Miklyaev, A. / Mazurkevich, A. / Korotkevich, B. i in.

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Zaitseva G.

The Institute of the History of Material Culture of Russian Academy of Sciences St. Petersburg. Russia

Miklyaev A., Mazurkevich A., Korotkevich B.

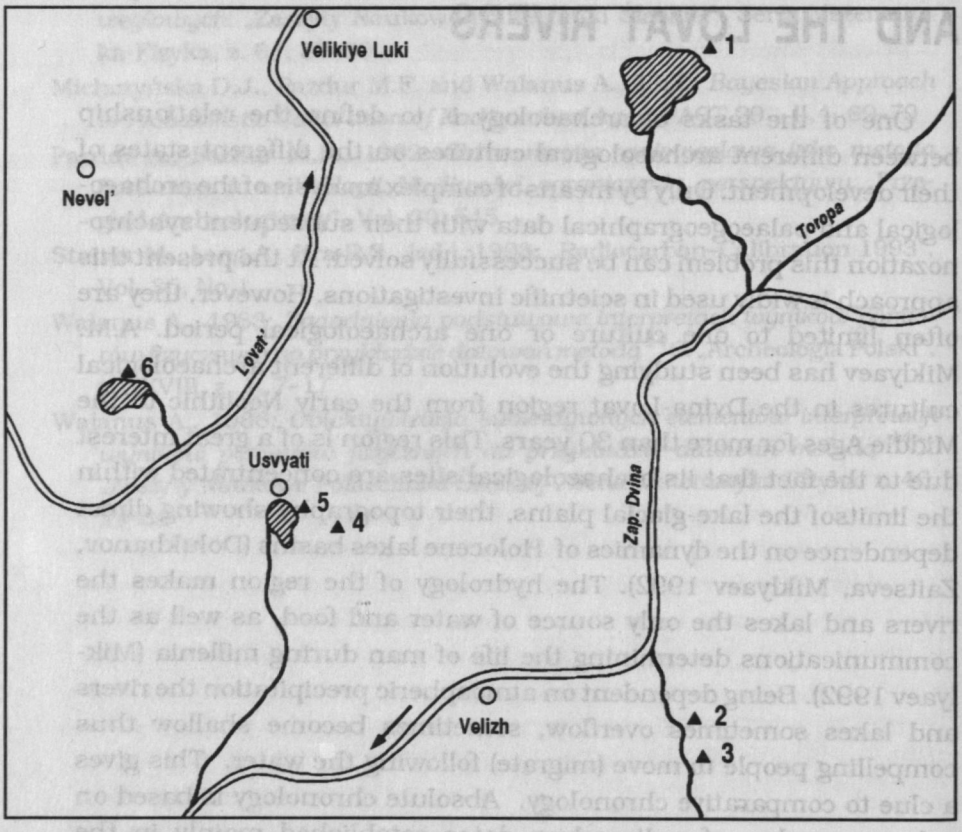
The State Hermitage. St. Petersburg. Russia

THE CHRONOLOGY OF THE OCCUPATION OF THE REGION BETWEEN THE DVINA AND THE LOVAT RIVERS

One of the tasks of archaeology is to define the relationship between different archaeological cultures on the different states of their development. Only by means of complex analysis of the archaeological and palaeogeographical data with their subsequent synchronozation this problem can be successfully solved. At the present this approach is widly used in scietnific investigations. However, they are often limited to one culture or one archaeological period. A.M. Miklyaev has been studying the evolution of different archaeological cultures in the Dvina-Lovat region from the early Neolithic to the Middle Ages for more than 30 years. This region is of a great interest due to the fact that its archaeological sites are concentrated within the limitsof the lake-glacial plains, their topography showing direct dependence on the dynamics of Holocene lakes basins (Dolukhanov, Zaitseva, Miklyaev 1992). The hydrology of the region makes the rivers and lakes the only source of water and food, as well as the communications determining the life of man during millenia (Miklyaev 1992). Being dependent on atmospheric precipitation the rivers and lakes sometimes overflow, sometimes become shallow thus compelling people to move (migrate) following the water. This gives a clue to comparative chronology. Absolute chronology is based on a large number of radiocarban dates established mainly in the radiocarbon laboratory of the Institute of the history of material culture of Russian Academy of Sciences. The time scale obtained for specific sites were synchronized with the period of lake transgressions and regressions in the whole region. This allowed us to get

a general scheme of the evolution of primitive cultures against the background environment and to relate them to certain calendar time.

The geographic map is presented in the figure 1. The all archaeological investigated sites are lacated on the border of. Pskov, Smolensk oblasts of Russia and Vitebsk oblast of Byelorussia. Wood (the remains of wooden structures and artifacts well preserved in moist peat was the main material for dating (Zaitseva 1992)). To define the period of transgressions and regressions more accurately, peat and gyttja from stratigraphical hirizon were also dated. The period of the Early Iron Ages was dated according to charcoal samples found at



▲ archaeological sites:
1 Naumovo
2 Rudnya Sertseyskaya
3 Sertseya
4 Dzyadizy
5 Usvyati
6 Dubokray I

Fig. 1. The map of the Dvina-Lovat region

the sites Mosti and Mezhuevo. Radiocarbon dates have been related to correspondind calendar time by computer program Cal3 (Van der Plicht 1993). The radiocarbon dates are presented in the table 1. The chronological sequence of archaeological cultures against the background of environmental changes is given in the figure 2. The presented schema schows the dependence of the occupation of different sites of the region on the fluctuation of water level in the rivers and lakes during over 7 millenia. The region was first occupated in the Upper Palaeolithic, at the beginning of the Wurm glacial period it became deserted (Miklyaev 1992). This territory started

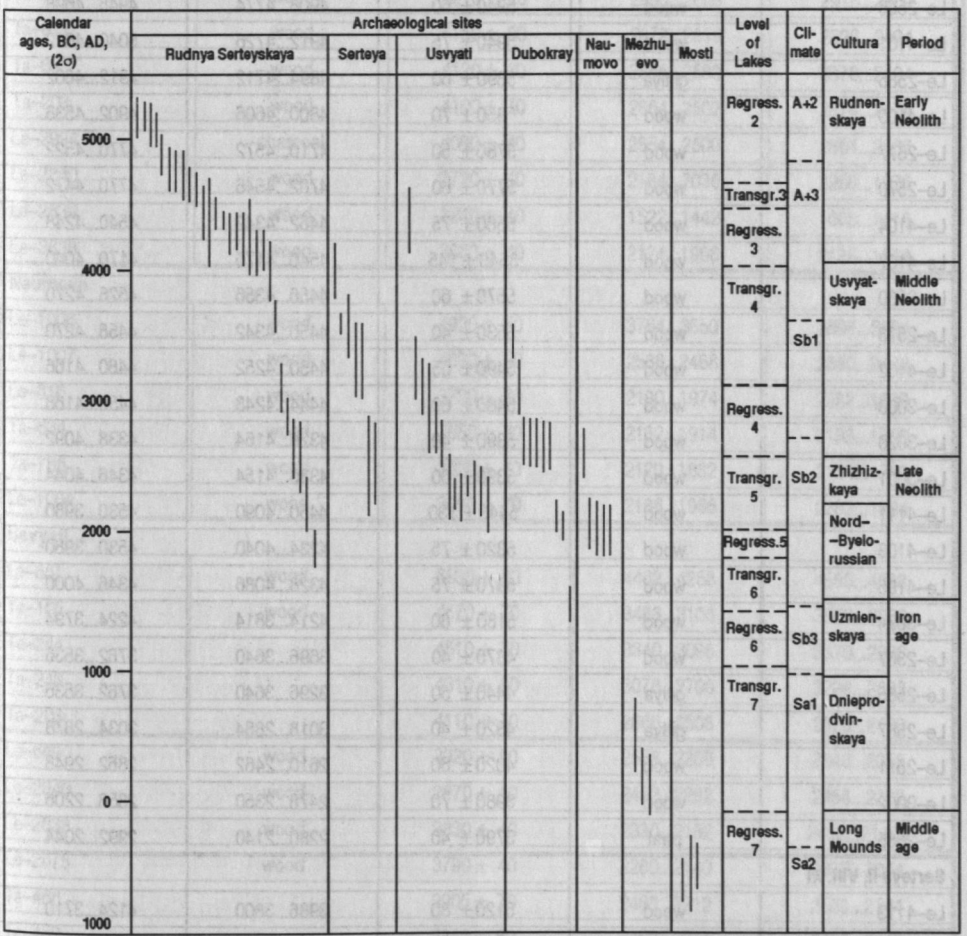


Fig. 2. Chronological correlation of archaelogical cultures and paleogeographic evidences in West Dvine–Lovat ragion

Table 1

The chronology of archaeological sites of Dvina–Lovat river's region

Lab. number	Material	^{14}C age b.p.	Calibrated age BC/AD.	
			1σ	2σ
1	2	3	4	5
Rudnya Serteyskaya				
Le–3054	wood	6240 ± 40	6256...5078	5282...5002
Le–2568	wood	6230 ± 40	5230...5080	5256...5070
Le–2569	wood	6180 ± 70	5220...5008	5354...4946
Le–2579	wood	6130 ± 40	5196...4960	5208...4940
Le–2566	wood	5940 ± 60	4908...4774	4946...4698
Le–4101	wood	5940 ± 75	4912...4726	5040...4612
Le–2586	gittiya	5890 ± 60	4894...4712	4912...4602
Le–4100	wood	5850 ± 70	4800...4606	4902...4538
Le–2577	wood	5780 ± 50	4710...4572	4770...4522
Le–2570	wood	5770 ± 60	4702...4546	4770...4472
Le–4104	wood	5560 ± 75	4462...4342	4540...4248
Le–4107	wood	5540 ± 145	4540...4170	4170...4040
Le–2580	wood	5570 ± 60	4456...4356	4526...4270
Le–2578	wood	5530 ± 40	4450...4342	4458...4270
Le–4102	wood	5490 ± 65	4450...4252	4460...4166
Le–3000	wood	5480 ± 60	4444...4248	4456...4168
Le–3020	wood	5390 ± 40	4326...4164	4338...4092
Le–3001	wood	5390 ± 60	4330...4154	4346...4044
Le–4111	wood	5440 ± 130	4450...4090	4530...3980
Le–4103	wood	5320 ± 75	4234...4040	4530...3980
Le–4105	wood	5370 ± 75	4328...4086	4346...4000
Le–3674	wood	5180 ± 80	4214...3814	4224...3794
Le–2567	wood	4870 ± 40	3696...3640	3762...3536
Le–2585	gittya	4440 ± 50	3296...3640	3762...3536
Le–2587	gittya	4320 ± 40	3018...2884	3034...2878
Le–2571	wood	4020 ± 60	2610...2462	2862...2948
Le–3002	wood	3980 ± 70	2478...2350	2858...2206
Le–2565	peat	3790 ± 40	2280...2140	2992...2044
Serteya II, VIII, XI				
Le–4113	wood	5120 ± 80	3986...3800	4124...3710
Ta–242	wood	4830 ± 30	3650...3542	3692...3532

1	2	3	4	5
Le-4112	wood	4760 ± 100	3640...3380	3780...3140
Le-4108	wood	4590 ± 75	3500...3106	3618...3040
Le-4110	wood	4620 ± 100	3610...3110	3630...3040
Le-4109	wood	4000 ± 140	2860...2290	2890...2140
Le-3676	wood	3980 ± 70	2578...2350	2358...2206
Le-2572	wood	3790 ± 40	2280...2140	2392...2044
Dubokray				
Le-3003	charcoal	4720 ± 40	3620...3378	3630...3372
Le-3891	wood	4430 ± 60	3290...2924	3334...2916
Ta-202	wood	4210 ± 70	2890...2628	2918...2586
Ta-817	wood	4159 ± 80	2872...2616	2896...2494
Ta-633	wood	4120 ± 60	2866...2580	2876...2494
Ta-203	wood	4100 ± 70	2864...2502	2874...2474
Le-2994	charcoal	4080 ± 40	2854...2500	2864...2486
Le-2840	wood	3720 ± 40	2184...2036	2268...1976
Le-2839	wood	3240 ± 40	1522...1442	1608...1416
Le-3838	wood	3660 ± 40	2124...1968	2136...1914
Naumovo				
Le-1006	wood	4920 ± 50	3764...3650	3896...3634
Le-1007	wood	4030 ± 50	2586...2468	2860...2408
Le-816	wood	3700 ± 70	2190...1974	2282...1890
Ta-634	wood	3650 ± 70	2132...1914	2198...1780
Ta-756	wood	3620 ± 70	2120...1882	2184...1760
Le-1004	wood	3690 ± 70	2186...1966	2282...1884
Usvyati				
Le-651	wood	5530 ± 90	4462...4258	4550...4098
Ta-105	wood	4570 ± 70	3488...3106	3508...3056
Ta-244	wood	4510 ± 70	3340...3098	3370...2926
Ta-243	wood	4310 ± 80	3078...2706	3298...2622
Ta-203	wood	4110 ± 70	2866...2508	2876...2490
Le-649	wood	3920 ± 90	2558...2208	2846...2052
Le-2840	wood	3870 ± 40	2452...2282	2458...2202
Le-2833	wood	3830 ± 40	2330...2152	2452...21409
Le-2675	wood	3790 ± 40	2280...2140	2392...2044
Ta-466	wood	3905 ± 70	2468...2212	2568...2144
Ta-469	wood	3860 ± 60	2452...2204	2466...2140

1	2	3	4	5
Mezhuevo				
Le-3677	charcoal	2340± 80	748...208	762...194
Le-3678	charcoal	2200± 100	380...120	410...60
Le-3679	charcoal	2080± 100	200...60	370...120
Mosti				
Le-4211	charcoal	1390± 80	596...718 AD	466...874 AD
Le-4633	charcoal	1460± 130	430...690 AD	270...880 AD
Le- 4634	charcoal	1490± 90	450...654 AD	392...760 AD

being continuously inhabited since the lake Pleistocene when the water level reached its maximum (transgression 1). However, radiocarbon dates for the initial period have not been established yet. Typological features of pottery have traditionally been the basic criteria in determining archaeological cultures. They are described in literature (Miklyaev1992), therefore we do not dwell on them here. The main site of the Early Neolithic is Rudnya Serteyskaya with two Early Neolithic cultures, but unfortunately there is no material for radiocarbon dating available for the earliest of them, named Serteyskaya. The subsequent Rudnenskaya culture genetically connected with the Serteyskaya one has several stages of development during about a millenium, synchronously with regression 2 and transgression 3. At the beginning of the transgression 3 the population moved to higher places. The appearence of the site Dubokray can be dated from the same time. At the present it is covered with water and studied by the method of underwater archaeology. The analysis of Rudnenskaya pottery of the middle phase has revealed some features characteristic of the Narva culture, its late phase has parallels with the Upper Volga culture. This testifies to the fact that the region was a link between the Baltic region and Upper Volga region. Transgression 4 following regression 3 is a boder between the Early and the Middle Neolithic. The main site of this period is the peat site Usvyati containing several occupation levels. The material of this site as well as of the site Serteya indicate for over a 500-years development of the Usvyati Neolithic culture, which according to the technique of pottery (manufacture) making has 3 phases of development. Its initial period, according to sample from pile-dwelling, dates from the late 5th millenium B.C. Continuous transgression 4 led to the building of dwellings on high places

characteristic of the site Dubokray and Naumovo where the Usvyati culture came into its next phase.

Regression 4 lasted for a short time and was followed by transgression 5 when pile settlements were biult at the site Naumovo. These strctures and materials connected with Zhizhizkaya culture following after Usvyatskaya culture and date from the late Neolithic which beginning dates from the 3th millenium B.C. The subsequent North-Byelorussian culture was excavated in the upper layers of the sites Naumovo, Serteya and Dubokray.

It developed during regression 5 followed by transgression 6 which washed away all the pile structures. A radiocarbon date was established according to a sample of wood from of the lake Sennitsa (settlement Dubokray). It suggests a disastrous flood which took place about the middle of the 2nd millenium B.C.

Further the scheme presented shows an approximately 700 years gap. However, there was a continuous development of the territory in that period. The North Byelorussian culture was replaced by the Uzmien culture, its pottery has been uncovered at the site Serteya 2. Unfortunately, there is no material for radiocarbon dating available at present and we can only hope that further investigations will provide us with radiocarbon dates making the developmental stages of the Uzmien culture more exact. ThusŰ, the chronological gap can be filled. The Uzmien culture is characteristc of early Iron Age. The fall of temperature and the damping of climate worsened living condition to neighbouring hills. The materials available at present are not enough to trace the evolution of the Uzmien culture into the subsequent Dnieper-Dvina culture. The peat deposited above the cultural layers of the sites with the Uzmien culture formed during the 9th-6th centuries B.C. Therefore, the early stage of the Dnieper--Dvina culture, the material of which were found at the site Mezhuevo, can be dated from this period. Remains of an iron extracting workshop have been uncovered here. At that time the tops of the hills ceased to be used as settlements, sometimes they were used for the biulding of workshops extracting and processing iron.

At the beginning of this millenium regression 7 developed during funeral rise in temperature and the decrease level in rivers and lakes and the subsoil waters level made it possible to expand areas for pastures and use fertile plots for farming which development can be

established according to a number of indirect features. Favourable climatic conditions and the development of ferrous metallurgy, farming and stock-breeding promoted the appearance of communities on a high social level manifested in the separation of trade from farming. All this gave impetus to the transformation of Dniepro-Dvina culture into the culture of Long Mounds which developed during regression 7. In lake Sennitsa frame foundatiopns of an iron extracting workshop with the remains of slag have been uncovered. Charcoal samples impregnated into the slag have been dated. On the basis of these dates the culture of Long Mounds may be said to have existed in the region since the 6 the century A.D. Later the culture of Long Timbers became one of the componenets of Ancient Russian culture.

Thus, the complex research of sites in the region the Dvina and the Lovat rivers with a wide range of cultures allowed us to retrace schematically the history of the territory develompent beginning with the Early Neolithic. It should be noted that changes in the water level of the lakes and rivers were not the only reason of the evolution of material culture, but they are sure to have influenced the local migration. Generalization of the data available enabled us to show a common line in the development of material culture, which is well demonstrated by the scheme given above.

Yes, A.M. Miklyaev is gone, his contribution to this investigation can coarsely be exaggerated.

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