Ostracode of Sinocytheridea Genus in Geological History of Peter the Great Bay (Pan-Sea of Japan)

Ostracods of *Sinocytheridea* Genus in Geological History of Peter the Great Bay (Pan-Sea of Japan)

Evgenij I. Schornikov[1] and Maria A. ZENINA[2]

Institute of Marine Biology, Far East Branch, Russian Academy of Sciences, Vladivostok 690041, RUSSIA

About 5 species have been referred to genus *Sinocytherdea* Hou, 1978 by different authors. Zhao and Whatley (1987) reduced all them to synonyms of *Sinocytheridea impressa* (Brady, 1869). So this genus became monotype including a variable type species which has been imputed a very wide geological (Pliocene to Recent) and geographical distribution in deposits of Japan, China and recent sediments of the East China and Yellow Seas from supralittoral zone to middle shelf (50-100 m). Detail comparative morphological investigations of soft parts (including penis structure) and shells of *Sinocytherdea* specimens of different populations show that *S. impressa* s. lat. consists of a complex of independent species having different ecology and distribution. Three of them have been identified by us in Peter the Great Bay area (Pan-Sea of Japan): 2 fossil species and 1 recent ones.

Sinocytherdea sp. 1 occurs in abundance in the brackish and fresh waters of Razdolnaya estuary and Melkovodnaya Bight of Amursky Bay. Besides, it has been found only in supralittoral zone of the Yellow Sea in Jiangsu Province of China. We suppose that in Peter the Great Bay it is a relict of the global climatic optimum of Holocene and at present it occurs only as solitary populations in particular in the mostly warmed in summer areas (i.e. refugium).

Sinocytherdea sp. 2 has been found in middle Holocene (5700+-50-6410+-50 years ago) sediments of Shkotovo core in the upper part of Ussurisky Bay. These sediments correspond to the period of global climatic optimum of Holocene, when warm water species settled far to the north. Later these species became extinct there because of global cooling. Now it is lacking through the Pan-Sea of Japan area but inhabits in abundance littoral and brackish waters of the East China and Yellow Seas.

Valves of *Sinocytherdea* sp. 3 have been found in a core holed in the open sea opposite Vostok Bay (sea depth 51 m, core depth 5.5 m). They mark location of the ancient (apparently of middle Pleistocene, about 220 thousand years ago) coastline of the sea. This species are also known only from Pleistocene deposits of Honsu Island.

References

Zhao, Q.H. and Whatley, R. 1997. On *Sinocytherdea impressa* (Brady). Stereo-Atlas of Ostracod Shells. 14 (4): 13-16.

[1] Electronic Address: eschornikov@imb.dvo.ru

[2] Electronic Address: maria_zenina@mail.ru