

Stratigraphic occurrence ranges and paleoceanographic significance of *Amphimelissa setosa* (radiolarian) at IODP Site U1417

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During the Expedition 341 of the Integrated Ocean Drilling Program (IODP), sediment cores were retrieved at several sites in the southern Gulf of Alaska for clarify the linkage between tectonic uplift and the evolution of global climate since the Miocene. The preservations and abundances of siliceous microfossils were relatively poor in the collected sediment cores except at Site U1417, where the siliceous microfossils were better preserved in the upper 200 meters CCSF-B corresponding to the Pleistocene. In this study, we have analyzed radiolarian assemblages from sediment core samples of the correponding depth interval in order to first re-define the onboard radiolarian biostratigraphy. Then, we propose to focus and discuss the spatio-temporal distribution of *Amphimelissa setosa*. This species records its last occurrence at the MIS 4/ MIS 5 boundary (77 ka) in the North Pacific, while in the Arctic Ocean, this species is still extant. For accurately discuss the spatio-temporal distribution of this species, the major concern is that the first occurrence (FO) of this species is poorly constrained at that time. Therefore, through this study, we newly defined the age of the FO of *Amphimelissa setosa* based on the onboard magnetostratigraphy and tried to propose few hypothesis for explain its migration to the arctic seas around the MIS 4/ MIS 5 boundary.

Keywords: Integrated Ocean Drilling Program, Biostratigraphy, Radiolarians, Paleoceanography