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TWO EARLY CASES OF LEPROSY IN GREAT BRITAIN*

by

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From the Duckworth Laboratory of Physical Anthropology, Faculty of Archaeology and Anthropology, Cambridge

287 It is not our intention to enter into the controversy concerning the early history of leprosy in Great Britain. Newman (1895) writes of leprosy having been 'brought to England' as early as 60 B.C., and Richards (1960) mentions the leper houses in Nottingham (c. A.D. 623) and in Eire (c. A.D. 869). In a critical review, MacArthur (1953) writing of 'medieval leprosy' in Britain, states that 'no assertion of leprosy in old times can be accepted as indicating an infection with Hansen's bacillus in the absence of clinical details sufficient to point the diagnosis.' He goes on to stress that the word 'leprosy' has been used to describe diseases other than true leprosy in many early accounts. When we read, therefore, that Bladud, son of Lud Hudibras and legendary tenth king of Britain, suffered from leprosy (Evans, 1903) prior to his death in 852 B.C., and that Alwineor, Abbot of Evesham (c. A.D. 1040), contracted leprosy and was rejected by his monks on these grounds, we must regard such statements with obvious caution. It is as easy to deny such statements as to agree with them, bearing in mind the lack of physical evidence of the existence of the disease—or indeed of any clear description of the manifested symptoms. We are on something safer ground with the case of Robert the Bruce, King of Scotland, a cast of whose cranium has been preserved. This shows evidence of changes which, if seen in a cranium, would indicate leprosy (Brothwell, 1958).

An objective approach to this subject of early leprosy in Britain will involve a combination of the techniques of the archaeologist and the physical anthropologist. Ideally, it would include the examination of all known skeletal material in Britain from prehistoric to modern times, with particular reference to the evidence of the incidence of leprosy. Such cases of leprosy, if found to have existed, and if correctly dated, would contribute greatly to an accurate assessment of the history of the disease in this country. One of us has excavated four mediæval leper cemeteries in Denmark, and found that the Danish leper houses were hospitals for patients suffering from the true leprous condition. As far as examination of the skeletal evidence can reveal, these patients suffered from no other disease (Møller-Christensen, 1953, 1961). It is at least probable that the leper houses established in Britain were intended, in the first instance, for the same kind of sufferers. The validity of this assumption could only be fully tested, however, by archaeological excavation of an early British leper cemetery and by a careful examination of the skeletal remains.

Several cases of leprosy, or of suspected leprosy, in excavated remains of early British populations have recently been reported, viz. a case from a post-Conquest cemetery at Castle Hill, Scarborough (Brothwell, 1958), three cases attributed to the seventh century from Tean, Isles of Scilly (Brothwell and Møller-Christensen, 1962), and a case from Beckford, Gloucestershire (Wells, 1962).

![Fig. 1. Burwell Cranium: Inferior Surface of the Palatine Process](image.png)

We have examined the osteological evidence of past British populations now preserved in the Duckworth Laboratory, Cambridge, with the intention of adding to these data on the incidence of leprosy in Britain in early times. The material examined for this purpose is listed in Table I.

<table>
<thead>
<tr>
<th>Period or Series</th>
<th>Infants</th>
<th>Adults</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neolithic</td>
<td>3</td>
<td>69</td>
<td>72</td>
</tr>
<tr>
<td>Bronze Age</td>
<td>9</td>
<td>37</td>
<td>46</td>
</tr>
<tr>
<td>Iron Age</td>
<td>—</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Romano-British</td>
<td>11</td>
<td>125</td>
<td>136</td>
</tr>
<tr>
<td>Saxena</td>
<td>24</td>
<td>332*</td>
<td>356*</td>
</tr>
<tr>
<td>Medieval (England only)</td>
<td>5</td>
<td>126*</td>
<td>161*</td>
</tr>
<tr>
<td>Spitalfields crania (London, c. 1550-1650)</td>
<td>17</td>
<td>626</td>
<td>643</td>
</tr>
<tr>
<td>Moorfields crania (London, 1665)</td>
<td>1</td>
<td>111</td>
<td>112</td>
</tr>
<tr>
<td>Whitechapel crania (London, probably nineteenth century)</td>
<td>1</td>
<td>384</td>
<td>385</td>
</tr>
</tbody>
</table>

| Totals                            | 71      | 1870   | 1941  |

* Including one case of leprosy

Advanced cases of the leprous type have been shown to exhibit the *facies lepra* (Møller-Christensen, 1961, p. 44) which comprises atrophy of the anterior nasal

* With Plate N, a text figure and a table

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Photographs: University Museum of Archaeology and Ethnology, Cambridge
spine, either as an isolated symptom or in combination with a median or central atrophy of the maxillary alveolar process. This is invariably found in conjunction with inflammatory changes of the superior surface of the palatine process of the maxilla.

*Facies leprosa* is, in 77.9 per cent. of cases, found to occur in combination with pathological changes of the tibia and fibula. ‘Vascular grooves’ surrounded by areas of periosteal activity are to be seen on the lateral surfaces of the tibia, *i.e.* where these face the fibula. On the fibula, the crista anteriores and interossea, as well as the medial and posterior aspects of the bones, are very rough and pitted in appearance and characterized by fine or coarse osseous deposits traversed by numerous furrows and depressions.

The osteological material that forms the basis of the present study was examined very carefully for evidence of changes such as have been described. If a cranium displaying *facies leprosa* was found, it was considered as a possible case of leprosy until the long bones had also been examined. If the long bones showed no pathological changes, or had not been preserved, as not infrequently occurred, the case was not regarded as being a proven one of leprosy. Only where a cranium with *facies leprosa* was accompanied by tibiae and fibulae showing the typical pathological changes, bilaterally and symmetrically, was a firm diagnosis of the lepromatous type of leprosy made. In practice, this confined the number of certain cases in the Cambridge material to two, one in a skeleton of the Saxon period and the other in one of the Mediaeval period. In these circumstances, the figures for the incidence of leprosy in these samples of early British populations must be regarded as minima, and may well be augmented by further studies of this kind of osteological material preserved elsewhere in Britain. The possibility of less advanced cases of leprosy being overlooked also cannot be excluded.

The first case of leprosy to be discussed was found among skeletal remains from the cemetery at Burwell, Cambridgeshire, excavated about 35 years ago (Lethbridge, 1931) and attributed to a ‘Christian Anglo-Saxon community of the seventh century.’ The individual who suffered from leprosy was buried in Grave 111, which was an unusually large grave for this cemetery, being seven feet in length and four feet deep. The actual grave was one foot ten inches in width, but there was a shelf cut in the chalk on each side of it giving a total width in the upper section of three feet. Lethbridge supposes that this shelf might have supported some kind of covering for the body. Although this is not the place to discuss the dating of the Burwell cemetery, it may be suggested that as many of the graves in the cemetery are not oriented according to the usual Christian custom, *i.e.* with the feet towards the east, it is quite possible that some of the graves antedate Christian Saxons times. This possibility is not contradicted by Lethbridge’s statement that many of the ornaments and other grave goods are characteristic of the ‘end of the pagan period and thought to be of VII century date.’

The Burwell remains are those of a mature male individual (Laboratory No. Eu.1.2.48), and although incomplete, comprise the skull, the major part of the pelvis, several of the long bones (the two tibiae and a fibula being of particular interest), and a number of other fragmentary bones. The hand and foot bones were unfortunately not preserved.

The Cranium

*Norma facialis* (Plate No). There are clear signs of an active bone resorption in *vivo* of the anterior alveolar maxillary process. This bone resorption appears to have begun in the central part between the median incisors, exposing the roots of these teeth and very probably loosening them. As a result of this pathological process, which is one of first-degree resorption (Møller-Christensen, 1961, p. 27), the anterior margin of the alveolar process assumes an arch-like shape in place of its customary horizontal appearance.

*Norma lateralis* (Plate Nd). This aspect of the cranium displays a first-degree atrophy of the anterior nasal spine (Møller-Christensen, op. cit., p. 28).

The Nasal Cavity

Superior surface of the palatine process (Plate Nb). This shows changes that are due to a chronic deep inflammation which has affected the left side particularly, but which is also visible on the right side. On the right, the inflammation has resulted in a perforation through the hard palate, about 2 mm. anterior to the suture transversa palatina.

Inferior surface of the palatine process (fig. 1). This surface shows only a slight degree of inflammation and consequent changes.

This cranium, therefore contains the three components of *facies leprosa*, *viz.* chronic inflammation in the nasal cavity; a first-degree atrophy of the anterior nasal spine; a medial resorption of the first degree of the alveolar maxillary process, accompanied by a loosening of the two median incisors. On these grounds, it may be said that this individual very probably suffered from leprosy.

To confirm this diagnosis, an examination of the tibiae and fibulae must be made. Upon examining these bones (Plate Na) there are seen to be (bilaterally on the tibiae and on the single fibula) areas of osteophytes on the superficial surfaces of the bones, symmetrically arranged in a manner that is typical of lepromatous leprosy (Møller-Christensen, 1961, p. 42). The right fibula and the bones of the extremities have, unfortunately, not been preserved. If they had been recovered, they would have added to the reliability of the diagnosis.

The conclusion to be drawn from this examination is that this is a case of the lepromatous type of leprosy.

Besides the manifestations of leprosy, this skeleton shows evidence of chronic maxillary and mandibular abscesses; severe spondylarthrosis; signs of osteo-arthritis in the right elbow, right hip joint and left knee.

The second case of leprosy was found amongst human remains recovered during the excavations carried out at Nonesuch Palace, Ewell, Surrey, in 1959. These remains come from burials in the old churchyard of Cuddington Church which, together with Cuddington village, was levelled in A.D. 1538 for the building of the Palace (Biddle, 1959). The church has been in existence from about A.D. 1100, with many subsequent alterations and additions to its fabric. The date of the leprosy burial, therefore, can lie between about 1100 and 1538.
The remains are those of a mature individual of male sex (Nonesuch Palace, Field No. 101).

The Cranium

*Norma facialis* (Plate Ne). The symptomatic esorption of the alveolar process, which can be one component of *facies leprosa*, is absent in this aspect of the cranium.

*Norma lateralis* (Plate Nf), however, gives a clear indication of a first-degree atrophy of the anterior nasal spine, i.e., the second component.

The Nasal Cavity

*Superior surface of the palatine process* (Plate Nh). This surface of the palate shows a distinct first degree reaction following a chronic inflammation. This is especially noticeable at the right nares, but is also clear on the left side.

This cranium, therefore, contains two of the components of *facies leprosa*, viz. the chronic inflammation visible in the nasal cavity and the first-degree atrophy of the anterior nasal spine. On these grounds, it may be stated that this individual very probably suffered from leprosy.

For a confirmation of this diagnosis, the tibiae and fibula must be examined (Plate Ng). There are conspicuous areas of osteophytes placed symmetrically and bilaterally on the superficial surfaces of the bones, and these are typical of the manifestations of lepromatous leprosy (Møller-Christensen, *op. cit.*, p. 42).

The conclusion to be drawn from this examination is that this individual suffered from the lepromatous type of leprosy, but that the disease is manifested in a less advanced degree than in the Burwell case.

Of the toe bones, there were recovered only three first phalanges, and these showed the hour-glass shape that is another indication of leprosy. The remainder of the bones were missing, and this is to be regretted in view of their importance in a diagnosis of leprosy. There were no changes indicative of leprosy in the hand bones that were preserved, but the terminal phalanges were missing and it is those, above others, that characteristically manifest the earliest leprous changes.

Apart from leprosy, this individual suffered from a chronic inflammation of the gums, had several dental abscesses, and showed evidence of the initial stages of spondylarthritis in the thoracic region of the spine.

Acknowledgements

The authors wish to record their thanks to Dr. J. C. Trevor, Director of the Duckworth Laboratory, for the provision of the facilities for this inquiry, and to him and to Professor Dorothy Whitelock, Head of the Department of Anglo-Saxon and Kindred Studies, University of Cambridge, for their kind assistance in tracing a number of historical allusions.

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ON NANNAS AND NANNIES

by

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Some years ago, when I was living in a Cambridgeshire village, I overheard a young boy speak of his grandmother as his nanna. I later heard the word used very frequently in this kinship sense, not only by the villagers in these parts but also by townsfolk such as college bedmakers, who are themselves often grandmothers.¹

Shortly after I first heard the word I was writing a paper on kinship in England for a seminar and I started to search in written sources for any references.² I could not remember having come across this usage in any play, novel or other literary work, so I turned to the dictionaries. The original edition of *The New English Dictionary* (1888–1928), later called *The Oxford English Dictionary* (O.E.D.), failed to list the word at all. However, in the supplement, issued in 1933, it did appear, but with a different meaning, namely, ‘a child’s form of address to a nurse; hence, a children’s nurse’, an alternative form of the more familiar nanny, the first use of which is given as occurring in *Chambers’ Journal* for September, 1864. I should add that like nanna, nanny was also absent from the main dictionary, except as ‘elliptical for nanny-goat’ and in the compound form of nanny-house (or nanny-shop), which appeared in the *New Dictionary of Cant* in 1720 and meant bawdy-house.³ In the O.E.D., both these words, nanna and nanny, are tentatively derived from the girl’s name Nanny (or Nan, Ann or Anne).

Dictionaries of American English were scarcely more

¹