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**PROGRAMME  
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ABSTRACTS**





be complicated by changes associated with other biotic (*e.g.* competition) and abiotic (*e.g.* temperature, salinity) factors. Complicating this further is the potential for pre- and post-burial processes to obscure valuable information. Presented here is a coupled geochemical-morphological analysis utilising an approach that allows for accurate oxygen and carbon isotopic measurements from specimens  $>5\mu\text{g}$  along a core top depth transect in the North Atlantic. Contradictory to prior analysis, shell mass appears to increase with depth in some species. Sedimentation rates suggest that exposure time to corrosive water masses, rather than water depth in itself, may play an important role. Differential dissolution between populations of 'lighter' and 'heavier' tests, a bi-product of physiological and ecophenotypical processes, may also affect the average test mass.

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### The fate of a middle Danian (Lower Paleocene) turtle from the bryozoan limestone of Faxø Quarry, Denmark

Jesper Milán<sup>1,3</sup>, Bent E. K. Lindow<sup>2</sup> and Bodil W. Lauridsen<sup>3</sup>

<sup>1</sup>Geomuseum Faxø/Østsjælland Museum, Faxø, Denmark

<sup>2</sup>Natural History Museum of Denmark, University of Copenhagen, Copenhagen K, Denmark

<sup>3</sup>Department of Geography and Geology, University of Copenhagen, Copenhagen K, Denmark

A piece of turtle carapace from the Middle Danian bryozoan limestone at the Faxø quarry, eastern Denmark, is identified as a partial coastal plate from the carapace of a chelonoid turtle. In addition to being the first record of turtles from the Middle Danian of Denmark, the fragment bears evidence of a dramatic taphonomic history comprising traces of three separate acts of predation and/or scavenging. Two circular bite traces measuring 4mm in diameter and situated 2.5cm apart have fractured the carapace and are interpreted as crocodylian predation traces, probably fatal to the turtle. Smaller groups of parallel scrapes, 4-5mm long and 0.5mm, wide are interpreted as bite traces from sharks, and small circular traces, only 1mm in diameter, found either solitary or in a row of three, are interpreted as scavenging traces from fish.

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### A new genus of Acrochordiceratidae (Early Triassic) and its implications for stress-induced evolutionary jumps of ammonoids (cephalopods)

Claude Monnet<sup>1</sup> and Hugo Bucher<sup>2</sup>

<sup>1</sup>Géosystèmes, FRE 3298 CNRS, Université Lille 1, Villeneuve d'Ascq, France

<sup>2</sup>Palaeontologisches Institut und Museum, Universitaet Zuerich, Zuerich, Switzerland

A new genus of Acrochordiceratidae (Ammonoidea, Cephalopoda) has been discovered in Nevada (USA) and in South China, and typically ranges in the late Spathian (Early Triassic). Its plicate ribbing and subammonitic suture line are diagnostic of the family. Its large adult size, high degree of involution and subammonitic suture line stand in sharp contrast with the next younger genus of the family (*Paracrochordiceras* of early Anisian age, Middle Triassic), which is evolute and has a ceratitic suture line. Shell coiling and suture line of the new genus are closer to that of the youngest member of the family (*Acrochordiceras carolinae* of late middle Anisian age). The latter is the end-member of a long-term morphological trend of the family during the early and middle Anisian (*ca.* 4 Myr), characterized by Cope's Rule and classical increases of shell involution and sutural complexity. The abrupt morphological evolutionary jump (proteromorphosis) between the new genus and *Paracrochordiceras* at the Early/Middle Triassic boundary is