NEW DATA ON THE LATE TRIASSIC (NORIAN-RHAETIAN) FORAMINIFERANS OF THE WESTERN PRECAUCASUS (RUSSIA)

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The Upper Triassic successions of the Western Precaucus are very interesting because it occupies a key geographic and geological position between the Caucasus, Central Asia and Europe (Fig. 1.). The uppermost part of the Upper Triassic in the Western Precacausus is the limestone-clay unit in the Regional Stratigraphical Scheme of the Western Precacausus and Caucasus (Oleymikov and Rostovtsev, 1979). It correlates to the Upper Norian (Upper Triassic). These deposits lie with unconformity on Paleozoic or Triassic deposits (Ladinian-Carnian, Chelbskay Formation) and are unconformably overlain by Jurassic or Lower Cretaceous rocks. Bivalves (Monois salmarina (Schloth) and others) and brachiopods (Oxycolpella) occur in the limestone-clay unit. Besides this unit, there are deposits in several wells of the Western Precacausus, which correspond to the Upper Triassic or Upper Triassic/Lower Jurassic. In some unpublished reports there are some references to the Late Triassic and Late Triassic/Early Jurassic foraminiferan assemblages. The first paper with references to foraminiferans from the different areas of the Western Precacausus and levels of the Triassic was published by Bigun and Pinchuk (2003), but some data in this paper are not complete.

In the framework of this research, diverse foraminiferan assemblages were found in three wells of the Western Precacausus: Severo-Nekrasovskaya N 1, Chernigovskaya N 1 and Molodezhninskaya N 4. In the Severo-Nekrasovskaya area, well N 1 (depth 3555-3560 m), I have found a foraminiferan assemblage from the Triassic-Jurassic stratigraphical interval. This level is represented by limestone and clay beds. Foraminiferans were studied in thin-sections from limestones. This assemblage consists of Cornuspira? sp., Cornuloculina ex gr. C. orbiculare (Burbach), Ophthalomidium lucidum (Trifonova), Quinqueloculina? sp. ex gr. Q. kunaensis, Antonovia, Dentalina subsigilla Franke, Nodosaria ex gr. N. nitidana Brand, N. spp., Frondicularia ex gr. F. xiphoidea, F. sp., Lenticulina subquadrata (Terquem), L. sp. and Astacolus sp. From the Chernigovskaya area, well N 1, foraminiferan assemblages were studied in thin-sections from two limestone levels (depths 3484-3490 m and 3514-3519 m). Bigun and Pinchuk (2003) correlate these levels to the Late Triassic and Late Triassic/Jurassic according to these results. The studied assemblage is similar to the Norian-Rhaetian assemblages from the Western Caucasus and other regions of Europe, and it can be correlated to the Norian-Rhaetian. The studied deposits correspond to different stratigraphic levels of the Triassic and Triassic-Jurassic according to these results. The studied rocks from well N 1 of the Severo-Nekrasovskaya area and well N 1 of the Chernigovskaya area correspond with the Upper Triassic and Lower Jurassic. First, the Norian-Rhaetian foraminiferan assemblage is found in well N 4 of the Molodezhninskaya area. Two of the above-mentioned levels with foraminiferans are very good correlative levels for interregional correlation of the described beds from the Upper Triassic and Upper Triassic/Lower Jurassic of the Western Precacausus. The generic compositions of the presented foraminiferan assemblages are similar to the composition of the assemblages from the Upper Triassic of the Western Caucasus, Western Carpathians, and Alps.

So, the present research demonstrates more completed lists of foraminiferans and more precise correlation than were presented by Bigun and Pinchuk (2003).

In the general picture of Triassic foraminifer evolution in the world there are several points of radiations and development of rich foraminiferan communities. Among them there is one point in the Norian-Rhaetian, which has a place in the Western Precacausus, too, according to the results of this research. Besides, data of this study partly confirm the
results of previous researchers, which are in unpublished reports. The existence of similar foraminiferal assemblages from the Caucasus and Precaucasus to Alps and Carpathians allows us to mark the possibility of migration of the benthic foraminifers between these paleobasins. Finally, in the territory under consideration there are diverse foraminiferal communities, which indicate a good paleoenvironmental situation for the development of the benthic fauna. So, the results of this study allow us to obtain more detail data about the distribution of foraminifers in the Triassic and Triassic/Jurassic of the Western Precaucasus. Thus, these data are a new contribution to the creation of a more complete picture of biotic evolution in this territory.

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