Comprehensive Technical Report of Archaeological Investigations at Site IV-209 Samshvilde, KP 77+60, Tetritskaro District, Kvemo Kartli Region

Prepared by:
Guram Mirtskhulava, Guram Kvirkvelia, Guram Chikovani, Civi Gambashidze
Otar Lordkipanidze Centre of Archaeology of the Georgia National Museum
14 Udnadze Street
0102 Tbilisi, Georgia

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0177 Tbilisi Georgia

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Table of Contents

List of plates

List of tables

List of appendices

Abstract
The Otar Lordkipanidze Centre of Archaeology of the Georgian National Museum undertook a series of evaluation and salvage excavations at the Samshvilde Village Site (IV-209, KP 77+600), Tetritskaro District in connection with the construction of the BTC and SCP Pipelines. The sites investigated included both known features identified during construction activities, and new discoveries found in evaluation trenches.
The archaeological investigations and post-excavation analysis carried out in 2005-2007 form the subject of this report.
The work, limited to the project right of way and immediately adjacent to it, entailed the partial excavation of a multicomponent site, or parts of sites, of different types and periods. These included one Eneolithic pit, two Late Bronze Age pits and an oven, fifteen Hellenistic features including cists, pits, a pithos burial, and an oven, a possible Early Medieval burial and two indeterminate features. In addition, post-excavation analysis found pottery assemblages dating to the Kura-Araxis, Trialeti, and Medieval periods.
Important environmental evidence was also obtained from the site. Some of the features consisted of faunal materials. Palaeobotanical and pollen samples were collected with a view to establishing environmental sequences and providing prehistoric and historical insights.
Building activity in the vicinity of the site is not allowed. A substantial part, however, remains unexcavated and the greatest extension of the site could not be determined.
A number of key overall research themes were recognized during post-excavation analysis and may be summarized as follows:

- The transition in pottery manufacturing techniques from the Eneolithic to the Kura-Araxis culture.
- The origin and development of the Kura-Araxis culture in relation to the Eneolithic.
- The distribution of Trialeti culture sites
- The origin and relationship of four separate, continuous occupations.

The first two themes emerged as a result of the discovery of pottery fragments that combine elements of two different, consecutive cultures such as Eneolithic decoration (a band of triangles in relief) and Kura-Araxis pottery manufacturing techniques. The data that was recovered was not enough to provide comprehensive information and only limited research could be carried out based on these materials. More fieldwork is needed on undisturbed portions of the site, in order to obtain more information and carry out inclusive research.

1.0 Introduction

Purpose of the investigation

A number of prehistoric and historic features were discovered as a result of ROW preparation and BTC trench widening. The Samshvilde expedition team of the Centre for Archaeology carried out rescue and data recovery excavations in selected places. Twenty features were the subject of further archaeological investigation. Two additional features were found later, in a trench dug when the section between BTC and SCP pipelines was being evaluated.

Project sponsor

Field investigations and post-excavation laboratory processing and analysis were funded by the BTC and SCP Pipeline Companies.

Permits and contract numbers

Permit No. 8 issued by the Archaeological Board of the Georgian Academy of Sciences licensed Dr Guram Mirtskhulava to conduct archaeological excavations in the environs of Samshvilde village. The date of issue was March 2005, and the date of validity January 2006.
Contract references related to the works at KP 77+600 area are C-03-BTC-52923, C-03-SCP-52927; and C-06-BTC-111082, C-06-SCP-111083.

The following reference numbers relate to work connected with KP 77+600 area: HL-022, HL-024, Hl-071, HL-118, HL-200, HL-211, HL-223, and HL-235.

Legal requirements
According to Georgian legislation the Archaeological Board of the Georgian Academy of Sciences authorized the applicant from the Centre of Archaeological Studies (now the Otar Lordkipanidze Centre of Archaeology of the Georgia National Museum) upon his request, to conduct archaeological excavations. The archaeological work was to be conducted according to the existing regulations.

Dates of the investigation
The Samshvilde site investigation took place between the 19th and 30th April 2005.
Fieldwork was constrained by a pile of boulders that has been disposed of on the RHS bank section of the ROW. Prominent archaeological features were visible in the section of the bank below the boulders, but they remained practically untouched because the conditions were unsafe, and this affected the interpretation of the site.

Personnel involved in project
Staff of the Otar Lordkipanidze Centre of Archaeology of the Georgian National Museum undertook field work and post-excavation processing and analysis under the supervision of Dr Guram Mirtskhulava. See the extended list of personnel in Appendix A.

Final disposition and repository Address
The finds and archive from Samshvilde site have been deposited with the Otar Lordkipanidze Centre of Archaeology of the Georgian National Museum.
D. Uznadze St 14
Tbilisi 0102, Georgia
Tel. 995 32 952920

2.0 Environmental Background

The Samshvilde site lies in Kvemo Kartli, located in south-eastern Georgia. The area is surrounded on three sides by the mountainous ridges of Kakheti, Trialeti and Javakheti and on the fourth, southern, side by the Azerbaijan plain, which together contribute to the environmental diversity of the region.
The landscape of Kvemo Kartli is characterized by a wide variety of plains, river valleys, plateaux, and canyons, but the area is mostly mountainous. Volcanic mountains are also to be seen in Kvemo Kartli. The central plain and southern parts of Kvemo Kartli rise gradually from *c.* 270 metres above sea level at Marneuli terrace to *c.* 1950 metres at Bedeni plateau. At around 1800 metres above sea level the area rises to a sub-alpine zone, which reaches a maximum altitude of 2400 metres. The alluvial plain of Kvemo Kartli is divided by the Mtkvari river into the Marneuli and Gardabani valleys.
The Kvemo Kartli area enjoys a continental climate, but specific subdivisions of other climatic zones occur, resulting from land formations and bodies of water. Arid, humid, and highland climates come together in the area.
The average annual temperature is 12^0-13^0 C, the coldest month being January when the average temperature is -3^0-0^0 C. The average annual precipitation is 350-500 mm. The mixture of different land formations, environmental conditions and climate zones creates a diverse floral and faunal community. The region possesses both mixed hardwood and savannah/grassland vegetation, including oak, fir, pine, poplar, willow, mulberry, sedge, and cereals. The wildlife includes a number of mammals such as bear, wolf, fox, wild boar, roe,

field vole; birds such as eagle, hawk, jay, and reptiles such as snake, lizard, and turtle. Several rivers and streams flow through Kvemo Kartli, and aquatic life includes trout, carp, shemaya, etc. The Kvemo Kartli land formations appear to have been influenced by the Quaternary glacial period and also by erosive-denudative and accumulative processes in the past and present. The building of the earth is variable in different parts of the region. Highland deposits are mostly represented by Middle Cretaceous sediments consisting of arkosic sandstone, limestone and lithic tuff. Relatively young effusive rocks, dolerite lavas and volcanic glasses also occur in the region. Forest areas have brown soil, while meadows possess fertile top and sub-soils. The soils of Kvemo Kartli are regarded as Transcaucasian dry steppe soils.

2.1 Site Location and Description

Site IV-209 is located 1.5 kilometres east of the modern village of Samshvilde in Tetritskaro District, Kvemo Kartli region. The site is situated on a southern hillside of Karknali Mountain at about 925m AMSL, overlooking the confluence of the Civchavi and Khrami rivers to the southeast. On site, soil overlays bedrock to a depth of 0.3m-0.4m below the original surface. The soil is not subject to erosion and there are no accumulations such as lynchets visible. The area of the site is covered with brush and grass and occasional trees.

2.2 Past Environment

The Pliocene, Pleistocene, and Holocene epochs of the Tertiary and Quaternary periods coincided with the appearance of early hominids, their evolution and subsequent distribution. The Quaternary period is on this account also called the anthropogenic period. Lasting geological processes such as earth formation and numerous glacial and interglacial ages occurred within these geological periods; they affected the environment and subsequently the development of early hominids.

The Lower Palaeolithic coincided with the final stage of the Pliocene and the glacial and interglacial ages of the Pleistocene. Judging by palaeozoological, palaeological, and pollen analysis evidence from Dmanisi, the landscape of eastern Georgia during the Pliocene consisted of mountain ranges traversed by deep gorges and valleys. The climate was moderately dry and warm, there were a great number of rivers and lakes, and a rich fauna and floral cover supported early human distribution and establishment in Transcaucasia. In the Middle Pleistocene Environmental conditions changed in both the Mediterranean and Transcaucasia as the result of a fall in temperature. Palaeozoological analysis from sites in Georgia and Azerbaijan suggest the existence of an ancestor of the horse (*Equus*), of the southern elephant, as well as of an archaic antelope and cow.

At the beginning of the Apsheron period, there were floral and faunal changes. Palynology suggests that herbaceous plants and crops were prevalent, and forests, savannas, and steppe landscapes were widespread. It is probable that the early hominid community lived mostly in warm climatic conditions, which will have promoted their development.

Only limited palaeoenvironmental research has been conducted with regard to the Middle and Upper Palaeolithic periods in Georgia. The Middle Palaeolithic corresponds to four glaciations that occurred in the Pleistocene and is has been suggested that the climate, flora, and fauna of Georgia would have reflected the prevailing characteristic elements of the Ice Age.

The Upper Palaeolithic is lasted from the second stage of the last ice age of Quaternary period and until the beginning of the Holocene. Climate fluctuation affected both flora and fauna, as is indicated by the variation of vertical zones within the landscape. Mixed broad-leaved forests, as well as ferns and thermophilic mammals and rodents were widespread. The climate at the end of the Pleistocene in Georgia is generally considered to have been humid and moderately warm.

The Mesolithic corresponded to the end of the Pleistocene and beginning of the Holocene. This period is associated with great environmental changes, such as global warming and glacial retreat, which resulted the elimination of a number of animal species such as the mammoth and woolly rhinoceros (*Dicerorhinus sumatrensis*). Horse, bison, elk, European red deer *(Cervus elaphus*), wild boar, fox, and wolf were still present.
The climate was gradually getting more and more arid and warm, and between 12,000 and 9,000 years ago it reached its postglacial optimum, followed by the total elimination of floral and faunal elements typical of the Ice Age. In northern latitudes forest biotypes spread, in the south forests and steppes, and as a result these extended faunal communities and complete environmental modifications affected human activities.
The Holocene includes the period from the Neolithic to the present. The Neolithic corresponds to the middle of the Atlantic period Holocene, which experienced its warmest and driest stage in Eurasian continental regions after the Ice Age. The arid climate that formed during this period affected the environment, therefore decreasing the forest areas and prevalent thermophilic floral and faunal elements. Palaeobotanical, palaeozoological, and palaeopedological sample analysis of sites in eastern Georgia where Early Agriculture has been recognised has shown that really favourable environmental conditions were generated there for the expansion of thermophilic vegetation and of mammals.
The following cultural periods did not undergo any substantial ecological changes and apparently the environmental conditions were almost the same as today, with the exception of the minor glaciation, which took place in 18th century, when lower temperatures, increasing humidity, and a significant expansion of ice cover took place in the Greater Caucasus.

2.3 Land Use History

The site is located on an undeveloped piece of land, and was cleared of brushes and occasional trees before construction of the pipeline. The area around the site had been used for agricultural activities in the past. There are artificial terraces to north and south. At present land adjacent to the site is used for pasture and haymaking. In general, archaeological remains may have been affected by cultivation.

Cultural Background

3.1 Prehistoric and Historic Contexts

Palaeolithic

There are several areas in Georgia where Palaeolithic sites and artefacts have been discovered. A lower Palaeolithic habitation dissemination zone has been recognized in eastern Georgia. The earliest lower Palaeolithic site in Kvemo Kartli, dated to the Olduvan period—or 2,000,000 years ago, appears to be Dmanisi. Homo erectus is generally considered to have lived in the Olduvan period, and the site of Dmanisi is recognized as earliest Homo erectus habitation in Europe.
Fossilized lower Palaeolithic faunal remains that are 1.5 million years old, of sabre-toothed tiger, southern elephant, and horse were discovered in the villages of Imera, Beshtasheni, and Darakov in Tsalka District. Finds were made at Imera and Darakov in connection with the BTC pipeline construction.
Lower Palaeolithic tools were made of stone materials such as andesite, basalt, flint, or obsidian. Hand axes, choppers, and scrapers made from thick flakes were diagnostic tools of this period. Some basalt Acheulean hand-axes have been identified in the village of Avranlo, Tsalka District.

The approximate time range for the lower Palaeolithic period is between 2,000,000 and 100,000 years ago.
Around seventy-five Middle Palaeolithic (100,000-35,000 BP) and forty Upper Palaeolithic (35,000-12,000 BP) sites are known in western Georgia. Sites of this period have not been found in eastern Georgia, presumably because the environmental conditions for human habitation in this stage of the Pleistocene were inadequate. Nevertheless, tools that are diagnostic of Mousterian (Middle Palaeolithic) industry have been found distributed about several villages of Tsalka District. Some occurred in places related to BTC pipeline construction such as Imera KP 110, Eli-Baba KP 116, Ai- Ilia KP123, and Santa KP129. Mousterian tools display greater variety and are more finely worked. The Mousterian is generally associated with the Neanderthals
Upper Palaeolithic habitations have produced archaeological and anthropological evidence for the appearance of a new species, namely *Homo sapiens sapiens* or Cro-Magnon, similar to modern humans. The emergence of verbal communication is also attributed to this stage of evolution. The activities of Upper Palaeolithic people took place in caves and also in open spaces. Hunting and gathering were their way of life. The variety of worked Upper Palaeolithic stone tools suggested stylistic diversity, which might indicate the presence of culturally distinct human groups.

Mesolithic
The Mesolithic period marks the transition between Palaeolithic and Neolithic. There are around twenty Mesolithic sites in Georgia, for which dates between 12,000 and 8,000 BC have been proposed. There is more evidence for human habitation in open areas rather than in caves, a fact that is thought to be the consequence of climatic change that occurred in the final stage of Pleistocene. Mesolithic stone industries are often distinguished by an abundance of flint and obsidian microliths; burins and fish-hooks appear, but hunting and gathering are still the only life style.

Neolithic
The Neolithic (8,000-6,000 BC) way of life seems to have been based on farming and livestock breeding. The cultivation of crops and the domestication of animals allowed man to settle permanently in one place, which led to the appearance of buildings works and burials. We see the first use of pottery and the grindstone at this period. The pottery is coarse, with a convex body and a flat base, without handles, and with applied or incised decoration. Stone was still exclusively used as a material for tools and weapons. These, however, were becoming more sophisticated and rivet holes are found on the shafts. It is usually thought that Neolithic sites are unknown in eastern Georgia, although they are known in the western part of the country. The remains of one Neolithic site have, however, been found in the village of Abelia in Kvemo Kartli (Gabunia 1981) and stone tools of a Neolithic type have been found at the early Farming Culture settlement at KP 85. Neolithic occupation in western Georgia coincides with the beginning of Eneolithic habitations in eastern Georgia.

Eneolithic
Eneolithic is considered as a transitional period between the Neolithic and Bronze age, separated from each by breaks in the cultural development, within which cooper came into use, therefore its alternative names are Cooper age or Chalcolithic.
Two different types are distinguished among Eneolithic sites discovered on the territory of modern Georgia. One known as west Transcaucasian is evidenced in western Georgia mostly.

While the second known as east Transcaucasian is found in east Georgia and also in Azerbaijan and Dagestan.
Some scholars distinguish two different types among east Transcaucasian Eneolithic sites, such as Shulaveri-Shomutepe (the names of sites in eastern Georgia) and Kültepe Nakhichevan-Mugan (the names of sites in Azerbaijan). Most scholars, however, believe that these sites are local variations of Eneolithic culture.
The dating of these sites has also been open to question. Some attributed the sites to the Neolithic period, others to the Eneolithic. Therefore more general term Early Farming Cultures has been suggested. Central Transcaucasian group is considered to be the earliest among them. The area of their concentration mainly lies along the middle part of the river Kura that includes southeast Georgia and west Azerbaijan.
Early Farming Cultures sites are mostly to be found in Kvemo Kartli, in the valleys of Khrami and Debeda rivers.
Habitations in Early Farming Culture settlements were densely disposed around a circular open place. Houses were circular in plan. They were built immediately on the ground without foundations. The diameter of the walls gradually decreased the higher they got, so that the shape of building was essentially ellipsoid with a dome at the top. Separate buildings were built for ceremonial purposes.
The manufacturing of household tools became a vital consideration. These were mostly made of stone, obsidian, bone, horn, or wood. Tools made of horn were used for ploughing. Obsidian tools were common. The raw materials were available locally in the quarries in the Trialeti mountains. Microliths were also made from obsidian or flint, and they are thought to be sickle blades that were once mounted in wooden or bone hafts.
A notable fact is that pollen analysis has shown that there was a wide variety of wheat, thought to be the result of the cultivation of wild cereals. Grape pips have also been recovered from some settlements, which, it as been suggested, represent a transitional stage between the wild and domesticated grape.
Eneolithic evidence such as fossil soil samples collected from the site of Arukhlo (eastern Georgia), pollen analysis, land formation, and two kinds of ditches channels excavated in settlements suggest that the Early Farming Culture folk employed primitive irrigation techniques.
Eneolithic activity included both livestock breeding and agriculture. Pottery manufacture was also developed; vessels were handmade, and some have burnished and ornamented decoration. Early Farming Culture sites have also produced figurines of unfired clay, that represent naked seated females. The purpose of such figurines is thought to be religious: that they were either objects of worship in themselves, or were votive offerings to a deity. These statuettes find parallels in figurines discovered at the north Mesopotamian sites Hasuna and Halaf.
Early Farming Culture settlements were widespread in eastern Georgia in the sixth and fifth millennia BC. They can be tied into the Mesopotamian sequence by means of similar diagnostic elements.

Kura-Araxis Culture

The Early Bronze Age Kura-Araxis Culture existed in the fourth millennium BC, and succeeded the Eneolithic. Kura-Araxis settlements were extensive in the Kura (the Greek name for the river Mtkvari) and Araxis valleys in SE Anatolia and Transcaucasia. The earliest stages of Kura-Araxis development are characterized by a correlation of Eneolithic and Early Bronze Age activities, as is well demonstrated in pottery manufacturing.
Storage pits seem to be the most prominent feature of Early Bronze Age sites in Kvemo Kartli region. Houses are rare, are poorly preserved, and are often cut into by later occupation layers.

Clay and plaster fragments with impressions of wood that have been found at these sites are, however, thought to be the parts of house walls.
The later stages of this phase of cultural development are characterized by Kura-Araxis Culture settlements spread wide throughout a vast territory that included Transcaucasia, the NE Caucasus, NW Iran, and eastern Anatolia. Some of these sites appear to reflect local variants of the Kura-Araxis Culture, recognizable through building styles, burying practices, and artefact assemblages. Kura-Araxis diagnostic pottery and the horseshoe shape hearth also reached Syria and Palestine.
Natural eminences or places next to watercourses were usually chosen for habitation. In the plains settlements were built on artificial barrows of earth or were surrounded by artificial ditches. In both cases, sites were chosen or built for safety reasons.
The style of house buildings is more complex. Buildings became rectangular in plan and wooden building materials were widely used. Walls and roofs were built from wooden materials. In some regions stone was also used. The interior was divided into work and living sections, and had earthen floors. The flat roofs were plastered on the exterior with clay, and had a central perforation for lighting and ventilation. In the middle of the living room a central column was erected. Next to it was a circular hearth.
Burials were either placed very close to settlements or they might be located some distance away, either singly or grouped together. Three types of burial can be distinguished: horseshoe-shaped tombs, pit graves and cists. The burials were both individual and collective. Most are inhumation burials, with individuals buried either prone or crouched.
The frequent recovery of agricultural tools and domesticated animal bones indicate how intense were the farming and livestock breeding activities.
The pottery has such diagnostic elements as a dark burnished exterior that is mostly black and which has a lighter, mostly pink, interior.
Technological improvement was the hallmark of the Early Bronze Age. Bronze succeeded pure copper as the principal material for tools and weapons, and at the beginning of the third millennium BC metalwork emerged as a separate branch of industry.
The Middle Bronze Age that corresponds to the third millennium BC witnessed the decay of the Kura-Araxis culture. People moved to the highlands, with a corresponding decline in the population in the plains. This period coincides with the emergence of what is termed the Trialeti Kurgan Culture.

Trialeti Culture

As the name suggests, the Trialeti Culture is a term derived from the Trialeti area, where Trialeti Culture kurgans have mostly been discovered. The diagnostic elements of the culture were, however, widespread throughout eastern Georgia. The kurgans were mainly constructed in the highlands. They consisted of huge single inhumation burials beneath a barrow. A timber burial chamber might typically contain a skeleton lying on a wooden chariot accompanied by rich grave goods.
Later in the first half of the second millennium BC graves might be arranged beneath massive heaps of stone. The burial chambers too might be built from huge pieces of stone. Wooden chariots and luxury gold- and silverware would still be present. Ceremonial roads paved with cobblestones led to some of these kurgans.
Kurgans also contained a large amount of domestic animal bone, which together with the wealthy grave goods demonstrated the prosperity of the people who created the Trialeti Kurgan Culture.
Apart from grave goods of high artistic value made from precious metal, the kurgans also yielded stone and obsidian tools. Well-worked obsidian arrowheads and bronze weapons, mainly ceremonial axes, were recovered from earlier kurgans. Household tools were not

present among the grave goods. Some diagnostic elements of Kura-Araxis culture were still evidenced in pottery manufacturing techniques: features such as handmade black burnished vessels. However new decorative styles and shapes were adopted during this period. Characteristic techniques of Trialeti culture pottery are combing and incised and painted herring-bone decoration. Pottery with a light slip and painted brown appears in kurgans dated to the 17th–18th centuries BC, while for kurgans of a later period painted and black ornamented pottery became the norm.

The greatest contribution of Trialeti Culture was the art of the jeweller. The gold and silver wares inlaid with coloured stones still rank as masterpieces of metal work.

The decline of the Trialeti Culture set in at the end of the first half of the second millennium BC. Kurgans decrease in size and rich grave goods are not found any more.

Of the society that created this wealth, very little can said little, since no settlements related to these burials have come to light. This accounts for the name Trialeti *Kurgan* Culture.

Trialeti Culture kurgans and burials are known from eastern and southern parts of Georgia, e.g., Sagarejo (Pitskhelauri 2004), Dmanisi (Kakhiani 2004), Marneuli (Japaridze 1969), Tetritskaro (Tushishvili 1972), Tsalka (Kuftin 1941), Borjomi (Gambashidze 2004) and Adigeni (Japaridze 1969) Districts.

Elements of the Trialeti Culture have been observed in burials excavated in Armenia and Azerbaijan (Kushnariova 1994).

Late Bronze Age / Early Iron Age

The end of the Trialeti Culture in Georgia corresponds to the middle of the second millennium BC. The succeeding Late Bronze Age-Early Iron Age lasts till the middle of the first millennium BC. A large number of archaeological sites dated to this period have been discovered in eastern Georgia. Ceremonial buildings, the remains of metal and pottery workshops, and hoards, together with settlements and cemeteries have been excavated.

This was a period that saw great technological improvement, an example of which is the widespread use of the potter's wheel. Pots made on a potter's wheel are known from the beginning of the Middle Bronze Age and the custom continued in succeeding periods. Handmade pottery is known, but it is exceptional. Dark pottery with a variety of geometric patterns and decorated with burnished, grooved or incised techniques are diagnostic of this period.

Industrial improvements are most evident in metalwork. Bronze composition changed, with arsenic and antimony gradually being replaced with imported tin. Late Bronze Age metal wares were made of alloys with many constituents. Metalwork is represented by weapons such as axes, spears, daggers, or arrows; or by jewellery such as pins, beads, finger rings, bracelets, pendants, or insignia.

Later, bronze casting gave way to iron smelting, and iron objects appear from the 16th century BC. Bronze was rapidly replaced by a more common and more efficient material, namely iron, for making tools and weapons. It did, however, continue in use alongside iron for many decorative purposes right down to the Roman and Medieval periods. One indication of this are the 8^{th}-7^{th} century BC bronze belts decorated with a great variety of incised ornament, as well as bronze cast sculpture. The dissemination of ironworking can be dated to the 12th-11th centuries BC. Objects made form iron often resemble the earlier bronze, and for this reason they are thought to be made locally.

The development of an iron industry encouraged progress in agriculture, and this was also influenced by irrigation. The discovery of wide range of cultivated grape pips, bent iron knifes for pruning vines, and wine storage jars, provide evidence of the development of winemaking.

Horse breeding rapidly developed in the second half of the second millennium BC, attested to by finds of horse gear and statues of horses wearing harness.
The development of farming and livestock breeding encouraged an increase in population.
This was the period when Georgian tribes and their political alliances are first mentioned in the ancient Near Eastern written sources.
From the beginning of sixth century BC eastern Georgia was less intensively occupied, and there is evidence of large-scale disturbance at settlements of this period. Western Georgian sites of the following period by contrast enjoyed the rather different Colchian culture.

Iron Age / Classical Period, Hellenistic
Archaeological evidence of the late 6th-early 4th centuries BC illustrates the decline of eastern Georgian settlements. Later finds, from the 4th-3rd centuries BC as well as Georgian written sources indicate progressive change. The development of the economy and of trade supported the establishment of settlements that later became towns. Towns of the Hellenistic period consisted in the main of a citadel built on a hill (Samadlo, Nastakisi, Tsikia-Gora). Complete town plans have not yet come to light. The main criteria for the discussion of the way of life of this period are derived from the burials and grave goods that have been found throughout eastern Georgia. The artefacts recovered from citadels include a considerable number of imported wares, which suggests that trade possessed an international character.
Cist burials were the norm, although pit graves have also been found. Pithos burial is diagnostic of this period, but was only practiced in Kvemo and Shida Kartli. Pithos burials were mainly laid in the ground horizontally; only rarely were they placed in a vertical position. Urn burials were made in fine-ware pots of red or buff fabric, occasionally decorated with red paint or with incised or grooved bands around the neck. Most graves contained single crouch burials, but occasionally there might be a double burial.
The great variety of grave goods included both metalwork, and plain and decorated pottery. Different shapes of pottery, such as bowls, trefoil-lipped jugs, or jars were mostly decorated with red slip or paint, as well as with black painted bands and various geometrical ornaments. Rich burials in a number of places (e.g. Akhalgori, Algeti) included large amounts of gold and silver, suggesting that they were the interments of a privileged group. This in turn indicates the nature of the social structure at the time, headed presumably by the local aristocracy.
The archaeological record of this period confirms the picture we derive from the 11th century Georgian chronicle *Kartlis Tskhovreba* ("The Life of Kartli"), where the 3rd century BC was characterized by the struggle of the local aristocracy to rule the various ethnic and political groupings of the eastern Georgian tribes. All of which came to an end in the eighties when Parnavaz was proclaimed the first ruler of the kingdom of Iberia (eastern Georgia).
It is noteworthy that Samshvilde is mentioned in these chronicles as an administrative unit of eastern Georgia in the 3rd century BC.
Judging by the archaeological record and the written sources, the establishment of Iberia or kingdom of Kartli was probably the result of the political consolidation of Georgian tribes over a long period.
There were two states named Iberia in the classical world. One was in southwest Europe, on the Pyrenean peninsula, and the other in the Caucasus, in eastern Georgia. The term Iberia was used by Greeks, and later on Roman and Byzantine authors adopted it, while Georgians called it Kartli.

Roman Period
The end of the 1st century BC marks the beginning of Georgia's relations with Rome. Pompey conquered Iberia by following the river Mtkvari upstream, but Roman domination of Iberia did not last very long. There was a kind of a partnership between Rome and Iberia in the first

and second centuries AD that in some way supported Iberia's foreign policy. This was the period when the kingdom of Iberia flourished. The archaeological record points to part of society, that which played a leading role in country life having been rich and prosperous. Rich tombs found in Armaziskhevi contained a great variety of artefacts: gold badges, daggers, belts, diadems, bracelets, necklaces, pendants, and inscribed finger rings; silver jars, plates, and bowls, amulets, iron weapons, glass vessels, and fineware pottery. Gold vessels decorated in precious and semi precious stone, silver bowls and glass vessels were of high artistic value. Rich burials also were discovered in other parts of eastern Georgia (at Bori, Zguderi, the Aragvi gorge).

The Samtavro cemetery next to the northern part of the modern city of Mtskheta, contained burials illustrative of the middle and lower classes in Iberian society. The cemetery contained of burials of several different kinds: pit graves roofed with stone slabs, tiles or bricks, cists, tile graves, and graves of brick. In some cases brick graves were roofed with tiles or stone slabs. Tile and brick graves were spread for the most part long the banks of the Mtkvari. Such graves have not been found in Kvemo Kartli, where pit graves and cist burials are the norm. Different types of jugs, jars and bowls can be recognized among the finds. Pithoi and pots were common, and were used for storing wine and grain.

Pottery was mostly made on the potter's wheel, and was either red or buff ware, or slipped red and burnished at the same time. It might be adorned with red painted bands or geometric ornament. Glassware, mostly imported from Syria, became widespread and was an essential component of grave assemblages.

From the first century AD such essential elements of Roman civilization as Roman baths, water pipes, and sewers were normal.

This archaeological information allows us to envisage the way of life in Roman period Iberia.

Medieval Period

The collapse of the Roman Empire in the west in the late fifth century AD is generally regarded as the end of the Classical period of the ancient world. The beginning of succeeding Medieval period coincides with increased Persian political influence and with the abolition of local royal rule in eastern Georgia.

Before the start of the Medieval period, however, the Georgian Christian tradition began around 330, when St. Nino of Cappadocia (Asia Minor) spread the Gospel in eastern Georgia, and the kingdom of Iberia was converted to Christianity. This event brought about a radical change in the mentality and self-identity of the people that was to be reflected in every social and economic sphere. These changes were demonstrated in the way the state developed, in international relations, and in the culture of the people.

The evidence of Medieval archaeology provides confirmation of the complicated picture of Medieval Georgian history that we receive in both Georgian and non-Georgian written sources. The instability of the Georgian state, shifting foreign influences and other social or economic changes is well reflected in the archaeological record.

Medieval archaeology in Georgia down to the 13th century is divided into Early Medieval and High Medieval periods. A great variety of Medieval archaeological sites are known in Georgia. City-fortresses, baths, industrial workshops, irrigation channels are recorded together with rural settlements and cemeteries. Grave goods are less numerous, as a consequence of Christianity, but they are still present. Inscribed artefacts are more common among Medieval finds.

In the Medieval period the feudal landowning system was established. Grain farming, cattle husbandry, viticulture, and horticulture were still the main agricultural activities. An increasingly effective range of agricultural techniques and the development of irrigation systems stimulated the Medieval economy.

Agricultural activity became more important in particular during the Early Medieval period. The Persian invasions brought about a decline of city life. Trading and handicrafts also suffered as a result of the disturbances brought on by the collapse of the Roman Empire, and the abandonment of what is termed the Silk Road (a trade route from China and India to Rome, that ran through Central Asia and the Caucasus in the classical period). The limited amount of imported goods and foreign coins of this period found in excavations bears witness to this.

The Medieval population lived in permanent settlements, some of which were situated close to fortified cities.

Judging by the monuments and archaeological sites excavated in Kvemo Kartli, and by Georgian narrative sources, Samshvilde County was one of the most populated areas in Medieval times. Its centre appeared to be Samshvilde citadel, constructed on a naturally fortified hill overlooking the confluence of the Chivchavi and Khrami rivers. Investigations at Samshvilde fortress revealed elements of urban life within the citadel; such features as rectangular stone buildings, together with water reservoirs and drainage systems. Glazed pottery fragments were also recovered from the structural remains.

Georgian historiography suggests that Samshvilde had the status of a town in the Medieval period, which lasted until the 17th century, while later on it only functioned as a fortress.

Excavations in a number of other Medieval cities mentioned in Georgian historical narrative sources such as Mtskheta, Ujarma, Urbnisi, Rustavi, or Dmanisi yielded rectangular dwellings built with limestone masonry and stones, with flat plastered or tiled roofs. In some cases *spolia* from the preceding Roman period were reused.

Rural settlements of the 12^{th}-13^{th} centuries excavated in Chivchavi gorge, in Tetritskaro District, produced buildings, enclosures and roads built, fenced and paved with basalt. Although the buildings consisted of several rooms employed a new method of construction, they still displayed traditions carried over from the Early Bronze Age, such as the central column erected in the middle of the principal dwelling chamber close to the hearth. The hearth in Medieval habitations was lined with stones. Other rectangular rooms were used for storing wine and grain, and as cattle-sheds. Storage pits and wine storage jars embedded in the floors of the rooms, as well as numerous animal bones bear witness to this.

Artefact assemblage recovered from urban and rural settlements consisted of tiles, clay water pipes, pottery and glass wares, weapons, jewelleries, coins, etc.

Medieval pottery varied in shape, and includes wine storage jars, pots of different sizes, jugs, jars, stemmed bowls, cups, and saltcellars. A considerable number of wine storage jars and large pots illustrate the development of viticulture. The presence of glaze appears to be a diagnostic element for local Medieval pottery. Glazing techniques included the application of glaze to painted or slipped vessel surfaces. Beginning in the 6^{th} century, glazed vessels decorated with various painted ornaments and floral and faunal devices are to be found throughout the entire Medieval period. There are also red plain and slip wares with occasional grooved or incised ornaments. Stemmed glazed bowls were common in the pottery of the 9^{th} to 13^{th} centuries.

Early Medieval glassware included local, Byzantine, Syrian, and Iranian imported tablewares and perfume vessels (*unguentaria*). Locally made glassware was almost identical to Roman period vessels. From the 7^{th} century the number of imported glass wares decreased and locally made goods became more plentiful.

Seals, gems, and amulets made of precious or semiprecious stones have mostly been found in Mtskheta and Urbnisi. Gems were imported from Sassanian Iran and also made locally; they include gems and finger rings inscribed probably with their owner's name. Precious metal, glass, jewellery, and perfume vessels were also found, some of high artistic quality and fine specimens of the Early Medieval jeweller's repertoire.

A great variety of foreign and local coins provided evidence for both the internal and external economy of the country. In the Early Medieval period the main international currency used both in eastern and western Georgia seem to have been gold and silver Byzantine coins. From the sixth century Sassanian Iran drachms are found as well, but later they are replaced by Mongol coins of the 11th-13th centuries, which existed side-by-side with Georgian currency.
Further evidence for the high level of craftsmanship and of industrial progress in general in Medieval eastern Georgia is to be found among the large quantity of locally made objects (pottery, glass, gems), as well as the kilns and workshops found in Mtskheta. A tombstone of the 3rd or 4th century with a Greek inscription from Mtskheta, attests to the existence there of the post of head of architects and artists.
Medieval cemeteries have been found throughout eastern Georgia. Three types of burials are known in this period: cists, pit graves frequently roofed with stone slabs, and clay sarcophagi. Burials are often collective. Individuals were mostly laid on their backs extended, although in some cases they were deposited in a crouch position. Mostly personal objects were recovered from Medieval period burials, although metal weapons also occur.
The 12th and 13th centuries witnessed a flowering of Georgian culture in both town and country. Glazed vessels, gold and glass jewellery found in both urban and rural sites show that the country was developing equally well at both centre and periphery.
The Mongol invasions devastated Georgia from the second half of 13th century until the 15th century. In one area of Kvemo Kartli region alone, in the Chivchavi and Khrami gorges (modern Tetritskaro District) more than 200 villages are known to have been practically wiped out by Mongol incursions, few of them to recover.
Between the 15th and 17th centuries Georgia was subject to invasion from both the Ottoman Empire and Iran, and fell under their strong political and cultural influence.
From the 13th century until the end of the Medieval period, Georgia experienced internal fragmentation and decline.

Post Medieval

In the 19th century Georgia was conquered by Russia. Local royal rule came to an end and Georgia became one of the provinces of Russia, a situation that lasted until the teens of the twentieth century. The Russians imposed a totally different lifestyle, and it was through Russia that European culture and a European life style penetrated Georgia.
Despite numerous incursions from abroad throughout the Middle Ages and after, Georgia has retained its identity as a Christian nation and created an indigenous art and architecture, widely regarded as one of the main Georgian contributions to the world.

Modern Period

In 1918 Georgia was established as an independent state, but only survived as such for a few years, before the Soviet occupation in the early 1920's. The Soviet Union developed an entirely new kind of economy that relied on the interdependence of Soviet states. The effects can still be seen in modern Georgia. A number of agricultural and industrial enterprises were developed in several districts of Kvemo Kartli.

3.2 Summary of Previous Research

A number of cultural heritage sites were identified within 1 kilometre radius of the Samshvilde site. Some of them were investigated during previous archaeological campaigns, and some were related to the BTC pipeline construction.

The list of cultural heritage sites known from previous surveys and also investigated in connection with pipeline construction are presented below in Table 1.

Site ID	Site Type	Time Period	Date of Excavation	Associated Publication/Report
IV-255	Pit Grave	Medieval	Not excavated	
IV-013	Drainage System	Medieval	2004	Samshvilde Expedition Technical Report 2003-2004
	Cemetery	Early Bronze Age	1968,1974,2004	Mirtskhulava, G. Samshvilde, 1976; Samshvilde Expedition Technical Report 2003-2004
	Settlement	Early Bronze Age	1970 - 1974	Mirtskhulava, G. Samshvilde, 1976
	Church	Medieval	Not excavated	
	Cist	Medieval	1969	Mirtskhulava, G. Samshvilde, 1976
IV-017 IV-018	Settlement	Medieval	2003	Samshvilde Expedition Technical Report 2003-2004
IV-019	Building	Medieval	2003	Samshvilde Expedition Technical Report 2003-2004

4.0 Methodology

4.1 Field Methods

To begin with, the dimensions of the area to be studied were measured and a sketch map made. Then our architect used a theodolite to create a plan, based on a central datum point and extended 200 meters in all four directions, encompassing a total area of 4,000 m^2. A grid was imposed aligned SE-NW, and the axes of the squares were identified by means of letters and numbers.

The area to be studied was divided into three plots. Plots 1 and 3 included features revealed during construction activity in sections of the BTC trench and the northern bank cutting of the ROW. These features were subsequently investigated using manual excavation methods. A number of them were partially excavated, others fully. Only plot two was examined with trial trenches. Eleven of the fifteen trenches were dug with a mechanical excavator and four manually with shovels.

Artefacts were recovered from around the features, as a result of chance finds, and from the trial trenches. No objects were discarded in the field.

Plans and section drawings were made of the site and the features, and photographic documentation carried out.

Human bones could not be recovered due to their poor state of preservation. Faunal materials were collected without the use of any preservatives in the field. Core samples were collected by specialists for pollen and palaeobotanical analysis.

4.2 Laboratory Methods

Laboratory work was undertaken in 2005-2006. All pottery artefacts were washed in tap water and cleaned with brushes, and in some cases hydrochloric acid solution was used. The dried artefacts were labelled and catalogued. The processed materials were categorized according to cultural affiliation or chronology, by manufacturing technique and decoration. Only in few cases they have been classified by shape, since the artefacts were mostly represented by fragments. Afterwards they were put into plastic bags and prepared for storage.
Metal objects, faunal and soil samples were passed to specialists for laboratory work.
Faunal materials were cleaned, glued together, restored, photographed, and catalogued.
Hard copy and electronic versions of field and laboratory records together with the finds will be deposited with the Otar Lordkipanidze Centre of Archaeology of the Georgian National Museum.

5.0 Results

5.1 Basic Data Summary

Archaeological activity was undertaken on three plots, measuring 1400 m^2, which included a total of 22 features. Plot 1 measured 10 x 10 m, including the BTC trench, which contained four features. Plot 2 measured 70 x 10 m, and was located at the SCP line side and contained two features. Plot 3 measured 60 x 10 m included the right bank section of the ROW. Sixteen features were identified there.
Full data recovery excavations of seven features (Pits 18, 20, Jar Burial 17, Ovens 1, 2, Burial 21, and Cist 14) out of 22 were carried out. Fourteen of them were partially excavated. One (Mud Hut 15) remained unexcavated.
Altogether, 688 artefacts were recovered from the site, among them 671 pieces of 671, 12 stone tools, and five metal objects; 654 objects came from archaeological contexts, and 34, or 5% of the total, were chance finds.
Faunal materials recovered from feature context included 12 mammals and one reptile: five different species in all. Thirty-four soil samples were collected for pollen and palaeobotanical analysis.
Any stratigraphy seemed to be broken up and imprecise due to the location of the site in open country and the disturbances created by the insertion of the features. The various exposed occupation layers did not provide much of a chronological sequence, and stratigraphy seemed therefore to be inapplicable.

5.2. Features

Nine features out of 22 were funerary in character, three domestic, and the other ten could not be defined, although they were apparently pits and might have been used for dumping domestic rubbish, for storage, or for ceremonial purposes. Most of these features were dated by shape, construction technique, or the nature of recovered artefact assemblages. Only two features remain undated; otherwise Eneolithic, Late Bronze Age, Hellenistic, and Early Medieval occupation illustrated the chronological variety of the site. Almost all the features were only partly exposed within the excavations and their overall plans and dimensions could not be recovered.
Hellenistic occupation features, Pits 18, 20, Jar Burial 17, and the Late Bronze Age Oven 1 exposed in the right hand side section of the BTC trench, were located in L/14 grid.

Feature 20 was a cylindrical pit dug into bedrock 1.9 metres depth, and a lower diameter of 1.5 metres. The fill contained ash and a charcoal dump as well as diagnostic Hellenistic sherds, decorated with red paint, burnish, and relief ornament.

Feature 17 was thought to be a pithos burial, although there were no human skeletal remains found in it. The skeleton may have been removed along with the upper part of the pithos. An oval, flat based, pithos was vertically cut into bedrock at a depth of 1.2, with a lower diameter of 0.20 metres. The fill contained the bones of a dog together with Hellenistic buff, burnished, and red painted sherds and few domestic stone tools. The pithos itself was also decorated with painted red ornament.

Feature 18 appeared to be a large U-shaped pit, cut into bedrock to a depth of 2.4 m, with a surviving height of 0.9 metres, and a lower diameter of two metres. The fill included an ash and charcoal dump as well as Hellenistic buff, burnished, and painted pottery sherds.
Pit 19 included the remains of the rectangular Late Bronze Age Oven 1, with surviving dimensions of 1.4 x 0.8 m. The base of the oven was made from a thick clay bricks, overlaid with three courses of potsherds embedded in clay, which may have been intended to retain heat. The oven was surrounded with a course of stones, which probably served as a support for the cover or upper part. A large number of Late Bronze Age pottery fragments were built into the oven; burnt sherds were only found in the base.

The Early Medieval Burial 21 and Hellenistic Oven 2, found in trial trenches 1 and 2, were located within SCP line, in Squares N/16 and N/14.

Burial 21 measuring 1.9 x 1.5 m, and 0.95 below stripped ground level, contained poorly preserved human bones and fragments of a pottery vessel.
Only a small portion of the SW part of the Hellenistic **Oven 2** was preserved, consisting of a single course of stone and two of clay bricks with potsherds between. The oven produced brown, buff pink and painted Hellenistic wares.
Four Hellenistic cists and a single Bronze Age pit from among 16 features identified in the right-hand section of the ROW were situated in Square O/17.

Cist 1, was 0.6 m below ground level and measured 1 x 0.5 m. It contained poorly preserved human remains and the few artefacts consisted of potsherds and metal finger rings that suggested the Hellenistic period.

Cist 2 was 0.5 metres west of cist 1, and only preserved in its north-west part. It measured 1.2 x 0.7 x 0.8 m, and contained red painted Hellenistic pottery.

Cist 3 was 0.6 m below ground level and contained red painted Hellenistic potherds.
The cylindrical **Pit 13** was cut into bedrock at a depth of 1 m, was 0.9 m in diameter, and contained ash and charcoal fill, and black, burnished, Late Bronze Age potsherds.

Cist 14 was roofed with two stone slabs, and oriented NE-SW, and cut to a depth of 1 m below ground level. It measured 1.3 x 1.1 x 0.6 m. It contained poorly preserved human bones and a few iron artefacts.
The Hellenistic cists 4, 6, the Eneolithic pit 5 and the indeterminate pit 16 were located in Square O/16.

The north-eastern wall of **Cist 4** measured 1 x 0.5 x 0.8 m, and contained human bones and a few grey Hellenistic potsherds.

The Eneolithic **Pit 5** was cut into bedrock at a depth of 1.4 m and was 0.6 m in diameter at the bottom, narrowing towards the top where the diameter was approximately 0.25 m. It

contained ash and charcoal fill with animal bones and brownish-grey, burnished, Eneolithic sherds.

Cist 6 was oriented EW and was 0.6 m long, 0.5 m wide, and 1.1 metres deep, and produced human bones and fragments of a red Hellenistic jar.

Only part of **Feature 16** was excavated, which consisted of an oblong pit measuring 0.5 x 0.3 m. Perhaps the larger part remained unexcavated, since it extended beyond the project corridor. A bovine skull and mandible were recovered, which suggest possible funerary or sacrificial use. Its position between Hellenistic cists 3 and 4 might also indicate a similar date for the pit, but without other evidence its interpretation remains obscure.
The Hellenistic cist 7 and pit 9, and the Late Bronze Age pit 8 were located in Square O/15.

Cist 7 was oriented EW, and measured 0.6 x 0.6 x 1 m, contained human bones and a few buff Hellenistic pottery sherds.

The Late Bronze Age **Feature 8** appeared to be a U-shaped pit cut into bedrock at a depth of 1.05 metres, with a surviving height of 0.65 m and a lower diameter of 1.15 m. The pit contained ash and charcoal fill together with very poorly preserved animal bones and buff and greyish-brown, burnished, Late Bronze Age potsherds. One was incised with a herringbone pattern.

Feature 9 was a large pit cut into bedrock at a depth of 1.3 metres, it was about 1 m deep and 1.3 m in diameter, narrower towards the upper part, and also contained ash and charcoal fills. Animal bones and buff and red painted Hellenistic potsherds were recovered from the lower fill.
Late Hellenistic features 10, 11 were located in Square O/13.

Feature 10 appeared to be a large U-shaped pit cut into bedrock at a depth of 1.25 m, that was 1.1 m deep and 1.3 m in diameter. It contained ash and charcoal fill, in which the lower deposits included animal bones, and buff and brown painted Hellenistic pottery sherds. A few Late Bronze Age pottery fragments were found in a deep level near the pit, apparently derived from Late Bronze Age occupation in the immediate vicinity. One appeared to possess diagnostic elements of the Kura-Araxis culture. There was no Late Bronze Age pottery in the fill of Hellenistic pit 10.

Feature 11 was another large U-shaped pit cut into bedrock at a depth of 1.4 m, and was 1 m deep and 1.9 m in diameter. Three large stones were found in the lower fills of the pit, which contained buff, burnished Late Hellenistic pottery sherds.
The Hellenistic pit 12 and the undated mud hut 15 were located in Square O/12.

Feature 12 was a large U-shaped pit cut into bedrock at a depth of 1.3 m, and was 1 m deep and 2 m in diameter. The pit contained ash and charcoal fill, the lower part of which contained lithics and household pottery wares.

The **Mud Hut 15** was found at a depth of 2 metres below ground level, was 3 m wide survived to a height of 1.1 m. No bones or artefacts were visible in the fill in the bank section, but potsherds diagnostic of the Late Bronze Age and the Trialeti culture were found near the mud hut, at a low level. Both the source of this pottery and the interpretation of the feature are obscure as long as Feature 15 remains unexcavated.

5.3 Artefacts

The predominant material among both the excavated artefacts and the chance finds was pottery. Only few objects were made of stone or metal. The pottery was attributed to an appropriate period on the basis of fabric and decoration. The result was a sequence of at least six different time periods.

Artefacts classified by cultural affiliation and material are presented in Table 2 below.

Cultural Affiliation	Pottery	Stone	Metal	Total
Eneolithic	15			15
Kura-Araxis	1			1
Trialeti	1			1
Late Bronze	282	1		283
Hellenistic	342	3	5	350
Medieval	30			30
Undated		8		
Total	671	12	5	688

Artefacts classified by function and material are presented in Table 3 below.

Function	Pottery	Metal	Stone	Total
Household	237		3	240
Kitchenware	73			73
Kitchenware / Tableware	360			360
Constructional	1			1
Jewellery		5		5
Undetermined			9	9
Total	671	5	12	688

Artefacts classified by cultural affiliation and decoration are presented in Table 4 below.

Ceramics	Eneolithic	Kura-Araxis	Trialeti	Late Bronze	Hellenistic	Medieval	Total
Plain	11			150	133	16	310
Burnished	4	1		121	127	2	255
Burnished, red painted					33		33
Burnished, red painted, incised, relief band					5		5
Burnished, grooved, incised or relief band			1	6	22	6	35
Red, brown, white painted					13		13
Incised, grooved, relief band				5	3	5	13
Black-glazed					1		1
Slip					3	1	4
Total	15	1	1	282	340	30	669

Eneolithic pottery sherds displayed diagnostic elements typical of this period, such as a coarse fabric with layers unevenly fired brown, grey or buff, a burnished surface, and relief decoration.
A single piece of black burnished coarse ware, with two-layered fabric and buff interior belonged to the Kura-Araxis culture.
A few black burnished coarse ware sherds, with a buff interior and decorated with herringbone incisions and swastika stamped ornament, typical of the Trialeti culture, apparently came from one large vessel.
Late Bronze Age coarse ware pottery varying in surface and fabric colour from black to brown and grey was limited in decoration, having a burnished surface and incised bands. It was wheel made and represented household and tableware vessels such as pots, jugs, stemmed dishes and bowls.
Buff, grey, blackish plain and decorated Hellenistic pottery wares are characterized by a well-refined clay and a less coarse fabric. Brown and red slip or paint predominates among decoration techniques. The shapes of vessels vary from large household pots and wine storage jars decorated in relief and with grooved bands around the neck, to relatively diminutive tableware like handled cups.
Medieval pottery was mainly represented by plain wares that were various shades of brown red, pink and buff, although a few were dark, and some were decorated. Relief rope ornaments, grooved and incised bands were still used for decoration. Shapes and sizes also varied, and they included a fragment of a lamp and two lids.
A few household tools, such as grind stones and a possible mortar, came from one Hellenistic feature, and there were several blank flakes of obsidian among the chance finds.
A limited number of bracelets, finger rings, and pins of silver, bronze, and iron represented Hellenistic jewellery. Most of were recovered from one or other of the features. A single massive bronze bracelet was found in the immediate vicinity of Cist 1, where it probably rested until Cist 1 was disturbed at some time.
There is no clear pattern of pottery distribution owing to the disturbed features and the prevalence of broken pottery. It was not always possible to interpret the various features, or to restore pottery shapes. Prehistoric pottery sherds seemed to occur mainly in residential contexts, Hellenistic in both house and grave, and Medieval was scattered around indiscriminately.

6.0 Interpretation

The features and artefacts identified at the Samshvilde site come from six different time periods. The earliest Eneolithic habitation was dated to the 4th millennium BC, followed by Late Bronze Age features dated to the beginning of the 1st millennium BC. Kura-Araxis and Trialeti culture artefacts were later dated to the 3rd millennium BC and first half of the 2nd millennium BC. Hellenistic and Early Medieval finds were dated to the 3rd - 1st centuries BC and 4th –5th centuries AD.
Eneolithic activity was represented by a storage pit. The use of storage pits in settlements is a well known practice from Eneolithic until Late Medieval. Their use becomes more widespread in the Eneolithic-Bronze Age period. The pits were mainly used for the storage of crops or other products. Ceremonial pits are also to be found. In some cases these storage or ceremonial pits were reused as burials.
Pits contained ash and charcoal fill, broken pots or hearth fragments and were often regarded as the domestic rubbish dump of a settlement. The ethnographic record, however, suggests that objects and even ashes from domestic or ceremonial hearths had a special status, and if they were damaged were placed in pits, in the belief that they were sacred.

Similar Eneolithic pits and artefacts have been identified in Tetritskaro region at Tetritskaro settlement (Gobejishvili 1978), Samshvilde settlement (Mirtskhulava 1976), and also in Medieval cemeteries located at KP 74 and KP 77 and excavated in connection with BTC pipeline construction, where Eneolithic occupation was cut into or overlaid by later Medieval burials.

Two subdivisions of Eneolithic culture have been recognized and studied in Georgia: Shulaveri-Shomutepe and Sioni-Tsopi. On the basis of the ceramic evidence the Samshvilde Eneolithic feature is attributable to the late stage of the Sioni-Tsopi culture. It has been suggested that the subsequent Kura-Araxis culture is connected not with the Sulaveri-Shomu-Tepe culture but to the Sioni-Tsopi culture. The Samshvilde pottery links these two cultures and Kura-Araxis pottery may thus have its origins in Samshvilde Eneolithic pottery. The discovery of the Samshvilde Eneolithic feature therefore, and the possibility of that it might be further investigated promises much in the area of evolutionary research.

Evidence for the subsequent Kura-Araxis culture with its well-defined early, developed and late stages is widespread in Tetritskaro region. Samshvilde settlement and cemetery can be attributed to the developed stage of the Kura-Araxis culture. A single Kura-Araxis pottery fragment, discovered at Samshvilde out of context, could, in view the way it was made, be assigned to the developed stage and its presence may suggest that of yet more artefacts and features on this hillside, but the extent and integrity of this apparent occupation is unknown at this time.

Kvemo Kartli was one of the main areas of development not only for the lithic and Early Bronze Age periods but also for the Middle Bronze Age, of which local versions occur all over Transcaucasia. Several fragments of black burnished pottery discovered out of context at site IV-209 bore decoration diagnostic of the Trialeti culture. The shape and decoration of the vessel found close parallels in the pottery from Trialeti kurgans of the 18^{th}-16^{th} centuries BC (Gogadze 1972).

Although Trialeti our potsherds were discovered out of context, it is clear that they did not come from a kurgan (there was no evidence for a Trialeti culture kurgan at the site). And yet the Trialeti culture is only known from kurgans or burials; no settlements of this culture have as yet been found. The discovery of Trialeti pottery fragments is therefore significant, for if we could establish the role they played at Samshvilde we might be able to set a whole range of new scientific balls rolling.

The Oven 1 and Pits 8 and 13 located in Plots 1 and 3 belonged to a settlement. Similar ovens in settlements are known from various archaeological monuments Late Bronze Age in Kartli (eastern Georgia) (Davlianidze, Sadradze 1993; Mindiashvili 2003). Ovens had several parts: a stove, fireplace, ash pit and altar.

Similar ovens of the Late Bronze Age are also known within Kakheti (eastern Georgia). However they are not constructed in the open air, but inside houses (Pitskhelauri 1973).

There were apparently two different traditions of oven arrangement in these two parts of eastern Georgia: Kakheti had one kind of oven, and Shida and Kvemo Kartli another.

Late Bronze Age pits had the same function as those of the Eneolithic and were dated by means of the pottery evidence.

Damaged features and potsherds did not information precise enough for accurate classification or dating. It was however possible to distinguish four types among those pottery vessels, namely pots, plates, jugs and jars. These pots have parallels among the Late Bronze Age pottery of eastern Georgia. For instance, one Samshvilde pot is similar to a vessel from burial No. 83 at Bornigele, Borjomi district and dated to the 10^{th}-9^{th} centuries BC (Gambashidze 1991). With regard to other shapes, it was only possible to assign a broad time span somewhere in the Late Bronze Age or Early Iron Age (Abramishvili 1978).

Hellenistic features were the most prominent at the site, and were mostly dated by means of diagnostic Hellenistic pottery. The Hellenistic oven was almost identical to the analogous Late Bronze Age feature, and there were only slight differences in construction.
Two courses of pottery sherds plastered with clay, instead of three, formed the base of the Hellenistic oven. Their role was to facilitate heating, in that they both helped preserve a high temperature and to radiate a heat. It has been observed that there are very few changes in the way either ovens or settlements were constructed between Late Bronze Age and the Hellenistic period.
Hellenistic burials were represented by cists and an urn burial. The cist is a continuous shape from the Early Bronze Age, but urn burials were a Hellenist innovation (Noneshvili 1992). Urn burials are widespread throughout Georgia, and in most of them the pot is placed horizontally, but in others vertically. Urn burials tend to have few grave goods. In some cases only animal bones were found in such burials, which might be thought of a cenotaph (Tolordava 1980). The Samshvilde urn burial also contained the bones of a dog, but we do not know what was in the disturbed, missing part. It might have contained alongside the animal bones. We cannot therefore establish whether we had a cenotaph or the burial of an individual, but we can nevertheless be certain that the purpose was funerary.
Several shapes of vessels were distinguished among Hellenistic pottery, such as pots, plates, bowls, handled cups, and phialae. The shapes of some vessels were the same as in the Late Bronze Age, although their decoration and slight formal differences gave good reasons for dating them to the Hellenistic period. For instance, a handled cup with red painted bands was dateable to the 2nd century BC, a red painted omphalos phiale could be dated to the 3rd century BC, and buff jar that possibly had a trefoil lip, was made in the 3rd century BC. Among the jewellery, a bronze bracelet decorated with zoomorphic ends has parallels in eastern Georgia from the first half of the 4th century BC (Gogiberishvili 2003), and a wire finger ring set with a with sard can be dated to the 3rd-2nd centuries BC.
As was the case with earlier finds, the Hellenistic features and artefacts could not be dated more precisely the damage they had undergone and their fragmentary condition.
Early Medieval pottery was mainly found out of context and was dated on technical and stylistic grounds.
Apparently the fact that the environment of the Samshvilde site was pleasant made it an attractive place for human occupation over a broad time span, and this was supported by the results of palaeozoological, palaeobotanical, and palynological analysis. These studies consistently showed a variety of domesticated animals, and the use of both cultivated and wild plants in the local diet, all indicative of a continuous and intense rural economy.

7.0 Conclusions and Recommendations

Samshvilde Site IV-209 located on a parcel of land measuring 1400 square metres produced artefacts and evidence of occupation in six different periods. Despite the damage that the archaeological features and finds had undergone, it was nevertheless possible to obtain significant results thanks to field and laboratory research. We were able to demonstrate the continuity of building traditions, the organisation of the site, craft techniques and decoration over many centuries.
The archaeological investigations at KP77+600 within the project ROW are now complete. Research on the features that lie unexcavated beyond the ROW is, however, incomplete. The full extent of the site, the function and dates of two features, and the source of the Kura-Araxis and Trialeti culture finds are still unknown.
We therefore recommend that further archaeological work be carried out beyond Site IV-209 on undisturbed land in order to determine how far the site originally extended, to elucidate the

function of some of the features, and to study the distribution of various categories of monument.
Further archaeological investigations are also needed to compensate for damage incurred during the construction of the pipelines.
Further archaeological fieldwork might be supported by geophysical survey, in which geoarchaeological methods could be applied.
The Samshvilde site provides good conditions for the preservation of both floral and faunal remains, and as such has significant research potential.
The application of radiocarbon dating methods would refine the chronology of the site, currently based on relative dating and diagnostic artefacts.
Further exploration would place interpretation of the site in a wider context, and provide the opportunity for research on themes such as the relationship between prehistoric and historic sites and their evolutionary connections.

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Appendix

Palaeozoological Material Analysis Report

By Oleg Bendukidze

The osteological material obtained from the Samshvilde settlement was cleaned, repaired, classified and prepared for photography over a period of five days (30/VII – 4/VIII). It is remarkable that despite its obvious paucity, the Samshvilde material has provided interesting data that throws light on the fauna of Samshvilde, in particular cattle. The Samshvilde cow was a comparatively small animal, slightly larger and more solid than today's native species,

namely the cattle associated with Khevsureti. It was also distinguished for the solidity of its teeth and bones, which is not a characteristic of the Khevsureti breed.

As for **sheep** and **goats**, nothing useful can be said in view of the dearth of material relating to small livestock found at Samshvilde. The most we can say is that both animals were indeed present.

Domestic pig: judging by the size of the porcine remains (an upper jaw and mandible of a piglet) excavated at Samshvilde, we may be dealing with a member of a native Kakhetian species of black pig. In particular, the rather small size of the Samshvilde pig, similar to that of the Kakhetian pig, makes this a possibility.

Domestic dog (Pl. XXIII.1-3): The excavation of the complete skeleton of an ancient dog (including skull and mandibles) at Samshvilde is especially interesting. The remains of the dog were found in a wine storage jar that had ensured the perfect preservation of the material in question. Judging by its teeth, the dog found at Samshvilde might be one-and- a-half or two years old, but the evidence of its skull and limbs points to its having been smaller than its modern counterpart, the Georgian sheepdog. It was also unusual for the slenderness of its extremities, and the anomalous lack of the last upper molar tooth in the left upper jaw.

The conclusion to be drawn was that the dog from Samshvilde was medium-sized. The restored skull much resembles that of a modern Caucasian sheepdog, which in turn, as is widely recognized, resembles the skull of its direct ancestor the wolf. Unfortunately, the abundant remains of dogs found on Georgian archaeological sites, have not been studied, and for this very reason, the Samshvilde dog is of particular importance. Further study is urgently required in order to throw more light on canine questions.

Remains of a tortoise (*Testudo graeca ibera*) were represented in the Samshvilde material by pieces from the edge of the upper part of the carapace of a tortoise that had chosen to hibernate in a cultural layer.

Appendix

Palaeocarpological Material Analysis Report

By Nana Rusishvili
Nino Meladze

Soil samples collected from trial trenches, graves, pits and wine storage jars were subjected to palaeoethnobotanical analysis. In total, 16 samples were processed. Fossil botanical material was discovered in 14 samples. Soil samples were processed by means of the flotation method, which involves the extraction of fossil botanical remains by means of water and CCL4. At the next stage the material was consolidated and conserved, and prepared for identification. The identification of fossil botanical remains was conducted at the level of genus and species by means of a microscope (Dobrokhotov 1961; Kats N.J.; Kats S. V., Kipiani; Rollov 1908; Latalova 1999).

Among cultivated plants were identified: soft wheat: *Triticum aestivum L.*, emmer wheat: *Triticum dicoccum Schubl.;* barley (*Hordeum vulgare L.*), cultivated vine: *Vitis vinifera L.*, cultivated millet: *Panicum miliaceum L.* Twenty-five ruderals and wild plants were also identified.

Millet was attested only in soil samples collected in pits dated to the Hellenistic period (Fig. 1). Carbonized grains of millet were found in eight samples. According the to morphological features, the seeds were elongated, one third of their bodies were occupied by embryos (Pl. XXIV. fig. 1). Seed parameters: length (L) 2.1-1.3 mm, width (B) 1.8-1.1 mm. All the above-mentioned grains belonged to a cultivated species of millet, *Panicum miliaceum*. The earliest discovery of millet in Georgia was at Arukhlo, where a single grain was found. According to

palaeoethnobotanical data, the spread of millet in Georgia began in the Early Bronze Age, and continued in later periods as well (Rusishvili 1990).

A carbonized **grape** pip was identified in a sample collected from a wine storage jar dated to the Hellenistic period (fig. I). Seed parameters were: length (L) 4.0 mm, width (B) 3.0 mm, length of beak 1.10 mm. The grape pip had a pearlike shape, on its dorsal side the *kaladza* was located in the middle of the seed body, on its ventral side lateral grooves were deep, spreading in parallel. The ventral seam was distinctly marked. These data point to the grape pip in question having belonged to a cultivated species of vine: *Vitis vinifera*.

Soft wheat was found in six samples collected at various places in the area of the settlement (Pl. XXIV. fig. 1). Grains were found in the pits and in a wine storage jar dated to the Hellenistic period, as well as in the Eneolithic and the Late Bronze Age pits. According to their morpological features, the grains had round apical parts and bases, and deep ventral grooves and a low dorsal side (Pl. XXIV. figs. 25-2). The calculation of parameters and indices was possible for only three samples. According to these parameters and indices, the excavated grains (figs. 2,3,4) correspond completely to the values for soft wheat (Rusishvili 1991:285-294).

Cultivated two-grained cereal was attested only in three samples collected from the Hellenistic wine storage jar (fig.1). According to their morphological features, the grains were prolonged, and had deep ventral grooves, slightly asymmetrical dorsal sides, and high ridges (Pl. XXIV. fig. 3). Judging by their parameters and indices, the grains in question correspond to the conventional normal values for *Triticum dicoccum* (figs. 5,6,7). As for the existence of an independent agropopulation of the cultivated two-grained cereal, this was only attested in the cases of wheat and millet. It seems more likely that the two-grained cereal was of no importance as an independent growth, but was mixed with soft wheat and millet crops.

Husk-grained barley, *Hordeum vulgare*, was identified in six samples (fig. 1). Measurements and the calculation of parameters were undertaken only with three samples (figs. 8, 9, 10). According to their morphological features, the grains were ellipsoid, i.e. they were flattened on their dorsal and ventral sides. There were triangular grooves on their ventral sides, widening at their apices. Imprints, characteristic of blooming husks were clearly distinguishable on the dorsal sides of the grains in question (Pl. XXIV. figs. 25-4). The grains were identified as belonging to husk-grained barley, *Hordeum vulgare L.* on the basis of the aforementioned characteristics and relevant parameters and indices.

Lentil (*Lens culinaris Medic.*) represents one of the earliest cultivated plants. It was identified (Pl. XXV. fig. 5) in two samples from the settlement (fig. 1) and was dated by context to the Hellenistic period. The parameters of the carbonized grains were 3.2-3.5 mm. According to palaeobotanical data, the lentil was widespread in the Near East. According to M. Hopf, lentil, emmer, one-grained cereal and barley were domesticated simultaneously (Zohary and Hopf 1988).

Carbonized seeds of a small lentil dated to 9200-7500 B.C. have been found at Mureybit, in Syria and were identified as *Lens orientalis*. They were attested together with wild one-grained cereal and wild barley (Van Zeist 1970:167-176).

The lentils found at Tepe Sabz (Iran), a settlement dated to 5500-5000 BC, definitely belonged to a cultivated species (Helbaek 1969:389-426).

Lentils have been identified in Egypt in tombs of pharaohs of the 12th dynasty. The lentil has been known in Switzerland, Hungary, Germany and Asia Minor (Troy tombs) since the Neolithic period; In ancient Greece and Rome it was generally recognized as an edible plant. In Russia lentils have been known since the 15th century (Zhukovsky 1971:316-317).

Asia Minor and Transcaucasia, where the wild ancestor of the lentil, *Lens orientalis*, is widespread, are regarded as a primary source of the cultivated lentil (Zohary and Hopf 1988).

According to palaeobotanical data, in the Eneolithic period the lentil was widespread on the territory of Georgia, in particular in Kvemo Kartli.
In former times, lentils were a basic food during Lent.
At present the lentil is comparatively rare. With the introduction of the bean, the lentil migrated from the plain to the mountains.
Cooked lentil is regarded as a delicacy. Its moderate vegetative mass and high percentage of albumen give lentils an advantage over other cereals as cattle feed. Compared with other pulses, it grows well on arid mountainous soils.

Ruderals and Wild Plants

1. ***Agrimonia eupatoria L.*** Agrimony. False fruit parameters: 4-5 x 3-5 mm. Belongs to the family of Rosaceae. Rarely grows with cereal plants. Widespread on meadows in Europe, the Crimea and the Caucasus (Pl. XXIV. fig. 6).
2. ***Ajuga reptans L.*****:** Blue bugle. Family: Labiateae. Seed parameters: 1.8 x 1.3 x 1.0 mm. Widespread in damp meadows, forests, undergrowth; grows in mountains, and found throughout the Caucasus (Pl. XXIV. figs. 26-7).
3. ***Avena sp.*****: O**ats. Belongs to the family of cereals (*Graminae*). Species of this genus mainly represent weeds of cultivated cereals.
4. ***Brassica sp.*****: C**abbage. Belongs to the family of Cruciferae. Only some members of this genus are weeds.
5. ***Chenopodium rubrum L.*****:** Red goosefoot. Family of Chenopodiaceae. Seed parameters: 1.5-1.7 mm. A tiresome weed that retains the ability to grow back for decades. Its young shoots are edible greens. Besides areas under crops, grows in ruderal places.
6. ***Chenopodium sp.*****:** Goosefoot. Representatives of this genus are weeds of cultivated cereals.
7. ***Fragaria viridis Duch.*****:** Green strawberry. Seed parameters: 1.4-1.5 mm. Grows in undergrowth at forest edges. Belongs to a family of Rosaceae.
8. ***Galium spurium L.*****:** Goosegrass. Family of Rubiaceae. Seed parameters: 1.5-2 x 1-1.5 x 1.3-1.5 mm. Widespread throughout the Caucasus. A weed of cereals. Grows at roadsides.
9. ***Heliotropium europaeum L.*****:** Heliotrope. Family of Boraginaceae. Seed parameters: 1.7 x 1.3 x 1.2 mm. A weed of cereals. Grows in vineyards and gardens. A decoction of its leaves is used in folk medicine to cure calculous diseases. Widespread throughout the Caucasus.
10. ***Lithospermum arvense L.*****:** Corn gromwell. Family – Boraginaceae. Seed parameters: 2 x 1.7 x 1.7 mm. A weed of cultivated cereals. Especially frequent areas under millet crops. Grows on roadsides, in meadows, gardens and orchards. Its seeds are used for feeding poultry. Widespread throughout the Caucasus. (Pl. XXV. figs. 26-8).
11. ***Lolium sp.*****:** Poison darnel. Family: Graminellae. This genus mainly consists of weeds of cultivated cereals.
12. ***Lygia passerina (L.) Fas.*****:** Spurge Flax. Family: Thymelaeaceae. Seed parameters: 1.5–2 x 1-1.2 mm. A weed of cultivated and technical plants.
13. ***Medicago minima (L.) Grufberg.:*** Lucerne covered in burrs. Family – Legiminosae (Pulses). Seed parameters: 1.2 x 0.7 x 0.5 mm. A weed of cultivated cereals. Grows at roadsides. Best food for animals. Widespread throughout the Caucasus.
14. ***Neslia Paniculata (L.) Desv.:*** Ball mustard. Family: **Cruciferae.** Seed parameters: 2 x 2 x 1.5 mm. A weed of cereals. Especially frequent areas under millet crops. Its seed contains oil of high quality. A blue dye is made of its leaves.

15. ***Polygonum aviculare L.*:** Common knot-grass. Family: Polygonaceae. Seed parameters: 2.0 x 1.0 x 0.75 mm. A weed of cereals. Grows on roads. Widespread throughout the Caucasus. (Pl. XXV. figs. 26-9).
16. ***Polygonum convolvulus L.*:** Black bind-weed. Family: Polygonaceae. Seed parameters: 2.5 x 1.75 mm. A weed of cereals. Grows in orchards. The seeds preserve the ability to germinate for 5-6 years.
17. ***Potentilla bifurca L.*:** Belongs to a family of Rosaceae. Seed parameters: 1.2 x 0.7 x 0.7 mm. A weed of areas under wheat, barley and millet crops. Widespread throughout the Caucasus.
18. ***Potentilla recta Hampe.*:** Creeping cinquefoil. Belongs to a family of Rosaceae. Seed parameters: 1.5 x 1.2 x 0.5 mm. A weed of cultivated cereals. Widespread throughout the Caucasus.
19. ***Poterium sanguisorba L.*:** Thorny burnet. Family: Rosaceae. Parameters of a false fruit: 2.5 x 1.7 mm. A weed of cultivated cereals. Represents edible grass of high quality. Widespread throughout the Caucasus. (Pl. XXV. figs. 26-10).
20. ***Rumex acetosa L.*:** Sorrel. Family: Polygonaceae. Seed parameters: 1.5 x 1.7 mm. Known as a weed. Grows in meadows, pastures and orchards. A sour soup is made from its leaves (Pl. XXV. figs. 26-11).
21. ***Salvia verticillata L.*:** Whorled clary. Family: Labiatae. Seed parameters: 1.5 x 1.2 x 0.7 mm. A weed of cultivated cereals. Grows on roadsides.
22. ***Secale cereale sp. segetale L.*:** Wild rye. Family: Graminae. Mainly a weed of areas under wheat crops.
23. ***Solanum nigrum L.*:** Black nightshade. Family: Solanaceae. Seed parameters: 1.7 x 1.25 x 0.5 mm. Rarely encountered on areas under cereal crops. Grows on roads and in ruderal places (Pl. XXV. figs. 26-12).
24. ***Verbena officinalis L.*:** Vervain. Family: Onagraceae. Seed parameters: 1.5 x 0.5 x 0.5 mm. A weed of cultivated cereals. Grows on roadsides. Used to make brooms.
25. ***Vicia sp*.** Its genus name is vetch. Representatives of this genus are mostly weeds of cereals. They grow on meadows as well.

Thus, relying on the results of our analysis of the palaeoethnobotanical material from Samshvilde, we can see that millet predominated in the Hellenistic settlement. Out of 16 samples, it was attested in eight.

By the same token, it might be assumed that millet was of special importance compared with other cereals. As for wheat and barley, these cereals were presumably also important in their own right, but quantitatively only a few specimens were attested.

Soft wheat and husk-grained barley were attested at the settlements dated to the Neolithic and Bronze Ages.

Of the weeds and wild plants, goosefoot (*Chenopodium*), green strawberry (*Fragaria viridis*), and sorrel (*Rumex acetosa*) are worthy of note. These plants are still collected today, being used as edible greens.

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Appendix

Pollen Analysis Report

By Eliso Kvavadze

A total of 16 samples were collected from cultural layers, pits, clay vessels and burials at the Samshvilde site in 2005. The material was processed at the Palynological Laboratory of the Institute of Palaeobiology. For this purpose the currently established standard methodology was applied: for the first stage the material was boiled in potassium alkali, for the second it was centrifugally separated in heavy fluid and for the third the material underwent acetolysis, or in other words, was stained. In this way, a sufficient quantity of pollen was identified.

Apart from the archaeological material, we analysed soil collected in the environs of the site as well as from the areas sown under wheat crops. It showed that pollen grains were perfectly preserved and that the palynological spectrum itself distinctly reflected the type of vegetation.

The palynological spectra of organic remains collected from burials (Plot No.3, Burials Nos. 3,4,6,7, Fig. I) were characterized by the following peculiarities: there were plenty of pollen grains of weeds that grow in gardens, on roadsides, pathways or rubbish piles (Pl. I, II, III). These pollen grains belonged to noogoora burr (*Xanthium*), yarrow (*Achillea*), stinging nettles (*Urtica*), saw-wort (*Serratula*), mallow (*Malva*), etc. There were elements of crops, such as wheat (*Triticum*), barley (*Hordeum*), bindweed (*Convolvulus*), cornflower (*Centaurea*), etc. Weeds of pastures were represented in the spectra. These plant pollens were introduced into burials via the garments of the deceased, since those deposited in stone tombs were not

covered with earth, hence pollen dust could not have been introduced there via the soil. Remains of cotton and linen fibres and threads found in all burials served as confirmation that the palynological spectrum included textiles (Pl. IV, V). Pollen of wild plants, such as hornbeam (*Carpinus caucasica*), oriental hornbeam (*Carpinus orientalis*), oak (*Quercus*), elm (*Ulmus*), juniper (*Juniperus*), pine (*Pinus*) etc., penetrated in a similar way. Spores of mosses (*Spragnum*) and ferns (*Polypodiaceae*) were found, mostly forest elements.

Pit No.1. Two samples were collected (Nos.5, 6, Fig. I). The palynological spectra of the sample (No. 6) collected at a depth of three metres differed drastically from those of the burial material. The pollen of various thermophilic plants were found in the relevant layer, among them cultivated vine (*Vitis vinifera*), lime (*Tilia*), walnut (*Juglans*), hazel nut (*Corylus*), etc. There was an abundance of spores of adder's tongue fern (*Ophioglossum vulgatum*) (Pl. I). At present this fern grows mainly in western Georgia in lower belts of forests since it favours warmth and dampness. Besides this, pollen grains of fir (*Abies nordmanniana*), alder (*Alnus*) and elm (*Ulmus*) found in the relevant layer belonged to damp forest elements.

As for cultivated vegetation, apart from the vine, there was a large amount of wheat and barley. Weeds of field crops, such as knot-grass (*Polygonum*, *Polygonum persicaria*), goosefoot (*Chenopodiaceae*, *Chenopodium album*), and buckwheat (*Fagopirum*) were represented in abundance.

Sample No. 6, collected at a depth of 2.4 metres, was characterized by nearly the same spectral composition. There were pollen grains of vine, walnut and hazel nut, indicating the existence of viticulture and horticulture. There was a large amount of cereals and their accompanying weeds. Weeds from house gardens, roadsides and rubbish piles were plentiful. They were great plantain (*Plantago lanceolata*, *Plantago media/maior*), buttercup (*Ranunculus*), yarrow (*Achillea*), etc.

Pit No.2. Sample (No. 7) collected from the pit, at a depth of 0.8 m, contained a great amount of pollen of plants generally regarded as anthropogenic indicators, such as cereals (wheat, barley, rye, Italian millet) and weeds accompanying their crops (goosefoot, knot-grass, cornflower, thistle, etc.). There was also attested a small amount of pollen grains of pasture weeds.

Among wild plants, the pollen of fir, pine, milk mushroom, oak, oriental hornbeam was attested. There were spores of forest fern as well, such as adder's fern (*Polypodium vulgare*), adder's tongue fern (*Ophioglossum vulgatum*) and maidenhair fern (*Adiantum*). Spores of moss were found as well.


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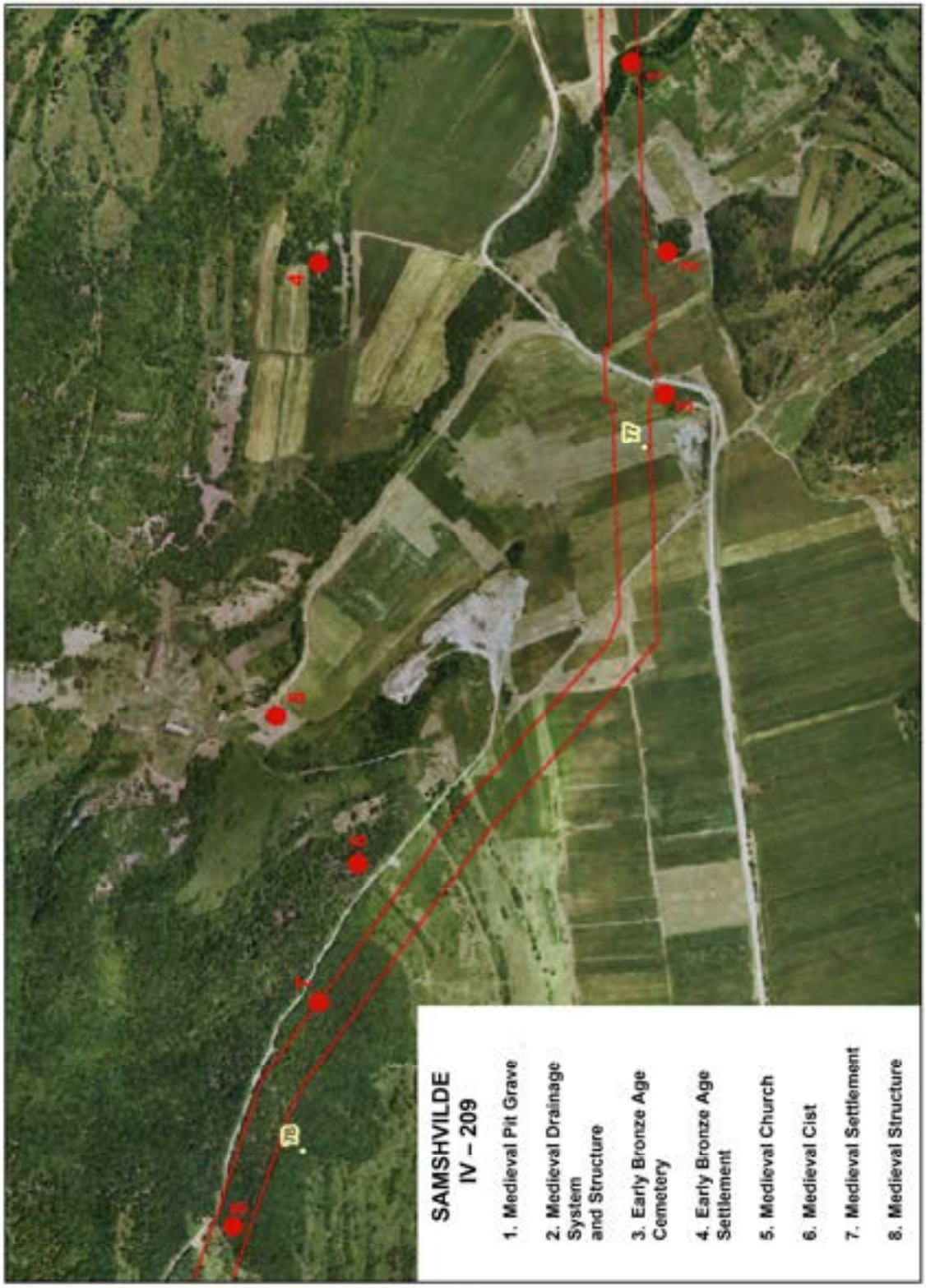
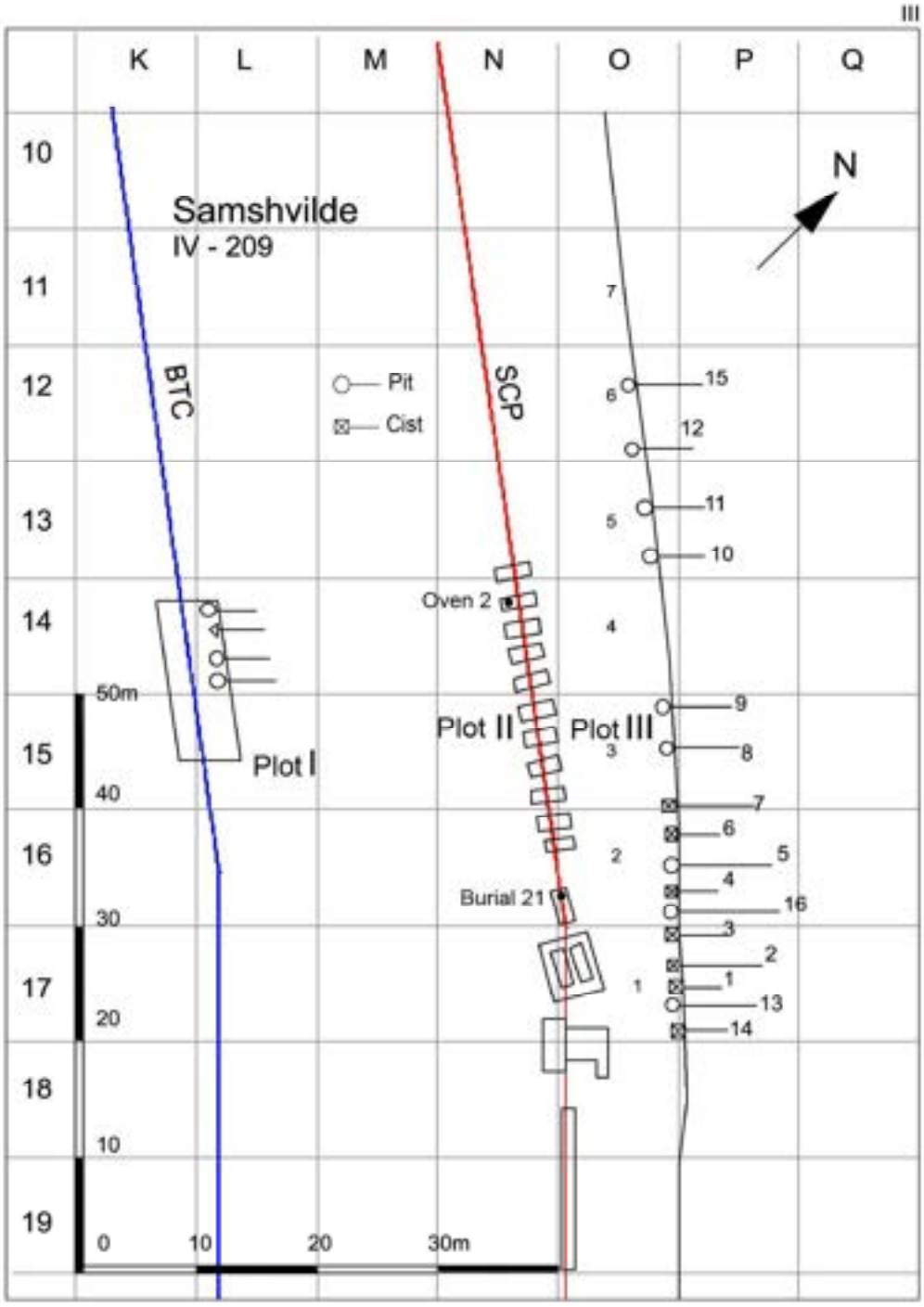
SAMSHVILDE
Legend

II


SAMSHVILDE
IV – 209
1. Medieval Pit Grave
2. Medieval Drainage System and Structure
3. Early Bronze Age Cemetery
4. Early Bronze Age Settlement
5. Medieval Church
6. Medieval Cist
7. Medieval Settlement
8. Medieval Structure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Samshvilde
IV - 209
BTC
SCP
Pit
Cist
Oven 2
Burial 21
Plot I
Plot II
Plot III
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30m
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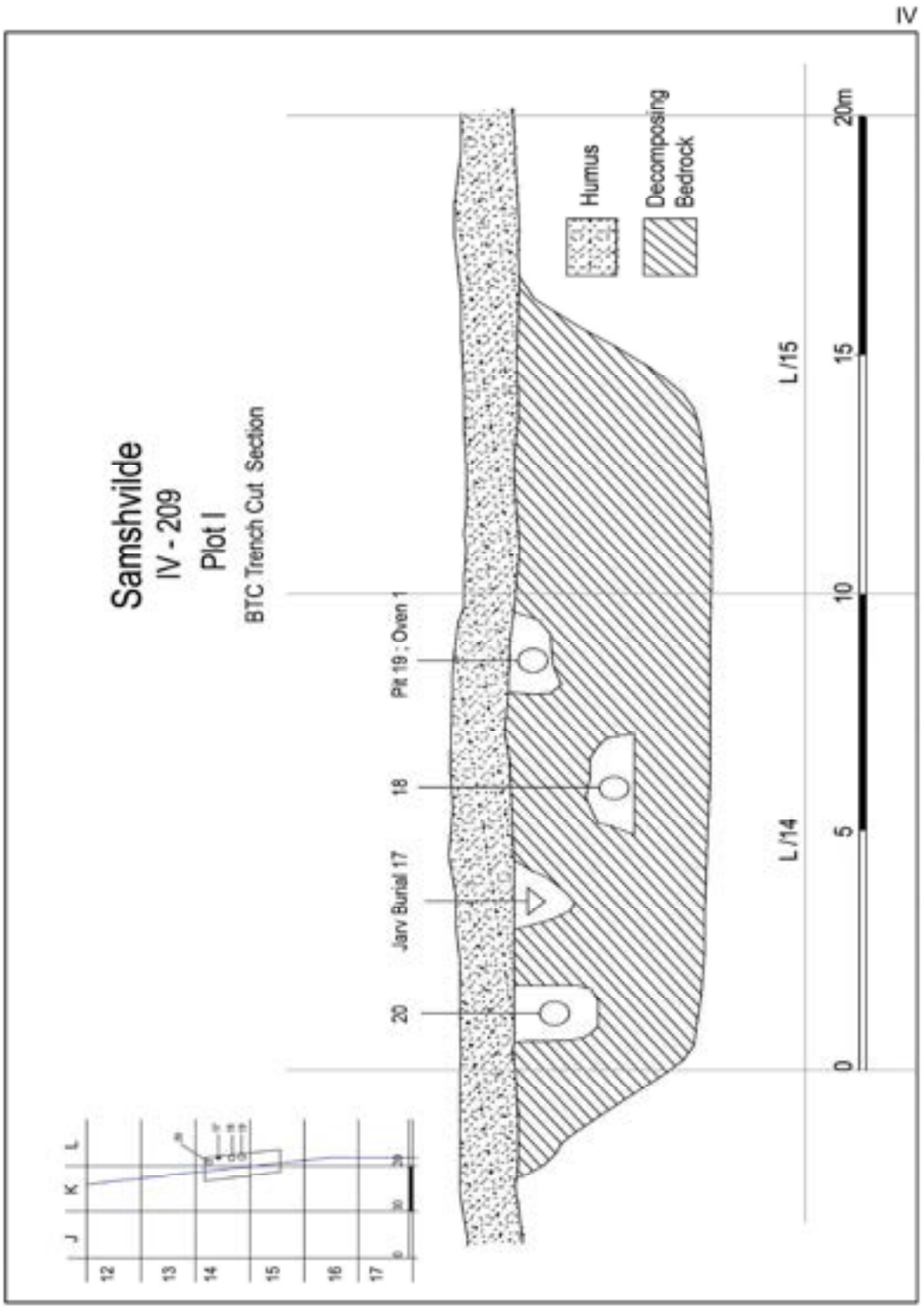
IV
Samshvilde
IV - 209
Plot I
BTC Trench Cut Section
Humus
Decomposing Bedrock
Pit 19 ; Oven 1
Jarv Burial 17
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V

SAMSHVILDE
IV – 209

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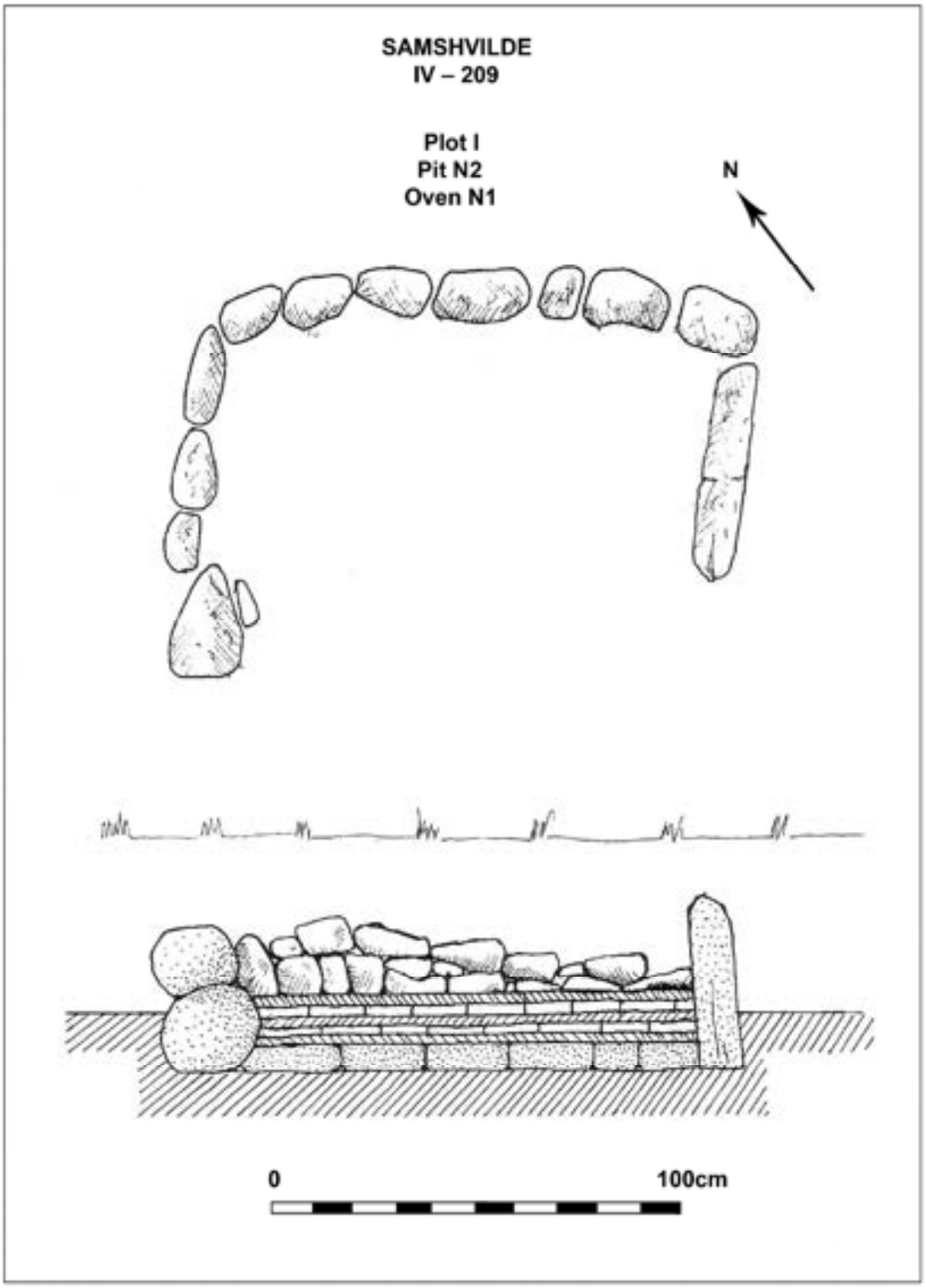
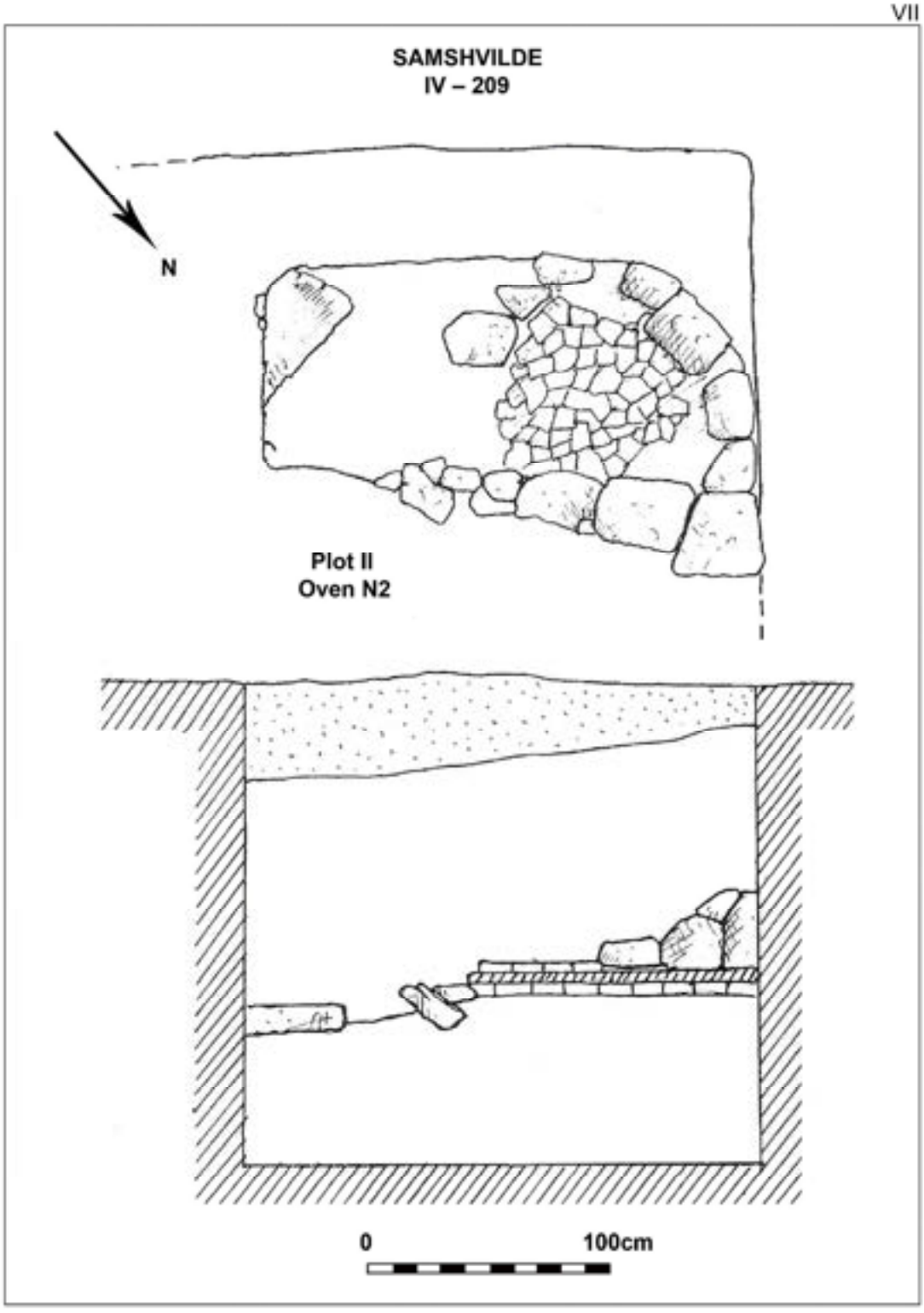
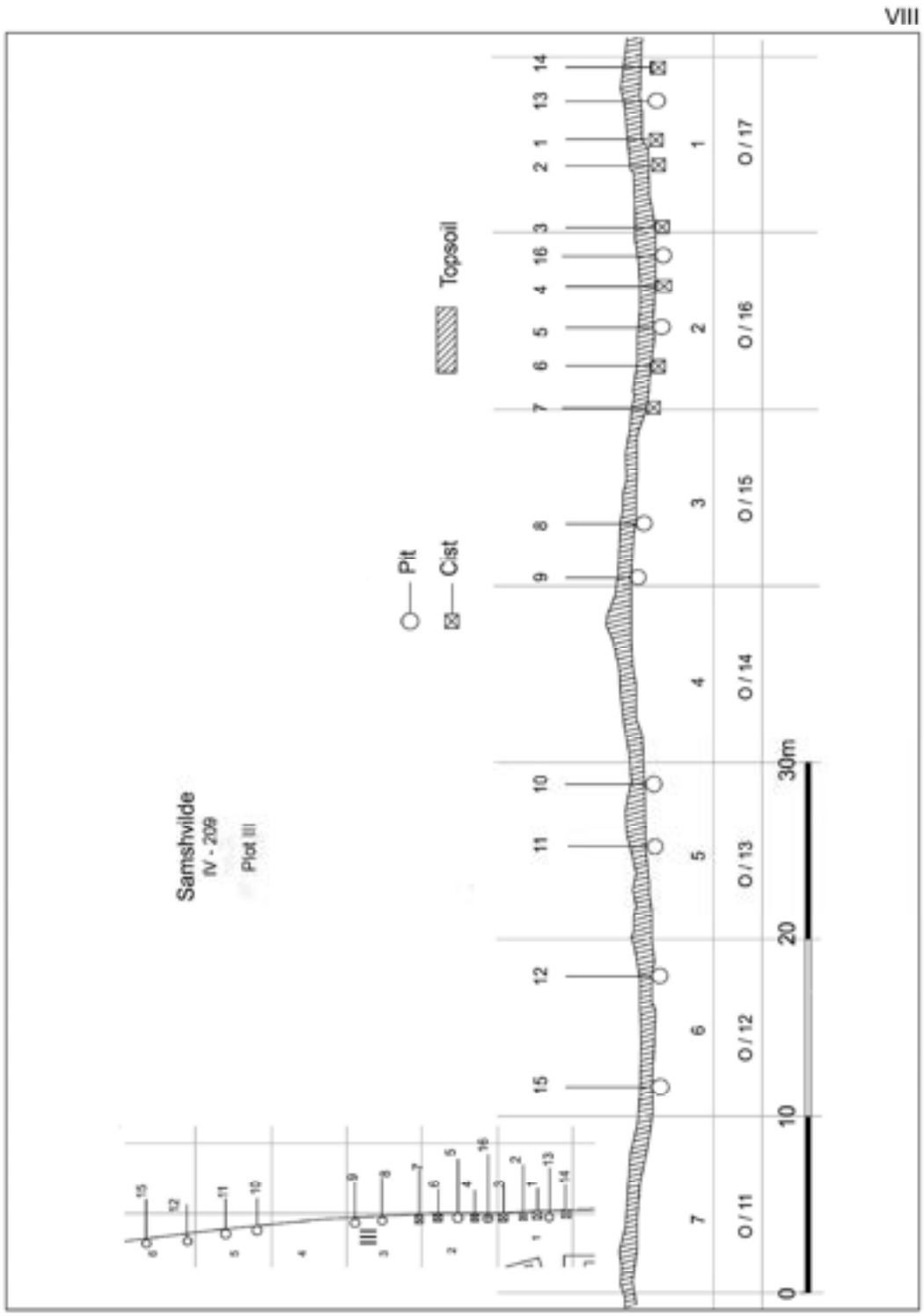
VI



VII




VIII
Topsoil
Pit
Cist
Samshvilde
IV - 209
Plot III
III
O / 17
O / 16
O / 15
O / 14
O / 13
O / 12
O / 11
0
10
20
30m

IX

SAMSHVILDE
IV – 209

1

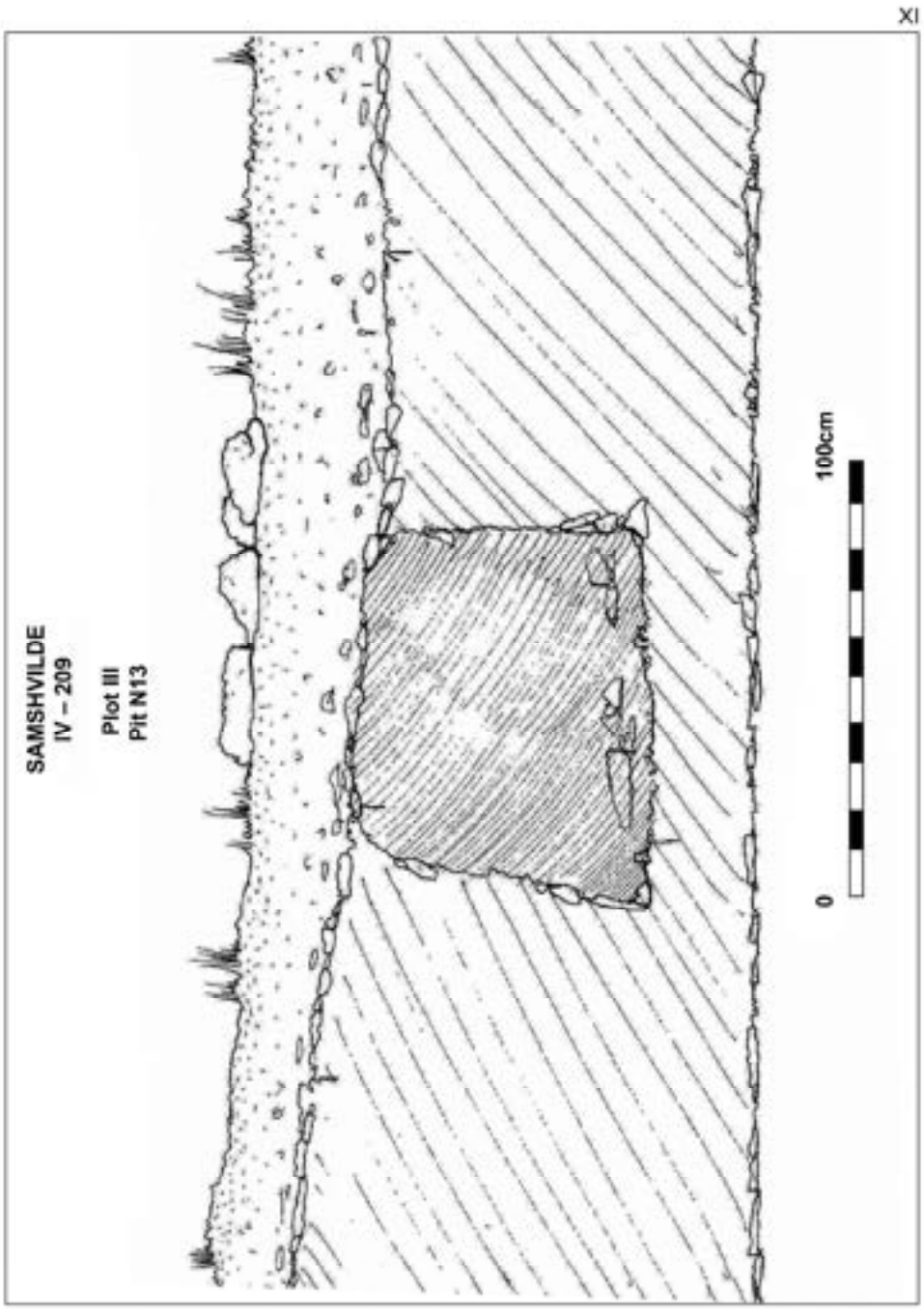
2

X

SAMSHVILDE
IV – 209

1

2


XI
SAMSHVILDE
IV – 209
Plot III
Pit N13
0
100cm

XII

SAMSHVILDE
IV – 209

1

2

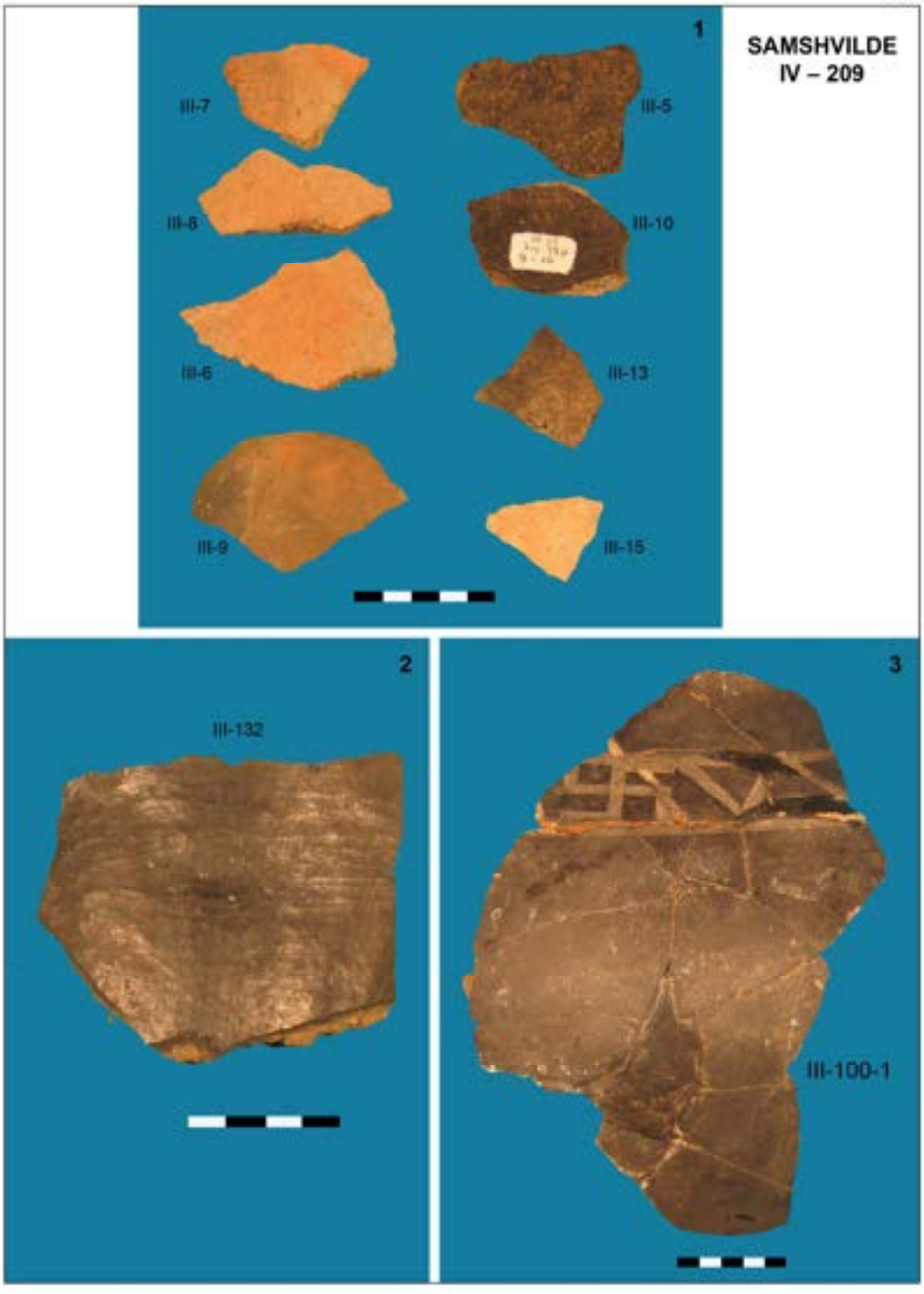
XIII

1

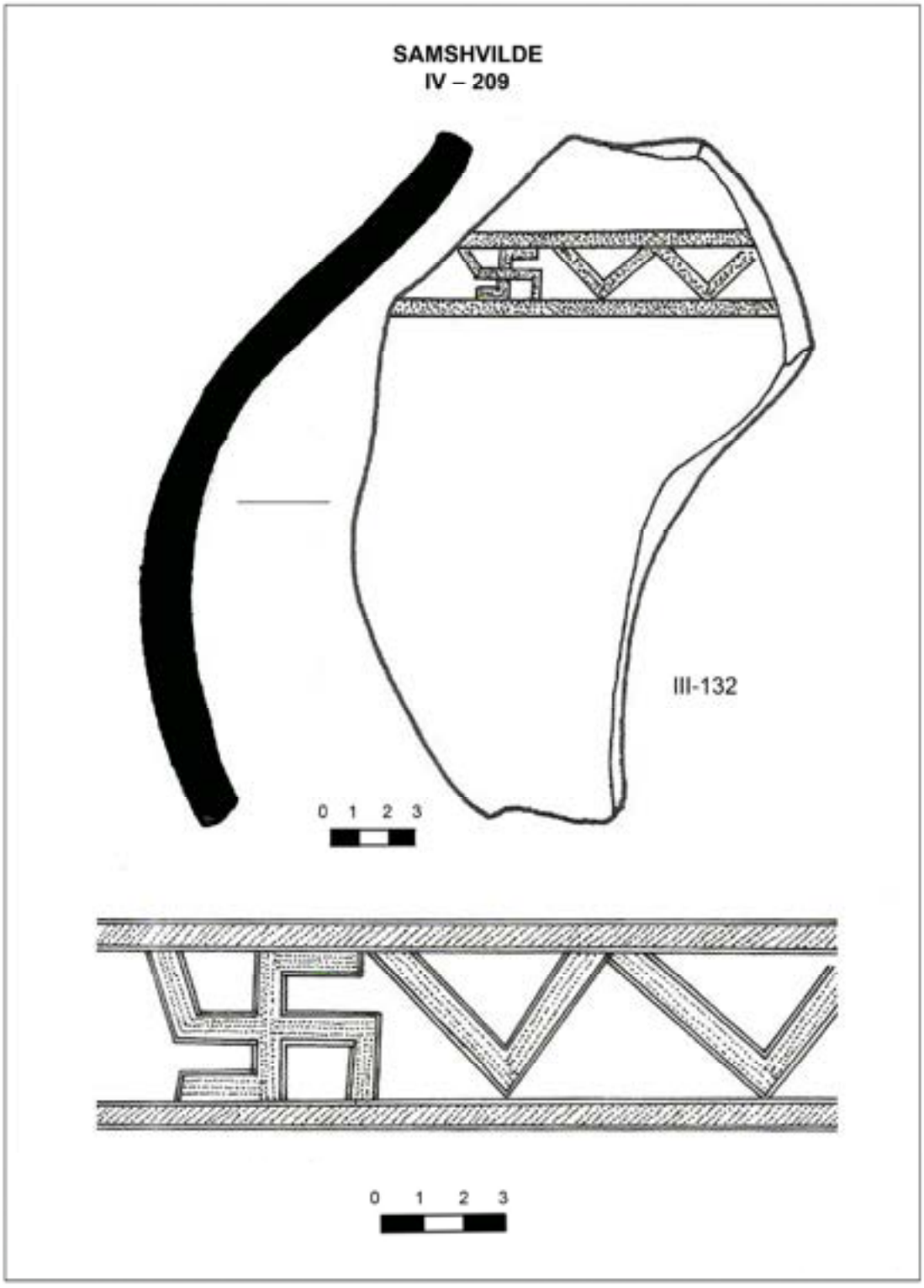
SAMSHVILDE
IV – 209

2

XIV


1
SAMSHVILDE
IV – 209
III-7
III-5
III-8
III-10
III-6
III-13
III-9
III-15
2
III-132
3
III-100-1

XV



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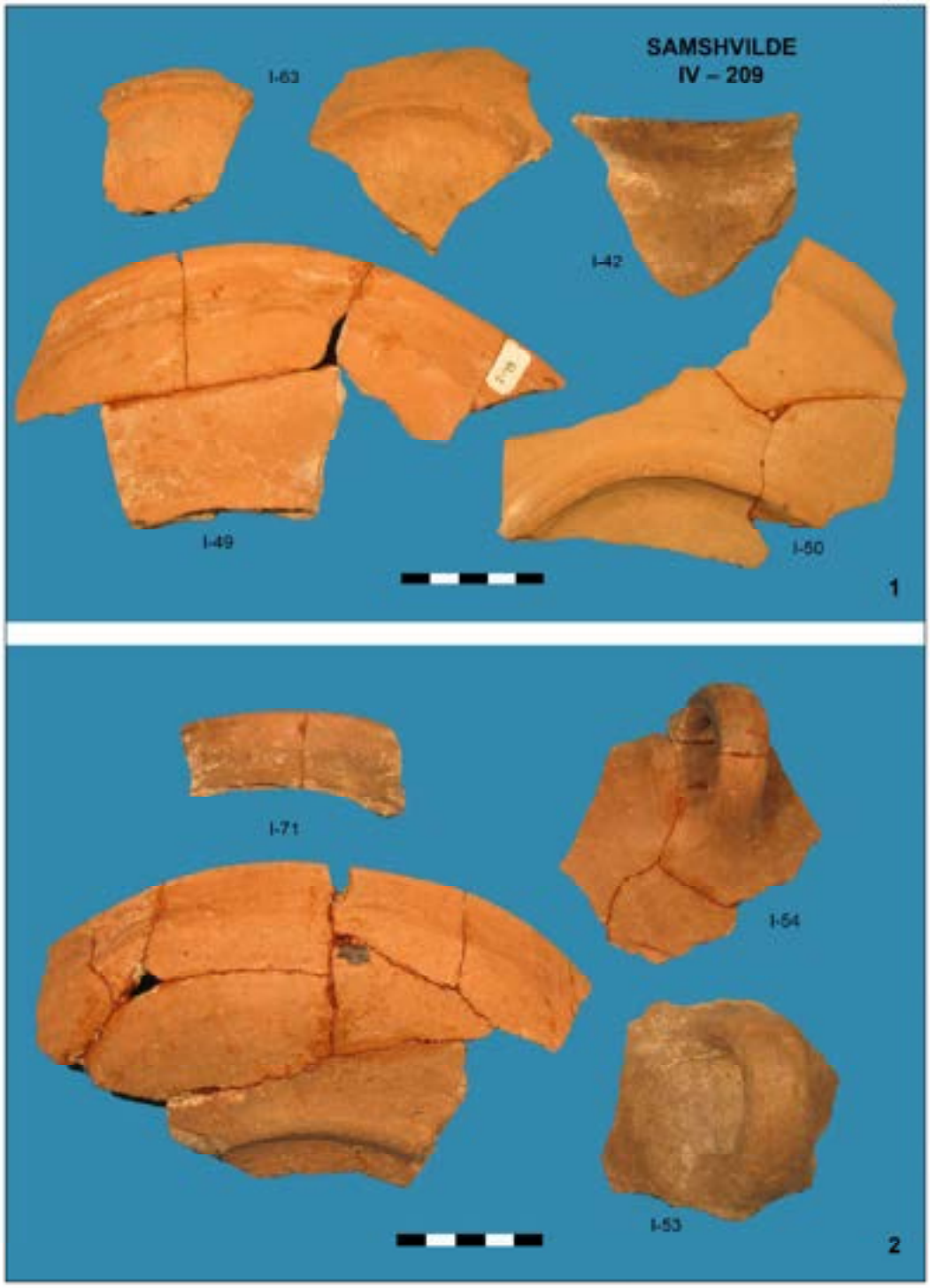

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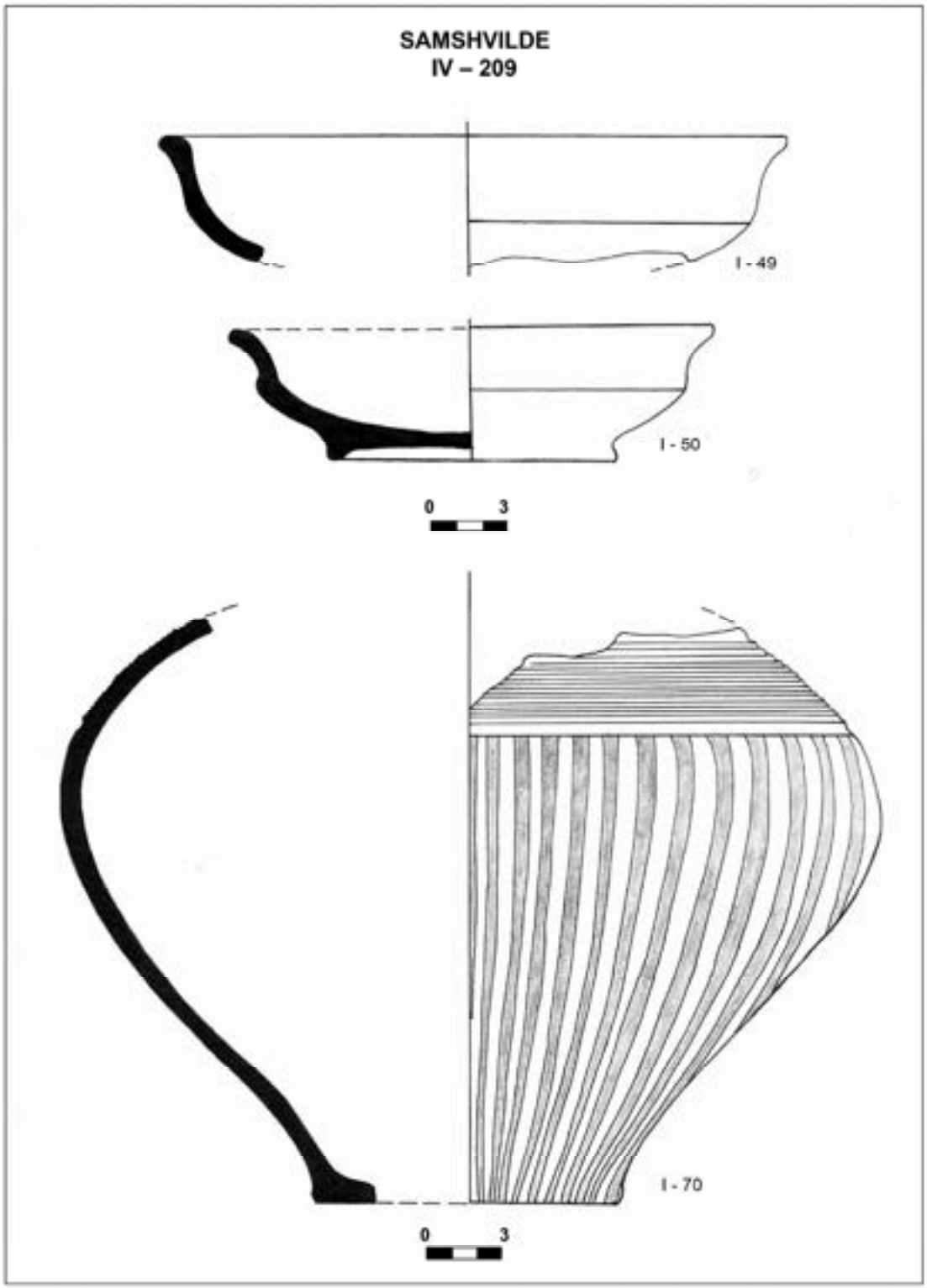

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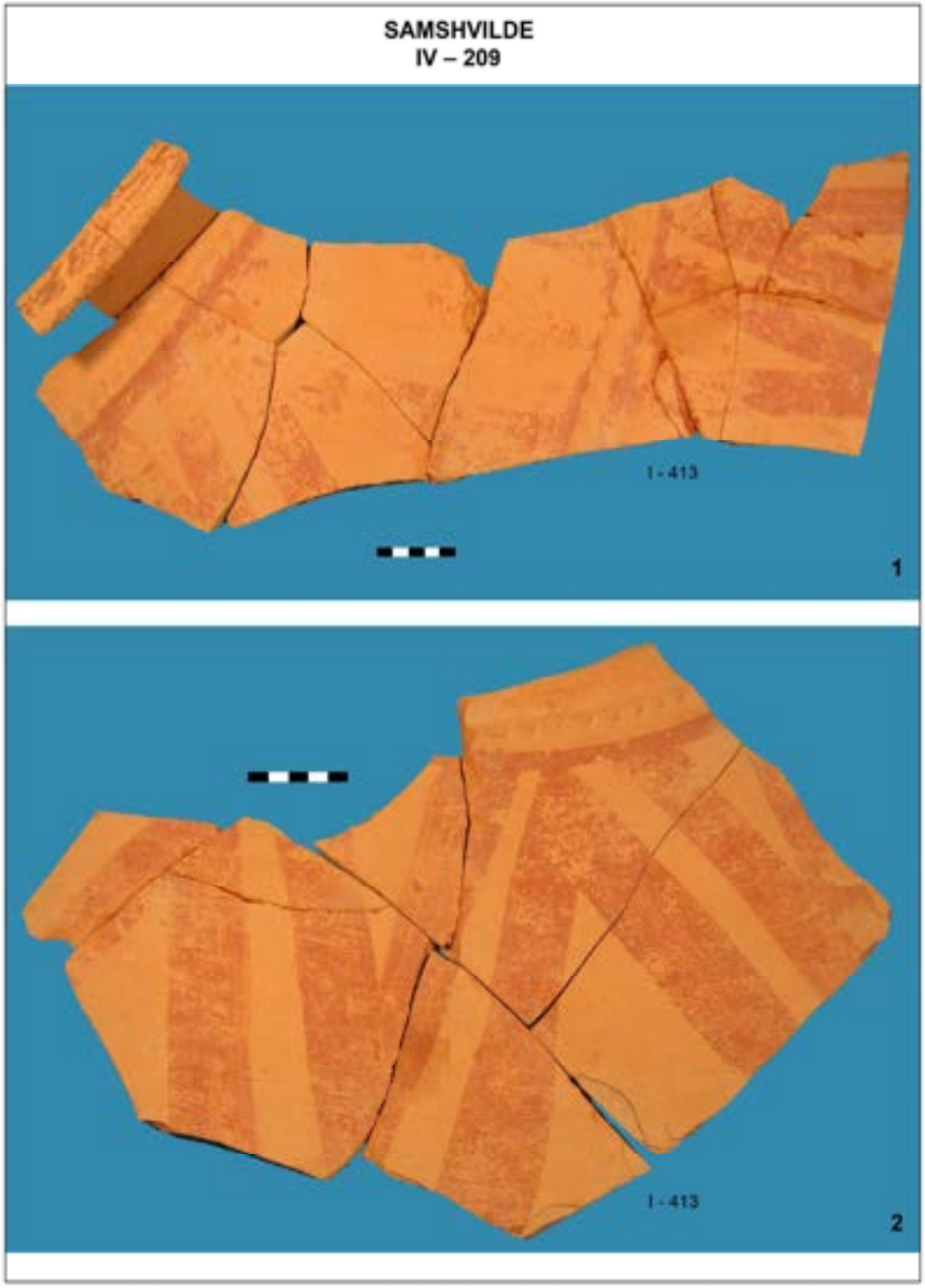

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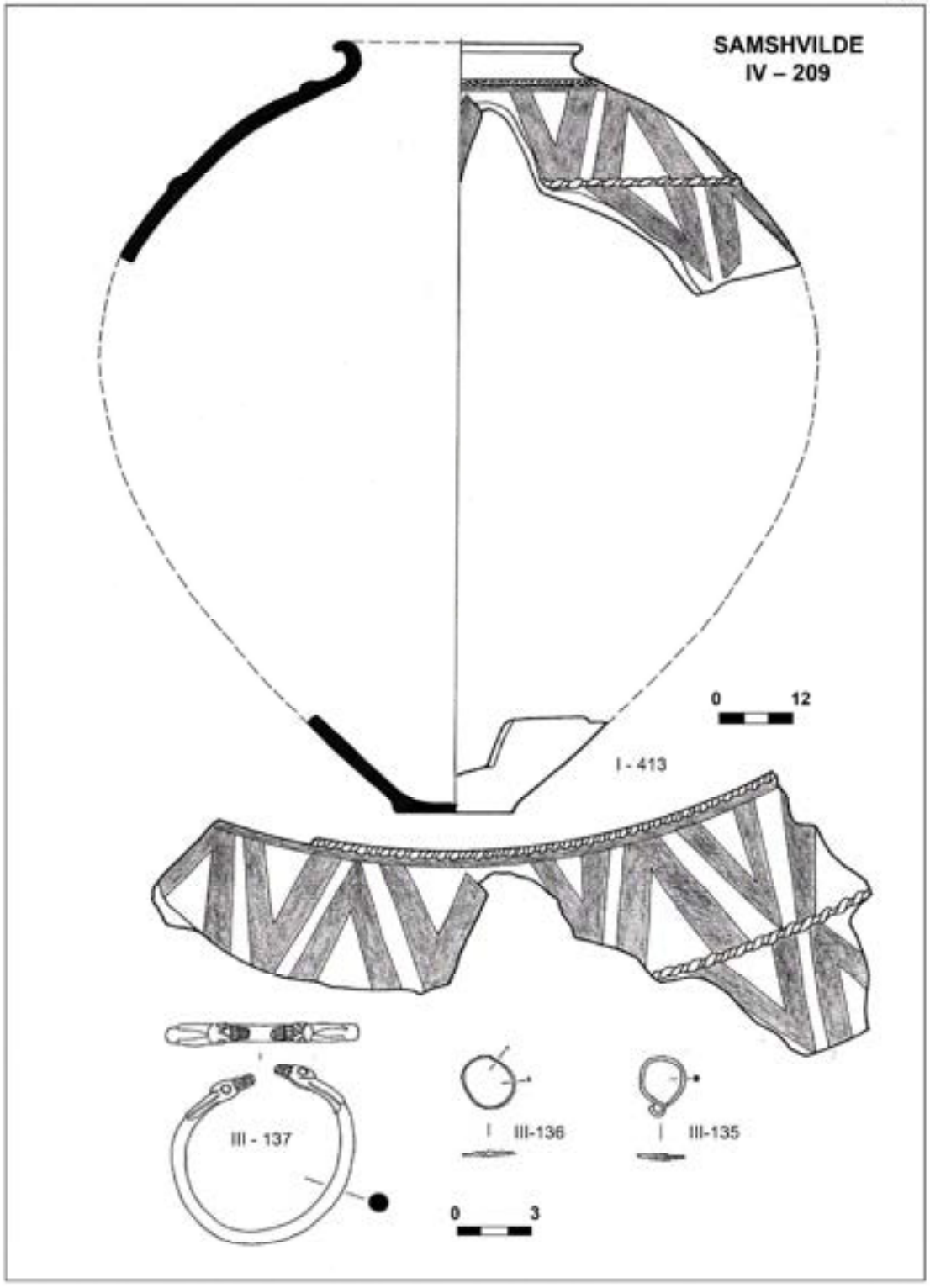
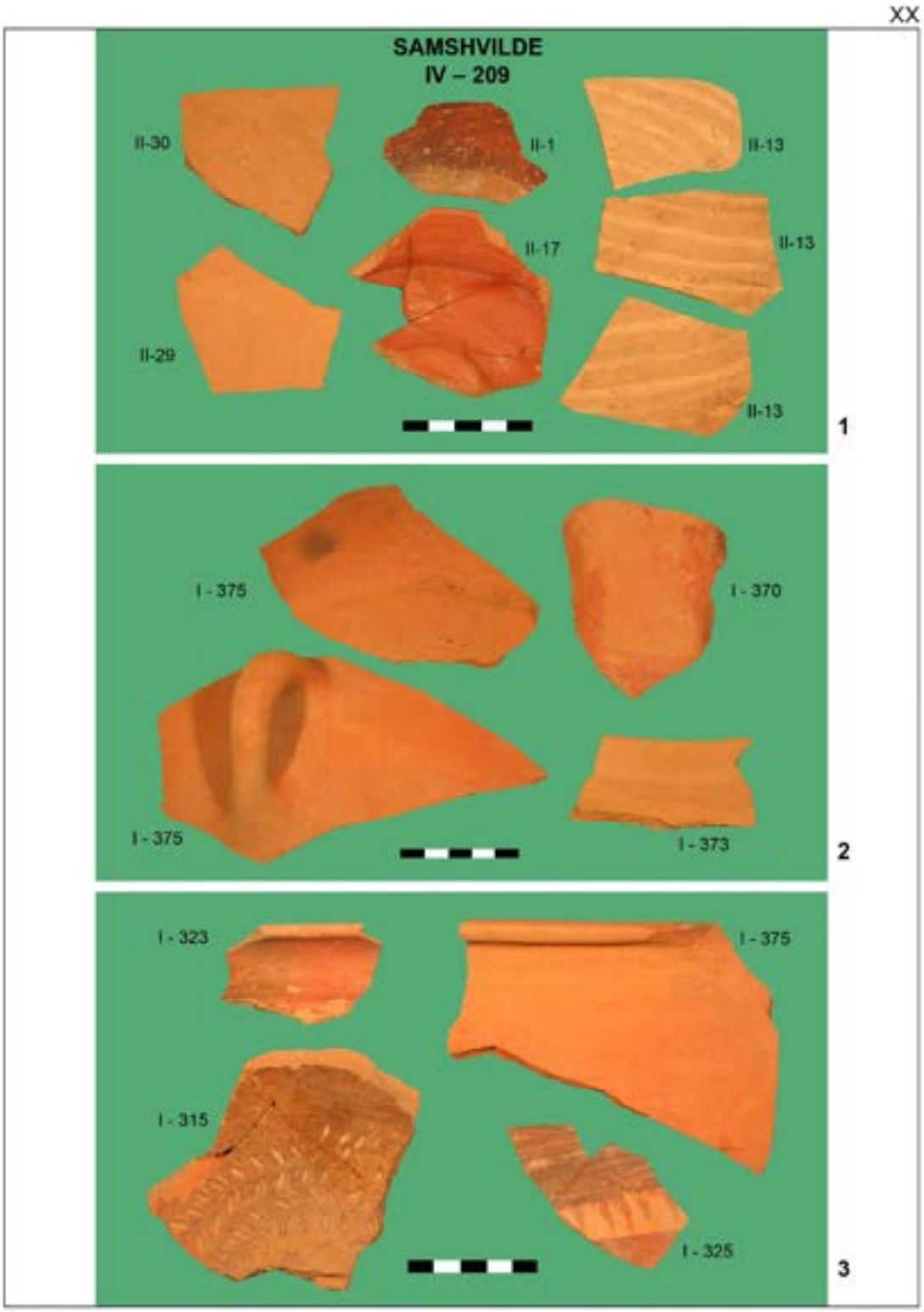



XX
SAMSHVILDE
IV – 209
II-30
II-1
II-13
II-17
II-13
II-29
II-13
1
I - 375
I - 370
I - 375
I - 373
2
I - 323
I - 375
I - 315
I - 325
3


XXI
160
162
SAMSHVILDE
IV – 209
1
163
161
159
2

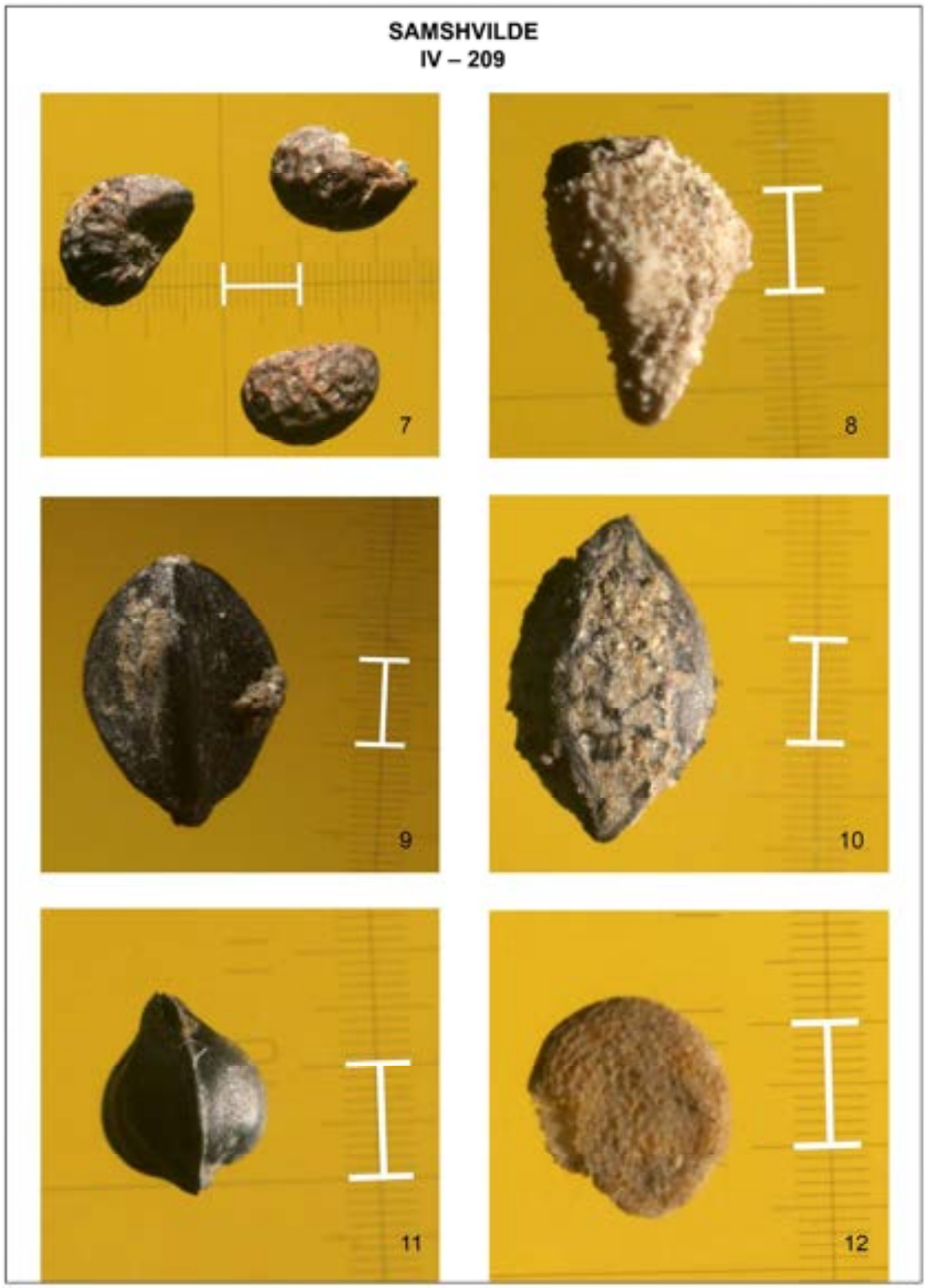
XXII

SAMSHVILDE
IV – 209

XXIII

XXIV

XXV



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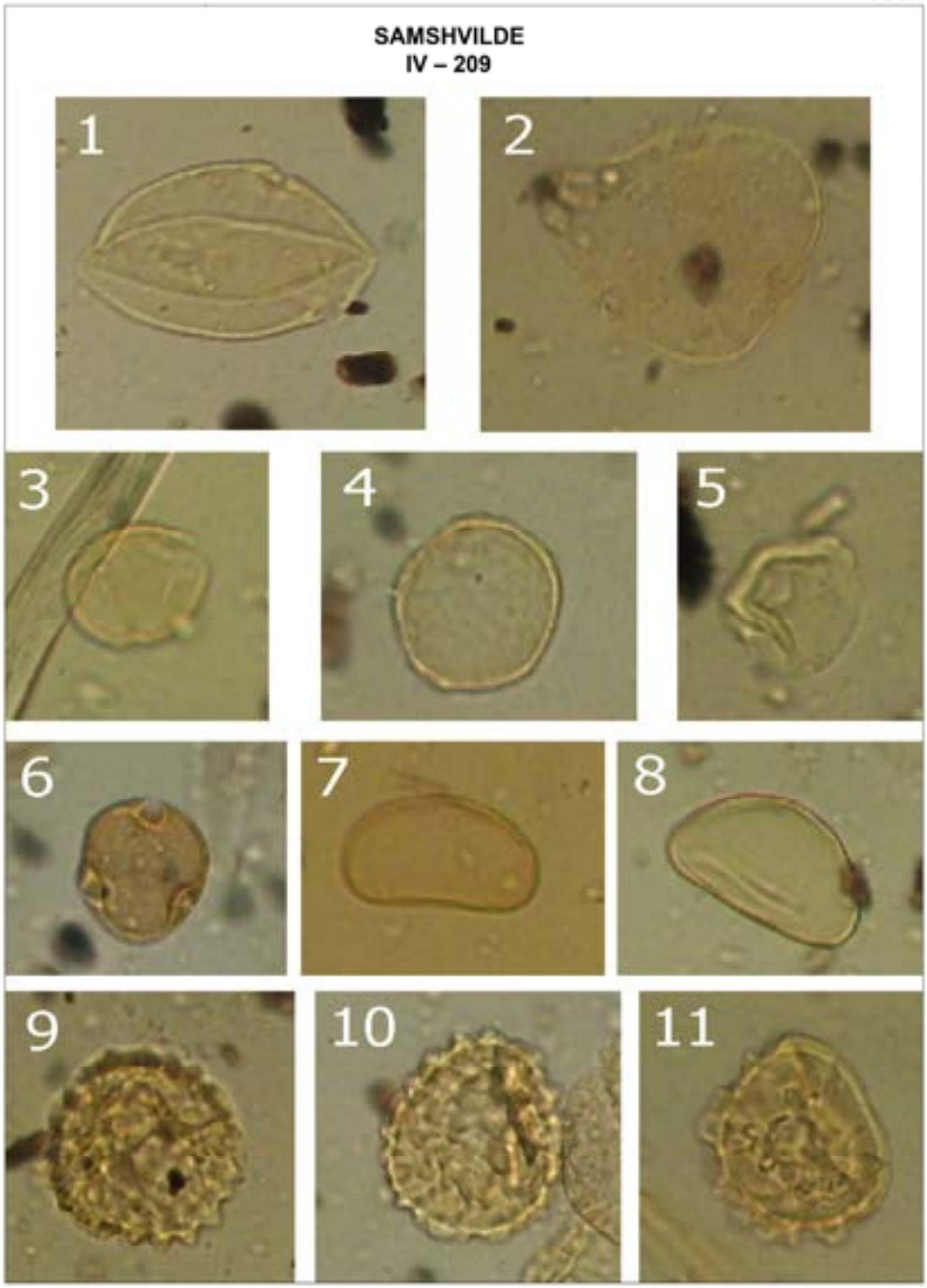

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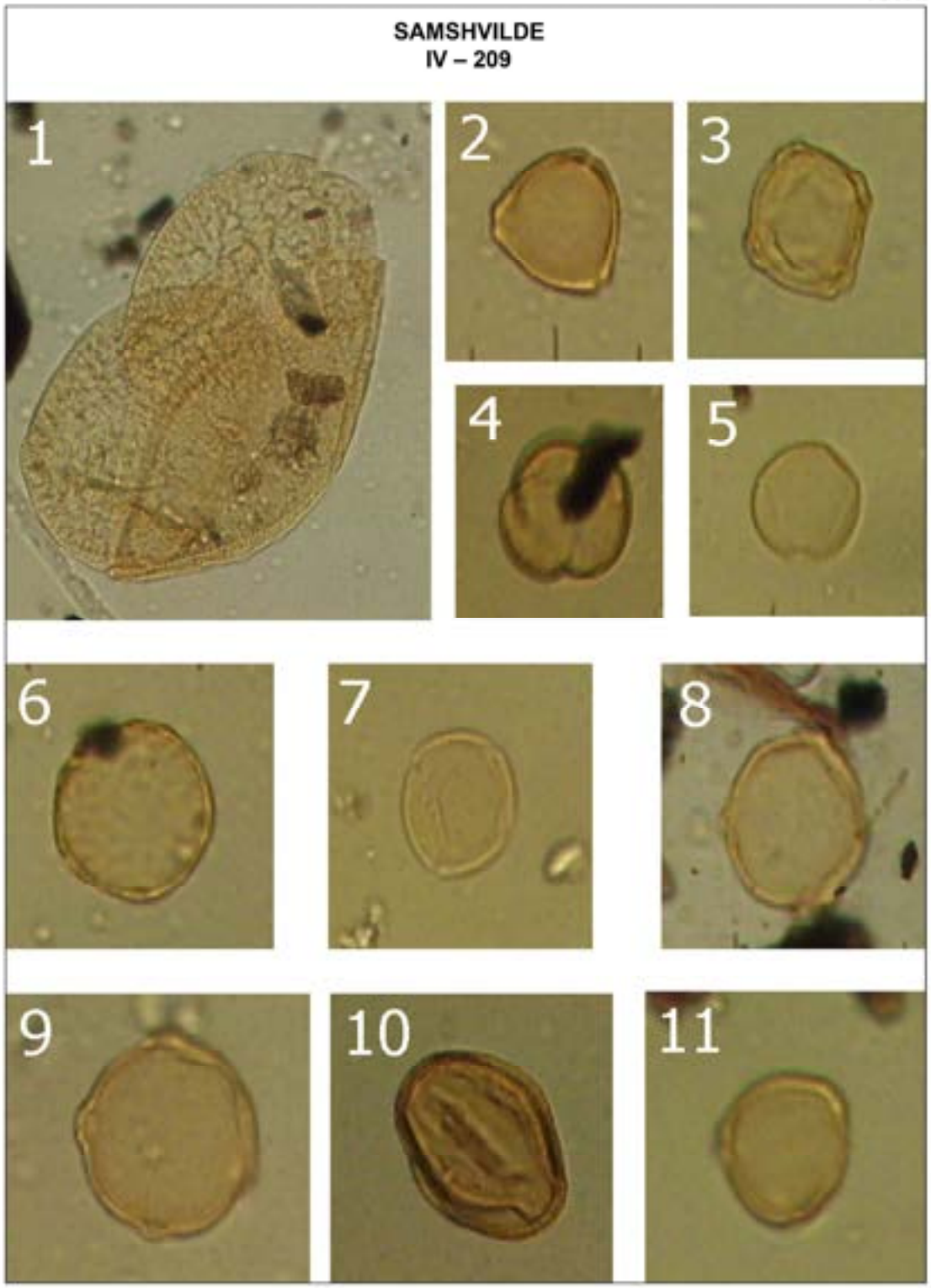

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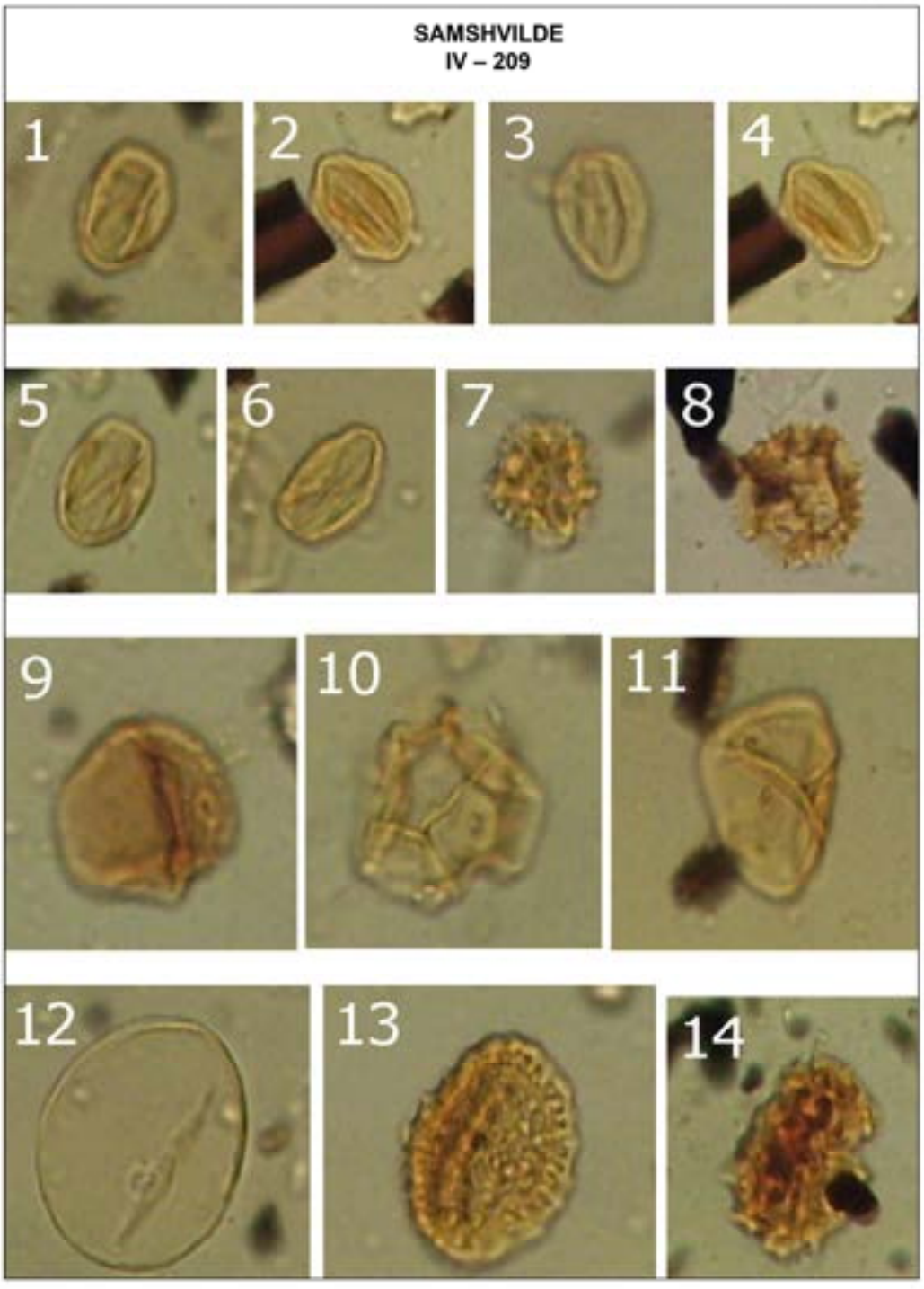
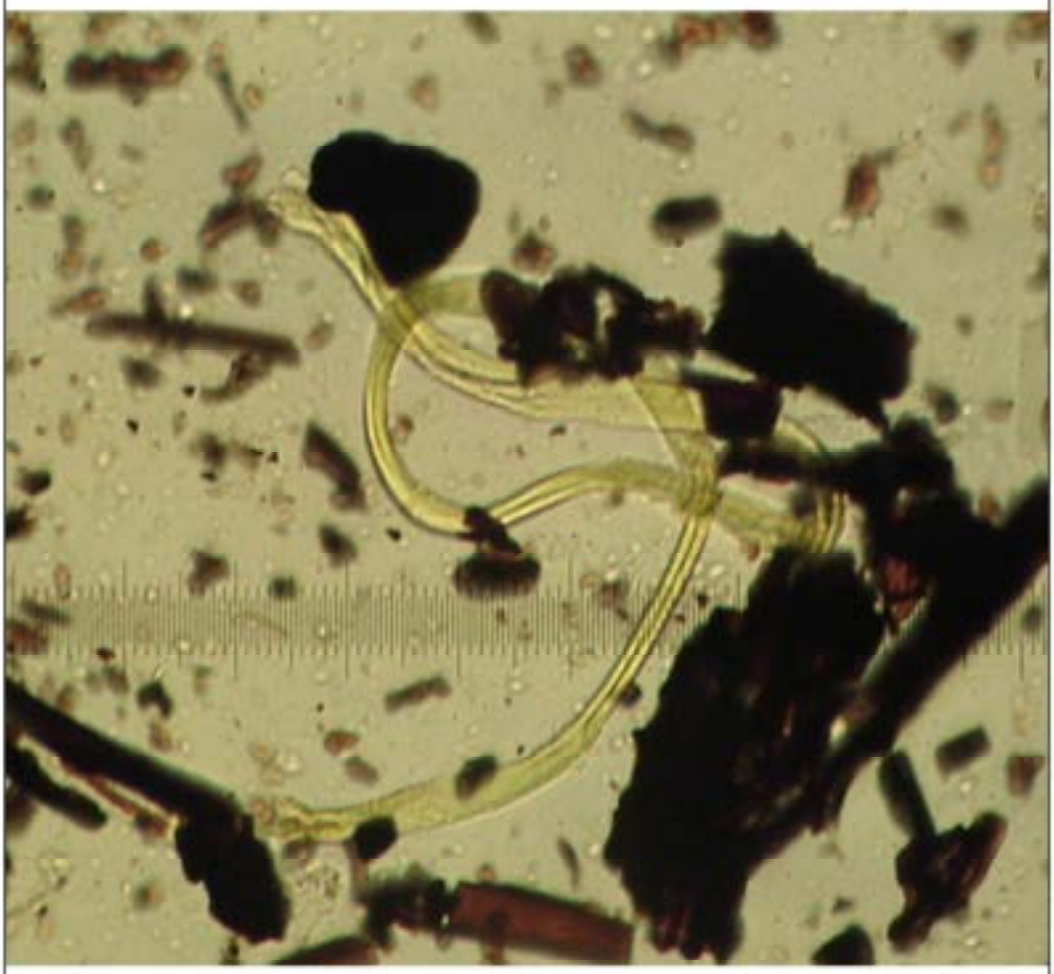
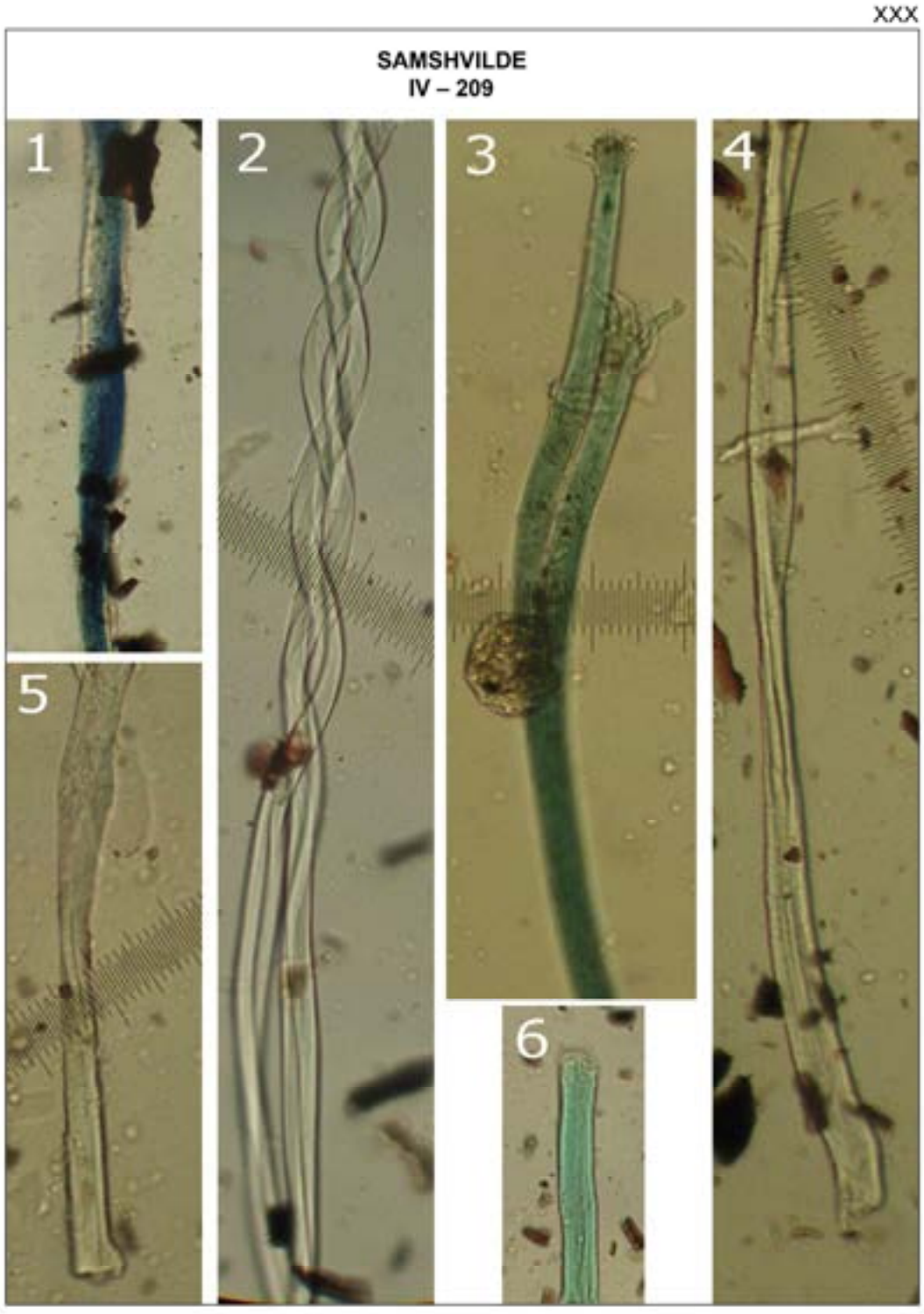


XXIX

SAMSHVILDE
IV – 209




XXX
SAMSHVILDE
IV – 209
1
2
3
4
5
6

XXXI

SAMSHVILDE
IV – 209