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Lagos, Memorias del Territorio

Lakes, Memories of the Landscape

Stable isotope geochemistry for the modern ostracods in the Caspian Sea

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The main role in the present study is played by paleoecological studies – “the study of the relationship between the world of organisms of the geological past and their habitat” (Gofman, 1962), and oxygen isotope studies of the modern benthic microfauna of ostracods, without which further detailed paleogeographic and paleoclimatological constructions are impossible. To compare the measurements obtained as a result of implementing different approaches to sample preparation, we used the species *T. amnicola donetziensis*, which is the most common in surface samples. Sample points are located in the western part of the South Caspian to the north of the confluence of the Kura, not far from each other. From the surface samples at these points, 5 samples were taken for the implementation of 5 cleaning techniques. The difference between the oxygen isotopic compositions of ostracod shells bears a species-index imprint, but shows small discrepancies, which are lower on average than for any other marine carbonates used in the analysis of stable isotopes, which makes ostracods a universal and reliable object of both paleofaunal and geochemical studies. The influence of metabolic effects on the fractionation of oxygen isotopes depends on the genus, the smallest discrepancies are typical for species of the genus *Candonidae*. The difference between the carbon isotopic composition of shells is not only species-specific, but also variable for each individual species. For the analysis of stable oxygen isotopes, it is permissible to use different species of ostracods, preferably closely related ones. Averaging of the measured values does not lead to a false interpretation of the isotope record and is not capable of distorting the paleogeographic picture; on the contrary, it gives a smoother result, excluding the manifestation of random factors and rebounds.