The paleogeographic setting and biostratigraphy of the South-East part of Georgia at the boundary of the Cretaceous/Paleogene

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The Georgian part of the Alpine-Himalayan orogenic belt is characterized by the highly complex structure of Upper Cretaceous and Lower Paleogene sediments of the Alpine sedimentary cover. Within the territory of Georgia are distinguished the following structural-morphological units: 1) the fold (fold-nappe) system of the Greater Caucasus; 2) The Transcaucasian intermountain area; and 3) The fold (fold-thrust) system of the Lesser Caucasus. Each of these consists of several tectonic units of higher order. These tectonic units controlled sedimentary environments in the region and also, to a large extent, the marine habitat, so that there are differences in the biota between the different basins.

In the fold system of the Greater Caucasus, the nannoplankton and planktonic foraminifers from a representative section of the western Gagra-Java (fold) zone, and one from the eastern Mestia-Tianetian (fold nappe) zone have been investigated. In the Maastrichtian, the sediments are carbonate turbidites, mainly composed of alternating granular-argillaceous and sandy limestones, marls, limy sandstones and clays. Locally, one rock type may predominate, for example, in the Mestia-Tianetian zone (basin of the rivers Patara Liakhvi, Mejuda, Lekhura, Aragvi, etc.), bands and lenses of conglomerates and olistostrome-type boulder-breccias are observed. These represent a chaotic pile of boulders and large blocks of Lower Jurassic slates, Bajocian volcanics, Upper Jurassic limestones, and Cretaceous sandstones and limestones. Rounded or poorly rounded fragments of granitoids also occur. In the Transcaucasian Intermountain area, the Maastrichtian is represented by limestones, which are sometimes clayey and/or arenaceous.