The Early Cretaceous plant communities and palaeoenvironments of Transbaikalia

Eugenia BUGDAEVA¹, Natalia YADRISHCHENSKAYA², Alyona KURILENKO², Olga MININA³, Alexei VERGUNOV⁴, Igor KOSENKO⁵, Solangy ONDAR⁶, Galsan SANZHIEV³

¹ Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia (E-mail: <u>bugdaeva@biosoil.ru</u>)

² A.P. Karpinsky Russian Geological Research Institute, St. Petersburg, Russia

Dobretsov Geological Institute, Siberian Branch of the Russian Academy of Sciences, Ulan-Ude, Russia

⁴ University of Tyumen, Tyumen, Russia

⁵ Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia

⁶ Tuvinian Institute for Exploration of Natural Resources of Siberian Branch of the Russian Academy of Sciences, Kyzyl, Russia

On the territory of Transbaikalia during the Early Cretaceous Epoch the West Transbaikalian Rift Region (WTRR) and East Mongolian Volcanic Belt (EMVB) developed. A bimodal trachybasalt-trachyrhyolite volcanism occurred in the WTRR. The EMVB includes several subparallel rift basins, initially covered by the Upper Mesozoic volcanic rocks, primarily trachybasalts and basaltic trachyandesites. Among the volcanic rocks, three series are distinguished: bimodal trachybasalt-trachyrhyolite, shoshonite-latite, and alkali-basalt (basanite). The Northern Biota Jehol existed in these regions WTRR and EMVB.

The Lower Cretaceous section of the Gusinoozersk Depression and its fossil flora are the most representative among those of the WTRR, while the section of the Turga-Kharanor depression and its flora are those of the EMVB. The sedimentary sequences of the Gusinoozersk and Turga-Kharanor depressions in Transbaikalia provide a representative record of the Early Cretaceous floristic events. The sections of these basins commence with volcanogenic-sedimentary deposits, are overlain by sedimentary rocks, and terminate in coal-bearing beds. The sedimentary cover of the Gusinoozersk Depression includes the Gusinoozersk Group, which is further subdivided into the following formations: Murtoi (containing dinosaur remains), Ubukun (of lacustrine genesis with ostracod remains), Selenga (lacustrine-fluvial sediments with coal seams), and Kholboldzhin (swamp-lacustrine with thick coal seams). The absolute dating showed that the formation of the Gusinoozersk