

The comparison with radiolarian assemblages from the Northern Marginal Facies and the Main Facies of the upper Cretaceous

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The Upper Cretaceous Izumi Group is distributed along the Median Tectonic Line. This group is divided into three facies. They are the Northern Marginal Facies, the Main Facies, and the Southern Facies (Research Group for MTL in West Kinki, 1981 etc). The Main Facies are observed in the southwest from the Northern Marginal Facies (Tanaka, 1989). Ammonite fossil Pravitocerasigmoidale Yabe are yielded from the Northern Marginal Facies of the southwestern Awaji Island and the Main Facies of the Hidonodani River in the Shikoku. This ammonite species shows a late Campanian age, and stratigraphic range was short (Matsumoto et al., 1981; Morozumi, 1985). Therefore, these strata are heteropic facies. Radiolarian assemblages occurred in these strata. However, the differences of assemblages are not cleared. The Izumi Group deposited in continental margin. Therefore, it is possible that the assemblages of the Izumi Group will be compared with those of deep seas. The purpose of this study is solution of these problems. The radiolarian assemblage was obtained from a siliceous nodule of the Northern Marginal Facies in the Awaji Island. About 300 radiolarians were confirmed. The obtained radiolarian fossils contained Amphipyndaxstocki (Campbell & Clark), Amphipyndaxtylotus Foreman, Amphipyndax cf. tylotus Foreman, Amphipyndax sp., Archaeodictyomitrasquinaboli Pessagno, Archaeospongoprimum sp., Cryptamphorella sp., Dictyomitradensicostata Pessagno, Dictyomitramulticostata Zittel, Dictyomitra sp., Orbiculiformarenillaeformis (Campbell & Clark), Orbiculiforma (?) sempiterna Pessagno, Porodiscus sp., Pseudoaulophacus sp., Stichomitrasymbatos Foreman, Stichomitracampi (Campbell & Clark), and Stylotrochus sp. The radiolarian assemblage was found from mudstone of the Main Facies in the Hidonodani River. Suyari and Hashimoto (1985) reported the radiolarians from this area. About 80 radiolarians were confirmed. The obtained radiolarian fossils contained Amphipyndaxstocki (Campbell & Clark), Amphipyndaxtylotus Foreman, Amphipyndax cf. tylotus Foreman, Archaeodictyomitralamellicostata (Foreman), Cryptamphorella sp., Dictyomitradensicostata Pessagno, Dictyomitramulticostata Zittel, Dictyomitrakoslovae Foreman, Dictyomitra sp., Rhopalosyringium sp., Stichomitrastocki (Campbell & Clark).

Both radiolarian assemblages were compared. The assemblage of the Northern Marginal Facies was characterized by the dominance of discoidal spumellarians, while that of the Main Facies was characterized by the dominance of globular spumellarians. The Main Facies are more productive nassellarians than the Northern Marginal Facies. Both areas were productive Amphipyndaxstocki (Campbell & Clark). However, Archaeodictyomitralamellicostata (Foreman), Dictyomitrakoslovae Foreman, and Rhopalosyringium sp. were yielded only from the Main Facies.

Keywords: the Izumi Group, radiolarian, ammonite, late Campanian