

A killer whale (*Orcinus orca*) in the castle: first find of the species in a Dutch archaeological context

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Bones and other non-skeletal remains of animals, such as antlers, shells, fish scales and remains of insects, are frequently found in archaeological sites (Bakels & Zeiler 2005). By studying these remains we can form an idea of the natural environment in the past and the use that people made of animals and animal products. The preservation of organic remains – both zoological and botanical – depends on the nature of the material and on the soil type: organic material decays rapidly in sandy soils above ground water level. Hence, most of the information from Dutch archaeozoological and botanical research originates from the lower lying parts of the Netherlands (including brook valleys from the Pleistocene areas), and other wet sites such as wells and cesspits in towns and villages. In this article we describe the find of two vertebrae of a whale during excavations at Brederode Castle (Noord-Holland).

The castle of Brederode, situated near the coast at Velsen, was built between the late 13th and early 14th centuries. In later centuries it was destroyed and rebuilt several times. Finally, in 1573, it was plundered and burnt down by Spanish troops. A few decades later (shortly after 1600), the remains of the castle were covered by sand from drifting dunes. During archaeological research in 1996, part

of the moat was excavated. The research was carried out by the local section of the Netherlands Archaeological Working Group (AWN). As the animal remains were collected both by hand and sieving, small birds and mammals are well represented in the faunal spectrum, as well as some fish, shellfish and amphibians. Fifteen species of mammals and 19 species of birds were found; both categories included domestic and wild forms. Five species of fish were found, both freshwater and marine (Zeiler 2007).

Some of the species discovered are rarely found in Dutch archaeological contexts. These include the fallow deer (*Dama dama*), short-eared owl (*Asio flammeus*) and (as far as Late Medieval sites are concerned) white-tailed eagle (*Haliaeetus albicilla*). The turtle dove (*Streptopelia turtur*) had never been found before.

Among the excavated bones were two vertebrae, a lumbar and a caudal vertebra, of an adult whale (figure 1). The vertebrae were compared with vertebrae of an adult female killer whale (NMR 9990-00002791) and adult male killer whale (NMR 9990-00002789) and with those of other medium sized whales: pilot whale (*Globicephala melas*), minke whale (*Balaenoptera acutorostrata*) and northern bottlenose whale (*Hyperoodon ampullatus*), all held in the collection of the Natural History Museum in Rotterdam. The round shape of the epiphyses and the shape

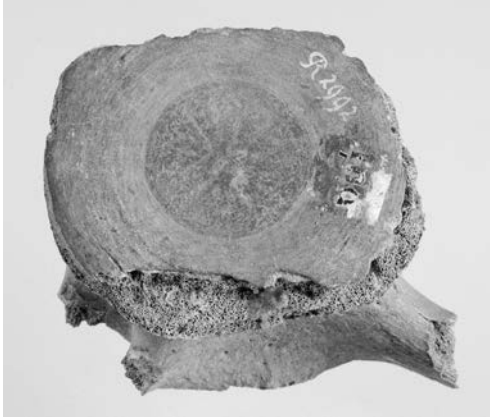


Figure 1. Lumbar (left) and caudal vertebra of a female killer whale (*Orcinus orca*) from the Late Medieval castle of Brederode. Photographs: J. Buist.

and dimensions of the vertebral bodies point to an adult female killer whale (*Orcinus orca*). The two vertebrae from Velsen are stored in the *Provinciaal Depot voor Bodemvondsten* at Wormer (collection numbers: 1531-1 and 1531-2).

This find represents the first record of this species from a Dutch archaeological site, and the earliest record of this species for the Netherlands. It also demonstrates the value of expertise in archaeozoological research. In an earlier study of the material (den Hartog 2005) the vertebrae were described as “whale species” and no further attempts were made to identify them to species level. Killer whales are nowadays very rare in the southern part of the North Sea (van de Mey & Camphuysen 2006, Camphuysen & Peet 2006) and it has probably been fairly uncommon as a species, even in historical times (Kompanje 1995). The oldest known record of a stranded killer whale dates back to December 1783 (a pregnant female of unknown total length at Walcheren, Zeeland), and a further 27 cases have been reported within the Netherlands, 20 of these during the first six decades of the 20th century.

The two excavated vertebrae are most probably from a killer whale that was found washed up on the shore. In view of its rarity and size, a carcass of a killer whale would have attracted

attention. In those days, everything of value that was found washed up on the shoreline belonged to the Count of Holland, who could pass on his rights to others (originally this was a royal right of the Frankish kings, instituted by Charlemagne). It is known that the Lord of Brederode was given this right in 1250 for the area between Zijpe and Huisduinen, about 40 kilometres to the north of Brederode Castle. In 1285 the Count of Holland decided to exercise the right himself, and from then on his annual accounts contain a list of everything that was found on the shore (and its yield). Sea mammals are regularly mentioned here, and they were clearly considered a delicacy (den Hartog 2005). Moreover, the consumption of their meat was permitted during Lent, as they were regarded as fish.

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Samenvatting

Historisch bewijs voor de eerste orka (*Orcinus orca*) in Nederlandse wateren

In 1996 vond archeologisch onderzoek plaats op het terrein van het voormalige Laat-Middeleeuwse kasteel van Brederode te Velsen, waarbij een deel van de slotgracht werd opgegraven. De opgraving werd uitgevoerd door de afdeling Velsen van de Archeologische Werkgroep Nederland. Onder de circa 400 dierlijke resten waren twee wervels van een walvisachtige. Deze werden gedetermineerd als een volwassen orka (*Orcinus orca*). De wervels, hoogstwaarschijnlijk afkomstig van een gestrand exemplaar, vertegenwoordigen de eerste vondst van deze soort in een Nederlandse archeologische opgraving, en daarmee de vroegste documentatie van het voorkomen van de orka in Nederlandse wateren. Aangezien in de Middeleeuwen het vlees van zeezoogdieren als een delicatessen werd beschouwd en bovendien op vastendagen mocht worden gegeten, is het goed denkbaar dat we hier te maken hebben met resten van een bijzondere maaltijd.

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