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The Puzzle of Silesia's Pre-Roman Iron Age: The Settlement at Graniczna Street in Wrocław

Zagadka przedrzymskiej epoki żelaza na Śląsku Osada przy ulicy Granicznej we Wrocławiu

Abstract: In the autumn of 2014, rescue excavations were carried out at 4A Graniczna Street in Muchobór Wielki, Wrocław. The 2-hectare excavation area yielded remains of a multi-phase settlement, including a stage from the pre-Roman Iron Age. The excavated finds primarily consisted of pottery vessel fragments, alongside a well-preserved middle La Tène Mötschwil-type brooch, daub, and animal bones. Among the identified features were pits, postholes, pit houses, and the remains of a ground-level post building with a well. However, while the structure dates to the Iron Age, its exact chronology remains a subject of debate. The discovery of this late pre-Roman Iron Age settlement in the Ślęza river zone provides further evidence that the area featured a network of settlements dating to the earliest phases of the late pre-Roman period. These settlements bridge the chronological gap between the decline of the Lower Silesian La Tène culture settlement and the earliest discoveries associated with the classical Przeworsk style.

Keywords: pre-Roman Iron Age, Jastorf culture, Przeworsk culture, Lower Silesia, settlement archaeology

Introduction

The multi-phase settlement at 4A Graniczna Street in Wrocław (Wrocław–Muchobór Wielki district) was revealed during rescue excavations conducted by the Zdzisław Wiśniewski sp. z o.o. company in the autumn of 2014. Situated overlooking the Kasina stream, approximately 400–500 m from its confluence with the Ślęza river, the site encompasses areas designated as Archaeological

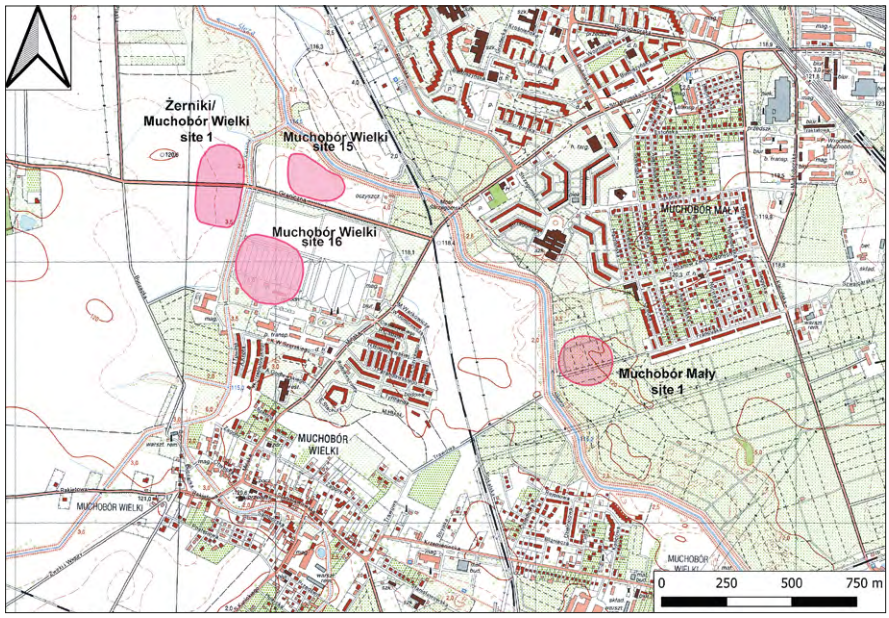

Fig. 1. Iron Age sites in Wrocław–Muchobór (map by P. Dulęba, J.E. Markiewicz).

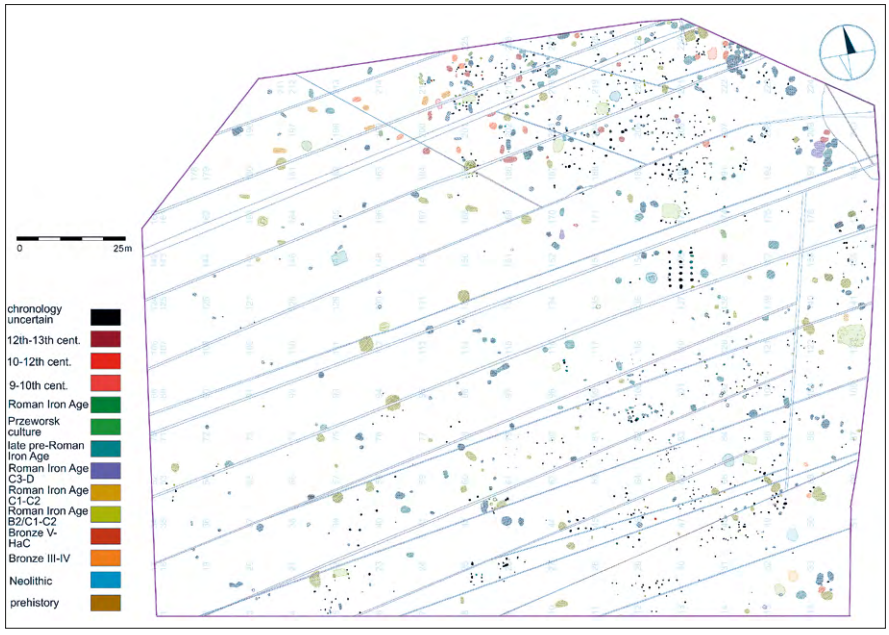

Fig. 2. Feature distribution at 4A Graniczna Street (Wrocław–Muchobór Wielki) during the 2014 rescue excavations (map by R. Biel, edited by J.E. Markiewicz).

Record of Poland numbers 1/41/80-27 and 1/41/80-28. The excavations covered over 2 hectares and uncovered multiple occupation phases spanning from the Neolithic to the Middle Ages. Although the Roman Iron Age saw the peak of occupation intensity, the investigators also identified a settlement phase from the pre-Roman Iron Age.

Before the excavation campaign, little was known about the site, as no archival records mention its existence. However, prehistoric artefacts, including those from the pre-Roman Iron Age, had been discovered in various nearby locations (cf. Demidziuk 1999: 80–94; Dulęba, Markiewicz 2024). Surface surveys conducted on adjacent plots as part of the Archaeological Record of Poland programme revealed Iron Age settlements at nearby sites, including site 1 in Wrocław–Żerniki, and sites 15 and 16 in Wrocław–Muchobór Wielki (Fig. 1).

The excavations commenced with the mechanical removal of a topsoil layer approximately 1 meter thick. It consisted of up to 50 cm of arable layer, followed by a 30 cm clayish layer, and nearly half a metre of black earth eluvial layer. The investigated area yielded 1,327 features (Fig. 2), primarily with preserved shallow bottom parts. Among them, only 26 could be definitively dated to the pre-Roman Iron Age. Additionally, several other features were potentially contemporaneous with this period, based on their spatial positioning and relationship to other features. The artefact assemblage included pottery sherds, daub fragments, animal bones, and pieces of metal items, notably a well-preserved middle La Tène-type brooch.

Settlement features and layout

Pits

Feature 360 (Fig. 3) was identified as an oval-shaped pit measuring 2 x 0.8 metres with a depth of 41 cm. It contained a single sherd: a fragment of a cup with a polished surface and a thickened, everted rim (Fig. 14:7).

Feature 433 (Fig. 3) had an oval ground plan measuring 1.37 x 1.13 metres and a bowl-shaped cross-section, with a depth of 34 cm. This pit yielded seven pottery shreds, among which only one allowed for identifying the vessel type. It belonged to a cup with an everted, unthickened rim featuring one facet on its inner side. The sherd was polished and fired under oxidation conditions, corresponding to the smallest specimens from Dąbrowska's group VI vessels (Dąbrowska 1997: 103).

Feature 649 (Fig. 3) was a pit characterised by a circular ground plan measuring 1.13 x 1.23 metres and a bowl-shaped cross-section, reaching a depth of 59 cm. It yielded 88 pottery sherds, predominantly bottom parts of vessels and undiagnostic fragments. Due to heavy weathering, determining the original surface treatment of these sherds was challenging. The assemblage included five rim sherds: two thickened and everted rims that had been top parts of pots (Fig. 17:1–2),

one rim of a pot, cup, or vase (Fig. 18:3), one thickened and everted rim with three facets (on the inside, top, and outside) from an S-shaped bowl (Fig. 18:4), and one inverted rim from a hemispherical bowl (Fig. 18:2). The remaining characteristic fragments comprised bottom and middle parts of pots (Figs. 18:1, 19:1–2), a bottom part of a cup (Fig. 18:5), and a bowl (Fig. 17:3). Notably, the feature also yielded a relatively well-preserved middle La Tène-type bronze fibula (inv. no. 338/1, Fig. 19:3).

Feature 650 (Fig. 3) was a pit with a ground plan resembling a rectangle with rounded corners, measuring 2.21 x 2.27 metres and reaching a depth of 1.13 metres. Its walls and bottom were relatively straight. It yielded 28 pottery sherds, with nine of them being classifiable. All rim fragments were thickened and everted, and one was faceted on the inside and top (Fig. 21). These sherds originated from kitchenware vessels, including two pots and a large pot/storage vessel. The last rim was straight and belonged to a hemispherical bowl (Fig. 21:2). Additionally, the feature produced a mildly faceted, band-shaped handle (Fig. 21:8) and bottom parts of four vessels: a pot/storage vessel, a bowl, and two unclassifiable vessels (Fig. 21:1,7). Apart from several cattle and pig bones, fragments of a human skull were also identified within the feature.

Feature 675 (Fig. 3) was a pit with an irregular ground plan measuring 1.64–1.18 metres and having almost a flat bottom with a depth of 24 cm. It yielded six pottery sherds, three of which could be classified. Among them were two vessels corresponding to Dąbrowska's type VI (Dąbrowska 1997: 103): a rim part of a pot or vase with a thickened, everted rim and a polished surface, fired under reduction conditions, and a rim part of a pot or cup with an everted, unthickened rim featuring two facets (on the top and inside), also fired under reduction conditions (Fig. 22:1–2). The remaining rim belonged to a polished hemispherical bowl, similarly fired under reduction conditions (Fig. 22:3).

Feature 738 (Fig. 3) was a pit with an almost circular ground plan sized 1.11 x 1.25 metres, a bowl-shaped cross-section, and a depth of 26 cm. It yielded four pottery sherds, three of which allowed for a partial vessel reconstruction. The reconstructed lower part suggests that it was a vase, jug, or pot fired under reduction conditions, featuring an unpolished surface and a maximum body diameter located at or above the mid-height (Fig. 14:1). The vessel's shape, firing, surface treatment, and ceramic paste suggest a late pre-Roman Iron Age dating, resembling other pre-Roman Iron Age vessels from the site. An early Roman Iron Age chronology is less probable.

Feature 740 (Fig. 4) was a pit with an irregular ground plan measuring 1.95 x 2.47 metres, almost vertical walls, and a relatively flat bottom, reaching a depth of 45 cm. It yielded three pottery sherds, two of which allowed for partial vessel reconstructions. One sherd was a thickened and everted rim fragment with a single facet inside (Fig. 24:1), belonging to a pot with an unpolished surface,

fired under oxidation conditions. The other sherd was the bottom part of a pot with a thick, slightly concave base and an unpolished surface, fired under reduction conditions (Fig. 24:2).

Feature 748 (Fig. 4) was a pit with an almost circular ground plan measuring 1.83 x 2.06 metres, vertical walls, and a flat bottom, 46 cm deep. Besides the 54 pottery sherds, the feature yielded animal bones and daub. The relatively rich sherd assemblage allowed for identifying parts of at least eight vessels. These included a hemispherical bowl with a straight, unthickened rim and an unpolished surface (Fig. 25:1), two pots or vases (Figs. 25:2, 26:1) with polished surfaces, rounded bodies and thickened, everted rims (close to Dąbrowska's group VI, Dąbrowska 1997: 103), two pots with unpolished surfaces and thickened, everted rims (Figs. 25:3, 26:3), one small rim fragment of a pot, vase, or cup (Fig. 26:4), a bottom fragment of a pot or vase with a distinguished base and an unpolished surface (Fig. 26:2), and a bottom fragment of a large vessel with a thick, slightly concave base and an unpolished surface (Fig. 26:5). All of the vessels were fired under oxidation conditions.

Feature 782 (Fig. 4) was a pit with a flat bottom, 38 cm deep. Its ground plan was circular with a diameter of 1.4 metres. It produced 17 pottery sherds with unpolished surfaces. Of the nine diagnostic sherds, four were ornamented fragments of vessel bodies. Two featured incised meander-type motifs, typically located above the vessels' mid-height and associated with the Przeworsk style (Fig. 28:3–4). One fragment was decorated with a clay strip with a fingertip impression (Fig. 28:2). The last ornamented sherd had two incised parallel lines, most likely part of a larger decoration (Fig. 28:6). The only rim part belonged to a conical bowl with a rounded lip (Fig. 28:1). The remaining characteristic sherds included bottom parts of a tableware vessel (Fig. 28:5), a bowl (Fig. 28:8), a cup (Fig. 28:9), and a pot (Fig. 28:7).

Feature 792 (Fig. 4) was a pit with an oval ground plan measuring 1.97 x 1.12 metres and a depth of 42 cm. Its bottom was flat, but the eastern and western parts were shallower than the centre, forming "steps". The pit contained 16 sherds, five of which were diagnostic vessel parts. All sherds were unpolished and fired under oxidation conditions. One sherd was a thickened and everted rim of a pot with a very rounded, wide body (Fig. 29:1). Another substantially thickened, everted, and faceted rim belonged to a tableware vessel (Fig. 29:3). Two fragments were originally the upper part of a conical bowl with a thickened, inverted rim (Fig. 29:4). The last diagnostic sherd was a bottom fragment of a pot or storage vessel (Fig. 29:2).

Feature 831 (Fig. 4) was a pit with an oval ground plan measuring 1.54 x 1.55 metres and a depth of 31 cm. Its cross-section was bowl-shaped, and it was shallower in its northern part. A modern drainage ditch cut the pit along its E–W axis. The feature yielded 25 pottery sherds, 15 of which allowed for a partial reconstruction of three vessels. The first vessel was an almost wholly preserved, thin-walled cup with a thickened, everted rim and rounded body, with a maximum diameter above its

mid-height (Fig. 30:3). The cup featured a band-shaped handle, with the upper end attached slightly below the lip and the lower end at the vessel's widest point. Fired under reduction conditions, its surface was unpolished. It matches type 1.1 in T. Dąbrowska's classification (Dąbrowska 1973: 500). The cup's morphological features, such as the handle's shape and size and the body and rim shapes, were similar to those observed in late Jastorf assemblages. The remaining diagnostic sherds belonged to two bottom parts of unpolished vessels, most likely pots with rounded bodies, fired under oxidation conditions (Fig. 30:1–2).

Feature 879 (Fig. 4) was a pit with an oval ground plan measuring 1.97 x 1.51 metres and a depth of 81 cm. The cross-section revealed nearly vertical walls and a slightly sloping bottom. The pit yielded 22 pottery sherds and some animal bones, which allowed for the partial reconstruction of four pottery vessels. All vessels had an unpolished surfaces and were fired under oxidation conditions. The hemispherical bowl had a thinned rim and a single facet on its top (Fig. 31:2). The pot or storage vessel featured a thickened and everted rim with two facets: one on the inside and one on the top (Fig. 31:4). An unclassifiable vessel, likely a pot or a cup, also had a thickened and everted rim (Fig. 31:1). The last identified vessel had an everted, slightly thickened, and broad rim with a single facet on the inside (Fig. 31:3).

Feature 898 (Fig. 5) was a pit with an oval ground plan measuring 0.93 x 0.73 metres and a preserved depth of 14 cm. The cross-section was bowl-shaped. It yielded eight pottery sherds, some daub, and animal bones. The only diagnostic sherd was a rim fragment with an inverted, unthickened rim, slightly rounded at the top (Fig. 14:3). Its surface was polished, and it was fired under reduction conditions. Such vessels, found almost exclusively at settlement sites, occurred throughout nearly all of prehistory. However, the sherd's firing, surface treatment, and ceramic mass are consistent with the site's pottery evidence dated to the late pre-Roman Iron Age.

Feature 936 (Fig. 5) was a pit with an irregular ground plan measuring 1.41 x 0.72 metres. The bottom was even and relatively shallow in the northwestern part (approximately 8 cm), but significantly deeper in the southeastern part, reaching 0.54 metres below the sterile soil level. The pit yielded only two pottery sherds, one of which was a diagnostic fragment of an everted, slightly thickened rim with a single facet on the inner side (Fig. 14:5). Its surface was unpolished, and it was fired under oxidation conditions.

Feature 1111 (Fig. 5) was a pit with a ground plan resembling a circle with a diameter of 1.04 metres. Its bottom was irregular, reaching a depth of 24 cm. It yielded only three pottery sherds, one of which was diagnostic. It was a fragment of a pot with a straight, slightly thickened rim featuring two facets: one on the top and one on the inner side (Fig. 14:4). Its surface was polished and fired under reduction conditions.

Feature 1129 (Fig. 5) was a large pit with a subcircular ground plan measuring 1.97 x 2.02 metres and a depth of 60 cm. Its cross-section was nearly bowl-shaped. The pit yielded 23 pottery sherds and some animal bones. The diagnostic sherds included the top part of a pot with a thickened, everted rim with inner and outer facets and an unpolished surface (Fig. 32:1); a fragment of a bowl with a cone-shaped profile, likely a thickened and everted rim and an unpolished surface (Fig. 32:1); and the top part of a hemispherical bowl with a slightly thinned rim and an unpolished surface (Fig. 32:3). All these vessels were fired under oxidation conditions.

Feature 1168 (Fig. 5) was a pit with an oval ground plan measuring 2.03 x 1.33 metres and a depth of 20 cm. Its cross-section was mildly bowl-shaped. Only three pottery sherds were recorded in the fill, one of which was a diagnostic top part of a tableware vessel. It had a thickened and everted rim, a polished surface, and was fired under oxidation conditions (Fig. 14:2).

Feature 1323 (Fig. 5) was a shallow pit with a sub-rectangular ground plan measuring 1.63 x 0.92 metres and a depth of 13 cm. Its cross-section revealed a flat bottom and slightly sloping walls. The pit yielded 13 pottery sherds, some daub, and animal bones. Only one sherd (Fig. 14:5) was diagnostic: a part of a tableware vessel with a thickened and everted rim, an unpolished surface, and fired under reduction conditions.

Postholes

Feature 234 (Fig. 6) was a posthole with a circular ground plan, a diameter of 0.27 metres, and a preserved depth of only 9 cm. The preserved pottery sherds included a base of a pot/storage vessel (Fig. 13:4), the upper part of a large cup with thin walls and two facets: one on the inside and one on the upper side of the rim (Fig. 13:1), the upper part of an S-shaped bowl (Fig. 13:2), and a fragment of a bowl base (Fig. 13:3). The cup corresponds to T. Dąbrowska's group VI (Dąbrowska 1997: 103). However, its elongated rim and broad inner facet suggest a connection to the Jastorf style.

Feature 252 (Fig. 6) was a posthole with a circular ground plan, a diameter of approximately 0.2 metres, and a depth of 20 cm. It yielded a single sherd: a fragment of a rounded, everted rim of a pot or storage vessel (Fig. 14:4). Such vessels, recorded almost exclusively in settlement contexts, were prevalent throughout the pre--Roman and Roman Iron Ages. Nevertheless, the firing, surface treatment, and ceramic paste match those observed in the pre-Roman Iron Age pottery sherds at the site.

Feature 599 (Fig. 6) was a posthole with a circular ground plan, a diameter of approximately 0.2 metres, and a depth of 13 cm. It yielded a small fragment of a hemispherical bowl with an unthickened, straight, rounded rim fired under oxidation

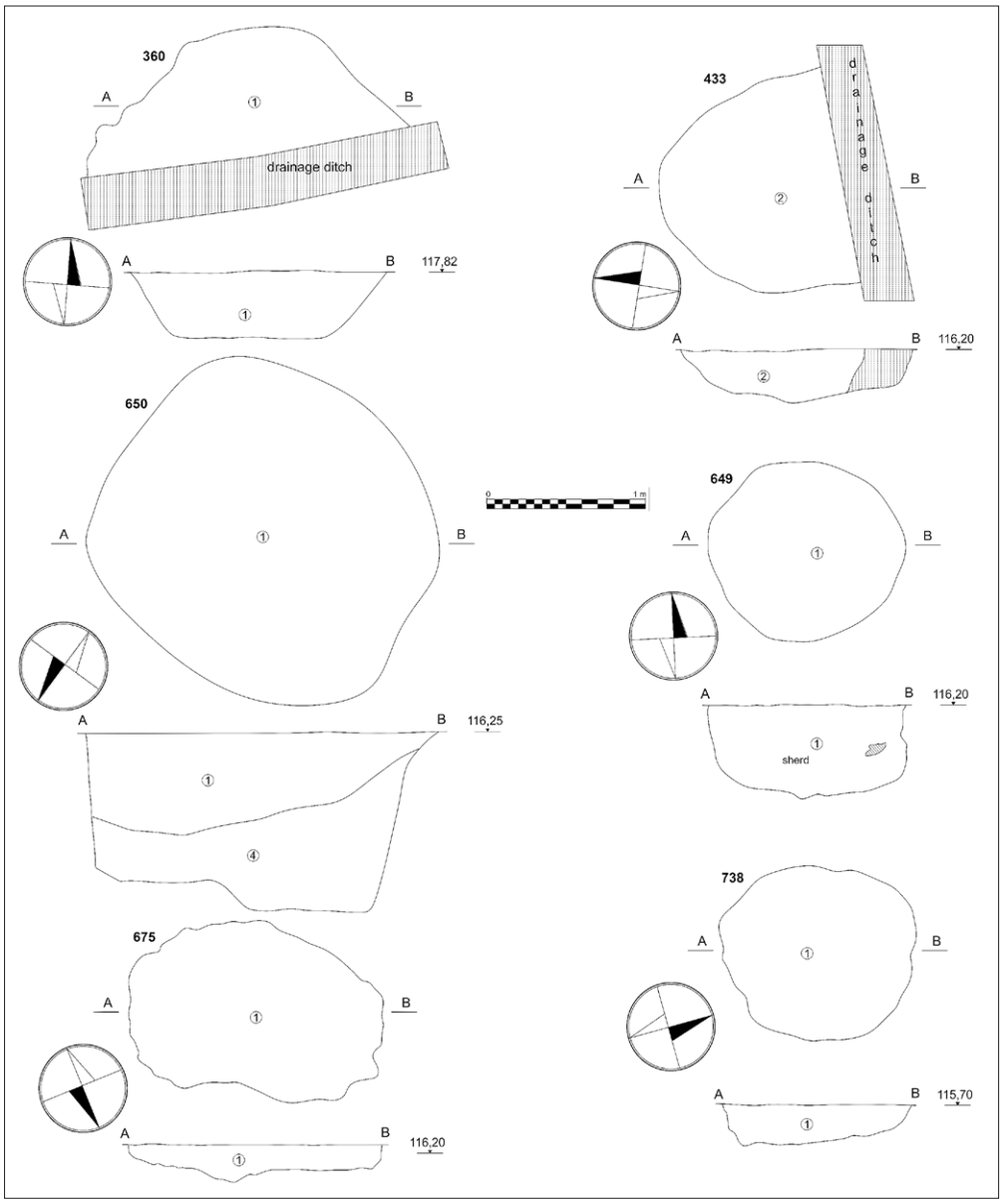

Fig. 3. Pre-Roman Iron Age pits from site 4A Graniczna Street, Wrocław. Key: 1 – dark grey soil, 2 – dark grey soil with daub, 3 – dark grey soil with yellow sand, 4 – dark grey soil with sand and charcoal pieces (drawing by R. Biel, edited by J.E. Markiewicz).

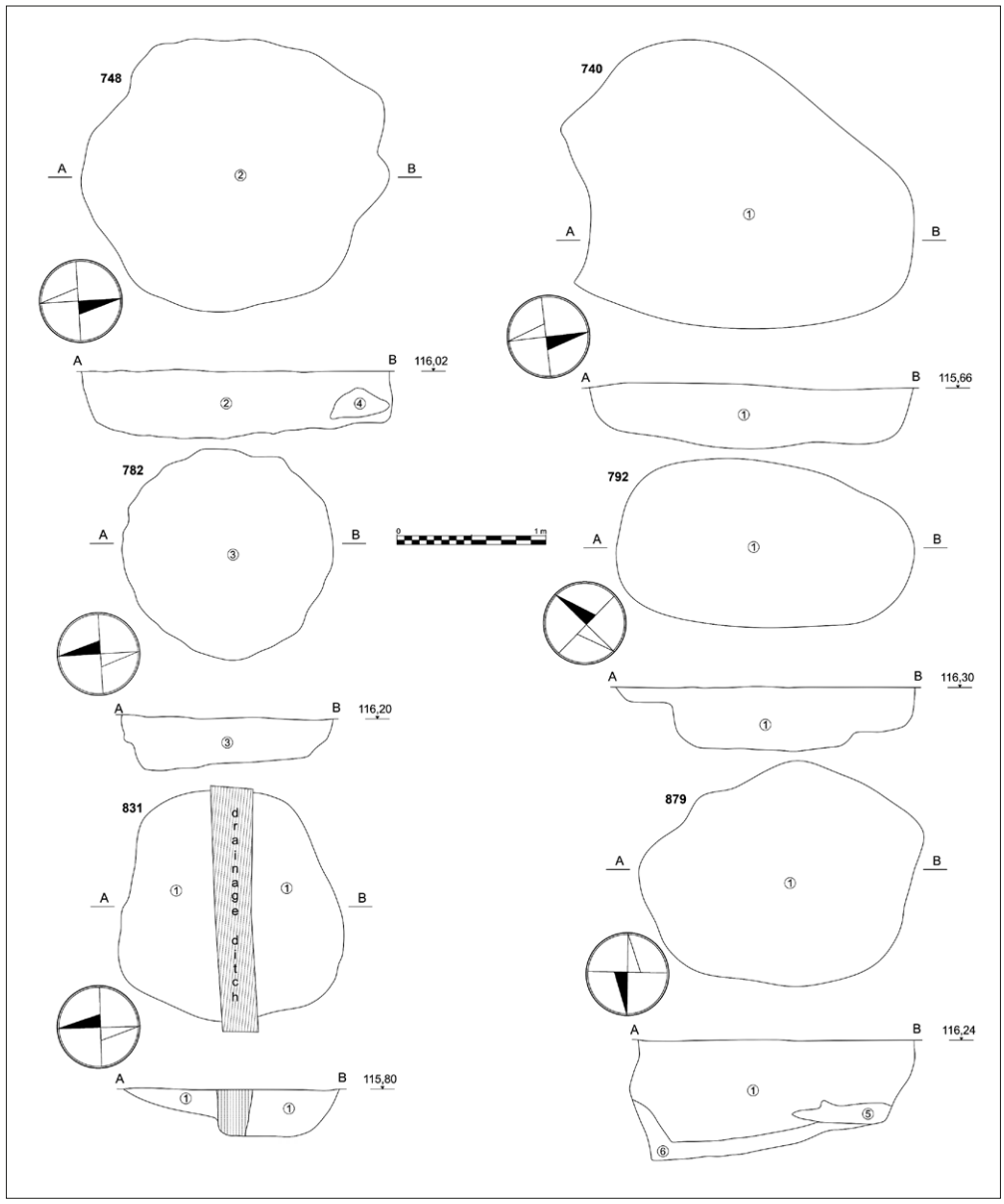

Fig. 4. Pre-Roman Iron Age pits from site 4A Graniczna Street, Wrocław. Key: 1 – dark grey soil, 2 – dark grey soil with charcoal pieces, 3 – dark grey soil with daub and charcoal pieces, 4 – yellow sand, 5 – yellow-grey sand, 6 – grey soil with yellow sand and charcoal pieces (drawing by R. Biel, edited by J.E. Markiewicz).

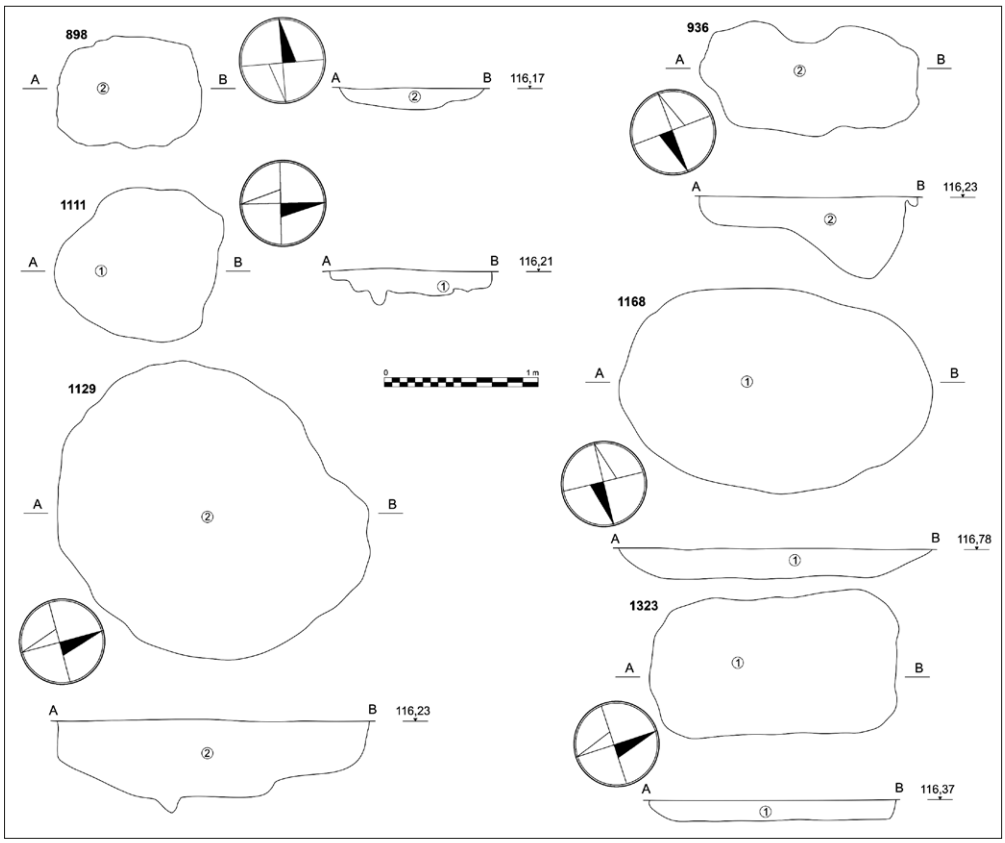

Fig. 5. Pre-Roman Iron Age pits from site 4A Graniczna Street, Wrocław. Key: 1 – dark grey soil, 2 – dark grey soil with yellow sand (drawing by R. Biel, edited by J.E. Markiewicz).

conditions (Fig. 14:3). Such bowls occur in settlement contexts throughout prehistory. However, the firing, surface treatment, and ceramic paste closely match the pre-Roman Iron Age vessels from the discussed site.

Feature 687 (Fig. 6) was a posthole with an irregular ground plan measuring 0.2 x 0.33 metres and a depth of 21 cm. It yielded a single pottery sherd: a slightly everted, thickened rim with a rough surface, fired under reduction conditions (Fig. 14:2), most likely part of a pot. Such sherds, typical of settlement contexts, occurred throughout the late pre-Roman Iron Age and Roman Iron Age. However, its firing, surface treatment, and ceramic paste match the site's pottery evidence dated to the late pre-Roman Iron Age.

Feature 728 (Fig. 6) was a posthole with an almost circular ground plan measuring 0.32 x 0.31 metres and a depth of 27 cm. It produced two pottery

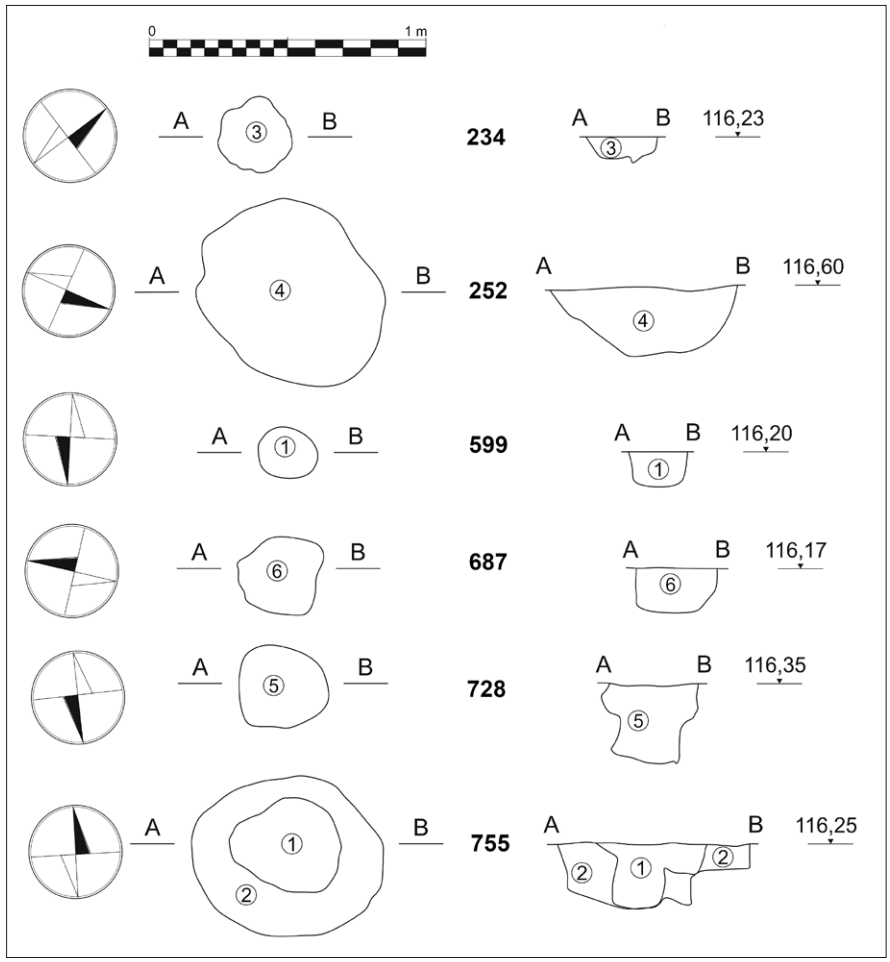

Fig. 6. Pre-Roman Iron Age postholes from site 4A Graniczna Street, Wrocław. Key: 1 – dark grey soil, 2 – grey sand with grey clay, 3 – grey soil with daub, 4 – grey soil, 5 – dark grey soil with yellow sand, 6 – light grey soil (drawing by R. Biel, edited by J.E. Markiewicz).

sherds, one of which was the bottom part of a tableware vessel, most likely a thin-walled, polished cup fired under reduction conditions (Fig. 14:6). Such vessels, more prevalent at cemeteries than at the settlement sites, occurred throughout the late pre-Roman Iron Age and Roman Iron Age. However, the sherd's firing, surface treatment, and ceramic paste match the site's pottery evidence dated to the late pre-Roman Iron Age.

Feature 755 (Fig. 6) was a large posthole with an almost circular ground plan measuring 0.6 x 0.68 metres and a depth of 24 cm. It was part of an extensive

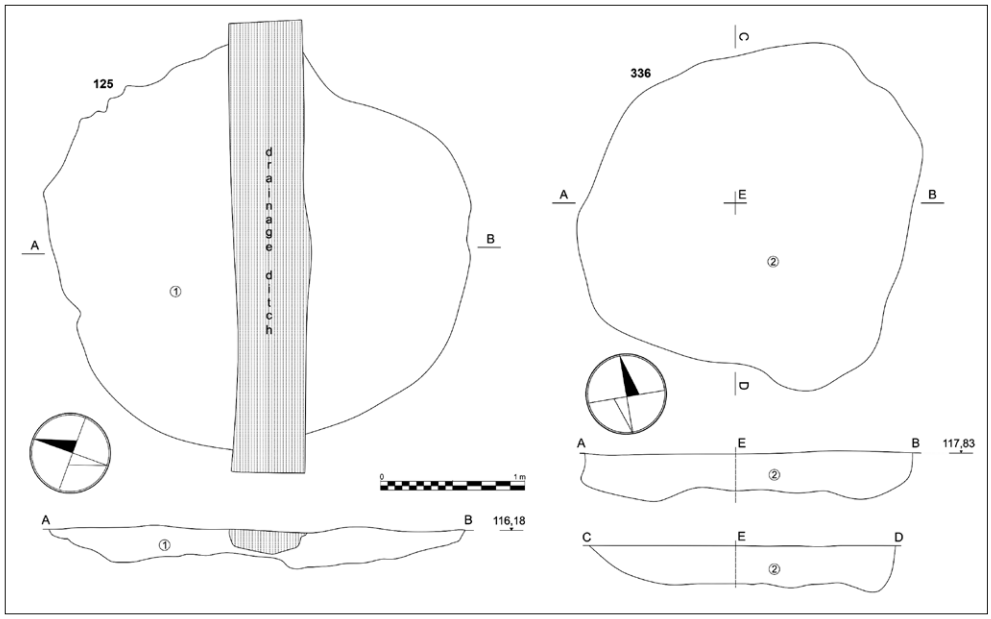

Fig. 7. Pre-Roman Iron Age pit houses from site 4A Graniczna Street, Wrocław. Key: 1 – dark grey soil with charcoal pieces, 2 – dark brown soil with daub (drawing by R. Biel, edited by J.E. Markiewicz).

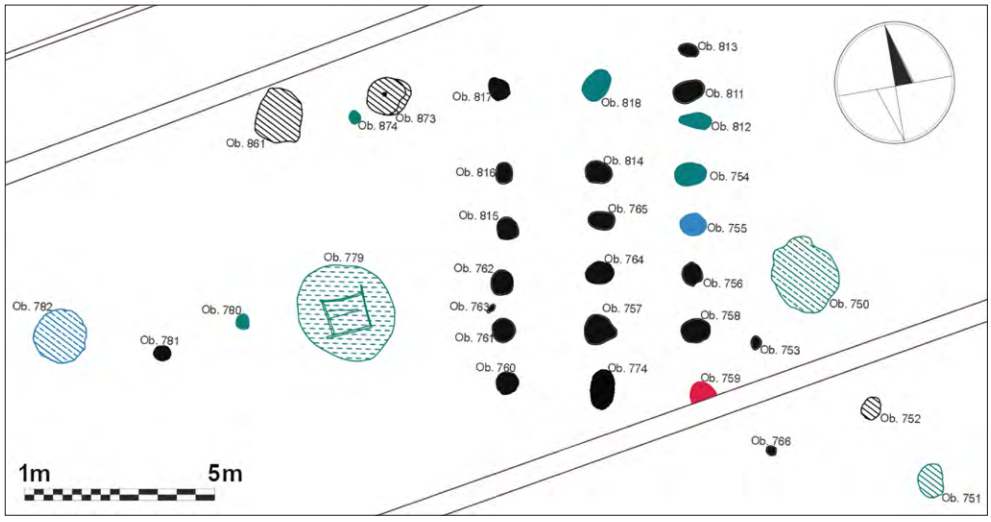

Fig. 8. Ground-level post building and its surroundings. Key: black – undated features, blue – features securely dated to late pre-Roman Iron Age, green – features dated to pre-Roman / Roman Iron Age, red – features dated to Roman Iron Age (drawing R. Biel, edited by J.E. Markiewicz).

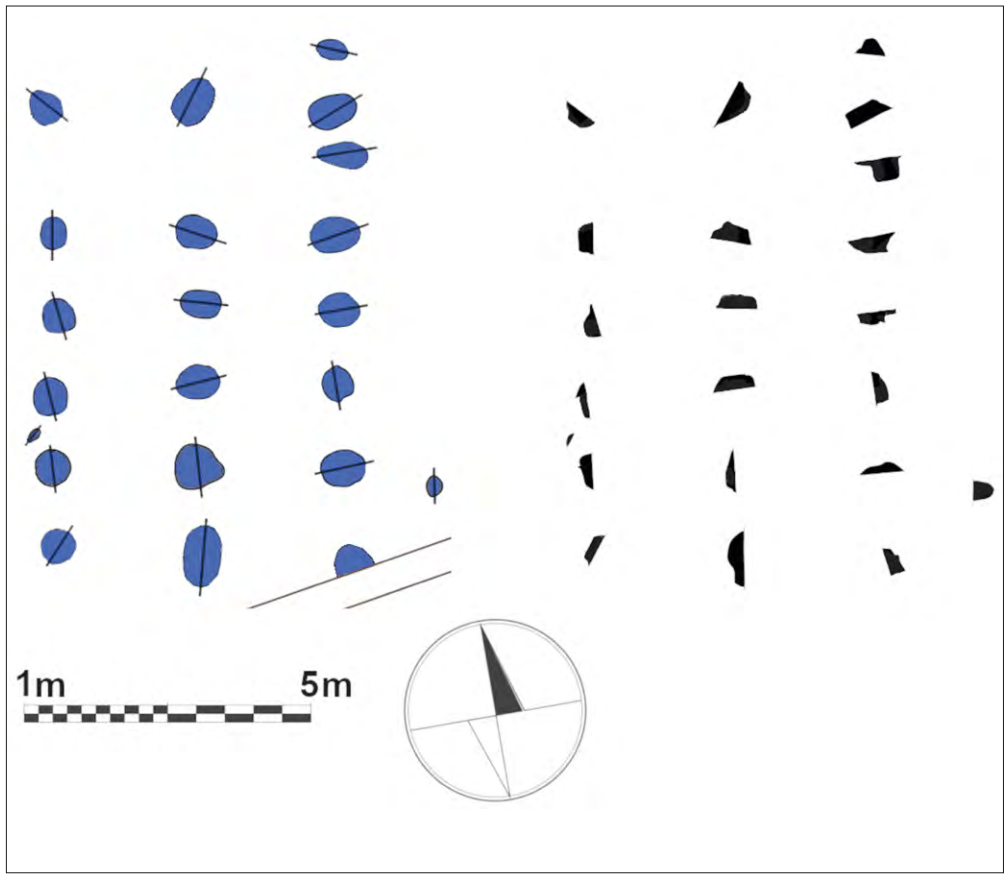

Fig. 9. Posthole distribution and cross-sections in the ground-level post building (drawing by R. Biel, edited by J.E. Markiewicz).

posthole structure, likely a longhouse. The feature displayed a two-phase stratigraphy (also observed in the surrounding postholes) with clear traces of burning at the bottom and a secondarily filled hollow space after the burnt-out post, reflected by a lighter area in the centre. The posthole yielded four pottery sherds. Two were parts of vessel bodies, and two were bottom parts of vessels fired under oxidation conditions. One was likely a pot with a roughened surface, and the other was a pot, vase, or jug with an unpolished surface (Fig. 18). Unfortunately, there is no information on which layer the sherds came from. Such vessels, typical of settlement contexts, occurred throughout the late pre-Roman Iron Age and Roman Iron Age. However, the firing, the characteristic surface treatment on one of the sherds (Fig. 27:1), and the applied ceramic mass tempered with mica match the site's pottery evidence dated to the late pre-Roman Iron Age.

Pit houses

Pit houses are frequently found at settlements scattered over vast areas of north-central Europe in the Iron Age (Michałowski 2011: 87–90). Although the discussed specimens were small or very small (feature 125 had an area of less than 9 m^2 and feature 336 less than 5 m^2), such structures occurred at the Jastorf and Przeworsk culture settlements (Markiewicz 2019: Figs. 6.1–6.4).

Feature 125 (Fig. 7) was a shallow pit house with an oval ground plan (approximately 2.5 x 3 metres), a relatively flat bottom, a slightly bowl-shaped cross-section, and a depth of 26 cm. The sherd assemblage allowed for the reconstruction of the upper parts of two vessels classified as pots (Fig. 3), corresponding to T. Dąbrowska's group VI (Dąbrowska 1997: 103).

Feature 336 (Fig. 7) had a somewhat irregular ground plan measuring 2.3 x 2.1 metres, with a greatest preserved depth of 33 cm. The cross-sections show that it was slightly deeper along the walls, which might indicate the presence of posts or foundation trenches supporting the original structure. Otherwise, the bottom was relatively flat, suggesting the structure was a small pit house. According to the inventory, the analysed pre-Roman Iron Age sherd assemblage originally came from feature 389, identified as a posthole with an oval ground plan measuring 0.3 x 0.22 metres and a preserved depth of 6 cm. However, the assemblage was too extensive to have originated from such a small space. Photos of the ground plan and cross-section revealed no sherds in the feature's fill. After consulting a member of the excavation team (I would like to thank Dr Radosław Biel for his invaluable insights), it was clarified that the sherds actually came from feature 336, and there had been confusion in assigning the correct feature number during the fieldwork.

The ceramic assemblage contained 81 sherds, with 11 vessel forms partially reconstructed: two S-shaped bowls (Fig. 15:6–7) with thickened and everted rims featuring one facet, fired under reduction conditions, one S-shaped bowl with a thickened and everted rim fired under reduction conditions (Fig. 15:5), one probably hemispherical bowl fired under reduction conditions (Fig. 15:2), one cone-shaped bowl with thickened and slightly everted rim fired under oxidation conditions (Fig. 16:1), one pot with a most likely oval profile, straight, unthickened rim, and a band-shaped handle fired under oxidation conditions (Fig. 16:4), four unclassified tableware vessels: two with rounded and slightly everted rims – one with an unpolished surface and fired under oxidation conditions (Fig. 15:1) and one polished and fired under reduction conditions (Fig. 15:3), and two polished specimens with thickened, faceted, and everted rims fired under oxidation (Fig. 16:2) and reduction conditions (Fig. 16:3), as well as one storage or kitchenware vessel with an unpolished surface and a thickened, everted rim, fired under oxidation conditions (Fig. 15:4).

Fig. 10. Posthole cross-sections in the ground-level post building (photograph by R. Biel, edited by J.E. Markiewicz).

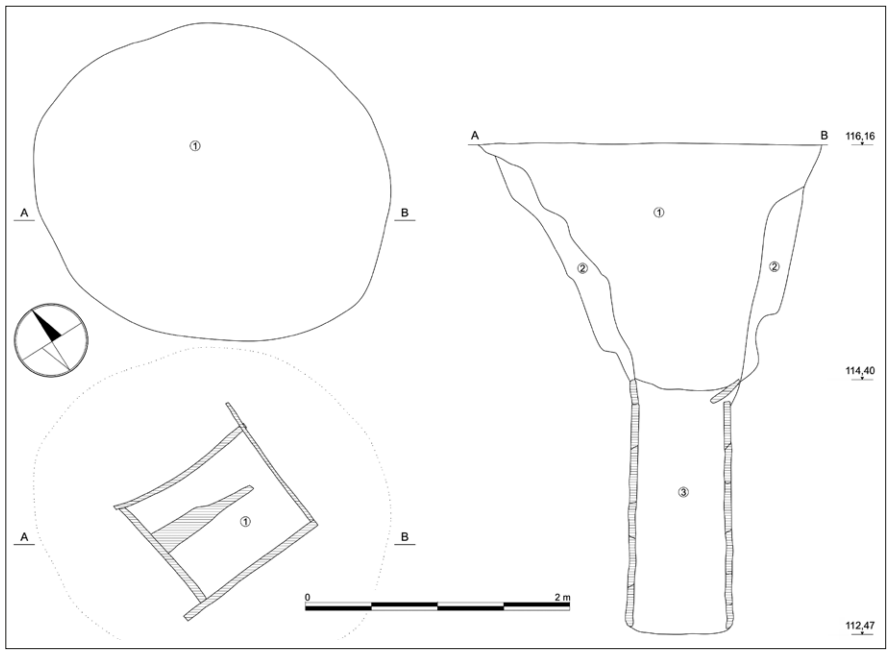

Fig. 11. Outlines and cross-section of feature 779. Key: 1 – dark grey soil with daub and charcoal pieces, 2 – grey soil with yellow sand and clay, 3 – dark grey, silty and muddy soil (drawing by R. Biel).

Ground-level post building and its surroundings

Apart from features that can be relatively securely dated to the pre-Roman Iron Age, the site has also yielded a set of features with unclear chronology. Indirect indications may suggest that the complex originated during the discussed period, but the possibility of a later dating must also be considered.

Among the posthole arrangements at the discussed site, the remains of an intriguing ground-level post building (Fig. 8) have been identified. The concentration of postholes included 19 large ones arranged in three rows, with possibly four smaller ones. The building is oriented along the NNE–SSW axis, and its preserved outline measures approximately 6 x 10 metres. However, due to the scarcity of dating material discovered, interpreting its chronology presents challenges.

According to a preliminary chronological interpretation by K. Bykowski, most of the postholes the yielded finds contained sherds attributed to the pre-Roman Iron Age (features 754, 755, 812, and 818), while one contained Roman Iron Age material (feature 759). However, further verification revealed that the sherds classified as pre-Roman Iron Age were poorly diagnostic. Although initially attributed to the

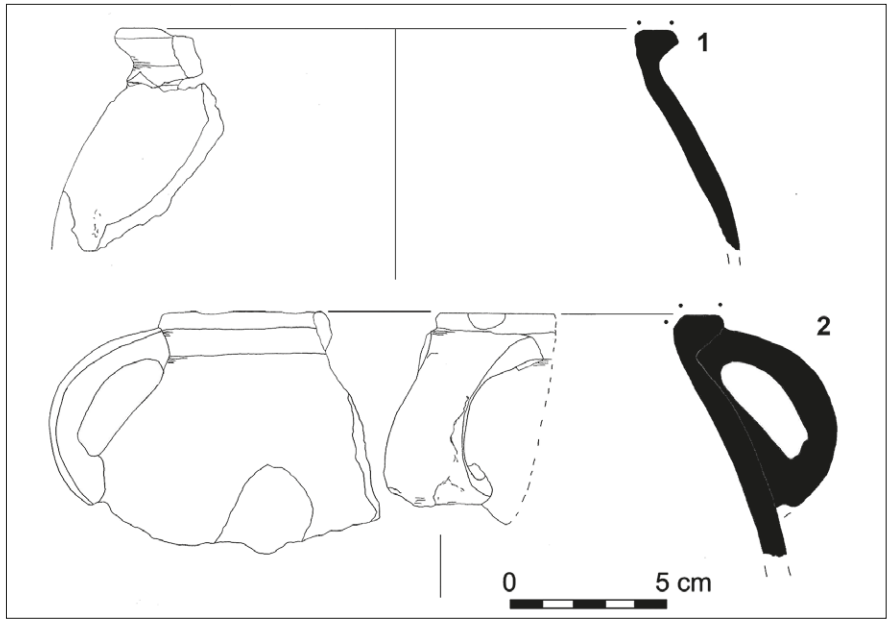

Fig. 12. Pottery from feature 125 (drawing by A. Dołbizno, J.E. Markiewicz).

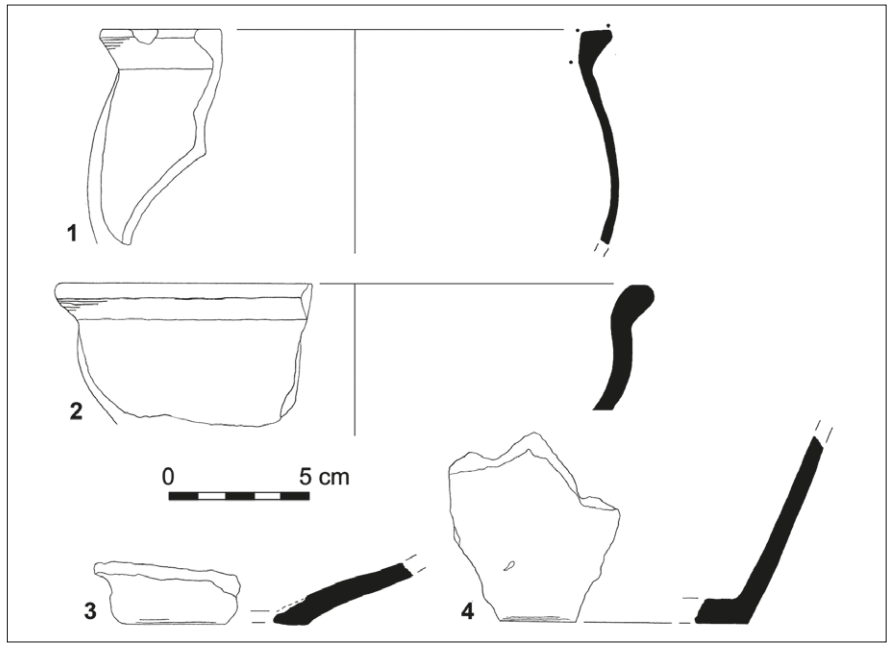

Fig. 13. Pottery from feature 234 (drawing by A. Dołbizno, J.E. Markiewicz).

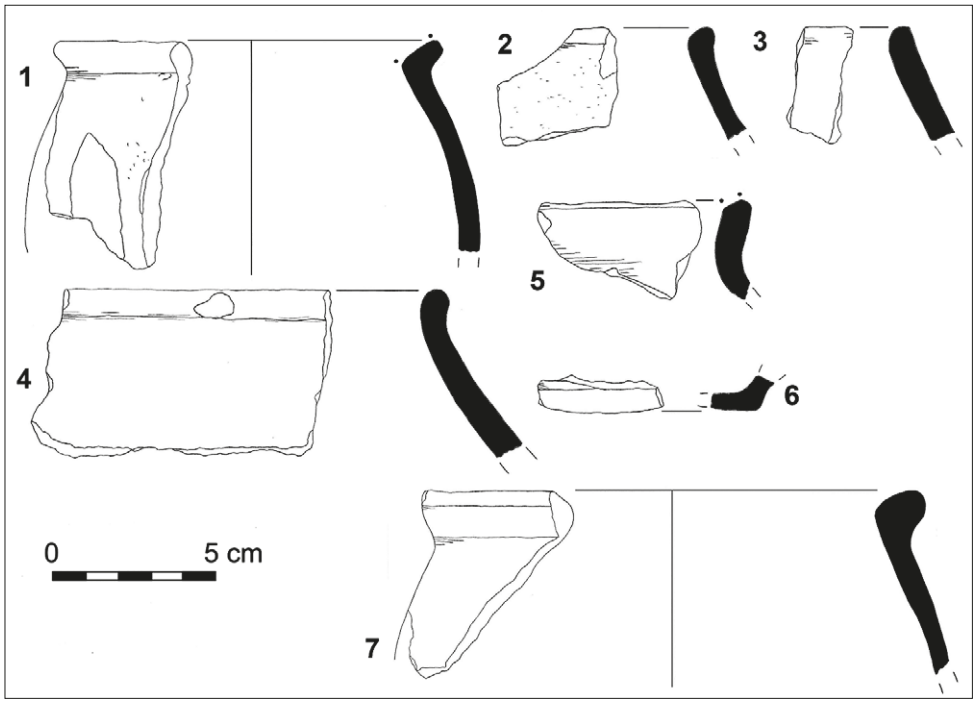

Fig. 14. Pottery from features: 1 – 433, 2 – 687, 3 – 898, 4 – 252, 5 – 936, 6 – 728, 7 – 360 (drawing by A. Dołbizno, J.E. Markiewicz).

Przeworsk culture, they were body fragments of hand-made settlement-type vessels, which could also originate from the early Roman Iron Age. Sherds from posthole 759, initially interpreted as originating from the Roman Iron Age's B2/C1 horizon, went missing, and their chronology could not be verified. This feature, however, was cut by a modern drainage ditch, suggesting possible secondary deposition of the sherds.

I believe that only finds from posthole 755 (Fig. 18) can be confidently interpreted as late pre-Roman Iron Age artefacts. While no diagnostic rim fragments were preserved, their specific surface treatment (roughening) and the temper and firing type precisely matched other late pre-Roman Iron pottery finds from the site.

Theoretically, it is possible that not all postholes originated from the same time period. However, all features comprising the building's basic outline (features 754, 755, 756, 757, 758, 759, 760, 761, 762, 764, 765, 774, 811, 814, 815, 816, 817, and 818) exhibit an identical destruction pattern, evident from their cross-sections (Fig. 10). Most of these postholes (except for nos. 756–758) show clear traces of burning in the fill, usually near its boundary – at the bottom and/or at the side. Hollow spaces left after the burnt-out posts appear to have been filled secondarily, often resulting in lighter areas in the centres of their cross-sections.

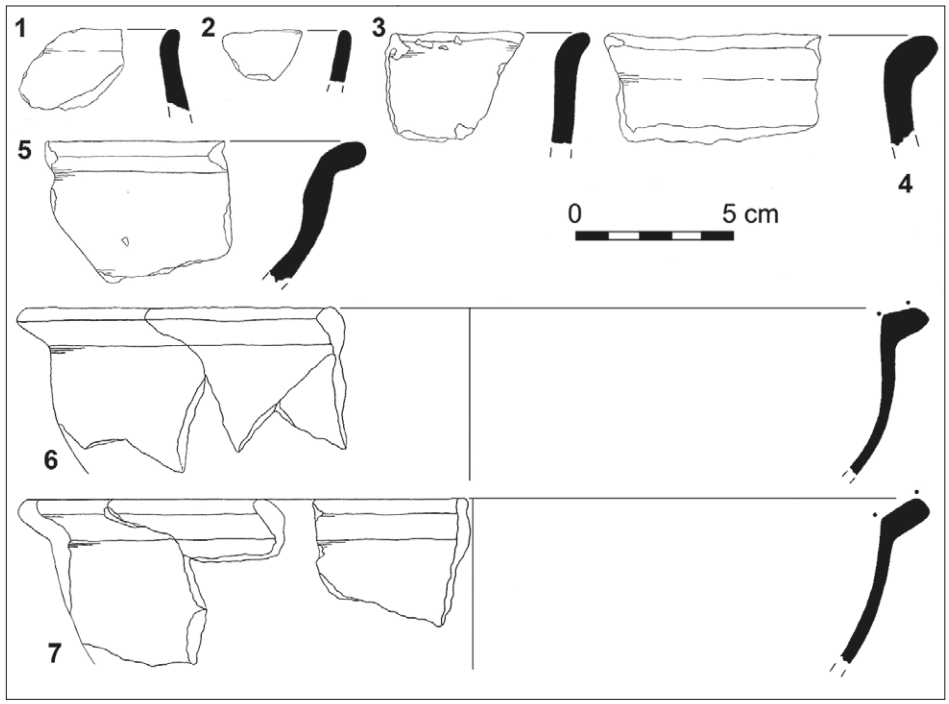

Fig. 15. Pottery from feature 336 (drawing by A. Dołbizno, J.E. Markiewicz).

It is only reasonable to conclude that the discussed postholes all belonged to the same structure: a building destroyed in a fire. Postholes 753, 763, 812, and 813 did not display the same pattern and were situated outside of the regular posthole arrangement, suggesting they did not belong to the discussed structure. While the chronological placement of the building remains uncertain, most indications suggest it originated in the late pre-Roman Iron Age rather than a later period.

In terms of design, the building did not resemble typical north-European longhouses. Unlike two-aisle buildings where the central row of ridgeposts and two rows of posts along the walls differ significantly in robustness and depth (as illustrated in Fig. 9), all postholes in this structure were of similar, considerable diameter, typically ranging between 60 and 80 cm, with a few outliers (e.g., feature 816 – approximately 50 cm, feature 774 – approximately 1 m). Their preserved depth varied, being almost 40 cm in the northern part of the arrangement and approximately 15 cm in the southern part. Such robust posts might suggest they were likely intended to support a heavy structure. If we were to consider this structure as a longhouse with a ground-level entrance, the only plausible location for the entrance door would be between posts 816 and 817. This is because the northernmost row of posts was spaced approximately 1.5 metres apart from

the subsequent rows, which were typically spaced 0.7–0.8 metres apart from each other.

In many aspects, the preserved remains of the building resemble structures interpreted as granaries, characterised by regularly distributed posts of similar sizes. However, granaries typically feature a much smaller scale, having between four to nine postholes, whereas the building at Muchobór contained 18. In a recent discussion on the northern European settlement architecture, J. Schuster categorised such structures as "smaller ground-level post buildings", often considered auxiliary structures (Schuster 2020: 124–127). The discussed building would fit within this highly diverse category of buildings, which vary in size and design details. However, its identification as such does not significantly advance our understanding of its function or chronological context.

While the rescue excavations in Graniczna Street yielded many other posthole arrangements (Fig. 2), the absence of dating material and the presence of multiple occupation phases at the site prevent us from conclusively linking them to the pre-Roman Iron Age phase, which is the focus of this paper. This is especially significant given the substantial evidence from the Roman Iron Age recorded at the site.

The Well

The excavation team uncovered remains of a well located west of the previously discussed ground-level post building. Its outline at the top level was oval, measuring approximately 2.45 x 2.8 metres. At lower levels, the dimensions gradually reduced. At a depth of 1.9 metres, the shaft transitioned to a rectangular shape with dimensions of 0.9 x 1.1 metres, revealing plank lining (Fig. 11). According to the drawings, the well reached a depth of about 3.7 metres. However, due to the high groundwater level, photographic documentation of the lower levels is unavailable.

K. Bykowski's analysis of the recorded pottery sherds suggests the well's pre-Roman Iron Age origin. However, the preserved assemblage included seven pottery sherds, identified as body fragments of coarse, thick-walled, settlement-type vessels fired under oxidation conditions. While they were definitely of Iron Age origin, a more accurate chronological interpretation is extremely difficult despite the preserved wooden lining. Unfortunately, no wood samples were taken for dendrochronological analysis, and the planks were either discarded or left *in situ* at the excavation site.

Interestingly, approximately 2.2 metres west of where the well's casing would have been situated, a posthole (feature 780, Fig. 29) was identified. At such distance, shadoofs for drawing water from the well would be typically located (Piotrowska 2019: 187–190). Unfortunately, the posthole only yielded a single non-diagnostic sherd, which – as it was in the case of the well – can be attributed to the Przeworsk culture but cannot be dated more precisely.

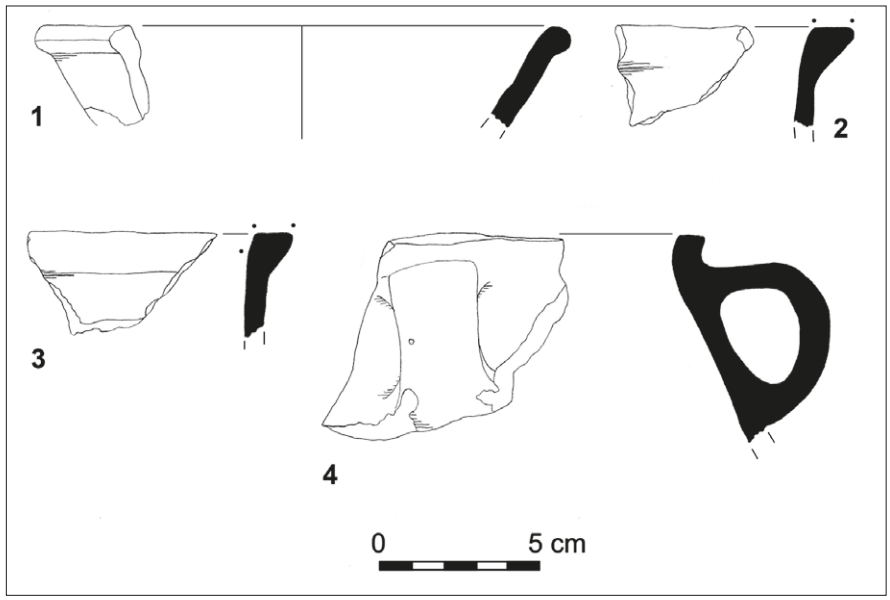

Fig. 16. Pottery from feature 336 (drawing by A. Dołbizno, J.E. Markiewicz).

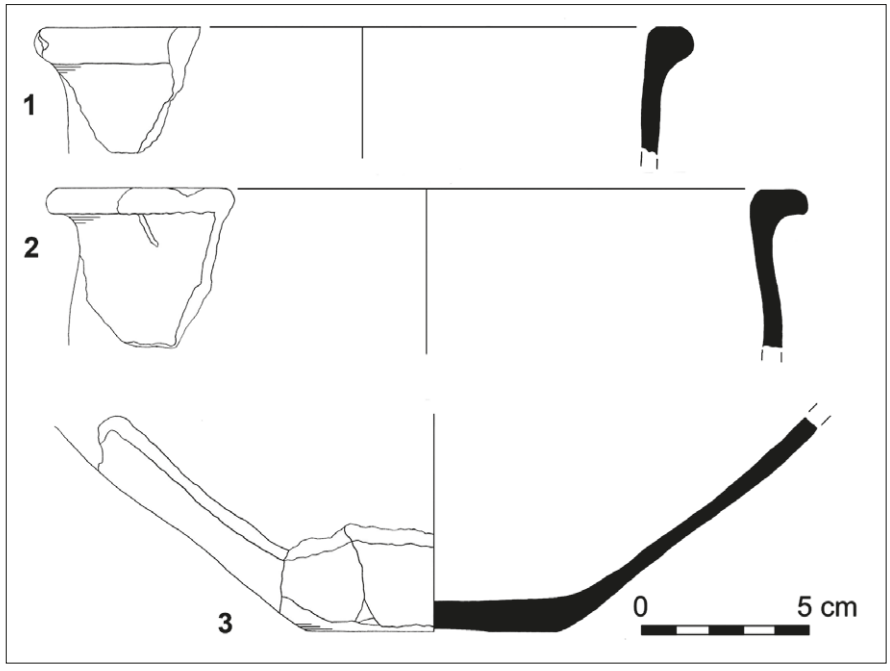

Fig. 17. Pottery from feature 649 (drawing by A. Dołbizno, J.E. Markiewicz).

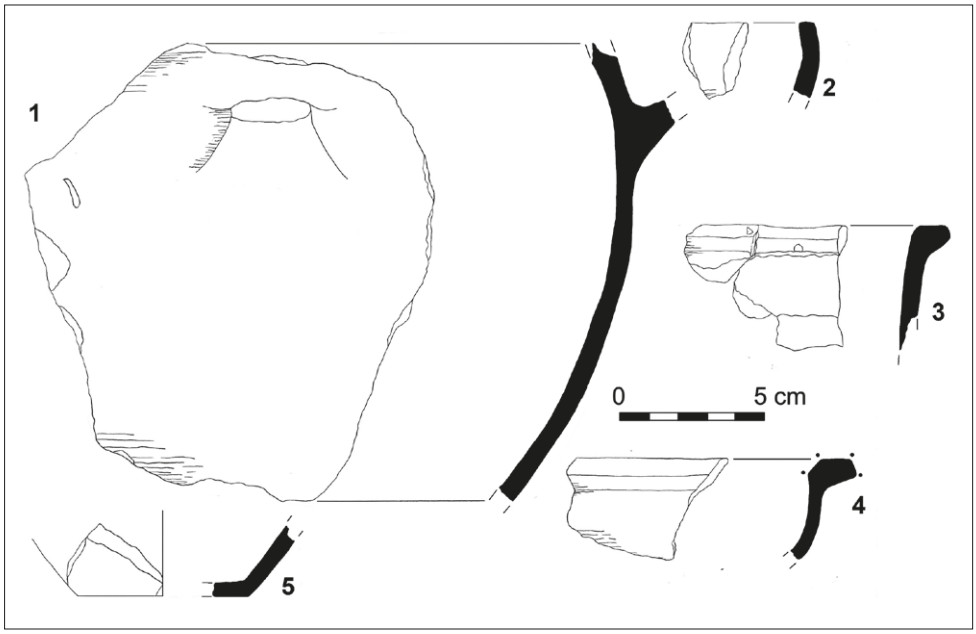

Fig. 18. Pottery from feature 649 (drawing by A. Dołbizno, J.E. Markiewicz).

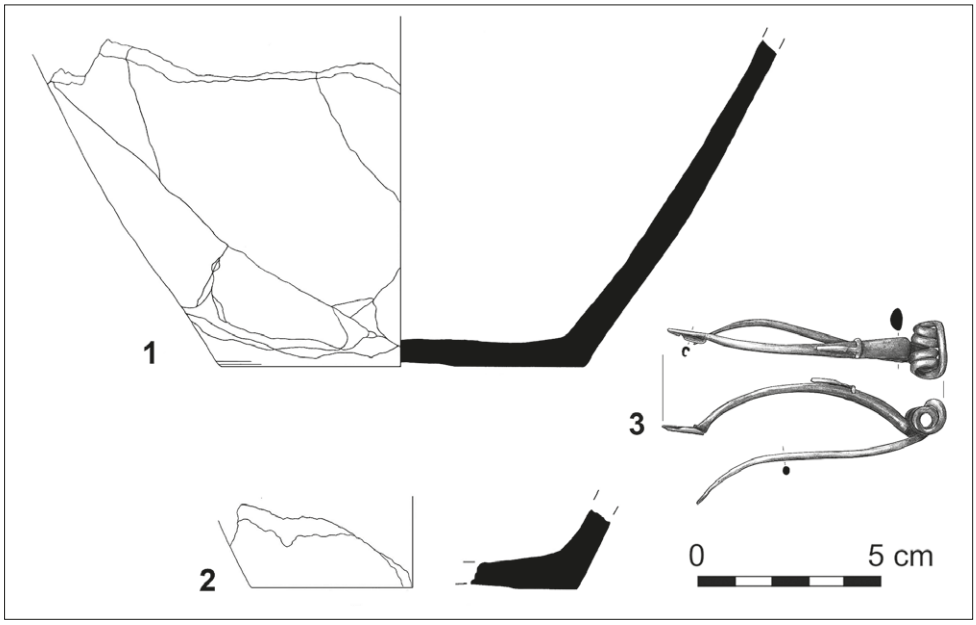

Fig. 19. Pottery and fibula from feature 649 (drawing by A. Dołbizno, J.E. Markiewicz, N. Lenkow).

Fig. 20. Fibula from feature 649 (photograph by J.E. Markiewicz).

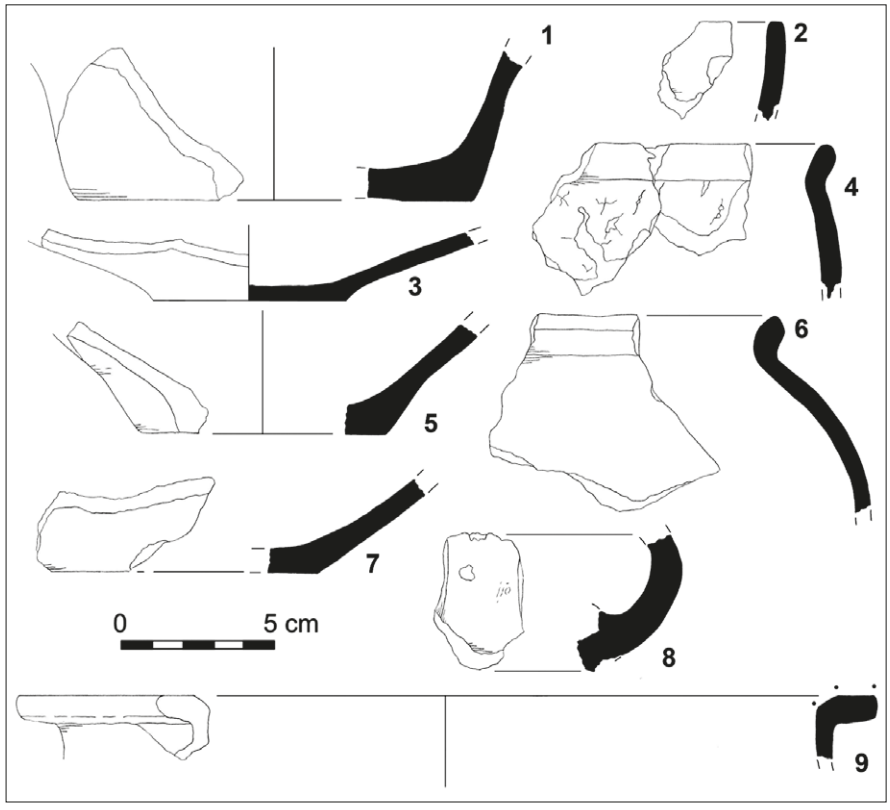

Fig. 21. Pottery from feature 650 (drawing by A. Dołbizno, J.E. Markiewicz).

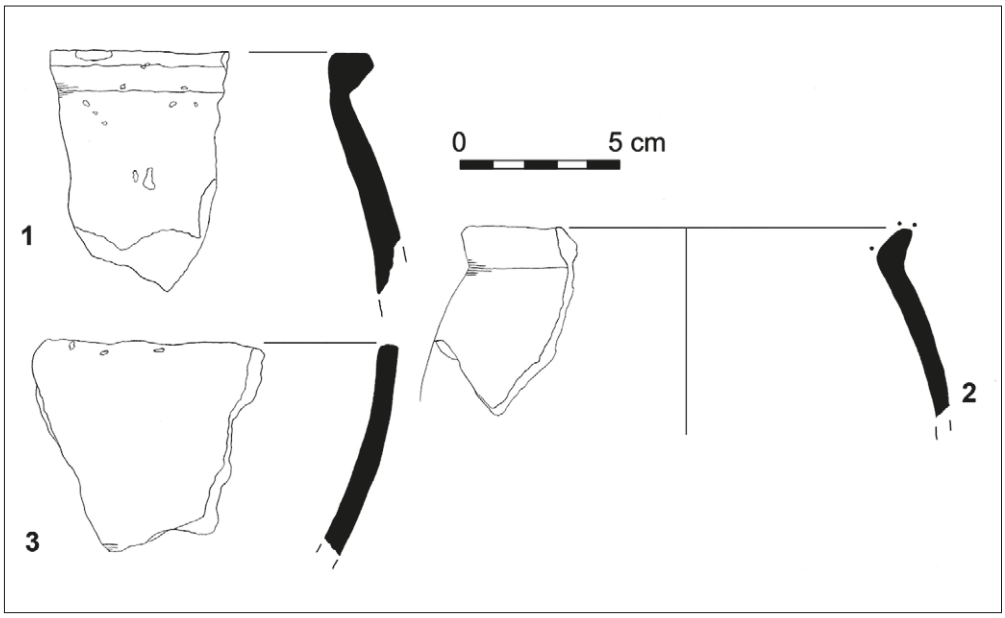

Fig. 22. Pottery from feature 675 (drawing by A. Dołbizno, J.E. Markiewicz).

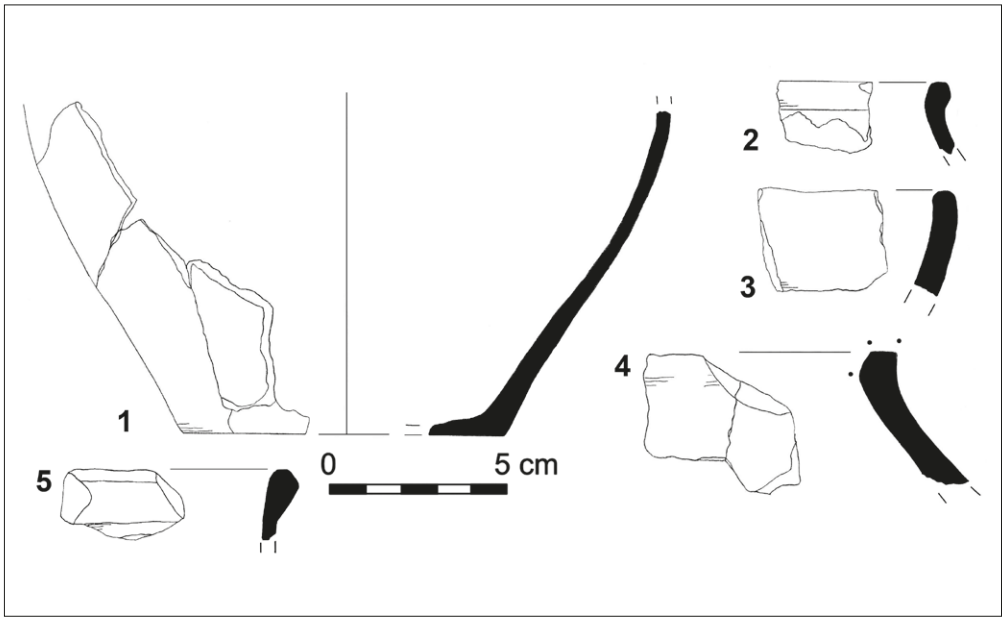

Fig. 23. Pottery from features: 1 – 738, 2 – 1168, 3 – 599, 4 – 1111, 5 – 1323 (drawing by A. Dołbizno, J.E. Markiewicz).

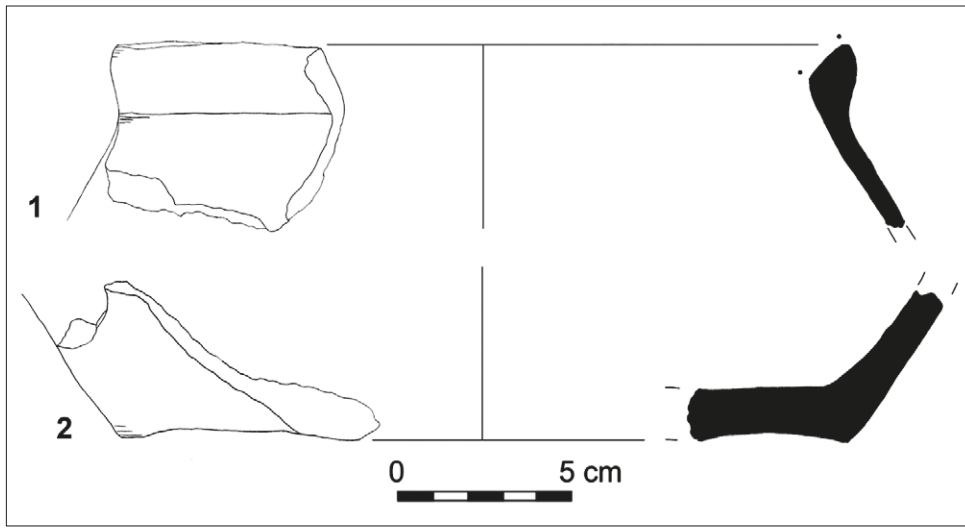

Fig. 24. Pottery from feature 740 (drawing by A. Dołbizno, J.E. Markiewicz).

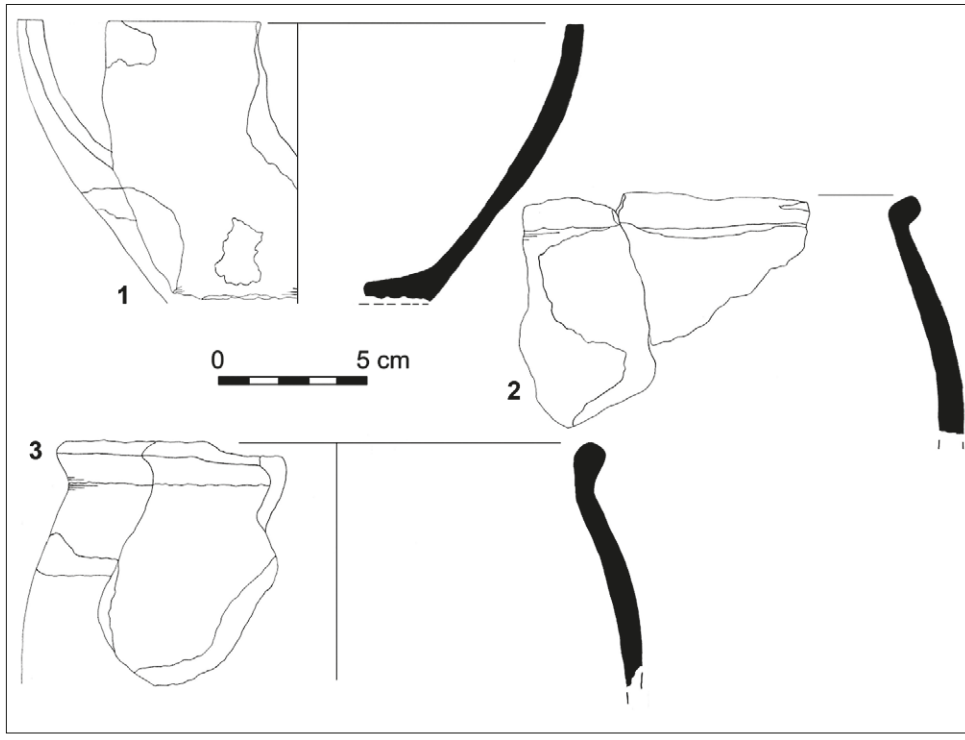

Fig. 25. Pottery from feature 748 (drawing by A. Dołbizno, J.E. Markiewicz).

Layout

In addition to the previously discussed complex comprising the ground-level post building and the well, interpreting the spatial arrangement of the preserved pre-Roman features proves challenging. The analysed features were scattered sparsely across the eastern part of the excavation area (except for pits 1168 and 1323), close to the Kasina stream along with features from other periods. Poor state of preservation of most features hinders their functional interpretation. No functional units could be identified, but given the abundance of features without any dating material and chronological interpretation, the presence of such functional units is highly likely.

Portable finds

Pottery

The 451 late pre-Roman Iron Age pottery sherds recovered were generally poorly preserved, as is frequently the case in settlement contexts. The vessels were heavily fragmented, with damaged and weathered surfaces, making it difficult to identify their original forms and surface treatments in many cases. Among the pottery assemblage, only two vessel forms were fully reconstructed: a cup from feature 831 (Fig. 30:3) and a bowl from feature 748 (Fig. 25:1). The ceramic paste of all vessels was tempered with sand and crushed rock, with small pieces of mica present in most.

Three types of surfaces were identified: polished, unpolished, and roughened/textured. While most of analysed pottery sherds lacked any decorations, a few featured incised ornaments or decorations made from fingertip or fingernail impressions.

Pottery pieces that were not suitable for formal analysis were categorised into four technological groups: 1 – polished pottery fired under reduction conditions (42 sherds), 2 – polished pottery fired under oxidation conditions (31 sherds), 3 – roughened pottery (91 sherds), and 4 – unpolished pottery (267 sherds).

Twenty sherds were so damaged that they could not be attributed to any of the defined groups. It is possible that the count of unpolished sherds (those not worked with polishing or roughening) has been overestimated. Given the significant weathering of many pottery pieces, some of these sherds might originally have belonged to groups 1 and 2.

Bowls

Bowls were defined as thin-walled vessels with rim diameters greater than their heights, typically featuring polished surfaces. They are among the most commonly found vessel types at late pre-Roman Iron Age settlement sites. The site under

study yielded fragments of at least 17 bowls, which can be broadly categorised into three types:

1. Hemispherical bowls with vertical rims

Eight specimens from features 336, 599, 650, 675, 748, 782, 879, and 1129 (Figs. 15:2, 21:2, 22:3, 23:3, 25:1, 28:1, 31:2, 32:3) represent this type.

2. Hemispherical bowls with inverted rims

A single specimen was recorded in feature 649 (Fig. 18:2).

3. Bowls with thickened and everted rims, sometimes featuring facets

Features 234, 336, 649 and 1129 yielded seven such bowls (Figs. 13:3, 15:5–7, 16:1, 18:4, 32:2). Another one may have been deposited in feature 650, although only its bottom part is preserved; its shape aligns with the discussed vessel forms (Fig. 21:3). Apart from two specimens with conically shaped bodies (Figs. 16:1, 32:2; variant 11.5a according to Dąbrowska 1973: 502, Pl. XXIX: 17), the discussed vessels had rounded bodies which, coupled with their everted rims, formed S-shaped profiles. Facets were identified only in three specimens. Two bowls from feature 336 (Fig. 15:6–7) had single facets on the inner side of the diagonally everted, broad rims. The bowl from feature 649 (Fig. 18:4) had a thicker, horizontally everted rim with three facets: on the inner side, the top, and the outer side.

Bowls with thickened and everted rims, often featuring facets, might be considered among the prominent forms of the late pre-Roman Iron age, typically associated with the A2-stage Przeworsk culture and categorised by T. Dąbrowska as types 11.1–5 (Dąbrowska 1973: 501–502). However, those featuring slimmer, broader rims with facets on the inner side are more characteristic of late Jastorf assemblages found in the Polish Lowland (see, for example, Kasprowicz 2008: Plate 5:19, 18:14; Machajewski, Pietrzak 2008b: Plate 35:6; Bokiniec 2014: Fig. C44:8; Kot, Piotrowska 2014: Fig 13:8; Grygiel 2018: 303–306, Fig. 146:1–2, Plate 31:6).

Cups

Small tableware vessels (up to approximately 15–16 cm in rim diameter), usually with polished surfaces, thin walls, and a height greater than rim diameter, typically featuring a handle, were classified as cups. Seven such vessels were discovered in the settlement. Rim fragments were preserved in specimens from features 360 (Fig. 14:7), 433 (Fig. 14:1), 675 (Fig. 22:2), and 831 (Fig. 30:3). The cups from features 360, 433, and 675 have rounded bodies with the maximum width likely at mid-height. The first cup lacks facets, the second has one on the inner side of the rim, and the third features two facets – one on the inside and one on the top of the rim. These vessels correspond to the smallest specimens from Dąbrowska's categories VI and VII (Dąbrowska 1997: 103, Pl. CLXIX:7–8). In contrast,

E. Bokiniec classified them as pots (Bokiniec 2014: 23–24, Fig. A31, 9.13) or D1e-type cups (Bokiniec 2018: 117, Figs. B41:17; B45:5; B54:4). Such vessels were common finds in late pre-Roman Iron Age contexts throughout north-central Europe.

The cup from feature 831 represents a different type, which might correspond to Dąbrowska's type I cups (Dąbrowska 1997: 102). In Kamieńczyk, all type I cups with rims matching our specimen were dated to stage A2 of the late pre-Roman Iron Age. A similar cup was found, for instance, in grave 364, alongside a Kostrzewski's type C-I fibula (Dąbrowska 1997: Pl. CLXIX:1,6), situating it at the very beginning of the A2 stage of the late pre-Roman Iron Age (Mistewicz et al. 2021: 99–105). The discussed specimen was fired under reduction conditions and featured a broad, almost band-shaped handle just below its lip. Its surface is heavily weathered, so no traces of ornamentation or facets have survived – if they were ever present. Similar vessels appear in various sizes in both Przeworsk and Jastorf culture contexts (Bykowski 1976: Pl. XIII:c; Machajewski, Pietrzak 2008b: 302, P. 27:1;

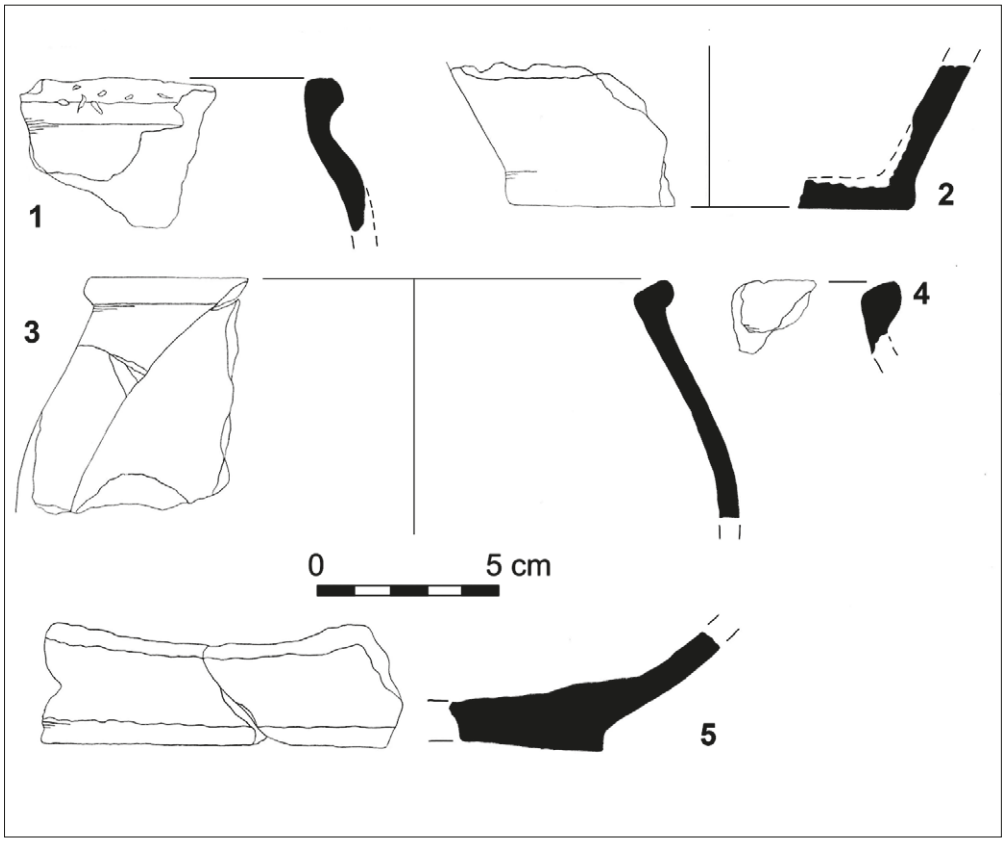

Fig. 26. Pottery from feature 748 (drawing by A. Dołbizno, J.E. Markiewicz).

Kasiński 2010; Grygiel 2018: Fig. 144:6; Dulęba, Markiewicz 2021: Fig. 17:3). However, in the Jastorf culture, specimens with diameters exceeding 20 cm are more common.

Vases/Tureens

Vases or tureens are defined as medium-sized tableware vessels with a rim diameter of over 15–16 cm, thin or medium-thick walls, and heights greater than the rim diameter. They are usually polished and typically lack handles. However, distinguishing this category in the discussed assemblage is challenging due to the significant weathering of the sherd surfaces. Since surface treatment and wall thickness are the primary features distinguishing them from pots, some vases with damaged surfaces may have been misclassified as kitchenware vessels. Thus, only two specimens were classified as vases/tureens: one from feature 125 (Fig. 12:1) with

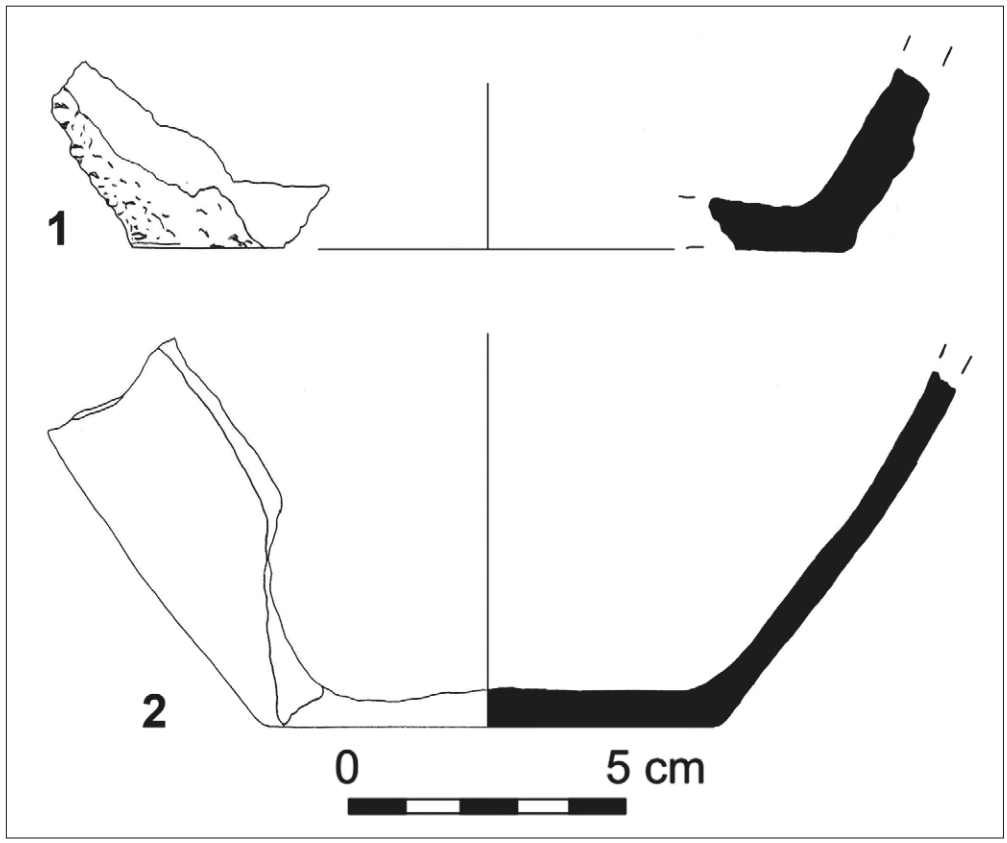

Fig. 27. Pottery from feature 755 (drawing by A. Dołbizno, J.E. Markiewicz).

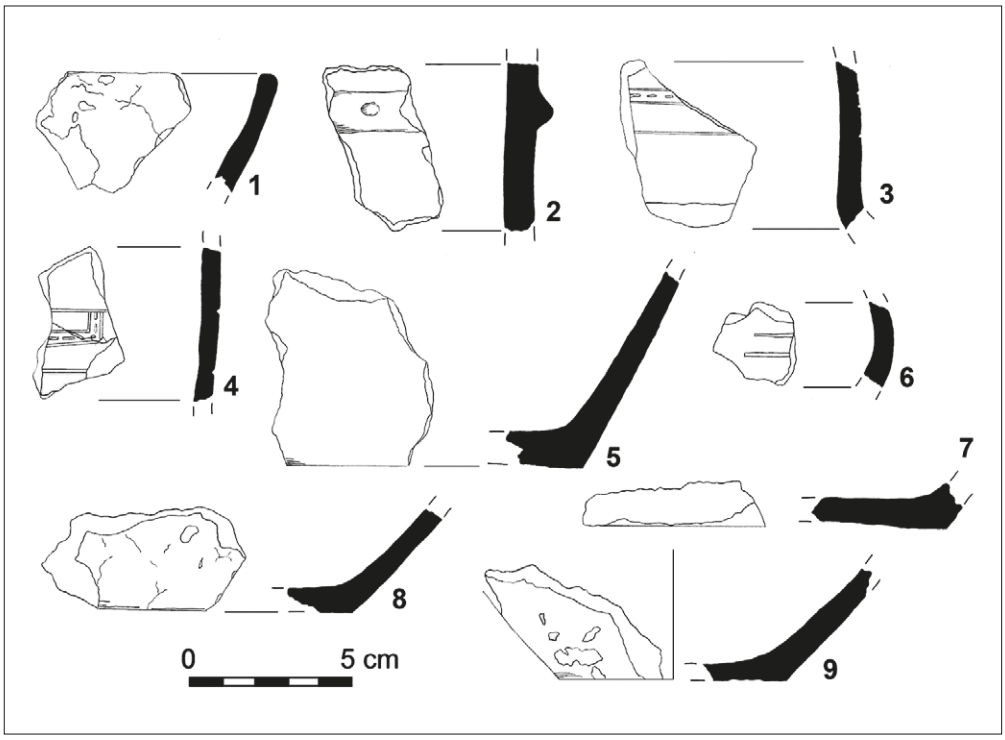

Fig. 28. Pottery from feature 782 (drawing by A. Dołbizno, J.E. Markiewicz).

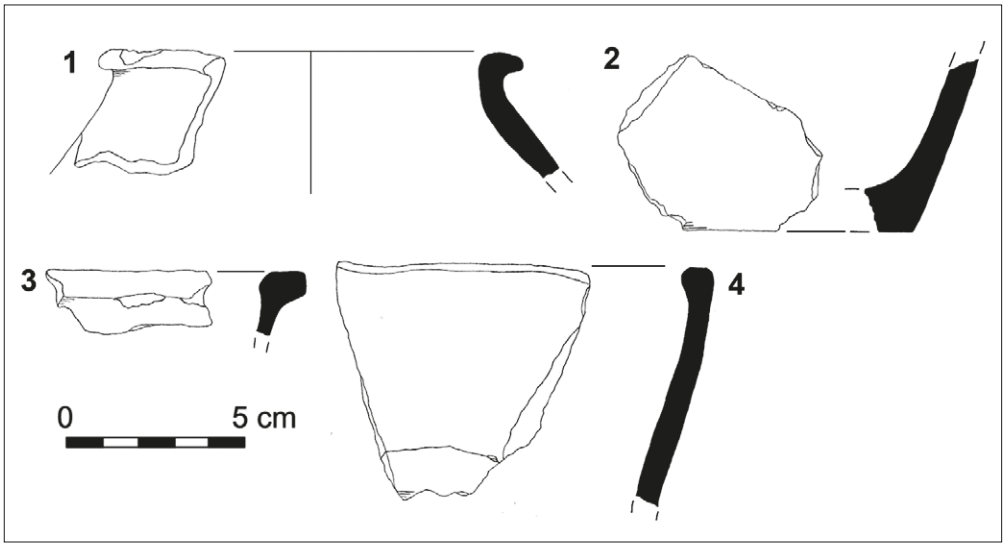

Fig. 29. Pottery from feature 792 (drawing by A. Dołbizno, J.E. Markiewicz).

a polished surface and another from feature 234 (Fig. 13:1) with a wall thickness of only 0.3 mm. Both correspond to specimens in T. Dąbrowska's category VII. The first vessel featured a thickened, everted rim with one facet on the top, while the second had a similar rim with one facet on the top and one on the inside. H. Machajewski and R. Pietrzak classified vessels of this type as bi-partite pots (group B), which were relatively common throughout north-central Europe in the pre-Roman Iron Age (Machajewski, Pietrzak 2008b: 300). The shape of the rims in the discussed specimens suggests an A1/A2 chronology. Similar vessels with unpolished or roughened surfaces were classified as pots.

Pots and storage vessels

Pots and storage vessels form the most diverse and capacious category of pottery finds, encompassing all non-tableware vessels, that is, medium-sized and large vessels intended for kitchen and household purposes. They have medium-thick or thick walls, with surfaces that are usually unpolished, roughened, or textured, and heights greater than the maximum body and rim diameters. The distinction between pots and storage vessels is not always clear: the largest specimens (over 30 cm in diameter) were likely used for storing goods, while smaller ones, often featuring handles, were also suitable for cooking.

As many as 43 pottery sherds, including 28 rim fragments, were classified as pieces of pots or storage vessels. Unfortunately, none of these vessels could be fully reconstructed, and only a few vessel forms could be identified based on the rim and body shapes. The rim fragments can be generally divided into the following groups:

1. Thickened and everted (Figs. 15:3, 17:1–2, 18:3, 21:6, 22:1, 25:2–3, 26:1,4, 31:1),
2. Thickened, everted, and faceted (Figs. 12:2, 14:5, 16:2, 21:9, 24:1, 31:4, 32:1),
3. Unthickened and everted (Figs. 14:2,4, 15:1,3, 16:4, 21:4, 29:1),
4. Unthickened, everted, and faceted (Figs. 23:4, 31:3),
5. Inverted (Fig. 14:3).

The first two groups are typical of the late pre-Roman Iron Age assemblages from stages A1 and A2. The third and fifth groups are not chronologically indicative, while the fourth group is most characteristic of the initial horizon of the late pre-Roman Iron Age and frequently occurs in the Jastorf culture assemblages.

Ornamented fragments

All decorated fragments were found in feature 782 (Fig. 28:2–4,6). Three had incised ornaments, and one had a clay strip with fingertip impressions. Clay strips with fingertip impressions, typically located on the vessel shoulder or neck,

were common in many Bronze and Iron Age potting traditions across the North European Plain (e.g., Hatt 1957: Fig. 247, Fig. 261, Fig. 308, Fig. 309; Martens 1988: Fig. 15:6a, Fig. 16:14; Kosicki 2001: Fig. 3:1, 8, 10; Salač, Kubálek 2015: Fig. 24:15, Pl. 34:9, Pl. 68:19). In the late pre-Roman Iron Age of Silesia, this type of decoration was already archaic and occurred in Jastorf and early Przeworsk settlement contexts (cf. Czerska 1959: Fig. 9:9; Machajewski, Pietrzak 2008a: Pl. 7:1,2, Pl. 11:2–4, Pl. 23:5, 6, Pl. 40:3; Markiewicz 2016: Fig. 41:6).

The incised decorations on two sherds from feature 782 are fragments of meander-type ornaments typically associated with the Przeworsk culture but also found in Jastorf-type contexts (Machajewski, Pietrzak 2008a: Pl. 7).

The Fibula

The site yielded only one well-preserved metal artefact securely associated with the late pre-Roman Iron Age occupation stage: a Mötschwil-type fibula (Fig. 19:3) found in feature 649. The preserved length of the specimen is 7.7 cm, with a four-coiled spring approximately 1.6 cm wide. The mildly arched bow has an almost D-shaped cross-section. The artefact's surface bears only minor damage and is covered with a green patina (Fig. 20). The foot part is missing, with only the terminal section and the ring around the bow remaining. A similar, although poorly preserved, specimen was found at site 1 in Wrocław–Muchobór Mały, located about 1 km southeast of the discussed site, on the opposite bank of the Ślęza River (Dulęba, Markiewicz 2024). Mötschwil-type fibulae are most numerous in Switzerland, where their eponymous site is located. Their distribution area includes Rheinland, Bavaria, Württemberg, Austria, Bohemia, Moravia, the north Balkans, the Carpathian Basin (Márton 2004), and Silesia. As A. Maciałowicz argues, Mötschwil fibulae found outside the La Tène culture settlement clusters were likely imports. The contexts of their use and deposition suggest that the La Tène communities and their northern neighbours were closely interconnected and that their members were, at least periodically, physically present in the north (Maciałowicz 2015: 279–283).

Chronology and cultural interpretation

As previously mentioned, the dating of the discovered settlement phase is entirely based on artefactual chronology, as no samples for radiocarbon or dendrochronological studies were taken during the excavations. The only chronologically sensitive metal artefact, a Mötschwil-type fibula, was recorded in feature 649. In the La Tène culture zone, Mötschwil-type fibulae circulated in substantial numbers during stage LT C2 (Polenz 1971: 43–44; 1982: 109; Stöckli 1974: 369, Fig. 1).

For areas north of the La Tène zone, that stage corresponds to the final stage A1 and initial stage A2 of the late pre-Roman Iron Age (Dąbrowska 1988: 50–62), or stage A1b according to the more recent interpretation by M. Grygiel (2018: 91, Fig. 48). North of the La Tène zone, they were found in Jastorf, Przeworsk and – exceptionally – Oksywie culture contexts. In both their primary and secondary distribution areas, they are predominantly found as settlement or stray

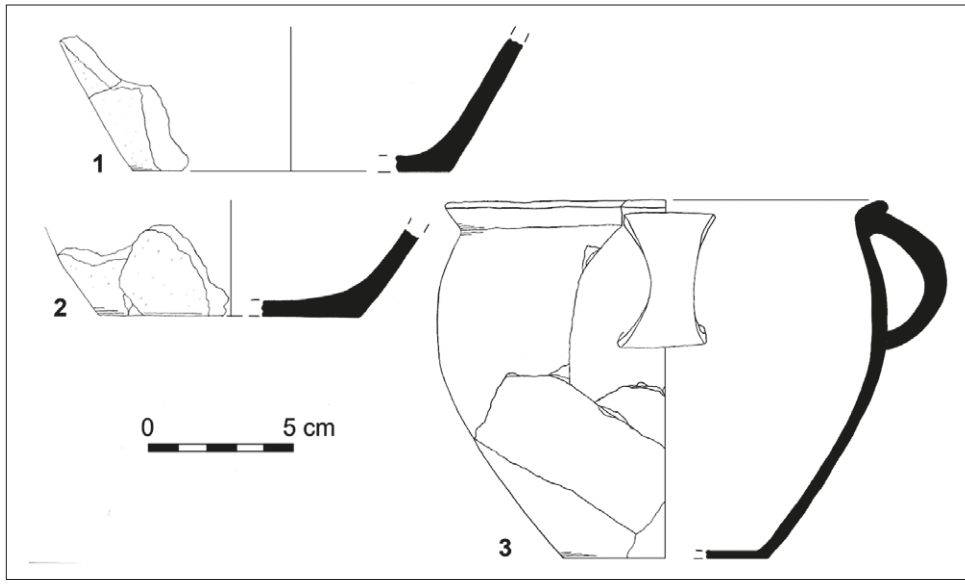

Fig. 30. Pottery from feature 831 (drawing by A. Dołbizno, J.E. Markiewicz).

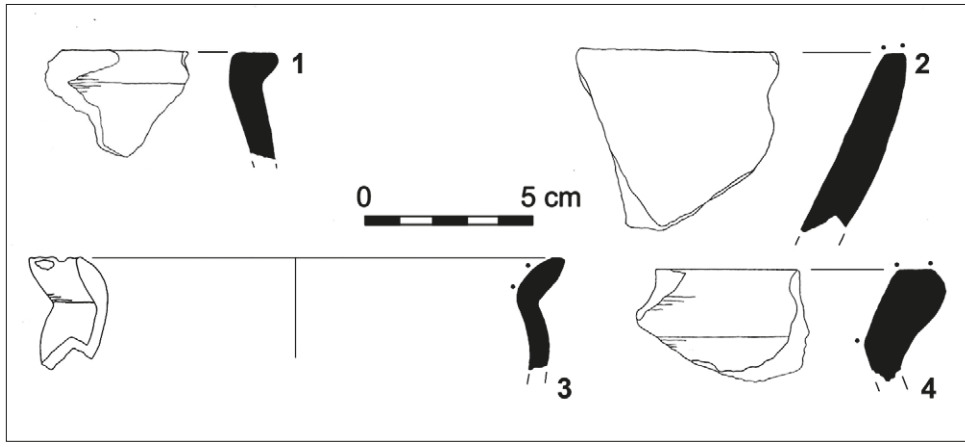

Fig. 31. Pottery from feature 879 (drawing by A. Dołbizno, J.E. Markiewicz).

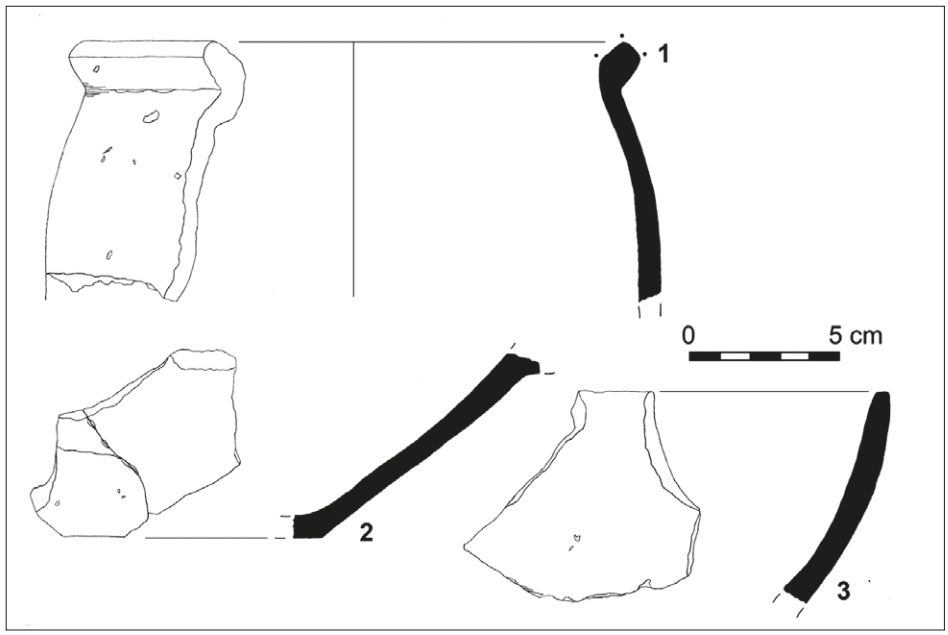

Fig. 32. Pottery from feature 1129 (drawing by A. Dołbizno, J.E. Markiewicz).

finds (Maciałowicz 2015: 279–283). The nearest production centres with abundant manufacturing evidence, including unfinished specimens, were situated on both sides of the Moravian Gate – in Nowa Cerekwia in Silesia (documentation and finds available in the Museum of Opole Silesia) and Němčice nad Hanou in Moravia (Čižmář et al. 2018).

Otherwise, the dating of the features was exclusively based on pottery. While pottery is not ideal for precise dating, finds from all the features constituted a temporally homogeneous assemblage, and their chronology aligns with the dating of the fibula from pit 649. The ceramic finds would generally fall into the category of "early-style" pre-Roman Iron Age Przeworsk pottery. However, some stylistic features suggest an earlier stage of the late pre-Roman Iron Age rather than a more advanced A2 stage or LT D1 in La Tène culture terms. These features include broad rims with facets on their inner side (e.g., Figs. 15:7, 21:9, 31:3), handles that are more band-shaped than X-shaped (Figs. 21:8, 30:3), specific body profiles (e.g., Figs. 13:2, 21:3, 30:3), and distinctive decorations (Fig. 28:2). These elements are characteristic of the Jastorf culture in the Polish Lowland rather than classical early Przeworsk style. However, the rest of the pottery assemblage reflects a pattern typical of early-style Przeworsk settlement finds. Thus, the assemblage appears to correspond with the formation period of the Przeworsk culture in Silesia.

Unfortunately, neither the find assemblages nor the stratigraphy provide sufficient information to differentiate the analysed features chronologically. The lack of chronologically sensitive evidence makes it impossible to determine whether these features functioned simultaneously or sequentially, or to analyse the temporal relation of the feature dated by the brooch to the other features.

The complex of structures, which includes a ground-level post building, a well, and a posthole, yielded finds of little diagnostic value and might originate from either the pre-Roman or early Roman Iron Age.

Settlement and environmental context

The settlement along the Kasina stream represents the northernmost recorded site in a chain of late pre-Roman settlements situated along the Ślęza River, which includes locations like Wilczków, Bielany Wrocławskie, Wrocław–Partynice, and Wrocław–Muchobór Mały (Fig. 33; Dulęba, Markiewicz 2021; 2024). Until recently, there was limited convincing evidence bridging the chronological gap between the end of the Lower Silesian La Tène culture in stage LT C1 and the earliest Przeworsk culture burials dated to the pre-Roman Iron Age's stage A2. The evidence from the discussed settlement, dating to stage A1 or LT C2 (as demonstrated in this paper and Dulęba, Markiewicz 2024), appears to fill this gap.

The people who arrived in Lower Silesia from the north seem closely connected to La Tène communities. Abundant indirect evidence of interactions between these two includes Mötschwil-type brooches, as discussed earlier, and amber deposits in Wrocław–Partynice. However, direct evidence such as La Tène culture pottery sherds was not found in features outside La Tène contexts. Similarly, La Tène culture settlements in Lower Silesia, which persisted until stage LT C1 (Gralak 2012; Dulęba 2019: 122–123), did not yield features with non-La Tène evidence. In contrast, Upper Silesian La Tène culture settlements typically show such pottery sherds by stage LT C2. Thus, while interactions intensified between La Tène and non-La Tène communities during the latter part of the middle La Tène period, clear evidence of their coexistence is only sporadically found in specific locations.

Finds from the discussed cultural and chronological horizon have also been documented at other Lower Silesian sites (Dulęba, Markiewicz 2024: Fig. 1), although many of them were surface or stray finds (Grygiel 2018: Fig. 168; Dulęba, Markiewicz 2021: 384). Among the excavated settlements, the site in Brodno, although barely published, yielded perhaps the most extensive find collection, which included another fully preserved specimen of a Mötschwil-type fibula (Bykowski 1977). The Lower Silesian settlements that emerged in the initial stages of the late pre-Roman Iron Age exhibited material culture traditions consistent

with those found in other locations in the Polish Lowland (e.g., Grygiel 2015; 2018: 355–356; Kasprowicz 2008; Machajewski, Pietrzak 2008a; 2008b).

The Ślęza River basin is characterised by relatively fertile soils. In prehistory, the area was crisscrossed by numerous watercourses and had many swampy areas. Despite favourable farming conditions, agricultural potential was not always the primary factor influencing settlement locations for non-La Tène communities (Markiewicz 2019: 29–31). The site of Brodno, located upstream of the Oder, was situated on poor, sandy soil, yet it appears to have been continuously inhabited across several settlement phases (Frączkowska 2012: 11–14). Unfortunately, little is known about the farming and stockbreeding strategies of the populations discussed here, as studies of faunal and botanical remains are scarce. In Brodno, a relatively rich assemblage of animal bones was found, with cattle bones dominating at 64% (Chrzanowska 1979). This composition was typical of north-central Europe during this period. Unfortunately, the bone assemblage from the site at Graniczna Street discussed here was too small to yield statistically significant results, with only 51 fragments for which the species could be identified. Of these, 80% were cattle bones (see R. Abłamowicz in this paper).

Conclusions

The settlement in Wrocław–Graniczna Street stands out as one of the few excavated and fully published late pre-Roman Iron Age sites in Lower Silesia (cf. e.g., Domański, Lodowski 1984; Markiewicz 2009; Domański 2010; Markiewicz, Błażejewski 2016; Markiewicz 2019: 132–137), and notably, it is the only one in the Ślęza River basin excavated and published after World War II (Dulęba, Markiewicz 2024). While the number of pre-Roman Iron Age features initially may not appear impressive, it is among the largest discovered at Lower Silesian settlement sites from this period (along with Brodno: Bykowski 1977, Bytomin: Markiewicz 2016, and Jazów: Domański 2010).

Evidence from the dawn of the late pre-Roman Iron Age in Silesia is fragmented, incomplete, and often chronologically ambiguous, underscoring the significance of the excavation results presented here in advancing our understanding of this period. Moreover, the site yielded Lower Silesia's best-preserved Mötschwil-type fibula, found in association with a matching pottery assemblage from a well-documented settlement feature. The establishment of a settlement network during the initial stages of Silesia's late pre-Roman Iron Age indicates significant population movement through the Polish Lowland (Grygiel 2015: 150–155). Pinpointing the exact moment when newcomers settled in Lower Silesia archaeologically remains challenging. Therefore, every chronologically sensitive artefact holds great value. The site was part of a broader settlement network spanning the black-earth areas

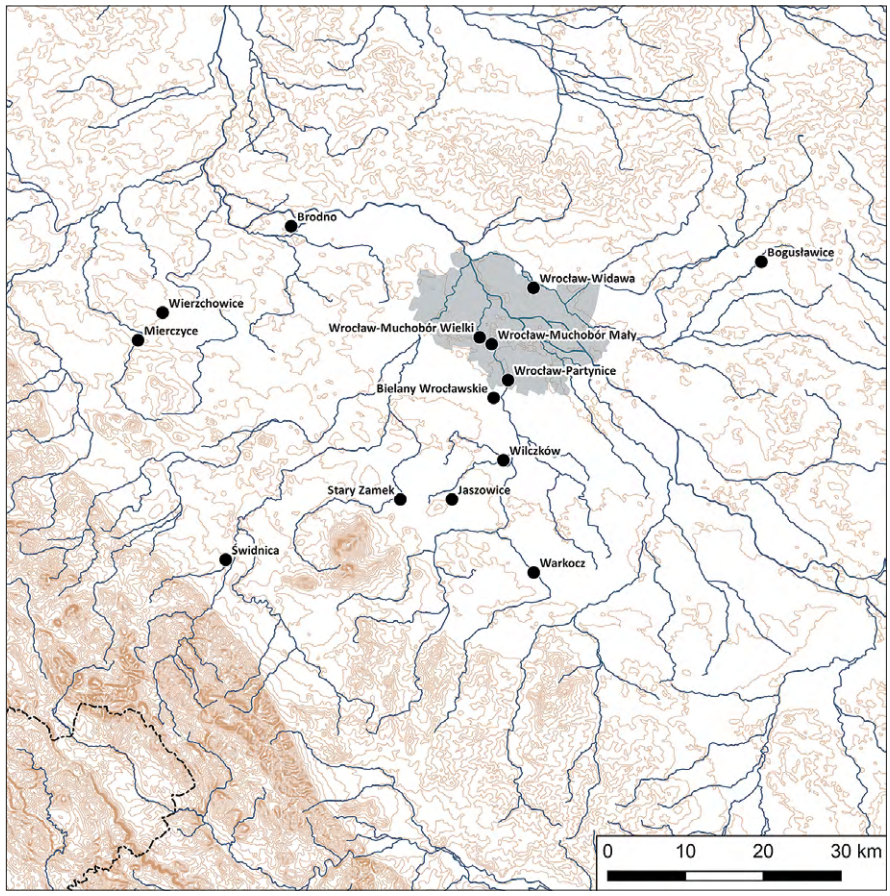

Fig. 33. Jastorf-type finds in Lower Silesia (map by P. Dulęba).

between the Bystrzyca and Oława rivers, including sites such as Wilczków, Bielany Wrocławskie, Wrocław–Partynice, Wrocław–Muchobór Mały, Stary Zamek, and Piskorzówek. If the ground-level post building and the well indeed date to the pre-Roman Iron Age, they would provide compelling and invaluable evidence for studying late pre-Roman Iron Age housing, settlement organisation, and layout.

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Streszczenie

Jesienią 2004 r. przeprowadzono ratownicze badania archeologiczne na działce przy ul. Granicznej 4a na wrocławskim Muchoborze Wielkim. Na obszarze 2 ha odkryto pozostałości wielokulturowej osady, na której jedna z faz pochodzi z młodszego okresu przedrzymskiego. Zbiór zabytków ruchomych z tego okresu obejmuje przede wszystkim fragmenty naczyń ceramicznych, ale także dobrze zachowaną zapinkę typu Mötschwil, kości zwierzęce i polepę. Wśród zbadanych obiektów młodszoprzedrzymskich znalazły się jamy, dołki posłupowe i budynki zagłębione w ziemię. Wykopaliska przyniosły także odkrycie budynku słupowego i studni. Choć obie struktury można datować na epokę żelaza, ich dokładna chronologia pozostaje niejasna. Osada z młodszego okresu przedrzymskiego na Muchoborze Wielkim to kolejne osiedle w dorzeczu Ślęzy,

które datować można na najwcześniejszy horyzont młodszego okresu przedrzymskiego. Osady te wypełniają chronologiczną lukę między zanikiem dolnośląskiego osadnictwa lateńskiego i najwcześniejszymi znaleziskami w klasycznym stylu przeworskim.

Słowa kluczowe: młodszy okres przedrzymski, kultura jastorfska, kultura przeworska, Dolny Śląsk, archeologia osad

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Appendix

Animal Bone Analysis

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Material and methods

The animal bones recovered from 12 features underwent comprehensive archaeozoological analysis, including species and anatomic determinations. This analysis utilised a comparative collection housed in the Bioarchaeology Laboratory at the Department of Archaeology of the Silesian Museum in Katowice. Additionally, handbooks of comparative animal anatomy were consulted (Schmid 1972; Krysiak et al. 2007; Popesko 2008). Numerical estimates were based on the global number of remains method, which involves tallying the identified remains of each species excavated from the site. The age at death of the animals was assessed by examining tooth development, drawing upon data compiled by W. Lutnicki (1972), H.H. Müller (1973), and N. Benecke (1988).

Additionally, the study considered skeletal ossification stages (Schmid 1972; Benecke 1988). Sex determination of pigs and wild boars relied on tusk analysis (Habermehl 1975; Schmid 1972). Osteometric examinations followed the guidelines of A. von den Driesch (1976), using the author's recommended abbreviations for osteometric points, with values provided in millimetres. Estimated height at withers (WH) for wild boars was calculated using coefficients developed by Teichert (1969) and expressed in centimetres.

Fig. 34. A – fragment of a cattle scapula with chopping traces from feature 1129, B – wild boar talus bone from feature 336 (photograph by R. Abłamowicz).

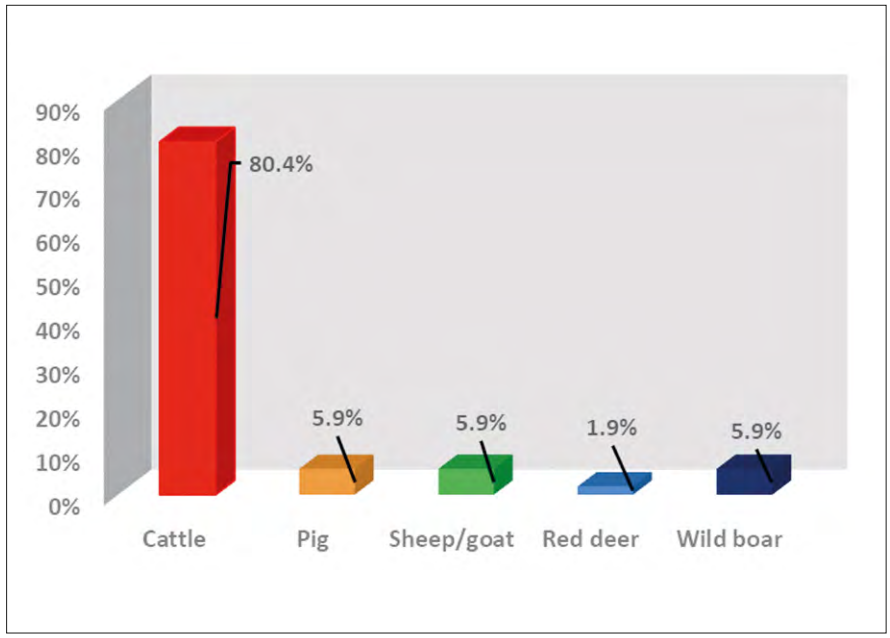
Tab. 1.

Feature	Cattle	Pig	Sheep/goat	Red deer	Wild boar	Undetermined	Total
125	–	–	2	–	–	1	3
360	2	–	–	–	–	–	2
389/336	1	–	–	–	1	1	3
649	1	–	–	–	–	–	1
650	3	1	–	–	–	–	4
675	11	–	–	–	–	–	11
738	–	–	–	–	1	–	1
748	13	–	–	1	–	2	16
831	3	–	–	–	–	1	4
879	3	2	–	–	–	–	5
1129	2	–	1	–	1	1	5
1323	2	–	–	–	–	2	4
Total	**41**	**3**	**3**	**1**	**3**	**8**	**59**

Tab. 2.

Bone	Cattle	Pig	Sheep/goat	Red deer	Wild boar	Total
Skull *Cranium*	5	–	–	–	–	5
Mandible *Mandibula*	1	–	1	–	–	2
Teeth *Dentes*	5	1	–	–	1	7
Cervical vertebrae *Vertebrae cervicales*	1	–	–	–	–	1
Thoracic vertebrae *Vertebrae thoracicae*	2	–	–	–	–	2
Lumbar vertebrae *Vertebrae lumbales*	2	–	–	–	–	–
Ribs *Costae*	10	–	–	–	–	10
Scapula	1	–	–	–	–	1
Humerus	5	–	–	–	–	5
Ulna	–	1	–	–	–	1
Metacarpus	3	–	1	–	–	6
Femur	–	1	1	–	–	2
Tibia	2	–	–	–	–	2
Talus	–	–	–	–	2	2
Metatarsus	2	–	–	1	–	3
Phalanges	2	–	–	–	–	2
Total	41	3	3	1	3	51

Tab. 3.



Distinguishing between sheep and goat remains posed challenges due to their morphological similarity and extensive fragmentation of the skeletal material studied. Therefore, the analysis employed the conventionally adopted joint sheep/goat group in archaeozoological studies (Lasota-Moskalewska 2008).

Results

The examined collection comprised 59 animal bone remains, which belonged exclusively to mammals. In twelve features (Table 1), these bones exhibited chopping and cutting traces indicative of carcass cutting and meat portioning (Fig. 34:A), classifying them as post-consumption remains.

Species and anatomical origins were determined for 51 osteological units (86.4%). Small fragments lacking distinctive anatomical features were categorised as undetermined bones. The identified mammalian bones included domestic animals (92.2% of identified mammals) and wild animals (7.8% of identified mammals) – see Table 2. Domestic animals consisted of cattle (*Bos taurus* Linnaeus, 1758), representing 80.4%, pig (*Sus domesticus* Erxleben, 1777) at 5.9%, and sheep/goat (*Ovis aries* Linnaeus, 1758/*Capra hircus* Linnaeus, 1758) also at 5.9%. Wild mammals included red deer (*Cervus elaphus* Linnaeus, 1758) at 1.9% and wild boar (*Sus scrofa* Linnaeus, 1758) at 5.9% – as detailed in Table 2 and Table 4.

Tab. 4.

Scapula	
SLC	36.8
GLP	(50.0)
feature	1129
Phalanx 1	
GL	50.2
Bp	22.0
SD	18.0
Bd	20.5
feature	675
Phalanx III	
DLS	49.0
Ld	39.0
feature	675

Tab. 5.

Talus		
GLl	57.0	56.0
GLm	51.0	50.0
WH	102.0	100.2
feature	336	1129

Cattle (*Bos taurus* Linnaeus, 1758)

Cattle bones constituted the majority, accounting for 80.4% of the species-determined bones (Tables 1–2, Chart 1). The identified bones predominantly belonged to morphologically mature individuals (90.2%), with juveniles making up the remaining 9.8%. Notable finds included a metatarsal bone and a mandibular fragment from a juvenis individual in feature 1323, as well as a metacarpal bone and an M3 tooth from a subadult individual in feature 675. Limited bone measurements were taken for the cattle bone collection (Table 4), indicative of smaller individuals.

Pig (*Sus domesticus* Erxleben, 1777)

Three pig bones were identified in two features – 650 and 879 – representing 5.9% of the species-determined bones (Tables 1–2, Chart 1). In feature 879, bones from a male pig less than three years old were found.

Sheep / Goat (*Ovis aries* Linnaeus, 1758 / *Capra hircus* Linnaeus, 1758)

Sheep/goat bones were recovered from features 125 and 1129, comprising 5.9% of the species-determined bones (Tables 1–2, Chart 1). In the former, the bones belonged to an individual estimated to be about 20–24 months old, while in the latter, the identified mandible was from a three-month-old individual.

Red deer (*Cervus elaphus* Linnaeus, 1758)

A single metatarsal bone from a European red deer was recovered from feature 748, comprising 1.9% of the species-determined bones (Tables 1–3).

Wild boar (*Sus scrofa* Linnaeus, 1758)

Isolated wild boar bones were found in three features: 336 (Fig. 34:B), 738, and 1129, making up 5.9% of the species-determined bones (Tables 1–3). In feature site 738, the identified lower tusk belonged to a male individual. Using the greatest lateral length (GLl) of the talus bones from features 336 and 1129, the wither height was calculated to be approximately 100.2 cm and 102 cm, respectively (Table 5).

Summary

The bones recovered from twelve features at the pre-Roman Iron Age site on Graniczna Street in Wrocław are post-consumption waste. The assemblage included mammal bones from both domestic and wild animals, including cattle, pig, sheep/goat, red deer, and wild boar. Unfortunately, due to the limited size of the assemblage and the absence of distinct features, it was impossible to determine age and sex profiles of the animals. Only a few measurements were taken. Wither height calculations were conducted solely for the wild boar specimens, resulting in measurements ranging from 100.2 to 102 cm. In addition to the animal bones, fragments of a human skull were also found in feature 650.

Measurements

Bd – greatest breadth of the distal end
Bp – greatest breadth of the proximal end
DLS – greatest (diagonal) length of the sole
GL – greatest length
GLl – greatest length of the lateral half
GLm – greatest length of the medial half
GLP – greatest length of the Processus articularis
Ld – length of the dorsal surface
SD – smallest breadth of the diaphysis
SLC – smallest length of the Collum scapulae
WH – withers height (in cm)