

RESEARCH ON THE SO-CALLED MUSKERVASTLWALD GRAVEYARD AT BURGSTALLKOGEL, KLEINKLEIN, STYRIA (AUSTRIA)

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In the well-known and important Early Iron Age Sulmtal necropolis in Western Styria, an archaeological excavation was carried out because of woodworking in 2018 in the so-called Muskervastlwald group, which was relatively unexplored until now. In the course of the excavation, four cremation burials were discovered, which were only partially preserved due to the levelling. The funeral rite shows cremation pourings and urn graves. The pottery shows cone neck vessels, collar rim vessels, and bowls with inserted rims, which also fit together with the decorations into the known forms of the Styrian-Pannonian group of the Hallstatt period. Remarkable vessels also point to more far-reaching relationships with the surrounding cultural groups, such as the Kalenderberg group or in the Inner Alpine region. Based on the metal finds, it is possible to record both, burials of warriors with spearheads and parts of belts and burials with fine jewellery. The occupation period of the cemetery ranges from the phase Ha C1 (NT I), which can be determined by old finds, with a focus in the period Ha C2 and at the transition from Ha C2 to Ha D1, which are comparable to the occupation phases NT IIa and NT IIb of the Nova tabla cemetery.

In the Sulmtal, about 30 km south of Styria's capital Graz, one of the important, biggest and famous necropolises of the Early Iron Age is known around the Burgstallkogel hill, the so called Sulmtal necropolis. This necropolis is located in the municipalities of Großklein and Gleinstätten and contains about 700 tumuli. Beneath big graveyards like the so called 'Hörschusterwald' or the 'Grellwald', also some smaller cemeteries are known, like the 'Haiblwald' or the 'Masser -Kreuzbauer'. One of these small cemeteries is so called 'Muskerwastlwald', where 2018 excavations were done and the results are going to be presented below (Fig. 1).

TOPOGRAPHY

The Muskervastlwald cemetery is located on the eastern slope of the Burgstallkogel and is distributed on two plateaus, which are today separated by a road. Most of the burial mounds are located on the upper plateau, which is limited by two sharp slopes in the south and the northeast, in the east side of the graveyard is limited by the street. The second part of the cemetery is situated on a lower level and there a few tumuli from Muskervastlwaldgroup, three other tumuli are located on a different property, so it was called the Kröllwaldgroup. All lower levelled burial mounds are situated on a flat plateau surrounded by slopes except the Southwestern part, which is limited by the street (Fig. 2).

RESEARCH HISTORY

First excavations were done by W. Radimský and J. Szombathy in 1883, the findings of the excavations of Radimský were published by Claus Dobiat, who presented a complete overview on the Sulm Valley necropolis and its ceramics. The only known finding from Tumulus 1 is a fragment of a boat fibula, from Tumulus 2 we know fragments of a rim and wall piece of a cone-necked vessel (Dobiat 1980, 217,

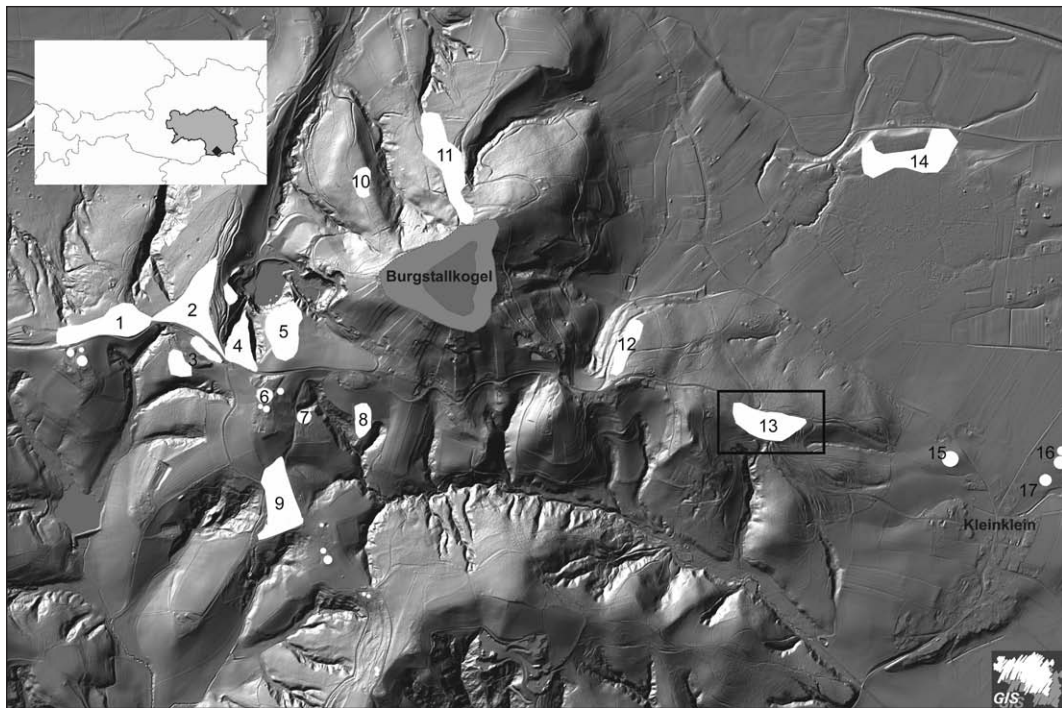


Fig. 1. Overview of the graveyards on Burgstallkogel near Großklein. 1 – Forstwaldgroup; 2 – Kaiserschneiderwaldgroup; 3 – Tschoneggerfranzlwaldgroup; 4 – Ofenmacherwaldgroup; 5 – Höchschusterwaldgroup; 6 – Tschoneggerfranzl Tumulus 2; 7 – Kürbischhansl Tumulus; 8 – Masser-Kreuzbauer; 9 – Grellwaldgroup; 10 – Haiblawaldgroup; 11 – Leitengritschwaldgroup; 12 – Karnerwaldgroup; 13 – Muskervastlwaldgroup; 14 – Pommerkogel; 15 – Precklwaldgroup; 16 – Hartnermichlkogel 1 and 2; 17 – Kröllkogel. After Mele 2012, fig. 1. Courtesy of Marko Mele, UMJ.

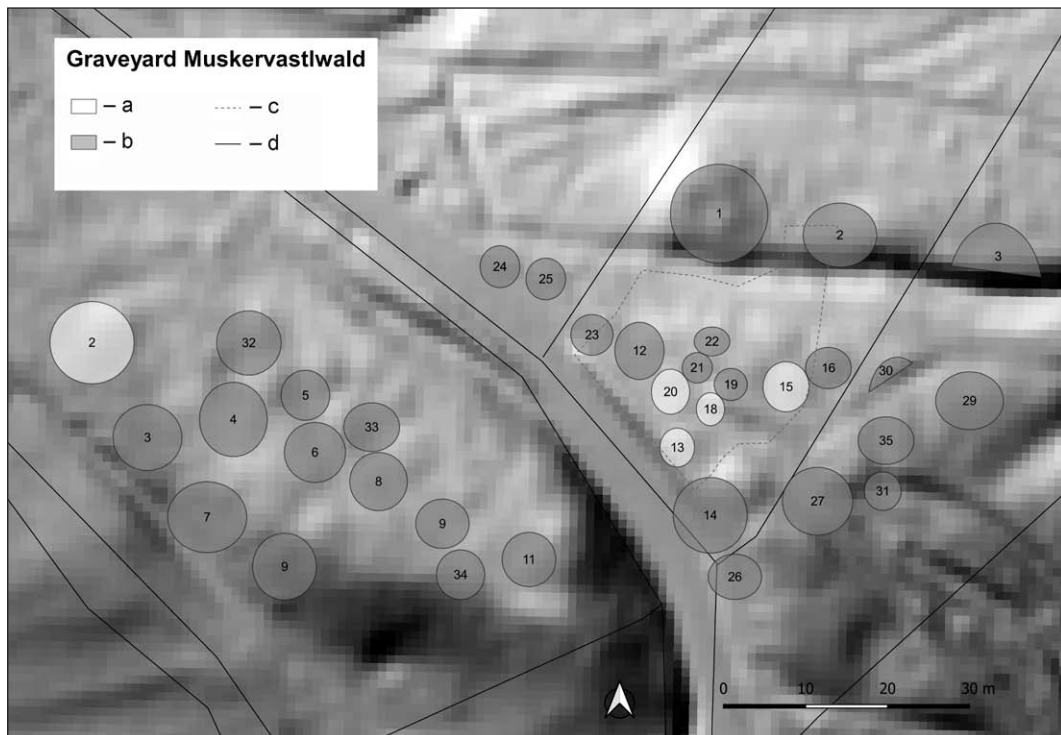


Fig. 2. Muskervastlwald. Overview of the tumuli. Graphics F. Mauthner. Legend: a – researched burial mounds; b – unresearched burial mounds; c – excavated area; d – plots.

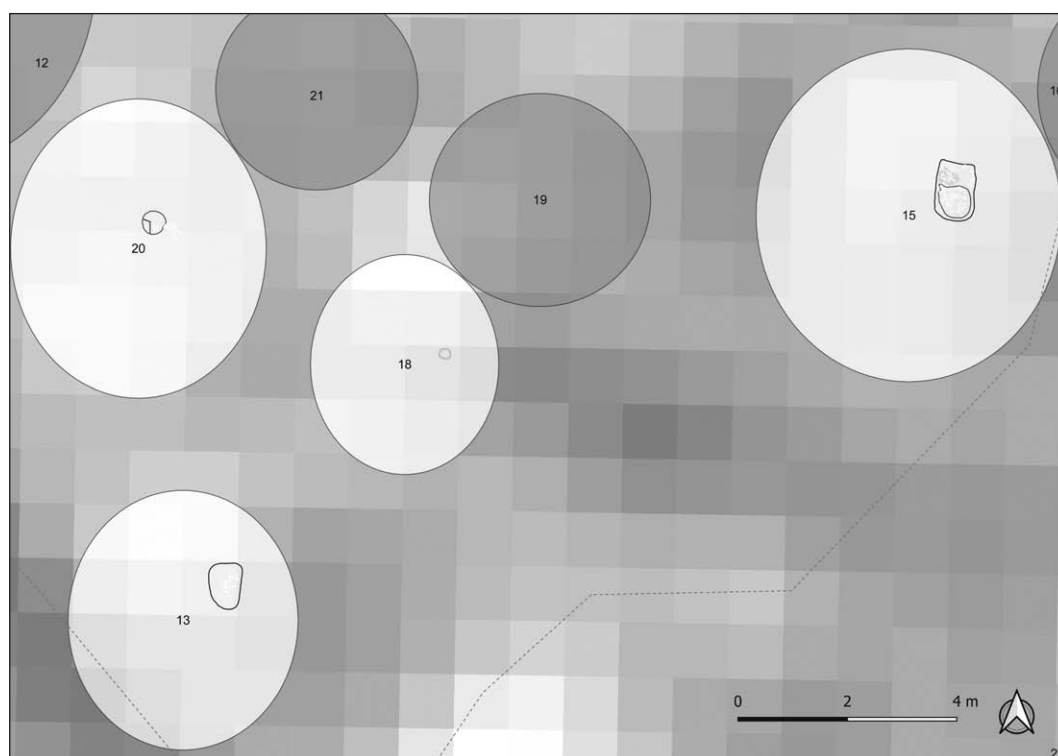


Fig. 3. Muskervastlwald. Situation of the structures in the tumuli. Graphics F. Mauthner.

Cat. No. 66, 67, 288; pl. 31: 1, 2; *Radimský-Szombathy 1885*, 162, 163.). After Dobiat, Muskervastl 2 could be dated into Burgstall phase I (Ha C1; *Dobiat 1980*, 168) and Muskervastl 1 could be dated into Burgstall phase II (Ha C2; *Dobiat 1980*, 169).

In 2014 the cemetery was inspected by the *Universalmuseum Joanneum* in Graz and re-recorded, so that a total of 20 tumuli could be counted (Interarch Database¹). With the help of new LiDAR – data, up to 35 burial mounds have been identified by data analysis and surveys conducted by the Archeo Norico Burgmuseum Deutschlandsberg.

THE ARCHAEOLOGICAL EXCAVATION 2018

Due to the partial destruction of burial mounds in the course of forestry work, archaeological investigations in the graveyard took place in 2018, which were carried out by the *Archäologisch-Soziale Initiative Steiermark* and the *Archeo Norico Burgmuseum Deutschlandsberg* on behalf of the Federal Monuments Authority (*Dobiat 1980*, 48).

The excavated area was approximately 550 m², and the soil was found to be heavily ransacked due to clearing and logging (Fig. 3).

The burials

The archaeological rescue excavation in the Muskervastlwald group in 2018 made it possible to record several features, including cremation burials in various forms, some of which were very badly affected by the levelling work and must therefore be considered incomplete in their inventory. Nevertheless, it was possible to assign the features to the originally existing four tumuli – 13, 15, 18 and 20.

¹ Interarch.eu: Datenbank interarch.eu, Fundstellenbezeichnung: Leibnitz.66003.5. Online available at: <http://www.interarch-steiermark.eu/datenbank/fundstellen/details.html?item=4dbe8ae7-d2b1-1315-e56e-54b66b6fd3c5> [04. 12. 2020].

Grave forms and burial types

All the graves are cremation graves and it was possible to distinguish between cremation pit graves (Tumulus 13, 15 and 20) and an urn grave (Tumulus 18).

By cremation graves we understand, based on Claus Dobiak's investigations, burials in whose grave pits, in addition to a few burnt pottery fragments and cremated remains, the remains of the funeral pyre were also filled in. In contrast, in an urn grave the selected cremated remains were collected and deposited together with the grave goods, and the urn was buried in a grave pit.

The shape of the cremation pits varied in the cemetery – oval (Tumulus 13), rectangular (Tumulus 15 and 20) and round (Tumulus 15) pits were distinguished. The size of the burial pits can be given as 0.86×0.6 m for the oval pit, 1×0.7 m or 0.85×0.55 m in the case of the rectangular pits, and a diameter of 0.6 m for the round pit.

With regard to the depth of the burial pits, only limited information is possible, as the burials have not survived intact. The depth of the round burial pit in Tumulus 15 was still 0.26 m.

Inventory and grave goods

All statements concerning the pattern of equipment and the custom of offering graves from the Muskervastlwald group have limitations. The inventory of all four cemeteries is not complete, and the number of graves is insufficient for more detailed analyses within the cemetery.

Nevertheless, the objects found in the graves can be divided into three large groups. These include, for example, dress components that were burnt at the funeral pyre and show more or less clear traces of burning.

In this context, the rod-shaped bead and the fragments of fine bronze rings from Tumulus 13 should be mentioned, which are thought to be the remains of neck jewellery.

A second group includes objects of personal possession that can also be interpreted as attributes of a social group or gender-specific items. These include, for example, the iron belt rings (coupling rings) from Tumulus 18 and the lance tip from Tumulus 20, objects associated with male burials (warrior status).

The third group comprises the vessel furnishings in the graves, whereby in the burials investigated the focus is on pyre pottery, i.e. *pars pro toto* pottery that entered the grave and mostly also heavily burnt remains of the vessels. Among the reconstructed vessel forms are conical neck or collar rim vessels, bowls with a rim, handle cups as well as barrel-shaped vessels and, as special forms, a suction or hanging vessel.

Whole vessels, which would be placed in the grave as containers for food and drink, are completely missing.

Better equipped graves, such as Tumulus 20, contain the remains of a set of pottery. This consists mainly of mixing and drinking vessels. The barrel-shaped vessels can possibly be interpreted as storage or cooking vessels.

Tumulus 13

In the southern part of the investigated area, an oval pit (0.86×0.6 m) oriented north to south was uncovered, which could be interpreted as remains of Tumulus 13. The cremated bones and the ceramics were spread in the eastern part of the pit, in the north and northwest no objects could be found and even no urn was perceptible (Fig. 4).

A total of four vessels were found in the cremation burial, all of which were heavily fragmented and sometimes secondarily burned.

The fragments of a collar rim bowl (Pl. I: 1), which possibly belonged to a vessel with a stand, show an S-shaped profiling, whereby the short collar rim was clearly set off from the shoulder. The shoulder-abdomen border of the vessel is subdivided at regular intervals by vertical or slightly curved narrow plastic ribs. The areas between the ribs were originally painted alternately red and black with graphite, as sufficient traces still indicate, with the painting extending into the belly area of the bowl.

From the inventory of the Wiesenkaiser Tumulus No. 4, a richly furnished burial at the western extension of the Sulmtal necropolis, a profiled bowl is available, which is characterized by knobs, a verti-

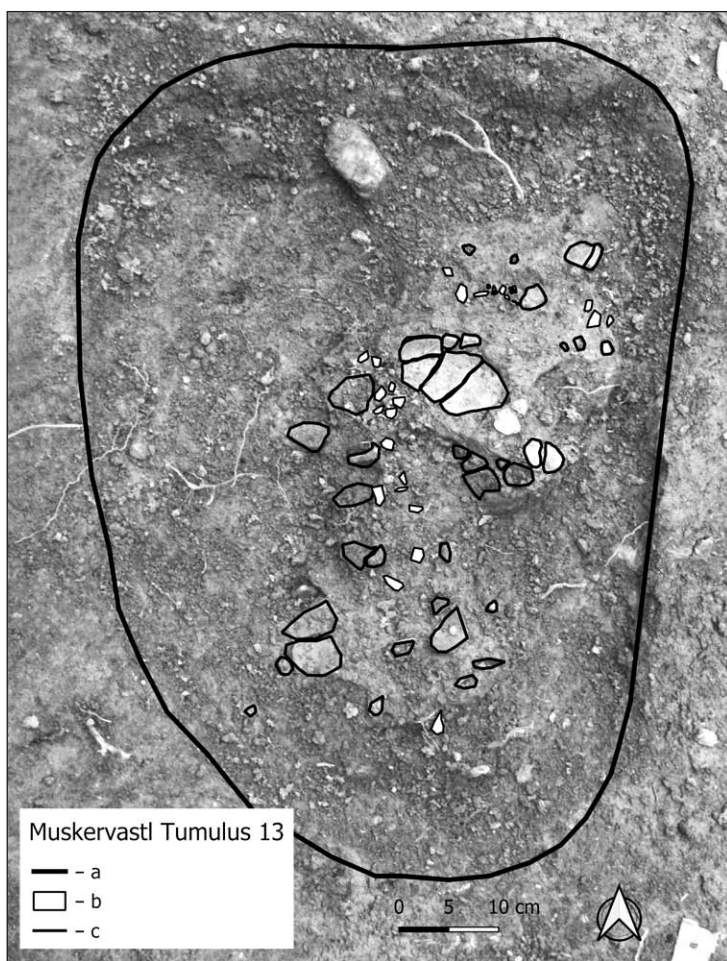


Fig. 4. Muskervastlwald. Tumulus 13, plan. Graphics F. Mauthner.
Legend: a – grave pit; b – cremated bones; c – ceramics.

from the Grellwald group, for example Grellwald 30 (Dobiat 1980, pl. 71: 5).

The coherent bottom-belly pieces of a coarse-toned, heavily secondary-burned vessel should also be mentioned (Pl. I: 4).

In addition to the pottery finds, remarkable filigree bronze objects were also uncovered, some of them had been partially melted in the course of burning at the pyre.

These include, small, fine bronze rings (Pl. I: 5) and a rod-shaped bead (Pl. I: 6). The bead is hollow inside and has a length of 18 mm, its cross-sectional diameter is 4.5 mm, and the two end pieces are four-ribbed. Very similar ribbed bronze rods or beads come from the cemetery of Frög-Rosegg in Carinthia, which are assigned to the phase Frög 2–3 (Ebner-Baur 2020, 142, Cat. No. 85; fig. 92).

The incomplete and fragmentary inventory of the burial in Tumulus 13 belongs chronologically to phase NT IIb, a transitional stage from Ha C2 to Ha D1. The phase classification follows the scheme drawn up by G. Tiefengraber (2019, 422, 423) for the cemetery of Nova tabla in Slovenia.

In Tumulus 13, only 7 g of cremated bones were preserved, which is why anthropological analysis yielded an 'adult' age determination between 19 and 60 years, without possible sex determination, however (Renhart 2020, 1).

Tumulus 15

In the eastern part of the excavation area some individual vascular findings turned out to be another disturbed burial mound (Tumulus 15). The burial pit has a rectangular shape (1 × 0.7 m), which yielded smaller rectangular pottery concentration (0.4 × 0.25 m) in the north-west. In this, remains of a conical neck vessel were excavated, which may have been intentionally broken into many very small fragments.

cally fluted shoulder as well as by the black-red painting (Hack 2001, 30, pl. 13: 2).

Shoulder and belly fragments and single rim pieces can be assigned to a conical neck vessel (Pl. I: 2), which shows remarkable graphite stripe painting, but no secondary burning marks. On the one hand, the graphite stripes emphasize a shoulder furrow and also a circular dent. Both motifs fit into a partially preserved diamond decoration, which are followed along the shoulder by further, obliquely running graphite stripes. In the lower part of the vessel, the entire decoration is bordered by a horizontal graphite stripe.

A decoration consisting of diamond-shaped graphite stripes is also found, for example, on the shoulder-abdominal circumference of conical neck vessels of the Sulmtal necropolis, which were discovered in the burials of Hörschusterwald 1 (Dobiat 1980, pl. 1: 11) and Ofenmacherwald 43 (Dobiat 1980, pl. 19: 1).

A type of bowls with inverted rim, which are popular in the burials of the Sulmtal necropolis could also be found in Tumulus 13. The surface of the bowl (Pl. I: 3) shows secondary burn marks, the bowl has a flat base and can be compared with pieces

In addition to this, fragments of another conical neck vessel are also documented, but interestingly, no cremated bones were found. This structure gives the impression that these vessel pottery fragments were laid down in a past container.

The southern part of the burial pit includes a roundish pit with a diameter of 0.6 m and a depth of 0.26 m, filled with a mixture of pottery fragments, charcoal remains, and mortuary cremated remains, suggesting a burial as cremation fill in a pit (Fig. 5).

A total of seven vessels' remains were uncovered from the pyre filling in the pit.

A fragmentary preserved collar rim vessel (Pl. II: 1) could be found in both areas described above. All parts of the vessel still have their original dark-black surface and apparently were not exposed to the heat of the pyre. A shoulder furrow runs under the short neck of the collar; the shoulder of the vessel was originally adorned with four crosswise distributed knobs, which in turn are bordered by narrow semi-circular channellings.

From the Sulmtal necropolis a comparable vessel is known from burial mound 45 of the Grellwald Group, which is decorated with additional angular channelling around the shoulder and belly (Dobiat 1980, pl. 82: 4).

A very similar collar neck vessel, but with additional dot decoration around the channelling, comes for example from the important hilltop settlement at Hoarachkogel-Bubenberg/Novine, located directly at the Austrian-Slovenian state border (Vinazza *et al.* 2015, 192, pl. 5: 5). The vessel from the Hoarachkogel, which served as an urn for a cremation burial with a covering shell, was assigned to the Ha C2 phase (Črešnar/Vinazza 2019, 465; pl. 5: 10).

From the multi-phase hilltop settlement on Poštela near Maribor/Marburg, Slovenia, not far from Hoarachkogel, we know a comparable shoulder fragment with knob and surrounding semicircular fluting (Teržan 1990, 143, pl. 40: 11).

Finally, it should be noted that especially conical neck vessels, such as a specimen from the Iron Age cemetery of Nova tabla near Murska Sobota in Slovenia, were decorated with this characteristic pattern canon (Guštin *et al.* 2017, grave 45, 461, fig. 1474).

A so-called spouted vessel (Pl. II: 2), heavily fragmented, is also part of the burial equipment, which can probably be reconstructed as a collar rim vessel with a straight, tubular spout. Such spouted vessels, also called suction vessels, are found three times in the cemetery of Statzendorf in Lower Austria and are assigned to the Kalenderberg culture (Rebay 2006, e.g. grave B127, 106, 107, pl. 135: PA43104). Further comparisons can be found, for example, in the settlement at Burgstallkogel near Kleinklein, which also has a straight tube (Smolnik 1994, 56, 57, pl. 3: 17) or in the Hallstatt period burial ground of Nova tabla near Murska Sobota, Slovenia. Here this vessel was found in a grave of an infant (Guštin *et al.* 2017, grave 68,



Fig. 5. Muskervastlwald. Tumulus 15, plan. Graphics F. Mauthner. Legend: a – ceramics; b – ceramic in box; c – charcoal; d – grave pit.

491, fig. 1630) and can be attributed on the basis of chronological aspects to phase NT IIB, i.e. to the transition from stage Ha C2 to Ha D1 (*Tiefengraber 2019*, 424–426).

In the rectangular pottery concentration mentioned above, the fragments of a heavily secondarily burnt conical neck vessel were deposited (Pl. II: 6). The remarkable high neck area is decorated up to the shoulder by horizontal channelling. The shoulder of the vessel was originally decorated by four crossed knobs framed by a triple bundle of channelling, the ends of which converged towards the bottom in an acute triangular shape.

Another single shoulder fragment of the conical neck vessel has a very similar decoration consisting of the same channelling bundle, with the triangular zone in the spandrel between the shoulder furrow and the channelling designed by shallow circular impressions. The channelling bundles may have originally run in zigzag mode along the vessel shoulder, to which some parallels are known from the Sulmtal necropolis grave inventories (*Dobiat 1980*, e.g. Grellwald 34, pl. 73: 2; Grellwald 54, pl. 87: 5). The characteristic neck area of the conical neck vessel, which was designed by surrounding horizontal channelling, finds good comparisons in the Sulmtal necropolis (*Dobiat 1980*, e.g. Grellwald 55, pl. 89: 1) as well as in the material from the settlement of Kalsdorf. The decoration is a culmination of the 'high baroque' conical neck vessels of type 5 according to Dobiat, which were defined as important representatives of the latest occupation phase of Kleinklein (*Tiefengraber 2005*, 166, pl. 31: 1).

Strongly secondarily burned fragments of a collar rim vessel has a vertical eyelet (Pl. II: 5) at the shoulder-abdominal boundary. For this rare cord eyelet, which identifies our fragment as a hanging vessel, a comparison from the burial Kaiserschneiderwald 40 is available (*Dobiat 1980*, pl. 28: 11).

For the small, double conical profiled vessel (Pl. II: 3), which has been preserved from the flat standing surface up to the shoulder-belly-part, reference can be made to a similar piece from the cemetery of Nova tabla in Slovenia (*Guštin et al. 2017*, grave 18, 430, 431, fig. 1317).

Further vessel fragments could be reconstructed to a vessel with high collar rim and pressed spherical belly part (Pl. II: 4), whereas the standing surface is completely missing. A collar rim vessel with very similar profiling comes, for example, from the burial of Leitengritschwald 41 (*Dobiat 1980*, pl. 102: 2).

The finds from Tumulus 15 point to a dating to the NT IIB phase, i.e. to the transition from the Ha C2 to the Ha D1 phase, but there are no chronologically sensitive metal finds.

The anthropological age and sex analysis shows that this is the incomplete cremation of a young individual who died between the ages of 13 and 18 (*Renhart 2020*, 1).

Tumulus 18

Already after removal of the coarse dirt, a circular structure with a diameter of 0.2 m was detected in the middle of the excavation area, a few metres north of Tumulus 13. This layer turned out to be the remnant of a ceramic urn with cremated bones and could be seen as the last remains of burial mound number 18 (Fig. 6).

Pieces of the urn's belly and base (Pl. III: 1) have been preserved, which can probably be reconstructed as a collar rim or conical neck vessel due to the protruding belly. The contents of the urn showed selected pieces of cremated bones, from which further finds, such as a knife and three rings of iron could be recovered.

The iron rings (Pl. III: 4) have a diameter between 4.2 and 5.4 cm, with the smaller ring having a round-bar cross-section and the two larger rings having a squashed spherical cross-section. Pieces of bone corroded onto the rings, and the two larger rings were encountered in the urn slightly overlapping and corroded to each other.

These characteristic iron rings are often found in warrior graves and are interpreted as parts of a belt, for example in the Tumulus Forstwald 21 (*Dobiat 1980*, pl. 37: 10a–c), where an armament with two pieces of lances was documented. Further comparisons are available within the Sulmtal necropolis in the graves Leitengritschwald 2 (*Dobiat 1980*, pl. 98: 7) and Kaiserschneiderwald 123A (also labelled as 146; *Bernhard/Weihs 2003*, pl. 47: 7), where in the latter one, three pieces of iron rings were rusted at the bottom of the urn.

From the cemetery of Nova tabla in Slovenia iron rings were published, which were also found in triplicate, with a diameter of about 5 cm. The equipment of grave 66 mentioned here also includes the broken tip of an iron knife (*Guštin et al. 2017*, 486, fig. 1612–1614).

The iron knife (Pl. III: 3) has a curved back and a handle mandrel, whereby the knife tip and the end of the grip tang has been broken in antiquity. There are also corroded residues of cremated bones on the knife. Parallels to our iron knife, which is to be addressed as an equipment element, can be found in the

Sulmtal necropolis, for example with-in the burial of Forstwald 50 (*Dobiat 1980*, pl. 40: 6), or from the cemetery of Nova tabla in Slovenia (*Guštin et al. 2017*, grave 70, 494, fig. 1659).

A second pottery vessel could be mentioned in the inventory of the burial. It is the fragmented cup with a high, over-edged handle of a relatively wide, flat cross-section (Pl. III: 2). The cup with the handle, the base of which has not been preserved, can be described by a high straight neck as well as by a sharply profiled shoulder-abdominal transition.

Within the Sulmtal necropolis, this type of cup belongs to a younger horizon of graves, as showed by the comparable finds from the burials of Grellwald 55 and Tschoneggerfranzl 2 (*Dobiat 1980*, pl. 54: 11; 92: 1, 2).

Phase NT IIb, i.e. the transitional horizon of Ha C2/Ha D1, can be attributed to the few pottery finds and metal objects from the urn burial in Tumulus 18.

Some cremation bone fragments showed a rust-brown discolouration due to the iron oxide. Animal bones were also burnt and separated out during analysis. As far as pathological conditions are concerned, fine porosities called *cribra cranii* were found on some skull remains, indicating deficiency diseases. The cremated bones came from a medium robust to robust and probably strong man, who died between the 31st and 50th year of his life (late adulthood – early maturity; *Renhart 2020*, 2).

Tumulus 20

In the western part of the investigated area some fragments of pottery vessels were unearthed, which were seen as remains of Tumulus 20. Based on the consistency of the earth material, a rectangular burial pit can be recognized, the dimensions of which are 0.85 × 0.55m (Fig. 7).

During the preparation of the block recovery of the upper vessels, a black charcoal layer was found c. 30 cm deeper north of the ceramic fragments. After the block recovery of this pit, during the restauration, this layer could be divided into three fillings. The upper filling shows a few charcoal fragments and no bones. The next filling contains very much charcoal and burned wood without any main orientation, so an organic container is excludable. In addition to some cremated bones and vessel remains a fragment of a spearhead have been documented. The final filling on the bottom of the pit consisted of a few fragments of charcoal, sandy clay and burned stones. In this filling the rest of the spearhead has been uncovered, so we can prove the he was in an upright position.

Some vessel fragments were found in both layers, so they were created at the same time.

The fragments of a collar rim vessel (Pl. IV: 1) come from the upper area of the burial, whereby the characteristic collar rim has only been preserved in the base. Along the shoulder runs a circumferential sloping channelling, the squeezed spherical belly part ends in a flat base. A vessel comparable in its basic form and decoration is known, for example, from the grave Leitengritschwald 46 (*Dobiat 1980*, pl. 103: 10) of the Sulmtal necropolis.

Another collar rim vessel (Pl. IV: 3) consists of individual base and belly fragments as well as a rim and a shoulder piece. It is decorated by a slightly high oval dent at the shoulder-abdominal transition. The decoration with the dent is known from the grave Grellwald 45 (*Dobiat 1980*, pl. 83: 2), even if this comparison piece has more decorations.

A strongly fragmented conical neck vessel (Pl. IV: 5) with a folded rim could also be recovered, which shows four crosswise distributed knobs as well as a diagonal channelling decoration along the shoulder-

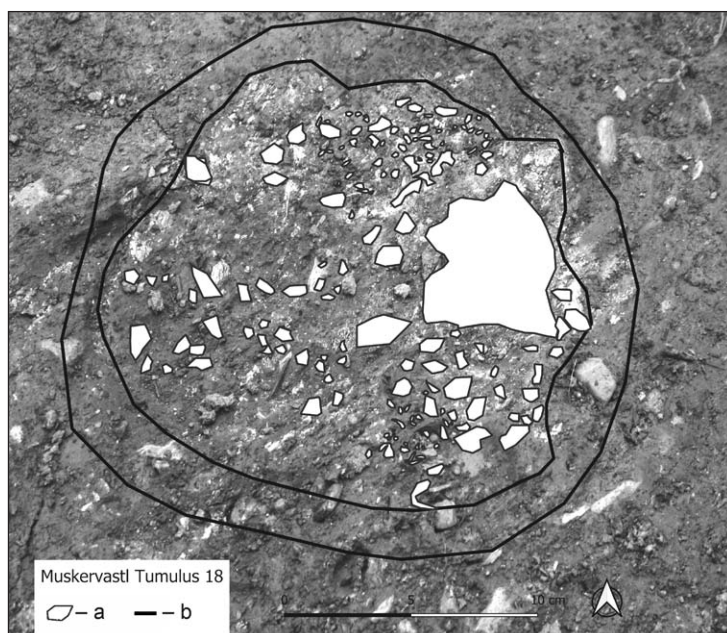


Fig. 6. Muskervastlwald. Tumulus 18, plan. Graphics F. Mauthner. Legend: a – cremated bones; b – ceramics.

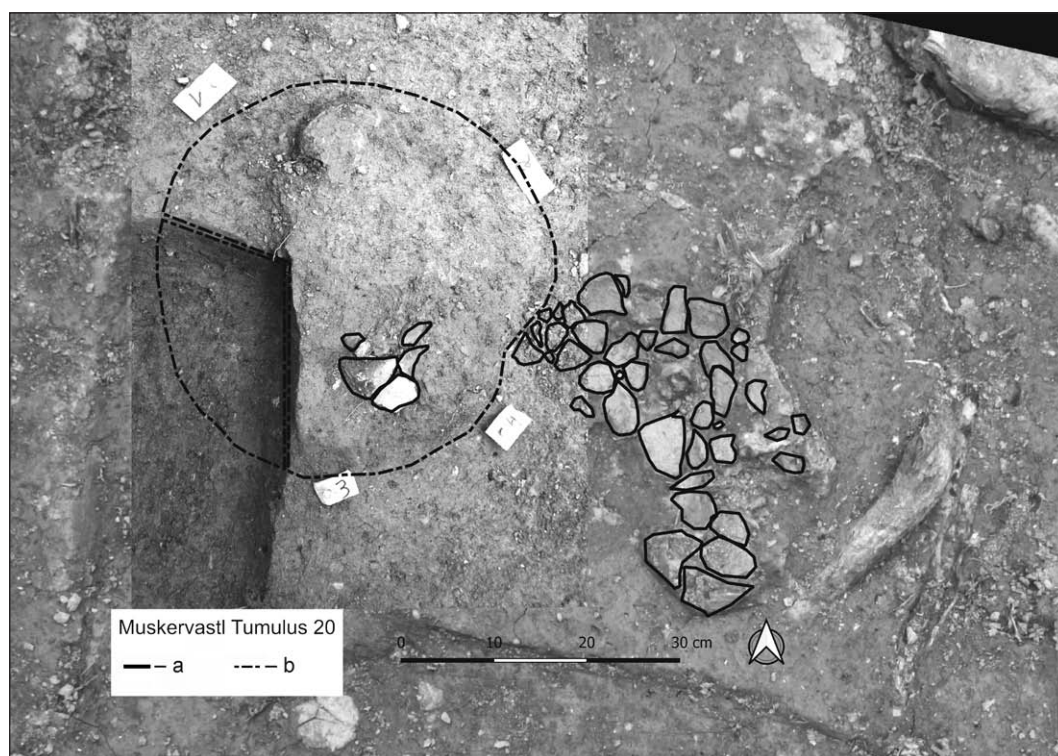


Fig. 7. Muskervastlwald. Tumulus 20, plan. Graphics F. Mauthner. Legend: a – ceramics; b – charcoal.

abdominal transition. Parallels can be found in the material from the neighbouring Slovenian Styria, for example in Šentjanž pri Rečici, grave 2 (*Teržan* 1990, pl. 81: 1) or at the cemetery of Nova tabla near Murska Sobota, where the channelling, however, is oriented to the right (*Guštin et al.* 2017, grave 78, 503, fig. 1699). At the Nova tabla cemetery, conical neck vessels of this form and decoration appear as typical representatives of phase NT IIa, a chronological classification corresponding to phase Ha C2 (*Tiefengraber* 2019, 424).

The strongly secondarily burned bowl with inverted rim (Pl. IV:2) with hemispherical profiling finds comparisons in the inventory of the burial of Leitengritschwald 27 (*Dobiat* 1980, pl. 99: 10).

With the barrel-shaped vessel (Pl. IV: 4), whose fragments are strongly secondarily burned, another widespread vessel form can be recorded, which has, for example, comparisons in the graves Kaiserschneiderwald 40 (*Dobiat* 1980, pl. 27: 8), Grellwald 45 (*Dobiat* 1980, pl. 83: 6) and Leitengritschwald 46 (*Dobiat* 1980, pl. 103: 13).

Besides the ceramic vessels, two metal objects were found. A spearhead made of iron (Pl. IV: 7) with a broken tip and a roof-shaped central ridge with a cross-shaped cross-section.

The ring-like end of its shaft has three horizontal grooves and appears to be upshifted, as shown in the X-Ray. A similar designed spearhead is known, for example, from the Tumulus Forstwald 21 (*Dobiat* 1980, pl. 37: 9) of the Sulmtal necropolis.

In this context it is necessary to mention a characteristic way of depositing spearheads in Southwestern Styria, because already V. Radimský, in the course of the excavation of Tumulus 21 of the Forstwald group, came across a burnt layer (*bustum*), where two iron spearheads were driven into the grown soil side by side, with the tips downwards (*Radimský* 1883, 122). A comparable deposition of the lance tip(s) is also present by the specimens from graves Forstwald 50 and 51 (*Dobiat* 1980, 62, 63).

The second iron object is a phalere-like disc (Pl. IV: 6) made of thin iron sheet with a slightly curved cross-section, which has a radial fine notch decoration on the upper surface. On the other side there is a mounting bracket with a button-shaped end. With regard to their shape or the possible purpose of use, comparable objects were published from the cemetery of Nova tabla, Slovenia. These are two fragmented round iron plates, once with central perforation, with diameters between 2.8 and 2.9 cm (*Guštin et al.* 2017, grave 48, 466 f., fig. 1510; 1511).

From the elaborately equipped graves of Magdalenska gora in Slovenia we know high quality metal belts, which besides the belt plates also have trimmings made of bronze, which, however, belong to a much later period than our specimens made of iron. The small metal discs, also decorated with radial notches, were mounted on the belt, and a bronze loop with an attached ring may also have been mounted on the disc (*Tecco Hvala/Dular/Kocuvan 2004*, mound 2, grave 13, pl. 24: 5, 6; mound 4, grave 1, pl. 64: 10).

Our warrior burial in mound 20 may be dated to phase NT IIa, i.e. Ha C2 based on the pottery and metal artefacts.

The eleven find spots of bones from burial mound number 20 probably belong to a medium-bodied and medium-robust man, who died between the age of 19 and 40. Some of the mostly milky-white to old white coloured bone remains (only two show blue-grey to milky-white colour) show iron oxide discolouration (*Renhart 2020*, 2, 3).

RESULTS

In the eastern part of Muskervastlwaldgroup in total 19 burial mounds could be expected regarding the LiDAR data. In the area of the woodworking, about eleven burial mounds had been suspected. Through the excavation, the remains of four tumuli have been documented.

The remains of Tumulus 15 and Tumulus 20 show a rectangular burial place with rounded corners, Tumulus 13 has an oval shape. Tumulus 18 has a round shape, so in fact, all common shape types of the Styrian-Pannonian group were recognized (*Teržan 2019*, 319–334), as we can see for example in the graveyard Masser-Kreuzbauer at Burgstallkogel (*Bernhard/Weihs 2003*, 17–24) or Nova tabla near Murska Sobota (*Tiefengraber 2019*, 410).

All researched graves of the Muskervastlwaldgroup are cremations and thus fit well into the known burial custom of the entire Styrian-Pannonian group, where no inhumation graves are tangible so far (*Tiefengraber 2019*, 410). The funeral rite is different and shows urn graves as well as cremation pouring, as it can be expected in the entire necropolis (*Dobiat 1980*, 47–52).

In Tumulus 18 are remains of a ceramic urn filled with separated or selected cremated bones, where the ceramic urn was dug into the ground without larger pit. Parallels to such way of burying the urn can be found in the Sulmtal necropolis with the graves Hörschusterwald 6 and 27, Forstwald 19, and Leitengritschwald 2, 56 and 138 (*Dobiat 1980*, table 1) as well as in Nova tabla, graves 75 and 90 (*Guštin et al. 2017*, 144, 146).

In Tumulus 20, a cremation pouring in a pit, which contains a mixture of ash and bones, was excavated, which is comparable with Tumulus 201 in the graveyard of Frög (*Ebner-Baur 2020*, 371–377). The partially preserved remains of grave 13 also point to a cremation pit grave, but a comparison is not made due to the advanced state of destruction. A cremation pouring with unseparated bones has been documented in Tumulus 15. Tumulus 15 shows a burial pit filled with shattered pottery and cremated remains, with a rectangular container, probably made of organic material, laid over it, which is also filled with broken pottery. In this context, it must be assumed that pottery and metal objects were deliberately destroyed in the course of burial (*Dobiat 1980*, 63).

The present remains of cremation bones are all incompletely preserved, fragmented to a very small pieces and indicating very high combustion temperatures over 650–700 °C due to their colouration and degree of combustion. Overall, these factors indicate a very intense and extensive burning rite. The identified bone fragments allow conclude on rather ‘accidental’ or even careless picking up of the bone remains from the funeral pyre (*Renhart 2020*, 3).

The collection of pottery found in the burials includes conical neck and collar rim vessels, as well as single-handled rim bowls, handle cups and barrel-shaped pots, with the vessel remains always ending up in the cremation pits more or less fragmented and severely burnt by secondary incineration.

The ornamental and decorative elements show the typical spectrum of (Late) Hallstatt forms in the Sulmtal necropolis, but also in the Styrian-Pannonian Group, with channelling, knobs, dents, and red and graphite painting. Two special forms, the spouted vessel and the hanging vessel, which are rare in the Southeastern Alps, are of particular interest from Tumulus 15.

The burials in Tumulus 13, 18 and 20 yielded metal objects that may have been dress accessories or gender-specific objects. In addition to Tumulus 13, which yielded a rod-shaped bead and fragments of

fine bronze necklaces, the urn grave in Tumulus 18 should be mentioned. It yielded three pieces of iron coupling rings and an iron knife with a handle.

Tumulus 20 can be regarded as a warrior burial, in which a small round iron belt item was found in addition to an iron spearhead deposited vertically at the bottom of the pit.

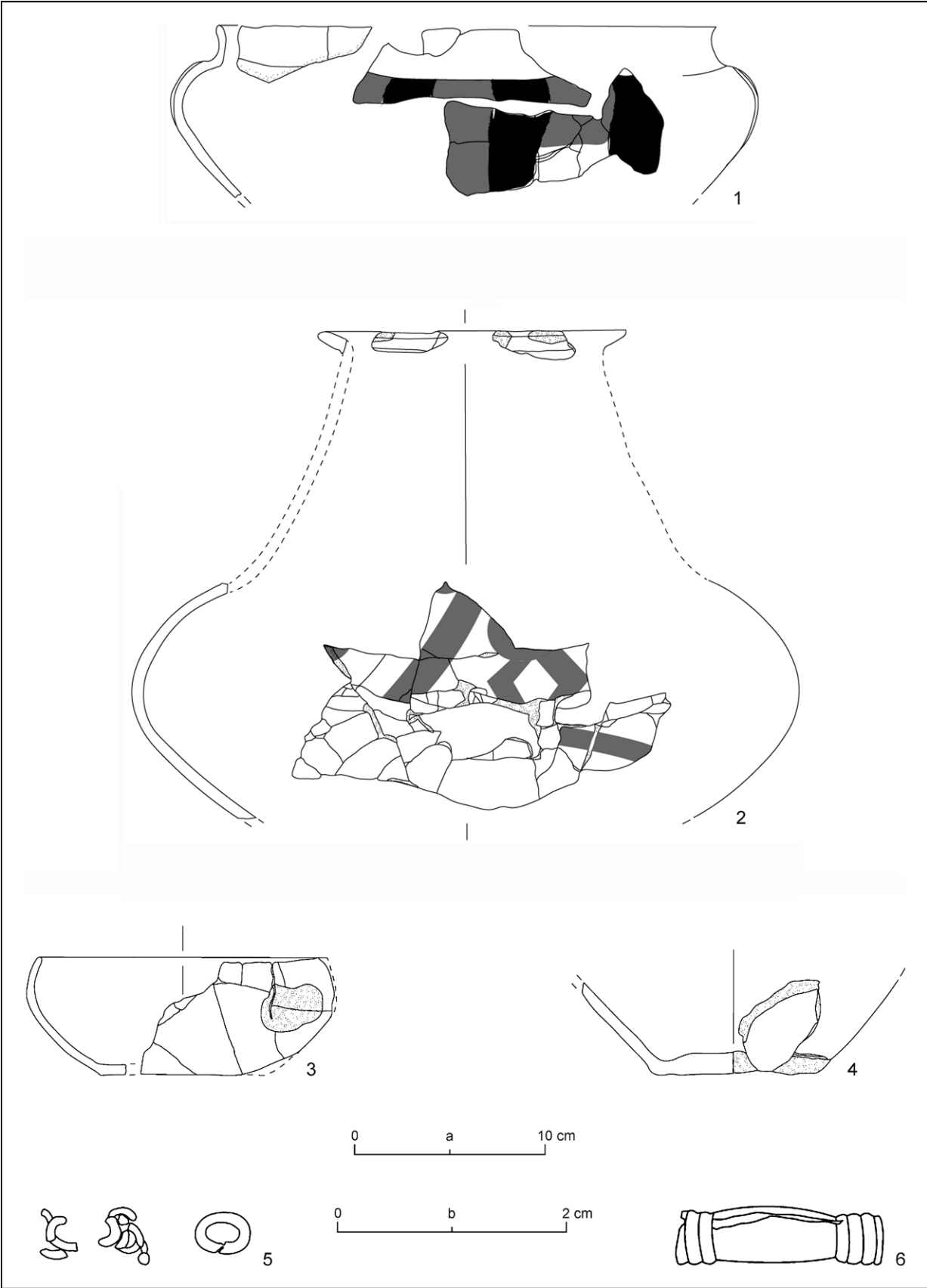
The finds of the Muskervastlwald group have, as has been shown, good analogies within the Sulmtal necropolis in the Grellwald, but also in the Forstwald group. Naturally, there is also a good comparability with other cemeteries of the Styrian-Pannonian group, such as in Nova tabla near Murska Sobota (Guštin *et al.* 2017, 81–99, 126–148, 416–537; Tiefengraber 2019) or in Hoarachkogel/Novine near Spielfeld (Črešnar/Vinazza 2019, 465).

Some objects testify to wide cultural contacts with the surrounding areas – e.g. spouted vessels have analogies in Statzendorf (Rebay 2005, 106, 107) and as such point to the Kalenderberg culture.

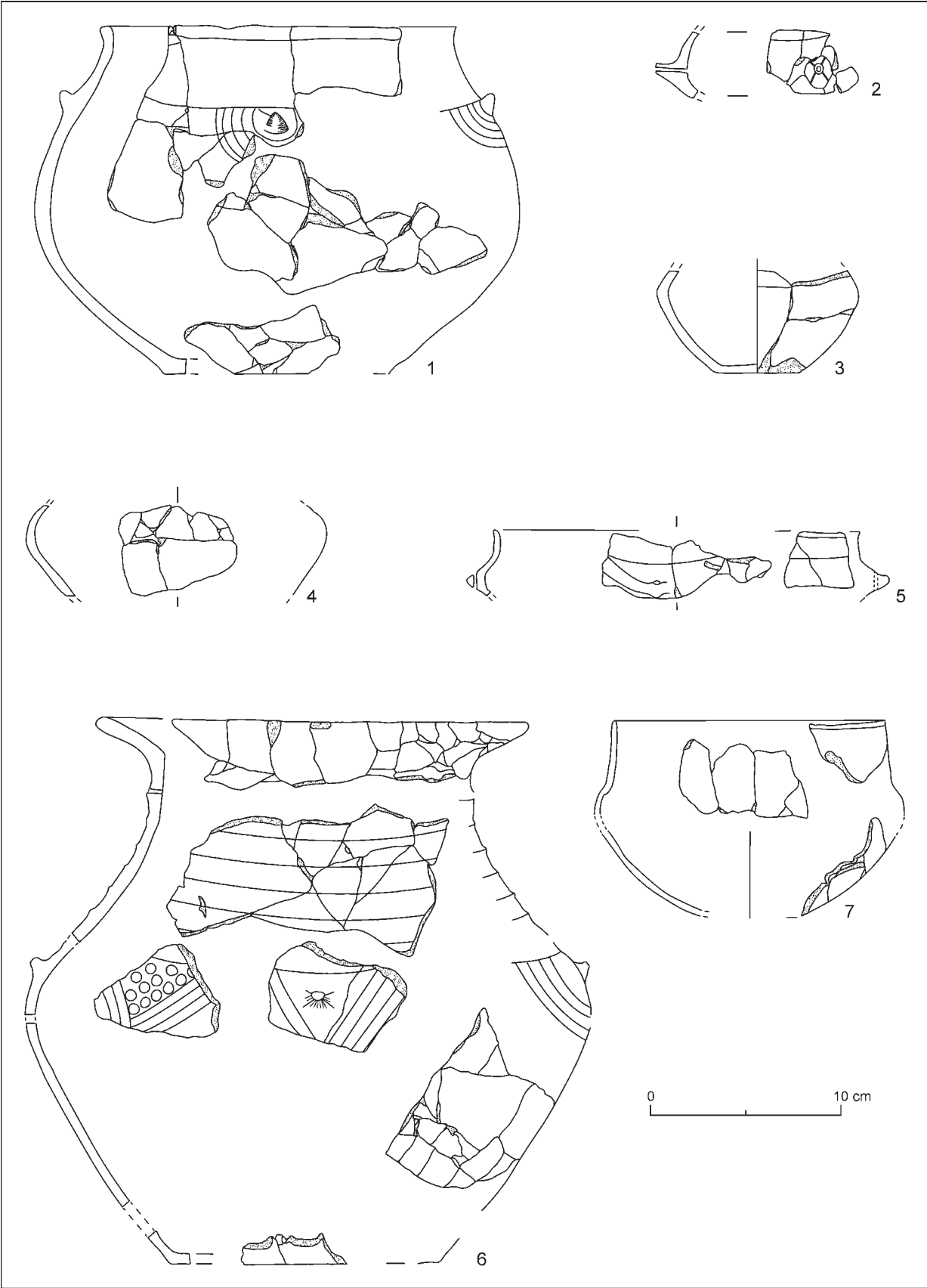
Other finds point to the direction of the Inner Alpine Carinthian area, where comparisons can be found in Frög-Rosegg, as shown by the funeral rite of Muskervastl 20 and Frög mound 201 (Ebner-Baur 2020, 371–377). Also, with regard to specific finds like the bronze rod bead (Ebner-Baur 2020, 142, Cat. No. 85, fig. 92), further relations to the Inner Alpine area, can be shown.

On the basis of the old finds published by C. Dobiat (1980, 217, Cat. Nos. 66, 67, 288, pl. 31: 1, 2) and the excavation results, an occupation period from Ha C1 to the main occupation stage Ha C2 (phase NT IIa) as well as the transitional horizon Ha C2/Ha D1 (phase NT IIb) can be assumed defined at the cemetery.

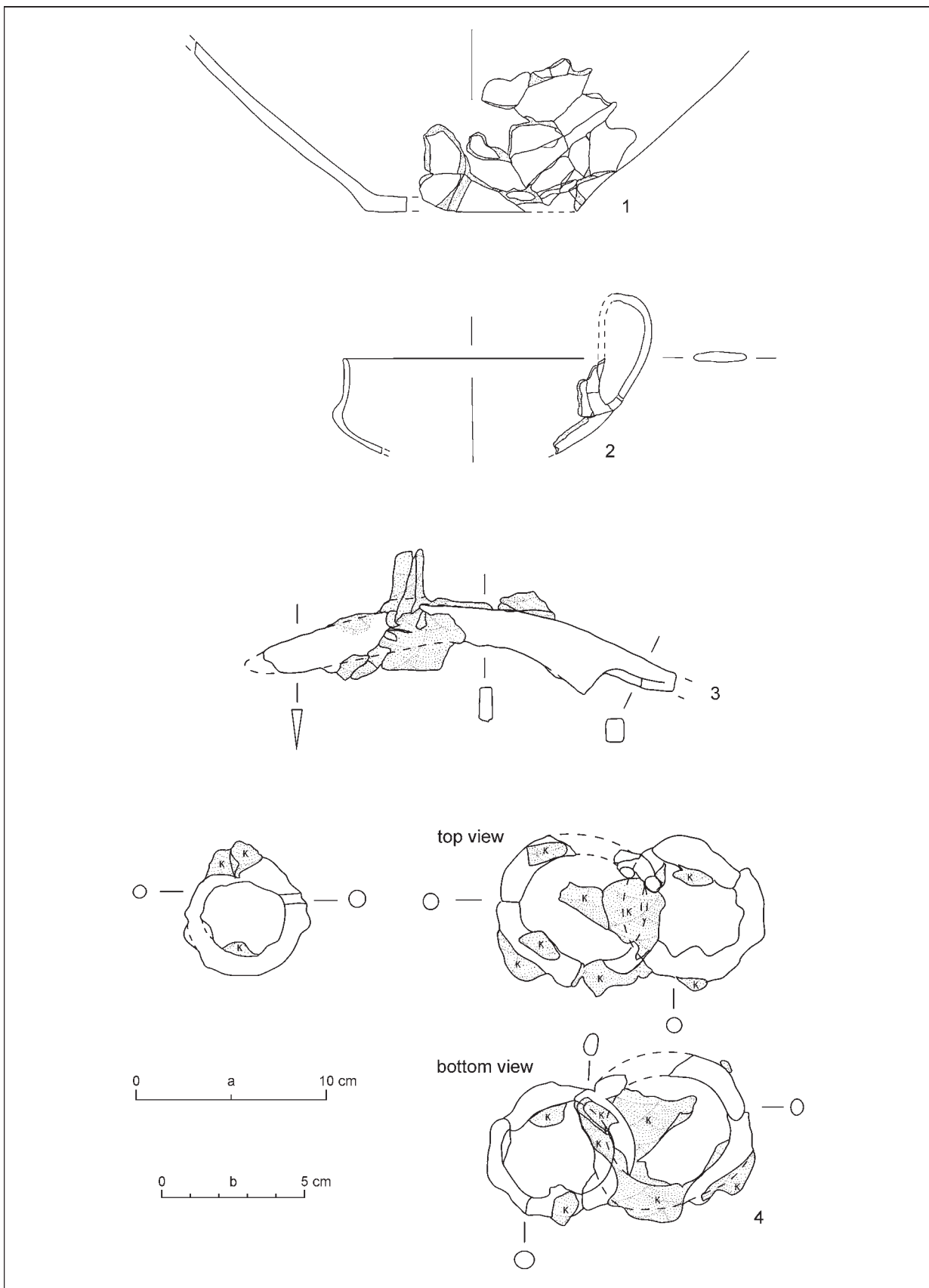
The topographical situation of the Muskervastlwaldgroup indicates, correlated with the chronological assignment of the graves found, also a horizontal stratigraphy of the Sulmtal necropolis. The earlier graveyards like the Masser-Kreuzbauer, Höschuster or Leitengritschenwald are located near the settlement zone of the hilltop settlement Burgstallkogel. With the progressive occupation of the grave fields, new groups were established further and further down the Burgstallkogel. In addition to the Forstwald and Grellwald groups, these now also include the Muskervastlwald group as well as the separate princely graves on the Pommerkogel (Egg/Kramer 2016, 53–180) and Kröllkogel (Egg/Kramer 2015).



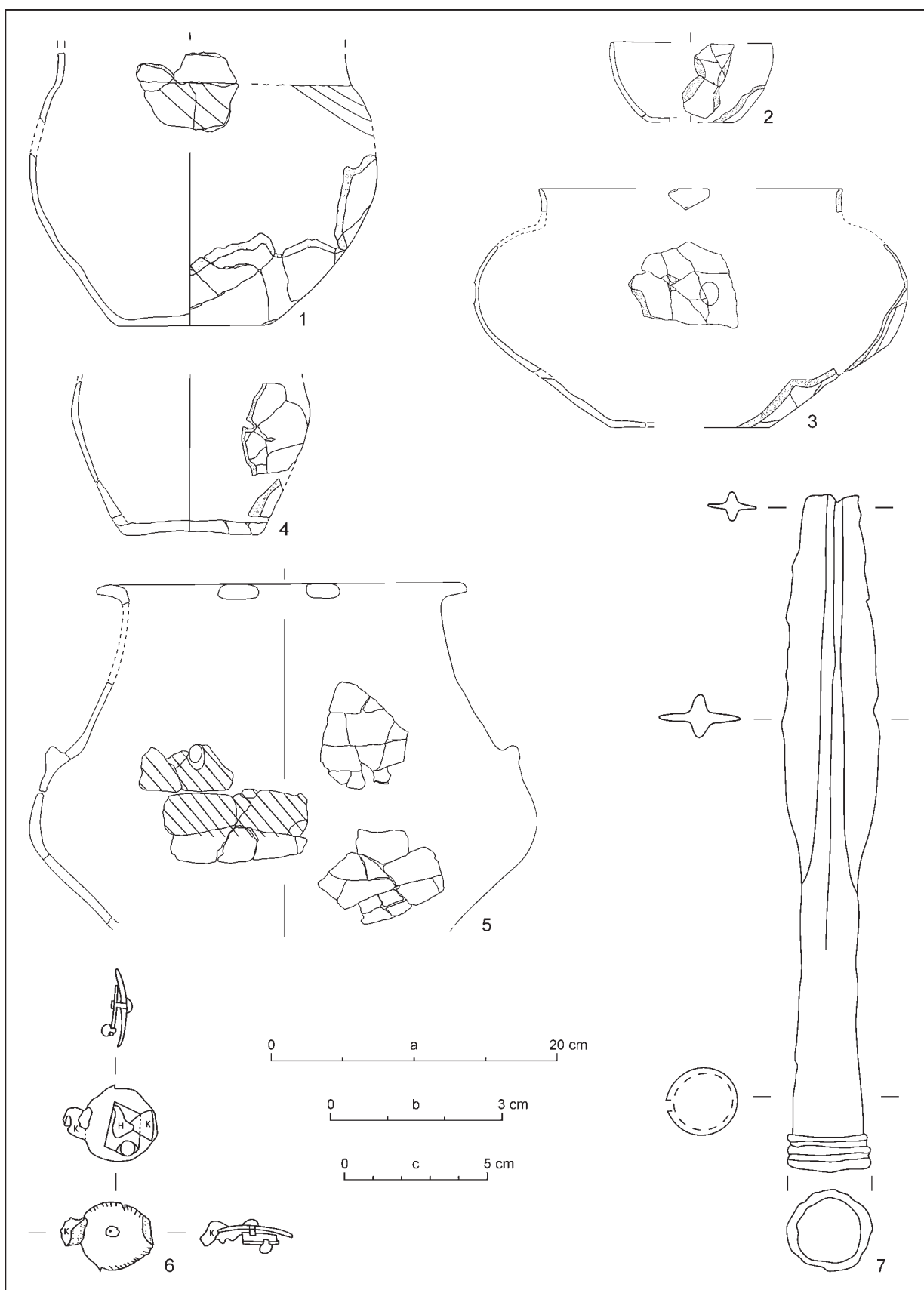
Pl. I. Muskervastlwald, Tumulus 13. 1–4 – pottery, 5, 6 – bronze objects. Drawings V. Vidoz; graphics F. Mauthner. Scale: a – 1–4; b – 5, 6.



Pl. II. Muskervastlwald, Tumulus 15. Pottery. Drawings V. Vidoz; graphics F. Mauthner.



Pl. III. Muskervastlwald, Tumulus 18. 1, 2 – pottery, 3, 4 – iron objects. Drawings V. Vidoz; graphics F. Mauthner. Scale: a – 1, 2; b – 3, 4.



Pl. IV. Muskervastlwald, Tumulus 20. 1-5 – pottery, 6, 7 – iron objects. Drawings V. Vidoz; graphics F. Mauthner. Scale: a – 1-5; b – 6; c – 7.

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Výskum pohrebiska Muskervastlwald v blízkosti polohy Burgstallkogel v Kleinkleine v Štajersku (Rakúsko)

Florian Mauthner – Andreas Bernhard

Súhrn

Výskum skupiny mohýl Muskervastlwald Spolkového pamiatkového úradu sa realizoval v roku 2018 v súvislosti s lesnými prácami. Výskum sa uskutočnil prvýkrát od výskumu W. Radimského v 19. storočí na doteraz málo známom pohrebisku a identifikovali sa štyri hroby.

Typy hrobov zodpovedajú bežným žiarovým hrobom a urnovým hrobom na sulmtalskej nekropole.

Rovnako aj nájdený keramický materiál, ako sú nádoby s kónickým hrdlom, nádoby s golierovým okrajom alebo misy so zatiahnutým okrajom, ako aj výzdoba a kovové artefakty zodpovedajú tvarosloviu štajersko-panónskej skupiny, pričom najbližšie paralely sa, prirodzene, nachádzajú v rámci pohrebných skupín v okolí Burgstallkogelu, najmä v skupine Forstwald a Grellwald, ale aj na pohrebisku Nova tabla v Slovinsku.

Na kontakty s okolitými kultúrnymi skupinami doby železnej poukazujú na jednej strane sacie nádoby známe v kandlerberskej skupine, na druhej strane analógie z pohrebiska Frög-Rosegg, a možno zistiť aj paralely na lokalitách vo vnútroalpskej oblasti.

Obdobie používania pohrebiska v Muskervastlwalde začína vo fáze HC1, ktorú možno definovať na základe nálezov publikovaných C. Dobiatom (1980, 217, kat. č. 66, 67, 288, tab. 31: 1, 2). Hlavná fáza pochovávania nastala vo fáze HC2 (fáza NT IIa) a pohrebisko sa používalo do prechodného horizontu HC2/HD1 (fáza NT IIb), čo dokumentuje predovšetkým nálezový materiál z mohýl 20 (HC2) a 15 (HC2/HD1).

Obr. 1. Pohrebiská v okolí Burgstallkogelu pri Großkleine. 1 – skupina Forstwald; 2 – skupina Kaiserschneiderwald; 3 – skupina Tschoneggerfranzwald; 4 – skupina Ofenmacherwald; 5 – skupina Höschusterwald; 6 – Tschoneggerfranzl, mohyla 2; 7 – Kürbischhansl, mohyla; 8 – Masser-Kreuzbauer; 9 – skupina Grellwald; 10 – skupina Haiblawald; 11 – skupina Leitengritschwald; 12 – skupina Karnerwald; 13 – skupina Muskervastlwald; 14 – Pommerkogel; 15 – skupina Precklwald; 16 – Hartnermichlkogel 1 a 2; 17 – Kröllkogel. Podľa Mele 2012, obr. 1. S láskavým dovolením Marka Meleho, UMJ.

Obr. 2. Muskervastlwald. Situačný plán mohýl. Grafika F. Mauthner. Legend: a – skúmané mohyly; b – neskúmané mohyly; c – skúmaná oblasť; d – parcely.

Obr. 3. Muskervastlwald. Štruktúry v rámci mohýl. Grafika F. Mauthner.

Obr. 4. Muskervastlwald. Mohyla 13, plán. Grafika F. Mauthner. Legenda: a – hrobová jama; b – spálené kosti; c – keramika.

Obr. 5. Muskervastlwald. Mohyla 15, plán. Grafika F. Mauthner. Legenda: a – keramika; b – keramika v schránke; c – uhlíky; d – hrobová jama.

Obr. 6. Muskervastlwald. Mohyla 18, plán. Grafika F. Mauthner. Legenda: a – spálené kosti; b – keramika.

Obr. 7. Muskervastlwald. Mohyla 20, plán. Grafika F. Mauthner. Legenda: a – keramika; b – uhlíky.

Tab. I. Muskervastlwald, mohyla 13. 1–4 – keramika, 5, 6 – bronzové predmety. Kresby V. Vidoz; grafika F. Mauthner. Mierka: a – 1–4; b – 5, 6.

Tab. II. Muskervastlwald, mohyla 15. Keramika. Kresby V. Vidoz; grafika F. Mauthner.

Tab. III. Muskervastlwald, mohyla 18. 1, 2 – keramika, 3, 4 – železné predmety. Kresby V. Vidoz; grafika F. Mauthner. Mierka: a – 1, 2; b – 3, 4.

Tab. IV. Muskervastlwald, mohyla 20. 1–5 – keramika, 6, 7 – železné predmety. Kresby V. Vidoz; grafika F. Mauthner. Mierka: a – 1–5; b – 6; c – 7.

Text translated by the authors

Súhrn preložila Lucia Benediková s využitím DeepL.com (free version)

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