DISPERSION PATTERN OF CENOZOIC BIVALVES FROM THE KING GEORGE ISLAND, WEST ANTARCTICA

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South Hemisphere experienced profound environmental changes during latest Cretaceous and Cenozoic times caused by reorganization in tectonics, oceanography, climate and atmospheric circulation, which greatly affected the biotic evolution of Southern Ocean to the present day patterns. These changes are closely related to the thermal isolation of Antarctica as consequences of full circulation of the circum-Antarctic current at the beginning of Neogene. In order to analyze paleobiogeographic dynamics of Cenozoic bivalve genera of West Antarctica, 16 bivalve genera recorded from Cenozoic deposits of King George Island, West Antarctica were selected and their affinities with other Cenozoic faunas from southern South America, Antarctica, New Zealand and Australia/Tasmania were accessed. Paleontological records of 16 genera from those regions revealed a dispersion pattern coupled with the hypothesis of larvae transporting by newly formed marine currents as consequence of tectonic changes during Cenozoic. The dispersion pattern fits in with the beginning of the circum-Antarctic current - that started in the late Eocene and was completely shaped during middle Miocene - at two steps. In the first step the oldest genera dispersed during early Cenozoic from Australia and New Zealand towards Antarctic Peninsula after Tasmanian Gateway opening (~33.7 Ma, Eocene/Oligocene boundary) through cool currents that represent the southern portion of circum-Antarctic current. The second step was accomplished after the Drake Passage opening started soon after 30 Ma (Rupelian). Tasmanian Gateway and Drake Passage openings are considered "key deep sea ocean gateways" of the Antarctic geological history and, not surprisingly, affected biotic composition and distribution in Southern Ocean by changing oceanic circulation during the Cenozoic. Noteworthy, as the dispersion pattern here proposed deals only with genera from King George Island and its relationships with other Southern Ocean regions, it is considered as a first approach.