The Woolly Rhinoceros from Hofstade

Distribution and biology

The Woolly Rhinoceros (*Coelodonta antiquitatis*) was an inhabitant of the steppes of Northern Eurasia. In contrast to the mammoth, it never reached North America. Morphologically speaking the Woolly Rhinoceros resembles the White Rhinoceros (*Ceratotherium simum*): de head is held low, the legs are sturdy. This is clear from the fossil skeletal remains, and also from the frozen carcasses from the permafrost of Siberia, the carcasses found in the salt deposits at Starunia (Ukraine) and the drawings made by Palaeolithic man. The Woolly Rhinoceros carried a thick fur, protecting it from the cold of the last glacial climate. The animal chiefly fed on grasses and herbs, as the stomach content of frozen rhinos reveals. Its high crowned teeth indicate that it was a grazer. The head had two horns: a first flat one and a second round one. The horns were used as a defense and for clearing the snow so that the underlying plants could be reached.

Age profile of the Woolly Rhinoceros from Hofstade.

The Woolly Rhinoceros from Hofstade

The site of Hofstade yielded one of the richest European collections of Woolly Rhinoceros with more than forty skulls and thirty jaws, all very well preserved. The fossil bones were collected in the beginning of the 20th century during works to extend the railway connection at Hofstade. Most fossils were found in sands, deposited by a river during the last glacial under an extreme continental climate. The river belonged to the so called "Flemish Valley". This palaeovalley was, during consecutive stages in the Pleistocene, formed by phases of fluvial and estuarine erosional activities, which alternated with periods of sediment accumulation. The valley was filled up during the last glacial with fluvial and eolian sediments.

Based on the rich fossil material a profile, indicating age at death of the individual rhinos, was established. The age profile, characterised by a peak of subadult and prime adult animals and a low frequency of older rhinos, suggests that the animals died as a result of a single or regularly recurring catastrophic events. Harsh winter conditions combined with a drought were probably fatal to many rhinos

of Hofstade. The mammoths at Hofstade, however, had a better fate. The woolly rhinos were more exclusive grazers than the mammoths and, having a shorter range, could not escape to areas where circumstances were better. Furthermore, empty fossil puparia of the Arctic Blow Fly *Protophormia terraenovae* found in a rhino skull from Hofstade also point to death in winter or early spring. Even the predators at Hofstade suffered: they turned to bone for food. A high frequency of bones, especially from woolly rhino (>30%), were scavenged by carnivores such as cave hyaena and wolf.

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