

66. *Pappomonas flabellifera* Manton & Oates (1975) var. *borealis* Manton et al. (1976)



12



Figs 12, 13

Figs 12, 13. *Pappomonas flabellifera* Manton & Oates, the type specimen of the new variety var. *borealis*, reproduced at various magnifications for the sake of comparability with previously published micrographs of the same variety from Greenland; the characteristic coccolith appendages and calcified plates clearly visible with some baseplates of appendages faintly visible (arrows); micrographs Y 7794.7 x10,000 and Y 7794.9 x 20,000.



Fig. 14

Fig. 14. *P. flabellifera* var. *borealis*, crystallographic details from the right hand side of the specimen of Fig. 12. For further description see text; micrograph Y 7794.8 x 40,000.

Diagnosis: A var. flabellifera lamina flabelliformi appendicis calcificatae formae triangulae propiore in margine terminali denticulata vel fimbriata diversa, fissura media magis manifesta margines se non tegentes separante, angulis inter marginem apicalem et margines laterales laminae formatis paene rectis, base laminae juxta scapum columnarem utrinque longius (fere dimidium laminae) decurrente. Squamae calcificatae nullis appendicibus armatae pro longitudine paulum latiores, praeter margines plerumque 9 x 14 μm magnae, crystallitis 7-9 series longitudinales manifestas formantibus, plerumque paulo, interdum multo brevioribus quam in var. flabellifera, non ut in illa nonnumquam

juxta latera fissione longitudinali duplieatis. In aqua marina lecta 6 graduum Celsii die 19 Junii anni 1975 ad pagum alaskanum Homer 15 m sub aequore hausta, Figs 12-14 typificis monstrata. Etiam in aqua 5 graduum die 4 Julii anni 1972 prope pagum groenlandicum Godhavn 20 m sub aequore hausta (vide Manton & Oates, 1975).

Differing from the type of the species by more nearly triangular blades to the flabelliform appendages, the distal edge dentate or fimbriate, the central cleft more distinct with the adjacent sides of the two half-blades not overlapping, the angle between outside edges of the blade as a whole approximately 90 °, each half-blade attached laterally to the end of the columnar stalk for a longer distance (about half the blade length), than in the type. Mineralized plates without appendages somewhat wider relative to their length, commonly 9 x 14 µm excluding the rim, the rows of crystallites on the plate surface distinct, 7-9 in number, the crystallites themselves sometimes short and not duplicated laterally (or split longitudinally) as sometimes in the longer rod-crystallites of the type.

Type specimen of var. *borealis*: Figs 12-14, collected at Homer, South Alaska, on 19 June 1975, from 15 m depth, sea temperature 6°C; also found (Manton & Oates, 1975) near Godhavn, West Greenland, on 4 July 1972, at 20 m depth, sea temperature 5°C.

Manton, I., Sutherland, J. & McCully, M., 1976. Fine structural observations on coccolithophorids from south Alaska in the genera *Papposphaera* Tangen and *Pappomonas* Manton and Oates. *British Phycological Journal*, **11**: 225-238.