

Diatom 27: 33-45 (和文)

柳沢幸夫：常磐地域の下部中新統湯長谷層群の珪藻化石年代層序

Yukio Yanagisawa: Diatom biostratigraphy of the lower Miocene Yunagaya Group, Joban area, Japan

Abstract

The lower Miocene marine diatom biostratigraphy has been established for the Yunagaya Group distributed in the Joban area, Fukushima and Ibaraki Prefectures, eastern Japan. The Yunagaya Group is composed of the Kunugidaira, Goyasu, Mizunoya, Kamenoo, Honya and Misawa Formations in ascending order. Diatoms are contained in the mudstone of the Mizunoya, Kamenoo, Honya and Misawa Formations. The Mizunoya, Kamenoo, Honya and lower Misawa Formations correlate with the *Crucidentricula sawamurae* Zone (NPD 2B) and the upper Misawa Formation is assigned to the *Crucidentricula kanayae* Zone (NPD 3A). The first occurrence of *Mediaria splendida* s.l., a useful biohorizon dated at 17.6 Ma, is found near the base of the Honya Formation. On the basis of diatom biochronology, the ages of the base and top of the Yunagaya Group are estimated at 18.2 Ma and 16.9 Ma, respectively. The late early Miocene marine and terrestrial climate changes reconstructed by well-preserved plant, molluscan and various microfossil assemblages are synchronous with changes in oxygen isotope records, suggesting that the late early Miocene climate fluctuations in the Joban area were controlled by global climatic change.

Key index words: biostratigraphy, diatom, fossil, Japan, Joban, Miocene