

Acritarchs from the Buen Formation (Lower Cambrian), North Greenland

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Siliciclastic sediments of the Buen Formation of North Greenland yield the earliest Cambrian fossils known from North Greenland, with the exception of cyanobacteria described from dolomites of the underlying Portfjeld Formation (see Peel, this report). The fauna is dominated by olenellid and nevadiid trilobites indicating an Early Cambrian age (Poulsen, 1974; Blaker, this report) but hyolithids, bradoriids, sponges and other fossils also occur. Bergström & Peel (this report) described trace fossils from the Buen Formation. Of particular interest is the recent discovery of lightly skeletised arthropods comprising an assemblage similar to that of the Middle Cambrian Burgess shale of Canada (Conway Morris *et al.*, 1987).

Fossiliferous black shales occurring near the middle of the formation at Jørgen Brønlund Fjord, southern Peary Land, near the type section of the formation, have been processed for acritarchs using methods described by Vidal (1976). The samples yield abundant, well preserved assemblages containing *Comasphaeridium strigosum*, *Skiagia compressa*, *S. ornata* type 1, *S. ornata* type 2, *S. ciliosa* type A, *S. ciliosa* type B, *Goniosphaeridium varium*, *Baltisphaeridium dubium*, *B. cerinium*, *S. orbiculare*, *S. scottica*, *Micrhystridium tornatum*, *M. lanatum*, *M. dissimulare*, *Trachysphaeridium timofeevi*, *Tasmanites bobrowskae*, *T. tenellus*, *T. volkovae*, *Lophosphaeridium tentativum*, *Archaeodiscina umbonulata*, *Leiosphaeridia* sp., *Cymatiosphaera* sp. and *C. ?membranacea*; they confirm the Early Cambrian age indicated by the macrofossils.

The acritarch assemblages from the Buen Formation are evidently similar to assemblages from the Bastion Formation of East Greenland described by Downie (1982) and Vidal & Peel (1984; Moczydlowska & Vidal, 1986). They closely resemble upper Lower Cambrian assemblages from Scandinavia and the eastern part of the European Platform (Vidal, 1981; Moczydlowska & Vidal, 1986).

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