

Cretaceous calcareous nannofossil biostratigraphy off the coast of northeastern Honshu, Japan

Shun Chiyonobu

Akita University, Akita City, Japan; chiyo@gipc.akita-u.ac.jp

Tokiyuki Sato

Akita University, Akita City, Japan; toki@gipc.akita-u.ac.jp

Cretaceous calcareous nannofossils were studied from two exploratory wells located offshore from the cities of Kesennuma (MITI-Kesennuma-Oki well) and Kuji (Kuji-Oki well) in the northwestern Pacific Ocean. The Cretaceous deposits are composed mainly of alternating mudstones and calcareous sandstones. The basement in the area consists of granite (Sato, 1986). Calcareous nannofossils in these wells occurred in high abundance and diversity, although coccolith preservation was variable. We followed the taxonomic usage of Thierstein (1976). Most of the samples have good to moderate preservation. Nannofossil assemblages were characterized by abundant *Watznaueria barnesae*. Key species for a Cretaceous calcareous nannofossil zonation, as proposed by Thierstein (1976), Sissingh (1977), and Perch-Nielsen (1979), were identified in these wells. *Micrura decussata*, *Marthasterites furcatus*, *Eiffellithus eximius*, *Eiffellithus turriseiffeli*, *Prediscosphaera cretacea*, *Crucellipsis chiastia*, *Braarudsphaera africana*, and *Watznaueria britannica* were recognized in the MITI-Kesennuma-Oki

and Kuji-Oki wells. On the basis of these species, the studied sections were assigned an age of Albian to Coniacian. These results indicated the existence of Cretaceous marine deposits off Honshu, Japan, above the Eurasian Plate and allowed reconstruction of the paleoenvironment in the northwestern Pacific region during the Cretaceous.

References

- Perch-Nielsen, K. 1979. Calcareous nannofossils from the Cretaceous between the North Sea and the Mediterranean. *Aspects der Kreide Europas. IUGS Series A*, 6: 223–272.
- Sato, T. 1986. Cretaceous calcareous nannofossil assemblages in the MITI Kesennuma-Oki. *Journal of the Japanese Association for Petroleum Technology*, 51: 9–12.
- Sissingh, W. 1977. Biostratigraphy of Cretaceous calcareous nannoplankton. *Geologie en Mijnbouw*, 56: 37–65.
- Thierstein, H.R. 1976. Mesozoic calcareous nannoplankton biostratigraphy of marine sediments. *Marine Micropaleontology*, 1: 325–362.