

Dinoflagellate Cyst Biostratigraphy Across the Cretaceous- Paleogene Boundary at the Ouled Haddou Section, Southeastern Rif, Northern Morocco

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A palynological investigation of the recently described and foraminifera-dated Ouled Haddou section (north of Taza, northern Morocco), revealed rich and well preserved palynological assemblages. The dinoflagellate cysts stratigraphy indicates well that the analysed samples of the Ouled Haddou outcrop represent a latest Maastrichtian and a lowermost Danian ages, on the basis of the appearance of index species of the Maastrichtian/Danian boundary as *Eisenackia circumtabulata*, *Carpatella cornuta*, *Damassadinium californicum*, *Lanternosphaeridium reinhardtii*, *Membranilarnacia tenella*, *Senoniasphaera inornata*, and *Kenleyia* spp. Age assignments based on dinoflagellate cysts agree with the stratigraphic interpretation of the Cretaceous- Palaeogene boundary of the studied section by planktonic foraminifera (Toufiq et al., 2002). The co-occurrence of the peridinioid dinocyst species of *Andalusiella*, *Cerodinium*, *Lejeunecysta* and *Senegalinium* on the one hand, and *Isabelidinium*, *Spinidinium* and *Trithyrodinium* on the other hand, indicate that the Ouled Haddou dinocyst assemblages belong to the transitional tropical to subtropical Malloy/worm temperate Williams suite of Lentin & Williams (1980).

Eight new dinoflagellate species are present in the section: *Batiacasphaera rifensis* sp. nov., *Cerodinium mediterraneum* sp. nov., *Damassadinium spinosum* sp. nov., *Eisenackia msounensis* sp. nov., *Impagidinium maghribensis* sp. nov., *Lejeunecysta izerzenensis* sp. nov., *Pterodinium cretaceum* sp. nov. and *Ynezidinium tazaensis* sp. nov.

Keywords: Cretaceous–Palaeogene; Dinoflagellate; Stratigraphy; Ouled Haddou section; Northern Morocco