Lopingian (Upper Permian) palynomorphs from the Cadeby Formation, Cadeby Quarry, Yorkshire, UK

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Abstract

Seventeen samples from the Cadeby Formation (Lopingian, Permian, EZ1) of Cadeby Quarry near Doncaster, South Yorkshire, UK, yielded organic residues including phytoclasts, cuticle, unstructured tissue and generally well-preserved palynomorphs. The palynomorph assemblages are dominated by taeniate and non-taeniate bisaccate pollen including *Klausipollenites schaubergeri, Limitisporites rectus*, *Lueckisporites virkkiae* and *Taeniaesporites noviaulensis*. The assemblages are generally similar to those from the English Midlands described from Kimberley Railway Cutting and the Haughton Hall Borehole, Nottinghamshire and those from the Marl Slate Formation (lower EZ1) of the Durham Sub-basin at Claxheugh Rock and Crime Rigg Quarry and to the mid EZ1 of the Salterford Farm Borehole and Woolsthorpe Bridge Borehole. The excellent preservation of the assemblages allows the recognition that *Dicappipollenites* Tiwari & Vijaya 1995 is a junior synonym of *Lueckisporites* Potonié & Klaus emend. Clarke 1965. The presence of rare microphytoplankton and microforaminiferal test linings indicate a neashore marine environment. The clastic (and organic) content of the Cadeby Formation, part of a dominantly carbonate succession, may represent erosion and transport of material from the hinterland reflecting a wetter climatic period, though the alternation of clastic and carbonate sedimentation in the section at Cadeby suggests some wet/dry palaeoclimatic cyclicity.

Keywords: palynology Permian Zechstein Dicappipollenites Lueckisporites palaeoclimatic cyclicity

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