

Diatom 15: 51-78 (英文)

小村精一：房総中新統波太層産の樽形珪藻

Seiichi Komura : Barrel-shaped diatoms from the Miocene Nabuto Formation, central Japan

Abstract

Four new genera are described with seven new species and two new combinations within a newly established family, Parodontellaceae, from the early Miocene Nabuto Formation in central Japan. The genera share several common features among barrel-shaped or cylindrical frustules, the main feature being that the loculate valves of *Gyrosigma*/*Pleurosigma* type are truncated into a plain valve face, which is thus naturally differentiated, without relying upon the marginal ridges, from the slanting valve mantle of great depth. Three are ocellate while the other is not.

Thamnodiscus is monotypic with *T. rectispinosus* typified, which has truncated-conical valves devoid of ocellar projections but instead with paired processes occluded by the internal rimoportules around the valvar centre. *Stylorium* (*S. truncatum* and *S. alticolle* included) is defined as sessile-eyed with two isolated ocelli near the mantle edge of the circular valve. *Parodontella*, composed of four species- *P. calamus* (= *Biddulphia calamus* Temp. & Brun), *P. paucispinosa*, *P. obliqua* and *P. clavifera*, is stalk-eyed on the lanceolate valve face which has the topmost ocelli of the tubular elevations. Finally, *Acigonium* with *A. gladarmatum* and *A. gladiatorum* (= *Biddulphia gladiatorum* Mann) incorporated bears two apical ocelli at the proximal corners of the narrow valve mantle and sword-shaped marginal processes associated with rimoportules. In the first two genera the areolae stretch in biparabolic lines from a central reticulum on the valve face, while in the rest they are in bilateral rows around the axial sternum. Morphologic features that relate the genera to one another are discussed to help coalesce them into one family.

Key index words

Barreled diatoms, Miocene, Nabuto Formation, new family, new genera, taxonomy.