

IN SEARCH OF THE EARLY MEDIEVAL SETTLEMENT OF WISKIAUTEN/MOHOVOE IN THE KALININGRAD REGION

TIMO IBSEN, JOHANNES FRENZEL

Since 1865, the Viking Age cemetery of Wiskiauten in former East Prussia was investigated by first German and later Russian archaeologists. Its more than 500 burial mounds were found to contain mainly Scandinavian grave goods. They are interpreted as the remains of Scandinavian settlers, who ran a trading point in the land of the Prussians between 850 and 1050 AD. Although the cemetery was investigated by both German and Russian scholars, no settlement has been found in the past 140 years. A recent research project used geophysical survey methods covering an area of nearly 150 ha and discovered thousands of anomalies in the vicinity of the barrow cemetery. After archaeological examinations of the past four years some of these anomalies can be connected with settlement activities of the 6th to 13th cent. AD. The results are summarized in this article.

Keywords: Viking Age, 6th to 13th cent. AD, Kaliningrad Region, former East Prussia, Wiskiauten, Kaup, burial mounds, settlement archaeology, Geophysical survey.

Vikingų laikotarpio Viskiautų kapinynas buvusiose Rytprūsių žemėse (dabar – Mochovoje, Kaliningrado sr.) nuo 1865 m. tyrinėtas vokiečių, vėliau rusų archeologų. Pilkapyną sudaro daugiau kaip 500 sampilų, kuriuose aptikta daugiausia skandinaviškos kilmės radinių. Manoma, jog tai – prūsų žemėse 850–1050 m. įsikūrusių ir prekiausių skandinavų palikimas. Nors paminklas ilgą laiką tyrinėtas, gyvenvietės paieškos nebuvo itin rezultatyvios. Pastaruoju metu vykdomas tarptautinis tyrinėjimų projektas, kurio metu atliekami geofizikiniai žvalgymai. Daugiau nei 150 ha teritorijoje užfiksuota tūkstančiai anomalijų. Per pastaruosius 4 metus kai kurios buvo iširtos ir nustatyta, jog dalis jų gali būti siejamos su VI–XIII a. gyvenvietės pėdsakais. Šiame straipsnyje apibendrinami tyrinėjimų rezultatai.

Reikšminiai žodžiai: vikingų laikotarpis, VI–XIII a., Kaliningrado sritis, Rytų Prūsija, Viskiautai, Kaupas, pilkapiai, gyvenviečių archeologija, geofizikiniai žvalgymai.

INTRODUCTION

The Viking Age cemetery of Wiskiauten is situated in the midst of the richest amber reservoir of the world – the Sambian peninsula – on the territory of the early medieval culture of the Prussians, known from written sources as early as the 9th century AD (Fig. 1). Until 1945 the area belonged to Germany, whereas after the Second World War it fell to the Soviet Union. Today the modern Russian village of former German Wiskiauten is called Mohovoe.

The Prussians buried their deceased in big flat grave cremation cemeteries. Only in Wiskiauten, 500 burial mounds appear in a little forest with the old German toponym ‘Kaup’ (Fig. 2), telling us about a foreign influence at this site. The grave goods, dated to the 9th–11th century AD, are not typically Prussian and seem to originate mainly from Scandinavia.

After the first excavations, which took place in 1865, German archaeologists interpreted the barrow cemetery as the remains of Scandinavian merchants from mid-Sweden, Gotland or Denmark

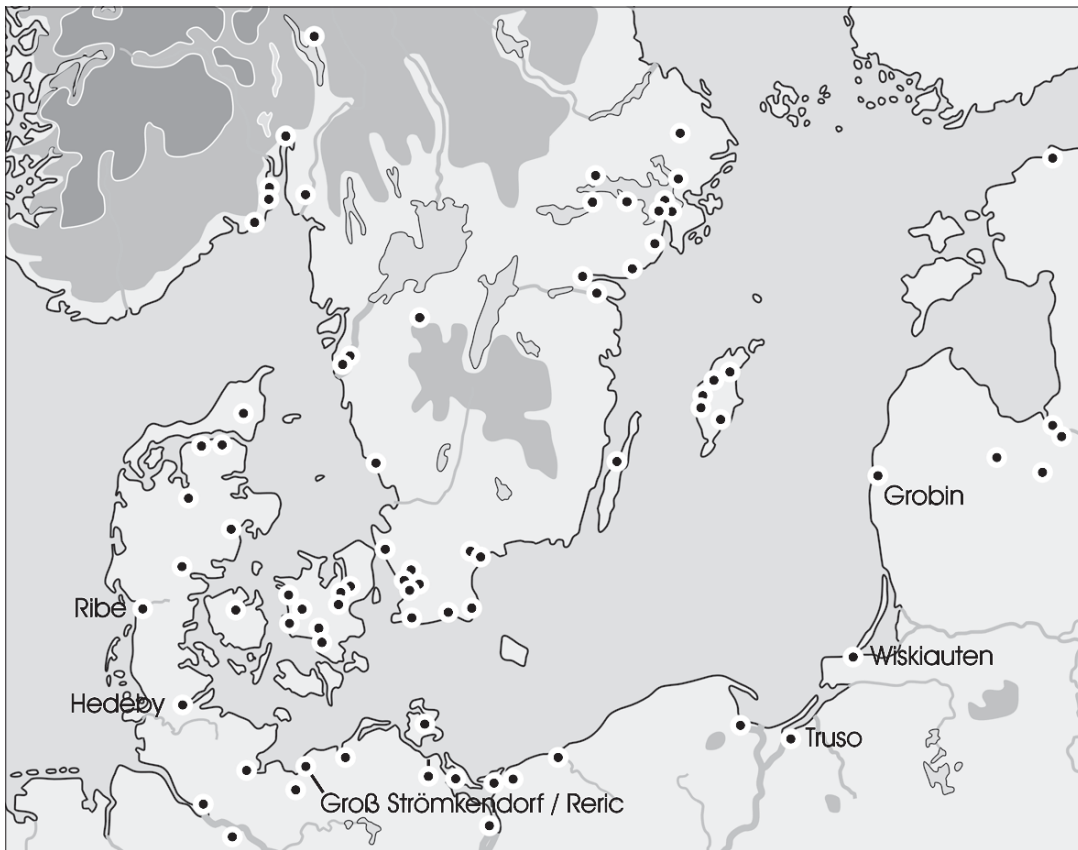


Fig. 1. Early Urban Settlements of the 8th to 11th cent. around the Baltic Sea (after Müller-Wille, 2002, fig. 1 with additions).

(von zur Mühlen, 1975, 56), who established a port of trade at the foot of the Courland Spit for nearly 200 years. This opinion is generally still accepted today, although alternative theories recently surmise a multicultural society, of which the Scandinavians formed only a small part (Wróblewski, 2006, 110). The main reason for the latter school of thought is a Prussian cemetery, consisting of two dozens of flat cremation graves, in the eastern part of the barrow cemetery. Besides, some of the graves contained horses wearing stirrups which by shape are very similar to stirrups from Scandinavia. The dating of this graveyard is still unclear because the original finds formed part of the famous Prussia-collection and are consequently missing for recent analysis.

Nevertheless, the cemetery documents the

presence of Scandinavian settlers, merchants and warriors for at least 200 years. Especially a relatively big number of female graves can only be explained with a permanent settlement near the cemetery. The supposed market place, which must have been erected shortly after the decline of Grobina 200 km north of Wiskiauten, fits perfectly into the Viking Age trading network around the Baltic Sea. Preliminarily, it can be compared with early urban settlements like Haithabu, Birka, Kaupang, Reric/Groß Strömkendorf, Menzlin, Wolin, Ralswiek or Truso, in which the Scandinavian population played a very important role.

Distribution maps of ornaments, weapons and tools from the graves show clearly that Wiskiauten was integrated in the trading activi-

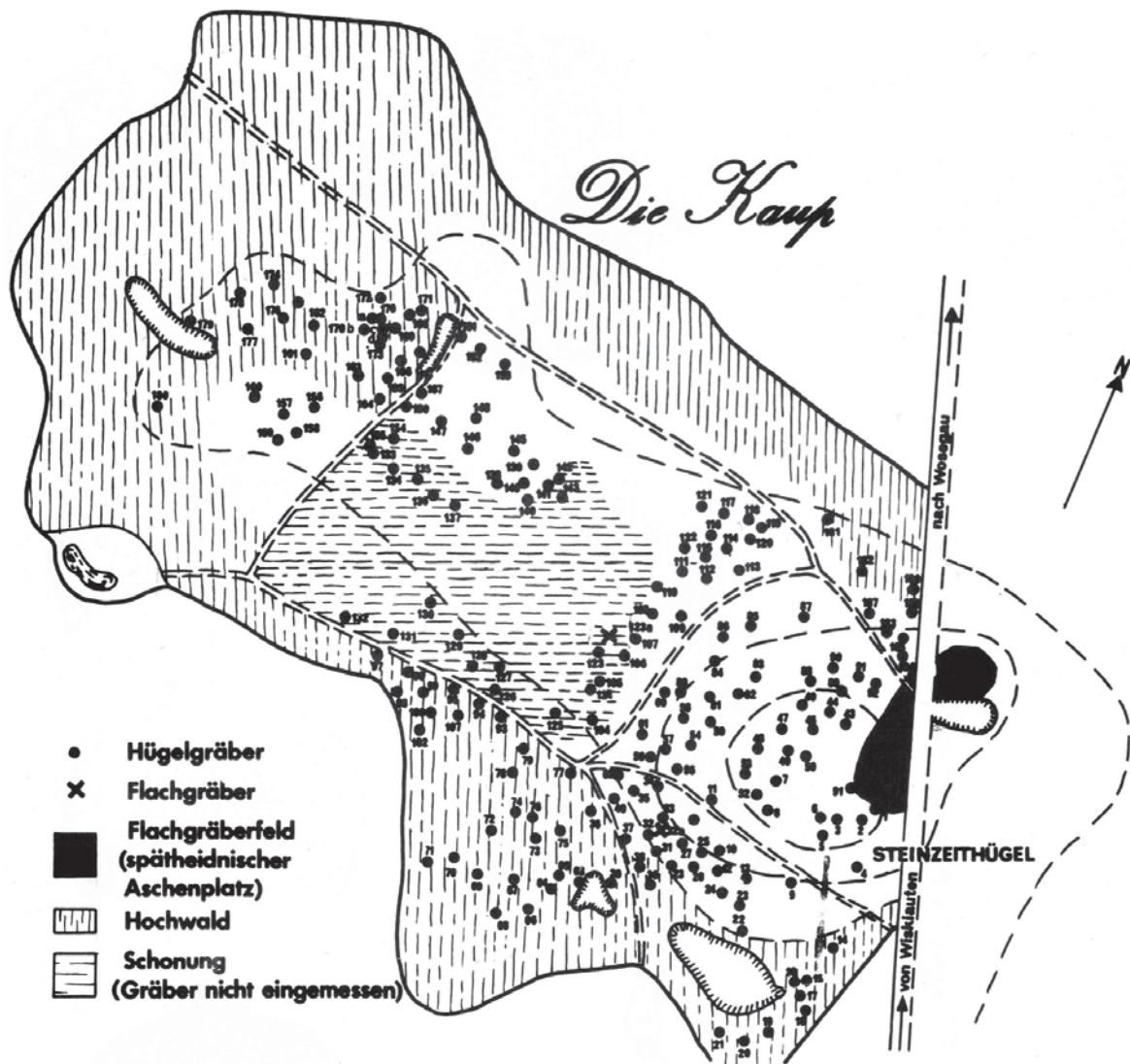


Fig. 2. Map of the barrow cemetery of Wiskiauten (von zur Mühlen, 1975, tab. 2).

ties of the Viking Age. Although the site was ever mapped as a trading place among the growing quantity of ports of trades in the southern Baltic, the place was nearly forgotten by western archaeologists in the last 65 years¹. The reason has to be searched in the very special research

history of the whole region. The tremendous amount of archaeological sites in former East Prussia, among them the site of Wiskiauten, were already excavated by German archaeologists since the middle of the 19th century. Most of the original finds and the documentations, for instance

¹ For further information about the complicated history of the so called Prussia-collection of ancient Königsberg, in which the material from Wiskiauten was integrated, see for example: Junker, Wieder, 2003; Reich, 2003; 2005; Ibsen, 2005; Valujev, 2005.

digging reports, photos and drawings were stored in the famous Prussia-collection in the castle of ancient Königsberg.

Shortly before the destruction of the castle during the war, the famous collection was evacuated and hidden at several different locations in Königsberg as well as in the West. In fact, the people in charge did their job so good that for nearly 60 years nobody knew the exact locations; the collection seemed to be totally lost.

The situation was even worse because the earlier publications could not replace the loss of the original documentations. Apart from some very exceptional finds only short reports were published in German literature and there is existing nearly no information about the grave constructions or the horizontal structure of the whole necropolis.

After the political changes of the 1990's, parts of the Prussia-collection, among them also material from Wiskiauten, were recovered from multiple sites in Eastern and Western Europe and can now be integrated into modern investigations.

Only by analyzing the ancient find material and documentations from German excavations and combining them with the results of Russian scholars, who carried out new investigations in the 1950's (Гуревич, 1963, 198) and 1970's (Kulakov, 2005, 62), can the character of the site be completely understood.

PROBLEMS AND METHODS

Although the graveyard has been under investigation and is known quite well today, archaeolo-

gists could not find any definite evidence for the location of the settlement in nearly 120 years. It was not before 1979, when the Russian archaeologist V. I. Kulakov began to work at Wiskiauten (see at last: Kulakov, 2005, 63) and presented his first ideas about the settlement 'Kaup' shortly after (Кулаков, 1994, 82, рис. 39). He is of the opinion that the colony is partly covered by the cemetery. Two excavated stone settings were interpreted as the ground plans of some houses (Kulakov, 2005, 62 f., fig. 11, 12). Kulakov (1994, 82, рис. 39) additionally analyzed an aerial photo, which led to his suggestion that Viking Age settlement structures have to be expected in the southwest of the graveyard.

Although the two aforementioned excavations gave first hints for settlement traces, further questions of the exact location of the settlement, its size, character and inner structure were not satisfactorily answered. For this reason the potential settlement area of a size of about 3 km² has been under renewed examination since 2005². The Russian-German co-operation uses modern methods such as geophysics in addition to regular archaeological excavations. During the project a 4-step strategy was developed with the aim of first limiting the possible settlement area, later excavating the most suspicious features.

The first step was to limit the borders of the possible settlement area by topographical observations. Geological drillings showed what German scholars already suggested: a branch of the Courland Lagoon, situated approx. 4 km east of Wiskiauten, in ancient times must have reached much further into the landscape forming kind of a coastline not far from the famous graveyard.

² Since 2005 the site is being investigated by a project of the Archaeological State Museum of Schleswig Centre for Baltic and Scandinavian Archaeology (Germany) and the Institute of Archaeology of the Russian Academy of Sciences Moscow (Russia). The project has been financed by the European Social Fund (ESF), the German Research Foundation and the Roman-Germanic Commission in Frankfurt a. M. as well as the Museum of Pre- and Early History in Berlin. The geophysical examinations are carried out by the Institute of Geosciences of the Christian-Albrechts-University in Kiel. Project webpage available at: <http://www.wiskiauten.eu> [accessed 02 Oct 2009].



Fig. 3. Map of the area around the cemetery of Wiskiauten with marking of the geomagnetical surveyed areas. *Map by J. Frenzel.*

Even today the area east of the modern railway (Fig. 3) is wet and swampy and forbids any settlement activity. This branch of the Lagoon can be described as a shallow open water basin, filled by two small rivers coming from the south and the west and meeting 1 km northeast of the barrow cemetery, offering perfect conditions for Viking Age shipping traffic. However even by excluding this region from the investigations, the remaining area to examine is still nearly 3 km² in size and can only be investigated by large-scale surveying.

For this reason every spring since 2005, a team of geophysicists of the Institute of Geosciences from Christian-Albrechts-University Kiel³ has scanned an area of nearly 150 ha with geomagnetical instruments. The resulting digital grayscale pictures show a loose coverage of punctual anomalies with diameters up to 4 m which in some areas form dense concentrations – probably settlement cores. The total number of suspicious anomalies can be approximated to be at least 2000, taking only the bigger ones with diameters of more than 0.8 m

³ For the large-scale geomagnetical surveys the authors thank, Dr. H. Stümpel (Institute of Geosciences of Christian-Albrechts-University Kiel) and his team.

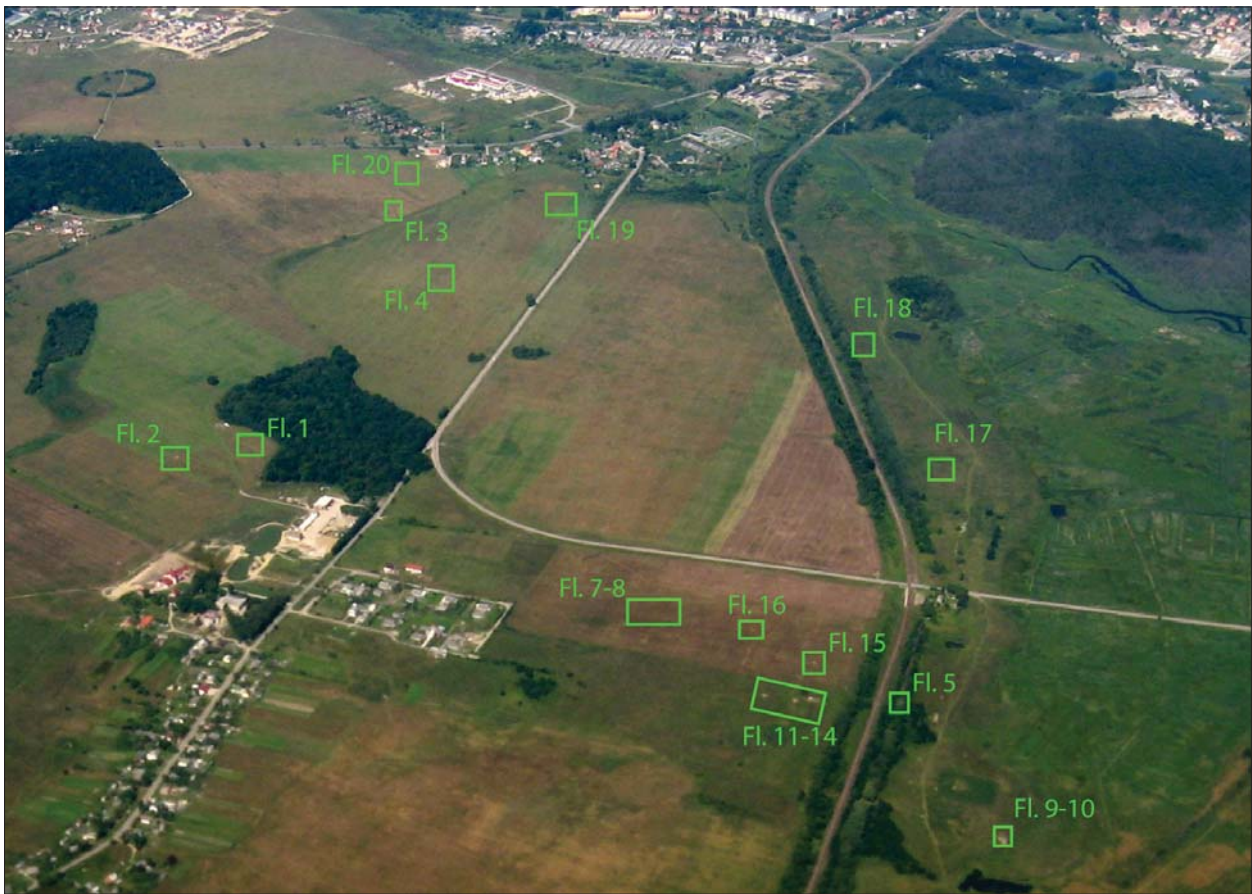


Fig. 4. Aerial picture of the vicinity of Wiskiauten with the position of the excavation areas 1 to 20. *Photo by B. Kisakurek.*

into account. Supposing that only deep and highly magnetically features can be detected by geophysical methods, the extension of the archaeologically interesting area is surprisingly big. Using geological drilling equipment, so far 200 anomalies were examined with mostly positive results. A lot of them show general human influence, but they principally could arise from all periods of history. So the next logical step is dating the anomalies. For this purpose, organic probes are extracted from drilling cores to be dated by C14-analysis⁴. According to the results nearly 75% of the anoma-

lies seem to belong to the period between the 6th and the 13th cent. AD. In the last step regular archaeological excavations are carried out. So far 20 small-scaled areas were unearthed (Fig. 4).

RESULTS

The excavation results cover a time span from Neolithic times up to the 16th century. Chronologically connected to a big burial mound in the forest 'Kaup' itself, which contained Neolithic

⁴ All datings are done by the Leibniz Laboratory for Radiometric Dating and Stable Isotope Research at the Christian-Albrechts-University of Kiel.

graves of the funnel-beaker-Culture (Kleemann, 1939, 208), excavations in the east of Wiskiauten at the banks of the supposed former coastline brought occupation layers of this period to light. They were covered by cultural layers of the Bronze Age that also appear elsewhere in the big investigated area. In addition, objects of the Pre-Roman Iron Age were identified at several spots.

Beside these single objects of prehistoric times, nearly 75% of all archaeological traces are originating from the period of the 6th to 13th cent. AD.

Traces of settlement activities from the 6th to 8th cent. AD were massively discovered in excavation area 9 in the east, close to the supposed coastline (Fig. 4). Here an oval shaped waste pit of 2 m diameter (Fig. 5), containing ceramics, slag fragments and animal bones was discovered on a little sandy peninsula in the swampy area. Only 100 m west, cultural layers of the same period were unearthed in excavation area 5, which is situated next to a little river running down from the west to the water basin. The occupation layers can be distinguished into three different horizons. Between the first and the second horizon a layer of charcoal was embedded, indicating a catastrophe or a big fire that took part between 602 and 680 AD⁵ by



Fig. 5. Waste pit in excavation area 9, dated to the 6th to 8th cent. AD. *Photo by T. Ibsen.*



Fig. 6. Feature of the 7th to 8th cent. AD in excavation area 8 with stones at the bottom. *Photo by T. Ibsen.*

C14-analysis. Among lots of pottery sherds and animal bones, a grindstone and fragments of crucibles and pieces of slag from metalliferous handicraft were discovered.

⁵ KIA 34277: Radiocarbon Age: BP 1398 +/- 30, One-Sigma-Range: cal AD 621-663, Two-Sigma-Range: cal AD 602-680.



Fig. 7. Bronze bead of Wiskiauten/Mohovoe (left upper corner; *photo by T. Ibsen*) in comparison with a ringbit from grave 497 in Ire, Gotland (after Thunmark-Nylén, 1995, fig. 193), decorated with bronze beads of the same shape.

Further west on the upper reaches of the same brook in excavation areas 12 and 13 (Fig. 4), a shallow ditch and a posthole with remains of a wooden post, splined by a few big stones, could be documented. Another pit, used for a so far unidentified production process, was unearthed in excavation area 8 (Fig. 4) embedded in a dense concentration of anomalies. The pit was lined with bigger stones (Fig. 6) at its sole, forming a quadratic shape. Most probably these stones were meant to store heat from a fire, which burnt inside the pit itself. The filling consisted of a huge amount of lumps of vitrified clay, some of them showing traces of rounded wood or bigger branches, indicating wattle-and-daub houses in the near vicinity. Overall these archaeological features of the 6th to 8th cent. AD, which are covering an area of approximately 400 by 200 m, can be interpreted as the remains of a bigger residential area of this period. Presumably indigenous Prussians erected their houses here. Some single C14-dates out of three anomalies in the neigh-

borhood indicate, that principally this settlement could have also existed in the 9th or 10th cent. Additionally in the same area, a bronze bead was found as a stray find on the surface (Fig. 7). Exact analogies can only be found on Gotland in graves of the 10th cent. AD; for example in grave 497 of Ire (Thunmark-Nylén, 1995, fig. 193), nearly identical pieces functioned as attachments to the rings of a snaffle. Bigger excavations, planned in this territory in the near future, can hopefully confirm this preliminary interpretation.

Approximately 1 km northeast of the barrow cemetery, features of the same period comprising a hearth and some cultural layers were discovered. They were unearthed in excavation areas 3 and 20 (Fig. 4) and could be dated into the period of the 6th to 10th cent. AD by C14-analysis. Especially a black incrustation, probably burnt food, on a single fragment of handmade pottery was dated to the time between 721 and 959 AD⁶. This is the second spot with early medieval evidence of settlement, which shows that at least two settlements might have existed when the Scandinavians arrived in the area and started to use the cemetery in the forest 'Kaup'.

Exceedingly unclear is the fact that so far no distinct marks of the Scandinavian population could be identified within the settlement structures. Only some dates from single, not yet excavated anomalies hint at the possibility that there also existing features of the Viking Age. Maybe the cultural layers of this time already have been destroyed by deep ploughing activities within the last centuries. Nevertheless, some deeper features should have survived, but have not been detected yet.

Really clear are the traces of humans during the second half of the 11th cent. This period is represented by a 4.5x4.5 m stone well, established approx. 140 m south of the Scandinavian's necropolis in excavation area 2. A big black

⁶ KIA 30156: Radiocarbon Age: BP 1196 +/- 32, One-Sigma-Range: cal AD 781-882, Two-Sigma-Range: cal AD 769-955.

anomaly of nearly 4 m indicated an archaeological object in this area before the excavation. Drillings had proven the existence of a huge amount of stones close to the surface. After removing the ploughing horizon, a quadratic shaped pit appeared. Although first interpreted as a feature of a sunken feature building, after digging deeper and deeper a well consisting out of hundreds of stones arranged in a circle emerged (Fig. 8). Its inner construction can be described as follows: a tube of big stones was erected in a quadratic pit. The inner diameter was 1.8 to 1.2 m, narrowing towards the bottom. Each stone was orientated towards the middle of the well's shaft along its long axis. After building this chamber, the interspaces between the walls and the shaft of the pit were filled up with bigger stones. The well was excavated to a depth of 4 m, until the strong flowing groundwater stopped any further excavation.

Lots of pottery fragments and animal bones, as well as some single beads, weights, loom weights, bone tools, comb fragments and amber pieces were extracted from the well's shaft. The ceramics, technologically comparable to middle and late Slavonian pottery, combined with three C14-dates indicate that the well might be dated into the middle or the second half of the 11th cent. AD and hence into the period shortly after the cemetery was abandoned. It probably served a relatively big village with freshwater.



Fig. 8. The well in excavation area 2 was unearthed to a depth of 4.5 m. *Photo by T. Ibsen.*

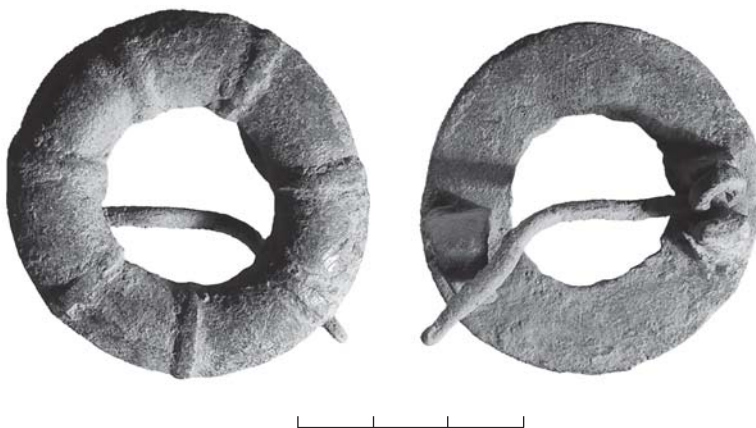


Fig. 9. Prussian Ring brooch from excavation area 4, dated to the 11th or 12th cent. AD. *Photo by T. Ibsen.*

Over 60 traces of wooden posts were found in another excavation trench in the north of the cemetery in excavation area 4 (Fig. 4). They at least belong to a bigger house. The find material suggests that it was constructed in the late 11th or early 12th cent. C14-analysis confirm the dating (BP 957 +/- 26; cal AD 1020-1159 (2-Sigma-Range)), although there are also some hints for

earlier constructions at the 8th to 10th cent. AD. The excavated area is too small for a reconstruction of a ground plan. A lot of pottery sherds, a byzantine silvercoin, a ring brooch (Fig. 9), a bead made of jet and several other objects tell us about an intensive settlement activity in this area. They all belong to the later phase of the 11th/12th cent. AD.

Several stray finds of weights and silver coins in the immediate neighbourhood confirm the suspicion that the settlement of Wiskiauten, whose economical power surely stems from the rich amber deposits of the region, could have been a trading point of supra-regional importance in the Viking Age.

All things considered the excavation results indicate that there must have been a settlement that moved with time. Maybe it already began in the period of the 6th to 8th cent. AD near the banks of the little river in the north or the east. Whereas the time span of the 9th and 10th cent. AD only is proven by some single C14-dates, the time of the 11th and 12th cent. AD is well documented with the traces of well and the post houses. So far it can be pointed out, that the majority of finds belongs to the Prussian Culture, whereas typical Scandinavian settlement finds are still missing.

CONCLUSIONS

The investigation of the settlement structures around the cemetery of Wiskiauten/Mohovoe just started and will be continued in the next years. Nevertheless, the results up to now promise some very interesting conclusions, suggesting that the whole place will probably be seen in a new light in near future. Already now a new theory is shaping in the investigators heads. The settlement was widespread, probably beginning at different places and much earlier than estimated before. The local Prussians had already inhabited the settlement chamber and established an infrastructural system, which was probably used by the Scandina-

vian settlers between the 9th and 11th cent. AD as well. Still the cemetery proves the Scandinavian presence very clearly. They most likely took part in the settlement, mainly ran by the Prussians. For about 150 or 200 years Wiskiauten was integrated into a bigger trading network around the Baltic. Otherwise the rich graveyard can not be explained. After the Scandinavians left the scenery, a settlement continued and was still functioning as a trading knot, maybe on a smaller scale, until the Teutonic Order conquered the land of the Prussians in the 13th cent. AD.

REFERENCES

- Ibsen T.**, 2005 – 100 Jahre Sammeltätigkeit. Die Prussia-Sammlung von ihren Anfängen bis zum 2. Weltkrieg // Die Prussia-Sammlung – Der Bestand im Museum für Geschichte und Kunst Kaliningrad. Bremen, 2005.
- Junker H., Wieder H.**, 2003 – Das neue Prussia-Fundarchiv in Berlin // Archäologisches Nachrichtenblatt. 2003, 8.1, p. 3–13.
- Kleemann O.**, 1939 – Die vorgeschichtlichen Funde bei Cranz und die Siedlung von Wiskiauten // Sitzungsberichte der Altertumsgesellschaft Prussia. 1939, Band 33, p. 201–225.
- Kulakov V. I.**, 2005 – Die wikingerzeitliche Siedlung und das Gräberfeld Kaup bei Wiskiauten. Bericht über die Ausgrabungen der Jahre 1956–2004 // Offa. 2002/2003 (2005), 59/60, p. 55–79.
- Müller-Wille M.**, 2002 – Frühstädtische Zentren der Wikingerzeit und ihr Hinterland. Die Beispiele Ribe, Hedeby und Reric // Abhandlungen der Akademie der Wissenschaften und Literatur Mainz, Geistes- und sozialwissenschaftliche Klasse. Stuttgart, 2002, p. 3.
- Reich Chr.**, 2003 – Archäologie einer vorgeschichtlichen Sammlung, Die Bestände des ehemaligen Prussia-Museums im Berliner Museum für Vor- und Frühgeschichte // Arch. Nachrichtenbl. 2003, 8.1, p. 14–23.

Reich Chr., 2005 – Die Prussia-Sammlung im Museum für Vor- und Frühgeschichte // Acta Praehistorica et Archaeologica. 2004/2005, 36/37, p. 343–354.

Thunmark-Nylén L., 1995 – Die Wikingerzeit Gotlands I, Abbildungen der Grabfunde. Stockholm, 1995.

Valujev A., 2005 – Die Geschichte des Kaliningrader Bestandes der Prussia-Sammlung // Die Prussia-Sammlung – Der Bestand im Museum für Geschichte und Kunst Kaliningrad. Bremen, 2005.

Von zur Mühlen B., 1975 – Die Kultur der

Wikinger in Ostpreußen // Bonner Hefte zur Vorgeschichte. Bonn, 1975, Nr. 9.

Wróblewski W., 2006 – Invaders, Merchants or Settlers // Transformatio mundi. The transition from the late Migration period to the early Viking age in the east Baltic (ed. Mindaugas Bertasius). Kaunas, 2006, p. 107–116.

Гуревич Ф. Д., 1963 – Норманский могильник у дер. Вишнево // Скандинавский сборник. 1963, VI, с. 197–210.

Кулаков В. И., 1994 – Пруссy (V–XIII вв.). Москва, 1994.

ANKSTYVŲJŲ VIDURAMŽIŲ GYVENVIETĖS PAIEŠKOS VISKIAUTUOSE/ MOHOVOJE, KALININGRADO SRITYJE

Timo Ibsen, Johannes Frenzel

Santrauka

Straipsnyje aptariami naujų tyrinėjimų buv. Rytprūsių žemėje, vikingų periodo Viskiautų (dabar – Mochovoje, Rusija, Kaliningrado sr.) archeologinėje vietovėje rezultatai. Tyrimai atlikti gerai žinomo Viskiautų pilkapyno aplinkoje. Pilkapyną, kuris tyrinėjamas nuo 1865 metų, sudaro apie 500 sampilų, datuojamų IX–XI a. Pilkapiuose daugiausia aptikta kremacijų su skandinaviškos kilmės radiniais. Manoma, jog tai – prūsų žemėse 850–1050 m. įsikūrusių skandinavų palikimas.

Nors paminklas ilgą laiką tyrinėtus, vienalaikės skandinavų gyvenvietės paieškos buvo ne itin rezultatyvios. Pastaruoju metu jos paieškoms pasitelkti geofizikiniai metodai. Išžvalgyta maždaug 150 ha teritorija pilkapyno aplinkoje. Užfiksuota keli tūkstančiai anomalijų, 200 iš jų buvo patikrinta gręžiniais, didelė dalis datuota C14. Daryta prielaida, kad dauguma objektų gali būti siejami su VI–XIII a. žmonių veikla gyven-

vietėje. Iširta 20 perkasų, kurių radiniai – keramika, gyvulių kaulai, metaliniai dirbiniai patvirtino šią prielaidą. Tai ankstyvųjų viduramžių prūsiškosios kultūros palikimas. IX–XI a. skandinavai greičiausiai gyvenę kartu su vietiniais gyvenvietėje, kuri buvo įkurta jau vėlyvuosiu migracijų periodu ir gyvavo iki Vokiečių ordino įsiveržimo XIII a. viduryje.

ILIUSTRACIJŲ SĄRAŠAS

1 pav. Ankstyvosios miesto tipo gyvenvietės VIII–XI a. Baltijos jūros regione (pgl. Müller-Wille, 2002, fig. 1, su autorių papildymais).

2 pav. Viskiautų pilkapyno situacinis planas (Von zur Mühlen, 1975, tab. 2).

3 pav. Geomagnetškai žvalgyti plotai Viskiautų pilkapyno aplinkoje. *J. Frenzel planas.*

4 pav. Viskiautų pilkapyno aplinkoje atliktų žvalgomųjų archeologinių tyrimų vietų 1–20

situacijos aerofotonuotrauka. *B. Kisakurek nuotr.*

5 pav. VI–VIII a. atliekų duobė perkasoje 9. *T. Ibsen nuotr.*

6 pav. Perkasoje 8 aptiktas VII–VIII a. datuojamas objektas su akmenimis dugne. *T. Ibsen nuotr.*

7 pav. Žalvarinis karolis iš Viskiautų (kairiame kampe viršuje (*T. Ibsen nuotr.*); plg. žąslai, puošti

tokios pačios formos žalvariniais karoliais, iš kapo 497 (Ire, Gotlande) (pgl. Thunmark-Nylén, 1995, fig. 193).

8 pav. Šulinys perkasoje 2 (iškastas iki 4,5 m gylio). *T. Ibsen nuotr.*

9 pav. XI–XII a. prūsiška žiedinė segė iš perkastos 4. *T. Ibsen nuotr.*

Dr. Timo Ibsen

Centre for Baltic and Scandinavian Archaeology – Stiftung Schleswig-Holsteinische Landesmuseen Schloß Gottorf

Address: Schloß Gottorf, 24837 Schleswig

phone-number: 04621 813 507

email-address: ibsen@schloss-gottorf.de

Gauta 2009 04 17

Johannes Frenzel M. A.

Centre for Baltic and Scandinavian Archaeology – Stiftung Schleswig-Holsteinische Landesmuseen Schloß Gottorf

Address: Schloß Gottorf, 24837 Schleswig

phone-number: 04621 813 508

email-address: frenzel@schloss-gottorf.de