

## Paleoceanographic changes in the Miura Peninsula during MIS54-49 based on fossil ostracod assemblages.

\*Katsura Yamada<sup>1</sup>, Mayuko Kato<sup>1</sup>, Atsushi Nozaki<sup>2</sup>, Masayuki Utsunomiya<sup>3</sup>, Ryuichi Majima<sup>4</sup>

1. Shinshu University, 2. Hiratsuka City Museum, 3. National Institute of Advanced Industrial Science and Technology, 4. The Open University of Japan

The Upper Pliocene and Pleistocene Kazusa Group distributes widely in Boso and Miura Peninsula. High resolution and multi-proxy studies have been performed in the Lower and Middle Pleistocene in Boso Peninsula (e.g., Kubota et al., 2021). However, few investigations reconstructed bottom paleoenvironments in glacial- and interglacial-cycles in Miura Peninsula, though general past environments were recognized there. Recent study suggested that the Koshiha Formation in Yokohama area was deposited between MIS 57 and 49 on the basis of oxygen isotopes of planktonic foraminifers (Nozaki et al., 2014). Thus, our aim is to clarify glacial- and interglacial-cycled paleoceanography in the Koshiha Formation based on fossil ostracod assemblages.

The Nojima, Ofuna and Koshiha formations are exposed in and around “Segami Citizon’ s Forest” in southern part of Yokohama City. The Koshiha Formation is composed of muddy fine-grained sandstone, fine- and medium-grained sandstone. Several tuff layers, which are intercalated in the Formation, can correlate strata between the sections and core J exactly. In our study, total seventy samples were used from three sections and core J for ostracod study. As a result, 86 species fossil ostracods belonging to 42 genera were identified from 54 samples. Most abundant species is *Schizocythere kishinouyei* and showed high values of more than 50% in most samples. Subsequently, *Laperousecythere robusta*, *Baffinicythere ishizakii*, and *Cytheropteron miurense* represent relative high abundance. Addition, genus *Aurila* and *Neonesidea oligodentata* inhabiting in sandy bottom and algae, were found.

Q-mode factor analysis indicated that the first four factors explain 94% of the total variance. The first factor was characterized by species found in the sandy bottom of the coastal area. The ostracod species in cold and sublittoral environments showed high score in the second factor. The third and fourth factors were interpreted as warm to temperate upper sublittoral environments and lower sublittoral affected by coastal current, respectively.

The high values of factor loadings in the first factor were recognized through the study horizon excepting lower and uppermost parts, suggesting that the Koshiha Formation was generally deposited in the sandy bottom of the coastal area. The factor loadings in the second and third factors showed relative high values in the lower and upper parts, respectively, whereas they fluctuated. These bottom environmental exchange from cold and warm upward corresponds to the gradual decrease in oxygen isotope values of planktonic foraminifers. Cold and warm environments derived from the second and third factors were recognized in three times, respectively, between MIS 54 and 49 derived from oxygen isotopes in planktonic foraminifers. This infers that bottom water temperature shifted at least three times. However, peaks in these cold and warm environments were found in transitional periods between glacial and inter-glacial peaks. Furthermore, lower sublittoral environments affected by coastal water, which is deepest, was identified at the horizon just below the peaks of MIS 53 and 51.

Keywords: Pleistocene, Kazusa Group, Fossil ostracod