

Calcareous nannofossil biohorizons from the late Neogene to Quaternary in and around the Japanese islands and comparison with oxygen isotope and magnetostratigraphic records

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Thick, continuous Neogene and Quaternary formations are widely distributed in and around the Japanese islands, and many studies have been conducted on the calcareous nannofossils in these formations in order to obtain their geologic ages. Calibrated ages of individual biohorizons from other areas (e.g., Raffi *et al.*, 2006) were used in these studies because no useful age data existed for the northwestern Pacific region. This study improves on Kameo *et al.* (2015) and aims at summarizing useful calcareous nannofossil biohorizons around the Japanese islands that are based on a direct correlation with oxygen isotope and magnetic reversal records. We examined samples primarily from Pliocene and Pleistocene strata in the Boso Peninsula in central Japan. Deep-sea cores that were obtained by the NanTroSEIZE project, which was conducted around the Nankai Trough in the southwestern part of Japan, were also used. Twelve useful and traceable nannofossil biohorizons were found in the Pleistocene, and eight were found in the Pliocene. Comparative studies of biohorizons with stable isotope records are possible in the Pleistocene and the upper Pliocene sequences in the Boso Peninsula (e.g., Kameo & Okada, 2016). In the lower Pliocene, however, it is only possible to correlate

biohorizons with magnetic reversal records in the NanTroSEIZE cores because there is no available oxygen isotope data. Most of the Pliocene and Pleistocene biohorizons proposed by many authors can be applied to the study area, but biohorizons based on occurrences of *Amaurolithus* and *Ceratolithus* species were not identified. On the other hand, there are some traceable biohorizons that correspond to abrupt morphologic changes in *Reticulofenestra* specimens.

References

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