

## **A Camel at Greenwich?**

### **Zooarchaeology and Negative Evidence for Camels in Roman Britain**

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#### **Abstract**

*Reviews of the archaeological record of camels in Europe include one reported occurrence from a Roman site in Greenwich Park, England. Examination of the site reports and the surviving bones from the Greenwich Park site indicates that it is unlikely that camel remains were ever found there, and therefore there is no existing osteological evidence for camels in Roman-Britain.*

#### **Did the Romans bring camels to Great Britain?**

Neither the one-hump dromedary (*Camelus dromedarius*) nor the two-hump Bactrian camel (*Camelus bactrianus*) is native to Europe, but both species of camel were used by the Romans. Scattered remains of both species of camel, as well as hybrids of the two, have been reported in Roman-era archaeological sites in Europe, including a single site in Great Britain, at Greenwich Park near London (Applebaum 1987:514; Bond 2017; Green 2017; Pigière and Henrotay 2012; Webster 1902).

Other finds of one or a few isolated camel bones have been reported from Roman sites in Spain, Portugal, France, Italy, Austria, Germany, Hungary, Switzerland, Serbia, Slovenia, Bulgaria, and Russia (Albarella *et al.* 1993; De Grossi Mazzorin 2006; Muñiz *et al.* 1995; Pigière and Henrotay 2012; Tomczyk 2016), and a partially complete skeleton was found at both Saintes in France and Viminacium in Serbia (Pigière and Henrotay 2012; Tomczyk 2016; Vuković and Bogdanović 2013).

While most of the other camel finds in continental Europe are based on relatively recent analyses of actual osteological material, the Greenwich Park record is based on a report dating back to the very early twentieth century (Webster 1902). A review of the published reports and an examination of the surviving bones from this site cast doubt on the presence of camel at Greenwich Park.

#### **A Roman site in Greenwich Park**

Greenwich Park, located east of London on the south side of the River Thames, is the home of the Royal Observatory and the Prime Meridian. Another line, the Roman road known as Watling

Street, also passes through the park. In 1902, Park Superintendent A.D. Webster probed for archaeological remains in a mounded area near where the Roman road was thought to be. When tesserae, the small cubes of stone or ceramic used in mosaics, were found (Webster 1902:68), Herbert Jones was brought in to supervise more extensive excavations, which were completed in 1903. The Roman site contained floors and wall trenches, almost 400 coins ranging in date from c. 35 B.C. to A.D. 395-423, an arm from a statue, a small bone figurine, fragments of a marble tablet with an inscription, pottery sherds, glass fragments, an iron key, animal bones, and shells (Webster 1902, Jones 1903a, 1903b). Originally thought to be a Roman villa, more recently, the site has been interpreted as a Romano-Celtic temple (Sheldon and Yule 1979; Wallower 2002a).

### **Animal remains from the Greenwich Park Site**

The first, and only, claim that camel bones were found at the Greenwich Park site comes from one of the original site reports. In 1902, the same year the excavations began at the site, A.D. Webster published the book *Greenwich Park: Its History and Associations*. One section described the then-current excavations at the Roman site. The complete faunal report from this book states:

*BONES, TEETH, AND ANTLERS. —Generally speaking, these are of domesticated animals —horse, sheep, oxen, deer, &c.  
Antler of red deer in good preservation, and of unusually large size. Evidently from the sawmarks where portions of the tangs had been removed, the horns were used for making knife handles and bone implements.  
Antlers of fallow deer.  
Bones of the ox and sheep in abundance, showing, in some instances, traces of gnawing.  
**Teeth—identified (sic) as those of the horse, camel, small ox, rabbit and dog.**  
SHELLS.—Oyster shells in abundance were found all over the ground, but principally in the two rubbish heaps where the broken pottery was discovered in such quantity.  
Shells of mussels, common and edible snails. (**emphasis added**; Webster 1902:73-74)*

Herbert Jones published two separate reports the following year in *The Home Counties Magazine*. Neither of these reports mentioned camel remains at all. According to Jones,

*The animal remains were but few, the chief being two very fine antlers of the red deer; there is also one of the fallow deer, but as a herd of fallow deer has been for many years kept in Greenwich Park, this may possibly be modern. No trace of the roe was found, but **some teeth of horses, oxen, pigs, and small sheep**. As usual, many oyster shells came to light, also traces of whelk, cockle, and mussel shells. (**emphasis added**; Jones 1903a:54)*

While Webster and Jones agree on some things, like the presence of both red deer and fallow deer antlers, there is clearly a discrepancy between the two contemporary accounts. As others have noted, Jones' and Webster's accounts of the project differ in other details as well, including the date on which excavation began (Wallower 2002a). Neither report includes counts, drawings, or photographs of any of the animal remains. A field notebook kept by Jones has since been lost (Wallower 2002a:47), although it reportedly only contained information on pottery at the site (Elliston-Erwood 1924).

### **Where are the bones?**

After Jones completed his fieldwork in 1903, the artifacts were stored in the Park-Keeper's office at Blackheath Lodge (Jones 1903a:51, 55). That same year, A.D. Webster left Greenwich Park for a new position at Regent's Park. Some of the more significant artifacts were transferred to the British Museum by 1906, but most were stored at municipal buildings in Greenwich including the town hall, library, and Charlton House (Page 1932:116; Wallower 2002a:53).

Most of these artifacts were destroyed or lost due to the bombing during the Blitz of World War II (Wallower 2002a:53). Surviving artifacts from the 1902-1903 excavations were transferred to the Greenwich Borough Museum in 1964 and are now stored at the Greenwich Heritage Centre, Royal Greenwich Heritage Trust, in Woolwich. When the collection was examined around 2002, archaeologists noted that much of the pottery was no longer present but did not comment on the animal remains (Wallower 2002a:54).

Meanwhile, limited excavations at the Roman site were conducted between 1924 and 1927 by J.E.G. de Montmorency on behalf of the Greenwich and Lewisham Antiquarian Society (Wallower 2002a:47-48), and in 1978-1979 by the Southwark and Lambeth Archaeological Excavation Committee (Sheldon and Yule 1979). In 1999 Time Team in collaboration with the Museum of London and Birkbeck College (Wallower 2002a, b) spent their typical three days working on the site. Animal bones recovered from the latter excavation have not been analyzed (Wallower 2002a:50).

### **Is there camel at Greenwich?**

Most later accounts of the site do not mention camel, or for that matter, any animal remains. A description of the site published three decades later stated that the 1902 finds included "many bones of horse, sheep, oxen, deer, and teeth of dogs, rabbits and (it is stated) camels." (Page 1932:116) The parenthetical statement implies skepticism at the time about the identification. Applebaum (1987) mentioned camel at the site without any additional details. Pigière and Henrotay (2012:1537) present the record as undated (other than Roman) and leave skeletal elements, species, and criteria of identification blank.

Camels, cattle, sheep, goat, and deer all belong to the Order Artiodactyla (some taxonomists now use the term Cetartiodactyla instead). While cattle, sheep, goat and deer, as members of the suborder Ruminantia, are closely related to each other, they are more distantly related to camels, which are the only living Old World species in the suborder Tylopoda.

Not surprisingly, there are some distinctive characteristics of camel teeth that distinguish them from the Ruminantia. Adult camels have a single, pointed upper incisor and three spatulate lower incisors. The pointed canines are large and tusk-like in males. There is a small canine-like premolar behind the canines. A diastema separates this tooth from the other premolars, which have a more typical artiodactyl form (Hillson 2005). Camel molars

*have a double infundibulum, with a similar B-shaped occlusal outline to the ruminants, but with a simpler, squarer form; they have less pronounced 'buttresses' on the buccal*

*side of the upper molars, without the additional small cusp between the twin bulges of the lingual side (in upper teeth) or buccal side (in lower teeth). (Hillson 2005:144)*

Therefore, I contacted the Greenwich Heritage Centre and received permission to examine the surviving bones from the Roman site, which I did one day in April 2018. Although no modern osteological comparative collections were available on site, standard published osteology guides were consulted (e.g., Hillson 2005). The goal was simply to see if any of the teeth or bones could be camel, not to conduct a complete zooarchaeological analysis of the entire faunal assemblage. Since Webster specifically stated that the camel remains were teeth (1902:74), my examination focused on those elements.

The faunal assemblage contains only 52 specimens, including 12 deer antler fragments, 28 other bones, two mandible fragments with teeth, and 10 individual teeth. The individual teeth consist of four equid (horse or donkey) teeth and six artiodactyl teeth.

Based on the size and morphology of the artiodactyl teeth from Greenwich Park, none of the six specimens appear to be from camel. Specific identifications were not made for the artiodactyl teeth, but they are smaller than would be expected for camel and include sheep or goat, deer, and possibly cattle. The two mandible fragments, probably from sheep/goat, are much smaller than camel and also do not have any of the distinctive characteristics of camel teeth.

The 28 other bones consist of two equid bones, three long bone shafts that are probably pig, and 23 mammal long bone, rib shaft, and scapula blade fragments from sheep/goat, deer, or cattle.

In sum, although a more detailed faunal analysis would provide more precise identifications, there is no definitive evidence of camel in the faunal remains from the Greenwich Park site.

### **Was Camel Ever Present at the Greenwich Park Site?**

Comparison of the surviving bones with Jones' and Webster's reports reveals other differences. Jones identified horse, oxen, pig and small sheep teeth. No pig teeth are present in the surviving assemblage, but all other species Jones identified do appear to be present in the surviving faunal assemblage.

Webster identified horse, camel, small ox, rabbit and dog teeth. Three of these species (camel, rabbit, and dog) are not present in the surviving assemblage and were not identified by Jones. Pig teeth were identified by Jones, but are not listed by Webster.

How can we explain the different faunal lists presented by Webster and Jones? A.D. Webster, the Park Superintendent, had a naturalist's knowledge of local flora and fauna, but was neither an archaeologist nor a paleontologist and there is no indication that he had any special training in animal bone identification. Rather, he was more skilled with plants; his published books include *British Orchids*, *Coniferous Trees for Profit and Ornament*, *Firewoods, their Production and Fuel Values*, and *Webster's Practical Forestry*.

Herbert Jones, on the other hand, was a Fellow of the Society of Antiquaries of London and had worked on excavations at Silchester, Carlisle, and Wroxeter (Society of Antiquaries 1917; *The Archaeological Journal* 1917). Most significantly, he had documented experience in identifying

archaeological animal bones, having published papers on the Roman period faunal assemblage from Silchester. At that site, he identified most of the same species later found in Greenwich – but no camel (Fox 1892; Fox and Hope 1893; Jones 1892, 1893).

Between the two, Jones seems more likely than Webster to have been able to correctly identify mammal teeth at Greenwich. The fact that he does not mention camel at all in his site reports (Jones 1903a, b) makes me think that there were no camel teeth found at the site. Given the seemingly casual way Webster includes camel, which would have been an unusual find, in the species list with no additional comment, I also wonder if camel might be an error made during production of Webster's book; could he have originally written "cattle, small ox" or something similar?

There will always be uncertainty about whether camel remains were ever present at the Greenwich Park site, as it is possible camel teeth, if present, were destroyed by bombing during World War II. This situation is not unique; early twentieth century reports of camel bones at Roman sites around the Black Sea have also been difficult to verify (Tomczyk 2016). It seems likely, however, that the original identification of camel teeth at Greenwich by Webster was an error, and therefore, there are no confirmed records of camel remains in Roman Britain.

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