NATUUR HISTORISCH MUSEUM ROTTERDAM

PRESS RELEASE

Embargoed till December 9, 2010

30,000 – 40,000 years old, brown, and nicely fossilized

The first hyena dropping from the North Sea

For the first time on record a fossil hyena dropping was trawled from the North Sea. The coprolite (a fossil turd) was found in the nets of a fishing vessel that searched for fossils in an area some 15 kilometres west of The Hook of Holland. The Rotterdam Port Authorities use this area for obtaining sand for the construction of the extension of the Rotterdam harbour, the so-called Second Maasvlakte. Research in the Natural History Museum Rotterdam has shown that the coprolite was produced by a cave hyena (*Crocuta crocuta spelaea*) some 30,000 to 40,000 years ago. Never before has such a young (Late Pleistocene) and yet nicely fossilised specimen been found in the North Sea basin.

Jelle Reumer, Dick Mol (scientists, both of the Rotterdam Museum) and Wil Borst (an engineer expert in dredging, working for the Port of Rotterdam Authority) report on the fossil dropping in an article that was published (today) in the museum's scientific journal *Deinsea*. The coprolite measures 55 x 44 millimetres. It will henceforth reside at the museum, where it is now on display.

Background:

The bottom of the North Sea is a rich and internationally renowned locality of fossil mammals. The southern part of the North Sea basin, between Holland and Britain, was dry land until about 10,000 years ago. The environment was a vast and cold steppe landscape, the so-called Mammoth Steppe. The cave hyena lived there together with woolly mammoth, woolly rhino, bison, reindeer, giant deer, and the like. The presence of hyena is this ecosystem was already known to science, evident from both fossil skeletal remains and from the characteristic gnawing-traces on the bones of mammoths. However, hyena droppings had until now never been seen in the fossil record. (The only known Dutch hyena coprolites were from the circa two million year old Oosterschelde sediments. Being much older, these droppings are considered to have been produced by the extinct hyena species *Pliocrocuta perrieri*.)

In 2009 and 2010 the Rotterdam Port Authorities organized six special fossil-fishing trips in the area where sand is being dredged for the Second Maasvlakte. Thanks to the large hopper-dredgers that clear new and successively deeper parts of the sea bottom, the quality and the number of newly-found fossils is spectacular. The Rotterdam museum has already added more than 200 specimens of prime quality to its collection. Most are of woolly mammoth. Amongst them are the longest mammoth thighbone (femur) ever found, two nearly complete and very large pelvic girdles and a large tusk. Remains of reindeer, bison, giant deer, red deer, horse, woolly rhino, cave lion, and even seals were found. The discovery of this nicely fossilised hyena coprolite confirms the new insight that the Late Pleistocene landscape between Britain and Holland was a cold and dry steppe, and not the snowy tundra where hungry mammoths had to plough for food.

Images: Kees Moeliker (Natural History Museum Rotterdam) + 31 10 2660463 | + 31 6 53778445
Sjaak Poppe (Rotterdam Port Authorities) + 31 10 2521426 | + 31 6 22466553

'Mister Mammoth' Dick Mol (+31 6 51289778) and Professor Jelle Reumer (+31 6 53778444) can both be reached on their cell phones for more information. The paper in *Deinsea* (14: 15-18) can be downloaded here: http://tinyurl.com/38vq6t4

Natuurhistorisch Museum Rotterdam, Westzeedijk 345, 3015 AA Rotterdam
+3110 4364222 | info@nmr.nl | www.nmr.nl