

## THE PALEOCENE /EOCENE BOUNDARY CHANGES OF THE DEEP AND SHALLOW WATER BENTHONIC FORAMINIFERAL ASSEMBLAGES

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The changes of the foraminiferal communities are demonstrated in the successions of two zoogeographic provinces: North Caucasus (deep water basin) and Central Asia (shallow water basin).

During the Late Paleocene the environments were unfavourable for the development of the planktonic and benthonic foraminifers. One is interpreted this conditions as the reflecting the decline of oxygenation level in the bottom water. The extinction event was marked everywhere as reduction in foraminiferal diversity and replacement of calcareous forms by agglutinated ones with the primitive morphology. Some families (Gavelinellidae, Karreriidae, Coleitidae) and genera (Stensioeina, Citharina, Pulsiphonina etc.) disappeared at the end of Paleocene. The brief interval following the extinction (Globorotalia aequae Subzone) characterized by appearance of rare new species. In the next step in recovery the new genera (Pseudogaudryina, Cancris, Siphonina, Florilus, Globocassidulina, Turrilina, Sphaerogypsina, Asterigerinella) and immigrants forms became characterized for the eocene assemblages. Among them there were many specialized forms. The calcareous species became prevailing.

In the deep water basin (N.Caucasus) the extinction event was more marked. These changes started earlier and to the end of Paleocene the benthos disappeared entirely. In the shallow sites (C.Asia) fauna changes were more gradual. The part of fauna including the progenitor forms were capable to cope with new conditions and they crossed over the P/E boundary. In the initial phase of recovery some rare survivors and Lazarus taxa (Gyroidina cetera, Nonionella aff. ovata, Anomalinoidea infrapaleogenicus) were observed. Progenitor species (Gyroidina depressaeformis, Brotzenella aff. pseudoacuta) gave rise to new forms. This assemblage was joined by abundant immigrant species distributed in both provinces.

At the beginning of the Globorotalia subbotinae Subzone the high taxonomic and morphological diversity, the wide distribution of rich foraminiferal associations were observed everywhere.