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Room:Convention Hall

Time:May 23 14:00-16:30

Plio-Pleistocene fossil ostracodes of continental shelf cores at IODP Site U1354 (Exp. 317), Canterbury Basin

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Integrated Ocean Drilling Program (IODP) Expedition 317 was devoted to understanding the relative importance of global sea level (eustasy) versus local tectonic and sedimentary processes in controlling continental margin sedimentary cycles. The expedition recovered sediments from the Eocene to recent period, with a particular focus on the sequence stratigraphy of the late Miocene to recent, when global sea level change was dominated by glacioeustasy. Drilling in the Canterbury Basin, on the eastern margin of the South Island of New Zealand took advantage of high rates of Neogene sediment supply, which preserved a high-frequency (0.1-0.5 m.y.) record of depositional cyclicity. Ostracodes are benthic micro-crustaceans that widely inhabit marine, brackish, and non-marine environments. Shallow marine species have more restricted habitat and respond sensitively to environmental changes. Therefore they are a useful tool for high-resolution analyses of paleoenvironmental changes.

We investigated samples during Plio-Pleistocene sections from Site U1354(Hole U1354B and C; 75-375 m below seafloor; ~1.2 to 4.3 Ma), which is in an intermediate position within the three shelf sites transect of Expedition 317. Samples were examined at 1.5 m depth intervals (~15-20 kyr intervals) at 75-110 m below seafloor and 10 m (~100 kyr) intervals at under 110 m below seafloor. Fossil ostracodes occurred from all 41 samples that we used. Numbers of ostracode species and specimens/g sample increase upward. Five species of ostracodes *Argilloecia* sp., *Callistocythere* sp., *Cytheropteron* cf. *abyssorum*, *Hemicytherura* sp., and *Munseyella brevis* were contained abundantly through whole samples. Relative abundance (%) of *Munseyella brevis*, that lives on the shelf area at east of the south land of New Zealand, versus *Argilloecia* sp. that lives in cold and deep sea and *Cytheropteron* cf. *abyssorum* that lives around Antarctica shifted constructively. These changes are supposed to be relative sea level changes. We expect to reveal detailed environmental changes by using data of such as calcareous nannofossils stratigraphy.

Keywords: IODP Exp. 317, Canterbury Basin, fossil Ostracode, Plio-Pleistocene