Latest Cretaceous to early Paleogene radiolarian assemblages from Nemuro Group, eastern Hokkaido

Shunsuke Kawakami[1]; Seiichi Toshimitsu[2]

[1] Geoscience, Tsukuba, Univ.; [2] G.S.J, AIST

The Nemuro Group is an upper Cretaceous to lower Paleogene marine sequence distributed in the eastern Hokkaido. The previous studies elucidated an existence of K/T Boundary in the Nemuro Group exposed in the onland area, the Shiranuka Hill. In addition, the occurrence of calcareous nannofossils and its biostratigraphic correlation were examined for the Group exposed along the coastal area of the southeastern Hokkaido. On the other hand, there are only a few studies with radiolarian biostratigraphy for the Nemuro Group.

In the upstream of the Nokkamappu River in the Nemuro Peninsula, one tuffaceous siltstone sample in the Nemuro Formation of the Nemuro Group (Hasegawa and Mitsuya, 1959) were collected, and, in the Sanrihama area in the southern part of Nemuro City, one calcareous nodule in the Akkeshi Formation of the Nemuro Group (Mitsuya et al., 1962)were collected. These two samples occurred abundant and well preserved radiolarians, and these were assigned Maastrichtian (= the Nemuro Formation) and Danian (= the Akkeshi Formation) ages from the nannofossil biostratigraphy in Okada et al. (1987). These were unknown radiolarian assemblages assigned around the K/T Boundary, and carry great weight for discussing the mass extinction at the end of the Cretaceous. Some undescribed species observed in these assemblages, but they resembled the upper Maastrichtian assemblages of the California in Foreman (1968).

In the Nemuro Formation, the assemblage was characterized by commonly occurrence of Amphipyndax aff. stocki and Dictyomitra sp., and co-occurrence of Dictyomitra regina, Cornutella californica. In the Akkeshi Formation, the assemblage was characterized by commonly occurrence of Clathrocyclas aff. hyronia, and co-occurrence of Orbiculiforma renillaeformis, Spongosaturnalis moorei, Theocapsomma legumen, Clathrocyclas hyronia, D. regina, C. californica, Stichomitra livermorensis. No evidence is found for mass extinction of radiolarians at the end of the Cretaceous, and the assemblage in the Nemuro Group is a transitional assemblage as the assemblage from the California.