

**BERLIN RADIOCARBON MEASUREMENTS I**

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The  $C^{14}$  Laboratory of the German Academy of Sciences of Berlin (DAW) began to obtain dates in 1961. The focus of research is in archaeology. Samples, coll. in close collaboration with the DAW's Institut für Vor- und Frühgeschichte, are mainly from the Neolithic of central and southeastern Europe, and contribute to the continuing discussion (Milojčić, 1961; Müller-Beck, 1961) of the chronology of this period.

Our counter is operated in the proportional region, with acetylene as counting gas. Instead of adding  $SrC_2$  to 1 to 2 L of water, as recommended by Suess (1954), we generate  $C_2H_2$  by dropwise addition of ca. 10 ml of water to the carbide. In this way, a tested supply of a few liters of water serves for several hundred acetylene preparations, reducing the danger of contamination by tritium. The counting chamber, constructed by Kohl after the design of Houtermans and Oeschger (1958), has a sensitive volume of 1.8 L and is filled to a pressure of 700 Torr. It is protected from environmental radiation by 5 cm of mercury and a steel shield 20 to 35 cm thick, and from neutrons by 20 cm of a paraffin-boric acid mixture; the shielding weighs ca. 20 T.

The background is normally 2 counts/min and the modern counting rate 14.5 counts/min. Modern standards are tree-rings of A.D. 1825  $\pm$  3 from pine (*Pinus silvestris*) grown near Dresden and of A.D. 1820-1830 from a beech grown north of Copenhagen, kindly provided by Henrik Tauber. Deviations from 0.95 times the NBS oxalic-acid standard, in use since 1963, are negligible, so that no corrections are needed for dates obtained earlier. Following the recommendation of the Cambridge Conference, 1962, all dates are calculated from the 5568-yr half life of  $C^{14}$ .

Samples are usually counted for two 48-hr periods, 10 to 20 days apart, giving 10,000-25,000 counts according to age. Standard errors assigned include those of the sample count, the background and modern counts, and the half life.

In preparing samples, all substances are washed first in distilled water and rootlets and other gross contaminants are removed as far as possible. All are then soaked for 24 hr in 5% HCl, to remove contaminating carbonates, and, when contamination by humus is likely, samples are soaked for 24-48 hr in 5% NaOH.

The majority of samples used for dating were wood or wood-charcoal, a few being grain, seeds, peat, or gyttja. Special attention was given to an extensive series of ceramic materials (Kohl, 1961). The strongly organic-tempered pottery of the early Neolithic, especially of the Linienbandkeramik and Körös Cultures, has proved to be datable, as the plant fragments mixed with the clay were only partly oxidized at the low firing temperatures (300 to 400°C) employed. The carbon content is 0.5 to 2%, so that 1 to 2 kg of pottery is needed for a date.  $CO_2$  is released when the pottery, after standard chemical treatment followed by thorough drying, is sealed in a quartz combustion tube and heated

to 600-900°C in a stream of O<sub>2</sub>. Although carbon incorporated in potsherds should be contemporary with the manufacture, the C<sup>14</sup> dates of such samples seem generally to be somewhat younger than those of other organic materials of equivalent age; more paired comparisons are needed to resolve this problem.

Measurements in the following list were made in 1961 and 1962. Dates are expressed as before A.D. 1950. Where the archaeological data are unpublished, we have quoted descriptions and cultural assignments kindly provided by the excavators or their sponsoring institutions. Botanical determinations are by K.-D. Jäger, of Berlin. Our particular thanks are due to the Forschungsgemeinschaft der Naturwissenschaftlichen Institute der DAW zu Berlin, which has supported our laboratory and its operations for several years.

## SAMPLE DESCRIPTIONS

### A. Germany

**Bln-47. Dedeleben** **1690 ± 120**  
**A.D. 260**

Wood (*Quercus* sp.) from Pile No. 1 of a trackway in the Grossen Bruch, NW of Dedeleben (52° 02' N Lat, 10° 53' E Long), Kr. Halberstadt. The trunk, ca. 2 m long and 15 cm thick, was sharpened at upper end and driven into the clayey subsoil of the bog. Archaeologic associations not determined; surface finds at S exit of trackway range from Neolithic to medieval. Coll. 1960 by O. Krüger, Dedeleben; subm. by H. Behrens, Landesmus. f. Vorgeschichte, Halle (Matthias, 1963).

**Bln-73. Dresden-Nickern** **5955 ± 100**  
**Bln-73a.** **5935 ± 100**

**average: 3995 B.C.**

Seeds (*Pisum sativum* L.) from a Bandkeramik dwelling site, Dresden-Nickern (51° N Lat, 13° 47' E Long). Peas, in quantity, covered horizontal floor of storage-pit, coordinates 173 E, 8.5 S, cut 75 cm in loess loam, overlain by humus soil, 40 to 50 cm thick. Associated with sherds of younger Linienbandkeramik Culture, comparable with those from Grave 1 at the same site (Baumann, 1960). Excavated 1961 and subm. by W. Baumann, Landesmus. f. Vorgeschichte, Dresden.

**Bln-77. Dresden-Nickern** **5815 ± 100**  
**3865 B.C.**

Coarse, undecorated potsherds from same Bandkeramik site as Bln-73, Point 4, coordinates 4.70 E, 8.50 S. From pit dug to 1.05 m depth below surface, streaked with loam in lower part. Sherds are distinct in organic temper and surface texture from younger Linienbandkeramik sherds prevalent elsewhere on the site; diagnostic vessel forms and decoration are lacking, but assignment to oldest or older Linienbandkeramik Culture is probable. Excavated and subm. by W. Baumann (Baumann, 1960).

### Ehrenstein series

Wood from Neolithic bog-dwelling (= "lake-dwelling") site of Ehrenstein (48° 25' N Lat, 9° 55' E Long), Kr. Ulm. Excavated 1960 and subm.

by H. Zürn, Staatliches Amt f. Denkmalpflege, Abt. Bodendenkmalpflege, Stuttgart (Zürn, 1962).

**Bln-54. Ehrenstein 885** **5140 ± 80**  
**3190 B.C.**

Soil-rotted log (*Alnus* sp.), Sample 885, from lower baulk layer (Zwischenwand) of House 5, Construction B, 1.5 m below surface, assigned to younger part of Period I, Michelsberger and Schussenrieder occupations. *Comment:* 2 wood samples from the same site, excavated 1952 by O. Paret, were dated at Heidelberg: H-125/107, 5200 ± 140; H-61/148, 5140 ± 130 (Groschopf, 1961).

**Bln-70. Ehrenstein 928** **5240 ± 100**  
**3290 B.C.**

Oak wood (*Quercus robur* L.) from House 6, Construction A, assigned to older part of Period I.

**Bln-71. Ehrenstein** **5200 ± 100**  
**3250 B.C.**

Oak wood (*Quercus robur* L.) from House 5, Construction B (same stratigraphy and archaeology as Bln-54).

**Bln-51. Eitzum** **6310 ± 200**  
**4360 B.C.**

Sherds from Bandkeramik occupation at Eitzum (52° 09' N Lat, 10° 48' E Long), Kr. Wolfenbüttel; found at 0.45 cm depth in residual block, Point 9 easterly, T 0.0. The thick-walled, strongly organic-tempered and weakly fired sherds belong to the oldest Linienbandkeramik phase present on the site. Excavated 1958 and subm. by F. Niquet, Landesmus., Braunschweig (Niquet, 1963; Quitta, 1960). *Comment:* wood-charcoal, likewise from the oldest Linienbandkeramik complex, from Point 5 at the Eitzum site, was dated 1961 by the Heidelberg laboratory: H-1487/985, 6480 ± 210 (H. Schwabedissen, private communication).

**Bln-56. Friedberg** **6120 ± 100**  
**4170 B.C.**

Sherds, recovered from several pits in a Bandkeramik occupation site nr. Friedberg (50° 20' N Lat, 8° 45' E Long), Kr. Friedberg. Thick-walled, chaff- or coarse-sand-tempered, rarely decorated material is assigned to a developed phase of the oldest Linienbandkeramik Culture. Coll. 1954 and subm. by F. R. Herrmann, Wetterau-Mus., Friedberg (Herrmann, 1957; Quitta, 1960).

**Halle-Dölauer Heide series**

Wood from a Funnel-Beaker site in the Bischofswiese, Halle-Dölauer Heide (51° 31' N Lat, 11° 55' E Long). Excavated and subm. by H. Behrens (Behrens, 1963).

**Bln-53. Halle-Dölauer Heide, Pile 26** **4630 ± 100**  
**2680 B.C.**

Carbonized wood (*Quercus* sp.) from Pile 26, part of a palisade; palisade trench, 20-25 cm wide and cut to 50-60 cm depth in adjacent gravel, contains carbonized pile fragments over ca. 10 m distance. Assigned to the Salzmünder phase of the central German Funnel-Beaker Culture. Excavated 1955. *Comment:* wood-charcoal from the same palisade trench was dated 1959 by the

Heidelberg laboratory: H-209/579,  $4970 \pm 90$  (H. Schwabedissen, private communication).

**Bln-64. Halle-Dölauer Heide, Pile 17** **4780  $\pm$  100**  
**2830 B.C.**

Carbonized oak wood from Pile 17, part of same palisade as Bln-53. Excavated 1955.

**Bln-65. Halle-Dölauer Heide, Grave 4** **3940  $\pm$  100**  
**1990 B.C.**

Rotten wood from floor of Grave 4, Burial Mound 6, a tub-shaped grave, 88 by 34 cm, excavated to 40-50 cm depth in adjacent soil, walled with wood and covered by 2 sandstone blocks. Grave contained a badly decomposed child's skeleton without furnishings. As burial was secondary, assignment to Cord Ceramic Culture is probable. Excavated 1954. *Comment*: two wood samples from an older (stone-chambered) Cord Ceramic grave in the same mound were dated 1956 and 1960 by the Heidelberg laboratory: H-253/208,  $4520 \pm 110$ ; H-572/919,  $4110 \pm 75$  (H. Schwabedissen, private communication).

**Bln-35. Hiddensee** **360  $\pm$  100**  
**A.D. 1590**

Carbonized wood (*Quercus* sp.) from shipwreck, under 2 m of water, ca. 300 m W of N tip of island Hiddensee ( $54^{\circ} 35' N$  Lat,  $13^{\circ} 05' E$  Long). Coll. 1960 and subm. by K. Ebbinghaus, Mus. Kloster auf Hiddensee.

**Bln-85. Irlbach** **5345  $\pm$  100**  
**3395 B.C.**

Sherds encountered in various quarry workings at the baronial gravel quarry of Irlbach ( $48^{\circ} 51' N$  Lat,  $12^{\circ} 46' E$  Long), Kr. Straubing. Assigned to an early phase of Linienbandkeramik Culture by their wide-line decoration, thick handles, flat bases, and strongly organic temper. Coll. 1953 and subm. by J. Keim, Straubing (Quitta, 1960).

**Bln-78. Kratzeburg** **2765  $\pm$  100**  
**815 B.C.**

Wood-charcoal (*Quercus* sp.) from late-Bronze-Age town wall, Kratzeburg ( $53^{\circ} 27' N$  Lat,  $12^{\circ} 48' E$  Long), Kr. Neustrelitz. Sample from vertical post, part of burned wall construction at front edge of wattle-and-daub wall, 1.8 m below surface. Construction dated by pottery and bronze finds to transition between Periods IV and V of Nordic Bronze Age. Excavated 1957 by H. Schubart; subm. by Inst. f. Vor- u. Frühgesch., DAW, Berlin (Schubart, 1961).

**Bln-39. Magdeburg-Salbke** **3200  $\pm$  100**  
**1250 B.C.**

Wooden stick (*Fraxinus excelsior* L.), 34.5 cm long, 5.4 by 2.7 cm in flattened cross-section, sharpened, probably artificially, at both ends, dredged at Find-place III/IV in Magdeburg-Salbke gravel quarry ( $52^{\circ} 05' N$  Lat,  $11^{\circ} 40' E$  Long). Inclosing gravel is alluvium, in former bed of Elbe River. No archaeological association, but finds made nearby, in addition to prehistoric and early medieval objects, include numerous bronze objects of Periods II to V, probably votive offerings. Coll. 1961 and subm. by H. Lies, Kulturhist. Mus., Magdeburg (Lies, 1963).

**Bln-93. Mockern** **2360  $\pm$  100**  
**410 B.C.**

Wood-charcoal (*Quercus petraea* L., *Corylus avellana* L.) from Cremation-burial 14 in the early Iron Age urnfield in the Teufelsbruch, Mockern (50° 57' N Lat, 12° 26' E Long), Kr. Altenburg. Found mainly on floor of rectangular grave pit, 80 cm deep, overlain by grass-overgrown humus soil, 20 cm thick; sherds of 3 pots lay near the urn. Assigned to early Iron Age (Hallstatt D). Excavated 1953 and subm. by H. Höckner, Mus. Altenburg (Höckner, 1962).

**Oberdorla series**

Wood-charcoal from a Germanic shrine at Rieth, nr. Oberdorla (51° 10' N Lat, 10° 25' E Long), Kr. Mühlhausen. Excavated 1960 and subm. by G. Behm-Blancke, Mus. f. Ur- u. Frühgesch. Thüringens, Weimar (Behm-Blancke, 1960).

**Bln-59. Oberdorla 2.29 m** **2220  $\pm$  100**  
**270 B.C.**

Beech charcoal from hearth, Area 14c/60, surrounded by stone circle, 2.29 m depth, Early La Tène time.

**Bln-67. Oberdorla 2.23 m** **2155  $\pm$  100**  
**105 B.C.**

Wood charcoal from Hearth 2, 2.23 m depth, Early La Tène time.

**Bln-33. Oberdorla 3.0 m** **1970  $\pm$  100**  
**20 B.C.**

Beech charcoal from B horizon, ca. 3.0 m depth, Early Roman Empire time.

**Bln-97. Perleberg** **2585  $\pm$  100**  
**635 B.C.**

Wood-charcoal (*Quercus petraea* L.) from one of several hearths, some containing fieldstone, exposed in sandpit, 40 cm depth below surface, directly overlain by organic soil, Golm, nr. Perleberg (53° 05' N Lat, 11° 32' E Long). Archaeologically datable finds lacking. Coll. 1962 and subm. by A. Hoppe, Heimatmus., Perleberg.

**Bln-46. Rüben** **1935  $\pm$  100**  
**A.D. 15**

Wood-charcoal (*Quercus* sp.) from a Roman Empire site at Rüben (51° 13' N Lat, 12° 25' E Long), Kr. Borna. Taken from hollow, dug in surrounding gravel, of a closed, dome-shaped structure, supposedly a baker's oven; dated as Early Roman Empire time by 2 wheel-decorated sherds. Excavated 1956 by G. Mildenerger and H. Hanitzsch; subm. by Inst. f. Vor- u. Frühgesch., Karl Marx Univ., Leipzig.

**Bln-92. Westeregeln** **6140  $\pm$  100**  
**4190 B.C.**

Seeds (*Pisum sativum* L.) from a Bandkeramik storage-pit, Westeregeln (51° 58' N Lat, 11° 24' E Long), Kr. Stassfurt. Horizontal floor of rhombic pit, 2.65 by 1.8 m in area and 1.15 m deep, contained 2 querns and 4 separate

heaps of carbonized seeds, 3 of peas and one of grain. Archaeologically dated by nearby sherds, including some with lines and long impressions that immediately overlay the peas, to an older or middle phase of Linienbandkeramik Culture. Excavated 1947 and subm. by H. Lies (Rothmaler and Natho, 1957). *Comment*: sample from the same storage pit was dated by the Groningen laboratory: GrN-223,  $6200 \pm 200$ .

**Bln-42. Westeregeln**

**6045  $\pm$  100**  
**4095 B.C.**

Same sample of peas as Bln-92, which had been well protected under glass. Bln-42 lay in an open cardboard container.

**Bln-66. Zwenkau-Harth**

**5900  $\pm$  100**  
**3950 B.C.**

Wood-charcoal (*Quercus* sp.) from posthole of a Stichbandkeramik house, Zwenkau-Harth (51° 14' N Lat, 12° 21' E Long), Kr. Leipzig. From 0.85 m depth in posthole, sunk in sand to receive a main roof support, ca. 35 cm thick, later burned, in Quadrant C 1; posthole, easily distinguishable in excavation by its dark color and carbonized fragments, was overlain by loam, 50 cm thick, with a layer of humus, derived from a known medieval forest, at the surface. Design of house, 36.5 m long, dates the posthole to a developed phase of older Stichbandkeramik Culture. Excavated 1953 and subm. by H. Quitta (Quitta, 1958). *Comment*: charcoal from the same posthole was dated 1958 by the Heidelberg laboratory: H-224/223,  $6000 \pm 115$  (H. Schwabedissen, private communication); and dated 1959 by the Copenhagen laboratory: K-555,  $5840 \pm 120$  (Tauber, 1960).

*B. Austria***Bln-58. Mold**

**5990  $\pm$  160**  
**4040 B.C.**

Thick-walled, undecorated sherds (Mus. Horn, Inv. No. 732) of the Bandkeramik site in the field "Am Hochrain" at Mold (48° 39' N Lat, 15° 43' E Long), Bez. Horn; from firepit sunk to ca. 30 cm depth in loess loam, accompanied by several fingernail-impressed and applied-knob vessel fragments, ash, and wood-charcoal. Assigned by Pittioni (1954) to an early phase of the Austrian Bandkeramik. As characteristically early styles are lacking, except for the decoration by impression, which is known to occur later also, and as sherds with musical noteheads are present, we consider the complex to be younger, about in the middle stage of Linienbandkeramik Culture. Excavated 1938 by J. Höbbarth; subm. by F. Berg, Höbbarth-Mus., Horn/NE (see Fundberichte aus Österreich, v. 3, 1948).

**Bln-83. Pulkau**

**6215  $\pm$  100**  
**4265 B.C.**

Sherds from the Bandkeramik site of Ziegelei Apfelthaler, Pulkau (48° 42' N Lat, 15° 52' E Long), Bez. Hollabrunn; details of collection unknown. Sherds can be placed only approximately among the Linienbandkeramik phases by the occurrence of musical-notehead decoration (Pittioni, 1954). Coll. in the '30s by J. Höbbarth; subm. by F. Berg, Höbbarth-Mus., Horn.

**Bln-63. Sauerbrunn** **980  $\pm$  100**  
**A.D. 970**

Grain (*Secale cereale* L., *Triticum aestivum* L.) from prehistoric (Lengyel?) site at Sauerbrunn (47° 43' N Lat, 16° 28' E Long), Bez. Mattersburg. From storage pit, 1.70 m deep, widening downward. Archaeologic assignment unknown, as pottery was absent. Excavated 1958 and subm. by A. Ohrenberger, Burgenländisches Mus., Eisenstadt.

**Bln-55. Winden am See** **5940  $\pm$  100**  
**3990 B.C.**

Sherds from a Bandkeramik site in the field "Kräftenäcker," N of Winden a.S. (47° 57' N Lat, 16° 50' E Long), Bez. Neusiedl a.S. From Pit 2 in Parcel 467/1, disturbed earlier by power shovel. Most of the thick-walled, organic-tempered pottery can be assigned to an early stage of Linienbandkeramik Culture, but some sherds of a better-fired ware, decorated with scratches and musical-notehead impressions, imply a more developed stage. Excavated 1948 by H. Mitscha-Märheim; subm. by A. Ohrenberger, Eisenstadt (see Fundberichte aus Österreich, v. 5, 1946-50).

**Bln-107. Winden am See** **5820  $\pm$  100**  
**3870 B.C.**

Entirely undecorated, organic-tempered sherds from various pits, disturbed by trench-plough, same site as Bln-55. Coll. 1947-50 and subm. by A. Ohrenberger.

*C. Romania*

**Bln-29. Baia-Hamangia** **4090  $\pm$  160**  
**2140 B.C.**

Wood (*Quercus* sp.) from Grave 1 in Burial-mound 1 at Baia-Hamangia (44° 47' N Lat, 28° 42' E Long), r. Istria, reg. Constanța. From rectangular grave pit in center of mound, which is ca. 1.5 m high. Floor of grave and skeleton, in flexed position, covered with a thin layer of red ochre; a clay vessel and a marble ornament accompanied the burial. Assigned to the Ochre-grave Culture, distributed from the N Pontic steppe to the Dobrukscha. Excavated 1952 and subm. by D. Berciu, Archaeol. Inst., Romanian Acad. Sci., Bucharest (see Studii si cercetari . . . , 1953). *Comment*: wood from the same grave was dated 1959 by the Groningen laboratory: GrN-1995, 4530  $\pm$  65 (Vogel and Waterbolk, 1963).

**Cernavoda series**

Wood-charcoal from a fortified site of the final Neolithic at Dealul Sofia nr. Cernavoda (42° 21' N Lat, 28° 03' E Long), r. Medgidia, reg. Constanța. Assigned to an older phase of Cernavoda-Ezero Culture. Excavated 1960 and subm. by D. Berciu (Berciu, 1960).

**Bln-61. Cernavoda** **4385  $\pm$  100**  
**Bln-61a. Cernavoda** **4505  $\pm$  100**  
**average: 2495 B.C.**

Wood-charcoal from Trench S I/s 1.

**Bln-62. Cernavoda** **4260  $\pm$  100**  
**2310 B.C.**

Wood-charcoal (*Quercus petraea* L.) from Trench S I/s 2.

*D. Czechoslovakia*

<b>Bln-102.</b>		<b>6285 ± 100</b>
<b>Bln-102a.</b>	<b>Mohelnice</b>	<b>6405 ± 100</b>
		<b>average: 4395 B.C.</b>

Grain (*Triticum dicoccum*) from the Bandkeramik site of Mohelnice (49° 47' N Lat, 16° 55' E Long), Kr. Zabřeh. From trench, sunk 60 cm into loess loam, Quadr. 0114, Obj. 054, Fundnr. 17, on E side of House 12. On evidence of old style of associated house, and of lack of musical-notehead decoration on pottery, assigned to an early stage of Moravian Linienbandkeramik Culture. Excavated 1961 and subm. by R. Tichý, Archaeol. Inst., ČSAV, Brno (Tichý, 1962). *Comment:* Bln-102 was measured without chemical pretreatment; Bln-102a received the usual acid and alkali soaking.

<b>Bln-74.</b>	<b>Nový Bydžov</b>	<b>5225 ± 100</b>
		<b>3275 B.C.</b>

Organic- and sand-tempered sherds from a Bandkeramik site in the Chudonice section of Nový Bydžov (50° 14' N Lat, 15° 30' E Long), Kr. Hradec Králové. Sherds from the same site were figured by Stocký, 1929; material belongs to one of the relatively early Linienbandkeramik phases. Excavated 1960 by A. Rybová; subm. by B. Soudský, Archaeol. Inst., ČSAV, Prague.

<b>Bln-118.</b>	<b>Tvarožná Lhota</b>	<b>665 ± 100</b>
		<b>A.D. 1285</b>

Wood-charcoal (*Quercus* sp.) from a Hallstatt grave-field at Tvarožná Lhota (48° 57' N Lat, 17° 28' E Long), Kr. Hodonín. Taken from a fireplace (funeral pyre?), but with no demonstrable connection to a Hallstatt grave; no sherds were in association. Coll. 1962 and subm. by V. Dohnal, Oblastní Mus. Jihovýchodní Moravy, Gottwaldov.

<b>Bln-57.</b>	<b>Žopy</b>	<b>6430 ± 100</b>
		<b>4480 B.C.</b>

Sherds from Bandkeramik site of Žopy (49° 20' N Lat, 17° 35' E Long), Kr. Kroměříž. Dwelling pit, ca. 5 m long and sunk to 1 m depth in yellow loess loam, exposed hearth on floor; most of the pottery was in upper half of trench, overlain by humus soil, 40 cm thick. Thick walls, organic temper, vessel forms, and decoration are all characteristic of the oldest Linienbandkeramik phase. Excavated 1954 by J. Pavelčík; subm. by V. Dohnal, Mus. Gottwaldov (Tichý, 1960).

*E. Hungary*

<b>Bln-75.</b>	<b>Gyálarét</b>	<b>7090 ± 100</b>
		<b>5140 B.C.</b>

Sherds from a site of Körös Culture at Gyálarét (46° 13' N Lat, 20° 05' E Long), Bez. Szeged. From pit, 1 to 1.5 m depth below surface. Assigned to eastern Hungarian Körös Culture on basis of uniformly organic temper and typical vessel forms and decoration. Excavated 1960 and subm. by O. Trogmayer, Móra Ferenc Múz., Szeged.

<b>Bln-115.</b>	<b>Hódmezővásárhely-Kotacpart</b>	<b>6450 ± 100</b>
		<b>4500 B.C.</b>

Sherds from a site of Körös Culture at Kotacpart-Vata-Tanya nr. Hódmezővásárhely (46° 25' N Lat, 20° 19' E Long), Kom. Csongrád. From



old excavations, kept without detailed data in the Szeged Museum, assigned to Körös Culture. Excavated 1931-32 by J. Banner; subm. by O. Trogmayer (Banner, 1933-34).

**Bln-86. Katalszeg**

**6370 ± 100**

**4420 B.C.**

Sherds from a site of Körös Culture at Katalszeg (46° 40' N Lat, 21° 06' E Long), Bez. Békéscsaba, Kom. Békés; from trench, 1 to 1.2 m depth below surface. Excavated 1960 and subm. by J. Korek, Hungarian Nat. Mus., Budapest.

**Bln-119. Korlát**

**6440 ± 100**

**4490 B.C.**

Sherds from pit, ca. 1 m depth, site of Bükker Culture at Arkatul nr. Korlát (48° 22' N Lat, 21° 15' E Long), Bez. Abánjszántó, Kom. Borsod. Assigned to an early phase of Bükker Culture; with the fine Bükker ceramics were numerous thick-walled, organic-tempered sherds with the decoration and vessel-forms of the eastern Hungarian Alföld phase of Linienbandkeramik Culture. Excavated 1960 by J. Korek and L. Vértes; subm. by J. Korek.

**Bln-123. Tarnabod**

**6280 ± 100**

**4330 B.C.**

Sherds from pit, 0.80 to 1.00 m depth in loess soil, overlain by humus soil, 40 cm thick, at Bandkeramik site of Templomföld, NW of Tarnabod (47° 41' N Lat, 20° 13' E Long), Bez. Heves, Kom. Heves. Assigned to Alföld phase of Linienbandkeramik Culture. Excavated 1960 and subm. by N. Kalicz, Archaeol. Inst., Hungarian Acad. Sci., Budapest.

**Bln-87. Zalavár**

**6180 ± 100**

**4230 B.C.**

Sherds from a Bandkeramik site at Zalavar (46° 40' N Lat, 17° 10' E Long), Bez. Keszthely, Kom. Veszprém. The thick-walled, organic-tempered sherds came from various excavations in salvage operations by the Hungarian National Museum. Assignable to an early phase of Linienbandkeramik Culture; occurrence of a few Zseliz sherds may indicate a longer duration for this ware in western Hungary. Excavated 1954-55 by B. Balint; subm. by J. Korek (Quitta, 1960).

*F. Sudan*

**Bln-116. Musawwarat es Sufra**

**1740 ± 100**

**A.D. 210**

Wood-charcoal from a wall construction confining a former large reservoir in the Meroitic temple-precinct of Musawwarat es Sufra (16° 28' N Lat, 33° 24' E Long), Distr. Shendi, Rep. Sudan. Sample from 1.80 m below surface in section cut in earthwork, heaped together with large blocks and sandy gravel to surround the Great Hafir; earthwork is assigned to a late period of the Meroitic Empire. Excavated 1960 and subm. by G. Viete, Bergakademie Freiberg, member of the Sudan Expedition of the Inst. f. Ägyptol., Humboldt Univ., Berlin (Hintze, 1962).

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