

ŁÓDŹ RADIOCARBON DATES III

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The results presented in this list were obtained from 1986 to 1989. Equipment, measurement and treatment of samples are as reported previously (Kanwiszer & Trzeciak 1984: 111). Age calculations are based on a contemporary value equal to 95% of the activity of NBS oxalic acid standard and on the conventional half-life for ^{14}C of 5568 ± 30 years. Results are reported in years before 1950 (years BP). Errors quoted ($\pm 1\sigma$) include standard deviations of count rates for the unknown sample, contemporary standard and background. The dates are not corrected for ^{13}C fractionation. Descriptions and comments are based on information supplied by submitters of samples.

ARCHAEOLOGIC SAMPLES

LOD-220. Nowodworce 1 **6000 \pm 150**

Wood from archaeological site in Nowodworce, Białystok prov ($53^{\circ}20'\text{N}$, $23^{\circ}25'\text{E}$). Material was fragment of stake from 0.6m depth. Sample should date site (Cyrek, Grygiel & Nowak 1982). Coll by K Nowak, Warsaw Univ, Białystok; subm by K Cyrek, Archaeol & Ethnog Mus, Łódź.

LOD-224. Mały Płock 8c/79 **740 \pm 140**

Charcoal from archaeological site in Mały Płock, Łomża prov ($53^{\circ}18'\text{N}$, $22^{\circ}02'\text{E}$). Sample coll from layer of burned material, from filling of object, depth 1.5m. Dated to establish correlation of particular settlement phase within site as well as absolute chronology of settlement complex. Date is supplement of Mały Płock series (Kanwiszer & Trzeciak 1986). Sample coll and subm by E Twarowska, Archaeol Inst, Warsaw Univ, Warsaw.

Brześć Kujawski region series

Several samples, mainly charcoal, from four archaeological sites: Brześć Kujawski ($52^{\circ}36'\text{N}$, $18^{\circ}35'\text{E}$), Nowy Młyn ($52^{\circ}37'\text{N}$, $18^{\circ}50''\text{E}$), Falborz ($52^{\circ}38'\text{N}$, $18^{\circ}48'\text{E}$) and Guźlin ($52^{\circ}39'\text{N}$, $18^{\circ}52'\text{E}$), Włocławek prov. Settlement-complex of Lengyel culture in Brześć Kujawski region is one of best dated Neolithic sites. More than 30 dates were obtained from four laboratories: Groningen, Köln, Geochron (Massachusetts), Łódź. These dates help create a chronology of the cultures living in the Brześć Kujawski region in the Early Middle Neolithic (Grygiel 1984). A detailed description of sites and results of previous measurements were published earlier (Kanwiszer & Trzeciak 1986). All samples coll and subm by R Grygiel, Archaeol & Ethnog Mus, Łódź.

LOD-225. Nowy Młyn 1 **4950 \pm 160**

Charcoal from lens in hearth, Pit 1, depth 1.0m. Sample yielded first date of Funnel Beaker culture in this region.

LOD-226. Falborz 4 **6050 \pm 170**

Charcoal, Pit D, depth 0.8m.

LOD-228. Falborz 2	5850 ± 170
Charcoal, Pit E, depth 0.8–2.0m.	
LOD-237. Guźlin 6	5950 ± 160
Charcoal, Site 1, Pit 1, depth ca 1m. Dated to determine absolute chronology of Linear Pottery culture in Brześć Kujawski region.	
LOD-291. Nowy Młyn P 11	5170 ± 210
Charcoal from lens in hearth at base of Pit 11, depth ca 1m.	
LOD-292. Nowy Młyn P 13	5230 ± 180
Charcoal from lens in Pit 13, depth 0.6–0.7m.	
LOD-293. Brześć Kujawski S 5/B	4480 ± 170
Charcoal from lens at base of pit, Site 5, Object B, depth ca 0.7m.	
LOD-297. Falborz 2 bis	5780 ± 150
Charcoal from lens in hearth, Pit E, depth 0.8–2.0m. Dated to confirm or correct date for LOD-228, above.	
<i>General Comment:</i> dated material was unutilized part of LOD-228. Date, unsuitable from archaeological viewpoint, is unchanged. The cause of nonconformity with archaeological expectations probably results from collecting material from too large a depth interval, 0.8–2.0m.	
LOD-298. Brześć Kujawski S 4/755	3630 ± 130
Charcoal from lens in Pit 755, Site 4, depth 0.8m.	
LOD-315. Brześć Kujawski S 5/H	4320 ± 120
Charcoal from lens in Pit H, Site 5, depth 0.4–0.7m.	
LOD-334. Nowy Młyn P 19	5030 ± 170
Charcoal from lens in hearth of Pit 19, Site 6, depth 0.4–0.6m.	
LOD-346. Nowy Młyn P 18	5230 ± 150
Charcoal from lens in Pit 18, Site 6, depth 0.4–1.0m.	
LOD-347. Brześć Kujawski S 3/809	5220 ± 140
Charcoal from lens in Pit 809, Site 3, depth 0.9m.	
LOD-349. Nowy Młyn P 20, 25	5180 ± 150
Charcoal from lenses in Pits 20, 25, Site 6, depth 0.4–1.0m.	

Gniew series

Six wood samples coll from Gniew, on Vistula River, Gdańsk prov (53°47'N, 18°48'E). Archaeologic excavations are being conducted in relation to urban renewal and castle reconstruction. Systematic research has revealed traces of Slavic settlement at this locality, eg, a layer from the town's foundation (the decline occurred 13–15th centuries AD). All samples coll from Site 3 and subm by H Paner, Archaeol Mus, Gdańsk.

LOD-230. Gniew 2 560 ± 130

Wood fragment from pile of bridge.

LOD-231. Gniew 3 620 ± 130

Wood fragment from pile of bridge; close to gable wall of granary.

LOD-232. Gniew 5 520 ± 130

Wood, peg no. 2, Trench XI A.

LOD-233. Gniew 1 600 ± 170

Wood fragment of board, near granary wall.

LOD-234. Gniew 4 660 ± 140

Wood fragment of timbering board, Trench XI A, near granary wall.

LOD-235. Gniew 6 630 ± 140

Wood fragment of peg, Trench XI B, near granary wall.

Stryczowice series

Seven samples from Stryczowice, Kielce prov (50°53'N, 21°19'E). Dated to complement archaeological research on Neolithic settlement of Funnel Beaker culture (Uzarowicz-Chmielewska 1979). All samples subm by A Uzarowicz-Chmielewska, Natl Archaeol Mus, Warsaw.

LOD-246. Stryczowice 1 4550 ± 170

Charcoal from lens in Pit 3, depth 0.8–1.4m. Dated to determine chronology of site. Sample coll by A Uzarowicz-Chmielewska and E Krakowiak.

LOD-247. Stryczowice 2 4850 ± 140

Charcoal scattered throughout large Pit 30, depth 0.8–1.0m. Dated to determine chronology of large feature of Lengyel culture which covered Funnel Beaker cultural layer. Sample coll by A Uzarowicz-Chmielewska.

LOD-248. Stryczowice 3 4350 ± 160

Charcoal from moat surrounding the settlement, depth 1.3–1.5m. Dated to determine chronology of moat, the end of its use and the start of its filling by natural elements. Sample coll by A Uzarowicz-Chmielewska.

LOD-249. Stryczowice 4 **3200 ± 140**

Charcoal from peat layer, depth 0.9–1.1m. Dated to determine chronology of upper moat filling. Sample coll by W Chmielewski.

LOD-250. Stryczowice 5 **4300 ± 210**

Charcoal scattered through middle and lower part of pit, mainly from darkest streak of pit filling, depth 0.8–1.2m. Dated to determine chronology of site and to establish whether settlement was single or multi-component. Sample coll by A Uzarowicz-Chmielewska and J Kamińska.

LOD-251. Stryczowice 6 **4700 ± 160**

Charcoal scattered in bright brown loess with iron precipitation streaks, depth 1.0–1.2m. Dated to determine chronology of moat and succeeding phases of its filling. Sample coll by W Chmielewski.

LOD-252. Stryczowice 7 **4550 ± 180**

Charcoal scattered through middle and lower part of pit filling, depth 0.7–1.7m. Dated to determine age of pit richest in artifacts as well as the age of these artifacts. Sample coll by W Chmielewski.

Kamieńczyk-Błonie series

Three samples from Kamieńczyk-Błonie, Ostrołęka prov (52°38'N, 21°30'E). Sites under examination are remains of settlement dating to Roman period. As there were no ceramics, samples were dated to determine chronology of settlement. All samples coll and subm by G Dmochowska, Natl Archaeol Mus, Warsaw. Excavations were made in 10m² units (Are), subdivided into Quarters (Qt).

LOD-253. Kamieńczyk-Błonie 1 **1670 ± 110**

Charcoal from carbonized beam, depth 0.5m, Are 11, Qt A, Feature 45.

LOD-254. Kamieńczyk-Błonie 2 **2300 ± 140**

Charcoal from carbonized beam from hearth, depth 0.52m, Are 1, Qt C, Feature 48.

LOD-255. Kamieńczyk-Błonie 3 **1780 ± 110**

Charcoal from outer layer of carbonized beam from hearth, depth 0.4m, Are 2, Qt A, Feature 64.

LOD-256. Łąkorek 1 **680 ± 100**

Wood from site on south bank of Łąkorz Lake, next to stream connecting this lake with Wielkie Partęczyny Lake, Toruń prov (53°27'N, 19°22'E). Date should help identify stratigraphy and establish chronology of site. Researchers are investigating basal layer of remains of settlement. Sample coll from pile settlement, from post which sank to bottom of Łąkorz Lake, at depth 1.0m below water surface. Sample coll and subm by K Grążawski, Reg Mus, Brodnica.

Grudziądz-Mniszek series

Two samples from Grudziądz-Mniszek, Toruń prov (53°26'N, 18°46'E). Site is situated on sandy dune. Both results indicate Late Neolithic/Early Bronze Age as well as beginning and end of several cultures at district of Chełm: Únětice, Iwno, Funnel Beaker, Globular Amphora, Pit-comb Ware, Corded Ware. Dates can also prove homogeneous chronology of site. Both samples coll and subm by M Marciniak, Reg Mus, Brodnica.

LOD-257. Grudziądz-Mniszek 3wI/84/c803 **3810 ± 160**

Charcoal, fragments of large clods from lens at floor of hearth pit. Hearth was in middle of dwelling feature plunged into rockbed, at ca 0.2–0.25m depth. Hearth pit was 0.8m in diameter, at ca 0.3m depth. Clods lying in midst of intensively burned material from 0.8–1.05m depth were collected for date.

LOD-258. Grudziądz-Mniszek 3wI/c880 **3770 ± 150**

Charcoal, scattered fragments of clods from lens in Pit 2. Clods were regularly scattered throughout sandy filling of pit at 0.8–1.3m depth.

Kalisz series

Wood from castle in Kalisz, Kalisz prov (51°48'N, 18°07'E). Dated to determine beginning of Phase I and intervals of Phases I and II of medieval castle. Samples coll by T Poklewski and J Maik; subm by T Poklewski, Inst Hist Material Culture, Polish Acad Sci, Łódź.

LOD-265. Kalisz III/84 **600 ± 90**

Wood, decaying beam and branches from twig layer, Are AB-49/4,9.

LOD-266. Kalisz 437/83 **650 ± 110**

Wood (batten) from layer of decaying material at base of pit, Are AB-49/4,9.

LOD-267. Kalisz IV/84 **580 ± 90**

Wood from twig layer in humus underlying foundation of tower castle wall, Are AA-48/10 and AB-49/6.

Łykowe series

Samples from systematic excavation in Łykowe, Sieradz prov (51°12'N, 18°47'E) (Cyrek, Grygiel & Nowak 1982; Cyrek 1987, 1990). Series is continuation of archaeological dates from this site. Detailed description of site with previous Łykowe series were published earlier (Kanwiszer & Trzeciak 1984, 1986). All samples coll and subm by K Cyrek.

LOD-268. Łykowe 1/85 **4130 ± 180**

Charcoal from posthole pits, depth 0.8m, Meter XIV-XVII/O₁₆-O₁₈.

LOD-269. Łykowe 2/85 **4250 ± 160**

Charcoal from cultural pit, depth 0.8m, Meter XIV/O₁₁.

LOD-270. Łykowe 3/85	4320 ± 120
Charcoal from hearth pit, depth 0.5m, Meter XXIII and XIV/O ₁₁ .	
LOD-271. Łykowe 5/85	3850 ± 150
Wood, fragment of wooden construction beam, depth 1.4m.	
LOD-299. Łykowe 1/86	4260 ± 150
Charcoal from lens in hearth, depth 0.5m, Meter XX, XXI/O ₂₀ .	
LOD-300. Łykowe 2/86	2160 ± 130
Charcoal, remnant of wooden construction, depth 0.2 - 0.4m, Meter XIV, XV/O ₂₀ , O ₂₁ .	
LOD-301. Łykowe 6/85	3850 ± 160
Charcoal, hearth traces, depth 1.6m, near pond, Meter h ₁ /B.	
LOD-302. Łykowe 7/85	2780 ± 150
Organic material from cultural pit, depth 1.3m, near pond, Meter h ₁ , i ₁ /B.	
LOD-272. Lednica	610 ± 100

Sample coll during underwater research near Ostrów Lednicki (52°30'N, 17°23'E). Initially, two samples were collected for dating – hemp rope and wood from outside bottom layer of boat, but both samples were so small that only a combined sample would yield a reliable result. Since both samples contained comparable amounts of carbon, the obtained result must be interpreted as an average of two dates. Sample coll by M Aleksy, Museum of the First Piasts at Lednica; subm by J Lehman, Natl Mus Poznań.

Osjaków series

Charcoal from Osjaków, Sieradz prov (51°24'N, 18°45'E). Samples are from archaeological excavations of Neolithic settlement on the Warta River (Niesiołowska 1971, 1973). Dated material is mainly related to Pit-comb Ware culture. All samples coll and subm by E Niesiołowska, Archaeol and Ethnog Mus, Łódź.

LOD-273. Osjaków 6/71	3900 ± 170
Charcoal from layer of sand overlying Hut 3, depth 0.3m.	
LOD-277. Osjaków 18/69	11,370 ± 250
Charcoal from second layer of fossil soil, depth 1.5m, Are XV/XVI, Meter b-g.	
LOD-278. Osjaków 19/69	4430 ± 170
Charcoal from hearth, Meter XVIIh.	

- LOD-279. Osjaków 1/73** 4390 ± 150
Charcoal from hearth of dwelling feature, depth 0.7m, Meter XIVs.
- LOD-335. Osjaków 5/70** 4110 ± 130
Charcoal from hearth, NS profile, Meter XX B.
- LOD-336. Osjaków 4/73** 4320 ± 130
Charcoal from hearth, depth 0.5m, Meter XXI B.

Michałów series

Charcoal from Michałów, Piotrków Trybunalski prov (51°20'N, 19°29'E). Samples are from systematic excavations of Mesolithic settlements. All samples coll and subm by E Niesiołowska.

- LOD-280. Michałów 10/78** 10,260 ± 210
Charcoal from Hearth 5, depth 0.7–0.9m, Meter 12 and 13 B.
- LOD-281. Michałów 2/79** 7380 ± 190
Charcoal from Hearth 2, depth 0.6–0.7m, Meter 9 A.
- LOD-282. Michałów 4,6/80** 7430 ± 150
Charcoal from hearth in Hut 1, depth 0.3–0.5m, Meter 9/10 C.
- LOD-283. Michałów 2/81** 7210 ± 180
Charcoal from Hut 2, depth ca 0.4m, Meter 7 D.

Rzucewo series

Two samples from Osłonino (54°41'N, 18°28'E) and one from Rzucewo (54°42'N, 18°28'E), Gdańsk prov. Collected material was related to settlement of Rzucewo culture (Żurek 1954). Dated to establish chronology of Rzucewo culture, particularly settlements lying to west of Vistula River. Samples coll during systematic salvage excavations. All samples coll and subm by D Król, Archaeol Mus, Gdańsk.

- LOD-288. Osłonino 1** 4100 ± 120
Charcoal from one lens, Pile 2, Excavation 2 - 80, Feature 2 (hut), depth 2.1–2.2m.
- LOD-289. Osłonino 2** 4200 ± 170
Charcoal from one lens, from burned pile, Excavation 2 - 80, Feature 3 (hut), depth 2.25m.
- LOD-290. Rzucewo** 4420 ± 130
Charcoal from hearth, Site 1, Borehole 9-25, depth 1.15–1.20m.

Krzesk-Królowa Niwa series

Two samples from site in Krzesk-Królowa Niwa, Siedlce prov (52°11'N, 22°25'E). Dated to establish precise chronology of wooden construction of rampart. Pottery found on site dates to 7th–8th centuries AD. Samples coll and subm by J Kalaga, Archaeol Inst, Warsaw Univ, Warsaw.

LOD-295. Krzesk-Królowa Niwa 1 **1270 ± 90**

Wood, depth 1.45m.

LOD-296. Krzesk-Królowa Niwa 2 **1240 ± 90**

Wood, depth 0.9m.

LOD-316. Grodzisk 50/84 **2250 ± 100**

Sample coll during systematic excavations in Grodzisk, Siedlce prov (52°25'N, 21°50'E). Charcoal from pit dwelling with large residues of burned material, depth 1.2m. Dated to determine age of pit dwelling which is situated within Early Medieval earthwork. Bronze fibula of Middlelathene construction and pottery of Przeworsk culture. Sample coll and subm by W Wróblewski, Archaeol Inst, Warsaw Univ, Warsaw.

Czerchów series

Two samples from Czerchów, Łódź prov (51°55'N, 19°15'E). Both samples from Early Medieval earthwork coll and subm by A Chmielowska, Archaeol and Ethnog Mus, Łódź.

LOD-329. Czerchów P 2 **660 ± 90**

Charcoal, depth 1.1–1.25m.

LOD-330. Czerchów 5 **630 ± 90**

Charcoal.

Rąty series

Two samples coll during systematic excavation in Rąty, Gdańsk prov (54°21'N, 18°19'E). In both cases, charcoal from hearths (layers of burned material with large fragments of carbonized beam) were used. Results seem to determine chronology and cultural attachment of exposed-hearth complex in south part of East Pomeranian cultural cemetery and its probable association with other research sites. Both samples coll and subm by M Fudzinski, Archaeol Mus, Gdańsk.

LOD-331. Rąty 34 **2320 ± 90**

Charcoal, depth 0.35–0.40m, Are XI.

LOD-332. Rąty 41 **2290 ± 90**

Charcoal, depth 0.25–0.30m, Are XXI.

LOD-333. Ruska Skala 1/52 **7120 ± 210**

Charcoal from Ruska Skala cave in Podlesice, Częstochowa prov (50°50'N, 19°55'E). Dating

material coll from cultural layer of cave variety of Świdry culture from early Holocene. Depth ca 1m. Sample coll by W Chmielewski; subm by K Cyrek.

General Comment: sample was composed of small bits of charcoal that were stored in lignin for 30 years. Most of charcoal was labeled. Despite precision cleaning and pretreatment, there is possibility that not all foreign carbon was removed. Thus, date may be too young.

GEOLOGIC SAMPLES

WBM series

This series is continuation of dating of material from geologic sites in Wola Branicka, Łódź prov (51°57'N, 19°27'E). Detailed description of sites with first WBM series were published earlier (Kanwiszer & Trzeciak 1986). All samples described below were coll and subm by H Klatkova and J Kamiński, Inst Geog, Łódź Univ, Łódź.

LOD-221. WBM 6 **3600 ± 140**

Humus from fossil soil layer in dune, depth 2.30–2.55m. Dated to determine one of dune-forming phases.

LOD-222. WBM 5 **3500 ± 140**

Peat from organic layer in dune, depth 3.5–3.7m. Dated to determine beginning of dune formation.

LOD-229. WBM 7 **7250 ± 220**

Organic fragments overlying gritty-sand series (river), depth 3.5–3.7m. Dated to determine end of deposition of coarse river material.

LOD-368. WBM 6,7 **3090 ± 100**

Peat from layer, depth 2.05–2.15m. Dated to determine stratigraphy and paleogeography of Holocene in this region.

LOD-223. Dąbrowa 5/9 **14,200 ± 400**

Organic ooze coll by boring from site in Dąbrowa, Piotrków Trybunalski prov (51°36'N, 19°21'E). Depth 4.8m. Analysis was carried out to date periglacial dry valley sediments. Sample coll and subm by H Klatkova.

Przedbórz region series

Numerous series of samples from sites on the Pilica River near Przedbórz: Będzyn (51°13'N, 19°53'E), Łęg Ręczyński (51°14'N, 19°13'E), Majkowice (51°10'N, 19°50'E), Paskrzyn (51°14'N, 19°52'E), Skotniki (51°15'N, 19°48'E) and Taras (51°10'N, 19°52'E), all Piotrków Trybunalski prov (Marosik 1984). These dates supplement earlier analyses from these sites, which were published earlier (Kanwiszer & Trzeciak 1986). All samples coll and subm by P Marosik, Archaeol and Ethnog Mus, Łódź.

LOD-227. Będzyn 5 **2950 ± 150**

Wood from natural outcropping. Sample coll from layer of river sand with wood, depth 1.3m.

LOD-243. Majkowice 11	10,050 ± 220
Peat from layer overlying loam silt, depth 2.6m.	
LOD-244. Paskrzyn 3	12,250 ± 190
Sandy silt with plant detritus, depth 1.6–1.7m.	
LOD-261. Taras 1	6600 ± 160
Peat from layer between organic silt and silty sand, depth 1.6–1.7m.	
LOD-262. Paskrzyn 3a	13,200 ± 200
Sandy silt with plant detritus from several layers, depth 1.7–1.8m.	
LOD-263. Paskrzyn 2a	11,600 ± 300
Charcoal, depth 8.5m.	
LOD-264. Majkowice 9	4530 ± 160
Wood with sandy silt underlying peat layer, depth 1.4m.	
LOD-318. Skotniki 1	10,150 ± 210
Peat from basal layer in fossil soil, depth 2.7–2.8m.	
LOD-319. Łęg Ręczyński 4a	8960 ± 190
Peat from basal layer in fossil soil, depth 2.5–2.6m.	
LOD-320. Skotniki 2	6060 ± 240
Peat from basal layer in fossil soil, depth 3.4–3.5m.	
LOD-321. Taras 1a	10,430 ± 210
Peat from basal layer in fossil soil, depth 3.0–3.1m.	
LOD-322. Taras 2	10,270 ± 250
Peat from basal layer in fossil soil, depth 3.3–3.4m.	
LOD-323. Majkowice 11a	12,860 ± 250
Gyttja from basal layer in fossil soil, depth 2.8m.	
LOD-324. Majkowice 12	4770 ± 170
Peat from basal layer in fossil soil, depth 1.45–1.55m.	
LOD-325. Łęg Ręczyński 1	11,420 ± 230
Peat from basal layer in fossil soil, depth 2.4–2.5m.	

LOD-326. Łęg Ręczyński 2 **10,950 ± 200**

Peat from basal layer in fossil soil, depth 2.2–2.3m.

LOD-327. Łęg Ręczyński 4 **7460 ± 250**

Organic silt from top layer in fossil riverbed, depth 1.4–1.5m.

LOD-328. Łęg Ręczyński 5 (forest) **10,270 ± 220**

Peat from basal layer in fossil riverbed, depth 1.8–1.9m.

LOD-350. Będzyn 4 **900 ± 90**

Sandy silt with wood fragments in fossil riverbed, depth 1.1–1.2m.

LOD-351. Będzyn 2 **1310 ± 100**

Loam silt with plant remains in basal layer of fossil riverbed, depth 1.2–1.3m.

LOD-352. Łęg Ręczyński 6 **4380 ± 140**

Peat with many small wood fragments in basal layer of fossil riverbed, depth 1.4–1.5m.

LOD-353. Majkowice 10 **2720 ± 110**

Peat with sandy silt in basal layer of fossil riverbed, depth 1.1–1.2m.

LOD-354. Majkowice 10a **7520 ± 160**

Loam silt with many plant remains and wood fragments, in loam silt layer (older mud?) underlying sands and silts (younger mud?), depth 1.6–1.7m.

Bychlew series

This is a continuation of previous dates of samples from a site in Bychlew, Łódź prov (51°38'N, 19°21'E). The site lies close to the upper stretch of the Pabianka River, several meters wide, flowing to the Dobrzyńska River in Pabianice. Investigations seem to determine stratigraphy and paleogeography of the Vistulian and Holocene periods in central Poland (Klatkova 1984). All samples coll and subm by H Klatkova.

LOD-236. Bychlew XI **12,400 ± 320**

Organic silt from depth 2.55m.

LOD-259. Bychlew A **12,300 ± 250**

Organic silt from depth 1.75m.

LOD-260. Bychlew B **4550 ± 170**

Wood, scattered fragments in organic carbon layer, depth 1.4m.

LOD-305. Bychlew 85/4.10-4.15 **13,260 ± 210**

Organic silt from depth 4.10–4.15m.

LOD-306. Bychlew 85/4.22-4.30	13,400 ± 200
Organic silt from depth 4.22–4.30m.	
LOD-307. Bychlew 85/4.58-4.65	14,700 ± 230
Organic silt from depth 4.58–4.65m.	
LOD-308. Bychlew 85/4.72-4.75	14,850 ± 250
Organic silt from depth 4.72–4.75.	

Lublinek series

Several samples from Lublinek, Łódź prov (51°44'N, 19°21'E). Samples collected to investigate geologic structure of the base of the Ner River Valley (Turkowska 1985, 1988, in press). Investigations are being conducted before the construction of a sewage-treatment plant. More information on the site and dating results were published previously (Kanwiszer & Trzeciak 1986). All samples coll by G Poborska; subm by K Turkowska, Inst Geog, Łódź Univ, Łódź.

LOD-238. Lublinek 1	12,950 ± 390
Organic silt, from branch, depth 4m. Probably fragment from fossil riverbed.	
LOD-239. Lublinek 2	4900 ± 170
Organic ooze from fossil riverbed lens, depth 2.8m.	
LOD-240. Lublinek 3	4050 ± 140
Organic ooze from fossil riverbed, depth 2.2m.	
LOD-241. Lublinek 4	5200 ± 170
Peat from fossil riverbed, depth 1.2m.	
LOD-242. Lublinek 5	3150 ± 150
Organic ooze from fossil riverbed, depth 0.7m.	
LOD-274. Lublinek 6	9380 ± 250
Riverbed sand with much detritus, from plant detritus lenticel in riverbed sediments, depth ca 3m.	
LOD-275. Lublinek 9	9850 ± 250
Flood sands with organic detritus in riverbed sediments, depth 4.2m.	
LOD-276. Lublinek 10	8180 ± 220
Organic ooze with detritus from base of fossil riverbed, depth 3.3m.	

LOD-294. Lublinek 13	1780 ± 120
Peat and organic ooze from old riverbed, depth 0.8m.	
LOD-342. Lublinek 16	8350 ± 160
Organic ooze from floor of fossil riverbed, depth 1.7m.	
LOD-343. Lublinek 17	7280 ± 180
Organic ooze from roof of fossil riverbed, depth 0.9m.	
LOD-369. Lublinek 20	2520 ± 100
Organic ooze from fossil riverbed, depth 3.4m.	
LOD-370. Lublinek 21	13,800 ± 200
Organic ooze from fossil riverbed, depth 1.75m.	
LOD-371. Lublinek 22	4000 ± 130
Organic ooze from fossil riverbed, depth 1.2m.	
LOD-372. Lublinek 23	4640 ± 130
Organic ooze from fossil riverbed, depth 1.75m.	
LOD-373. Lublinek 24	8250 ± 150
Wood, branch from sandy sediments, depth 1.5m.	

Ślądkowice series

Several samples from Ślądkowice, Piotrków Trybunalski prov (51°36'N, 19°19'E), collected from layer of outflow basin in dry valley. Dates may help to determine stratigraphy of Vistulian period. All samples coll and subm by H Klatkova.

LOD-245. Ślądkowice 40/16	27,200 ± 550
Peat, depth 2.65m.	
LOD-309. Ślądkowice 40/8	17,800 ± 400
Organic silt, depth 1.70m.	
LOD-310. Ślądkowice 40/10	21,350 ± 450
Organic silt, depth 1.90–2.05m.	
LOD-311. Ślądkowice 40/11	24,350 ± 450
Organic silt, depth 2.25m.	

LOD-312. Ślądkowice 40/14	26,400 ± 500
Organic silt, depth 2.55m.	
LOD-313. Ślądkowice 40/18	28,600 ± 550
Organic silt, depth 2.75m.	
LOD-340. Ślądkowice 2.40-2.55/NS	25,800 ± 600
Organic silt, depth 2.40–2.55m.	
LOD-341. Ślądkowice 2.60-2.70/NS	29,100 ± 700
Peat, depth 2.60–2.70m.	

Michałów (Mokracz) series

These dates supplement analyses of archaeological samples from the Michałów site, Piotrków Trybunalski prov (51°20'N, 19°29'E); other results are published under ARCHAEOLOGIC SAMPLES, this list. These dates help form chronology of Mesolithic site with palaeobotanical information. Both samples coll by P Marosik, subm by E Niesiołowska.

LOD-284. Michałów (Mokracz) 1	11,270 ± 210
Loam gyttja from depth ca 2m.	
LOD-285. Michałów (Mokracz) 2	8150 ± 150
Organic silt from depth ca 1.5m.	

Swędów-Moszczenica series

Samples coll from Swędów region, Łódź prov (51°51'N, 19°40'E). Results will help determine 1) the beginning of overgrowth and change in the Moszczenica Riverbed and 2) the beginning of organic sedimentation in the empty riverbed and the age of eolian processes on this section of the Moszczenica River Valley. All samples coll and subm by J Kamiński.

LOD-286. Swędów-Moszczenica 1	10,370 ± 250
Peat from undercut in river, depth 3.25m.	
LOD-287. Swędów-Wieś 2	3570 ± 150
Peat from old riverbed, depth 0.80–0.90m.	
LOD-303. Moszczenica 1/2.82	8740 ± 190
Peat from undercut in river, depth 2.82m.	
LOD-304. Moszczenica 6/3.45	10,850 ± 280
Organic silt from undercut in river, depth 3.45m.	

- LOD-339. Swędów 1A** **32,800 ± 900**
 Peat, depth 10m.
- LOD-314. Nobela 276/2.10** **3850 ± 150**
 Peat from Nobela village, Sieradz prov (51°41'N, 18°41'E). Sample coll from base of Warta-Niniwka River Valley, depth 2.1m. Dated to determine stratigraphy of Warta Valley sediments. Sample coll and subm by H Klatkowa.
- LOD-317. Bełchatów kop.D** **32,700 ± 900**
 Peat from Bełchatów strip coal mine, Piotrków Trybunalski prov (50°10'N, 19°21'E). Sample coll from 15cm peat layer in sediments filling fossil valley during systematic research of Vistulian sediments in strip mine. Depth ca 6m. Dated for precise chronology of Vistulian stratigraphy, paleogeography and depositional history of central Poland valleys. Sample coll and subm by B Manikowska, Inst Geog, Łódź Univ, Łódź.
- Czołczyn series**
- Two samples from site in Czołczyn village, Sieradz prov (51°46'N, 19°10'E). Dated to analyze stratigraphy of sediments. Both samples coll and subm by W Baliński, Inst Geog, Łódź Univ, Łódź.
- LOD-344. Czołczyn 2** **> 33,000**
 Wood from depth 6.0–6.2m.
- LOD-345. Czołczyn 1** **5620 ± 130**
 Peat from depth 1.9–2.5m.
- LOD-357. Troniny 5/3/88** **10,710 ± 180**
 Sample from archaeological region in Troniny village, Sieradz prov (51°06'N, 18°45'E). Dated to study evolution of Warta River Valley. Sample was composed of silt with organic matter, and was coll from fossil riverbed, depth 1.7–1.8m. Coll by P Marosik; subm by K Cyrek.
- LOD-358. Łykowe 1/1/88** **11,700 ± 200**
 Sample coll from archaeological region in Łykowe village, Sieradz prov (51°12'N, 18°47'E). Dated to study evolution of Warta River Valley. Sample was composed of peaty silt and was coll from fossil riverbed, depth 1.8–1.9m. Sample coll by P Marosik; subm by K Cyrek.
- LOD-365. Krzczów 2/1/88** **9080 ± 150**
 Sample coll from archaeological region in Krzczów village, Sieradz prov (51°09'N, 18°46'E). Dated to study evolution of Warta River Valley. Sample was composed of peat and was coll from fossil riverbed, depth 3.6–3.7m. Sample coll by P Marosik; subm by K Cyrek.

Wymokłe series

Two samples from Wymokłe village, Łódź prov (51°54'N, 19°24'E). Both samples coll from

basal layer of outflow basin. Dates will help to determine stratigraphy of Vistulian. Both samples coll and subm by H Klatkowa.

LOD-366. Wymokłe 4/4,5,6 22,890 ± 250

Organic silt, depth 3.58–3.72m.

LOD-367. Wymokłe 4/37,38 > 33,000

Organic silt, depth 5.92–6.00 m.

Józefów series

Two samples from Józefów village, Skierniewice prov (51°48'N, 19°52'E), coll from outside outflow basin by boring. Dates will help create geologic map of Poland. Samples coll and subm by K Nowacki, Warsaw Geol Enterprise, Łódź Dept.

LOD-379. Józefów 1 > 35,000

Peat, depth 3.96–4.14m.

LOD-380. Józefów 2 > 35,000

Peat, depth 8.16–8.34m.

LOD-381. Jeźów 1 26,030 ± 250

Peat from Jeźów village, Skierniewice prov (51°48'N, 19°57'E), coll from outflow basin by boring, depth 5.69–5.86m. Date will help create geologic map of Poland. Sample coll and subm by B Trzmiel, Warsaw Geol Enterprise, Łódź Dept.

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