

Dinocyst stratigraphy and paleoenvironmental interpretation of the Cretaceous/Paleogene boundary at Stevns klint, Denmark

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A re-examination of the uppermost Maastrichtian chalks and an expanded section of the Fish Clay (Fiskeler Member) undertaken at Stevns Klint, Denmark, one of the classic outcrops of the Cretaceous/Palaeogene boundary, has identified some differences between our findings and most earlier dinoflagellate cyst studies. The white coccolith chalk of the uppermost Maastrichtian (Sigerslev Member) is placed in the *Palynodinium grallator* Zone. The overlying 'Grey Chalk' (Højerup Member) represents a shallower-water, but still open marine succession that is characterised by a series of dune-like structures. The last occurrence of *P. grallator* is within the Højerup Member, confirming the Danian age for the Fish Clay (Fiskeler Member) and a latest Maastrichtian age for the *P. grallator* Zone. Within the Fiskeler Member, *Danea californica* (previously known as *Damassadinium californicum*), a key biostratigraphical marker is only intermittently present, while the distributions of *Carpatella cornuta* and *Xenicodinium reticulatum* may be used to generate a potential zonation. The highest samples in the Fiskeler Member indicate a progressive transition towards more proximal environments, with no dinoflagellate cysts recorded, having been replaced in the samples by pollen grains. Our data confirm the dinocyst stratigraphy seen in other locations (e.g., Brazos River area, Texas and the El Kef succession in Tunisia) and refute the suggestion by HULTBERG (1985, 1986, 1987) that the Fiskeler Member represents a diachronous event.

HULTBERG, S.U., 1985. Unpublished PhD Thesis, University of Stockholm.

HULTBERG, S.U., 1986. Journal of Micropalaeontology, **5**, 37–47.

HULTBERG, S.U., 1987. Journal of Micropalaeontology, **6**, 35–40.