average to poor. The skeleton was insignificantly transported, but the completeness was disturbed by the scavengers, locally the skeleton is heavily damaged. Bones are phosphatized, but poorly mineralized and their thinnest part are fragile. No traces of pyritization were observed. The total amout of rock taken with the skeleton was about 1m^2, and stripping around revealed no futher bones. At the present moment, attribtion of the skeleton to any certain animal is difficult, as the preparation process is not finished yet. Preliminary determination, based on the fragment, available

Fig. 1. Disarticulated bones of marine crocodile on a sandstone slab

to the moment, let us presuppose the attribution to marine crocodile *Metriorhynchus*. If further preparation will support this assumption, the specimen from Kashpir will be the second find of the mentioned genus in Russia and the first one made in Samara region. A similar find was made in the 90th of XX century in the Volgian lectostratotype at the locality Gorodischi [2]. In the Berriasian no vertebrate remains were known up to now.

Metriorhynchus is a crocodile, well-adapted to the offshore environments, having flapper-like limbs and a rudder-like tail, and which lost the horny coat of the body. It was a competitor of ichtyosaurs and plesiosaurs in shallow-water environments, having a size of 2-3 meters long. Metriorhynchids flourished in the Middle and Upper Jurassic, and are reported from England, France and South America.

The significance of the find. The study of fossil invertebrates of the Berriasian of Russian platform has a 200-year history, however, as it was mentioned before, no reports of vertebrates were made so far. Possibly, the new skeleton described herein will allow to paint over this “white spot” in Russian paleontology.

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