ORDOVICIAN FAUNAS OF BALTICA: DIVERSITY CHANGES AND IMMIGRATIONS ACCOMPANYING THE DRIFT OF THE CONTINENT

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The distribution and taxonomic composition of Ordovician brachiopods, trilobites, corals and chitinozoans are mainly influenced by the evolution of the basin, the drift of the continent and relationships with other palaeocontinents. Early and early Middle Ordovician faunas of Baltic Basin are highly endemic due to the oceanic separation. The well-known Ordovician “Baltic fauna” is mainly distributed in the onshore environments, differing essentially from that in the offshore area. Facial differentiation is also followed among the immigrants appearing in Baltic Basin in the late Ordovician during narrowing of the Tornquist and Iapetus oceans separating Baltica, Avalonia and Laurentia palaeocontinents. The common for Baltica and Laurentia Caradocian brachiopods and corals appear in the onshore part of the basin; Ashgillian East Avalonian faunal elements appear in offshore environments in the limits of a narrow belt. The intracratonic part of the Baltic basin, the Moscow syneclise, is characterized generally by the Baltic type of faunas until the early Caradoc. A new, short-lived diverse brachiopod dominated fauna with some common taxa with the Mediterranean Province is the youngest Ordovician shelly fauna in the Moscow syneclise. The essential changes in the faunal composition (first appearance of tabulate corals, renovation of species composition) in late Caradoc, controlled by the warming of climate due to the drift of the palaeocontinent to low latitudes, associated presumably also with the sea level changes in the late Caradoc and Ashgill. The terminal Ordovician glacio-eustatic regression lead to the reduction of the Baltic basin and invasion of the cosmopolitan Hirnantia fauna.