

THE
FOSSIL
WEEK

ABSTRACT BOOK



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Palynoflora at the K-T boundary in Amur (Heilongjiang) River region, Russia

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Upper Cretaceous and Paleocene deposits are widely distributed in the Zeya-Bureya Basin located in the higher part of the stream of the Amur (Chinese name - Heilongjiang) River. Based on study of fossil spores and pollen obtained from these beds, seven successive palynological assemblages (the Santonian-Danian) were revealed and correlated with age-equivalent assemblages of eastern Asia and western North America. We studied fossil spores and pollen from K-T boundary beds both on left (Russian) and right (Chinese) banks of the Amur River. The late Maastrichtian assemblage in Zeya-Bureya Basin was revealed from lower part of stratotype section of the Tsagayan Formation near Belaya Mount on left bank of the Amur River and from lower part of the Furao Formation. This palynological assemblage is dominated by Taxodiaceae and Ulmaceae. *Laevigatosporites* predominates among spores. The angiosperms are rather diverse. They are represented by Betulaceae, Salicaceae, Juglandaceae, Myricaceae, Myrtaceae, Loranthaceae, and Proteaceae. The diversity of the triprojectate pollen is rather high.

The early Danian assemblage was revealed from the upper part of the stratotype section of the Tsagayan Formation near Belaya Mount, lower part of section of Arkhara-Boguchan coal mine on left bank of Amur River and upper part of Furao Fm and Wuyun Fm on the right bank of the Amur River. This palynological assemblage is characterized by *Triatriopollenites confusus*, *T. plicoides*, *Quercoidites minor* and by predominance of Ulmaceae. This assemblage is dominated by ferns and gymnosperms. Among gymnosperms, the Taxodiaceae, Cupressaceae, and Pinaceae predominate. The angiosperms are locally abundant. The Juglandaceae and Fagaceae predominate. The plants produced the triprojectate pollen suffered a sharp decrease in amount.

The changes of taxonomical composition of palynoflora in Zeya-Bureya Basin were gradual at the K-T boundary. Only plants produced the triprojectate pollen suffered the most significant extinction. The palynospectra sampled just above the K-T boundary comprise an increased number of fern spores (so-called fern peak).

* Speaker

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