



## Data Article

# An archaeozoological dataset for 3000 years of animal management in the Netherlands

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## ABSTRACT

This paper presents an archaeozoological dataset listing numbers of identified fragments for domestic cattle, sheep/goat, pig and horse from archaeological sites in the Netherlands dating from the Bronze Age to the Early Medieval period (c. 2000 BC – AD 1050) [1]. In addition to fragment numbers per species, the geo-referenced dataset includes chronological information, site descriptions, and bibliographic references. Data were collected from tables listing numbers of bone fragments per animal species as found in published and unpublished reports.

Number of identified bone fragments per animal species form the most basic archaeozoological information. They can be used to reconstruct animal husbandry and human dietary practices in the past. The dataset can therefore be used in spatio-temporal studies of animal use and management across c. 3000 years.

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## Specifications Table

Subject	<i>Social sciences</i>
Specific subject area	Numbers of bone fragments per animal species
Type of data	Table
Data collection	Bibliographic: data taken from published and unpublished publications, including archaeozoological reports.
Data source location	Archaeozoological publications with relevant data from the Netherlands dating from the Bronze Age to the Early Medieval period (references and site coordinates included in the dataset) Bibliographic research was carried out to transfer data on bone fragments from archaeozoological publications. Source data was standardized and transferred into a single table. Compiled data are stored at Freie Universität Berlin, Germany; the compiled dataset is accessible through the Pandora data platform ( <a href="https://pandoradata.earth/">https://pandoradata.earth/</a> ).
Data accessibility	Repository name: An archaeozoological dataset for the Netherlands Data identification number: <a href="https://www.doi.org/10.48493/gdsr-kc24">https://www.doi.org/10.48493/gdsr-kc24</a> Direct URL to data: <a href="https://pandoradata.earth/dataset/an-archaeozoological-dataset-for-the-netherlands">https://pandoradata.earth/dataset/an-archaeozoological-dataset-for-the-netherlands</a> Instructions for accessing these data: Data can be downloaded following the direct link given above.
Related research article	<i>None</i>

## 1. Value of the Data

- Number of identified bone fragments per animal species form the most basic archaeozoological information. They can be used to reconstruct animal husbandry and human dietary practices in the past. These in turn may inform on socio-economic phenomena.
- This dataset can be used by archaeozoologists, archaeologists and historians interested in undertaking comparative studies within the Netherlands and beyond.
- The dataset forms an addition to Boneinfo, a database maintained by the Dutch Cultural Heritage Agency, which contains information on archaeozoological assemblages from the Netherlands, but does not include the numbers of fragments per species [2].
- Most archaeozoological reports are published only in Dutch and many are so-called grey literature and therefore are not easily accessible. The presented dataset makes the basic information from these reports accessible to a wider public.

## 2. Background

This dataset has been compiled by the first author during 20 years of research, initially to provide comparative data for specific site analyses, and later to carry out regional analyses of animal husbandry during the Iron Age and Roman period in the Netherlands [3]. More recently, the dataset was expanded to include data from the Bronze Age and Early Medieval period during a study focusing on developments in cattle husbandry over time. NISP – the number of identified specimens – was chosen as a variable since this is published in every archaeozoological report in the Netherlands, while MNI – the minimum number of individuals – is less common. All original sources are referenced in the dataset.

The repository for the data from the Netherlands is accessible on the Pandora platform ([www.pandora.earth](http://www.pandora.earth)) and is also part of the RomAniDat data community which connects different datasets across the Roman world [4], and which works on similar principle as i.e. Zooarch-Net [5]. The dataset forms an addition to Boneinfo, a database maintained by the Dutch Cultural Heritage Agency, which contains information on archaeozoological assemblages from the Netherlands, but does not include the numbers of fragments per species [2].

### 3. Data Description

The dataset consists of a single table file in both CSV and Excel formats, consisting of the following fields:

- ID: Each archaeological animal bone assemblage was given a unique identification number. An assemblage is seen here as deriving from a single site or excavation and published in one report, book or paper; it may cover several periods.
- Nr for map: this field is used for plotting purposes only. It assigns to sites in adjacent locations and excavations within the same site the same number. Fig. 1 shows their distribution.
- Period: The periods used here are the standard archaeological periods as used in the Netherlands [6] and are defined as follows: Early Bronze Age: 2000–1800 BC; Middle Bronze Age A: 1800–1500 BC; Middle Bronze Age B: 1500–1100 BC; Late Bronze Age: 1050–775 BC. Early Iron Age: 800–500 BC; Middle Iron Age: 500–250 BC; Late Iron Age: 250–12 BC. Early Roman: 12 BC–AD 70; Middle Roman: AD 70–270; Late Roman: AD 270–450. Early Medieval A: AD 450–525; Early Medieval B/Merovingian period: AD 525–724; Early Medieval C/Carolingian period: AD 725–900; Early Medieval D/Ottonian period: AD 900–1050.
- Region: This field assigns each location to one of five regions (north, northwest, west, central, and south) within the Netherlands (Fig. 1). This follows the standard from previous publications [3].
- Province: identifies one of the twelve provinces of the Netherlands: Friesland, Groningen, Drenthe, Overijssel, Flevoland, Noord-Holland, Zuid-Holland, Utrecht, Gelderland, Noord-Brabant, Zeeland and Limburg. All provinces except Flevoland are represented in the dataset.

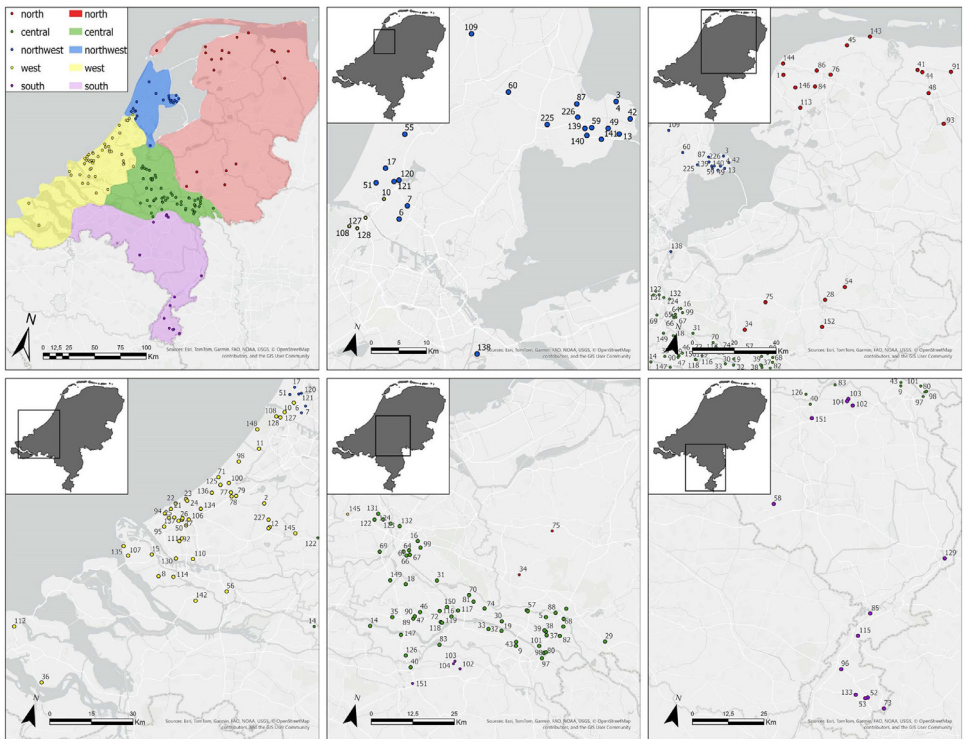


Fig. 1. Distribution of locations included in the dataset according to regional classifications.

- Site type: This field describes the type of archaeological site: agrarian part of trade center, agrarian+trade center, high status, military, monastery, ring fortress, rural (villa), rural settlement, rural/ritual, temple, trade center, urban, urban/military, vicus and undetermined. Cemeteries were not included in the dataset. A question mark is added if the classification is uncertain.
- Site: the name of the archaeological site as mentioned in the publication. Site names in the Netherlands usually include the name of the municipality followed by the toponym (such as: Arnhem-Schuytgraaf). In cases where the site name deviates from this norm, the site name was used as referred to in original publications.
- Lat: latitude coordinate of the site (decimal format, WGS84).
- Long: longitude coordinate of the site (decimal format, WGS84).
- Exact location: YES/NO (In all cases for current version of the dataset, the coordinates were estimated and are thus not exact although in close proximity).
- Cattle: The Number of Identified Specimens (NISP) of domestic cattle (*Bos taurus*). Whenever possible, articulated body parts or skeletons were not included in NISP counts.
- Sheep/goat: The NISP of domestic sheep (*Ovis aries*) and goat (*Capra hircus*). Whenever possible, articulated body parts or skeletons were left out of the NISP counts.
- Pig: The NISP of domestic pig (*Sus domesticus*). Whenever possible, articulated body parts or skeletons were left out of the NISP counts.
- Horse: The NISP of domestic horse (*Equus caballus*). Whenever possible, articulated body parts or skeletons were left out of the NISP counts.
- Total: The total NISP for domestic cattle, sheep/goat, pig and horse.
- Date: Date range of the animal bone assemblage. If the publication mentions a time period rather than a date range, then the standard dates for that time period are used.
- Start date: start date for chronological period associated to the animal bone assemblage.
- End date: end date for chronological period associated to the animal bone assemblage.
- Date type: (list): entry (1,2,3, or 4) describes a hierarchical date assignment. 1) direct absolute date of the assemblage (e.g., radiocarbon dates); 2) contextual dating employed when the previous was not available; 3) site date range/phase employed when the previous was not available; 4) if the previous is not available then a cultural range associated to the assemblage is employed. For the current dataset, all animal bone assemblages include material from various contexts within a site, and the date type is 3 in all cases.
- Reference: full bibliographic reference of the source publication or unpublished report where the archaeozoological data was retrieved from.

#### 4. Experimental Design, Materials and Methods

Data on the numbers of bone fragments for cattle, sheep/goat, pig and horse were collected from published and unpublished reports. The full bibliographic citations for each source (totaling more than 200 publications) are listed in the dataset. The aim was to be as complete as possible, although some publications may have been missed. Publications were retrieved by the first author during her academic career. In addition, archaeozoological colleagues in the Netherlands were approached and asked to share publications. Finally, some publications were found on the data repository DANS [7], searching for specific excavations.

Where possible (i.e. where reports contained the relevant information), complete and partial skeletons or associated bones were excluded. In some publications, hand-collected and sieved material was listed separately; the numbers were combined in the dataset.

The dataset consists of 305 sites with 479 phased assemblages and a total of 339,314 animal bone fragments.

Sites dating to the Neolithic were not included at this stage of data collection. For this period it is especially hard to distinguish between domestic pig and wild boar, and in some instances between domestic cattle and aurochs. As a result, publications frequently include categories of pig/wild boar and cattle/aurochs in addition to pig, wild boar, cattle and aurochs.

Fragment counts for wild species are also not currently included in the dataset. It is planned to add wild mammals and extend the compilation into the Neolithic in the future.

For the Early Bronze Age site Tiel-Medel-De Roeskamp, most pig fragments are listed as pig/wild boar. Tooth measurements, however, make it likely that most fragments are from domestic pig, so they are included in the dataset as pig.

Compiled data are available via the Pandora data platform (<https://pandoradata.earth/>) within the repository 'An archaeozoological dataset for the Netherlands' under the data community RomAniDat.

## Limitations

At the moment, only the most common domestic animals are included in the database. Furthermore, it excludes the Neolithic and full medieval and postmedieval periods. Numbers of fragments for dog, chicken, wild mammals and birds will be added in the future.

## Ethics Statement

The authors have read and follow the ethical requirements for publication in *Data in Brief* and confirm that the current work does not involve human subjects, animal experiments, or any data collected from social media platforms.

## Data Availability

[An archaeozoological dataset for the Netherlands \(Original data\)](#) (Pandora).

## CRedit Author Statement

**Maaïke Groot:** Conceptualization, Methodology, Investigation, Writing – original draft, Data curation, Project administration; **Dominika Schmidtová:** Writing – review & editing; **Ricardo Fernandes:** Writing – review & editing.

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## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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