'THEM WET BONES ...' FAUNAL REMAINS FROM THE LATE NEOLITHIC WELL AT KOLHORN

J.T. Zeiler
Biologisch-Archaeologisch Instituut, Groningen, Nederland

ABSTRACT: Faunal remains from a late Neolithic well at Kolhorn were studied. Most of the bone material came from birds, mainly ducks. The species correspond to those found in the surroundings of the well, and point to an open, wet landscape with a maritime influence.

KEYWORDS: The Netherlands, faunal remains, late Neolithic, paleo-environment.

1. INTRODUCTION

The study of faunal remains from the late Neolithic well at Kolhorn forms part of a study of the bone material from the so-called 'southern site', in which the well was situated (fig. 1).

The preliminary results of this study will be published in *Paleo-aktueel* 1. As for the archaeological and geochemical data of the well the reader is referred to the contributions of van der Waals and Zuurdeeg, Coenegracht, van der Wal & Reynders given in this volume.

2. MATERIAL AND METHODS

The bone material from two series of samples from the well was studied. The first series came from a number of features within the well, the second from a number of sieve samples (1 mm mesh-width) made by J. Schelvis (see this volume). As in the first case only part of the material was sieved (2 mm mesh-width), the two series are treated separately.

Due to the extreme fragmentation of the material only a small proportion could be identified to species/genus/family level. Because of this the remains from the well were studied as a whole and not for each level separately, as was done with the mites (see this volume). In the first series (total number of remains (NR) = 278) this was the case with 12.6%. As for the second series (NR = 130) 28.5% could be identified.

3. RESULTS

Table 1 presents the results of the identification of the bone material from the first series. As can be seen the majority of the remains came from birds (61.2%). As far as these could be identified, all but two come from ducks: mallard (*Anas platyrhynchos*), teal (*Anas crecca*), teal or garganey (*Anas crecca/A.querquedula*) and *Anas* sp. Ten remains could only be identified as duck sp. An interesting find is that of two phalanges III of a harrier (*Circus* sp.). In the same square in which the well was situated the distal half of a right metatarsal of a harrier was found, probably belonging to the same individual.

Of the remains of mammals (NR = 100) only five could be identified. One (a cranium fragment) came from pig/wild boar (*Sus domesticus/S. scrofa*), while a maxilla fragment and a left and right mandible came from Microtidae sp. Most probably the root vole (Microtus oeconomus) is concerned here. This species was found both in the second series of bone material and in the surroundings of the well. According to A. Ervynck (Laboratorium voor Paleontologie, University of Ghent, Belgium) a caudal vertebra could come from ground vole (*Arvicola terrestris*), as is the case with a caudal vertebra found in the neigbourhood of the square in which the well was situated. As these are the only two remains that could come from ground vole, and as it is usually impossible to identify vertebra and ribs of micromammalia (A. Ervynck, pers. comm.), he considers it very questionable that this species is indeed concerned here. Therefore it is designated as 'small rodent'.

Measurements could be taken of two bones of teal/garganey: a fragment of a humerus (Bp = 12.9 mm) and one of a scapula (Bp = 8.0 mm). These values fall within the ranges given by Woelfle (1967) for the two species.

Although the remains of birds outnumber those of mammals, the latter take the greatest part in the bone weight (BW; 71.4%).

The species composition of the bone material

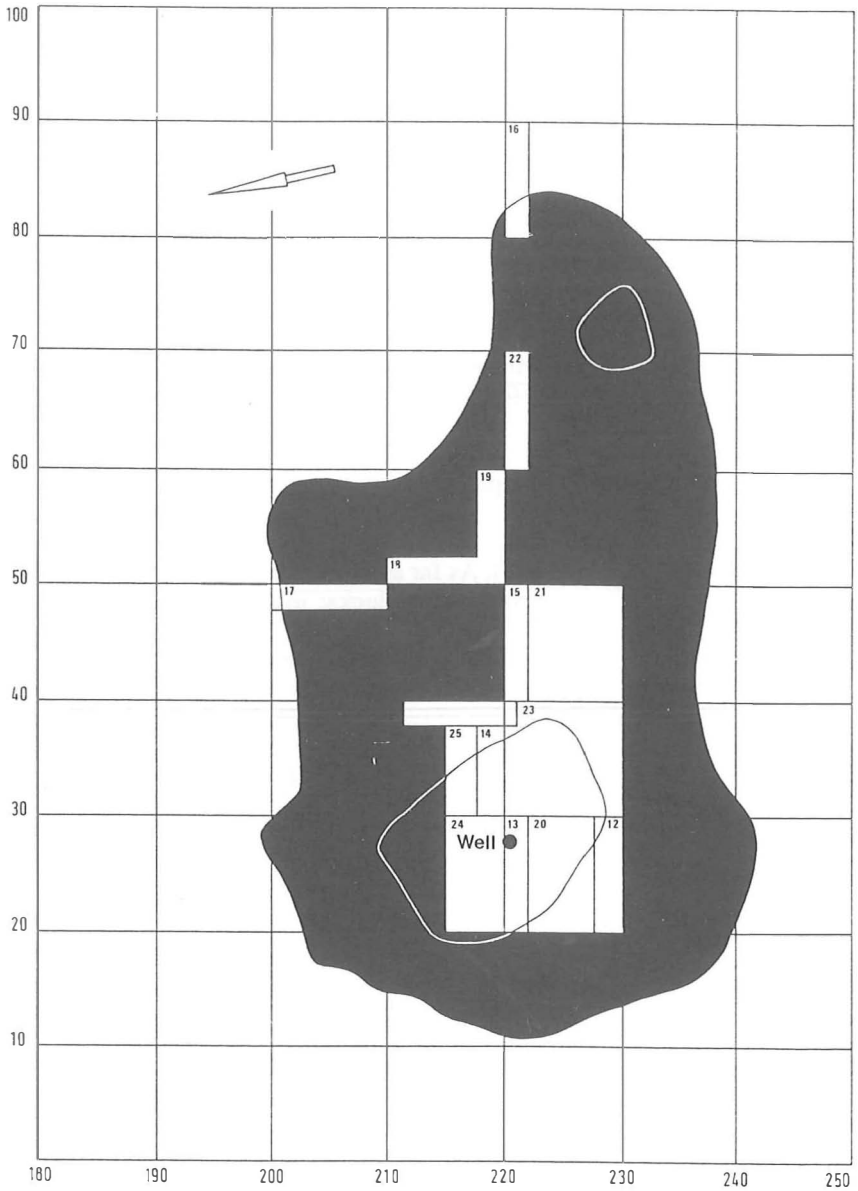

Fig. 1. Schematic map of the excavated areas in the northern and southern sites of Kolhorn including the test trenches north and south of both sites.

Table 1. The faunal remains from the late neolithic well at Kolhorn, series I (sieve mesh-width unknown). NR1 = relative frequency (number); NR2 = adjusted frequency (number); BW1 = relative frequency (weight in g); BW2 = adjusted frequency (weight in g).

Species	NR1 (%)	NR2 (%)	BW1 (%)	BW2 (%)
Pig/wild boar (*Sus dom./S. scrofa*)	0.4	0.5	6.1	17.6
Microtidae sp.	1.1	1.6	-	-
Small rodents	0.4	0.5	-	-
Mammal, indet.	34.2	-	65.3	-
Teal (*Anas crecca*)	0.4	0.5	-	-
Teal/garganey (*A. crecca/querquedula*)	3.2	4.9	2.0	5.9
Mallard (*A. platyrhynchos*)	1.4	2.2	4.1	11.8
Anas sp.	1.4	2.2	-	-
Duck sp.	3.6	5.5	4.1	11.8
Harrier (*Circus* sp.)	0.7	1.1	-	-
Bird, wild, indet.	53.2	80.9	18.4	52.9

Table 2. The faunal remains from the late neolithic well at Kolhorn, series II (sieve mesh-width 1 mm). NR1 = relative frequency (number);
NR2 = adjusted frequency (number); BW1 = relative frequency (weight in g); BW2 = adjusted frequency (weight in g).

Species	NR1 (%)	NR2 (%)	BW1 (%)	BW2 (%)
Microtidae sp.	2.9	3.1	-	-
Root vole (*Microtus oeconomus*)	0.7	0.8	-	-
Small rodent	1.5	1.5	-	-
Mammal, indet.	5.1	-	-	-
Teal/garganey (*A. crecca/querquedula*)	0.7	0.8	-	-
Mallard (*A. platyrhynchos*)	3.6	3.8	26.1	26.1
Anas sp.	7.3	7.7	17.4	17.4
Duck sp.	10.2	10.8	26.1	26.1
Sandpiper (*Calidris* sp.)	0.7	0.8	-	-
Bird, wild, indet.	66.4	70.0	30.4	30.4
Anura sp.	0.7	0.8	-	-

from the second series is more or less the same as in the first series, as is shown in table 2. Remains of birds are more numerous (89.8%). As far as they could be identified, all but one came from ducks: mallard, teal or garganey, *Anas* sp. and duck sp. One bone fragment (a right carpometacarpal) came from a sandpiper (*Calidris* sp.).

As for the mammals (NR = 14), seven remains could be identified. Two pelvis fragments belonged to small rodents (Rodentia sp.; most probably mice); a lower M1 could be determined as root vole, while the other four remains (a left and a right upper incisor), a right lower incisor and a left mandible came from Microtidae sp.

Apart from these remains a right radioulnare of frog/toad (Anura sp.) was found.
Measurements could be taken of two bones of mallard: a coracoid (Bd = 21.2 mm) and the distal half of a humerus (Bd = 14.9 mm). These values fall within the range given by Woelfle (1967) for this species.

Contrary to the first series, remains of mammals play no role in the BW.

4. CONCLUSIONS

The species found in the well correspond to those found in its surroundings (Zeiler, 1989). As the number of species is limited they give only little information about the ecological circumstances. The remains of root vole point to a wet environment (IJsseling & Scheygrond, 1949; Burton, 1976), those of ducks to open water and/or swamps in the neighbourhood of the site. The find of frog/toad point to the presence of freshwater in the well and possibly in the neighbourhood of the site. The remains of harrier point to an open landscape, and the proximity of the coast is indicated by *Calidris* sp. So it can be said that these indications correspond more or less to those given by the mites (see J. Schelvis, this volume): an open and wet environment with a maritime influence. The preliminary results of the investigation of the faunal remains from the surroundings of the well (Zeiler, 1989) appear to confirm this.

Remains of mallard, teal/garganey, duck sp., Microtidae sp., root vole, pig/wild boar and Anura sp. were also found in the material of the neolithic site of Zeewijk, situated in the vicinity of Kolhorn (Zeiler, 1988). The ecological conditions at the two sites were more or less the same.

5. ACKNOWLEDGEMENTS

I would like to thank Jaap Schelvis for reading preliminary versions of this paper, Anton Ervynck for his help in determining the rodent remains and Sheila van Gelder-Ottway for correcting the English text.

The investigations were supported by a grant from the Province of North-Holland.

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