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## FUNNEL BEAKER CULTURE TOMBS IN THE EASTERN PART OF THE WODZISŁAW HUMMOCK

### ABSTRACT

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The paper sums up the field research carried out at the complex of ceremonial and funerary sites at Malżyce and Zagaje Stradowskie in the northern part of the loess uplands of western Lesser Poland. The research revealed differences in construction among chamberless tombs of the Funnel Beaker culture (FBC) in western Lesser Poland (Małopolska). The results of these investigations were later confirmed by data obtained at other sites explored in recent years. Typological and chronometric studies point towards a similar age of all distinguished tomb types: around 3650-3350 BC. In addition, a chronological sequence of transformations in the megalithic burial rite of the FBC communities is proposed.

Keywords: Eneolithic, Funnel Beaker culture, funeral rite, long barrows, Lesser Poland

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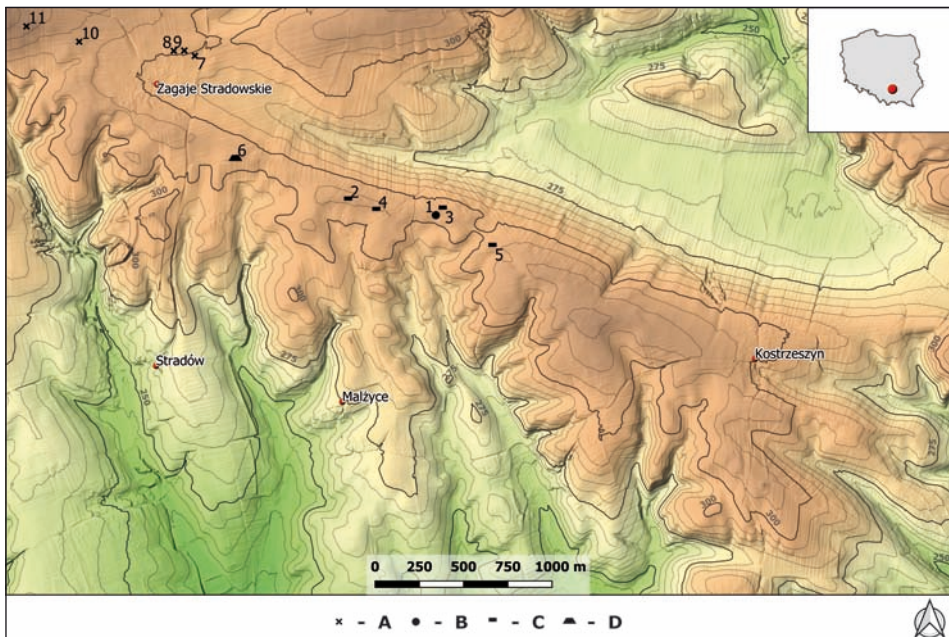
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## 1. INTRODUCTION

The first chamberless tomb in the loess uplands of western Lesser Poland was explored in 1968 in Niedźwiedź, Kraków district (Burchard 1973a). The find was long interpreted as a relic of a Middle Neolithic longhouse (*cf.* Kulczycka-Leciejewiczowa 1979, 105, fig. 42; Midgley 1985). Although constantly growing, the number of tombs discovered in the region still remains relatively small. Important information concerning this aspect of the Funnel Beaker culture (FBC) megalithic rite was obtained during research in the Wodzisław Hummock (Garb Wodzisławski) microregion (eastern part of the Nida Basin), in Malżyce and Zagaje Stradowskie (both in Czarnocin commune, Kazimierza Wielka district). The area lies in the interfluvium of the Nidzica and Nida Rivers, left-bank tributaries of the Vistula River. Vast hills built of Cretaceous rock prevail in the landscape, which is covered with loess in the eastern part (Kondracki 2000, fig. 38, 266). The hills of the Wodzisław Hummock generally stretch along a NW-SE axis, and are separated by valleys and ravines. The absolute height in the locations occupied by archaeological sites in Malżyce and Zagaje Stradowskie ranges from 300 to 312 m a.s.l. The discussed sites stretch over approx. 2.5 km, occupying the tops of the hills (Fig. 1).



**Fig. 1.** Location of FBC cemeteries at Malżyce and Zagaje Stradowskie. Illustration R. Skrzyniecki. 1-4 – Malżyce, site 30 (1 – tomb 1, 2 – tomb 2, 3 – tombs 3/I and 3/II, 4 – tomb 4/not excavated), 5 – Malżyce, site 31, 6 – Zagaje Stradowskie, “Mogiła Stradowska” site, 7-11 – Zagaje Stradowskie, destroyed graves of the FBC (7-9 – zone A, 10 – zone B, 11 – zone C)

The area became the subject of research as early as the late 1950s. At that time, a grave in a stone setting was discovered by Jan Gromnicki under a mound – the so-called Stradów Tomb – in Zagaje Stradowskie, which was associated with the FBC population (Gromnicki 1961). Research at the site was resumed by Barbara Burchard in the 1990s, when two tombs were investigated (Burchard 1998; 2006). Apart from these excavations, surface surveys in the vicinity were performed soon after by Krzysztof Tunia, which inspired further fieldwork in the first and early second decade of the 21<sup>st</sup> century at site nos. 30 and 31 in Malżyce, already badly damaged by that time (*e.g.* Jarosz *et al.* 2009; 2013a; 2013b; Tunia and Włodarczak 2011). The excavations uncovered the remains of multicultural sepulchral complexes, which offered a new insight into the burial rites at the turn of the Neolithic and Early Bronze Ages in Lesser Poland.

In total, the excavations carried out at the sites of Zagaje Stradowskie and Malżyce resulted in the discovery of seven tombs associated with the FBC. In addition, graves linked with the Corded Ware and Mierzanowice cultures were discovered near FBC tombs in Zagaje Stradowskie (“Stradów Tomb”) and Malżyce, site no. 30 (barrows nos. 1 and 2). Thus, we are dealing here with a sepulchral complex established in the 4<sup>th</sup> millennium BC, which came to be used again (after a gap of around one thousand years) in the 3<sup>rd</sup> and early 2<sup>nd</sup> millennia BC.

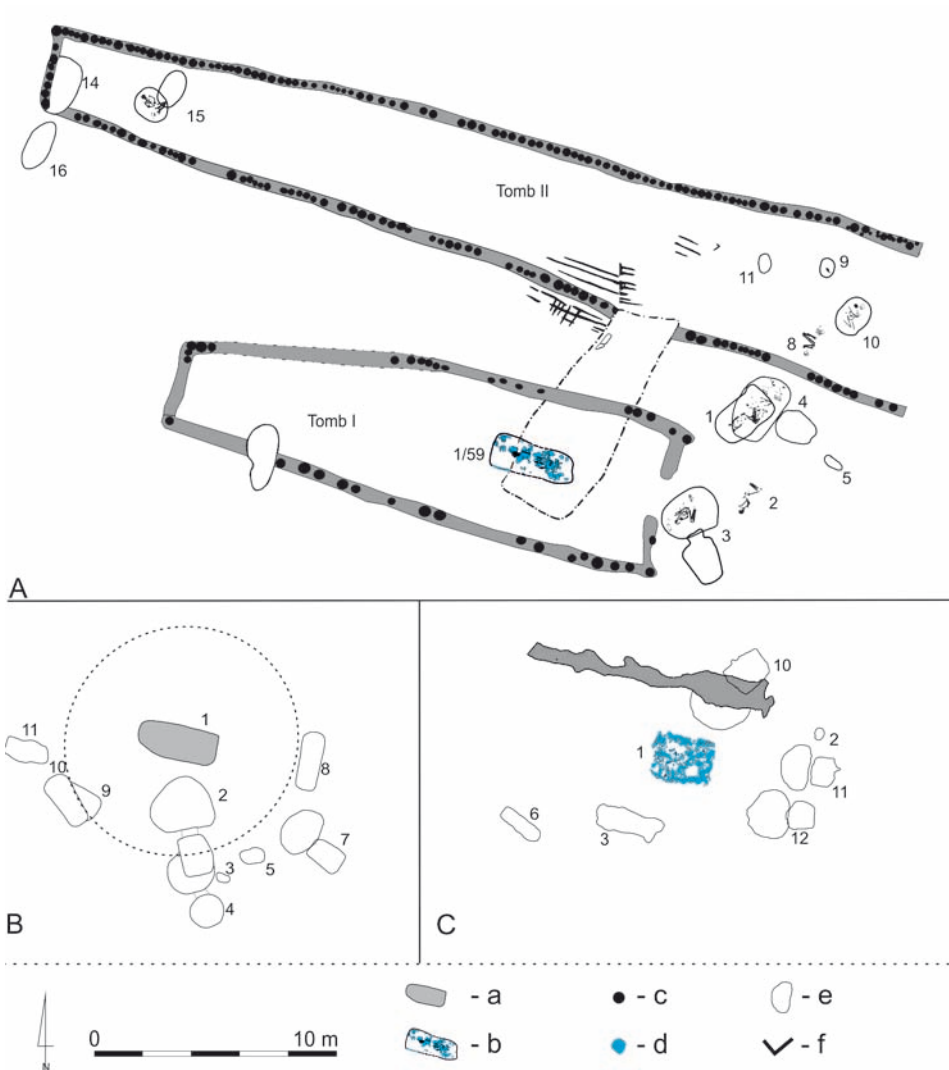
The purpose of the article is to summarize data on the complex of FBC cemeteries located in Malżyce and Zagaje Stradowskie. Information obtained on the construction types of chamberless tombs is particularly important in the context of studies on the funeral rite in the middle Eneolithic period.

## 2. FUNERARY STRUCTURES

### 2.1. Zagaje Stradowskie, site 1 (“Mogiła Stradowska”/“Stradów Tomb”)

Tombs I and II from Zagaje Stradowskie represent a chamberless type of structure typical of western Lesser Poland, with boundaries delineated by foundation trenches (*e.g.* Król 2011; Rzepecki 2011; Przybyła and Tunia 2013, 141, fig. 2). The tombs differed in size and shape. The better-preserved tomb I was built on the plan of a trapezium (Fig. 2: A). It was approx. 20 m long, with the southeastern front approx. 7 m wide, and the shorter northwestern side approx. 4 m wide. The tomb was framed by wooden posts fixed in foundation trenches. The entrance to the tomb opened to the east and was approx. 2 m wide. The trenches framing the entrance were set deeper than the remaining trenches. No traces of posts were recorded in these trenches, while stones were discovered in the fill. Approximately 4 m from the entrance was a grave in the form of a rectangular box built from limestone slabs, oriented along a NW-SE axis. The grave held the remains of an individual of undetermined sex and age, buried with the head to the NW. The burial was furnished with a cup with a handle of the *ansa lunata* type.

Tomb II was situated approx. 4 m north of tomb I, with its longer axis oriented NW-SE. It resembled an elongated trapezium in its plan. The front was damaged, probably due to erosion. The tomb's length can be estimated at approx. 40 m. The shortest side was 4 m wide, while the width of the damaged front side likely did not exceed 8 m. Traces of wooden



**Fig. 2.** Tombs of the FBC: A – Żagaje Stradowskie, “Mogiła Stradowska” site, B – Malżyce, site 30, tomb 1, C – Malżyce, site 30, tomb 2. Illustration P. Jarosz

Legend to Figures 2 and 3: a – features of the FBC, b – stone constructions of FBC graves, c – postholes, d – stones, e – graves of other cultures (Final Eneolithic/Early Bronze Age), f – limit of excavated area

posts tightly abutting each other were recorded in the foundation trench. No grave was found within the structure – it was most likely originally located in the damaged front part of the tomb (Fig. 2: A).

## 2.2. Malżyce, site 30

### **Tomb I**

The tomb had the form of a round mound. The mound has been completely damaged by ploughing, and its original shape was detectable as a circular patch of darker soil. Indirectly, this is also confirmed by the spatial distribution of nearby features linked with the CWC and Mierzanowice cultures, which formed arch-like arrangements from the west, south, and east (Fig. 2: B).

The construction of the tomb uncovered under the alleged, damaged mound was atypical. It resembled a rectangle with the longer side along a W-E axis (Fig. 2: B), with the western, shorter side clearly curved. On the walls of the pit and beneath its bottom, a thin layer of light-orange or dark-yellow loess was recorded, indicative of fire. In the western part of the pit, two ceramic vessels and a flint insert were discovered at the bottom (Tunia and Włodarczak 2011). No human bones were recorded in the pit.

### **Tomb II**

All that survived from the structural elements of tomb II was a shallow trench running along the N-W, to the north of the grave pit (Fig. 2: C). The trench was not very regular in shape, and a few pieces of limestone were found in its fill. If the trench originally surrounded the mound, the latter would have been elongated – most likely trapezoidal in plan – with the longer axis oriented W-E. The same is suggested by the position of grave 3 in relation to the trench, with the surviving fragment marking the southern margin of the tomb. The grave pit was discovered approx. 3 m to the east of CWC graves (nos. 11 and 12; Fig. 2: C), which were certainly situated by the front side of the tomb, even if its remains have not survived. The orientation of the grave pit followed that of the tomb, and it held the remains of two individuals buried with their heads to the west. In the southern part lay the remains of individual I (female, aged *Adultus*; Szczepanek 2009), and to the north those of individual II (*Adultus*, undetermined sex). In the western part of the pit, a macro-lithic blade was found, which was the only furnishing of the grave.

### **Tombs 3/I and 3/II**

These two adjoining tombs had similar, most likely trapezium, shapes (Fig. 3: A). In the southern part of the explored area, portions of a trench running NW-SE were discovered (feature 5), with single blocks of limestone in its fill. The trench may have marked the southern wall of tomb 3/I. Approximately 10 m further to the north, a poorly discernible elongated feature was recorded, being the remains of the northern wall of tomb

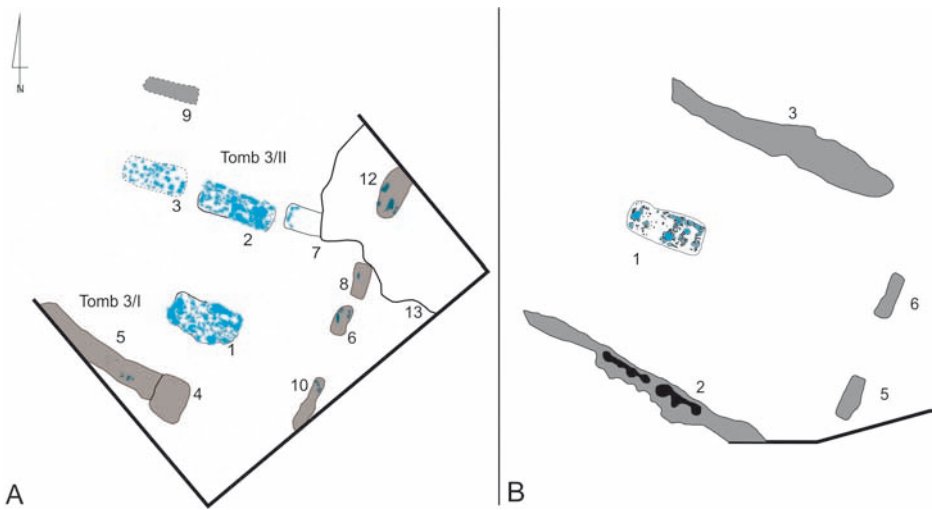


Fig. 3. Tombs of FBC: A – Malzyce, site 30, tombs 3/I and 3/II; B - Malzyce, site 31. Illustration P. Jarosz. Legend: see Fig. 2

3/II (feature 9). The front (eastern) walls of the tombs were marked by four rectangular features: short (from 2.5 to 3.1 m in length) sections of deep trenches in a linear arrangement (features 6 and 10 connected with tomb 3/I, and features 8 and 12 with tomb 3/II). The distances between the features were 200 cm (between features 6 and 10, and 8 and 12) and 50 cm (between features 6 and 8, which at the same time means between tombs 3/I and 3/II). The front walls of both tombs can each be assessed as being 5.75 m in length. The four trenches were similar in terms of shape, nature of the fill, and depth (90-100 cm beneath the present-day ground surface). Each of them contained a few limestone blocks. The trenches were rectangular in section and had flat bottoms. Within tomb 3/II (northern), three rectangular graves with stone boxes were discovered arranged in a line – features 2, 3, and 7 (Fig. 3: A). All were oriented along a W-E axis. In tomb 3/I only one feature was discovered (feature 1). Human bones survived only in grave 1, where a man of the *Maturus/Senilis* age-class was buried (unpublished report by A. Szczepanek). A furnishing, in the form of an end-scraper on a blade made from Volhynian flint, was recorded in grave 2 (Jarosz *et al.* 2013a).

### 2.3. Malzyce, site 31

The tomb was recorded as two foundation trenches running NW-SE (uncovered over a length of 10-11 m), marking the southern and northern margins of the tomb (features 2 and 3). In the southern trench, traces of wooden posts stabilised with single limestone

blocks survived. The slightly wider trench 3 marked the northern boundary of the megalith. Here, no traces of additional structural elements survived. The eastern, front wall of the tomb was marked by two features (nos 5 and 6), approximately 2.5 m from each other. They were rectangular in plan and section, and their depth reached 40 cm. They were similar to analogical rectangular features forming the front wall of tomb 3 at Małyce, site 30. A grave, in a stone setting, was discovered approx. 7.5 m from the tomb's front, and its orientation followed that of the tomb. The grave held remains of an individual of undetermined sex in the *Maturus* age-class, buried with the head to the NW (Jarosz *et al.* 2013b).

#### 2.4. Zagaje Stradowskie, information about damaged graves

In the course of excavations of the “Stradów Tomb,” the researchers learned about at least five FBC graves in the nearby area, damaged already by ploughing. One of them was allegedly situated to the northwest of Zagaje Stradowskie, in the fields between the village and the Chroberz forest. From this area (designated by B. Burchard as “zone C”) comes a fully preserved collared flask – a gift from the owner of the land (Fig. 4: 2). Its preservation suggests it originates from a grave. In the vicinity, about 400 m east of zone C, on the field of Stanisław Pytel, K. Tunia found traces of a few features during a field survey in 2004, as well as concentrations of limestone fragments – probably remains of destroyed graves.

North of Zagaje Stradowskie village (“zone A” according to B. Burchard), Antoni Kałuża (the owner of the field) dug up a grave with a stone pavement and setting in the 1990s. Within the construction, he found human bones and a small cup decorated with incised strokes on the body (Fig. 4: 1). Local people also provided information about another grave discovered nearby (no details available). Excavations carried out by B. Burchard in 1995 to verify this information unfortunately did not produce any more information.

Another grave was discovered in 1982 on the field of Feliks Dobaj, situated to the west of the village, in so-called zone B of the aforementioned area. The farmer brought out of the ground a large cup with an *ansa lunata* handle (Fig. 4: 3) and 13 human teeth. He also noticed the presence of finely crushed limestone – probably structural elements of a grave.

The discoveries presented above suggest the presence of a zone of FBC funerary activity, which can be regarded as a westward extension of the sepulchral complex situated in Małyce (sites 30 and 31) and Zagaje Stradowskie (site 1). In addition, numerous surface finds are known from fields situated north of the buildings of Zagaje Stradowskie village, indicative of the presence of FBC settlements. On the other hand, no traces indicative of the presence of monumental tombs has – so far – been recorded from this area. This, however, may stem from the patchy nature of the sources.



Fig. 4. Zagaje Stradowskie. Ceramic from destroyed graves. 1, 3 – zone A; 2 – zone C.  
 Illustration E. Włodarczak



### 3. CHARACTERISTICS OF SEPULCHRAL FEATURES

Among the structures discussed above, the tombs from Zagaje Stradowskie reveal features typical of chamberless tombs from the western part of the Lesser Poland upland (Fig. 2: A). Analogical structures are known from Niedźwiedź (Burchard 1973, fig. 3), Słonowice, Kazimierza Wielka district (Przybyła and Tunia 2013, 141, fig. 2), Karwin and Rudno Górne, Kraków district (unpublished research by K. Tunia), and Pielgrzymowice, Kraków district (site 15; unpublished research by M. M. Przybyła). Their boundaries were delineated by foundation trenches into which a wooden palisade was fixed, on the plan of a trapezium. What was interesting in the context of the tombs from Zagaje Stradowskie was the discovery of discernible negatives of posts within the trenches, and the recording of traces of ploughing which, according to B. Burchard, were connected with agricultural activity predating the construction of the tomb (Burchard 1998, 152-153). Her opinion was based on the analysis of phytoliths (Polcyn *et al.* 2001).

The structures discovered in Małyce at sites 30 (tombs 2, 3/1, and 3/2) and 31 were most likely built on a plan resembling an elongated trapezium (Figs. 2: C; 3). At the moment of its discovery, the construction of the front wall, consisting of two rectangular features, had no direct parallels in other FBC tombs. Analogical construction was later recorded in tombs discovered in Słonowice (tombs IX and X: Przybyła and Tunia 2013, 141, fig. 2), Ostrów, Proszowice district (unpublished research by P. Jarosz, J. Libera, and A. Szczepanek), Czaple Wielkie, Miechów district (site 14: two tombs), and Giebułtów, Miechów district (site 15; unpublished research by M. M. Przybyła). In the lowlands, feature D150 from Jastrzębiec, Gorzów Wielkopolski district is an example of a chamberless tomb with two elongated pits at the front is (Rzepecki 2011, 33, fig. 18). Of particular importance from a chronological perspective is the case of Słonowice, where tomb X was raised partly over tomb V, the latter being a trapezium-shaped structure with trenches at the sides and at the front (Przybyła and Tunia 2013, 141, fig. 2). This suggests that tombs with structural elements limited to two elongated pits at the front are younger. Moreover, the Słonowice tombs confirm beyond any doubt the existence of constructional differences among elongated chamberless tombs from western Lesser Poland. In light of the data acquired from this site, the reduced structures of the Małyce tombs do not stem from the state of preservation alone. In tombs of that type, deep foundation trenches were no longer dug along the sides of the tomb, as was the case in tombs I and II from Zagaje Stradowskie.

Regardless of the type of construction, elongated chamberless structures from Małyce and Zagaje Stradowskie were oriented along an E-W, or less often a SE-NW axis, with the front facing the east (Table 1). Such an orientation is standard in the southeastern group of the FBC (Rzepecki 2011, 104, 105, table 2).

In terms of construction, tomb 1 from Małyce, site 30, stands out against the structures discussed above. It had the form of a small, circular mound (barrow), erected over



Fig. 5. Malżyce, site 30. Graves of the FBC: A – tomb 1, grave 1; B – tomb 2, grave 1; C – tomb 3/II, grave 2. Photo P. Włodarczak

a single pit-grave. The mound has been fully removed by ploughing, and its borders were indicated by a patch of distinctly darker soil on the surface of the site. The circular outline of the mound was additionally corroborated by the spatial arrangement of graves associated with the CWC and Mierzanowice cultures, which formed an arch surrounding the central grave from the west, south, and east (Fig. 2: B). This is the first fully-confirmed round FBC barrow in southeastern Poland. In Central Europe, round and oval mounds occur as early as the Baalberg phase of the FBC development, and continue until the Boleráz period (*e.g.* Fischer 1956; Šmíd 2006). The genetic and chronological relation of the tomb from Malżyce to circular mounds located at the cemetery in Obalki, in the lowland zone, is difficult to determine (Tetzlaff 1961, 44)

The construction of the central grave in tomb 1 was atypical as well. It resembled a rectangle in shape, oriented along a W-E axis (Fig. 5: A), with the western, shorter side distinctly curved. A thin layer of light-orange or dark-yellow loess was recorded on the walls of the pit and on its bottom indicative of fires being burned. No traces of human remains were found, only grave goods consisting of two ceramic vessels and a flint insert. The absence of stone constructions is a feature rarely observed in graves covered with mounds, while it is more common in flat cemeteries, *e.g.* in Bronocice (Kruk and Milisauskas 1981,

Table 1. Tombs of the Funnel Beaker culture at Malżyce and Zagaje Stradowskie

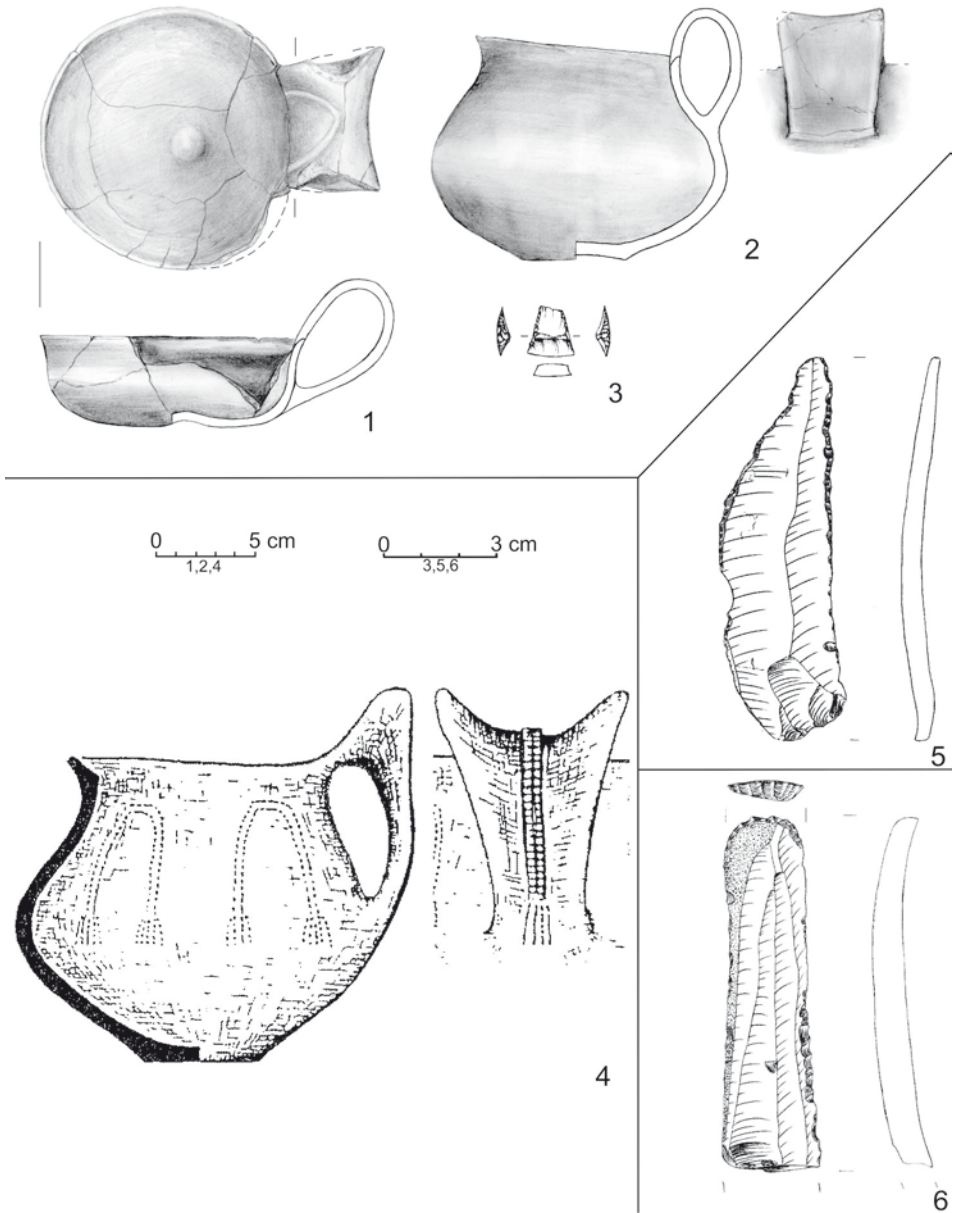
site	tomb	shape	orientation	length [m]	width [m]	graves of other cultures
Malżyce, site 30	1	round		(diameter) 10		X
Malżyce, site 30	2	trapezoidal?	E-W	?	~8	X
Malżyce, site 30	3/I	trapezoidal?	E-W	?	5.75	
Malżyce, site 30	3/2	trapezoidal?		?	5.75	
Malżyce, site 31	1	trapezoidal?	SE-NW	?	~10-11	
Zagaje Stradowskie	I	trapezoidal	SE-NW	21	7	X
Zagaje Stradowskie	II	trapezoidal	SE-NW	<38	~7-8	X

75), or in the context of megalithic structures, *e.g.* in Pawłów, Sandomierz district (Bargiel and Florek 2006, 387, fig. 2) and Słonowice (Przybyła and Tunia 2013, 146, fig. 7).

The remaining sepulchral features discovered in Malżyce and Zagaje Stradowskie had typical stone structures, with regular, rectangular stone settings. Their walls were built from narrow blocks, filled in with smaller stones, and the bottom was paved with tight-fitting slabs (Fig. 5: B, C). Boxes were built primarily from calcareous limestone. In cemeteries of the southeastern group of the FBC, analogical stone structures are known both from central graves and graves situated near tombs, as well as from flat graves.

Grave pits were oriented along a W-E or, alternatively, a NW-SE axis (Table 1). They were rectangular in plan, with their length varying from 270 to 360 cm, and their width from 120 to 180 cm. Grave 1 from tomb 2 in Malżyce, site 30, was noticeably wider than the rest, resembling a square in its plan (Table 1). Such proportions stemmed from the burial of two individuals in this grave (Fig. 5: B). All pits were situated in the eastern, frontal part of the tombs, although always at a considerable distance (of a few metres) from the front wall. Within tomb 3/I at Malżyce, site 30, the graves were arranged in a line, in a manner resembling that recorded in Słonowice, in tomb VI (Przybyła and Tunia 2013, 141, fig. 2).

Human bones are preserved very poorly in all the graves. In the double grave from tomb II in Malżyce 30, a female of the *Adultus* age-class was buried in the southern part (individual I), while in the northern part, an individual of undetermined sex, also of the *Adultus* age-class, was buried (individual II). They were placed in the grave in supine position, with the head to the west. Other graves in which human remains survived held single burials. All the deceased were buried with the head to the west (Table 1). This position and orientation of the body was typical of the ritual observed in the southeastern group of the



**Fig. 6.** Inventories of FBC graves:  
 1-3 – Malżyce, site 30, tomb 1, grave 1; 4 – Zagaje Stradowskie, “Mogila Stradowska” site, tomb I, grave 1/59; 5 – Malżyce, site 30, tomb 2, grave 1; 6 – Malżyce, site 30, tomb 3/II, grave 2.  
 Illustration A. Kosik, A. Kukułka

FBC in chamberless tombs (Nowak 2009, 469; Król 2011, 111-113, table 5). Where it proved possible, it was determined that the remains belonged to individuals whose ages-at-death fell into the *Adultus*, *Maturus*, or *Maturus/Senilis* age-classes (Table 1).

Graves from the discussed region were poorly furnished. In the western part of grave 1 in barrow 1 at Małyce 30, two ceramic vessels and one flint trapeze were found (Fig. 6: 1-3). The shapes of the vessels, the technology of their manufacture, and the micromorphological traits (*e.g.* a circular hollow in the centre of one vessel's base) find analogies in other sites attributed to the southeastern group of the FBC. A distinct trait of the vessels from Małyce is the shape of their handles, which differ from the most widespread *ansa lunata* handles. The flat, ribbon-like handles of the Małyce vessels protrude clearly above the rim, and their edges are slightly raised in the upper part. This may indicate chronological proximity to finds from layers C2-C1 in the "Stary Zamek" site in Jevišovice, okr. Znojmo (Medunová-Benešová 1981), and at the same time to the early Boleráz horizon in southwestern Slovakia. Many similar vessels were found, for example, in Hlinsko, okr. Přerov, where they correlated with the above-mentioned chronological frameworks (Pavelčík 1995, 135, fig. 4). They can be dated to around the middle of the 4<sup>th</sup> millennium BC. Also worthy of note is the relation of the Małyce inventory to FBC cemeteries in Moravia. The inventory in question finds analogies among materials of the Drahanovice phase – in other words, the horizon of tombs surrounded with stone settings (Šmíd 2003, 104-107). The analogies linking the Małyce inventory with this phase outnumber those linking it with the later phase of Ohrozim (Šmíd 2003, 114). As for today, the set of vessels from grave 1 at Małyce, site 30, has no direct parallels in other cemeteries of the southeastern group of the FBC. The discovery of two cups in one grave inventory is unique in itself. Such vessels were typically discovered singly or accompanied by other ceramic forms (most often slender double-handled amphorae and collared flasks).

In grave 1 in Zagaje Stradowskie, offerings in the form of a cup with an *ansa lunata* handle were placed in the western part of the pit (Fig. 6: 4). This vessel type is known from other FBC graves, including Słonowice, tomb VII, grave 54 (Przybyła and Tunia 2013, 143, fig. 4: 3), Pawłów, grave 6 (Bargiel and Florek 2006, 393, fig. 8), Grzybów, Staszów district, tomb II (Garbacz 2006, 320, fig. 17: 1), and Lublin-Sławinek (Jastrzębski and Ślusarska 1985, 195, fig. 6: c). Such cups most likely do not appear before about 3650 BC (Włodarczak 2006, 45).

The offerings discovered in three graves from site 30 in Małyce included flint tools. Two of them were flint blade tools (Table 1). In grave 1 from tomb 2, a retouched blade was found, and in grave 2 from tomb 3/II, an end-scraper made on a long blade was discovered (Fig. 6: 5, 6). The blades were made from Cretaceous Volhynian flint, a raw material often used for making such artefacts (Libera and Zakościelna 2006, 156). In grave 1, tomb 1, from Małyce 30, a microlithic trapeze was found, made from chocolate flint. Microliths are rare finds in graves of the southeastern group of the FBC: trapezes were only discovered in grave 14 from site XIV at Klementowice (Libera and Zakościelna 2006, 161) and

in grave 135 from tomb IX in Słonowice (Przybyła and Tunia 2013, 151, fig. 11: 3). As with the ceramic vessels, all the flint artefacts were found in the western parts of grave pits.

Three vessels originate from the above-mentioned damaged graves, discovered near Zagaje Stradowskie village. The large cup with the *ansa lunata* handle (Fig. 4: 3) resembles the vessel from grave 1/59 in the “Stradów Tomb”, but it is undecorated. The collared flask with a handle (Fig. 4: 2) is also a vessel typical of the “classic stage” of the FBC, with a close analogy in an artefact from grave 54/2005 in Słonowice (Przybyła and Tunia 2013, 143, fig. 4). On the other hand, the cup with the protruding handle (Fig. 4: 1) is a unique specimen, finding no direct analogies in graves of the southeastern group of the FBC. The vessel is decorated with a pattern of hatched triangles, which makes it similar to vessels known from pit 2/1969 in Bronocice (Burchard 1975, 73, fig. 5: a; Kruk and Milisauskas 2018, Ill. 42: 3) and from the Niedźwiedź settlement (Burchard 1973b, fig. 1: j). This is a rare decoration among western Lesser Poland materials, and one characteristic of the Boleráz horizon (Burchard 1975, 72, 74). The cup from Zagaje Stradowskie originated from a damaged grave with a stone structure. This suggests the cemetery still remained in use in the late phase of the FBC, at the beginning of the second half of the 4<sup>th</sup> millennium BC.

#### 4. RADIOCARBON DATING

Radiocarbon dates were obtained for three graves from the Malżyce cemeteries (Table 2).

Human bone samples from grave 1, tomb 2, at site 30 and grave 1 at site 31 produced dates of 3622-3377 BC and 3635-3523 BC, respectively (Table 2; 68.2% probability; OxCal v4.3.2, see Bronk Ramsey 2009). This correlates with phase Br II at the site of Bronocice,

**Table 2.** Characteristic of grave pits of FBC from Malżyce and Zagaje Stradowskie

site	tomb/ grave	length and width [cm]	orientation	age and sex	head	inventory
Malżyce, site 30	1/1	325x145	E-W			2 x cup + flint trapezium
Malżyce, site 30	2/1	265x220	E-W	<i>Adultus</i> ?	W	flint retouched blade
				<i>Adultus</i> ♀	W	
Malżyce, site 30	3/I/1	300x180	E-W	<i>Maturus-Senilis</i> ♂	W	
Malżyce, site 30	3/II/2	330x120	E-W			flint retouched blade
Malżyce, site 30	3/II/3	270x120	E-W			
Malżyce, site 30	3/II/7	150x100	E-W			
Malżyce, site 31	1	330x140	SE-NW	<i>Maturus</i>	W	
Zagaje Stradowskie	I/1	360x140	SE-NW	?	W	cup

Table 3. Radiocarbon dating of FBC graves from Malżyce funerary complex

site	tomb/ grave	dated material	lab. no.	BP	BC cal. (68.2% probability)*
30	1/1	charcoal	Poz-34682	4750±40	3634-3387
30	1/1	charcoal	Poz-34736	4700±40	3622-3377
30	2/1	human bone	Poz-27989	4700±40	3622-3377
31	1/1	human bone	Poz-48428	4765±35	3635-3523

\* Acc. to OxCal v4.3.2 program of C. Bronk Ramsey from 2017

Pińczów district (Kruk and Milisauskas 1983, 267-273; 1990, 223, 224; 1991, 174; Kruk *et al.* 2018), and at the same time with the age of the nearby settlement at Zawarża, Pińczów district. The latter is linked with the older stage of the classic phase (i.a. Burchard 1981, 226-228; Burchard *et al.* 1991, 99, fig. 2; Kulczycka-Leciejewiczowa 2002, 90-92), which is confirmed by a single radiocarbon date obtained for feature 67 at this site (Kruk *et al.* 2018, 39, table 9).

Two similar results were obtained for charcoal samples collected from the central grave in barrow no. 1 at site 30 (Table 2). The mean age (R\_Combine function in OxCal) corresponds to the years 3628-3586, 3531-3510, and 3425-3382 BC (68.2% probability), with the oldest and youngest of these ranges equally probable. The youngest range should be synchronised with phase Br III at the Bronocice settlement, which means the stage when Proto-Baden influences become clearly discernible (Boleráz). Such a chronological position of grave 1 from tomb 1 at Malżyce, site 30, seems possible given the Pre-Baden stylistic traits revealed by the vessels from that grave (*cf.* Zastawny 2018). This would make the round barrow from Malżyce the youngest tomb among the FBC funerary structures explored so far in western Lesser Poland.

No absolute age determinations have as yet been obtained for classic trapezium-shaped structures of the Niedźwiedź type (known as megaxylons), such as tombs I and II from the “Stradów Tomb” in Zagaje Stradowskie. It would be very interesting to verify the hypothesis positing their chronological position as earlier than the Malżyce type tombs. At present, it cannot be ruled out that they represent the earliest type of megalithic structures in western Lesser Poland.

## 5. CONCLUSIONS

Eight Eneolithic funerary structures have so far been identified in the loess hills between Malżyce and Zagaje Stradowskie, of which six have been explored (Fig. 7). The earliest phase of their functioning is marked by tombs erected by an FBC population in the 4<sup>th</sup> millennium BC. These tombs probably created a sacral area, which later attracted other

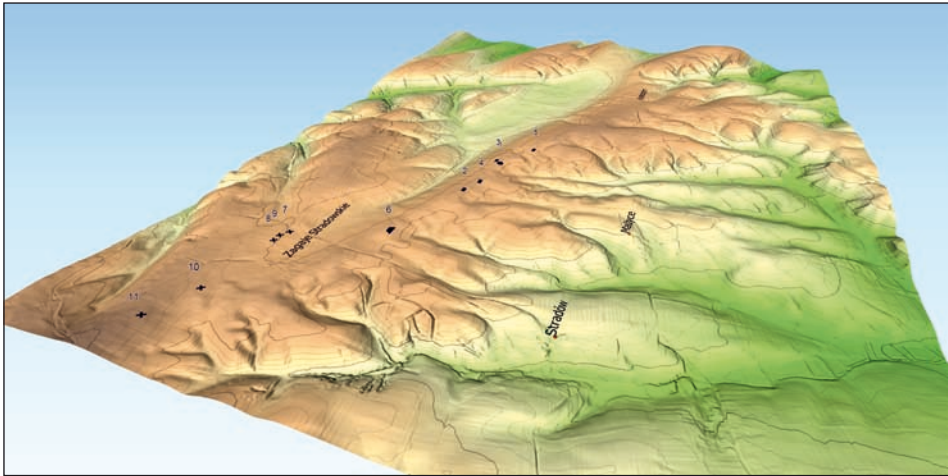


Fig. 7. Location of FBC sites in Malżyce and Zagaje Stradowskie. Numbers of sites: see fig. 1.  
Illustration R. Skrzyniecki

communities to bury their dead there. In this way, at the turn of the Eneolithic and the Bronze Age, cemeteries of the CWC and Mierzanowice cultures were established next to the Zagaje Stradowskie tombs and next to tombs 1 and 2 at Malżyce, site 30. The “Stradów Tomb” was also used for sepulchral purposes in the Early Middle Ages. A successive usage of FBC tombs for funerary purposes by Final Eneolithic and Early Bronze Age populations has been documented in other cemeteries in Lesser Poland as well (Włodarczak 2006, 48-50), with examples known from nearby sites of Kolosy, Kazimierza Wielka district (Kempisty 1978; Włodarczak 2008) and Pełczyska, Pińczów district (Rudnicki 2004; Rudnicki and Włodarczak 2007).

The information produced by the excavations points towards the considerable diversity of the megalithic burial rite in western Lesser Poland. Apart from the classic tombs of the Niedźwiedź type discovered in Zagaje Stradowskie (Fig. 2: A), a round barrow covering a centrally-placed grave pit was discovered for the first time in Poland. Original constructions were also recorded at sites 30 and 31 at Malżyce (tombs 2, 3/I, and 3/II) in which, while the plan of an elongated trapezium was maintained, the tombs were no longer outlined by a narrow palisade trench running around the entire perimeter, as was common in the Niedźwiedź-type tombs (Rzepecki 2011, 13). Instead, the sides were only partly confined by irregular trenches (Jarosz *et al.* 2009, 178, fig. 3; 2013a, 124, obr. 11).

Rectangular pits are another characteristic element, forming parts of the front wall (site 31 and site 30, tomb 3; Fig. 3: A, B). A similar “reduced construction” was recorded in the lowest-lying part of the Słonowice site (Przybyła and Tunia 2013). This allows for the assumption that tombs of the “Malżyce” type were built parallel with the younger phase of



the Słonowice cemetery. The type of construction recorded in Malżyce soon after its discovery found good analogies in a few other sites in western Lesser Poland (e.g. Czaple Wielkie, Giebułtów, and Ostrów). The radiocarbon dating of tombs from the younger phase, which were dug next to the tombs in Słonowice, is close to the absolute age determinations obtained for Malżyce (Przybyła and Tunia 2013, 157, table 1). In light of new discoveries, chamberless tombs from Malżyce have come to be seen as structures typical of FBC cemeteries in western Lesser Poland, reflecting a trend characteristic of the late “classic” stage of this culture.

The change in the FBC burial rituals, consisting in Niedźwiedź-type tombs being phased out by structures of other types, seems evident also in the cemetery at Pawłów (Bargiel and Florek 2006). At that site, as in Słonowice, a large, trapezium-shaped stone-and-timber structure inspired the establishment of a complex of tombs of different construction to the south of it.

The data from the sites discussed here, and the stratigraphic evidence from Pawłów and Słonowice, seem to indicate the possibility of a chronological differentiation of FBC tombs from western Lesser Poland. The older horizon would be marked by timber megaxylons (tombs of the Niedźwiedź type), and the younger one by tombs of the “Malżyce” type and round mounds.

The available age determinations allow for a conclusion that the sepulchral complex in Malżyce and Zagaje Stradowskie was established within the range of approx. 3650-3350 BC. This range overlaps nearly exactly with the dating of the “classic phase” of FBC development in loess uplands of southeastern Poland, or, referring to the periodisation developed for Bronocice, with phases Br II and Br III (Kruk and Milisauskas 1983; 1990; Kruk *et al.* 2018, 71, 77; also see Nowak 2009, 325-344).

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