THE REDDISH "IMPACT" LAYER OF THE BASAL FISH CLAY AT CRETACEOUS-PALEOGENE BOUNDARY, HØJERUP (STEVNS KLINT, DENMARK)

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*Abstract***. –** The marine-shallow Cretaceous–Paleogene boundary section at Højerup-Fish Clay consists of a very thin reddish smectite-rich carbonate-poor ("impact") layer overlain by a black marl. Similar reddish layers are found in the shallow-marine boundary sections at Agost in Spain and El Kef in Tunisia. The deposition of the "impact" layers at Højerup, Agost and El Kef occurred simultaneously and lasted for several decades to a century at most. Smectites of the "impact" layers of the boundary sections at these three locations are probably detrital and redeposited from adjacent coastal areas. Conceivably, a small part of these smectites is authigenic and derived from the nano-size glasses. The microspherules and nano-size glasses of the "impact" layer at Højerup are likely reworked and redeposited at or near the Cretaceous-Paleogene boundary simultaneously with smectite.

Key words: Cretaceous-Paleogene, Fish Clay, impact layer.