

STEPHANIE JERNIGAN MALONEY (Louisville, Kentucky, U.S.A.)

DOMESTIC CONSTRUCTION AT THE EARLY MEDIEVAL FORTRESS OF MIETLICA

The site of Mietlica, located on the east bank of Lake Goplo in central Poland (Fig. 1), consists of a settlement complex which includes a fortress, suburbs, and a cemetery (Fig. 2). A small portion of this complex was explored in 1977 - 79 by a joint Polish-American excavation team representing the

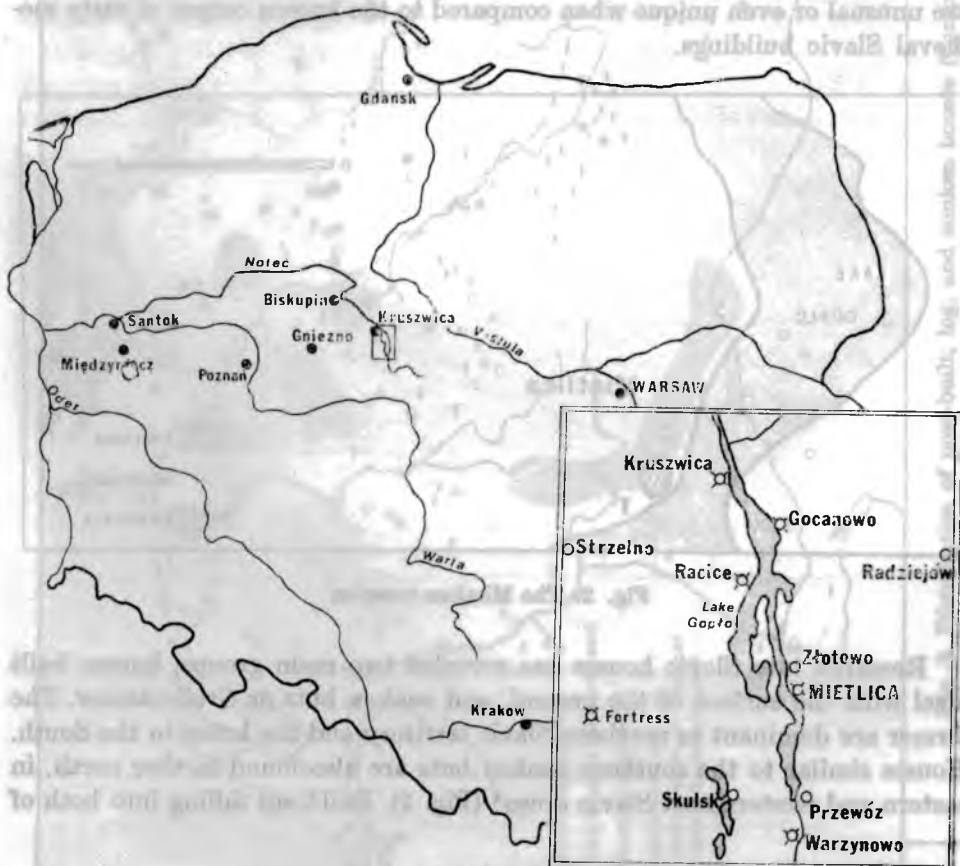


Fig. 1. Poland and the region around Lake Goplo

University of Louisville, Kentucky and the Institute for the History of Material Culture of the Polish Academy of Sciences. The excavations were supported by a grant from the Foreign Currency Program of the Smithsonian Institution.

In many respects the complex at Mietlica has proved to be a typical example of a Slavic proto-urban community. The site, which was first settled by Slavs in the seventh century AD, enjoyed a period of relative prosperity in the ninth and early tenth centuries. It began to decline in the tenth century and by the twelfth was virtually abandoned. The fortification walls were not begun until the ninth century. The method used in constructing those walls, layers of logs packed with sand and clay, is closely related to that found at numerous contemporary sites in Poland. The arrangement of the complex itself, consisting of unfortified suburbs surrounding a fortress with houses arranged around its inner perimeter and an essentially vacant center, is also similar to contemporary sites in Poland and other Slavic lands¹. Although the general situation, and indeed most of the material remains, are typical of northwestern Slavic culture at this period, several of the domestic structures are unusual or even unique when compared to the known corpus of early medieval Slavic buildings.



Fig. 2. The Mietlica complex

Research into Slavic houses has revealed two main groups, houses built level with the surface of the ground, and sunken huts or *Grubenhäuser*. The former are dominant in northern Slavic territory and the latter in the South. Houses similar to the southern sunken huts are also found farther north, in eastern and westernmost Slavic areas² (Fig. 3). Buildings falling into both of

¹ Leciejewicz 1976, pp. 90 - 100 passim.

² Donat 1970, 1975 and 1980.

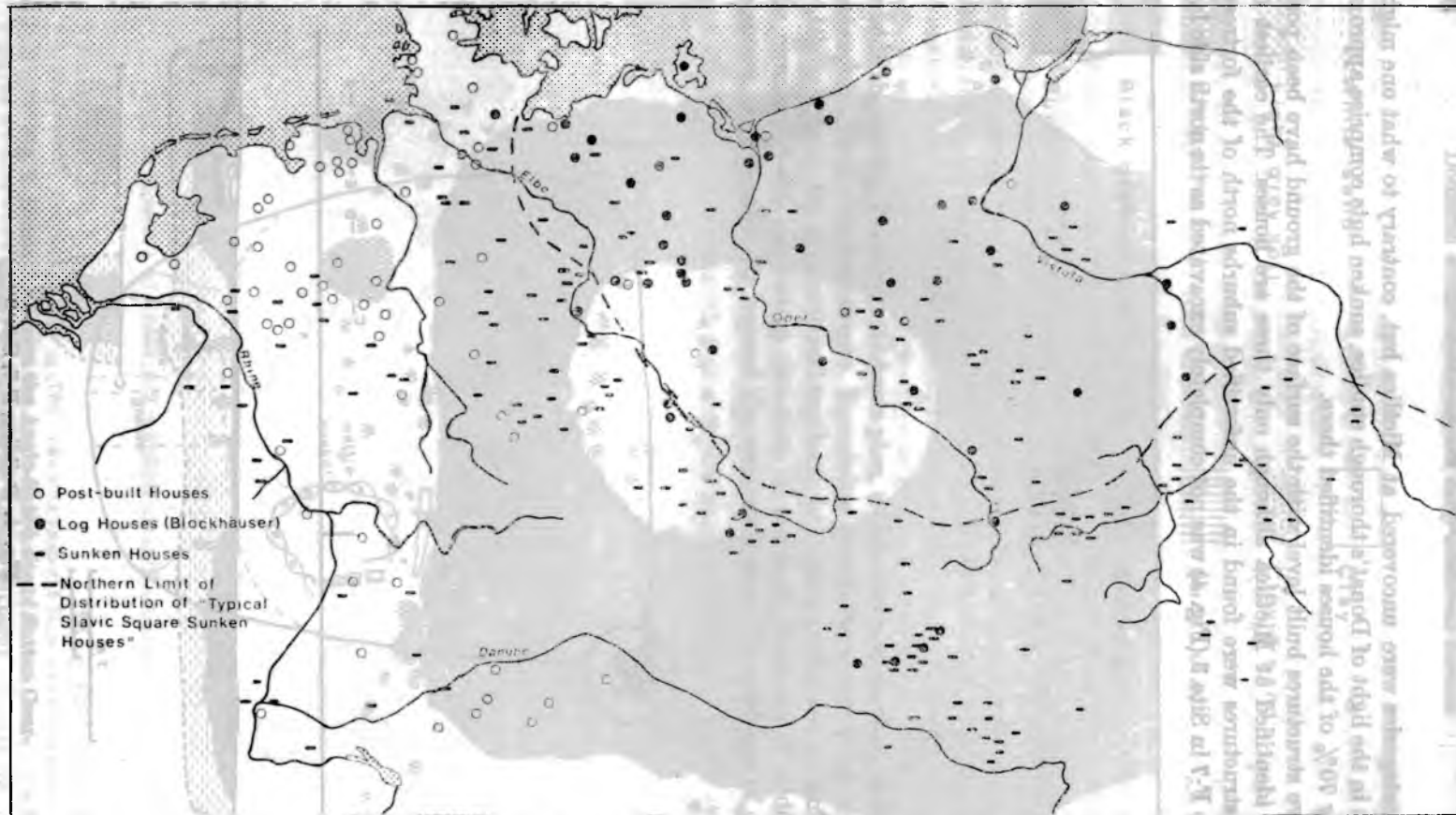


Fig. 3. Distribution of post-built, log, and sunken houses (Compiled from information from Donat 1980)

these categories were uncovered at Mietlica but, contrary to what one might expect in the light of Donat's thorough studies, sunken huts comprise approximately 70% of the houses identified there.

Five structures built level with the surface of the ground have been positively identified at Mietlica although only three are houses. The earliest of these structures were found in the unfortified suburbs north of the fortress. House F-7 in Site 3 (Fig. 4) was not completely excavated as its north side lay

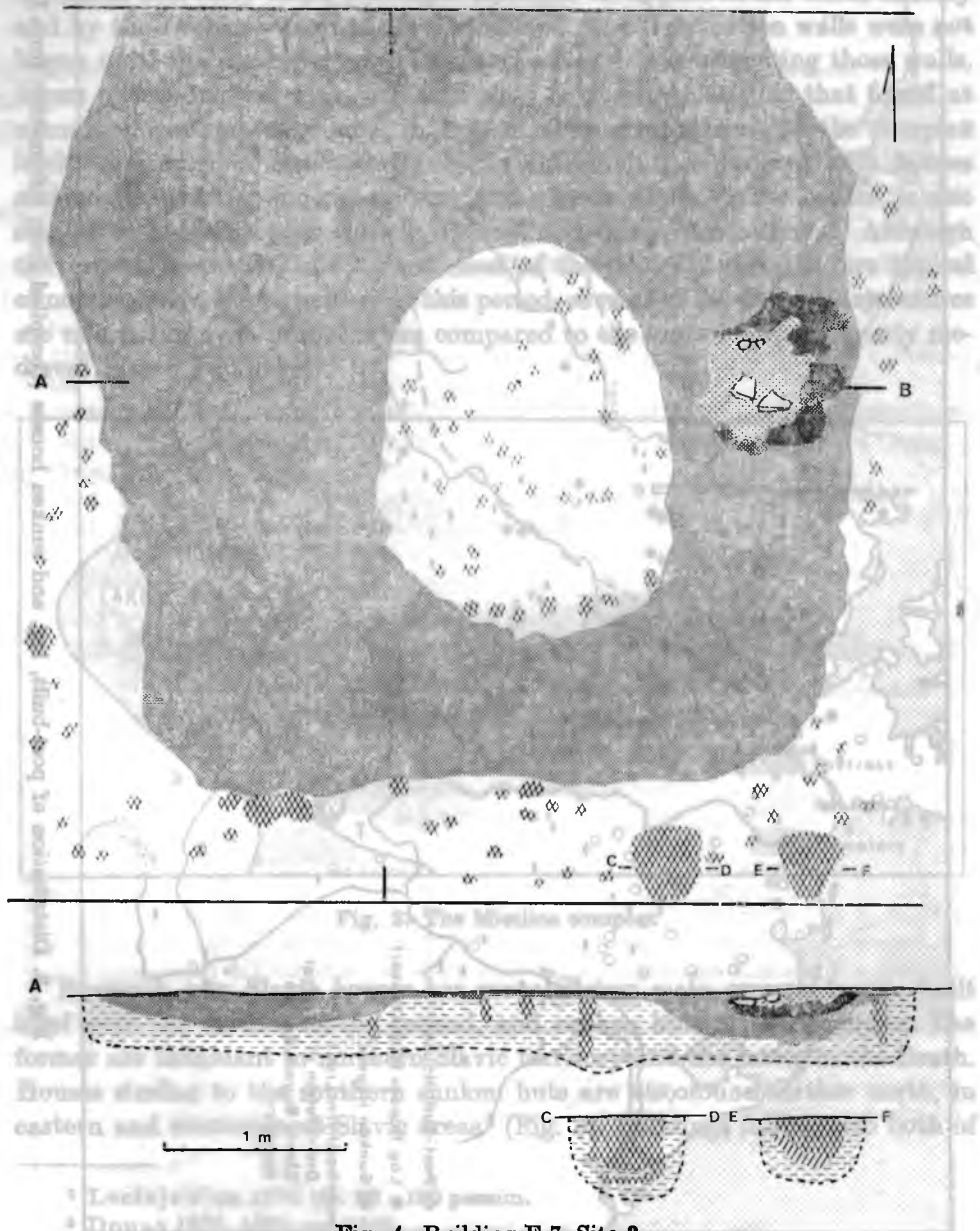
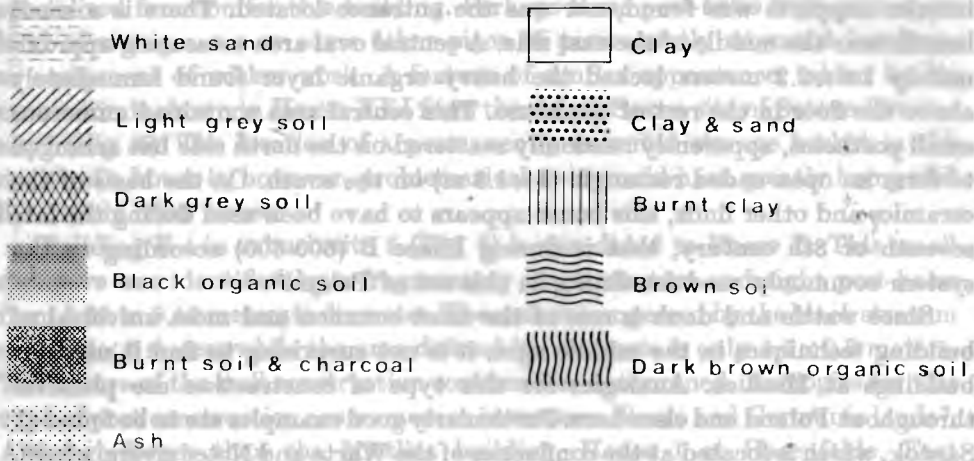


Fig. 4. Building F-7, Site 3



outside the trench. However, the basic plan, which covers more than 22.5 m², is rectangular with rounded corners. Remaining post-holes reveal outer walls of wattle and daub. On the south end two large triangular post-holes are probably the remains of the supporting structure of the roof. Remains of additional supports, if they exist, lie beyond the excavated area. No evidence of strong

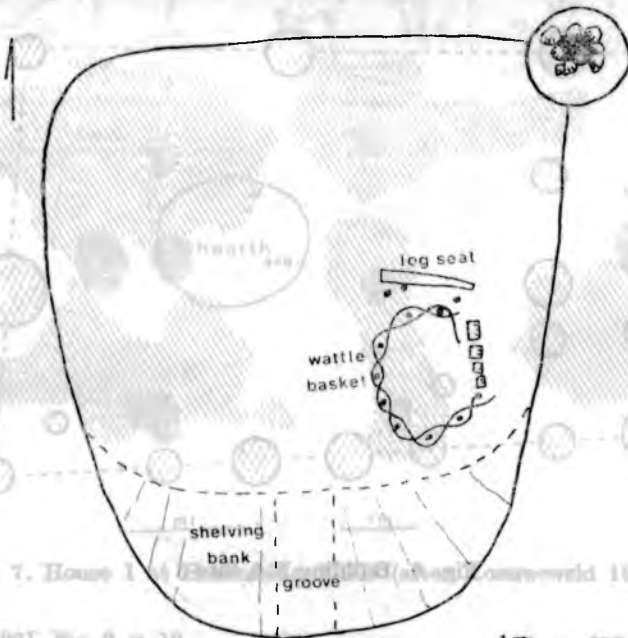


Fig. 7. House I (after Dymaszewski 1987)

Fig. 5. House XXI from the Anglo-Saxon site of Sutton Courtenay, England (after Rahtz 1981)

* Rahtz 1981, Fig. 2, p. 10.

* Dymaszewski 1987, p. 102, fig. 102.

* Dymaszewski and Dymaszewska 1987, p. 102, fig. 102.

* See for example Dymaszewski 1987, p. 102, fig. 102.

interior supports was found, nor was the entrance located. There is a small hearth near the middle of the east side. A central oval area measuring approximately 1.6×2.2 meters lacked the heavy organic layer found immediately above the floor in the rest of the house. This central area contained numerous small postholes, apparently randomly scattered on the north side but arranged to form an open-ended rectangle (1×1.8 m) on the south. On the basis of the ceramics and other finds, this house appears to have been used during the late seventh or 8th century, that is during Phase B (600-800) according to the system commonly used for dating in this part of Poland³.

Since wattle and daub is one of the most common and most universal of building techniques in the middle ages, it is not surprising to find it used for buildings at Mietlica. Analogies for this type of construction are plentiful throughout Poland and elsewhere. Particularly good examples are to be found at Santok, which is located at the confluence of the Warta and Noteć rivers, where, as at Mietlica, the corners of the wattle buildings were often rounded⁴. On the other hand, analogies for the central structure in this building are more elusive. In other parts of northern Europe permanently mounted features represented by post-holes near the centers of buildings are often interpreted as looms⁵, but neither the small finds nor the arrangement of the post-holes suggest such an interpretation for the example at Mietlica. The small finds, which were limited to a clay spindle whorl, an iron blade, a fish hook, and a bone awl are similar to those found in other houses at Mietlica and do not, in fact, indicate any

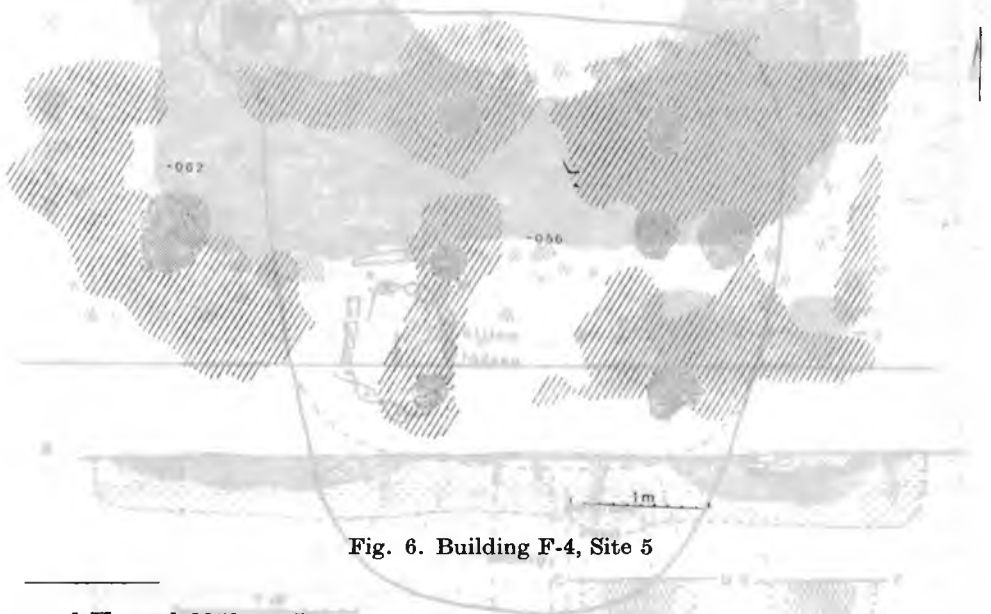


Fig. 6. Building F-4, Site 5

- ³ Hensel 1950, p. 5.
- ⁴ Dymaczewska and Dymaczewski 1967, p. 192, 198.
- ⁵ See for examples: Jackson, Harding, and Meyers 1969, pp. 208 - 210; Rahtz 1981, p. 57; Grimm 1968a, p. 97.

specialized function for this building. Perhaps these post-holes represent some kind of storage area or some other piece of permanently mounted furniture or equipment of wicker-work. A feature of similar appearance, labeled by its excavator, is shown in House XXI from the Anglo-Saxon site of Sutton Courtenay⁶ (Fig. 5). The location of a permanently-mounted storage basket in the center of a house is, however, problematical as it would have greatly hampered life within that house.

Building F-4 in suburb site 5 (Fig. 6) is also dated to Phase B. This small structure was identified by a fragmentary black stratum and eight post-holes from 0,30 to 0,45 meters in diameter. The area encompassed by the black stratum covers 6×3 meters while the area defined by the posts is only 4.5×2.3 meters. The nature of the wall construction could not be determined. Analogies for this type of post construction are numerous in western Slavic and Germanic lands⁷. Although larger than the Mietlica building, House 1 at Hasenfelde, East Germany (Fig. 7) is a particularly good analogy⁸. There, as at Mietlica, the east end is formed by two rows of posts approximately 1 meter apart. An example, very similar to the Mietlica building but with a hearth, dating several centuries earlier to the so-called Roman Period, was found in this region at Jacewo (pow. Inowrocław)⁹. The Jacewo house indicates this type of post construction was not new to this area in the seventh century. Since no hearth was found in the Mietlica building and because it is so small, it is probable that this structure was a barn or some other outbuilding rather than a house.

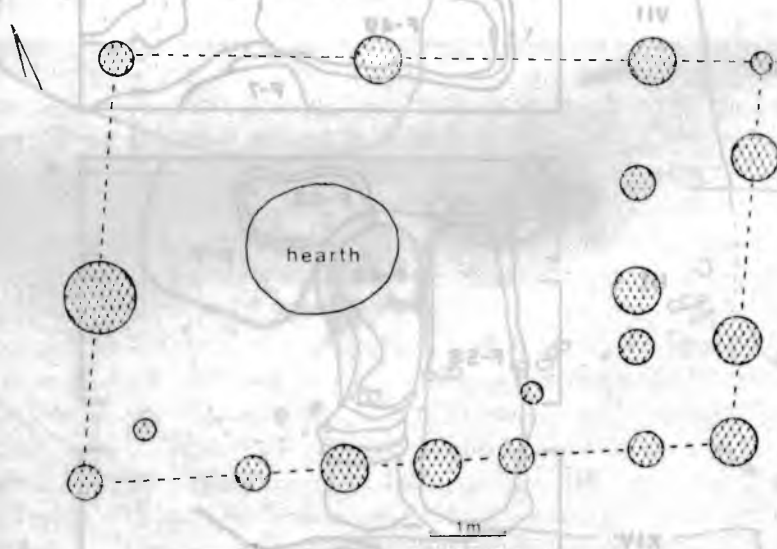


Fig. 7. House 1 at Hasenfelde, DDR (after Kostrzewski 1955)

⁶ Rahtz 1981, Fig. 2, p. 10.

⁷ Donat 1980, passim.

⁸ Kostrzewski 1955, p. 270; Donat 1980, p. 177.

⁹ Cofta-Broniewska 1970 - 72, p. 145.

Mietlica
Site 1

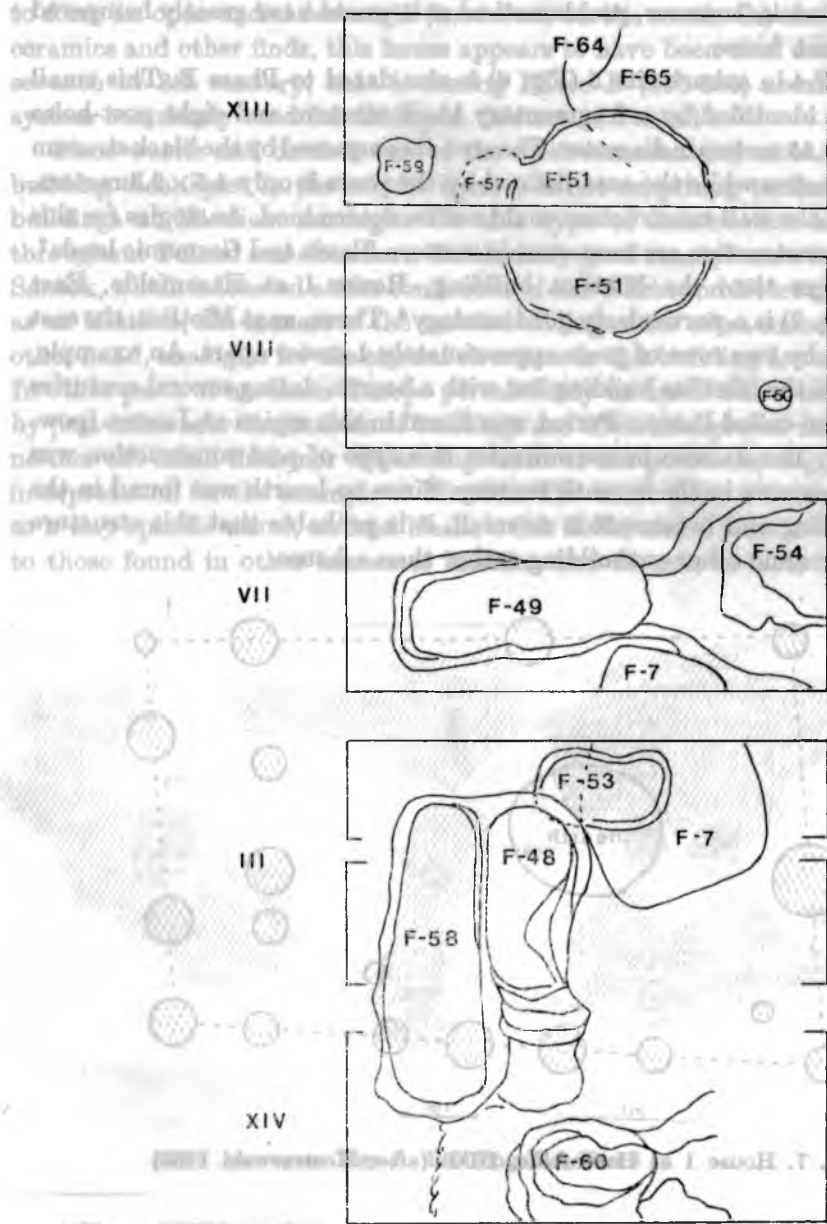


Fig. 8. Partial plan of the fortress showing the buildings, Site 1

A second house built on the surface of the ground is located within the fortress (F-7 in Figs. 8 and 9). It is an approximately rectangular building (6.0×6.3 meters) the floor of which was formed by the natural glacial clay which covers most of the fortress site. The only clear indication of the shape of the house was a slight depression in the clay. A hearth was found in the south-east quarter. Very few remains of the superstructure of this building were found, but small post-holes along the east side suggest wattle walls. Ceramics found in this house indicate a date of Phase B/C (approximately 750-850).

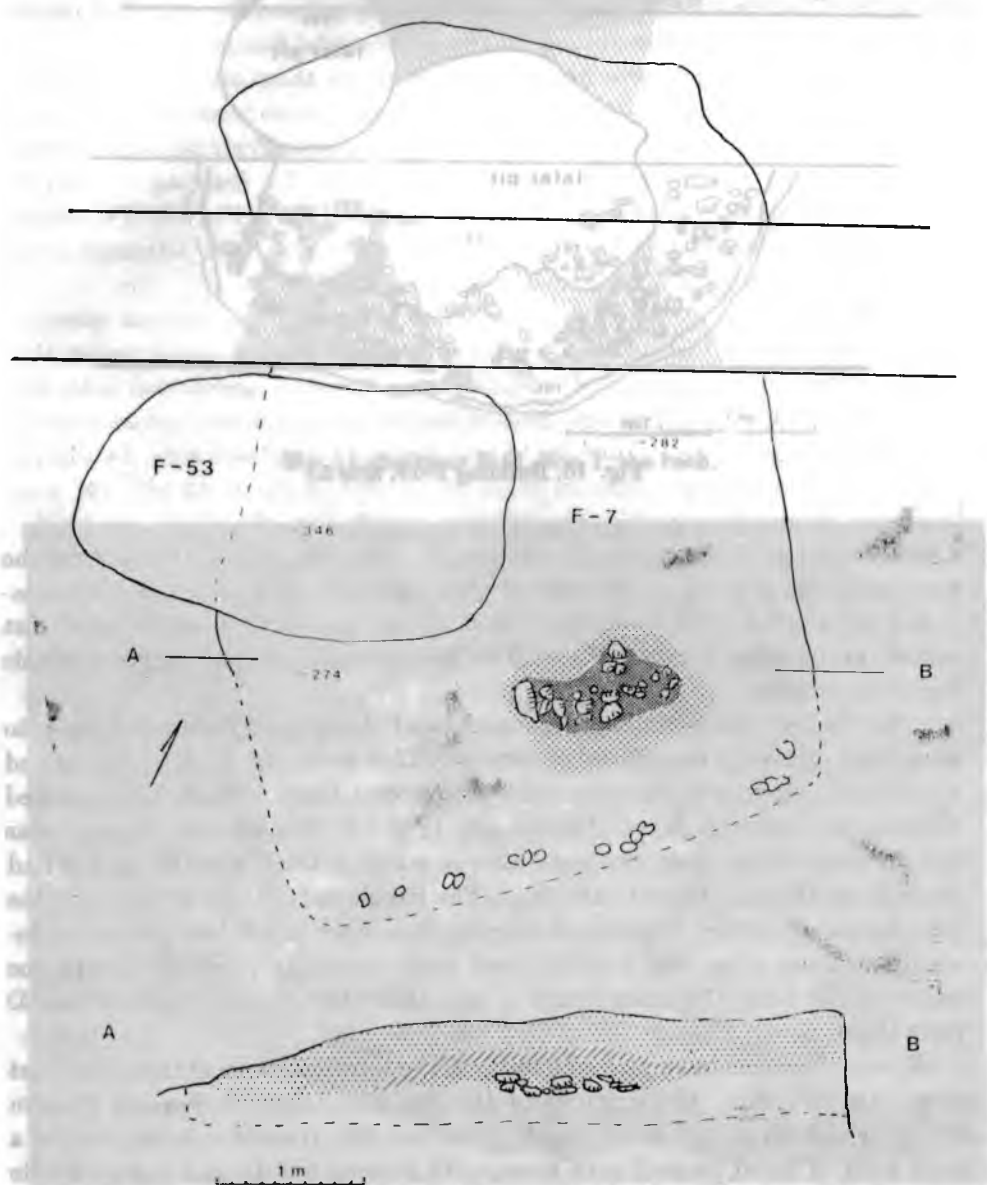


Fig. 9. Buildings F-7 and F-53, Site 1

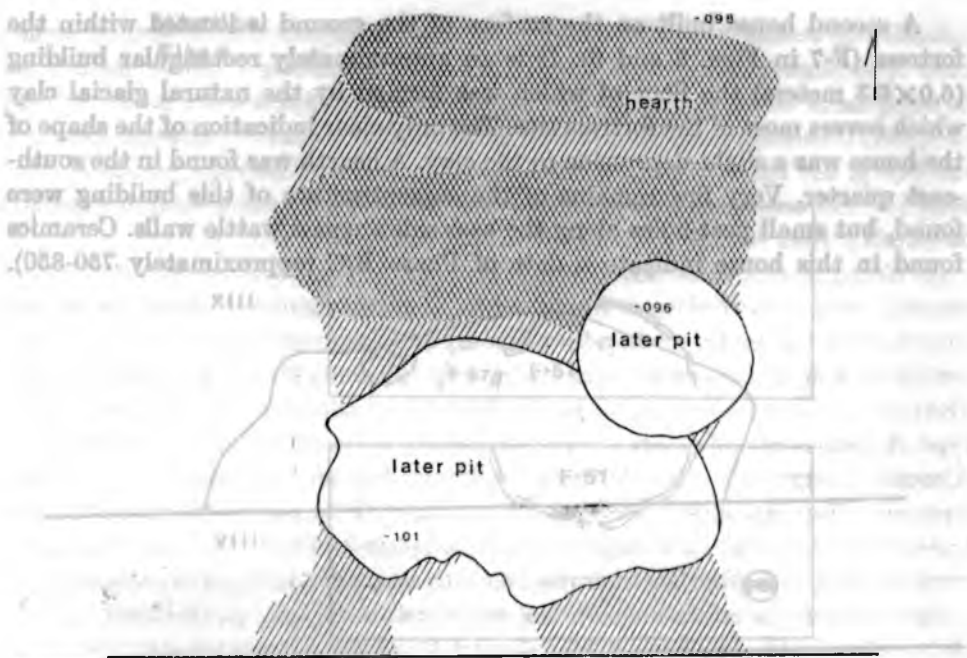
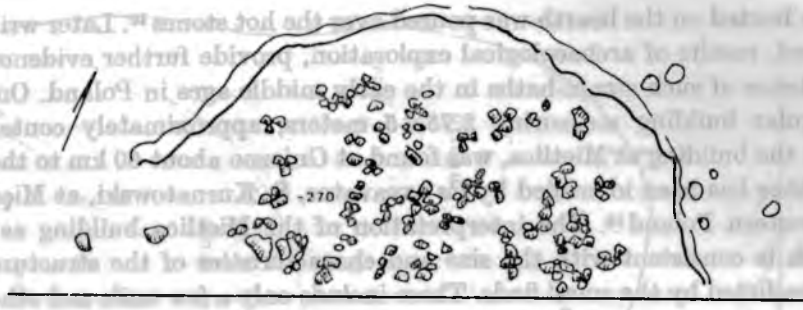


Fig. 10. Building F-19, Site 5.

Little can be said about the third house (F-19 in Site 5, Fig. 10) built on the surface of the ground except that it was approximately rectangular (excavated dimensions 3.5×4.5 meters), that it had a hearth near its northeast corner, and was built during Phase B/C. No traces of the superstructure of this building remain.

The final structure built on the surface of the ground does not appear to have been primarily residential in function. This structure (F-51 in Figs. 8 and 11), which is circular in plan (diameter 4.5 meters), has a floor of closely-packed fire-cracked rock on a layer of burnt clay (Fig. 12). The most friable rock was in the center of the floor, the same area in which a thick layer of carbon had seeped into the clay beneath the floor. The friable nature of the rocks and the percolation of carbon into the underlying clay were much less noticeable toward the outer edge. Ash and charcoal were especially plentiful toward the center of the floor. Ceramics found in and above the floor belong to Phase D (950-1100).

Literary sources have proved helpful in the interpretation of this somewhat enigmatic structure. The writings of Ibrahim ibn Jakub, a Spanish Moslem who traveled through Poland sometime around 965, include a description of a bath built of wood packed with moss, with a stone hearth and a smoke hole cut out above the hearth which was closed after burning. Water which had



of four, none of which indicates a specialized industrial function. Bathing pits are far more numerous at Miletus than are found built at ground level. In the fortress itself eight such houses were identified, although only four were excavated completely. A ninth was tentatively identified when the south profile of the bath was being prepared for drawing. In this case, one was positively identified as a bath. Two other large irregular pits have been found in the bath area. The evidence of a bath is also indicated by the presence of a large number of these buildings in the bath area. The original surface of the ground was level, but not all the buildings are oriented east-west, with a few oriented north-south. Two have a north-south orientation.



Fig. 11. Building F-51, Site 1, the bath.

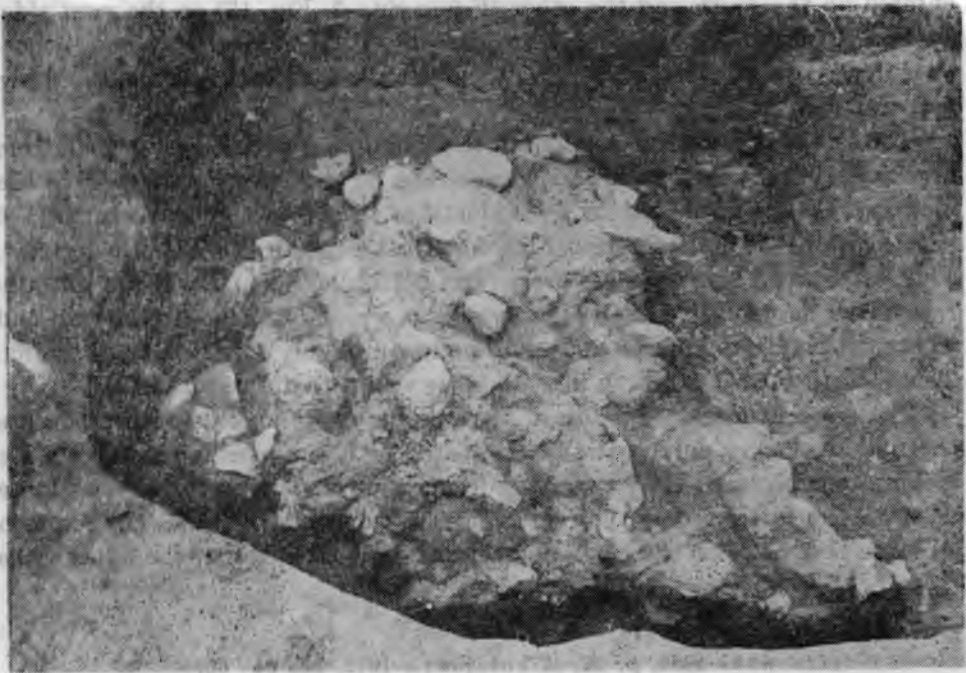


Fig. 12. A segment of the floor in the bath building

been heated on the hearth was poured over the hot stones¹⁰. Later writers and, indeed, results of archaeological exploration, provide further evidence for the existence of such steam-baths in the early middle ages in Poland. One, a rectangular building measuring 2.75×5 meters, approximately contemporary with the building at Mietlica, was found at Gniezno about 60 km to the west¹¹. Another has been identified by its excavator, S. Kurnatowski, at Międzyrzecz in western Poland¹². The interpretation of the Mietlica building as a bath, which is consistent with the size and characteristics of the structure, is not contradicted by the small finds. These include only a few nails and other pieces of iron, none of which indicates a specialized industrial function.

Sunken huts are far more numerous at Mietlica than are houses built at ground level. In the fortress itself, eight such houses were identified, although only four were excavated completely. A ninth was tentatively identified when the south profile of Trench XIII was being prepared for drawing. In Site 3, one was positively identified and partially excavated (F-6 in Fig. 13). Two other large irregular pits in Site 3 may have been house sites as well, although clear evidence of a residential function is lacking.

With one exception, which will be discussed below, the dug-out portion of these buildings is oval in plan and sunken from 0.5 to 1 meter below the original surface of the ground. Post-holes were found in association with several, but not all, of the buildings. Most of the buildings are oriented east-west, with entrances (when found during the excavations) on the east side. Two have a north-south orientation. One of these (F-48-58 in Figs. 8, 18 and 19) was entered on the south and the other (F-6 in Site 3, Fig. 13) on the west side. In the fortress itself, the houses are dug into hard natural clay and, consequently, are quite distinct. Those in the suburb were dug into sand and are less well-defined.

The size of the dug-out portions of these buildings varies a great deal, from approximately 4 m^2 (F-53 in the fortress, Fig. 8) to 25 m^2 (F-48-58 also in the fortress). Well-defined hearths were identified in two of these structures (F-6 in Site 3 and F-54 in the fortress, Figs. 8 and 14). In a third (F-49 in the fortress, Figs. 8, 14 and 15) a probable hearth has been identified. It was not initially recognized but is visible in all photographs as a round dry spot in the west end where the clay is discolored and more porous probably as a result of burning. There was probably a hearth in F-48-58 as well (See discussion below).

The superstructure of many of these buildings is unclear, either because the buildings were only partially excavated or because remains of posts are lacking or are obscured by overlying features or modern disturbances. House F-49 in the fortress does, however, provide some information. The location of large post-holes on the north and south sides indicates that the upper walls

¹⁰ Woleńska 167, p. 114.

¹¹ Kostrzewski 1939, p. 32; Mikołajczyk 1972, pp. 64 - 65.

¹² Hensel and Hilczer-Kurnatowska 1972, p. 61.

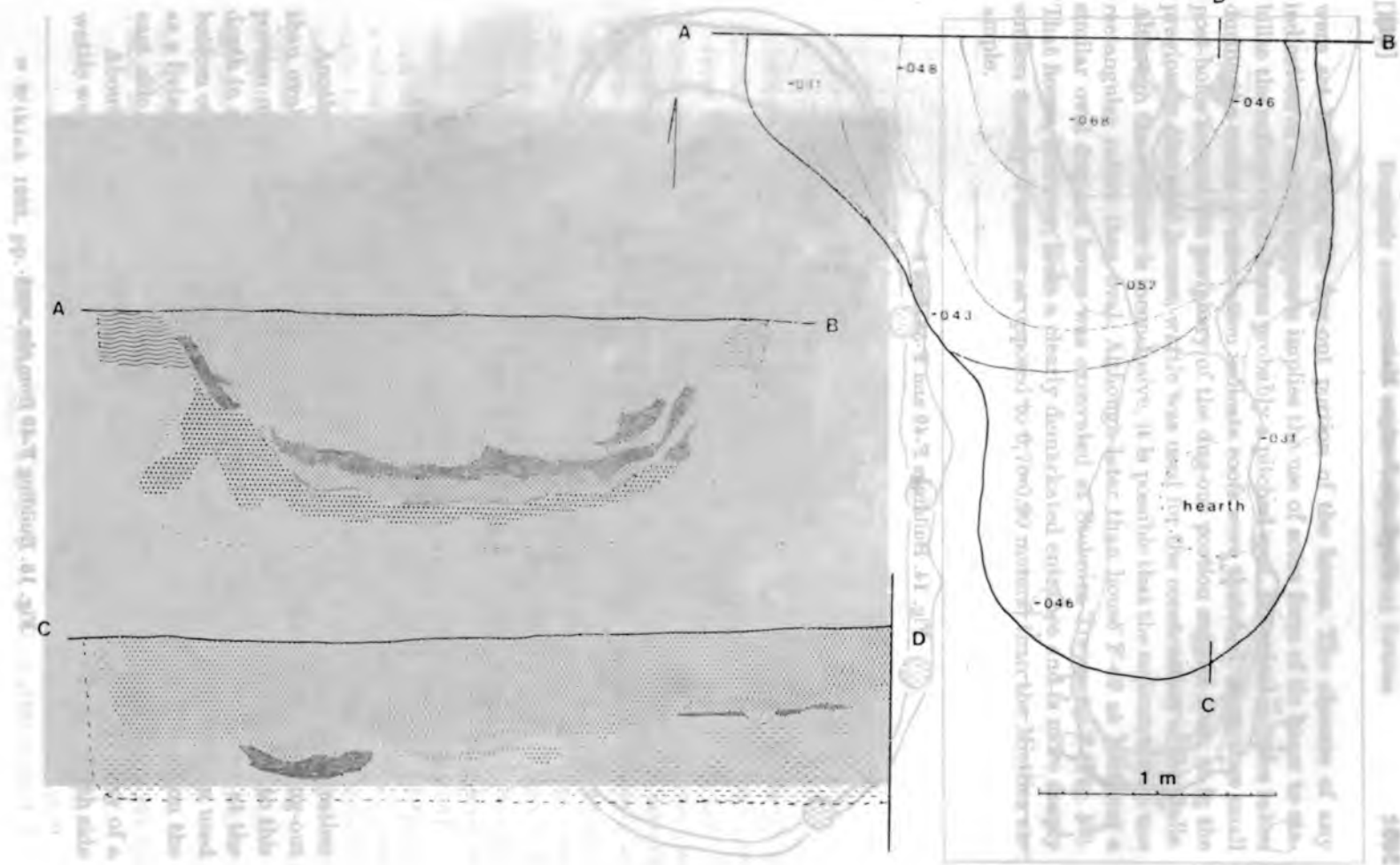


Fig. 13. Building F-6, Site 3

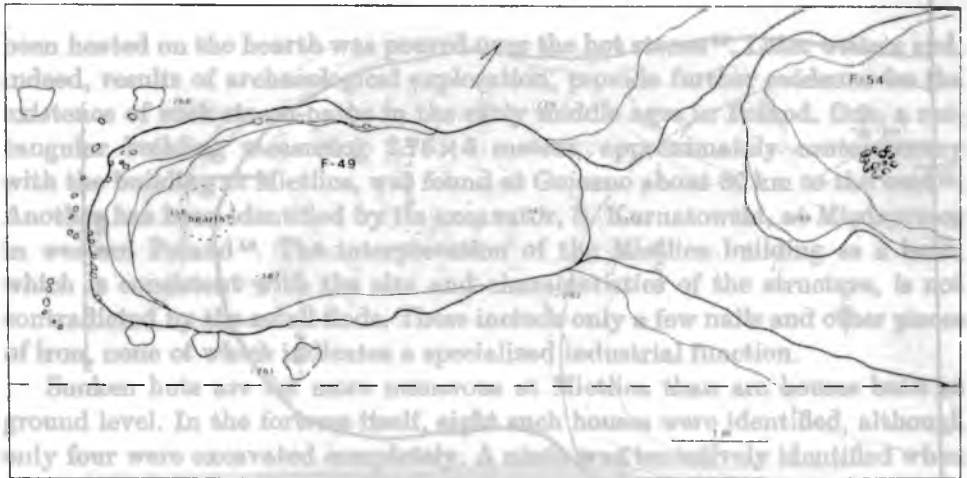


Fig. 14. Buildings F-49 and F-54. Site 1



Fig. 15. Building F-49 from the west.

were set back from the dug-out portion of the house. The absence of any indication of central supports implies the use of some form of tie beam to stabilize the rafters of what was probably a pitched roof. Botanical samples taken during the course of excavation indicate roofs were thatched. Numerous small post-holes around the periphery of the dug-out portion suggest that, as in the previously discussed houses, wattle was used for the construction of the walls. Although the evidence is inconclusive, it is possible that the superstructure was rectangular rather than oval. Although later than house F-49 at Mietlica, a similar oval dug-out house was excavated at Stobnica Trzymorgi¹³ (Fig. 16). That house, however, lacks a clearly demarkated entrance and is more deeply sunken (nearly 2 meters as opposed to 0,70-0,90 meters) than the Mietlica example.

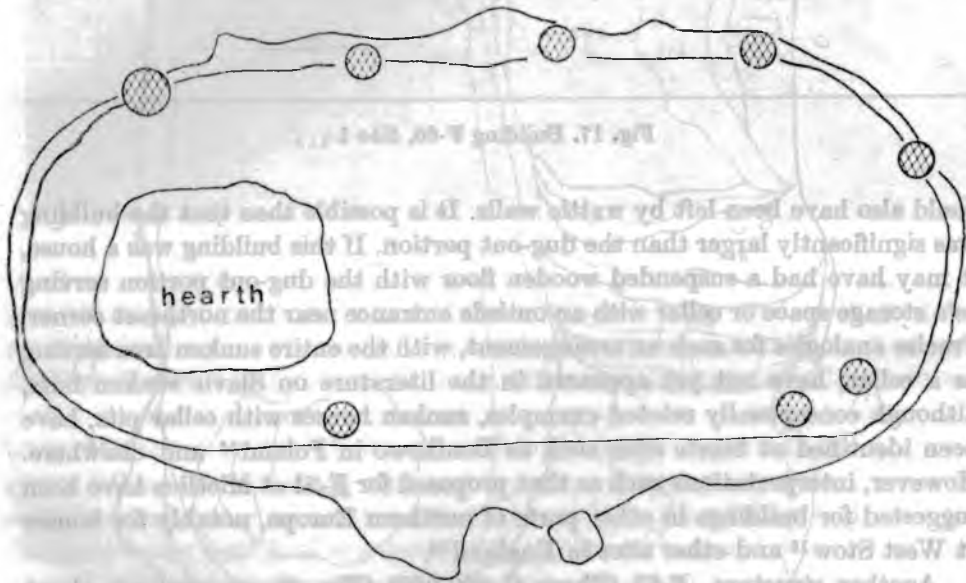


Fig. 16. House from Stobnica Trzymorgi (Simplified drawing after Wiklak 1983)

Another structure in the fortress which may have been rectangular rather than oval is F-60 (Fig. 17). It is dated to Phase D (950-1100). The dug-out portion of this building is 0,97 meters deep in the center. It descends to this depth in a series of uneven steps dotted with small postholes. The area at the bottom of the pit is less than 2 m² — an area far too small to have been used as a living space. Nevertheless, there is clearly an entrance to this pit on the east side.

About 1.5 meters west of the pit there is a clear indication in the clay of a wattle wall with two larger posts on either side of it. Postholes on the north side

¹³ Wiklak 1983, pp. 209 - 211.

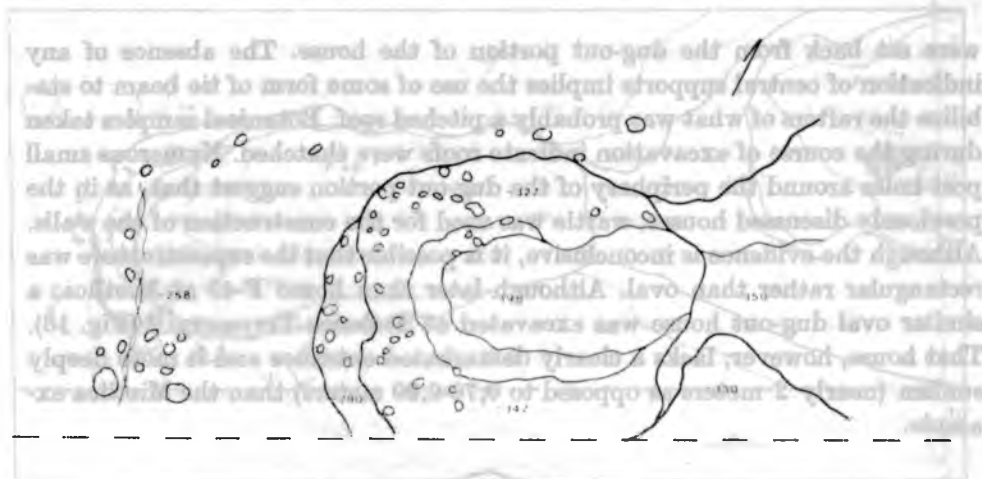


Fig. 17. Building F-60, Site 1

could also have been left by wattle walls. It is possible then that the building was significantly larger than the dug-out portion. If this building was a house, it may have had a suspended wooden floor with the dug-out portion serving as a storage space or cellar with an outside entrance near the northeast corner. Precise analogies for such an arrangement, with the entire sunken area serving as a cellar, have not yet appeared in the literature on Slavic sunken huts, although conceptually related examples, sunken houses with cellar pits, have been identified at Slavic sites such as Bonikowo in Poland¹⁴ and elsewhere. However, interpretations such as that proposed for F-61 at Mietlica have been suggested for buildings in other parts of northern Europe, notably for houses at West Stow¹⁵ and other sites in England¹⁶.

Another structure, F-53 (Phase C 800-950) (Fig. 8), an oval pit about 4.5 m² lacking indications of both hearth and entrance, is unlikely to have served a residential function. It too could have been a storage space under a suspended wooden floor. Had the structure served instead as some kind of an outbuilding, one would expect some slumping of the clay at the point of access. Since none is evident, it is probable that either the pit was reached through a trap-door in the floor of a larger house or it was otherwise covered by a board. On the other hand, it might have simply served as a large rubbish pit which was quickly refilled after being dug.

One dug-out house at Mietlica is particularly unusual. This house (Figs. 18 and 19), dated to early phase C (9th century), is by far the largest and most

¹⁴ Hołowińska 1956, Jama 9.

¹⁵ West 1969, p. 8.

¹⁶ Rahtz 1981, p. 75.

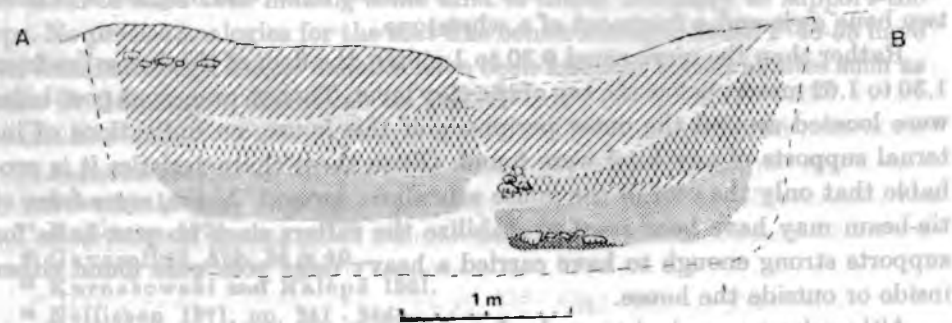
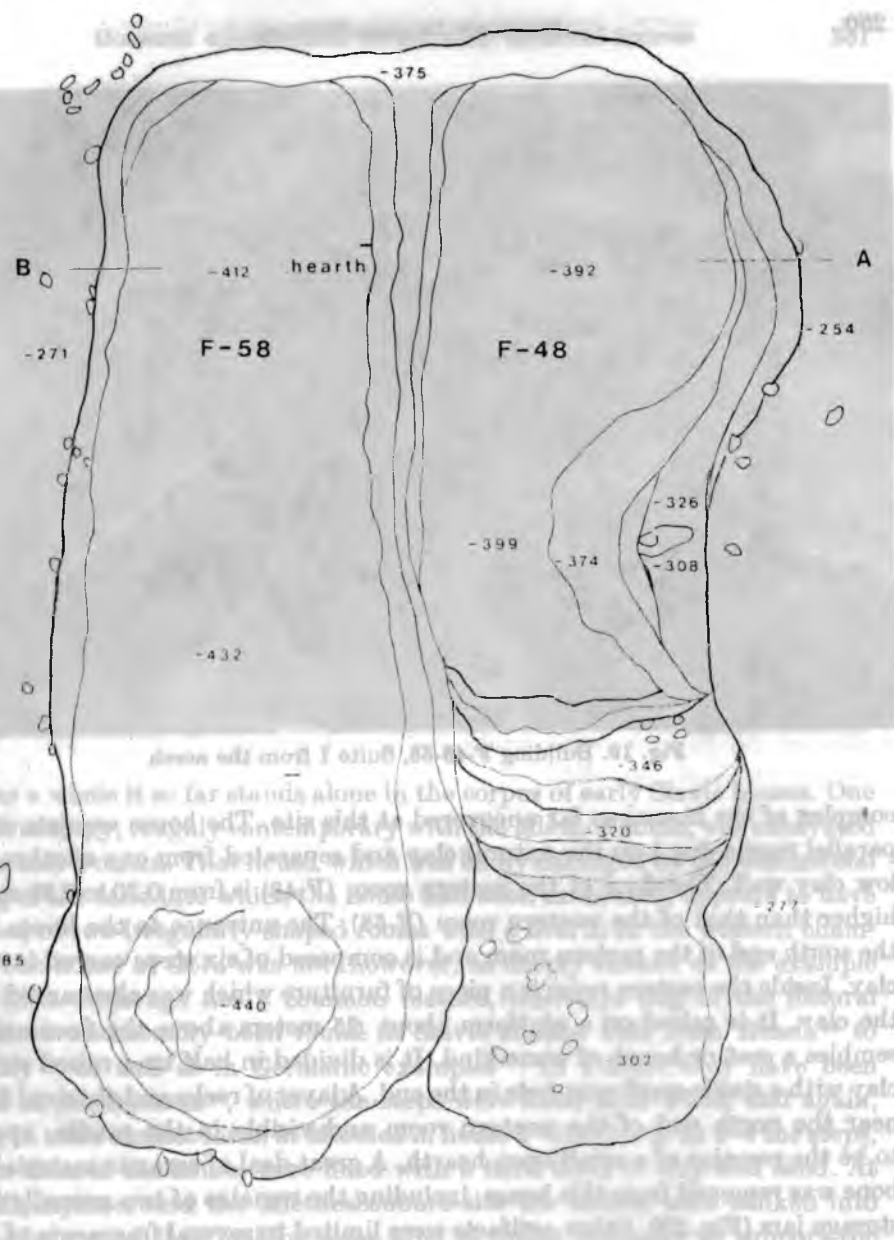


Fig. 18. Building F-48-58, Site 1



Fig. 19. Building F-48-58, Suite 1 from the north

complex of the houses so far uncovered at this site. The house consists of two parallel rooms dug into the natural clay and separated from one another by a low clay wall. The floor of the eastern room (F-48) is from 0,20 to 0,30 meters higher than that of the western room (F-58). The entrance to the house is on the south end of the eastern room and is composed of six steps carved into the clay. Inside the eastern room is a piece of furniture which was also carved from the clay. It is raised on a platform about .25 meters above the floor and resembles a seat or bench of some kind. It is divided in half by a raised strip of clay with a single small post-hole in the end. A layer of rocks and charcoal found near the north end of the western room and visible in the profile, appears to be the remains of a small open hearth. A great deal of ceramic material and bone was removed from this house, including the remains of two unusually large storage jars (Fig. 20). Other artifacts were limited to several fragments of iron, two bone awls and a fragment of a whetstone.

Rather than the more usual 0.30 to 1 meter, the floor of this house lies from 1.30 to 1.62 meters below the top of the clay layer. Though numerous post-holes were located around the outer periphery of this house, no indications of internal supports of any kind were found. Given these characteristics it is probable that only the roof of the house was above ground. Again, some form of tie-beam may have been used to stabilize the rafters since no post-holes for supports strong enough to have carried a heavy ridge pole were found either inside or outside the house.

Although some analogies can be found for individual features in this house,



Fig. 20. Large pot from building F-48-58, Site 1

taken as a whole it so far stands alone in the corpus of early Slavic houses. One possible analogy, roughly contemporary with the Mietlica house, was excavated at Góra near Poznań. That house, which was badly damaged by the commercial digging of the sand into which the house had been excavated, appears to have consisted of two irregularly-shaped rooms with a hearth in the western chamber¹⁷. The house at Góra was not, however, as deeply sunken as the example at Mietlica. Although not a common feature, stairways dug of the natural earth have occasionally been found in Slavic sunken huts from Russia¹⁸ to Germany¹⁹, as well as in Germanic examples²⁰. In Poland they have been located at Międzyrzecz²¹, where the steps were lined with wood, and again, though in more modest form, at Mietlica in house F-6 in Site 3. In F-6 the steps, like the floor of the house, were lined with a hard layer of clay and sand. At both Międzyrzecz and the Mietlica suburb-site the houses were sunken into soft earth or sand thus making some kind of lining necessary to support the steps. No precise analogies for the seat-like construction in house F-48-58 have been found although simple benches have been found in houses at sites such as Bosau in Germany²², Kędrzyno in Poland²³.

¹⁷ Jasnosz 1959.

¹⁸ Šramko 1960.

¹⁹ Nellissen 1971.

²⁰ Guyan 1952, Abb. 56 p. 10.

²¹ Kurnatowski and Nalepa 1961.

²² Nellissen 1971, pp. 241 - 244.

²³ Łosiński 1972, p. 139 and Ryc. 53.

The typical Slavic sunken hut as it is identified throughout southern Slavic lands as well as Little Poland, Russia, and East Germany is square in plan with a well-defined hearth or oven in one corner (Fig. 21). Posts, which vary considerably in number from one house to another, are usually located inside or at the edge of the sunken portion of the building. The Mietlica sunken buildings do not fit this pattern as none are square and post-holes, when found, are invariably located outside the sunken area. The location of the post-holes indicates that all the Mietlica buildings were at least slightly larger than the pits themselves and may sometimes (cf. F-60) have been considerably larger than the pits themselves. Hearths at Mietlica, even when clearly demarked, are small, in one case taking the form of a small pit (F-6 in Site 3) and in others a thin layer of rock in or on the clay (F-54, F-49, F-48-58). The preferred location is near one end of the dug-out area.

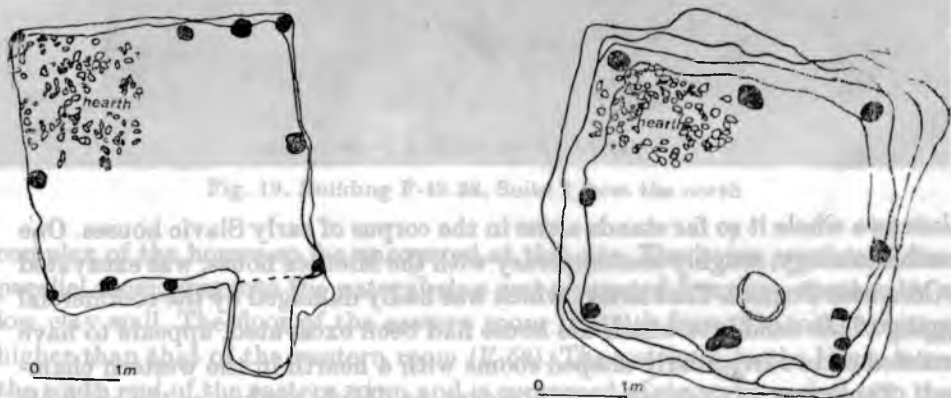


Fig. 21. Typical Slavic square sunken huts from Dessau-Mosigkau, DDR (Simplified drawings after Krüger 1967)

As mentioned above, research into Slavic house types has so far shown that houses built level with the ground, either of wattle and daub or of some type of log construction, are the prevalent type in most of Poland. The so-called "typical" Slavic sunken hut described above is found in a few areas of Poland as the upper Vistula river valley and occasionally between the Vistula and the Bug. Generally, such houses are found in areas with firm soils (loess) such as are common in the South. Square sunken houses found in the eastern and western Slavic lands are thought to be the result of a dispersal of a well-established form into areas where soils are less suitable²⁴. Sunken features in central and northern Poland which are often identified as houses (*ziemianki* and *półziemianki*) are generally amorphous bowl-shaped pits, usually without identifiable hearths and occasionally surrounded by small post-holes²⁵. However,

²⁴ Donat 1977, pp. 120 - 121.

²⁵ Kaźmierczyk 1969, p. 171.

as Donat points out, many of these irregular pits, especially the smaller ones, may not have been houses at all but various types of out buildings, refuse pits, or perhaps cellar pits²⁶. It is also possible that they were simply shallow hollowed-out spaces intended to insulate a suspended wooden floor from the damp ground such has been suggested for some Anglo-saxon houses²⁷. Certainly, the Mietlica excavations have yielded numerous pits of various sizes and shapes, most of which are easily eliminated from consideration as house sites. Those pits discussed above, do, however, appear to have been houses or parts of houses.

In his article on irregular pits and house construction in northwestern Slavic regions, Donat points out that in this region the large irregular pits, which are not very common in the South, are apparently all that remain of houses in most rural settlements. On the other hand, he notes that remains of ground-level houses prevail in fortified settlements. While it is true that soil conditions on the Mietlica fortress site are nearly ideal for the construction of sunken buildings, that fact alone is not enough to account for the unusual predominance of this type building there. Unfortunately, far too little systematic excavation has been carried out in Kujawy, the region in which Mietlica lies, to determine whether Mietlica represents a regional preference for sunken buildings or is an isolated case. Only Kruszwica, a fortified island settlement 22 km. north of Mietlica, has been thoroughly investigated. As might be expected, the location of that settlement on an island with its resulting dampness of soil, virtually precludes the building of sunken houses even by a people with a tradition of such building. Limited excavation has been carried out at nearby Radziejów where there is a clay layer similar to that at Mietlica. There, five oval or nearly rectangular pits with a depth of from 0,5 to 0,8 meters were found. At least three of those pits were over 5 m²²⁸. Although no hearths are reported in any of these pits, their size makes them probable house sites²⁹. These structures appear to be related to the dug-out houses at Mietlica.

Further excavation in this region may indicate that sunken huts were far more common in northwestern Slavic lands than has previously been recognized. Sunken houses may have been the preferred form of building for certain tribal groups in the northwest, a preference which might, but need not, have been the result of contact with the southern Slavs. It is equally possible that for the particular group of Slavs which settled the Lake Goplo region sunken huts were, from the start, an accepted building form. Perhaps as more work is done in this region more definitive answers to the questions posed by the enigmatic evidence from Mietlica will be revealed.

²⁶ Donat 1977, pp. 135 ff.

²⁷ Rahtz 1981, pp. 70 - 73; West 1969, p. 8.

²⁸ Gabałówna, Nowakowski 1964, pp. 236 - 254.

²⁹ Donat 1977, p. 137.

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