

New insights into the palaeolandscape of the Scheur, a hotspot for Late Pleistocene fossils off the Belgian coast

PRESENTED BY

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ABSTRACT

Over the past decades, bottom trawling and dredging in the vicinity of the 'Scheur' navigation channel (~5 km NE of the harbour of Zeebrugge, Belgium) has yielded vast amounts of unique Late Pleistocene palaeontological material. Besides finds related to prehistoric land mammals (including mammoth, woolly rhinoceros, aurochs and straight-tusked elephant), an exceptional quantity of walrus (*Odobenus rosmarus*) bones has been discovered. The walrus assemblage contains remains of 50 to 100 animals (both males, females and juveniles), which are most likely preserved in situ because they show no or little signs of abrasion. It can therefore be concluded that at some point(s) in the Late Pleistocene, one or multiple walrus colonies must have lived in the Scheur area. However, several questions remain to be addressed: (i) From which stratigraphic level(s) are the walrus fossils sourced? (ii) What is their age (given that radiocarbon dating indicates an age beyond the detection limit, > 45000 yr BP)? (iii) Why do we find such a large abundance of fossils in this specific area, so unusually far south? Key to answering these questions is a better understanding of the geological context and evolution of the Late Pleistocene coastal/nearshore landscape off Zeebrugge. This study contributes to this need by presenting new geophysical (ultra-high-resolution sub-bottom and multibeam) data and information from sediment cores. The results have led to the identification of a potential source layer for the walrus fossils, shed new light on the diversity in and stratigraphic superposition of sedimentary environments in the study area, and reveal the influence of human activities (specifically, dredging of the navigation channel) on the denudation of the fossil-rich strata. With this new information, more targeted sediment sampling, geophysical data acquisition and visual seabed inspections can be planned, to further elucidate the relationship between the abundant presence of (walrus) fossils and the Late Pleistocene landscape evolution around the Scheur.

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