

Conodonts from Ordovician ophiolites of central Kazakhstan

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Central Kazakhstan is frequently referred to as a hypothetical Paleozoic continent Kazakhstania, although its geological structure suggests that in the early Paleozoic it was either a series of island arcs or microcontinents separated by small oceanic basins, each having its own history of development. The cherty and volcanogenic-cherty deposits of the south-western Predchingiz Region and the North Balkhash Region in central Kazakhstan represent an ophiolite rock association with pelagic sediments. The Early-Middle Ordovician conodonts found in the cherty rocks are the only fossils useful for precise dating of the strata and for interpretation of the palaeobiogeographic relations. A low taxonomic diversity is typical of conodonts from these pelagic sediments. Most of them are of the Baltic type, and only some, like Paroistodus horridus and Histiodella tableheadensis, represent other, apparently more warm-water faunal elements. Deep-water conodont faunas from central Kazakhstan are coeval with the Early-Middle Ordovician conodonts from the shelf deposits of southern Kazakhstan, but the latter are taxonomically more diverse and contain warm-water forms (e.g., Juanognathus variabilis, Reutterodus andinus, Serratognathus bilobatus , and Bergstroemognathus extensus). This corroborates the idea that Kazkhstania was closer to the equator, than to the Baltic region in the Ordovician.

Key words: conodonts, Ordovician, Kazakhstania, biostratigraphy, palaeogeography, ophiolites.

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