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MONASTIC WASTE DISPOSAL IN THE LATE MIDDLE AGES – A SUBAQUATIC DEBRIS AND GARBAGE DUMP AT THE LAKESIDE LAVATORY OF SEEHAUSEN (UCKERMARK)

Abstract: The Cistercian nunnery of Seehausen (Uckermark), existing from the 13th to the 16th century, offers interesting insights into the organisation of waste disposal in late medieval monasteries. At the shore of the neighbouring lake posts and timbers of a platform were discovered, and around it hundreds of complete ceramic vessels and numerous other finds were recovered. Moreover, debris which was rich in medieval finds was also dumped at the shore of the lake. The subaquatic finds document two different aspects of monastic waste disposal: part of the material was littered at a lakeside lavatory over a long time, while the other part, together with the debris, was disposed of after a fire disaster in the monastery which is recorded for 1445. The Seehausen find complex, which is currently analysed within the framework of a research project, is discussed as part of the issue of the role of waters for medieval monastic waste management.

Keywords: Seehausen, Cistercian nunnery, monasteries, late Middle Ages, waste disposal

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Waste disposal in a medieval monastery

Medieval monasteries were often very clean: in the well-organized communities the coenobites themselves or servants took care of the monastic everyday life zones, the purgation of the church and the daily disposal of waste. The nuns and monks had special hygienic demands, due to practical requirements necessary for the coexistence of a larger group of people as well as due to their claims to form a spiritual community agreeable to God. These approaches were already reflected by the construction of the monasteries. Central buildings were usually made of stone or brick. Floors were tiled or provided with solid pavements. Water was conveyed into the monasteries by stone channels or wooden or leaden pipes, often made in an elaborate manner.[1] Whole streams could be led through the monasteries, in order to supply water and for disposal purposes. Convenient latrines were part of the construction programme from the outset. Hence, the convents were provided with a, for medieval conditions, unusually mature waste disposal system. It is not necessary to emphasize the enormity of the problem of disposing waste and effluents of larger communities in pre-modern times.[2]

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[1] Archaeologically detected or still existing examples of channel and pipe systems, just to mention only some instructive examples, are known from Kloster Zinna in Brandenburg (Schumann 1997, 105-107, Figs. 6-9), the Øm monastery in Jutland, Denmark (Gregersen and Selch Jensen 2003, 177-181), Ihlow in Ostfriesland (Brüggler 2012, 109, 217-219; Thiemann 2012, 324-325), Alzey in Rhenish Hesse and Maulbronn in the Northern Black Forest (Grewe 1991b, 34-35, 45-48, Figs. 25, 42-49), or Tom Roden in Höxter (Korzus 1982, 64-68, 140-145; Kosch 1991, 99-101), Liesborn (Peine 1993a, 71-77, 85-90), and Gravenhorst (Münz-Vierboom 2007, 4-5, 49-54, 84-86), all in Westphalia; numerous examples exist in France (Benoit and Wabont 1991) and England (Bond 1991, 161-170); for the famous medieval map of pipes in Canterbury see Grewe 1991a; for general information see Grewe 1991b, 40-47; Kosch 1991.

[2] Cf. for the problem and its medieval solutions Grewe 1991b, 74-78.

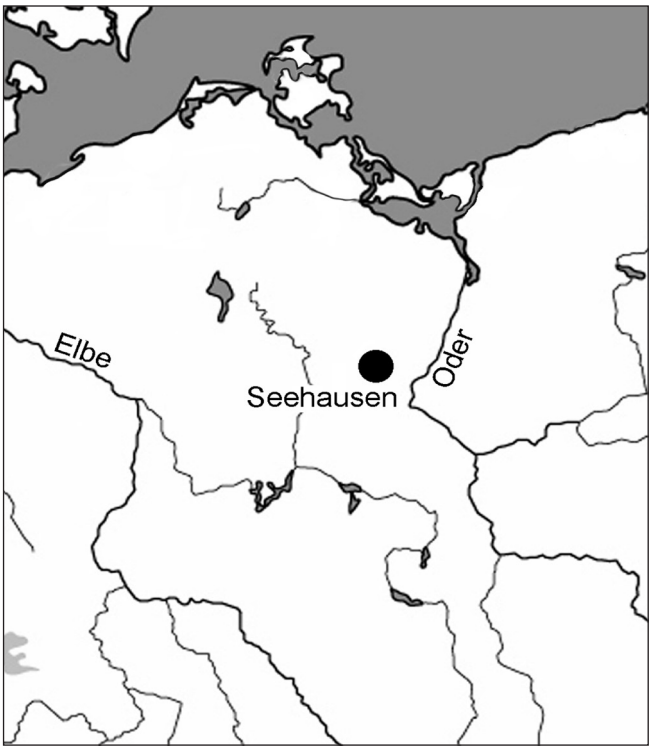

Fig. 1. Location of Seehausen. Elaborated by F. Biermann.

However, when it comes to excavations in monasteries or their claustrum areas this means that they often deliver only comparatively few finds. In the cloisters themselves, strata rich in finds or cultural layers formed during the use are rather rare. The bulk of finds at monastic sites is yielded by waste collection places, for instance latrine pits, disused wells or cellars, ditches, etc.[3] In this respect, the Cistercian nunnery of Seehausen, Uckermark, Northern Brandenburg, Germany (Fig. 1) presents a special situation. As usual, the excavations in the church and in the monastery delivered neither strong cultural layers nor large quantities of finds. But in the shore layers of the neighbouring lake, around the posts of a wooden construction, huge quantities of material goods from the 13th to the 15th/16th centuries were discovered – among others, nearly 900 complete clay vessels, dozens of non-ferrous bowls, lots of ornaments and coins. Many of the items disposed there would still have been usable, or, at least, were still of material value. Therefore, their astonishing disposal has not yet been explained satisfactorily.

We understand the find situation, as outlined below, as a result of two different backgrounds: both are connected with monastic waste disposal, but on the one hand with everyday life, on the other with a disaster event. Part of the material was littered at a waterside lavatory over decades, while the other part, together with debris, after a fire in the monastery which was recorded for 1445. Thus, when it comes to the organization of waste disposal in medieval monastic communities, especially for the many abbeys located at the shores of lakes, the Seehausen find complex is of considerable interest.

The Seehausen Monastery – building structures and the find complex

The Cistercian *Marienwerder* ("Mary's island") convent of Seehausen existed on a peninsula in the lake called Oberuckersee, south of Prenzlau, from the 13th to the 16th century. It originated in a time when Pomeranian Dukes ruled the Uckermark, but since the middle of the 13th century the Margraviate – later Electorate – of Brandenburg dominated the region; in the whole time of its existence it was in the competence of the bishopric of Kamień Pomorski (Cammin).[4] The abbey was dissolved in the course of the Protestant reformation, was later demolished and has now completely disappeared from the earth's surface (Fig. 2). Field research carried out from 1984 to 1991 and 2011/2012,[5] including geomagnetic, excavation and underwater research, brought the structure of the monastery back to light (Fig. 3): a closed cloister complex of 60-62 m side length, mostly made of brick, was in the south attached to a fieldstone hall church, slightly offset to the east. The cloister wings were arranged with crosscoats around an inner courtyard. According to the field work results, it functionally presented a typical Cistercian design. In the east wing there was – among others – the assembly hall and probably also the dormitory of the nuns. In the south there was the warming room and the refectory, while the west wing – with its large cellar – served rather economic purposes. Around the church and the cloister there existed various buildings for agricultural and other purposes. Especially in the north there was an extensive estate which included a large barn, a well, workshops and a brick kiln built in the 15th century. The terrain to the east of the cloister was enclosed by walls in the north and the lake in

[3] Cf. for instance, the results of archaeologically researched monasteries in Ihlow and Hude, Lower Saxony (Brüggler 2012, 252-253), or Hiddensee, Cispomerania (Biermann 2010, 299-319). These yielded only a few finds from cultural layers connected to the use in the church and cloisters. At tom Roden (Korzus 1982, 154-162) and Liesborn (Peine 1993b, 156, 174, 197, 202) there were wells or cellars that were rich in finds. These features were secondarily used for waste disposal purposes.

[4] Cf. for the history of the monastery Kohn 2010, 1099-1106; Biermann and Frey 2014a, 9-16, 31-33, 129-131 (beneath else by F. Escher), both with sources and further literature.

[5] Schulz 1995, 33-34; Jaitner and Kohn 1996; Jaitner et al. 1999; Biermann et al. 2012; Frey 2012; Biermann et al. 2013; Biermann and Frey 2014a.

Fig. 2. The peninsula of Seehausen in Lake Oberuckersee, aerial view from the south. The monastery was located at the central part of the peninsula (between two trees at the eastern shore), at the bay called Lanke. Photo J. Wacker.

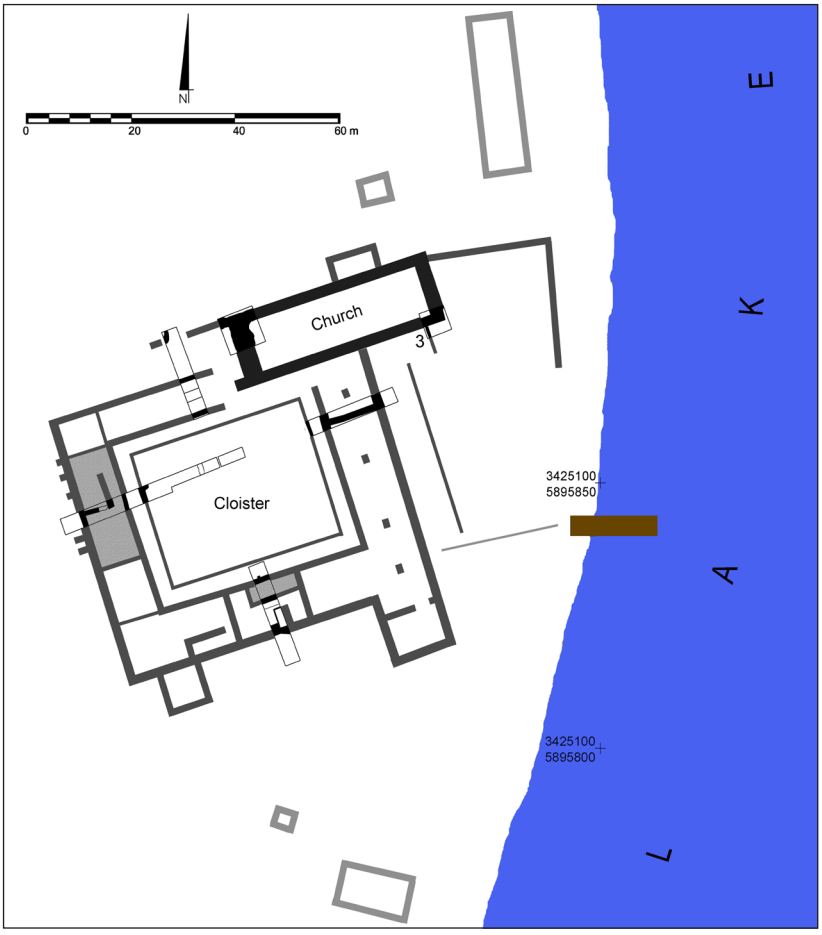

Fig. 3. Plan of the monastery basements and cellars (grey) with the church (black), the wooden lake construction (brown) and the geomagnetic anomaly between the latter and the cloister, according to excavations and geophysical surveys, simplified. Drawing F. Biermann.

the east. This zone was probably a kind of garden. The monastery was renovated and rebuilt several times, especially after fire events for which there is written evidence.

The church and cloister were erected about 30 to 40 m west of the bank of the "Lanke", a branch of Lake Oberuckersee. In the 1980s, underwater investigations were carried out there, including an excavation trench of 18 × 2 m. In order to detect all finds, the sediment was sucked, pumped on the shore and flushed through sieves. Due to difficult research conditions in mud and water, stratigraphy and the stratigraphic contexts of the finds were recorded rather rudimentarily. The trench brought to light a concentration of wooden piles of different size and profiles, running eastwards from a reed zone directly at the shore, approximately 18 m into larger water depth - until 3.5 m (Fig. 4). In the west, some of the piles probably belonged to a shoreline stabilisation system. To the east there follows a rather unstructured cluster of posts of approximately 8 m length and 6 m width, forming two irregular rows of piles in a W-E alignment, one in the north and one in the south of the field of poles. The concentration of poles is limited to the shallow water. Behind a 2 m wide sector of the descending sea ground which is free of poles there follows a 7 m long

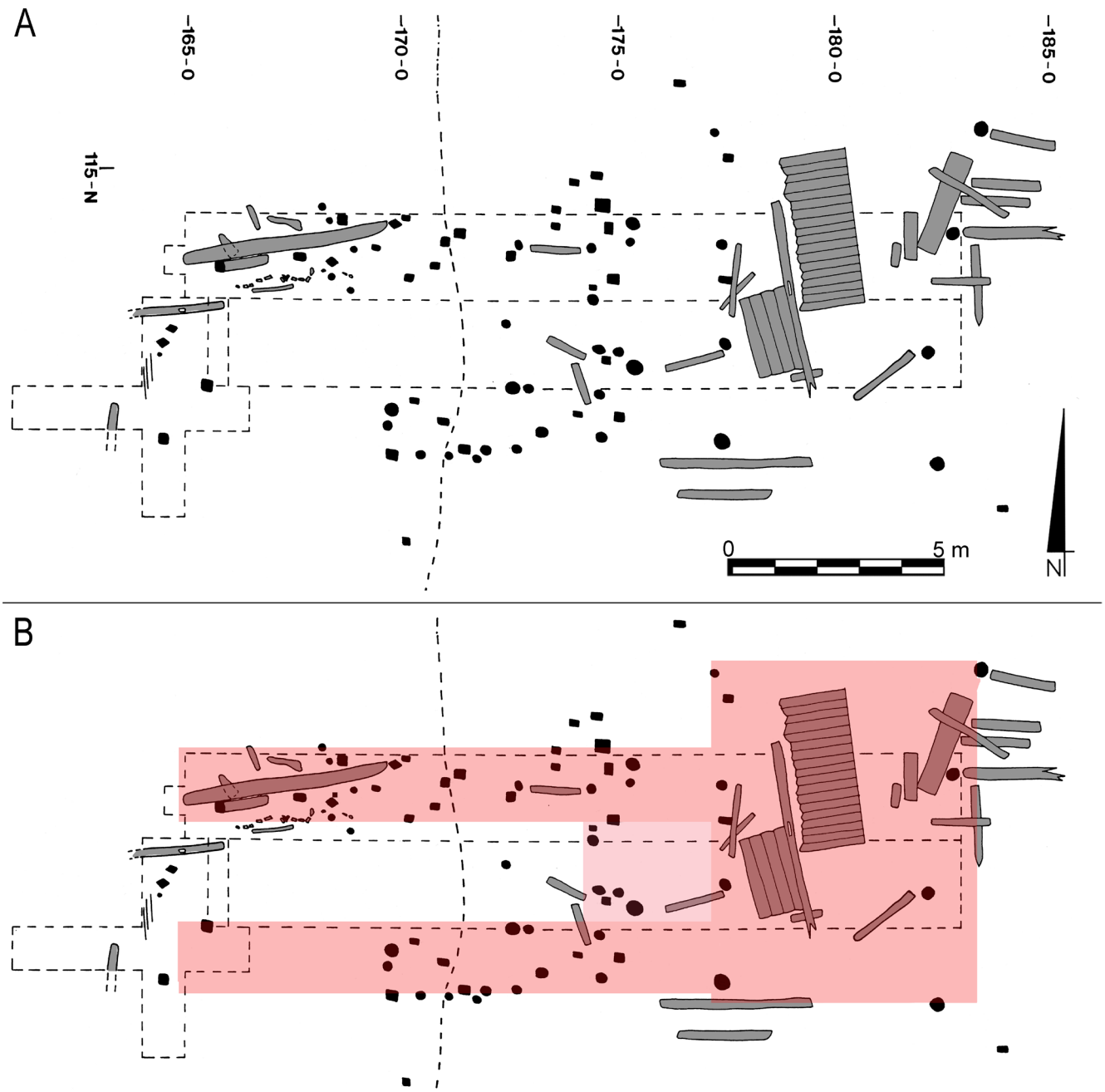

Fig. 4. Plan of the pile construction with posts (black), boards and timber (grey). A: archaeological record; B: reconstruction proposal with two footbridges (red). The dashed line marks the shoreline of 1984. After Schulz 1995, 33, Fig. 2, modified.

N-S aligned row of six posts. This row has its counterpart in another row of four posts 5 m to the west, approximately of the same length, but a little arcuate. As indicated by several wooden boards and timbers in a collapsed position on the ground between the two rows, these strong post rows formed the subbase of the main building above the lake: a rectangular platform of 5 × 7 m, based on posts which were probably linked by wooden girders. The boards probably belonged to the side walls and the roof of the building. Punched and edged beams indicate that it was a kind of half-timbered work (Fig. 5). One wide bridge or two narrow footbridges connected this building with the shore of the lake. Samples were taken for dendrochronology in the year 2014 from several posts which are still visible in the reed zone (Fig. 6). Two of these delivered the following results: 1311 +/-10 and around/after 1314.[6] Another four posts from the western part of the cluster were already sampled in ca. 1990 and yielded tree-ring data from the late 14th to the first half

[6] Dr. K.-U. Heußner, German Archaeological Institute (Berlin), no. C 75551, 75554, report of April 29, 2014; the samples were taken by the authors of this paper.

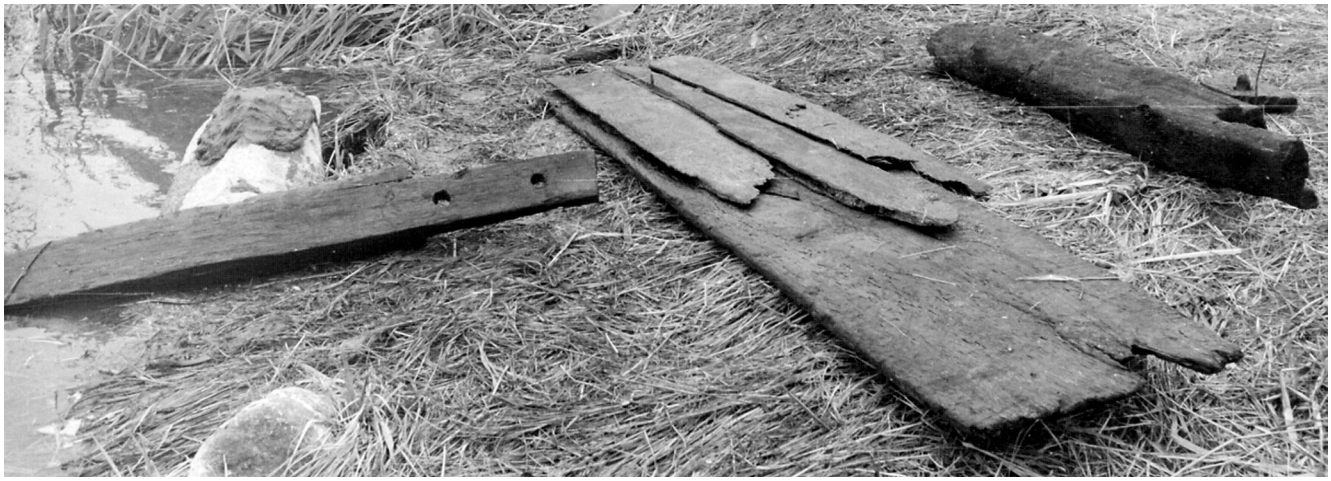

Fig. 5. Timber and boards from the lake immediately after recovery, 1980s. Photo H.-J. Schulz. After Schulz 2014, 71, Fig. 63.

Fig. 6. Two posts (in the foreground) from the wooden construction, fieldstones and bricks at the shore of the lake, view to the north, 2015. Photo F. Biermann.

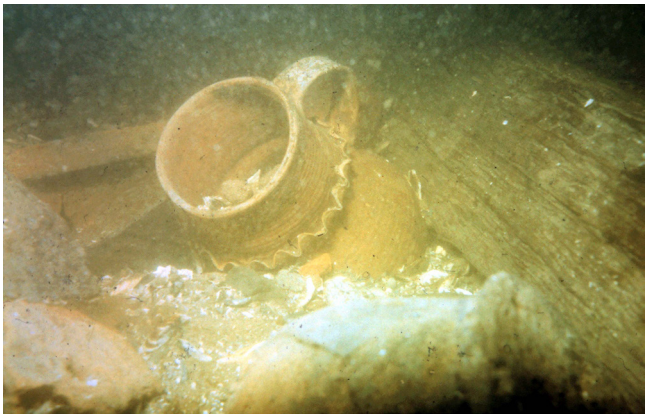

Fig. 7. Stoneware jug at the ground of the lake at the pile construction. Photo H.-J. Schulz. After Schulz 2014, 69, Fig. 60.

of the 15th century.[7] The data is not easy to connect with the building history of the post structure, which was rather poorly recorded and documented.[8] Certainly not all posts are uncovered. However, they still provide some chronological orientation and indicate a longer use of the construction, with several renovations and rebuilding.[9]

Around the remains of the wooden construction a ca. 0.4-0.5 thick organic silt layer with debris was found on the lake's ground (marl covered by peat). It covered the area of at least 15 × 15 m. The organic silt layer thickened directly at the shore and was covered by other debris layers. Much charcoal, broken bricks and burned timber were found in the silt and debris layers. Furthermore, these layers yielded numerous finds (Figs. 7 and 8), including nearly 900 complete ceramic vessels – mainly grey earthenware, furthermore stoneware (approximately 16%) and near-stoneware (ca. 9%), mostly cans and jugs (Figs. 9 and 10) – and impressive small finds. These included lots of utensils for everyday life and crafts, pieces of jewellery and dress ornaments,

[7] Schulz 1995, 35; Schulz 2018a, 28; this data is rather unsecure.

[8] Moreover, there are several ambiguities between earlier published plans of the structure (cf. for instance, Schulz 1995, 33, Fig. 2; Schulz 2014, 70, Fig. 61) which are difficult to solve on the basis of the field documentation.

[9] For this feature, but with a significantly dissenting interpretation, cf. Jaitner and Kohn 1986, 31-32; Schulz 1995, 33-37; Schulz 2014, 68-71; Schulz 2018a, 12-13; Schulz 2018b.

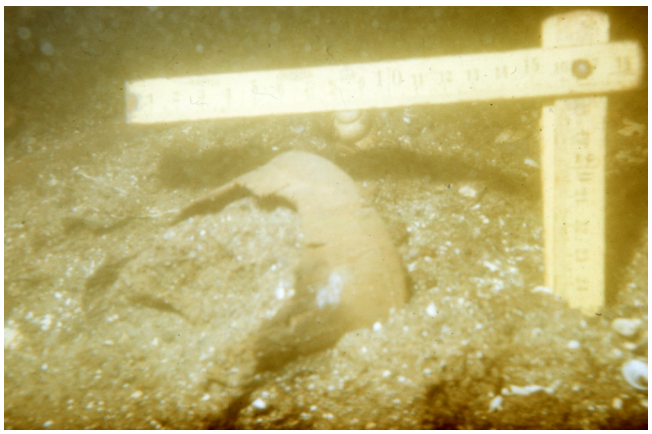

Fig. 8. Wooden vessel at the ground of the lake. Photo H.-J. Schulz.

Fig. 9. Selection of 27 out of roughly 900 complete or nearly complete vessels from the ground of the lake at the pile construction. Photo K. Frey.

Fig. 10. Small vessels and clay figurines. Height of the figurine on the left: 9.5 cm. Photo K. Frey.

Fig. 11. Glass-decorated brazen belt buckle. Diameter 2.1 cm. Photo K. Frey.

Fig. 12. Figurines of the Infant Jesus (gilded nonferrous metal, height 3.5 cm, left) and of a praying monk (glazed clay, height 5.5 cm, right). Photo K. Frey.

buckles (Fig. 11), more than 60 pilgrim's badges, book clasps, combs, spindle whorls, religious clay and metal figures (Figs. 10 and 12), padlocks and keys (Fig. 13), toys, clay taws, wooden plates and spoons, knives (Fig. 14), remnants of glass beakers, silver coins, rosary beads, approximately 2000 needles, animal bones, etc. Among them there are artefacts which undoubtedly still had utility or at least scrap value, for instance two tin cans and over two dozen non-ferrous metal vessels and bowls (Fig. 15).[10] While the bulk of the finds, especially the earthen crockery, was concentrated in the dumping zone around the wooden construction, there were debris deposits across further sections of the lake

[10] Jaitner and Kohn 1994; Schulz 1995, 34-36; Jaitner and Kohn 1996, 32; Kühne and Brumme 2007; Schumann 2007, 458-459; Kohn 2010; Biermann and Frey 2014a; Biermann and Frey 2014b.

Fig. 13. Iron padlocks and keys. Length of the key on the right below: 5.7 cm. Photo K. Frey.

Fig. 14. Knives. Length of the artefact on the right: 12.2 cm. Photo K. Frey.

shore. In smaller excavation trenches in the swampy grounds at the shore, about 70 m south of the landing stage, fire debris and some finds came to light, too, and on the whole shore east of the cloister debris is spread on the earth's surface still today.

A subaquatic debris and garbage dump at a lakeside lavatory

Concerning the unusually rich subaquatic find complex on the shore of the "Lanke", obviously we are dealing with two different find contexts: on the one hand with things lost or dumped into the water over a longer time span, and on the other hand with things included in deposited fire debris from a disaster event. The latter explanation can be traced back already to the excavators[11] and finds strong support in the find situation. Namely, the coins recovered from the rubble belong predominantly to the late 14th and 15th centuries,[12] and also many other finds can be dated to the time between ca. 1380 und 1450. Fire-blackened bricks, charcoal, burnt small finds etc. were deposited in the debris layer.[13] It is therefore reasonable to link a subsequent part of the finds with an event known from written evidence. For the year 1445 a devastating fire with a subsequent reconstruction of the monastery is documented. Letters of indulgence by the Bishops of

[11] First time published by Schulz 1985, 130.
[12] Jaitner 1998, 7.
[13] Schulz 1995, 35.

Fig. 15. Selection of brass and bronze vessels. Photo K. Frey.

Cammin and Lebus as well as foundations which were supposed to promote the subsequent reconstruction tell us about it. The same can be inferred from an appeal of the Elector of Brandenburg to support the rebuilding.[14] A huge portion of the finds was apparently deposited together with the demolition waste used for bank stabilisation, which is distributed in a laminar manner on large parts of the bank. A question remains why partly valuable materials, at least useful as salvage, were disposed on this occasion. Especially many of the metal artefacts were still useable, at least for melting down and recycling. Probably these items were so deeply buried in the rubble that their recovery was not possible or not worth the effort when the rubble was dumped into the water. Particularly the smaller artefacts might have been overlooked during the rough clearing work.

This certainly does not apply to the larger finds, such as bronze and brass cauldrons and bowls. Several of them were deposited not in the deep water of the lake but in shallow debris on the swampy lakeshore (Figs. 16 and 17) and would therefore have been easily retrievable. But it seems that this was not intended. The nuns may have been in a fatalistic mood after the fire catastrophe and paid no more attention to the partly annealed objects. The fact that particularly valuable things – such as cauldrons and tripods made of non-ferrous metal – remained in place after the fire destruction and similar catastrophic events is a phenomenon well known from other sites.[15] This interpretation is supported by a similar find from the Cistercian nunnery of Kentrup at Hamm in Westphalia. After a fire of the cloister's eastern wing in the early 17th century, the debris was filled into a 14 m wide and 3.3 m deep ditch near the building complex, together with many pieces of furniture and household items, often still usable or at least of material valuable: ceramic vessels and tiles, devotional items, fragmented glass beakers, metal utensils et cetera.[16]

The Seehausen find complex also contained things significantly earlier than 1445, such as ceramics and numerous metal finds from the 13th century onwards.[17] Moreover, the many complete clay vessels concentrate strictly around the stilt construction. They are much less present in the rubble distributed in a laminar-like way in the further parts of the bank, which we can connect with the events from 1445. Therefore, certainly not all finds, especially not all ceramics, come from the demolition of the monastery after the 1445 fire catastrophe. A sizeable part of the finds is earlier. These are apparently items from different phases of

[14] Kohn 2010, 1099.

[15] Cf. Hasse 1980, 133; Drescher 1982, 157; Krabath 2001, 34; Biermann et al. 2016, 134-136.

[16] Essling-Wintzer and Kneppe 2011, 131-134, Figs. 4 and 5.

[17] Schulz 1995; Biermann and Frey 2014a.

Fig. 16. A bronze cauldron in debris layers from the 15th century in the swampy reed zone at the shore of the lake, 2012. Photo F. Biermann.

Fig. 17. A nonferrous metal bowl immediately after discovery in the reed zone of the lake, 2015. Photo F. Biermann.

the monastery's history that were lost or thrown away. Eventually, they were dropped and dumped from the wooden platform.

So far, this unusual find complex prompted several hypotheses of diverging plausibility. For example, a religiously or superstitiously motivated sinking of complete ceramic or metal vessels was discussed.[18] That might be the case with individual pieces, but it cannot explain the bulk of the finds. Rather implausible is the hypothesis that the nuns deliberately threw valuables into the lake when the abbey was dissolved in the 1540s, in order to avoid delivering them to the Elector of Brandenburg.[19] However, the fact that only a few 16th-century artefacts were discovered in the lake speaks against this model. More convincing is the assumption that the wooden platform was a landing stage, serving for water communication of the monastery. The find cluster in its vicinity may be a result of losing household goods, ornaments, et cetera over a long time, during use, washing, cleaning and shipment on the lake shore.[20]

The fact that plant remains from the sediments, analysed with palaeobotanical methods and published already in 1988, sometimes showed signs of digestion[21] indicates, however, that the lake building did not serve

[18] Schulz 1995, 37.

[19] Jaitner and Kohn 1996, 32; Bilang 1998, 104; this hypothesis is based on punctures in a brass vessel, interpreted as evidence for intentional disablement before the abandonment of the monastery (Jaitner and Kohn 1996, 62; Jaitner and Schumann 1999, 106), but probably the punctures were rather preparations for repairing of the vessel.

[20] Cf. beneath else, Lange 1988, 6; Lange 1989; Schulz 1995, 34; Schulz 2014, 69; Schulz 2018a, 27.

[21] Lange 1988, 6; Lange 1989.

as a landing stage. The same is implied by the quality and quantity of the finds, the wooden relics of the pile construction, as well as many more pits of fruit and seeds in the layers around it. On the contrary, we propose an interpretation as a lavatory or *necessarium*. A wooden construction above a lake was quite suitable for this purpose.[22] It was built as a rectangular, half-timbered pile house covering an area of approximately 5 × 7 m, approximately 8-10 m from the shoreline; the latter might have changed gradually between the Middle Ages and today, of course. The building rests on strong posts in already over 3.5 m water depth, where the effluents were swept away by drifts in the lake – slowly, but steadily. A wide bridge or two narrow footbridges granted access to the toilets, perhaps – in the latter case – divided into two rooms with separate entrances for different groups of the monastery's inhabitants. However, a detailed reconstruction of the design and use of the rudimentarily preserved and documented building is hardly possible. The lavatory was easily accessible from the eastern monastery wing with the nuns sleeping hall: a 30 m walk via the enclosed garden between the cloister and the shore of the lake. Probably there was a gallery connecting the eastern wing and the lavatory. The existence of this walk is indicated by a rather unstructured line of geomagnetic anomalies oriented W-SW to E-NE and connecting the eastern wing and the lakeside post construction (Fig. 3). This anomaly possibly mirrors the destroyed foundation of a half-timbered gangway on a fieldstone base.[23] Together with this corridor, the lakeside lavatory, even though constructed mainly of wood, formed probably a building adequate to the architectonical demands of the monastic complex. It must be emphasized in this context that the construction of the lavatory shows a certain resemblance to the contemporary fortified lake dwellings of petty nobility common in Northern Germany, known as *Kemladen*.[24]

This interpretation also explains the large quantities of finds retrieved in the sediment around the posts: on the one hand, it was the central refuse disposal place of the cloister. Because of the slow current of the water of Lake Oberuckersee, the sewerage was spread, but the vessels and other things remained on the spot. It is well known that other waste was often disposed of in such places – not only in monasteries, but also in rural and urban contexts. On the other hand, there are numerous finds typically lost while visiting such facilities: buckles and other dress equipment, thousands of needles, small coins and utensils of personal spirituality, et cetera. Moreover, it cannot be excluded that some of the clay vessels served for personal hygienic purposes and as chamber pots.

As already emphasized, skilfully designed lavatories in medieval monasteries were common and important. Under ideal circumstances the latrine drained into floating waters. It was positioned at the end of the western or eastern wing of the cloister[25] or formed a separate, slightly distant building, but directly accessible from the cloister via a walk.[26] At the abbey of St. John in Lübeck (Holstein) a kind of toilet tower at the shore of the river, called *privet*, was built at the same time as part of the town wall.[27] A similar lavatory tower, integrated into the town wall, existed at the Franciscan monastery in Greifswald (Cispomerania).[28] A special and advanced type of facilities was realised in the form of the "Dansker" in monastery-castles of the Teutonic Order – toilet towers erected next to the castle above flowing waters, accessible via bridges.[29]

The Seehausen situation with a wooden toilet house based on posts directly above the shore of a lake has apparently no preserved parallel. This is easy to explain by the caducity of wooden buildings. In general, the spatial disposition finds an analogy at the Bridgettine Order monastery in Vadstena (Östergötland, Sweden). There were two lavatories built above the shores of the lake, accessible via walks from the cloisters (Fig. 18).[30] Thus, one can conclude from the finds that the garbage

[22] Until now, there have only been considerations of a cloister's sewer pipe leading into the lake near the wooden construction (Lange 1988, 6; Kohn 1995, 30; Schulz 1995, 34) or of a single outhouse privy on the landing stage (Schulz 1995, 35).

[23] Biermann and Frey 2014a, 43, Fig. 31 (contribution C. Meyer); the anomaly is also interpreted as foundation by M. Schulz (2018b, 24, Fig. 2).

[24] Cf. Biermann 2007, 129-130, with further literature.

[25] Braunfels 1985, 123-126; Kosch 1991, 98; Krongaard Kristensen 2013, 167, Fig. 8.2; such a solution is still preserved or reconstructed, for instance, in Kloster Zinna and Chorin; both in Brandenburg (Wittkopp 2007, 135-136, 142, Figs. 1 and 2; Damm 2007, 154), Bad Doberan, Mecklenburg (Erdmann 1995, 12) and St. Alban's priory in Basel, Switzerland (Kosch 1991, 102-103, Fig. 6), moreover in several French (Benoit and Wabont 1991) and English monasteries (Kosch 1991, 135); medieval lavatory facilities still exist at Buch, Saxony (Koch and Schmidt 2006, 56-74) and Zwettl, Austria (Kosch 1991, 134-137, Figs. 33-37).

[26] Cf., for instance, the ideal plan of Royaumont, Île-de-France (Badstübner 1984, 23; Benoit amd Wabont 1991, 204, Fig. 14; Braunfels 1985, 141, Fig. 61), of Pirita in Estonia (Krongaard Kristensen 2018, 36, Fig. 2.13) and of Vadstena, Östergötland, Sweden (Sigurdson and Zachrisson 2012; Krongaard Kristensen 2018, 28, 30, 129, Figs. 2.6, 7, 6.29); reconstructed at the end of a later stable in Isenhagen, Lüneburger Heide (Appuhn 1966, plan of the ground floor); in general for Denmark – see Krongaard Kristensen 2013, 182-183.

[27] Gläser 2003, 62; Gläser 2007, 125, Fig. 16.

[28] Fassbinder 2003, 158.

[29] Cf., for instance, Torbus 1998, 299-300; Herrmann 2007, 83-84.

[30] Krongaard Kristensen 2018, 28, 30, 129, Figs. 2.6, 7, 6.29.

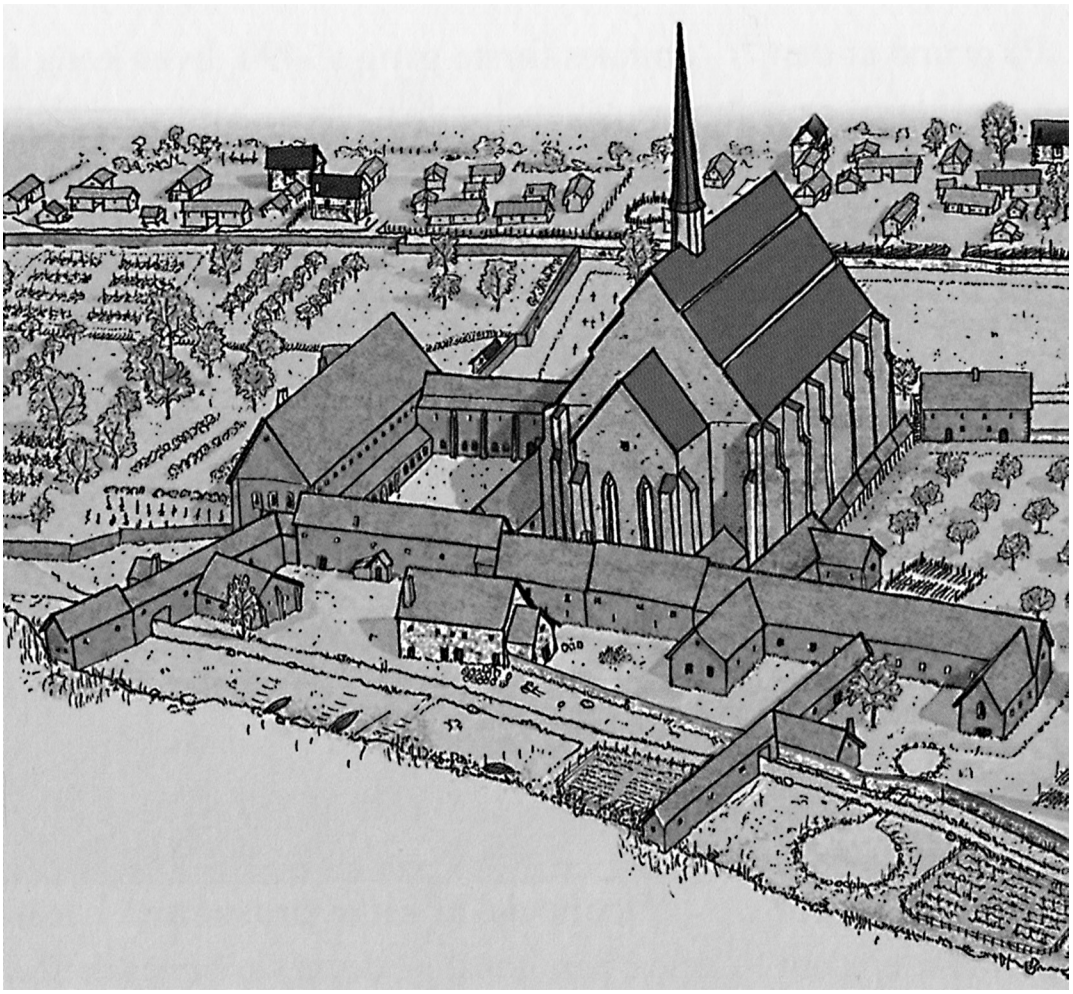

Fig. 18. Reconstruction of the Vadstena monastery. The two long corridors in the foreground lead to the lakeside lavatories. Reconstruction by J. Sigurdson, S. Zachrisson, J. Levin – after Sigurdson and Zachrisson 2012; Krongaard Kristensen 2018, 129, Fig. 4.29, detail.

of the monastery was partly disposed of in the nearby lake, in everyday life as well as after fire catastrophes.

The lake as a monastic waste disposal site

The find situation in Seehausen allows for various conclusions concerning the handling of waste in a medieval convent. The disposal of a large part of the artefacts was probably a direct consequence of the damage fire of 1445. Many items were not found again, were heavily burnt, or their functionality and value were lost due to fire and other damage. It was not worth the effort to recover them from the rubble. Moreover, the magnitude of the devastation, apparently necessitating the reconstruction of extensive parts of the monastery, may have caused a certain degree of fatalism among the nuns, preventing efforts to recover still valuable objects.

The lake was also used for sewage and waste disposal at an earlier stage of the monastery´s history. The pile construction served as a toilet facility at least between beginning of 14th to middle of 15th century, and things were obviously sunk there that were no longer needed. The effluents were lost as fertilizer for agrarian use, but this was the way of proceeding at many places near waters.[31] The advantage of this way of proceeding was that the sewerage did not form a hygienic or discommoding problem anymore. In this manner the monastery could be kept clean and the rubbish was out of sight. The lake – about 685 hectares in size, up to 25 m deep, rich in fish and flowed through by the River Ucker – could certainly tolerate this pollution without losing its ecological balance. Water quality directly at the monastery was also probably affected only slightly. Drinking water was not taken from the lake by the monastery inhabitants, but from wells, and bathing in the lake was probably not one of the Cistercian nun's usual activities. The fact that this also resulted in the sinking of still usable objects, or at least valuable salvage in the lake is a proof of a careless handling of things by a medieval "throwaway society" which by its regulations was obliged to poverty but was in fact wealthy. Despite the

[31] Cf. Grewe 1991b, 76-78.

knowledge of the utility or material value of material goods, people often decided for the convenient way of disposing them.[32]

The characteristic foundation of monasteries at lakes was not only because the latter supplied fish, birds, drinking and service water, communication possibilities on the waterway and – if necessary – natural protection, but also because they were useful for the disposal of waste. A similar approach will have been adopted in other monasteries – the Seehausen find complex provides an indication for comparable monastic-sites to explore the neighbouring lakes. Because for the time being it has few parallels in terms of quantity, richness and value, it is of great scientific significance: the find material offers excellent conditions to learn about the everyday life, economy and religiosity of a medieval convent on the basis of material culture. Therefore, a comprehensive analysis of the extensive find material of the Seehausen nunnery is currently carried out within the framework of a project funded by the German Federal Ministry of Education and Research.

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[32] Biermann and Frey 2013.33

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Streszczenie

Usuwanie odpadów klasztornych w późnym średniowieczu – podwodne wysypisko śmieci i odpadów w *lavatorium* nad jeziorem Seehausen (Uckermark)

Badania archeologiczne prowadzone w latach 1984-2015 w okolicy żeńskiego klasztoru cysterskiego w Seehausen (Uckermark, Północna Brandenburgia, Niemcy), działającego od XIII do XVI stulecia, dostarczyły interesujących obserwacji, m.in. na temat organizacji usuwania nieczystości w późnośredniowiecznych konwentach. Na brzegu pobliskiego jeziora zostały odkryte słupy i fragmenty drewna, stanowiące relikty prostokątnego budynku, dostępnego za pomocą mostu, datowanego dendrochronologicznie na XIV i XV wiek. W jego otoczeniu odkryto niemal 900 kompletnie zachowanych naczyń ceramicznych oraz dziesiątki mis z metali kolorowych, jak również wiele ozdób oraz monet. Do jeziora wyrzucano także innego rodzaju odpadki, ale pośród nich znaleziono przedmioty, które wciąż nadawały się do użytku lub przynajmniej miały wartość materialną.

Badany zespół znalezisk dokumentuje dwa różne aspekty usuwania odpadów w klasztorze. Część materiału gromadziła się w przybrzeżnym *lavatorium* na przestrzeni dekad, natomiast pozostałą część wyrzucono tam razem z rumoszem po katastrofalnym pożarze klasztoru w roku 1445. Prezentowany zbiór przedmiotów, analizowany obecnie w ramach projektu badawczego, został omówiony w kontekście zagadnienia znaczenia wody dla klasztornej gospodarki nieczystościami w średniowieczu.