

# Victims of the Great Famine and the Black Death?

The Archaeology of the Mass Graves found in the former Graveyard of Holy Ghost Hospital, Lubeck (N. Germany), in the European Context

By *Stephan A. Lütgert*

## 1. *The Holy Ghost Hospital*

The foundation of the Holy Ghost Hospital by the city council of Lubeck dates back to the year 1226 or 1227.<sup>1</sup> The first building had been erected on a plot owned by the bishop and situated south of the town hill at the corner of Marlesgrube-Pferdemarkt. The high-handed action of the citizens had involved years of quarrels culminating in a settlement, which placed the hospital under the supervision of the cathedral chapter. The translocation of the Holy Ghost Hospital to the northern part of the town after 1286<sup>2</sup> probably must be regarded as a consequence of this development.<sup>3</sup> A further aspect was the bigger size of the plot of land adjoining the “Koberg” square.

Persons wishing admission into the hospital were vowed to poverty, chastity, and obedience. The hospital was restricted to all “*personae miserabiles*”, above all to the poor and non-infectious invalids, but also to pilgrims and travellers. Nevertheless, in time the number of older people also from higher walks of life increased.

The premises had room for 100-200 inmates; most of them were accommodated in the nave, the so-called “Langes Haus”, a building of c. 87 m length.<sup>4</sup>

## 2. *The Discovery of the Lubeck Graves*

Already twenty years ago, a high-density accumulation of human bones was discovered while sinking a

new drain in the eastern corner between the nave and its southern extension, the so-called “Herrenstube”. It laid about one metre below the pavement outside the boundary of the 19th-century churchyard. At that time nobody knew the particular quality of the discovery.

In 1989 the owner of the restaurant established in the cellars beneath the nave decided to install a guest toilet out of the hospital walls below ground. The building activities enabled the monument service to initiate an archaeological investigation. It was thought to give information about the mysterious bone package that had been found a decade earlier. As the groundwork had been done excavation started in October 1990. It was scientifically directed by the director of the town archaeology unit, Prof. Dr. Günter P. Fehring, and carried out by a site technician, who was assisted by an anthropologist, Mrs. Monika Prechel M. A. She was responsible for the proper documentation, recovery and analysis of the numerous skeletons.<sup>5</sup> The author of this article (which is based on a lecture held at Ribe in June 1999) was in charge of the archaeological and historical analysis of the excavation.<sup>6</sup>

To the east of the extension an area of 73 sq. m was opened and gradually excavated to a depth of 4 m (about 5 m aNN). After removal of the topsoil hundreds of closely connected human remains were

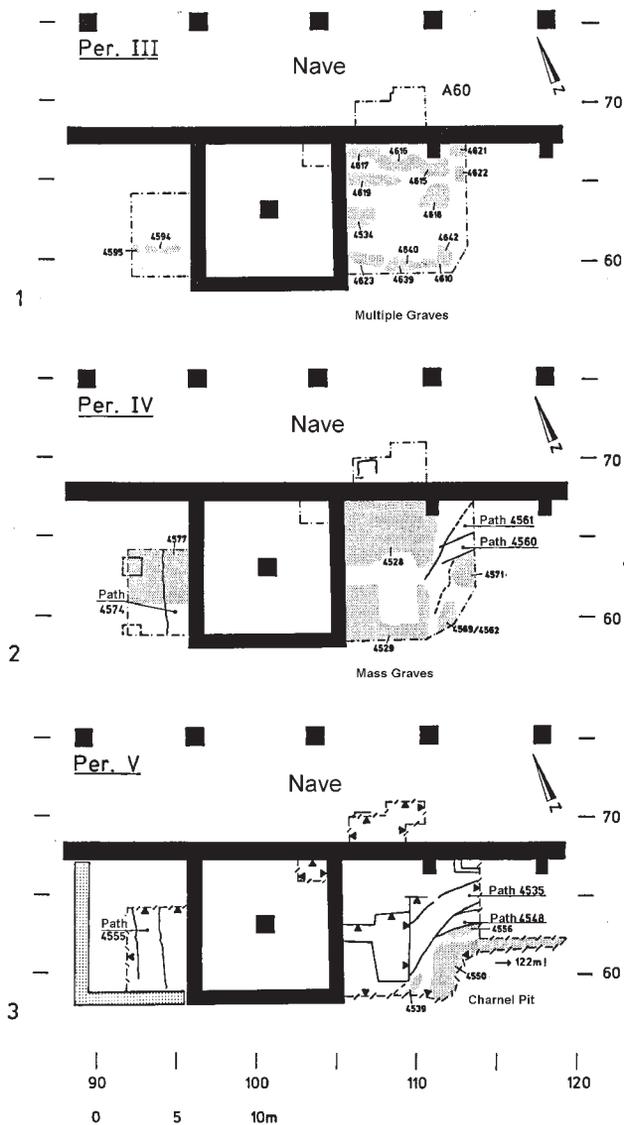


Fig. 1. Holy Ghost Hospital, Lubeck. Excavation campaign 1990-1992: periods III-V with main features.

brought to light which seemed to belong to different mass graves. In addition the right corner of a huge charnel pit had been found, which produced innumerable disarticulated human bones. Its minimum length was 11 m west to east, while it measured four metres across (fig. 1.3)!

Another mass grave, which disturbed two older inhumations, was found in a trench, the western part of which had been cut by the extension (“Mannsstube”), which was probably built in 1606.<sup>7</sup>

From the relative chronology that I built up with the help of the Bonn Harris PC-program I can make a distinction between an older (period 3) and a younger (period 4) burial horizon. The older one consisted of 15 grave pits 1.4 to 4 m in length and 0.7 to 1.7 m in width (fig. 1.1). They were adjacent to another in four lines north to south. The pits contained between three and 22 individuals of both sexes lying side by side and one above the other. Their orientation followed the Christian scheme with the head looking to the east. The size of the pit decided how the dead were placed in it (*i.e.*: the pit was not made to measure a certain number of bodies, but the opposite). In four of these multiple burials – as the excavators called them – the bodies were stacked up like roof tiles west to east. In one grave the bodies were raised up at an angle of 35°. Obviously the gravediggers had tried to save room, time and trouble.

Even more impressive were the four mass graves that covered or cut these multiple burials (fig. 1.2). The two bigger ones (features 4528 & 4529) occupied nearly two thirds of the excavation area (fig. 2). Both were about 5.2-m long, 4.5-m wide and probably about 2-m deep. The northern mass grave contained 364 individuals, the southern one – which had been disturbed by the modern drain and was not



*Fig. 2. Holy Ghost Hospital, Lubeck. Excavation campaign 1990-1992: Excavating mass grave 4529. Photo: Bereich Archäologie der Hansestadt Lübeck.*

completely excavated southwards – 332, that is 696 individuals in all. We assume that these pits originally contained about 800 skeletons!

Furthermore, another two mass graves of smaller dimensions were partially uncovered east of them. These consisted of 87 (feature 4571) and 33 individuals (feature 4562), the smaller one being definitely younger.

Despite or because of the confined room the bodies had been carefully placed in the pits rather than thrown in. They had been laid down west to east and north to south in three or four rows overlapping each other and stacked up to five deep, only in a few cases separated by thin layers of soil. In the southernmost row the legs had been bent to fit the bodies into the pit. There was no clear evidence of coffins but some fabric remains may indicate that the dead had been buried in shrouds or in their clothes. The vast majority of the skeletons were correctly oriented with their head at the west and laid out on their backs. Two skeletons were buried lying on the stomach.

I have tried a quantitative analysis of the arm positions based on the model by Lars Redin.<sup>8</sup> Qualifying one must say that only 58% of the skeletons of period 3 and 62% of period 4 could be evaluated. The others were partially disturbed. The comparison between older and younger graves shows that arms folded across the stomach or crossed over the chest (type C and D) are more often found in the later graves. This result corresponds with the general tendency that the arms “climb up” from the early Middle Ages.<sup>9</sup>

The sex of the skeletons was determined<sup>10</sup> by the Sjøvold method for adolescents and adults and the Schutkowski method for infants. The determina-

tion of ages was based on the Szilvassy method.<sup>11</sup> As in other medieval cemeteries in the city of Lubeck the majority (58%) of the skeletons found in the mass graves were male. Boys also dominate within the group of children and adolescents respectively that comprises 25-30% of the individuals! In this context it may be of interest that many infants had been deposited between the legs of adults or on their chests. Furthermore, for the first time, the morphological comparison of the metrical data of the skull<sup>12</sup> with other European skeletal series shows a faint resemblance to Slavonic populations.<sup>13</sup> The anthropological examination of the skeletons has not been finished yet. It will be carried out by Prof. Dr. Bernd Hermann, Institute of Anthropology, Göttingen University. The aim of this research project is to answer questions concerning the form of nutrition, diseases etc.

### *3. Historical Interpretation*

The huge number of skeletons – about 5 % of the medieval population estimated at 15.000 people<sup>14</sup> – has led to the suggestion that the two bigger mass graves are plague victims from the Black Death of 1350. The two smaller pits were supposedly mass graves from one of the following plague waves of 1367, 1376, 1388 or maybe 1396 that actually claimed fewer victims than the first one of 1350. Of course the dating evidence – the radiocarbon dating ranges from 1260 to 1390 – is too imprecise to verify this thesis. Still, we have some hints, which support this idea:

1. As the <sup>14</sup>C and the ceramic analyses suggest, the distance in time between the multiple graves and the mass graves is very short. Yet we have to assume an interval of several decades represented by one or pos-



*Fig. 3. East Smithfield Cemetery, London. Excavation campaign 1986-1988: A bird's eye view of one of the three mass burial trenches. Photo: Museum of London.*

sibly two brick ways crossing this part of the churchyard.

2. The dead seem to have been buried within a short time. The pits had been planned for a large number of persons. The fact that they were not spacious enough could indicate that more people died than was expected. We know from medieval sources that the “*pestilentia maxima*” spread at a high speed.

3. The first emergency cemetery outside the town walls is supposed to have been laid out in front of the “Burgtor” (Castle Gate) in the summer of 1350. It is mentioned as “*cymiterium pauperum*” in 1373.<sup>15</sup> Before this date all plague victims had to be buried in the town. This practice was by no means unusual as many examples from the later Middle Ages and from the early Modern Age confirm, for instance Augsburg 1463,<sup>16</sup> Nuremberg 1517,<sup>17</sup> Zurich 1611<sup>18</sup> and Paderborn 1636.<sup>19</sup> It has to be seen against the religious background at that time when the burial *apud ecclesiam* in consecrated earth was the elementary precondition for the salvation of one’s soul.<sup>20</sup> For that reason it was only natural that the first sudden and unexpected appearance of the Black Death caused the people to act according to custom.

So at last we have only two possible historical events – the great European famine of 1316-17<sup>21</sup> and the first plague wave of 1350. The decisive and also the only written source is the Lübeck chronicle. An unknown writer reports the effects of the great famine in 1320: *Within two years 2300 folks died at the Holy Ghost and the hunger was so great that one found dead men everywhere, lying on the streets, in the fields, in bushes and churches.*<sup>22</sup> Hopefully future research will bring certainty!

#### *4. Archaeological parallels from other European Countries: England, Denmark, and Switzerland*

A handful of comparable European mass burial sites related to epidemics have been archaeologically investigated.<sup>23</sup>

##### *London, England*

The oldest archaeological report is on an (uncertain) mass grave found at St. Bartholomew’s Hospital, Newgate Street, in 1905 and published by F. G. Hilton Price; he wrote: “... *Mr. A. Abrahams informed me [Hilton Price] that through the courtesy of Mr. Nelson Wise he was able to visit the excavations on this site, where upwards of 400 skeletons had been in all discovered. He told me they were found in an oblong excavation measuring about 50 feet by 20 feet [15.2 x 6.1 m], situated close to the wall over the southern extremity of the St. Bartholomew’s Hospital property, and extending partly beneath the old swimming bath of the Bluecoat School. This oblong excavation was probably 20 feet in depth, and a separate grave had been cut for each occupant; the bodies were laid one over the other with about a foot or more of earth lying between them, and they were arranged eight deep. The highest grave was about 8 feet from the surface of the ground. The sinking of the ground after these burials had rather brought the interments closer together. But from the nature of the soil it was clear that they had been separately interred, and were not cast into a pit all together as was usually the case in plague pits... These bodies had been simply interred in their coarse frocks, as no vestige of wood was found with them, but with them about one hundred leaden crosses were met with, possibly laid upon their breasts... After duly considering these points I consider that these crosses belonged to members of the Friars Minors in London who had died of the Black Death in the great visitation of 1348-1349.*”<sup>24</sup>

Between 1986 and 1988 one of the two documented emergency cemeteries of London, the East Smithfield cemetery, was excavated at the Royal Mint site by the Museum of London's Department of Greater London Archaeology (fig. 3).<sup>25</sup> The burials were not spread out over the whole site but restricted to two distinct areas on the west and east.

The western area produced one mass burial pit, two mass burial trenches running north to south and "conventional" graves laid out in 11 parallel rows of the same orientation (266 individuals). The mass burial trench in the west was 67-m long, 2 m-wide and had a maximum surviving depth of 1.25 m. It contained the remains of 242 individuals. The eastern one was 9.5 m in length, about 2 m in width and up to a maximum of 1.66-m deep. This feature contained 50 individuals. The mass burial pit was only 2.06-m long, 1.56 m-wide and 0.55-m deep; it comprised eight skeletons.

The eastern area consisted of one mass burial trench and graves laid out in four parallel north-south rows (containing 90 individuals). The mass burial trench, the northern bound of which could not be determined clearly due to modern truncation is expected to have had an original length of 125 m. It had an average width of 2 m and a maximum surviving depth of 0.75 m. Only 105 individuals were excavated.

All excavated skeletons were lying in supine position with their heads in the west and feet at the east, with the exception of one prone and one crouched individual both from mass burial trenches. They represented both sexes of all age groups but the number of children was comparatively low. As in Lubeck the dead had been carefully placed, rather than thrown, packed very densely, and laid up to five deep.

#### *Hereford, England*

Even more similarities to the Lubeck graves show the three mass burial graves that have been partly excavated by the City of Hereford Archaeology Unit in the south-west corner of the Cathedral Close in 1993.<sup>26</sup> They were of rectangular shape laid out in a row. The southernmost mass grave (pit 1360) contained about 120 individuals, the central (pit 0157) over 50 and the northern one (pit 2359 of which only a small part was excavated) 12.<sup>27</sup> It is assumed that the original number was about 300 or 400 skeletons, or 10 % of the estimated 3000 inhabitants of Hereford at the time! The pits (which were unfortunately disturbed by post-medieval excavations) all continuing west beyond the area; their dimensions correspond with that of the two larger mass graves at Lubeck (ca. 4 x 5 m). Most of the individuals were buried in shrouds and just separated by a thin layer of clay but there was some evidence of coffins. The vast majority of the bodies were orientated in the Christian manner with their head at the west and resting on their backs. Similar to the East Smithfield cemetery, juveniles, in particular infants, are under-represented.

#### *Randers, Denmark*

Churchyard excavations around the Church of Our Lady (Vor Frue Kirke) in Randers in 1989 produced a late medieval(?) multiple burial 1.9 m in length and 1.26 m in width in which 11 individuals had been interred.<sup>28</sup>

#### *Zurich, Switzerland*

A mass burial pit (2 x 2 m) dating from the 14th century was found during sewerage works in the precincts of the Grossmünster cathedral at the "Zwingliplatz"

in 1985. It contained the skeletons of 20 adults and four infants laid down in four layers, the latter between the heads of the adults. There was some indication of coffins.<sup>29</sup> Another mass grave containing several skeletons laid on top of each other and separated by layers of soil mixed with lime had been observed seven years before at the corner of Löwenstraße and Seidengasse, i. e. outside the medieval town walls.<sup>30</sup>

#### *Wintherthur, Switzerland*

Two mass burial pits presumably belonging to the plague wave of 1519 have been discovered (but not carefully recorded) to the east of the southern steeple of the town church St. Laurentius at Wintherthur.<sup>31</sup> Grave I was at least 1.6 m in length and 1.4 m in width; it comprised a minimum of four skeletons. Three were oriented northwest-southeast and one was oriented north-south. Grave II measuring about 1.5 by 2 m contained at least 14 individuals that were supine laying west-east (topmost layer) and east-west respectively.<sup>32</sup> The anthropological examination of 8 individuals from grave II revealed that all the dead were infants and adolescents of both sexes at the age of 3-6 months to 19 years.

#### *5. Conclusion*

Excavations at Holy Ghost Hospital, Lubeck, Northern Germany, in the years of 1990-92 have uncovered different mass graves containing more than 800 skeletons in all. It is supposed that the vast majority of them are victims of the Black Death, which arrived at Lubeck at Whitsuntide 1350. The high number of individuals, including many children, and their excellent state of preservation are unique in Europe. The osteological and genetic analysis of

the bones will shed light on some basic biological questions concerning the most serious epidemic in the history of mankind.

#### **Notes**

1. Kruse & Neugebauer 1988; Böker 1988.
2. As the archaeological and architectural investigations (carried out during the redevelopment works in the 1970-80s) have revealed, the foundation stone of the new hospital had been laid before the great fire in 1276, probably shortly after 1260 (Kruse 1997).
3. Hauschild 1981.
4. This part of the extended building complex was finished in 1285 (dendro date).
5. Prechel 1996.
6. Lütgert in preparation.
7. Schaumann 1906 p. 496.
8. Redin 1976.
9. Eggenberger, Ulrich-Bochsler & Schäublin 1983; Kieffer-Olsen 1990.
10. Prechel 1996 p. 326-328.
11. Sjøvold 1988; Schutkowski 1990; Szilvassy 1988.
12. After Penrose 1947.
13. Prechel 1996 p. 330-332.
14. Peters 1940; Hoffmann 1988 p. 310.
15. Hagemann 1952-53 p. 103; Müller 1986 p. 18.
16. Nohl 1924 p. 136.
17. Bauer 1992 p. 10 note 10.
18. Illi 1992 p. 60.
19. Weyand 1983 p. 58.
20. Ariès 1993 p. 43ff.; Ohler 1990 p. 134ff.
21. Curschmann 1900 p. 47ff., 208ff.; Lucas 1930 *passim*.
22. Chroniken 2 p. 335. Translated by author.
23. Particular thanks are due to Dr. John Clark (Museum of London), Dr. Richard Stone (Marches Archaeology, Lyonshall), Dr. Jakob Kieffer-Olsen (Den Antikvariske Samling i Ribe), Dr. Jürg E. Schneider (Büro für Archäologie, Zurich) and Dr. Martin Illi (Zurich) for supplying me with the necessary information on the mentioned sites.
24. Proceedings 1906-07 p. 15ff.; Platt 1978 p. 127 fig. 127.
25. Hawkins 1990.
26. Stone 1993a; Stone 1993b; Stone & Appleton-Fox 1996.

27. Letter to the author by Dr. R. Stone, dated Jan. 23 1995.
28. Information by Dr. Ernst Stidsing, Kulturhistorisk Museum, Randers.
29. Zürcher Denkmalpflege 1985-86 p. 137f.
30. Etter & Schneider 1982-83 p. 49.
31. Jäggi et al. 1993 p. 72.
32. Jäggi et al. 1993 p. 252.

\* Sproglig revision: Annette Lerche Trolle.

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