

# LANDSCAPES OF CEMETERIES FROM THE ROMAN AND MIGRATION PERIODS IN THE MASURIAN LAKELAND (NORTHEAST POLAND)

MALGORZATA KARCZEWSKA, MACIEJ KARCZEWSKI

## Abstract

The article discusses the question of palaeolandscapes of cemeteries from the Roman Period and the Migration Period in the area of the Masurian Lakeland. The primary purpose of the multidisciplinary study was to answer the questions: 1) whether the natural features of the palaeolandscape were important for the choice of location for a cemetery; and 2) whether the inside landscapes of cemeteries were consciously shaped and lasted long. An analysis of the locations of several cemeteries from the Roman Period and the Migration Period uncovered in the study area showed clearly that there was a close relationship between the location of the cemetery and palaeo-environmental conditions, especially the relief, bodies of water (lakes, rivers and streams), and the plant cover. Of particular importance were elevated isthmuses between two lakes. The specific habitat conditions of these areas conditioned the specific and diverse plant cover. All of these elements of the natural palaeolandscape made the sacred place clearly visible in the settlement area.

Case studies of the cemetery in the village of Paprotki Kolonia (northeast Poland) showed that the layout of the cemetery lasted long, and was clearly visible to the local community in the first centuries AD. It enabled the precise location of the next cremations, horse sacrifices and other ritual activities in the area of the cemetery.

Key words: West Balts, Roman Period, palaeolandscapes, cemeteries, multidisciplinary studies.

DOI: <http://dx.doi.org/10.15181/ab.v23i0.1299>

In symbolic culture nothing is accidental, and especially beliefs and rituals and their material traces. Most material evidence of beliefs and ritual activities from the Roman and Migration periods in the Masurian Lakeland comes from cemeteries. So far, in studies of cemeteries and burial rites, archaeologists have focused on features such as types of graves, vertical and horizontal stratigraphy, the typological and chronological analysis of grave goods, the anthropological analysis of human bones, and other elements of the layout of a cemetery, such as relics of pyres, as well as the archaeozoological and archaeobotanical analysis of animal and plant macroscopic remains. But these features are not an exhaustive analysis of the sources derived from cemeteries. We can assume that all of the activities connected with the cult of the deceased, and probably also with some other beliefs, took place at cemeteries, and traces of these activities have been directly or indirectly recorded in the archaeological record.

Most likely, the location of a sacred space in the territory occupied by a local community must have a fundamental meaning. Thus, the key question is: whether the locations of cemeteries were chosen accidentally, or whether they have certain characteristics? If so, what characteristics determined the location of the cemetery, and why? Were these required elements visible in the

natural and cultural landscapes, or were they hidden? What characteristics formed sacred landscapes?

## The landscape

The landscape is the physiognomy of the space segment shaped by natural and cultural factors and perceived by humans. It consists of environmental and cultural elements in continuing dynamic association, and reflects the natural evolution of the environment, as well as the result of human activities. In cultural respects, the landscape was, and still is, not only a space for all human activities, but also an important feature of both: the identity of the community living in it, and the characteristics of neighbouring communities. This definition of landscape is close to contemporary approaches to the landscape in archaeology (Anschuetz et al. 2001, 160ff.; Dincauze 2000, 390-391; Jankuhn 2004, Fig. 7).

Each landscape has its diameter, which depends on the reach of the human senses, e.g. the range of vision. So the diameter of a landscape is usually from a few to over a dozen kilometres. Ways of perceiving landscape depend on the cultural conditions and the individual characteristics of each observer. The landscape can be perceived at various levels: natural, economic, social,

emotional (symbolic), etc. This results in the subjective perception and valuation of the landscape. Contemporary landscapes can be perceived both from the inside and the outside, and this perception is multisensory, with the use of all of the human senses (Chmielewski 2008, 96). Features of landscapes are in continuous and dynamic change, so a landscape's physiognomy varies not only in the different seasons, but also at different times of the day, e.g. depending on the weather conditions (Suter 2007, 243). Moreover, the space of each landscape contains permanent elements, such as relief, surface water, plant cover, settlements and cemeteries; semi-permanent elements, changing in the different seasons, e.g. farmland; and unstable episodic elements, e.g. animals appearing in the landscape, and a person performing an action. Particular permanent elements, of both natural and cultural origin, can function in the landscape as landmarks.

The same landscape observed from the outside and from the inside differs. The difference is caused by the varied structure of the observed elements of the landscape. Furthermore, some cultural elements of a landscape can be specified as invisible or hidden. These elements include local names, consisting of hydronyms and toponyms (names of streams, hills, stones, etc). These elements are perceived only by the local communities living in the landscape.

Each landscape has a spatial dimension, and consists of material and non-material elements remaining in a dynamic balance. This complex includes relief, superficial formations and water, soil, plant cover, animals, atmospheric phenomena, and cultural elements, as well as people themselves. The environment/landscape conditions were of basic importance to all human activities in the past. At the same time, human activities defined by settlement, the economy, politics and ideology caused the evolution and transformation of the landscape. The range of anthropogenic, permanent changes implemented in the landscape enables a typological approach. All types of contemporary landscape and landscapes in the past are comprised of all-natural landscapes and landscapes shaped by humans (Karczewski 2011, 204). The relationships between natural and cultural elements, as well as the meaning of the cultural elements, form the basis for defining different types of landscape: natural, settlement, economic, sacred landscapes, etc.

These approaches in studies on landscapes in the past, defined as 'historical landscapes', 'ancient landscapes' and 'palaeolandscapes', are very limited according to the source database (Karczewski 2011, 204ff.).

## Source database for the study of palaeolandscapes of cemeteries from the Roman Period and the Migration Period in the area of the Masurian Lakeland

The basic source database for the study of sacred palaeolandscapes in the Roman Period and the Migration Period in the area of the Masurian Lakeland is information on the locations of well or fully excavated cemeteries. In the case of this kind of archaeological site, in contrast to partly excavated cemeteries, or cemeteries known only from surface research, it is possible to determine the exact spatial relationships of their internal spatial organisation with the local landscape, and the full period of their usage. Information on the settlement pattern and the chronology of the settlement micro-region connected with the cemetery is of great importance too. Moreover, information on natural elements of the local landscape and their evolution in the Roman and Migration periods is necessary.

Around 135 cemeteries of Bogaczewo culture are known in the area of the Masurian Lakeland (Table 1, Fig. 1). In the same area, around 11 cemeteries are dated only to the developed phase of the Migration Period (phase E), connected strictly with the Olsztyn Group (Table 2, Fig. 1). But in the same chronological phase, around 52 of the earlier cemeteries were still in use (Table 1, Fig. 1). Unfortunately, from the total amount of over 140 cemeteries, only a few can be included in the detailed research on the landscapes of cemeteries, sacred landscapes. Most of these cemeteries were uncovered and excavated at the end of the 19th century and in the first decades of the 20th century. The results of these excavations were largely not published in detail, and archival records are still not elaborated. However, even in the current state of research, we can assume that cemeteries of Bogaczewo culture and the Olsztyn Group were the most stable and long-lasting elements of the settlement pattern, the cultural landscape. Most of these cemeteries were established in the first century AD, and lasted into the sixth or seventh century AD. It is very probable that the shorter chronology of some cemeteries in fact reflects the state of excavation or the publication of its results. A close relationship between the number of excavated (known) graves and the chronology of the cemetery is visible. The more graves are known, the broader the chronology of the cemetery is (Table 1).

Another important problem of the source database is the lack of precise information on the location of most cemeteries. In fact, as early as 1904, Emil Hollack and Felix Ernst Peiser, in a monograph on the cemetery in Mojtyny (in German Moythienen), mentioned

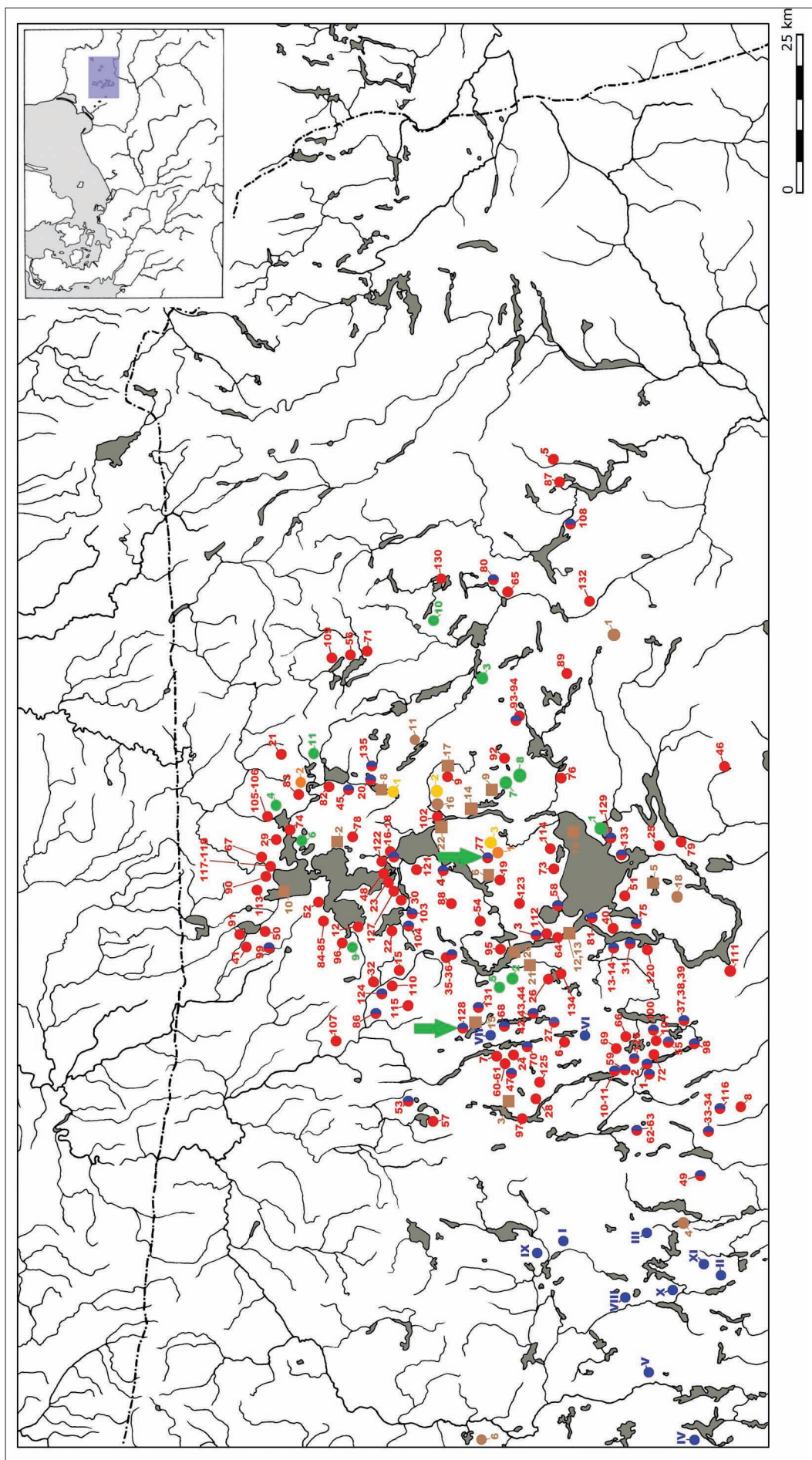


Fig. 1. The location of: I cemeteries of Bogaczewo culture and the Olsztyn Group; II areas of geological-geomorphological and palaeopedological research; III palaeolimnological research; IV pollen records with preserved subatlantic pollen grains in the area of the Masurian Lakeland; V lakes with laminated and partly laminated sediments (for site names, see Tables 1-2 and Appendix 1).

**Table 1.** Cemeteries of Bogaczewo Culture also used as cemeteries of the Olsztyn Group (after to Hollack, Peiser 1904; Okulicz 1958; Jaskanis 1977; Kowalski 1991, 2000; Lenarczyk 1991; Siemaszko 1991, 2007; Karczewska 1999; Hoffmann 2000; Karczewski M. 2001, 2011; Barczyk 2004; Szymański 2004, 2005; Nowakowski 2001, 2004, 2007a, 2007b; Juga-Szymańska 2007; Hilberg 2009; Szter 2010; Bitner-Wróblewska et al. 2011). For site location see Fig. 1

No on Fig. 1	Village and number of site	Archival name of village	Chronology*	Number of excavated graves
1	Babięta I	Babienten	B, C, D, E	572
2	Babięta II	Babienten		over 300
3	Bartlikowo	Bartlickshof	B, C, D, E	at least 440
4	Bogaczewo-Kula	Kullabrücke / Bogatzewen	B, C, D, E	444
5	Borzymy	Borschimmen	B, C	?
6	Brejdyny	Brödienen	C	?
7	Bronikowo	Bronikowen	C, D	?
8	Chochół	Friedrichsfelde	B, C, D	?
9	Czyprki/Malinka/ Szczepanki	Czyprken	B2/C <sub>1</sub> -C <sub>1a</sub>	?
10	Dłużec I	Langendorf	B, C, D, E	635
11	Dłużec II	Langendorf	B, C, D, E	90
12	Doba	Doben	B, C	?
13	Gąsior I	Gonschor (Jaskowska-See)	B, C, D, E	434
14	Gąsior II	Gonschor (Jaskowska-See)		at least 215
15	Gierłoż	Waldhaus Görlitz	B, C	at least 55 excavated and ca 60 more destroyed
16	Giżycko st. I Góra Szubieniczna	Lötzen, Galgenberg	A <sub>3</sub> , B, C, D, E	over 103
17	Giżycko st. II	Lötzen	B, C	?
18	Giżycko 18	Lötzen	B, C	?
19	Górkło	Gurkeln	B, C	116
20	Grądy Krukłaneckie	Grunden / Siewken / Abbau Kruglinnen	B, C, D, E	75
21	Grodzisko	Grodzisko-Schlossberg (Grodzisko bei Kutten)	B, C, D	?
22	Grzybowo	Grzybowen	A <sub>3</sub> -B <sub>1</sub> , B, C	24
23	Guty	Gutten	B, C	ca 40
24	Gwiazdowo	Sterenfelde	B, C, D	109
25	Imionek	Immioneck	B, C	?
26	Inulec	Inulzen	B, C	at least 20
27	Jakubowo	Jakobsdorf	B <sub>2</sub> /C <sub>1</sub> , C, D, E	at least 118
28	Jędrychowo	Heinrichshöfen	B <sub>2</sub> /C <sub>1</sub> , C, D	at least 287
29	Kal	Kehlen „Thymianshügel”	B, C, D?	3?
30	Kalinowo	Kalinowen	B, C	?
31	Kamień	Kamień	B, C, D, E	at least 164
32	Kętrzyn	Rastenburg	B, C	?
33	Kiejkutry Stare I	Alt Keykuth	B, C, D, E	ca 100
34	Kiejkutry Stare II	Alt Keykuth	C, D, E	at least 208
35	Knis I	Gneist	B, C, E	over 66
36	Knis II	Gneist	B, C?	?
37	Koczek I	Koczek	A <sub>3</sub> , B, C, D, E	at least 132
38	Koczek II	Koczek		
39	Koczek III	Koczek	C, D, E?	?

\* Chronology according to: W. Nowakowski (2007b), J. Kowalski (1991); A<sub>3</sub> (ca 50 BC – ca 40 AD), B (ca 40 – ca 150/160 AD), C (ca 150/160 – 350/375 AD), D (350/375 – 450 AD), E (450 – 650/675 AD).

No on Fig. 1	Village and number of site	Archival name of village	Chronology*	Number of excavated graves
40	Kończewo (Kończewo) / Lipnik	Konzewen / Lipnick	B, C	25
41	Kosakowo	Marienthal	B	?
42	Kosewo I	Alt Kosewen	B, C, D, E	at least 811
43	Kosewo II	Alt Kosewen	B, C, D, E?	at least 154
44	Kosewo III	Alt Kosewen	B, C, D, E?	at least 253
45	Krukłanki	Kruglanken	A <sub>3</sub> , B, C, D, E	ca 70
46	Kumielsk	Kumilsko	C, D	?
47	Lasowiec	Sternwalde	B, C, D, E	at least 110
48	Lechlin (Żyfeld)	Seefeld	C, D	?
49	Leleszki	Lehesken	C, D, E	at least 270
50	Leśniewo	Fürstenau	A <sub>3</sub> -B <sub>1</sub> , B, C	at least 116
51	Lipnik	Försterei Lipnick	B, C	?
52	Łabapa	Labab	A <sub>3</sub> -B <sub>1</sub> , B, C	68
53	Łabędziewo	Labendzewo / Labenzowen	B, C, D, E	
54	Ławki 4	Lawken / Lauken	A <sub>3</sub> , B, C	56
55	Ławny Lask	Lawni Lasek	B, C, D?, E	at least 46
56	Łażne	Hasznen	B, C, D	ca 73
57	Łężany	Loßainen/ Lossainen	B, C	at least 22
58	Łuknajno	Lucknainen	B, C, D, E	?
59	Machary	Macharen	B, C, D, E	over 300
60	Marcinkowo I	Mertinsdorf	B, C, D	over 150
61	Marcinkowo II	Mertinsdorf	B, C	?
62	Miętkie I	Mingfen	B, C, D, E	at least 800
63	Miętkie II	Mingfen	B, C, D, E?	at least 77
64	Mikołajki	Nikolaiken	B, C	?
65	Miłuki	Milucken	B, C?	?
66	Mojtyny	Moythienen	B, C	95
67	Możdżany	Mosdzehnen	C, D	?
68	Muntowo	Alt-Muntowen	B <sub>1</sub> , C, D?, E	at least 220
69	Nawiady	Aweyden	C	29
70	Nikutowo	Nikutowen	B, C, D, E	437
71	Nowiny	Neusass	B	?
72	Nowy Zyzdrój	Neu Sysdroy	B, C, D	199
73	Odoje	Odoyen	B	7
74	Ogonki 1	Ogonken / Schwenten	C, D	15
75	Onufryjowo	Onufigowen	C, D, E	at least 586
76	Orzysz	Arys	C, D	?
77	Paprotki Kolonia st. 1	Paprodtken / Goldensee	A <sub>3</sub> -B <sub>1</sub> , C, D, E	555
78	Pieczarki	Pietzarken	C	?
79	Pisz III	Johannisburg	B <sub>2</sub> , C, D	2
80	Płociczno	Plotzitznen	B, C, D?, E	?
81	Popielno	Popielnen / Popiellen	B, C, D, E	?
82	Przerwanki	Przerwanken	B, C	?
83	Przytuły 1	Przytullen	A <sub>3</sub> -B <sub>1</sub> , B, C	43
84	Radzieje I	Rosengarten	B, C	180
85	Radzieje II	Rosengarten	C	?
86	Reszel	Abbau Rösel	B, C, D, E	?
87	Romoty	Romotten	B, C	109
88	Rudówka	Rudowken	A <sub>3</sub> , B, C	at least 222
89	Ruska Wieś	Reuschendorf	B	?
90	Ruska Wieś	Reussen	A <sub>3</sub> -B <sub>1</sub> , B, C	over 17
91	Rydówka	Rehsau	B, C	?
92	Skomack Mały	Skomatzko	B, C	?
93	Skomack Wielki I	Skomatzko	B, C, D?, E?	over 96
94	Skomack Wielki II	Skomatzko	C	17
95	Skorupki	Skorupken	B, C	?

No on Fig. 1	Village and number of site	Archival name of village	Chronology*	Number of excavated graves
96	Skrzypy	Steinhof	B, C	32
97	Sorkwity	Sorquitten	B, C	?
98	Spychówko	Klein Puppen	A <sub>3</sub> , B, C, D, E	at least 287
99	Srokowo	Drengfurth	B, C, D?, E	?
100	Stare Kielbonki I	Kelbonken	B, C, D?, E	23
101	Stare Kielbonki II	Kelbonken	B, C	?
102	Staświny st. 11	Stasswinnen	B, C	11
103	Sterławki Małe	Klein Stürlack	A <sub>3</sub> -B <sub>1</sub> , B, C, D, E	443
104	Sterławki Wielkie	Gross Stürlack	B, C, D, E	68
105	Stręgiel Wielki I	Gross Strengeln	A <sub>3</sub> -B <sub>1</sub> , B, C, D	47
106	Stręgiel Wielki II	Gross Strengeln	A <sub>3</sub> -B <sub>1</sub> , B, C, D	158
107	Suśnik	Sussnick	B, C	at least 87
108	Sypitki	Sypitken	B, C, D, E	ca 500, excavated 75
109	Szwałk	Klein Schwalg	C, D	?
110	Święta Lipka	Heiligelinde	B	?
111	Śwignajno	Schwignainen	B, C	50
112	Tałty	Talten	B <sub>2a</sub> -C <sub>1a</sub> ?	158
113	Trygort	Thiergarten	B	at least 28
114	Tuchlin	Tuchlinnen	C	1
115	Turwągi	Thurwangen	B, C	22
116	Wawrochy	Wawrochen	B, C, D, E	at least 159
117	Węgorzewo I	Angerburg	B, C,	5
118	Węgorzewo II	Angerburg	B	?
119	Widryny	Widrinen	C, D, E	?
120	Wigryny (Wygryny)	Wigrinnen	B, C	?
121	Wilkasy	Willkassen	B	?
122	Wojsak	Woisak	B, C	at least 26
123	Woźnice	Wosnitzen	A <sub>3</sub> , B, C, D?	130
124	Wólka	Wolka	B, C, D?, E	?
125	Wólka	Dietrichswalde	B, C, D	at least 83
126	Wólka Prusinowska	Pruschinowen Wolka	B?, C, D, E,	at least 179
127	Wrony	Gross Wronnen	C, D (OWR)	?
128	Wyszembork st. IVa	Weissenburg	B <sub>2a</sub> , C, D, E	373
129	Wyszka	Wiska	B, C, D, E	37
130	Zabielne	Sabiellen	B	?
131	Zalec	Salza	B <sub>2</sub> , C, D, E	over 80
132	Zdedy	Sdeden	B, C	?
133	Zdory	Sdorren	B, C, D, E	over 140
134	Zelwągi	Selbongen	A <sub>3</sub> , B, C, D	at least 79
135	Żywki	Siewken	D, E	?

the location of 23 cemeteries, mostly in the Masurian Lakeland, pointing out similarities in their locations (Hollack, Peiser 1904, 5ff.).<sup>1</sup> They indicated four types of cemetery location: 1) on an elevation on a lake shore,

<sup>1</sup> Cemeteries in villages: Babięta (Babienten), Bystrz (Bystrz), Dymmer (Dimmer-Wolka), Koczek site I, II and III (Waldersee [Koczek] I, II, III), Lasowiec (Sternwalde), Łąck Wielki (Gr. Lensk), Machary (Macharren), Miętkie (Mingfen), Mojtyny (Moythienen), Muntowo (Alt-Muntowen), Nawiady (Aweyden), Spychówko (Kl. Puppen), Stare Kielbonki (Alt-Kelbonken), Stare Kiejkuty site I and II (Alt-Keykuth I and II), Uklanka (Uklanken), Wólka Prusinowska (Prushinowen-Wolka), Zdory (Sdorren) and Zimna Woda (Zimna Woda). Outside the Masurian Lakeland cemeteries were located in villages: Gródki (Grodtken) and Turza Mała (Kl. Tauersee) (Hollack, Peiser 1904, 5ff.).

or in the close vicinity of a lake shore; 2) on an elevation on the bank of a river or a stream, or in the close vicinity of one; 3) at some distance from a body of water; 4) completely away from a body of water (Hollack, Peiser 1904, 5ff.). But these descriptions of locations are not enough to determine the exact locations of cemeteries excavated before the Second World War. Precise archival maps with archaeological sites marked are most helpful. Luckily, some such maps are available. They are wall maps of former Kreis Sensburg, Kreis Ortelsburg, Stadt und Landkreis Allenstein and Kreis Lyck, published in the 1930s and the start of the 1940s. They are the so-called *Heimatkarten*, and they are equivalent to today's sightseeing maps (Fig. 2) (Karczewski 1996, 1999; Sikorska-Ulfik 1999; Mellin-Wyczółkowska 1999; Sobieraj 1999; Hoffmann 1999).

**Table 2.** Cemeteries of the Olsztyn Group (after Kowalski 1991, 2000; Rudnicki 2004; Nowakowski 2007a; Hilberg 2009; Bitner-Wróblewska et al. 2011). For site location see Fig. 1 (marked in Roman numerals).

No on Fig. 1	Village and number of site	Archival name of village	Chronology	Number of excavated graves
I	Bartołty Wielkie	Gr. Bartelsdorf	E <sub>2</sub>	3
II	Burdąg	Burdungen	E	70
III	Friederikenhain	Friederikenhain	E	?
IV	Jagielki		E <sub>2a</sub>	?
V	Kielary	Kellaren	E	130
VI	Piecki	Piecki	E <sub>2b</sub>	1
VII	Popowo Salęckie	Popowo Salęckie	E	?
VIII	Purda	Gross Purden	E <sub>1</sub>	1
IX	Tumiany	Daumen	D/E, E	317
X	Tylkowo	Scheufelsdorf	E <sub>2</sub> , E <sub>3</sub>	at least 22
XI	Waplewo	Waplitz	D, E	determined as a 'large' one, 16 graves known



Fig. 2. The cemetery in Rudówka (in German Rudowken) marked on the map 'Kreis Sensburg' by G.J.F. Hassel (from Mellin-Wyczółkowska 1999). The original of the map is in the collection of the Museum in Mrągowo, the section of the Museum of Warmia and Masuria in Olsztyn.



Fig. 3. The location of the cemetery (11) and settlement (12) from the Roman and Migration periods, marked on the archaeological map by Dr Arthur Schmidt. The original of the map is in the collection of the Kreisgemeinschaft Lötzen in Neumünster.

On the basis of these, the same cemeteries uncovered before the Second World War were located again: e.g. the cemetery in Lasowiec (Sternwalde) (Nowakiewicz Rzeszotarska-Nowakiewicz 2011a, 2011b).

During the last few years, a very important new cartographic source was discovered. The archive of Kreisgemeinschaft Lötzen in Neumünster near Hamburg received as a gift four maps on a scale of 1:25000 of the former Kreis Lötzen, the middle part of the Great Masurian Lakeland. Several archaeological sites from dif-

ferent chronological periods are marked precisely on them (Fig. 3). The author of these maps was Dr Arthur Schmidt, the scientific director of the Vaterländische Gedenkhalle der Stadt Lötzen und der Feste Boyen, today Giżycko, in the years 1933 to 1935. These maps show most archaeological sites uncovered before the end of 1935 in the area of Kreis Lötzen. Among them are 12 cemeteries from the Roman and Migration periods. The maps are an important source for studies on the landscapes of cemeteries in the Masurian Lakeland from the period before the Second World War.

The resource of maps of large, well-explored cemeteries from this area is much poorer. From the period before the Second World War, the best known is the map of the cemetery in the village of Bogaczewo (Kullabrücke) (Fig. 4).

The relationship between the location of cemeteries from the Roman and Migration periods in the Masurian Lakeland and their environmental conditions was noted by East Prussian archaeologists in the first decades of the 20th century. According to their information, cemeteries were located on elevations in the close vicinity of water (Hollack, Peiser 1904, 5). The same perspective in research on the location, the landscape of cemeteries from the study area, was presented by archaeologists after the Second World War (Jaskanis 1977; Karczewski 2001; Bitner-Wróblewska et al. 2011). The location of individual cemeteries was described as ‘on an elevation at the lake shore’ or ‘on an elevation, on the peninsula in the lake’. Geographical directions were also indicated (e.g. Lenarczyk 1991, 65). This information consisted of the whole descrip-

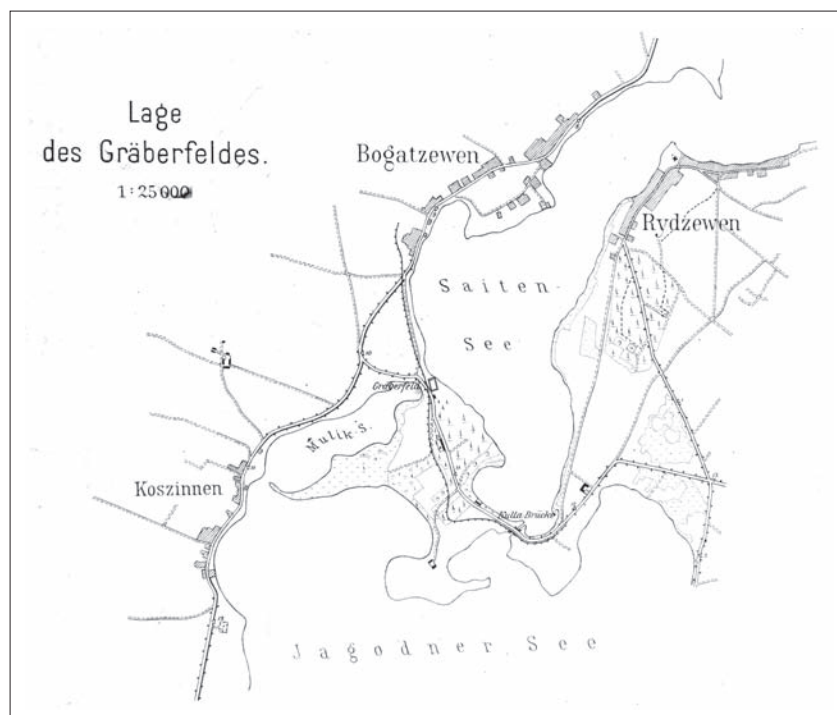


Fig. 4. A detail of the map of the cemetery in the village of Bogaczewo (Kullabrücke), with the excavated area marked as a quadrangular black frame. The original of the map is in the collection of the Department of Archaeology of the Museum of Warmia and Masuria in Olsztyn.



tion of the location of the cemetery in the landscape, the contemporary landscape.

Of course, in the past, all analyses of the landscape have had to take into account the contemporary landscape. But this landscape is only a background for the recognition and understanding of the reasons, mechanisms of changes and results of landscape evolution. To reconstruct a landscape in the past, we need the results of several palaeo-environmental and archaeological analyses. To reconstruct the relief, superficial sediments and soils, geological, geomorphological and soil analysis are needed. The palaeohydrography of superficial bodies of water requires hydrological, sedimentological and palynological analysis, and also studies of historical maps and documents. Local climatic conditions and climate change, as well as local plant cover and its evolution, require an analysis of palynological records and macroscopic plant and animal (insect) remains (Karczewski 2001, 60ff.). And the analysis of archaeological sources is necessary for reconstituting all the cultural elements of a palaeolandscape.

These requirements make the available dataset very limited (Fig. 1). In fact, only two cemeteries, in Wyszembork village site IVa and in Paprotki Kolonia village site 1, fulfil most of these requirements (Popławski 2002; Szymański 2005, 17ff., 2016, forthcoming; Karczewski et al. 2007; Karczewska et al. 2009; Karczewski et al. 2009; Karczewski 2011, 141ff., 205ff., 2012, 2014; Kupryjanowicz et al. 2013; Szal et al. 2014). This observation does not mean that other cemeteries are useless in the analysis of the landscape. They form a large set for comparative studies and generalisations of the detailed results obtained.

#### A case study: the palaeolandscape of the cemetery at Paprotki Kolonia village site 1

The excavations of the cemetery in the village of Paprotki Kolonia conducted so far have led to the discovery of 544 human cremation graves, dating from phase A3 – B1 until phase E, and 11 offering pits with horse skeletons and relicts of pyres (Fig 5). In the first decade of the 21st century, several environmental analyses were conducted in parallel with the excavations. They included geological-geomorphological analysis, pedological studies, the reconstruction of the water level fluctuations in the close vicinity of the cemetery, and the reconstruction of plant cover obtained on the basis of pollen analysis and potential vegetation (Karczewski 2012, 260).<sup>2</sup> A few years before, a recon-

struction of the bathymetry and range of the Wons palaeolake, located south of the cemetery, was obtained. The basis for this reconstruction was information on the thickness of the lake sediments (peat and gyttja), the topographical relief in the vicinity of the palaeolake, and the results of the archaeological excavations (Fig. 6) (Popławski 2002; Karczewski 2008, 56, 60ff., 67ff.; 2012, 261). At its maximum range, it was a large and rather shallow lake. It reached a maximum depth in the eastern part. The western part of the palaeolake, with the cemetery on its north shore, was shallower. Both basins were separated by a shoal. The degree of eutrophication of the lake at the time of the existence of the cemetery is unknown. The pollen analysis of peat and gyttja showed that sediments dating from the first century AD have not survived. Their destruction was probably caused by the lake drying out, which took place in 1865-1869 (Kupryjanowicz 2002, 55; Karczewski 2008, 68).

It was particularly important to reconstruct the relief and the soil cover in the area of the cemetery, as well as the coastal zones of palaeolakes in the vicinity of the cemetery. It occupied a small, sandy elevation located between two postglacial melt-basins, filled in the past by two lakes (Fig. 6). The soil cover in the area of the cemetery consists of brown soil. The area in its vicinity is covered by Luvisols and muck soils. Their mosaic arrangement depends on the relief and thickness of the superficial sediments (Karczewska et al. 2009, 57ff.; Karczewski et al. 2009, 133ff.; Karczewski 2014, 112ff.). The sedimentological analysis showed that at the time of the existence of the cemetery, the small elevation it occupied was situated between two lakes. To the north, the cemetery bordered directly on the shores of a nameless lake, which survives today as the Zielone Bagno (Green Swamp), whereas the north shore of the Wons palaeolake was situated 40 to 50 metres to the south of the cemetery. The digital terrain model shows that at the level of the water at a height of around 97.80 metres above sea level, the shores of both palaeolakes were located close to the cemetery (Fig. 7). But a small change in the position of the water level, to a level of about 97.00 metres above sea level, might have significantly modified the course of the shorelines of both palaeolakes. Then they were a certain distance from

29 'Sacrum et Nature. Results of research on the cemetery of Bogaczewo Culture at Paprotki Kolonia in the Great Masurian Lake District', financed by the Polish Ministry of Sciences in the years 2005 to 2008. The authors of the analysis are Piotr Banaszuk, Michał Wardyński (geology, geomorphology, reconstruction of the range of the north shore of the Wons palaeolake in the vicinity of the cemetery), Mirosława Kupryjanowicz (pollen analysis), Aldona Mueller-Bieniek, Ewa Pirożnikow (archaeobotany), Katarzyna Cywa, Zofia Tomczyńska (carpology).

<sup>2</sup> The palaeo-environmental analysis was obtained within the framework of the interdisciplinary project IH01H 003



Fig. 5. The cemetery at Paprotki Kolonia village site 1: 1 human cremation graves; 2 offering pits with horse skeletons; 3 relicts of pyres; 4 the layer of black sand formed during the use of the cemetery; 5 a feature formed during the use of the cemetery, with the vessel of the 'settlement type'; 6 military trenches from the Second World War and other features formed in the modern period.

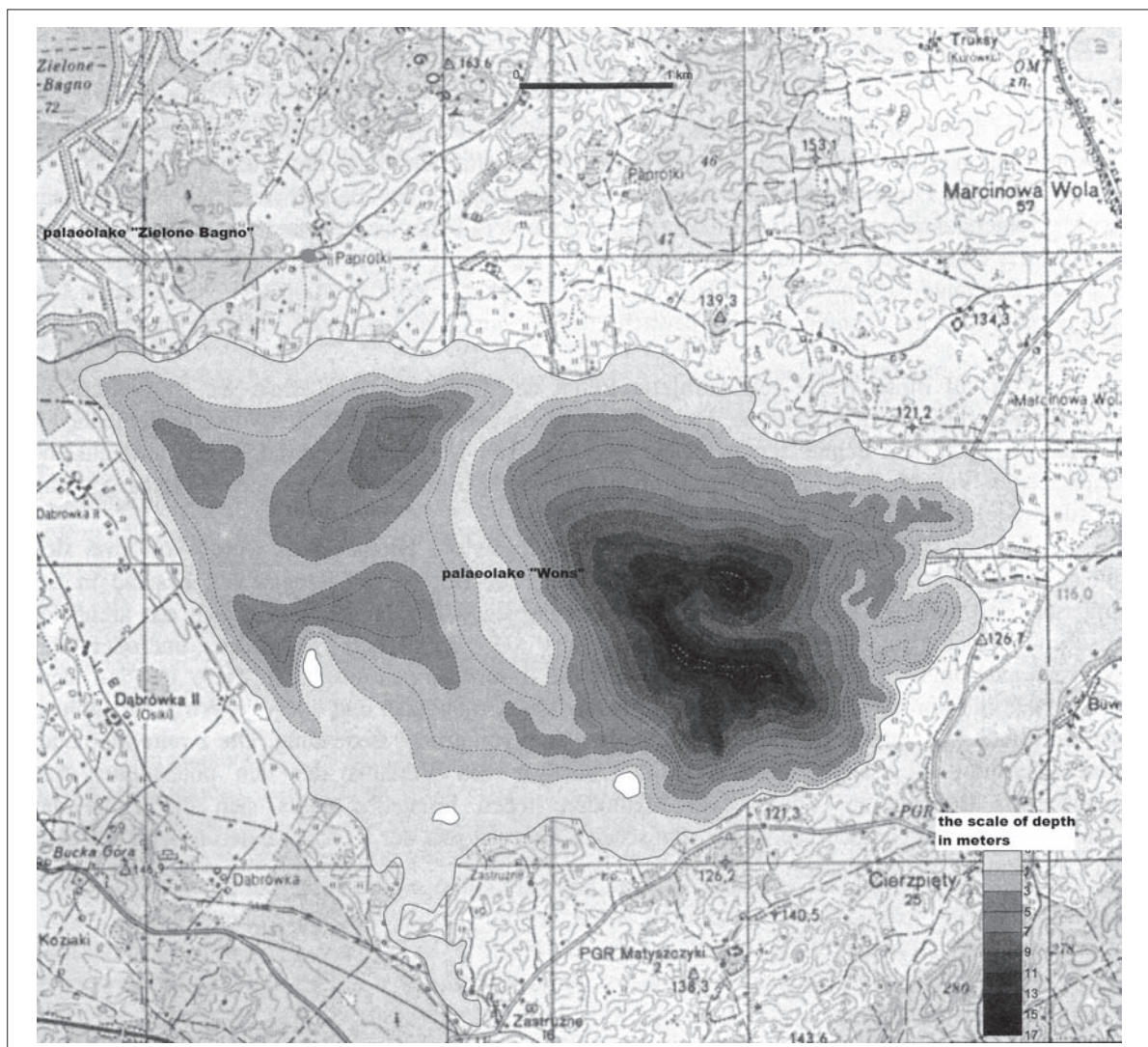


Fig. 6. A reconstruction of the bathymetry and range of the Wons palaeolake (by Popławski 2002). The location of the cemetery in the village of Paprotki Kolonia is marked in black spot.

the cemetery (Fig. 8) (Karczewska et al. 2009, 63ff., Fig. 3).

A reconstruction of the potential plant cover of the area of the cemetery and its vicinity was obtained on the basis of information on the soil cover, the water level and the results of pollen analysis. The pollen data originated from lakes Jędzelek, Miłkowskie and Wojnowo, with regional pollen records (Wacnik 2005a, 2005b, 2008, 2009a, 2009b, Kupryjanowicz 2008b; Kupryjanowicz et al. 2013). These lakes are located at a distance of about 3.7 kilometres to the west (Lake Jędzelek), 7.5 kilometres (Lake Miłkowskie), and 8.5 kilometres (Lake Wojnowo) to the northeast of the cemetery. This information allows us to conclude that the area between the Wons palaeolake and the cemetery was covered by rush, reed and sedge plant communities. Situated above parts of this area were alder or marshy pine or spruce woods. Mixed forests grew in the vicinity of both palaeolakes, and the moraine elevations were covered by pine and mixed forests. The

area of the cemetery itself was the habitat of hornbeam, but it was deforested probably during the existence of the necropolis (Kupryjanowicz 2008b; Karczewska et al. 2009, 70ff.; Karczewski 2014, 113ff.). The results of the environmental analysis show that the area chosen as a sacred space was clearly separated in the landscape.

The specific element of the palaeolandscape of the cemetery in the village of Paprotki Kolonia was the cemetery itself. The results of excavations conducted so far show that during at least the whole Roman Period, the spatial distribution of the cemetery was clearly known by the local community. The area with cremation graves and offering pits with horse skeletons covered the top and the southeast slope of the elevation, exposed to the Wons palaeolake. An area of pyres was located at the southern edge of the cemetery (Fig. 5). Each grave was precisely placed in grave clusters. So were offering pits with horses. They occupied a narrow zone extending from northwest to southeast

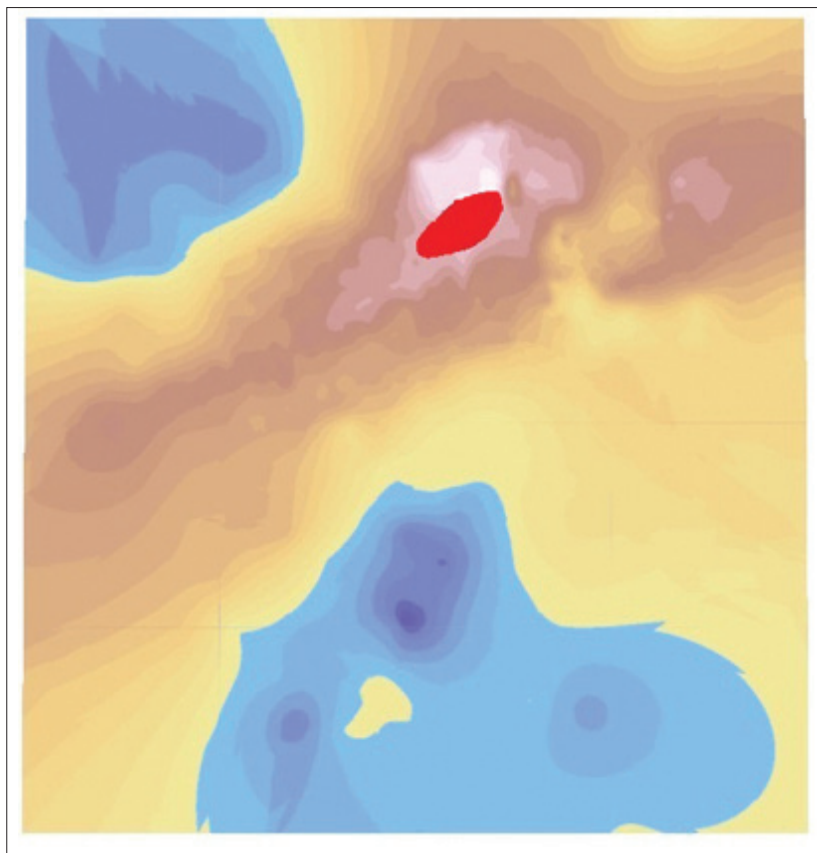


Fig. 7. A digital terrain model of the cemetery at Paprotki Kolonia site 1 and its vicinity. The lake's water level is about 97.8 metres above sea level (drawn by M. Wardyński, A. Majka). The area of the cemetery is marked by a red oval spot.

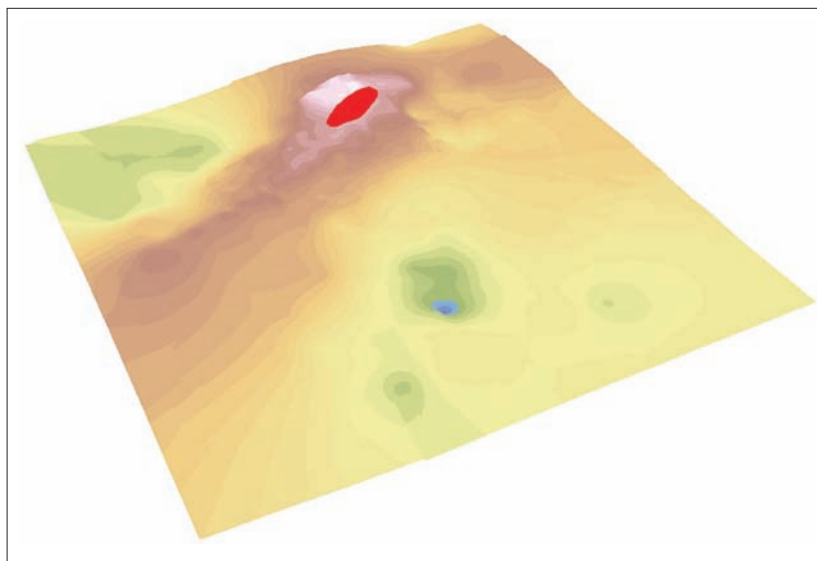


Fig. 8. A digital terrain model of the cemetery at Paprotki Kolonia site 1 and its vicinity. The lake's water level is about 97.07 metres above sea level (drawn by M. Wardyński, A. Majka). The area of the cemetery is marked by a red oval spot.

through the centre of the cemetery, and separated the area into two zones with cremation graves. The offering pits with horses were also located at the south and southeast edges of the cemetery, setting in this part of it the range of the burial area (Fig. 5). Relicts of pyres were visible on the surface of the cemetery. Graves were marked on its surface by stones, but no special features which enabled the recognition of a particular stone were noticed. Also, means of determining the siting of offering pits were not uncovered. In spite of this, there is no doubt that all elements of the cemetery were permanently marked on its surface. Probably deforest-

ed, the cemetery was a landmark of the settlement micro-region on the north shore of the Wons palaeolake.

### Conclusions

Emil Hollack and Felix Ernst Peiser were correct when indicating the relationship between the location of cemeteries, topographical relief and bodies of water. But the reconstruction of palaeolandscapes of cemeteries requires detailed palaeo-environmental research and archaeological studies. In the Masurian Lakeland, cemeteries were placed on the top and east or south-

east slopes of elevations in the close vicinity of the lakeshore or riverbank. A variant on the placement of cemeteries in landscapes, represented by the cemetery in the village of Paprotki Kolonia, was placing them on the elevation between two lakes. This variant was especially common in the area of the Great Masurian Lakeland. Cemeteries in the villages of Bogaczewo-Kula (Kullabrücke), Krukłanki (Kruglanken), Ławki (Lauken), Rudówka (Rudowken), Wilkasy (Willkassen) and Wyszka (Wiska) were thus placed in the landscape (Fig. 1) (Karczewski 2011, 141). Cemeteries were also the most long-lasting elements of the micro-region settlement network and landmarks in the local landscapes. The use of cemeteries of Bogaczewo culture by communities from the developed phase of the Migration Period reflects the acceptance of the same rules for the placement of cemeteries. It indicates cultural continuation in the sphere of beliefs related to the cult of the dead.

## Acknowledgement

We are grateful to Aleksander Pluskowski PhD for correcting the language of the text.

## Abbreviations

Archeologia ziem pruskich. – Archeologia ziem pruskich. Nieznane zbiory i materiały archiwalne. Międzynarodowa konferencja pod patronatem wojewody olsztyńskiego. Ostróda – 15-17 X 1998. M.J. Hoffmann, J. Sobieraj (eds.). Olsztyn.

## Reference

### Manuscript

KUPRYJANOWICZ, M., 2008b. *Wyniki analizy pyłkowej osadów z torfowiska otaczającego jezioro Jędzelek*. Typescript in archive of Institute of History and Political Sciences University at Białystok.

### Literature

ANTONIEWICZ, J., 1949. Wyniki badań powierzchniowych na stanowisku zwanym "Zameczek" w Tuchlinie, pow. Pisz. *Sprawozdania P.M.A.*, II, 83-91.  
 ANSCHUETZ, K.F., WILSHUSEN, R.H., SCHEICK, Ch.L., 2001. An archaeology of landscapes: perspectives and directions. *Journal of Archaeological Research*, 9/2, 157-211.  
 BARCZYK, K., 2004. Materiały z cmentarzyska w Starych Kiejkutach. In: *Barbaricum*, 7. Warszawa, 61-89.  
 BITNER-WRÓBLEWSKA, A., 1995. Pochwała archeologii archiwalnej. O lokalizacji zachodniobałtyjskiego cmentarzyska w Ławkach (b. Lawken) koło Rynu. In: A. BUR-

SCHE, M. MIELCZAREK, W. NOWAKOWSKI (eds.). *Nunc de Suebis dicendum est... Studia archaeologica et historia Georgi Kolendo ab amici et discipuli dicta. Studia dedykowane profesorowi Jerzemu Kolendo w 60-lecie urodzin i 40-lecie pracy naukowej*. Warszawa, 73-84.

- BITNER-WRÓBLEWSKA, A., RZESZOTARSKA-NOWAKIEWICZ, A., NOWAKIEWICZ, T., 2011. Katalog. In: T. NOWAKIEWICZ (ed.). *Archeologiczne dziedzictwo Prus Wschodnich w archiwum Feliksa Jakobsona/Das archäologische Vermächtnis Ostpreußens im Archiv des Felix Jakobson/Austrumprūsijas arheoloģiskais mantojums Fēliksa Jākobsona arhīvā, Aestorim Hereditas II*. Warszawa, 60-511.  
 CHMIELEWSKI, T.J., 2008. Zmierzając ku ogólnej teorii systemów krajobrazowych. Towards the general landscape system theory. In: T.J. CHMIELEWSKI (ed.). *Struktura i funkcjonowanie systemów krajobrazowych: meta-analizy, modele, teorie i ich zastosowania*, 6, Lublin, 93-108.  
 DINCAUZE, D.F., 2000. *Environmental archaeology. Principles and practice*. Cambridge.  
 FILBRANDT-CZAJA, A., 2000. Vegetation changes in the surroundings of lake Dgał Wielki in the light of pollen analysis. In: A. KOLA (ed.). *Studies in lake dwellings of the west Baltic Barrow Culture*. Toruń, 89-99.  
 GAŁKA, M., MIOTK-SZPIGANOWICZ, G., MARCZEWSKA M., BARABACH, J., van der KNAAP, W.O., LAMENTOWICZ, M., 2014. Palaeoenvironmental changes in Central Europe (NE Poland). Turing the last 6200 years reconstructed from a high-resolution Multi-proxy peat archive. *The Holocene*, 1-14.  
 GROß, H., 1935a. Die Steppenheidetheorie und die vorge-schichtliche Besiedlung Ostpreußens. *Altpreußen*, 1:3, 152-168.  
 GROß, H., 1935b. Moorfunde, ihre Bergung, Auswertung und Bedeutung. *Altpreußen*, 1.1, 7-51.  
 GROß, H. 1936. Die Steppenheidetheorie und die vorge-schichtliche Besiedlung Ostpreußens. *Altpreußen*, 1.4, 193-216.  
 HILBERG, V., 2009. *Masurische Bügelfibeln. Studien zu den Fernbeziehungen der völkerwanderungszeitlichen Brandgräberfelder von Daumen und Kellaren. Daumen und Kellaren – Tumiany i Kielary*, Bd. 2. Neumünster.  
 HOFFMANN, M.J., 1999. „Kreiskarte Stadt- und Landkreis Allenstein”. Mapa archeologiczna L. Fromma i W. Stefela, 1: 100 000. In: *Archeologia ziem pruskich*. Olsztyn, 191-198.  
 HOFFMANN, M.J., 2000. Nekropola Galindai z pierwszych wieków naszej ery w Piszcu, stanowisko III. *Znad Pisy*, 9, 16-24.  
 HOLLACK, E., PEISER, FE., 1904. *Das Gräberfeld von Moithienen*. Königsberg.  
 JANKUHN, H., 2004. *Wprowadzenie do archeologii osadnictwa*. Poznań.  
 JASSKANIS, J., 1977. Cmentarzyska kultury zachodniobałtyjskiej z okresu rzymskiego. Materiały do badań nad obrzędkiem pogrzebowym. *Materiały Starożytne i Wczesnośredniowieczne*, IV, 239-350.  
 JUGA-SZYMAŃSKA, A., 2004. Cmentarzysko z okresu wpływów rzymskich w Taltach na Pojezierzy Mazurskim. *Barbaricum*, 7. Warszawa, 91-147.  
 JUGA-SZYMAŃSKA, A., 2007. Cmentarzysko kultury bogaczewskiej w Gutach (byłe Gutten, Kr. Lötzen). Próba rekonstrukcji wyników badań. In: A. BITNER-WRÓBLEWSKA (ed.). *Kultura bogaczewska w 20 lat później. Materiały z konferencji, Warszawa, 26-27 marca 2003*. Warszawa, 393-412.

- KARCZEWSKA, M., 1999. Cmentarzysko z okresu wpływów rzymskich i wędrowek ludów w Sterławkach Małych, w Krainie Wielkich Jezior Mazurskich. Rekonstrukcja wyników badań na podstawie materiałów archiwalnych i zbiorów Muzeum Warmii i Mazur w Olsztynie. In: *Archeologia ziem pruskich*. Olsztyn, 239-275.
- KARCZEWSKA, M., KARCZEWSKI, M., BANASZUK, P., WARDYŃSKI, M., MAJKA, A., 2009. Naturalne i antropogeniczne zmiany rzeźby terenu w sąsiedztwie cmentarzyska z okresu wpływów rzymskich i okresu wędrowek ludów w Paprotkach Kolonii w Krainie Wielkich Jezior Mazurskich. *Prace i Studia Geograficzne*, 44, 55-73.
- KARCZEWSKI, M., 1996. „Heimatkarte des Kreises Lyck”. In: W. NOWAKOWSKI (ed.). *Concordia. Studia ofiarowane Jerzemu Okuliczowi-Kozarynowi w sześćdziesiątą piątą rocznicę urodzin*. Warszawa, 111-127.
- KARCZEWSKI, M., 1999. Mapa topograficzna Kreis Lyck Willego Herbsta, 1:25 000. In: *Archeologia ziem pruskich*. Olsztyn, 199-200.
- KARCZEWSKI, M., 2001. *Źródła archeologiczne do badań nad zasiedlaniem Krainy Wielkich Jezior Mazurskich w okresie wpływów rzymskich*. Olsztyn.
- KARCZEWSKI, M., 2008. Zmiany poziomu lustra wody w jeziorach mazurskich w ciągu ostatnich dwóch tysięcy lat w świetle źródeł archeologicznych i historycznych. In: A. WACNIK, E. MADEJSKA (eds.). *Polska północno-wschodnia w holocenie. Człowiek i jego środowisko. Botanical Guidebooks*, 30. Kraków, 47-75.
- KARCZEWSKI, M., 2011. *Archeologia środowiska zachodniobałtyjskiego kręgu kulturowego na jeziorach*. Poznań–Białystok.
- KARCZEWSKI, M., 2012. Human impact on the landscape of the Masuria Lakeland in the Roman Period (NE Poland). *eTopoi. Journal for Ancient Studies*, 3, 257-269.
- KARCZEWSKI, M., 2014. Znaczenie znalezisk roślinnych w badaniach cmentarzysk ciałopalnych. Przykład cmentarzyska kultury bogaczewskiej i grupy olsztyńskiej w Paprotkach Kolonii st. 1 w Krainie Wielkich Jezior Mazurskich. In: M. KARCZEWSKI, E. SMOLSKA, T. KALICKI (eds.). *Środowisko przyrodnicze, gospodarka, osadnictwo i kultura symboliczna w V w. p.n.e. – VII w. n.e. w dorzeczu Odry i Wisły. Środowisko-Człowiek-Cywilizacja*, 3. Białystok–Warszawa–Kielce, 111-119.
- KARCZEWSKI, M., BANASZUK, P., BIENIEK, A., KUPRYJANOWICZ, M., WACNIK, A., 2007. The ancient landscape of the Roman Period settlement microregion on the north shore of the former Lake „Wons” in the Masuria Lakeland (NE Poland). In: M. MAKOHONIENKO, D. MAKOWIECKI, J. CZERNIAWSKA (eds.). *Eurasian Perspectives on Environmental Archaeology. Annual conference of the Association for Environmental Archaeology, September 12-15, 2007. Środowisko i Kultura* 3. Poznań: Bogucki Wydawnictwo Naukowe, 78-79.
- KARCZEWSKI, M., BANASZUK, P., KUPRYJANOWICZ, M., MUELLER-BIENIEK, A., 2009. Uwarunkowania środowiskowe mikroregionu osadniczego z okresu wpływów rzymskich nad północnym brzegiem dawnego jeziora Wąż w Krainie Wielkich Jezior Mazurskich. In: L. DOMAŃSKA, P. KITTEL, J. FORYSIAK (eds.). *Środowiskowe uwarunkowania lokalizacji osadnictwa. Środowisko - Człowiek – Cywilizacja* 2. Poznań: Bogucki Wydawnictwo Naukowe, 131-145.
- KOWALSKI, J., 1991. Z badań nad chronologią okresu wędrowek ludów na ziemiach zachodniobałtyjskich (faza E). In: *Archeologia Bałtyjska. Materiały z konferencji Olsztyn, 24-25 kwietnia 1988 roku*. Olsztyn, 67-85.
- KOWALSKI, J., 2000. Chronologia grupy elbląskiej i olsztyńskiej kręgu zachodniobałtyjskiego (V-VII w.). Zarys problematyki. In: *Barbaricum*, 6. Warszawa, 203-266.
- KUPRYJANOWICZ, M., 2002a. Przemiany roślinności w sąsiedztwie stanowiska 41 w Paprotkach Kolonii, na Pojezierzu Mazurskim. In: M. KARCZEWSKA, M. KARCZEWSKI, E. PIROŹNIKOW (eds.). *Osada z okresu wpływów rzymskich i okresu wędrowek ludów w Paprotkach Kolonii stanowisko 41 w Krainie Wielkich Jezior Mazurskich, vol. II. Analizy paleoekologiczne*. Białystok, 55-76.
- KUPRYJANOWICZ, M., 2002b. Środowisko przyrodnicze osadnictwa pradziejowego w południowo – wschodniej strefie przybałtyckiej w świetle analiz palinologicznych przeprowadzonych przez Hugo Grobą oraz profili z Jeziora Mikołajskiego i Worytów. In: M. KARCZEWSKA, M. KARCZEWSKI, E. PIROŹNIKOW (eds.). *Osada z okresu wpływów rzymskich i okresu wędrowek ludów w Paprotkach Kolonii stanowisko 41 w Krainie Wielkich Jezior Mazurskich, vol. II. Analizy paleoekologiczne*. Białystok, 113-153.
- KUPRYJANOWICZ, M., 2008a. Badania palinologiczne w Polsce północno – wschodniej. In: A. WACNIK, E. MADEJSKA (eds.). *Polska północno-wschodnia w holocenie. Człowiek i jego środowisko. Botanical Guidebooks*, 30. Kraków, 77-95.
- KUPRYJANOWICZ, M., MUELLER-BIENIEK, A., CYWA, K., KARCZEWSKI, M., 2013. Intensywna eksploatacja lasów przez ludność kultury bogaczewskiej – mikroregion osadniczy nad jeziorem Wons (Kraina Wielkich Jezior Mazurskich). In: H. CIECIERSKA, CZ. HÓLDYŃSKI (eds.). *Dziedzictwo przyrodnicze Warmii, Mazur i Powiśla. Interdyscyplinarne i aplikacyjne znaczenie nauk botanicznych. Przewodnik do warsztatów terenowych 56. Zjazdu Polskiego Towarzystwa Botanicznego. Olsztyn, 24–30 czerwca 2013*. Olsztyn, 365-378.
- LENARCZYK, K., 1991. Materiały z badań cmentarzyska ciałopalnego z okresu wpływów rzymskich w Sterławkach Wielkich, gm. Ryn, woj. suwalskie. *Rocznik Białostocki*, XVII. 65-110.
- MELLIN-WYCZÓŁKOWSKA, I., 1999. „Kreis Sensburg” – mapa archeologiczna G.J.F. Hassela, 1:33 333. In: *Archeologia ziem pruskich*. Olsztyn, 177-181.
- NOWAKIEWICZ, T., RZESZOTARSKA-NOWAKIEWICZ, A., 2011a. Lasowiec (d. Sternwalde), woj. warmińsko-mazurskie. Badania w roku 2010. Co zostało z „dużej” nekropoli? *Światowit*, VII (XIX), Fasc. B, 225-227.
- NOWAKIEWICZ, T., RZESZOTARSKA-NOWAKIEWICZ, A., 2011b. Terenowa weryfikacja danych z archiwum Feliksa Jakobsona. Przykład cmentarzyska w Sternwalde na Mazurach. In: T. NOWAKIEWICZ (ed.). *Archeologiczne dziedzictwo Prus Wschodnich w archiwum Feliksa Jakobsona/Das archäologische Vermächtnis Ostpreußens im Archiv des Felix Jakobson/Austrumprūsijas arheoloģiskais mantojums Fēliksa Jākobsona arhīvā, Aestorim Hereditas*, II. Warszawa, 514-533.
- NOWAKOWSKI, W., 2001. Masuren. *Corpus der römischen Funde im europäischen Barbaricum – Polen I*. Warszawa.
- NOWAKOWSKI, W., 2004. Cmentarzysko z okresu wpływów rzymskich i okresu wędrowek ludów w Muntowie, pow. mrągowski. In: *Barbaricum*, 7. Warszawa, 191-247.
- NOWAKOWSKI, W., 2007a. Cmentarzyska mazursko-germańskie z późnego okresu wędrowek ludów – grupa

- olsztyńska w koncepcji Carla Engla. *Acta Univeritatis Lodziensis. Folia Archaeologica*, 25, 93-127.
- NOWAKOWSKI, W., 2007b. Kultura bogaczewska na Pojezierzu Mazurskim od schyłku późnego okresu przedrzymskiego do starszej fazy późnego okresu wpływów rzymskich. Próba analizy chronologiczno-kulturowej. In: A. BITNER-WRÓBLEWSKA (ed.). *Kultura bogaczewska w 20 lat później. Materiały z konferencji, Warszawa, 26-27 marca 2003*. Warszawa.
- NOWAKOWSKI, W., 2009. Dwa cmentarzyska z okresu wpływów rzymskich w Starych Kielbonkach na Mazurach. In: A. Bitner-Wróblewska, G. Iwanowska (eds.). *Baltowie i ich sąsiedzi. Marian Kaczyński in memoriam. Seminarium Bałtyjskie, II*. Warszawa, 405-419.
- OKULICZ, J., 1958. Cmentarzysko z okresu rzymskiego odkryte w miejscowości Bogaczewo, na przysiółku Kula, pow. Giżycko. *Rocznik Olsztyński*, I, Olsztyn, 47-116.
- POPLAWSKI, T. 2002. Rekonstrukcja zasięgu i batymetrii jeziora Nietlice w Krainie Wielkich Jezior Mazurskich w okresie wpływów rzymskich i okresie wędrówek ludów. In: M. KARCZEWSKA, M. KARCZEWSKI, E. PIROŹNIKOW (eds.). *Osada z okresu wpływów rzymskich i okresu wędrówek ludów w Paprotkach Kolonii stanowisko 41 w Krainie Wielkich Jezior Mazurskich, vol. II. Analizy paleoekologiczne*. Białystok, 19-22.
- RALSKA-JASIEWICZOWA, M., 1966. Osady denne Jeziora Mikołajskiego na Pojezierzu Mazurskim w świetle badań paleobotanicznych. *Acta Palaeobotanica*, 7:2, 1-118.
- RALSKA-JASIEWICZOWA, M., 1982. Prehistoric man and natural vegetation: the usefulness of pollen evidence in interpretation of man-made changes. *Memorabilia Zoologica*, 37, 31-45.
- RALSKA-JASIEWICZOWA, M., 1989. Type Region P-x: Masuria Great Lakes District. In: M. RALSKA-JASIEWICZOWA (ed.). *Environmental changes recorded in lakes and mires of Poland during the last 13000 years*. *Acta Palaeobotanica*, 29.2, 95-100.
- RUDNICKI, M., 2004. Grób grupy olsztyńskiej z miejscowości Piecki, woj. warmińsko-mazurskie. In: *Barbaricum*, 7. Warszawa, 265-273.
- SIEMASZKO, J., 1991. Archeologiczne badania wykopaliskowe w woj. suwalskim w latach 1981-1989. *Rocznik Suwalsko-Mazurski*, I, Suwałki, 75-89.
- SIEMASZKO, J., 2007. Wybrane zespoły grobowe z cmentarzyska kultury bogaczewskiej w Przytułach, stanowisko 1, gm. Olecko, woj. warmińsko-mazurskie. In: A. BITNER-WRÓBLEWSKA (ed.). *Kultura bogaczewska w 20 lat później. Materiały z konferencji, Warszawa, 26-27 marca 2003*. Warszawa, 487-496.
- SIKORSKA-ULFIK, I., 1999. „Kreis Röszel“ – mapa archeologiczno – historyczna Norberta Harnau’a, 1:25 000. In: *Archeologia ziem pruskich*. Olsztyn, 171-175.
- SOBIERAJ, J., 1999. „Kreis Ortelsburg mit Eintragung der vorgeschichtlichen Fundstellen” Mapa archeologiczno-historyczna H. Tiski i W. Kuschela, 1: 50:50 00. In: *Archeologia ziem pruskich*. Olsztyn, 183-190.
- STASIAK, J., 1963. Historia jeziora Kruklin w świetle osadów strefy litoralnej. *Prace Geograficzne IG PAN*, 42.
- STASIAK, J., 1966. History of lakes of the Younger-Glacial areas on the north-eastern Poland. *Symposium of Garda International Hydrological Decade*, 2, 847-851.
- STASIAK, J., 1967. Age and evolution of meltwater basin in the Masuria Lake District. *Baltica*, 3, 73-285.
- STASIAK, J., 1971. Holocen Polski północno – wschodniej. *Rozprawy Uniwersytetu Warszawskiego*, 47. Warszawa.
- SUTER, G., 2007. Zapis zmienności krajobrazu. *Czasopismo Techniczne*, 14. *Architektura*, 5-A, 243-245.
- SZAL, M., KUPRYJANOWICZ, M., WYCZÓLKOWSKI, M., TYLMAN, W., 2014. The Iron Age in the Mrągowo Lake District, Masuria, NE Poland: the Sałęt settlement microregion as an example of long-lasting human impact on vegetation. *Vegetation History and Archaeobotany*, 23, 419-437.
- SZYMAŃSKI, P., 2004. Cmentarzysko kultury bogaczewskiej i grupy olsztyńskiej w Zalcu koło Mrągowo, na Pojezierzu Mazurskim. In: *Barbaricum*. Warszawa, 7, 153-190.
- SZYMAŃSKI, P., 2005. Mikroregion osadniczy z okresu wpływów rzymskich w rejonie jeziora Sałęt na Pojezierzu Mazurskim. *Światowid, Supplement Series P: Prehistory and Middle Ages*, X.
- SZYMAŃSKI, P., 2016. Forthcoming. *Wyszebork, Fpl. IV. Ein Gräberfeld aus der römischen Kaiserzeit und der Völkerwanderungszeit in Masuren*. In: *Monumenta Archaeologica Barbarica*. Warszawa.
- SZTER, I., 2010. Cmentarzysko z okresu wpływów rzymskich i okresu wędrówek ludów w Kamieniu na Pojezierzu Mazurskim. *Wiadomości Archeologiczne*, LXI, 201-332.
- TYLMAN, W., WOŹNIAK, P.P., CZARNECKA, K., JAŹWIECKA, M., 2006. New sites with laminated lake sediments in north-eastern Poland: preliminary results of field survey. *Limnological Review*, 6, 283-288.
- WACNIK, A., 2005a. Kilkaset lat przemian środowiska w rejonie jeziora Miłkowskiego na Pojezierzu Mazurskim i ich związek z działalnością człowieka. In: M. MAKOHONIENKO, D. MAKOWIECKI, I. HILDEBRANDT-RADKE (eds.). *Studia interdyscyplinarne nad środowiskiem i kulturą człowieka w Polsce – dorobek i przyszłość. Sympozjum Archeologii Środowiskowej, 19-22 października 2005, Koszęcin., Środowisko i kultura*, I. Poznań, 142.
- WACNIK, A., 2005b. Wpływ działalności człowieka mezolitu i neolitu na szatę roślinną w rejonie jeziora Miłkowskiego (Kraina Wielkich Jezior Mazurskich). In: K. WASYLIKOWA, M. LITYŃSKA-ZAJĄC, A. BIEŃNIEK (eds.). *Roślinne ślady człowieka. Botanical Guidebooks*, 28, Kraków, 9-27.
- WACNIK, A., 2008. From foraging to farming in the Great Masuria Lake District: palinological studies on Lake Miłkowskie sediments, northeast Poland. *Vegetation History and Archaeobotany*, 18 (3), 187-203.
- WACNIK, A., 2009a. Galindowie i Krzyżacy – oddziaływanie na lokalną roślinność w rejonie Miłek i Staświn (Kraina Wielkich Jezior Mazurskich, północno – wschodnia Polska). *Wiadomości Botaniczne*, 53:1/2, 21-34.
- WACNIK, A., 2009b. Vegetation development in the Lake Miłkowskie area, north-eastern Poland, from the Plenivistulian to the late Holocene. *Acta Palaeobotanica*, 49(2), 287-335.
- WACNIK, A., 2014. Przemiany roślinności w następstwie działalności społeczności rolniczych na terenie Krainy Wielkich Jezior Mazurskich (północno-wschodnia Polska). In: P. KITTEL, K. LUDWISIAK, J. TWARDY, I. NOWAK (eds.). *Naturalne i archeologiczno-historyczne uwarunkowania osadnictwa średniowiecznego. VIII Sympozjum Archeologii Środowiskowej. Łódź – Łęczyca, 22-25 września 2014 roku*. Środowisko i Kultura (Environment and Culture) 10. Łódź, 108-109.
- WACNIK, A., RALSKA-JASIEWICZOWA, M., 2008. Przemiany szaty roślinnej w rejonie kopalnego Jeziora Staświńskiego i jej związek z lokalnym osadnictwem

pradziejowym. In: A. WACNIK, E. MADEJSKA (eds.). *Polska północno-wschodnia w holocenie. Człowiek i jego środowisko. Botanical Guidebooks*, 30. Kraków, 207-228.

## Appendix 1

Location of: II areas of geological-geomorphological and palaeopedological research; III palaeolimnological research; IV pollen records with preserved subatlantic pollen grains in the area of the Masuria Lakeland; V lakes with laminated and partly laminated sediments (for site location see Fig. 1, Tab. 1-2).

II Location of areas of geological-geomorphological and palaeopedological research (Karczewski 2011) (marked in orange): 1. Paprotki Kolonia site 1 and 41; 2 Przytuły site 1.

III Location of palaeolimnological research (Karczewski 2011) (marked in yellow): 1 lake Kruklin; 2 paleolake Staświny (Staświńskie peat-bog); 3 palaeolake Wons (Nietlice peat-bog).

IV Location of pollen records with preserved subatlantic pollen grains (marked in brown, a spot – pollen diagram of archival value, a square – pollen diagram of full scientific value):

1 Borki, Elk district, peadbog west of the village of Borki (Groß 1936; Kupryjanowicz 2002b); 2 Dgał Wielki (lake) (Filbrandt-Czaja 2000); 3 Gązwa mire (Gałka et al. 2014); 4 Gromskie (lake), district Szczytno (Groß 1936, Kupryjanowicz 2002b); 5 Jegocin (lake) (Stasiak 1967), 6 Jędzelek (lake) (Kupryjanowicz 2008b); 7 „Kamienna Góra”, district Olsztyn, small peatbog at the foot of „Steinberger Endmoräne” (Groß 1936; Kupryjanowicz 2002b, 2008a); 8 Kruklin (lake) (Stasiak 1963; 1967); 9 Łazduny (lake) (Wacnik 2014); 10 Mamry (lake) (Stasiak 1967); 11 Mazuchówka (in former times lake Feldsee) (Groß 1935a; Kupryjanowicz 2002b); 12 Mikołajskie (lake) (Ralska-Jasiewiczowa 1966, 1982; 1989); 13 Mikołajskie (lake) (Stasiak 1966, 1967, 1971); 14 Miłkowskie (lake) (Wacnik 2005a, 2005b, 2008, 2009a, 2009b); 15 Sałęt (lake) (Szal et al. 2014); 16 Staświńskie Łąki (in former times lake Staświńskie) near the village Siemionki (Groß 1935b; Kupryjanowicz 2002b); 17 Szczepanki (Staświńskie Łąki) (Wacnik, Ralska-Jasiewiczowa 2008); 18 Szeroki Bór (Kupryjanowicz 2008a); 19 Śniardwy (lake) (Stasiak 1971); 20 Tałty (lake) (Stasiak 1967, 1971); 21 Wągiel (lake) (Stasiak 1971); 22 Wojnowo (lake) (Wacnik 2009a).

V Location of lakes with laminated (L) and partly laminated (TL) sediments (Tylman et al. 2006) (marked in green): 1 Białoławki (TL); 2 Czarne (L), 3 Garbas (erroneously: Garbaś) (TL); 4 Głęboka Kuta (L); 5 Kot (L); 6 Lemieł (TL); 7 Przykop (L); 8 Rzęśniki

(L); 9 Silec Mały (erroneously: Siniec Mały) (TL); 10 Świętajno (L); 11 Żabinki (erroneously: Żabińskie) (L).

Received: 29 February 2016; Revised: 28 March 2016; .  
Accepted: 24 May 2016.

Małgorzata Karczewska  
Research Centre of Central and Eastern Europe  
Plac Uniwersytecki 1, p. 117  
15-420 Białystok  
Poland  
E-mail: malgorzata.karczewska@gmail.com

Maciej Karczewski  
Institute of History and Political Sciences  
University in Białystok  
Plac Uniwersytecki 1  
15-420 Białystok Poland  
E-mail: barbaricum@wp.pl

## MOZŪRŪ EŽERYNO (ŠIAURĖS RYTŲ LENKIJA) ROMĖNIŠKOJO IR TAUTŲ KRAUSTYMOŠI LAIKOTARPIŲ KAPINYNŲ KRAŠTOVAIZDIS

**MAŁGORZATA KARCZEWSKA,  
MACIEJ KARCZEWSKI**

### Santrauka

Emilis Holakas (Emil Hollack) ir Feliksas Ernstas Paizeris (Felix Ernst Peiser) buvo teisūs, kai pabrėžė kapinynų įrengimo ryšį su topografiniu reljefu ir vandens telkiniais. Be to, kapinynų paleokraštovaizdžio rekonstrukcijos reikalauja detalių paleoaplinkos ir archeologinių tyrinėjimų. Mozūrų ežeryno kapinynai įrengti aukštumų viršūnėse arba ant rytinių ir pietrytinių jų šlaitų, šalia ežerų ar upių krantų. Vienam iš galimų kapinynų įrengimo kraštovaizdžio variantų atstovauja Paprotki Kolonia kaimo kapinynas, įrengtas aukštumoje tarp dviejų ežerų. Šis variantas ypač paplitęs Mozūrijos ežeryno regione. Bogaczewo-Kula (*Kul-labücke*), Kruklinki (*Kruglanken*), Ławki (*Lauken*), Rudówka (*Rudowken*), Wilkasy (*Willkassen*) ir Wyszka (*Wiska*) kapinynai yra įrengti būtent tokiose vietose. Šie kapinynai yra ilgalaikiai mikroregioninio apgyvendinimo elementai ir vietinio kraštovaizdžio žymenys. Tautų kraustymosi laikotarpio Bogačevo kultūros bendruomenės naudojo tuos pačius kapinynus. Tai pabrėžia pasirinktų vietų laidojimo tinkamumą, taip pat nurodo kultūrinį tikėjimo ir mirusiųjų kulto tęstinumą (1–8 pav.).