

Estimating of paleoenvironment using fossils of shells produced in the Kanzawa Formation, Nakatsu Group

*Hotaka OGURA¹

1. Yokohama Science Frontier High School

In this study, I collected fossils of shells from an outcrop of Kanzawa Formation, Nakatsu Group, which is distributed in Midori Ward, Sagamihara City, Kanagawa Prefecture and analyzed it and estimated environment of when Kanzawa Formation was piled up.

Kanzawa Formation is a marine sediment which is piled up about 2.5 million years ago and wide variety of fossils are produced in Kanzawa Formation. A lot of studies about Kanzawa Formation have been conducted, but air temperature, sea water temperature, influence of sea current, bottom sediment of sea floor which Kanzawa Formation was piled up, sea area which Kanzawa Formation was piled up and so on are not clarified in detail. So, in this study, I estimated these paleoenvironments in detail.

As a result, I estimated that air temperature and sea water temperature of those days was similar to those of the present coast of Kanagawa prefecture and Shizuoka prefecture and the vicinity of where I collected fossils was influenced by both a warm sea current and a cold sea current

Also, I estimated that a basin or a shallow sea whose most of sea floor was covered with sand spread there. From these, I estimated the environment of the vicinity of where I collected fossils was similar to those of the present coast of Sagami Bay or Suruga Bay.

In the future, I think that I will compare fossils of shells using in this study with fossils of pollen and foraminifera produced in Kanzawa Formation and fossils of Kazusa Group and Miura Group, which was piled up in the same period of Kanzawa Formation. Also, I think I will estimate environment of each period and estimate climate change.

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