

The resolution of Cenomanian events in the Crimea and eastern Central Asia

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Cenomanian deposits of 3 paleobiogeographical provinces at the northeastern margin of the Peritethys spread over eastern Central Asia (from the Pamirs and Fergana in the east to the lower course of Amu Darya River in the west), the Russian Platform and Crimea, their biostratigraphy and their foraminiferal associations are discussed.

A Cenomanian zonation based on both planktonic and benthic foraminifers with emphasis on new data from these regions is proposed.

1. A layer containing metallic particles and microspheres of cosmic origin was found in Lower Cenomanian sandstones of the Crimea. It may be the evidence of a hitherto unknown Early Cenomanian impact event.

2. The isotopic event (MCE-1) $\delta^{18}\text{O}$ of the early Middle Cenomanian has been identified in the Crimea.

3. Several isotopic events (AOE-2) were found to have happened during the deposition of the Crimean “black shales” (analogous to the Bonarelli event) in the Late Cenomanian.

4. An episode of phosphorite accumulation in the *Praeactinocamax plenus* Zone is considered to be the most significant event on the Russian Platform.

5. An episode of marine transgression over the continent, which resulted in the submergence of areas of enormous size (Fergana depression, Alai Strait, Southwestern Darvaz, Northern Pamirs), occurred in the early Middle Cenomanian and probably reflected the Ce-3 eustatic event.

6. A wide-spread carbonate platform inhabited by typical benthic foraminifers of the Mediterranean Province (*Merlingina*, *Biconcava*, *Charentia*, *Orbitolina*, *Cuneolina*) was established in the early Middle Cenomanian in eastern Central Asia. During the Cenomanian, it was probably located at the eastern margin of the Mediterranean paleobiogeographic province.

7. The cool-water belemnite fauna of *Praeactinocamax plenus* and accompanying foraminiferal associations penetrated into southeastern Central Asia from the European paleobiogeographic province.

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