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HARWELL RADIOCARBON MEASUREMENTS XI

M. A. HARDIMAN, J. E. FAIRCHILD and GEOFFREY LONGWORTH

Isotope Measurements Laboratory, AEA Technology Harwell, Oxfordshire, OX11 ORA, UK

INTRODUCTION

Following Harwell Measurements VIII (Walker, Williams & Otlet 1990), this is the final series of lists of English archaeological dates commissioned for measurement by the Historic Buildings and Monuments Commission (HBMC) for England within prescribed contractual periods. This list, containing 127 dates, refers to the period April 1988 to March 1990, and results are reported irrespective of whether the associated projects are completed or ongoing.

Measurement procedures were essentially as reported earlier. We used two measuring systems of the Isotope Measurements Laboratory, as appropriate to the sample size. In all cases, the error term quoted for the ^{14}C age BP is the ± 1 standard deviation (σ) based on an estimate of full replicate sample reproducibility (Otlet 1979). Calculations of ^{14}C age are based on the Libby half-life of 5568 years, with 100% modern being defined as 0.95 × the activity of NBS oxalic acid corrected for fractionation. All raw ^{14}C ages are quoted as years BP, with AD 1950 as the reference year, and are corrected for fractionation using the ^{13}C stable isotope ratio (Stuiver & Reimer 1986). Values of the ^{13}C ratios are measured in the laboratory, and are quoted as enrichment per mil relative to the PDB standard. As previously, the basic text of reports is prepared from database entries using an in-house microcomputer. National Grid References are abbreviated to NGR.

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ARCHAEOLOGICAL SAMPLES

Alfriston series

HAR-941. ALF 2 — **2540 ± 70**; $\delta^{13}C = -23.3‰$

Bone, AML 749202, from northwest quadrant mound, Layer 2 at Alfriston, Sussex (50°48′49″N, 00°08′27″W, NGR TQ 508 038). Collected Aug. 1974 and submitted Oct. 1974 by P. L. Drewett, Institute of Archaeology, University of London (Drewett 1975, 1982).

HAR-2650. 1483 — **2530 ± 70**; $\delta^{13}C = -23.0‰$

Bone, AML 7716310, from a circular storage pit associated with probable early saucepan pottery at Marc 3, R17, Winnal Down. Collected May 1977 and submitted Nov. 1977 by P. Fasham, The Trust for Wessex Archaeology.

Shrewton series

4100 ± 100

HAR-4830. SNDRFRC4 $\delta^{13}C = -20.5‰$

Antler, red deer, from Pit 1, Shrewton (51°12′07″N, 01°52′23″W, NGR SU 0887 4480). Submitted Jan. 1982 by S. Rollo-Smith, The Trust for Wessex Archaeology.

Comment (S.R.-S.): This date is earlier than anticipated for the grave goods, which could not be earlier than 4 k BP. The result is earlier than any other from the barrow cemetery and contemporary with dates from the Stonehenge ditch, cursus and the destruction of the lesser cursus. The ditch fill contained small sherds of All-Over-Corded (AOC) Beaker, and antler fragments occurred throughout the central gravefill. I believe that the AOC sherds and antler are residual and that earlier material was incorporated into the gravefill, to which the ^{14}C date refers (Green & Rollow-Smith 1984).

Potterne series

3000 ± 90

HAR-8938. POTT16 $\delta^{13}C = -25.6‰$

Charcoal, AML 874369, from fill 3716 of post-pit 3605 at Potterne, near Devizes, Wiltshire (51°19′50″N, 2°00′21″W, NGR ST 996 591). Collected Aug. 1984 and submitted May 1987 by C. Gingell, The Trust for Wessex Archaeology (Gingell & Lawson 1984, 1985).

Comment (C.G.): Result will date the occupation features underlying the midden. For a plan of these features, see Gingell and Lawson (1985).

Field Farm series

3690 ± 100

HAR-9140. W109R625 $\delta^{13}C = -28.8‰$

Charcoal, identified as *Corylus* and *Prunus*, AML 881212, from fill of a Deverel-Rimbury cremation urn with a smaller ring ditch (604, ~75 m northeast of ring ditch (417) at Field Farm, Burghfield, Berkshire (51°25′41″N, 1°1′44″W, NGR SU 675 704) (Butterworth & Lobb, in press).

Comment (S.J.C.): Result provides a relative date for the construction of the ring ditch and dates the urn type (Deverel-Rimbury). One of a series of four dates from the site (HAR-9139, -9142 and -9143).

Dorchester By-pass series

3200 ± 90

HAR-9160. 186SF100 $\delta^{13}C = -24.8‰$

Bone, identified as human, adult male, from an inhumation cut into the base fills of a boundary ditch that cuts across the southeast side of an Early/Middle Bronze-Age (E/MB) enclosure at Middle Farm (50°42′26″N, 2°27′47″W, NGR SY 6730 8990). Dated from a pottery assemblage. Collected July 1987 by M. Fletcher; submitted Nov. 1987 by P. J. Woodward, The Trust for Wessex Archaeology (Green 1987).

Comment (P.J.W.): The date falls within the range for Bronze-Age settlements and boundaries for Dorset, such as at Poundbury (HAR-994, Shearplace Hill (Rahtz & ApSimon 1962), HAR-5698,

Rowden). HAR-9160 provides an early date for the dykes and boundaries in the area, some of which underlie and antedate the hillforts of Maiden Castle and Poundbury.

Gnipe Howe series

Samples from Gnipe Howe, Hawkser, Whitby, Yorkshire (54°51′00″N, 1°13′53″W, NGR NZ 4934 5086). Collected Jan. 1972; submitted Aug. 1985 by A. E. Finney, East Riding Archaeology Committee.

HAR-8773. GHRBQB2 — **3440 ± 90**; $\delta^{13}C = -28.1‰$

Charcoal associated with Urn III and found in Quad B, resting on stones of a cairn and sealed by a final capping mound at Gnipe Howe Round barrow.

Comment (A.E.F.): Result provides an independent date for pot and its contents as well as for final sealing of the mound.

HAR-8774. GHRBQB3 — **3910 ± 150**; $\delta^{13}C = -28.1‰$

Charcoal associated with many fragments of a pot (Urn II) in undisturbed soil, sealed by a final capping mound at Gnipe How Round Barrow.

Comment (A.E.F.): Deposit also contained flint flakes showing traces of burning. Dates final capping of the mound.

Kemp Howe series

Samples from Kemp Howe, Cowlam, Near Driffield, Yorkshire (54°21′25″N, 00°58′47″W, NGR SE 663 962). Collected 1968; submitted Aug. 1985 by A. E. Finney.

HAR-8776. KHT6GIBI — **1310 ± 100**; $\delta^{13}C = -22.0‰$

Bone, right tibia and femur (human), from Grave 1m, Burial 1 of Anglian cemetery.

Comment (A.E.F.): A previous date for Grave 3, Burial 3, gave an earlier-than-expected result. This result confirms the earlier dating. No associated grave goods.

HAR-8778. KHLBFBT3 — **4870 ± 90**; $\delta^{13}C = -27.1‰$

Charcoal from facade bedding trench, associated with occupation debris used as packing for post-holes.

Comment (A.E.F.): Facade was part of an earlier phase at Kemp Howe, which included a mortuary enclosure. The date should be compared with that for Long Barrow ditches.

HAR-8780. KHRBDE31 — **3730 ± 70**; $\delta^{13}C = -22.6‰$

Red deer antler, from primary fill of Round Barrow ditch.

Raisthorpe Manor series

5070 ± 60

HAR-8783. RMLBFBT3 $\delta^{13}C = -26.0‰$

Charcoal from the upper level of facade bedding Trench 3, Section E, at Raisthorpe Manor Long Barrow, Raisthorpe Manor Thixendale, near Burdsel, North Yorkshire (54°03′01″N, 00°41′55″W, NGR SE 852 624). Collected March 1965; submitted Aug. 1985 by A. E. Finney.

Comment (A.E.F.): Dates period of use of bedding trench and related features of the mortuary enclosure, pavement, *etc.*

Seamer Moor series

Two charcoal samples from Seamer Moor Barrow near Scarborough, Yorkshire (54°15′39″N, 00°26′04″W, NGR TA 0196 8617).

5260 ± 100

HAR-8785. SMT3SN2 $\delta^{13}C = -26.0‰$

Charcoal from *in-situ* red stones near Hearth Barrow 1. Collected Sept. 1966; submitted Aug. 1985 by A. E. Finney.

Comment (A.E.F.): Hearth is sealed by mound, thus sample dates final deposition of barrow mound.

4990 ± 90

HAR-8786. SMT3S01 $\delta^{13}C = -26.8‰$

Charcoal from shallow pit, Trench 3, Section 0 at Seamer Moor Barrow 1, rough moorland near Scarborough, North Yorkshire.

Comment (A.E.F.): Grave pit was excavated in 1934; as all the material was lost in the Hull bombing of 1942, this sample dates this grave pit and the other three pits not found in the 1966 excavation.

Heybridge series

2610 ± 110

HAR-4844. 813340 $\delta^{13}C = -25.7‰$

Charcoal, AML 813340, from Heybridge, site ref. F84 (51°44′29″N, 00°40′48″E, NGR TL 850 082). Collected 1972 by P. J. Drury; submitted March 1982 by N. Wickenden, Chelmsford Archaeological Trust (Wickenden 1986).

Comment (A.J.C.): At variance with HAR-4843 (from same post).

Mingie's Ditch series

1900 ± 80

HAR-4488. HYMD136 $\delta^{13}C = -27.2‰$

Charcoal from the bottom of an Iron-Age gully at Mingie's Ditch, Hardwick, Oxon. Collected Sept. 1978 and submitted May 1981 by M. A. Robinson, University Museum, Oxford.

Saint Oswald's Priory series

HAR-9700. 4175B464 **1170 ± 60**
$\delta^{13}C = -21.4‰$

Bone, AML 890025, from Gloucester (51°52′08″N, 02°14′49″W, NGR SO 830 190). Collected 1983 and submitted Nov. 1988 by C. M. Heighway, Gloucester Museum (Heighway 1978, 1980).

Comment (C.M.H.): Burial antedating Saxon minster of ~ AD 900.

Wetwang Slack series

From Wetwang, Humberside (54°01′34″N, 00°33′51″W, NGR SE 9405 5989).

HAR-8538. WK 023 **4490 ± 90**
$\delta^{13}C = -27.7‰$

Charcoal, AML 872561, from a chalk gravel matrix from one of a series of pits with Neolithic pottery (WK 008), possibly part of a linear ritual monument. Collected Aug. 1984 and submitted March 1987 by J. S. Dent, Humberside Archaeology Unit (Dent 1983).

Comment (J.S.D.): With HAR-8539 and -8540, this sample provides a series of dates for an important stage of later Neolithic ritual activity and associated pottery.

HAR-8539. WK 017 **3980 ± 100**
$\delta^{13}C = -27.8‰$

Charcoal, from same context as HAR-8538 (010). Collected Aug. 1984 and submitted April 1987 by J. S. Dent.

Comment (J.S.D.): Same as for HAR-8538.

HAR-8540. WK 031 **4340 ± 100**
$\delta^{13}C = -25.8‰$

Charcoal, AML 872562, from same context as above, HAR-8538 and -8539 (WK 009), found with pottery and flints. Collected Aug. 1984 and submitted March 1987 by J. S. Dent.

Comment (J.S.D.): This sample dates an important phase of ritual activity and material culture.

HAR-8543. WG10A0 **5670 ± 160**
$\delta^{13}C = -27.5‰$

Charcoal, AML 872559, from an early Iron-Age pit associated with pottery and part of a settlement that included a line of four round houses. Collected and submitted May 1980 by J. S. Dent.

Comment (J.S.D.): This result, which should provide an association date for early Iron-Age pottery and related roundhouse, is older than anticipated by >2 ka.

HAR-9244. WY 8AK **3690 ± 80**
$\delta^{13}C = -26.7‰$

Charcoal, AML 881271, from a Beaker-period grave, the central burial of a ring-ditch enclosure. The sample is from a layer of charcoal, presumed to be the collapsed lid, which covered both

bodies. Collected Dec. 1987 and submitted June 1988 by J. S. Dent.

Comment (J.S.D.): Compare with HAR-9245 and -9247 from the same coffin.

3680 ± 100

HAR-9245. WY8AM $\delta^{13}C = -26.8‰$

Charcoal, AML 881272, from the central grave of a Beaker-period funerary monument. The wood is from the upper sides of the charred inner surface of a monoxylous coffin, which contained two burials. The earlier one was disturbed by reopening. It was an inhumation carefully rearranged over the feet of the later, crouched inhumation, which was accompanied by a decorated beaker. Collected Dec. 1987 and submitted June 1988 by J. S. Dent.

Comment: HAR-9244, -9245 and -9247 date the monument and beaker, both part of the great extended cemetery of round barrows at Garton Slack.

3750 ± 80

HAR-9247. WY 8AJ $\delta^{13}C = -26.9‰$

Charcoal, AML 881270, underlying the skeletons in the remains of a wood coffin, central to a circular ditch. Collected Dec. 1987 and submitted June 1988 by J. S. Dent.

Comment (J.S.D.): Date compares with HAR-9244 and -9245 for the monument and beaker.

Ling Howe series

5220 ± 100

HAR-9248. LIN84024 $\delta^{13}C = -25.9‰$

Charcoal, AML 881269, from old soil beneath chalk mound material of a Neolithic long barrow at Ling Howe, Walkington, Humberside, Yorkshire Wolds (53°48′30″N, 00°32′09″W, NGR SE 964 357). Collected May 1984 and submitted June 1988 by J. S. Dent.

Comment (J.S.D.): Date provides *terminus post quem* for mound construction.

North Cave series

Samples from a previously water-logged pit in an Iron-Age and Roman settlement at North Cave, Humberside (53°47′12″N, 00°39′56″W, NGR SE 879 331). One pit had stood open as a shallow well or water hole in the Iron Age, and contained organic material as well as pottery and animal bone. Wooden steps into the well were made from a reused ox-collar and a possible rake.

2160 ± 80

HAR-10225. MS86 100 $\delta^{13}C = -27.5‰$

Wood. Submitted Feb. 1989 by J. S. Dent.

Comment (J.S.D.): HAR-10226, from the same pit, is some centuries older.

2410 ± 80

HAR-10226. NC86 100 $\delta^{13}C = -28.9‰$

Charcoal. Collected 1986; submitted Feb. 1989 by J. S. Dent.

Comment (J.S.D.): HAR-10225, from the same pit, is some centuries younger.

Hambledon Hill series

HAR-6037. HN82C108 — **4270 ± 100**; $\delta^{13}C = -25.8‰$

Charcoal, AML 831452, from an undercut at site reference HN82C108, Hambledon Hill, Dorset. Collected Sept. 1982 and submitted Feb. 1984 by R. Mercer, Department of Archaeology, University of Edinburgh.

HAR-9168. HH751535 — **4660 ± 100**; $\delta^{13}C = -26.1‰$

Charcoal, ~50% identified as hazel/alder by C. A. Keepax, not twiggy, AML 760798, from HH 75, Site D2, cross Ditch 1, Layer 11. Sample is from a primary chalk wash overlying the solid chalk base of a ditch at a Neolithic causewayed enclosure. Collected Sept. 1975 and submitted Feb. 1976 by R. Mercer.

Comment (R.M.): The silt deposit contained chalk and flint lumps and bone and antler pieces.

HAR-9169. HH751498 — **4140 ± 100**; $\delta^{13}C = -26.4‰$

Charcoal, identified as oak/hazel/hawthorn by C. A. Keepax, AML 760797, from HH 75 Site F, from a causewayed enclosure ditch, Layer 6. Collected Sept. 1975 and submitted Feb. 1976 by R. Mercer.

Comment (R.M.): Layer 6 consists of dark brown soil, chalk lumps and large flint nodules filling a roughly V-shaped slot recut into ditch fill; the deposit is associated with flintwork, pot and axe fragments.

Trelan series

HAR-5280. 41-203 — **3970 ± 120**; $\delta^{13}C = -25.0‰$

Charcoal, from Trelan II, Cornwall (50°01′48″N, 05°09′52″W, NGR SW 734 193).

Westward Ho! series

HAR-5632. 8311026 — **6110 ± 160**; $\delta^{13}C = -27.1‰$

Charcoal, AML 8311026, from the upper levels of a Mesolithic midden at Westward Ho!, Devon (50°53′18″N, 04°29′59″W, NGR SS 242 129).

Stanwick series

HAR-8526. 10743 — **1220 ± 70**; $\delta^{13}C = -31.8‰$

Wood, AML 872701, from Stanwick, Northamptonshire (52°20′05″N, 00°34′31″W, NGR SP 9707 7175).

Dainton series

2150 ± 80

HAR-8768. D414127 $\delta^{13}C = -25.2‰$

Charcoal, identified as *Prunus avium* and Pomoideae, twigs, ~5 years old, AML 8610323, from the fill of a posthole, which was sealed by stone rubble of a possible ring cairn at 4 km south of Newton Abbot, Devon on summit of Limestone Hill (50°29′21″N, 03°36′41″W, NGR SX 857 668). Collected Aug. 1986 by G. H. Smith; submitted Sept. 1987 by N. D. Balaam.

Comment (N.D.B.): Date will provide a rough *terminus post quem* for construction of the cairn.

650 ± 70

HAR-9018. 40-014B $\delta^{13}C = -27.6‰$

Charcoal, AML 8110601, from Trelan I. Collected June 1981 by G. Smith; submitted Dec. 1982 by N. Balaam.

1340 ± 90

HAR-9163. ABDC823 *Est.* $\delta^{13}C = -21.0‰$

Bone, from Abingdon Drayton cursus; submitted Nov. 1983 by R. Chambers, Oxford Archaeology Unit.

1020 ± 80

HAR-3969. BTS80501 $\delta^{13}C = -22.5‰$

Bone from Bell Tout shaft (50°44′19″N, 00°12′25″E, NGR TV 557 956) Collected May 1980 and submitted July 1980 by O. R. Bedwin, Institute of Archaeology, London.

Jeffs Farm series

4800 ± 70

HAR-4638. TT815 $\delta^{13}C = -25.5‰$

Charcoal, AML 813630, from a small pit or posthole that also contained Neolithic bowl pottery and flints at Jeffs Farm, Tattershall Thorpe, Lincolnshire (53°07′47″N, 00°09′03″, NGR TF 237 608). Collected March 1981 and submitted June 1981 by P. Chowne, North Lincolnshire Archaeology Unit.

Tattershall Thorpe series

Samples from Tattershall Thorpe, Lincolnshire (53°07′16″N, 00°10′20″W, NGR TF 223 598).

1480 ± 100

HAR-5107. TT79123B $\delta^{13}C = -28.0‰$

Wood, AML 822602, from an Iron-Age ring ditch. Collected Feb. 1980 by P. Chowne; submitted July 1982 by M. A. Girling.

2210 ± 70

HAR-8527. TT86204 $\delta^{13}C = -28.9‰$

Wood, AML 872565, from the lower levels of an enclosure ditch. Collected April 1986 and submitted March 1987 by P. Chowne.

HAR-8528. TT8615 **1990 ± 160**
$\delta^{13}C = -27.4‰$

Wood, AML 872566, same as HAR-8527.

Comment (P.C.): Sample establishes the date of the enclosure.

HAR-8529. TT8622 **6410 ± 70**
$\delta^{13}C = -27.7‰$

Wood, AML 872564, same as above.

Comment (P.C.): Sample dates construction and use of enclosure.

HAR-8530. TT8615 **1940 ± 80**
$\delta^{13}C = -28.0‰$

Charcoal, AML 872567, from a hearth. Collected March and submitted April 1986 by P. Chowne.

Comment (P.C.): Result establishes the date of secondary site use and enhances the Tattershall Thorpe sequence.

Bain Valley Project series

HAR-8531. LTO7861 **1530 ± 70**
$\delta^{13}C = -26.8‰$

Charcoal, AML 872568, from the fill of a Neolithic hearth, associated with pottery and animal bone at Low Toynton, Bain Valley (53° 13′ 23″N 00° 05′ 24″W, NGR TF 275 713). Collected May 1986 and submitted March 1987 by P. Chowne.

Comment (P.C.): I hoped sample would date Neolithic activity in the middle Bain Valley and compare with Tattershall Thorpe dates.

5502 series

HAR-2778. 55020542 **940 ± 80**
$\delta^{13}C = -20.8‰$

Bone, identified as human skull, AML 781574, from Ipswich, (IAS 5502). Collected 1975 by K. Wade; submitted July 1978 by P. Murphy, Centre of East Anglian Studies.

Roach series

HAR-8646. R2UPEAT **2260 ± 80**
$\delta^{13}C = -30.3‰$

Peat, AML 865052, from a biogenic deposit at 90–100 cm below the present salt-marsh surface at Bartonhall Creek (51°35′09″N, 00°45′17″E, NGR TQ 9081 9110). Collected Aug. 1986 and submitted Sept. 1986 by P. Murphy.

Comment (P.M.): Dates the biogenic deposit to the first millennium BC, which cannot be confidently correlated with similar, earlier deposits elsewhere on the Essex coast, and may relate to a localized event.

Blackwater series

6670 ± 130

HAR-9643. BCORE553 $\delta^{13}C = -28.6‰$

Peat, AML 886497, from a biogenic deposit of early Flandrian date, at 6.11–6.22 m depth, beneath estuarine clay revealed by contractors borehole 553 at the end of Dengie peninsula, near Othona Roman Fort, Blackwater, Essex (51°44′43″N, 00°55′56″E, NGR TM 024 093). Collected Feb. 1987 by T. J. Wilkinson; submitted Aug. 1988 by P. Murphy.

Comment (P.M.): Dates only the early Flandrian organic sediments available. Pollen analysis will provide information on contemporary vegetation but independent dating is needed.

1900 ± 70

HAR-9644. B28244 $\delta^{13}C = -30.1‰$

Wood, AML 886498, from a wooden hurdle structure exposed on the foreshore, Site 28 (51°43′52″N, 00°45′13″E, NGR TL 9014 0725). Collected July 1988 and submitted Aug. 1988 by P. Murphy.

Comment (P.M.): Previously obtained dates on a wooden structure at this site are mainly Iron Age. This sample is from the best preserved hurdle from the site, and the ^{14}C date shows that it is one of the latest structures.

Stansted series

3810 ± 80

HAR-9239. BRS228 $\delta^{13}C = -30.0‰$

Peat, AML 881268, from the base of a section exposed in contractors excavations through valley floor alluvial sediments at 228–238 cm depth at British Rail Section, Valley of Stansted Brook, Stansted, Essex (51°54′08″N, 00°12′50″E NGR TL 523 250). Collected May 1988 and submitted June 1988 by P. Murphy.

Comment (P.M.): Date provides information on phases of soil erosion/alluviation and on vegetational history in the survey area. ^{14}C dates are necessary in the absence of any artifactual dating evidence.

Chigborough Farm series

2980 ± 80

HAR-10199. 10.88971 $\delta^{13}C = -29.3‰$

Wood from the bottom of a water-logged deposit at the bottom of a Bronze-Age well or watering hole. The context was black organic loam, virtually stone-free and sealed by successive fills of gravelly clays and silts at Goldhanger, near Maldon, Essex (51°44′22″N, 00°43′24″E, NGR TL 880 081). Collected Sept. 1988 by M. Waughman; submitted Dec. 1988 by P. Murphy (Waughman 1989).

Comment: Date is consistent with LBA pottery.

Southacre ring ditch series

HAR-10238. SAC1449 **1150 ± 70**
$\delta^{13}C = -21.9‰$

Bone, identified as human, from a grave dug immediately outside a ring ditch containing similar graves (52°41′59″N, 00°40′08″E, NGR TF 8032 1472). Collected June 1988 by J. J. Wymer; submitted Dec. 1988 by P. Murphy.

Comment: (P.M.): Date establishes probable association with similar burials in the fills of the ring ditch.

HAR-10239. SAC1305 **1710 ± 90**
$\delta^{13}C = -21.8‰$

Bone, identified as human, from a grave dug into the fill of a ring ditch (52°41′59″N, 00°40′08″E, NGR TF 8032 1472). Collected May 1988 by J. J. Wymer; submitted Dec. 1988 by P. Murphy.

Comment (P.M.): Result confirms an early Saxon date for these burials, which were otherwise dated only by a few sherds of vaguely associated pottery.

Mount Farm series

HAR-4796. MF101 i **3080 ± 90**
$\delta^{13}C = -20.4‰$

Bone, identified as animal from Mount Farm, Berinsfield (51°39′59″N, 01°09′20″W, NGR SU 584 968). Collected 1978 and submitted May 1981 by G. H. Lambrick, Oxford Archaeology Unit.

Comment (G.L.): This sample is one of a series of 16 spanning the Middle Neolithic to Late Iron Age. It was from a ring ditch that contained fragments of a MBA bucket urn and surrounded several burial deposits. A bone from one inhumation was dated to 3170 ± 100 BP (HAR-4791), whereas charcoal from a cremation in a small MBA urn yielded an earlier date of 3380 ± 100 BP (HAR-4822). However, the second date may be too early, as it is 1 of 4 charcoal samples in the sequence, of which the other 3 are anomalously early. The ring ditch was stratigraphically earlier than a LBA water hole dated to 3000 ± 90 BP (HAR-4797, -4798). Thus, HAR-4796 entirely agrees with other dates in the sequence on samples of bone and water-logged wood. Very few MBA ring ditches in the upper Thames Valley have been dated; good stratigraphic and artifactual associations of the site make this date a valuable contribution to the chronology of the region.

Claydon Pike series

HAR-5410. FCP 4 **1940 ± 80**
Est. $\delta^{13}C = -21.0‰$

Bone, from the low levels of an Iron-Age enclosure ditch, which is in the center of the site and belongs to the middle phase (2) of occupation at Claydon Pike, Lechlade, Gloucester. Collected July 1981 by D. Miles, Oxford Archaeology Unit.

Alcester series

1680 ± 70

HAR-8524. 861J $\delta^{13}C = -28.2‰$

Wood, identified as *Alnus glutinosa* Gaertn (alder), AML 872595, from a foundation trench for the late 4th century bastion at Alcester, Warkwickshire. Submitted 1987 by J. Hillam, University of Sheffield.

Comment (J.H.): Wood could not be dendrochronologically dated; thus, ^{14}C dating was required.

Cannington Series

1730 ± 70

HAR-9137. GRAVE 87 $\delta^{13}C = -23.1‰$

Bone, AML 881259, from Cannington, Somerset (51°09′33″N, 03°04′11″W, NGR ST 252 406). Collected 1962/3 by P. A. Rahtz; submitted March 1988 by S. M. Hirst.

Comment (S.M.H.): Date is a rerun for skeleton previously dated by the British Museum (BM-469).

Henley Wood series

1190 ± 90

HAR-8761. GRA 12 $\delta^{13}C = -20.4‰$

Bone, identified as human, from Grave 12, below either Structure 1 or Temple 2 at Henley Wood, Yatton, Avon (51°22′57″N, 02°48′02″W, NGR ST 443 652). Collected ~1974 by E. Greenfield; submitted Sept. 1987 by L. Watts.

3070 ± 90

HAR-9028. MM 220 $\delta^{13}C = -29.1‰$

Peat, AML 790084, from a forested period preceding the first major clearance at Moss Mire, near Barnard Castle, Durham. Collected May 1978 and submitted Jan. 1979 by Mrs. A. M. Donaldson, Department of Archaeology, University of Durham.

Christchurch series

3510 ± 70

HAR-2906. X17-100 $\delta^{13}C = -25.2‰$

Charcoal, identified as oak (*Quercus* sp.) from mature timbers, AML 785392, from a ring ditch. The sample was ~10–15 cm from the base of the ditch in primary silt at Christchurch, Site X17 (50°44′11″N, 01°46′36″W, NGR SZ 1575 9305). Collected Jan./April 1978 and submitted Oct. 1978 by K. Jarvis (Jarvis 1983).

Comment (K.J.): Date confirms the earlier BA date expected for Ring Ditch 1, which was stratigraphically earlier than a LBA settlement. It is also consistent with adjacent Ring Ditch 2, which cut into a pit containing grooved ware, and yielded a sherd from a collared urn.

Staines series

HAR-9023. 50F1423 **1520 ± 70**
$\delta^{13}C = -25.3‰$

Charcoal, AML 822659, from a large pit 69 cm deep, inside the Neolithic enclosure (Layer 3), Staines, Middlesex. Collected Aug. 1962 by R. Robertson-MacKay; submitted July 1982 by L. Blackmore (AML).

HAR-9024. SEC30B **3950 ± 70**
$\delta^{13}C = -27.4‰$

Charcoal. Collected Aug. 1962 by R. Robertson-MacKay; submitted Oct. 1988 by L. Blackmore.

HAR-9026. 12F332 **1380 ± 80**
$\delta^{13}C = -25.6‰$

Charcoal, AML 822660, from a gully inside the Neolithic enclosure. Collected Aug. 1962 by R. Robertson-MacKay; submitted Oct. 1988 by L. Blackmore.

Enderby Iron Age Farmstead series

HAR-9410. A3083C1 **1870 ± 90**
$\delta^{13}C = -25.0‰$

Charcoal, identified as oak, ash, poplar, field maple, rowan – twigs/fragments, from an eaves drip trench surrounding a first-phase Iron-Age building at Grove Farm, Enderby, Leicestershire (52°35′47″N, 01°11′11″W, NGR SK 551 002). Collected Nov. 1984 and submitted Jan. 1988 by P. Clay, Leicestershire Museums Archaeology Unit.

Comment (P.C.): Sample may derive from the destruction of the building and thus, provides a terminal date for its use.

Stow Church series

HAR-8809. ST83/62 **960 ± 80**
$\delta^{13}C = -22.0‰$

Bone, identified as a long bone, AML 844227, from Stow Church, Lincolnshire.

HAR-9693. ST83322 **1640 ± 70**
$\delta^{13}C = -23.6‰$

Bone, identified as cattle, AML 858537, from the earliest level of activity on the site at Stow Church, Lincolnshire. Collected Sept. 1983 by Naomi Field; submitted Nov. 1984 by the Trust for Lincolnshire Archaeology.

Comment (N.F.): Result dates domestic use of the site.

Hayling Island Saxon series

HAR-8535 E46 **1840 ± 100**
$\delta^{13}C = -25.9‰$

Charcoal, AML 872579, from a late Iron-Age gully forming part of the circular structure of a

temple, from Hayling Island, Hampshire (50°49′20″N, 00°58′19″W, NGR SU 724 031). Collected Sept. 1977 and submitted April 1986 by G. Soffe, Air Photographs Unit, Royal Commission for the Historical Monuments of England (RCHM(E)).

Comment (R.S.): Dates construction and use of the Iron-Age temple.

1720 ± 100

HAR-8537. V57A/2 $\delta^{13}C = -26.3‰$

Charcoal, AML 872584, from the base of a mid-Saxon pit dug into a courtyard of the Roman temple. Collected Sept. 1979 by A. King; submitted April 1986 by G. Soffe.

Comment (G.S.): Dates the mid-Saxon occupation of the site.

Baldock Upper Walls Common series

1990 ± 110

HAR-5964. UWCA2224 $\delta^{13}C = -21.0‰$

Bone, AML 840026, from primary silt of major north-south ditch of a large agricultural enclosure at Baldock Upper Walls Common, northeast of Baldock (51°59′24″N, 00°10′46″W, NGR TL 250 340). Collected 1982 by G. R. Burleigh; submitted Sept. 1983 by J. C. Drake, Letchworth Museum.

Comment (G.R.B.): This will be a starting date for a series of intersecting enclosures, and hence, will date the subdivision of the land for agricultural purposes around the late Iron-Age/Roman settlement. It will also help narrow the date range of associated pottery.

Heslerton Parish Project series

1700 ± 80

HAR-6518. HGP00007C $\delta^{13}C = -25.0‰$

Charcoal, AML 841207, from fill of SFB context 2M00217 at Vale of Pickering, Yorkshire (54°10′33″N, 00°35′42″W, NGR SE 917 765); submitted Nov. 1983 by D. J. Powlesland.

Comment (D.P.): Date will be used to compare with burial dates.

Beeston Castle series

1890 ± 120

HAR-5610. BCOGRC07 $\delta^{13}C = -26.4‰$

Charcoal, from Context BCO375A timber, *in situ* in a stone rampart below the foundation level of medieval Beeston Castle, Bunbury, Cheshire (53°07′43″N, 02°41′26″W, NGR SJ 538 593). Submitted June 1983 by P. Hough.

5330 ± 110

HAR-6461. BCO54200 $\delta^{13}C = -27.2‰$

Charcoal, AML 834995. Submitted Aug. 1984 by P. Hough.

Longmoor series

HAR-4475. LFMBD4 **6040 ± 110**
$\delta^{13}C = -27.1‰$

Wood, identified as oak and birch, from the lower part of a horizon of gley podzol developed on the Folkestone Beds division of the Lower Greensand at Longmoor, Site I, East Hampshire. Collected summer 1979 and submitted April 1981 by Dr. R. M. Jacobi.

Comment (R.M.J.): Mesolithic-type flint artifacts were found in the same part of the profile.

Charlwood series

Samples from Charlwood, Surrey (51°09′31″N, 00°14′14″W, NGR TQ 2325 4145). Collected Dec. 1979 and submitted April 1981 by R. Ellaby (Ellaby 1983, 1987).

HAR-4531. PIT 1-1214 **4340 ± 100**
$\delta^{13}C = -28.6‰$

Charcoal, AML 820433, at 33 cm depth of PIT 1, excavated 46 cm into Weald clay, and containing Mesolithic flint artifacts and calcined bone at Charlwood Site 1.

HAR-4532. PIT 1-1416 **5270 ± 90**
$\delta^{13}C = -27.3‰$

Charcoal, AML 820432, at 38 cm depth.

HAR-4533. PIT 1-1618 **5640 ± 90**
$\delta^{13}C = -26.3‰$

Charcoal, AML 820431, from the basal 43 cm depth.

Avebury series

This series of dates puts Avebury, Wiltshire (51°25′N, 1°51′ W) in the same horizon as other big southern English henges, such as Durrington Walls and Mount Pleasant. A detailed chronology of the site remains open to interpretation. HAR-10325, -10500 and -10063 date material on the old land surface under the bank of the henge. HAR-10502 dates the primary ditch fill, and -10064, the secondary fill. At face value, -10502 is slightly earlier than Durrington Walls and Mount Pleasant. HAR-10326 dates a possible extension to the bank, compatibly with -10502, but hardly later than -10500, from the old land surface. HAR-9696, -10061, -10062 and -10327 are from stone holes of the main stone circle. HAR-9696 and -10061 must be rejected as intrusive; -10327, on bone, and perhaps more reliable than -10062 on charcoal, might suggest construction later than the ditch and bank. HAR-9694, -9695 and -10501 are from the occupation area of the West Kennet Avenue. HAR-9694 must be rejected; -9695 and -10501 agree with finds from the occupation, but neither dates the erection of stones in the Avenue (Gray 1935; Smith 1965; Evans, Pitts & Williams 1985).

HAR-9695. SQUARE 3 **4260 ± 80**
$\delta^{13}C = -26.7‰$

Charcoal from Hole 4 in the occupation area on the West Kennet Avenue. Collected 1934 by A. Keiller; submitted Sept. 1987 by M. Pitts, Avebury Museum.

2430 ± 70

HAR-10061. 831785 $\delta^{13}C = -25.8‰$

Charcoal, AML 831785, from a stake hole on the edge of Stonehole 8 of the main stone circle in the southwest quadrant. Collected 1938 by A. Keiller; submitted Sept. 1987 by M. Pitts.

4130 ± 90

HAR-10062. 831784 $\delta^{13}C = -27.5‰$

Charcoal, AML 831784, from the bottom of Stonehole 41 in the main stone circle in the northwest quadrant. Collected 1937 by A. Keiller; submitted Sept. 1987 by M. Pitts.

4380 ± 80

HAR-10063. 822624 $\delta^{13}C = -26.7‰$

Charcoal, AML 822624, from the old land surface under the henge bank in the southeast quadrant (Cutting X). Collected 1914 by H. St. G. Gray; submitted Sept. 1987 by M. Pitts.

3690 ± 80

HAR-10064. 822623 $\delta^{13}C = -25.4‰$

Charcoal, AML 822623, from a deposit of burned material beneath a 'dwarf' burial in the secondary fill of the ditch (*ca.* 2 m below modern surface) in the terminal of the ditch east of the south entrance (Cutting IX). Collected 1914 by H. St. G. Gray; submitted 1984 by M. Pitts.

4640 ± 70

HAR-10325. GBA82+63 $\delta^{13}C = -24.8‰$

Bone, AML 831778, from the old land surface under a bank of henge in the northwest quadrant (Cutting II). Collected 1982 and submitted June 1985 by M. Pitts.

4160 ± 90

HAR-10326. 831779 $\delta^{13}C = -24.5‰$

Antler, AML 831779, from the above bank of the henge in the northwest quadrant, above a possible revetment trench. Collected 1937 by A. Keiller; submitted June 1985 by M. Pitts.

4280 ± 100

HAR-10501. 831787 $\delta^{13}C = -24.3‰$

Bone, identified as antler, AML 831787, from a pit in the occupation area on the West Kennet Avenue. Collected 1934 by A. Keiller.

4300 ± 90

HAR-10502. 831780 $\delta^{13}C = -23.9‰$

Bone, identified as antler pick, AML 831780, from the primary fill of the henge ditch west of the south entrance (Cutting I). Collected 1909 by H. St. G. Gray; submitted June 1985 by M. Pitts.

5780 ± 80

HAR-9694. SQUARE 2 $\delta^{13}C = -27.3‰$

Charcoal from Posthole 1 in the occupation area on the West Kennet Avenue. Collected 1934 by A. Keiller; submitted 1987 by M. Pitts.

HAR-10500. AV2 **4190 ± 90**
$\delta^{13}C = -26.2‰$

Charcoal, AML 831777, identified as *Crataegus* sp., *Aesculus* sp. and *Corylus*, from the old land surface under the henge bank. Collected 1938 by A. Keiller; submitted June 1985 by M. Pitts.

HAR-10327. 831783 **3870 ± 90**
$\delta^{13}C = -21.5‰$

Bone, identified as pig, from the bottom of Stonehole 44 of the main stone circle in the northwest quadrant. Collected 1937 by A. Keiller; submitted June 1985 by M. Pitts.

HAR-9696. CIRCLE 10 **2080 ± 110**
$\delta^{13}C = -28.2‰$

Charcoal from an ash layer in Stonehole 44, of the main stone circle in the northwest quadrant. Collected 1937 by A. Keiller; submitted Sept. 1987 by M. Pitts.

Ewanrigg series

HAR-5962. EWR83114 **1620 ± 150**
$\delta^{13}C = -25.9‰$

Bone, AML 840107, from Context 14, a stone-lined cist containing a smashed collared urn at Ewanrigg, Maryport, Cumbria (54°42′05″N, 03°29′56″W, NGR NY 0342 3508). Collected Oct. 1983 by R. Bewley (RCHM(E)).

HAR-7073. EWR85072 **1070 ± 70**
$\delta^{13}C = -27.0‰$

Charcoal, AML 858544, from Context 72, a tunnel-like 'entrance' to a corn-drying kiln (54°42′05″N, 03°29′56″W, NGR NY 0342 3508). Collected Aug. 1985 and submitted Oct. 1985 by R. H. Bewley.

Comment (R.B.): Result establishes contemporaneity between tunnel and chamber.

HAR-7076. EWR85068 **810 ± 80**
$\delta^{13}C = -24.6‰$

Charcoal, AML 858547, from probable stake holes, part of a corn-drying kiln. Collected Aug. 1985 and submitted Oct. 1985 by R. H. Bewley.

Comment (R.B.): Dates the final use of the corn-drying kiln.

HAR-9459. EWR87346 **1450 ± 80**
$\delta^{13}C = -27.9‰$

Charcoal, AML 880750 (54°41′46″N, 03°29′51″W, NGR NY 035 345). Collected Aug. 1987 and submitted Feb. 1988 by R. H. Bewley.

Comment (R.B.): Dates the earliest context on the settlement.

HAR-9460. EWR87349 **2970 ± 60**
$\delta^{13}C = -25.9‰$

Charcoal, AML 880751, from a burned layer within (346), the earliest feature of the site,

possibly a storage pit (NGR NY 035 352). Collected Aug. 1987 and submitted Feb. 1988 by R. H. Bewley.

Maryport series

HAR-8788. EWR86084 — **4440 ± 70**; $\delta^{13}C = -28.6‰$

Charcoal, AML 8650270, from an oval pit with many stones, a beaker and a stone-lined bottom, a layer of quartz pebbles, at 1 m south of Maryport, Cumbria (54°42′02″N, 03°29′51″W, NGR NY 035 350). Collected Aug. 1986 and submitted Oct. 1986 by R. Bewley.

Comment (R.B.): The discovery of this beaker pit is unexpected and important in terms of the relationship between the Bronze Age and Beaker period in the length of use of the site as a cemetery. The disturbance to the pit suggests that this date cannot be taken too seriously.

Amesbury series

HAR-10514. NEWB49 — **3290 ± 80**; $\delta^{13}C = -24.7‰$

Charcoal, from a cremation pit at New Barn B3, Amesbury, Wiltshire (51°10′29″N, 01°47′33″N, NGR SU 145 418). Submitted Feb. 1990 by D. Jordan, AML.

HAR-10515. NEWB8 — **3610 ± 90**; $\delta^{13}C = -25.8‰$

Charcoal, from the middle ditch at New Barn B4. Submitted Feb. 1990 by D. Jordan.

HAR-10516. NEWB10 — **4070 ± 90**; $\delta^{13}C = -24.6‰$

Charcoal, from the filling of a horseshoe pit at New Barn B4. Submitted Feb. 1990 by D. Jordan.

Haddenham series

Samples from Haddenham, Upper Delphs Terrace, Cambridgeshire (52°20′21″N, 00°04′17″E, NGR TL 411 733).

HAR-8094. HAD84 IV — **3620 ± 110**; $\delta^{13}C = -25.0‰$

Charcoal. Submitted July 1985 by I. Hodder, Department of Archaeology, University of Cambridge.

HAR-9172. HAD6LB17 — **4960 ± 90**; $\delta^{13}C = -26.4‰$

Wood. Submitted March 1988 by I. Hodder.

HAR-10512. HAD87CE — **4490 ± 140**; $\delta^{13}C = -25.2‰$

Peat.

2110 ± 90

HAR-10513. HAD IX 87 $\delta^{13}C = -28.0‰$

Wood. Submitted July 1988 by C. Evans, Department of Archaeology, University of Cambridge.

4020 ± 110

HAR-10518. 3911 $\delta^{13}C = -26.8‰$

Charcoal, AML 886481, from the fill of a small pit in the middle of a causewayed enclosure. Collected Oct. 1987 and submitted July 1988 by C. Evans.

Comment (C.E.): The pit was just outside of the HAD VII enclosure and contained domestic rubbish, including worked flint and plainware bowls. Results date this important assemblage and place it in the chronology of the site.

2240 ± 80

HAR-10519. 3806 $\delta^{13}C = -27.4‰$

Wood, AML 886482, from the primary fill of the north ditch of the south-lying enclosure, sealed by an upcast bank of the north enclosure.

Comment (C.E.): Dates the south-lying enclosure.

4690 ± 90

HAR-10520. 0362 $\delta^{13}C = -24.7‰$

Charcoal, AML 886477, from a burned post in secondary fills of the butt of a causewayed enclosure ditch. Collected Sept. 1982 by I. Hodder and C. Evans; submitted July 1988 by C. Evans.

Comment (CE): Dates the later phase of activity/usage on the east side of the enclosure.

Brean Down series

3100 ± 100

HAR-9153. BD 1352 $\delta^{13}C = -22.8‰$

Material from Unit 16, part of Unit 4, the latest of the Bronze-Age occupation horizons at Brean Down, Sandcliffe, at Brean, near Burnham on Sea, Somerset (NGR 2957 5872). Collected 1985 and submitted Nov. 1987 by M. Bell, Archaeology Unit, St. David's College (Bell 1986, 1990).

Comment (M.G.B.): This and another date (3400 ± 90, HAR-9155) from Unit 4 are earlier than the dates suggest, based on the gold bracelets from this unit (~3000–2600 BC), or the estimated pottery date in the first quarter of the third millennium BP. Another date for Unit 4 (2730 ± 70, HAR-9151) agrees well with the artifactual evidence.

Low Hauxley-B series

Fine detrital lacustrine mud from a ~60-cm-thick organic sequence overlying freshwater silts, exposed in a sea-cliff, ~70 cm, of a multicomponent (Mesolithic, Bronze Age) archaeological site (Bonsall 1984) near Low Hauxley, 4 km south of Amble, Northumberland (55°18′34″N, 01° 33′09″W, NGR NU 284 018), ~270 m south of Low Hauxley (Innes & Frank 1988; Bonsall 1984). Samples were collected from a cleaned cliff exposure in Sept. 1986 by R. Tipping, Department of Archaeology, Edinburgh University, stored at 4°C, and submitted Feb. 1987.

HAR-8977. LHB-5 60–58 cm — **4280 ± 100**; $\delta^{13}C = -30.6‰$

Fine detrital mud.

HAR-8976. LHB-4 56–54 cm — **4700 ± 70**; $\delta^{13}C = -29.5‰$

Fine detrital mud with occasional roots, possibly not contemporaneous.

HAR-8975. LHB-3 50–46 cm — **3360 ± 70**; $\delta^{13}C = -29.5‰$

Fine detrital mud.

HAR-8974. LHB-2 39–37 cm — **3280 ± 60**; $\delta^{13}C = -29.4‰$

Fine detrital mud with occasional roots.

HAR-8973. LHB1 — **2330 ± 60**; $\delta^{13}C = -30.3‰$

Fine detrital mud.

General Comment (RT): The series relates to a detailed pollen profile of the sediments. With one exception, the series agrees in age with the pollen spectra, post-elm decline, and with two ^{14}C dates from closely comparable sediment and pollen stratigraphy at Low Hauxley. (Innes & Frank 1988).

HAR-8977 dates the change from fluviatile sedimentation to ponding, tentatively related to a small rise in sea level. The date is significantly younger (at 2 σ) than overlying HAR-8976. Internal evidence does not resolve this 'date reversal', but peat developed at Low Hauxley (Innes & Frank 1988) at 4720 ± 50 (SRR-1421); whether this implies HAR-8977 to be 'too young' is unclear.

The beginning of a phase of lowered pond level is dated by HAR-8976, and the resumption of raised water levels by HAR-8975; a small oscillation in sea level in inducing this change is suspected, but is difficult to demonstrate. A reduction in willow around the pond is dated to ~3280 (HAR-8974), suggesting an increase in agricultural activity. The covering of the pond by an advancing sand sheet is dated by HAR-8973; the comparable date at Low Hauxley is 2810 ± 40 (SRR-1420).

South West Fen Dyke Survey series

HAR-8510. SWFC1 — **3740 ± 100**; $\delta^{13}C = -28.1‰$

Peat from upper buried soil, from Crowtree Farm, Cambridgeshire (52°51′04″N, 00°15′34″E, NGR TF 5213 3061). Submitted April 1987 by C. French, Fenland Archaeology Trust (French & Pryor, in press).

HAR-8913. SWFC4A — **3190 ± 90**; $\delta^{13}C = -28.1‰$

Charcoal from the base of a lower peat trench. Submitted March 1987 by C. French.

HAR-8513. SWFC4 **3660 ± 60**
$\delta^{13}C = -27.6‰$

Peat from a thin exposure of basal peat overlying the buried soil and sealed by fen clay. Submitted March 1987 by C. French.

HAR-8511. SWFC2 **2800 ± 100**
$\delta^{13}C = -27.3‰$

Charcoal from a feature at Northey "Island," Cambridgeshire (52°50′49″N, 00°06′48″E, NGR TF 4230 2983). Submitted March 1987 by C. French.

HAR-8912. SWFC3 **2090 ± 80**
$\delta^{13}C = -26.7‰$

Charcoal from a sealed plowsoil/occupation horizon, Borough Fen Site 7, underlying alluvium (52°38′34″N, 00°14′44″E, NGR TF 5192 0740). Submitted March 1987 by C. French.

Hayes Farm series

HAR-8674. HFCH030 **8140 ± 160**
$\delta^{13}C = -25.0‰$

Charcoal from Hayes Farm, Clyst Honiton, East Devon (50°44′23″N, 03°25′46″W, NGR SX 9915 9438). Collected 1987 and submitted July 1987 by T. Pearson, Exeter City Museum.

HAR-8676. HFCH066 **1910 ± 100**
$\delta^{13}C = -27.2‰$

Collected 1987 and submitted July 1987 by T. Pearson.

Comment (T.P.): These samples were obtained during an excavation of aerial crop marks. The result supplements very few ^{14}C dates currently available for Barrows/Ring ditches in southwest England.

Sutton Common series

HAR-8916. SC022CO2 **2240 ± 90**
$\delta^{13}C = -30.7‰$

Peat, AML 881215, from the top peat layer underlying the tail of the bank (opposite to the ditch) at Sutton Common, Norton parish, Doncaster, South Yorkshire (53°36′08″N, 01°08′57″W, NGR SE 563 121). Collected Nov. 1987 and submitted Dec. 1987 by B. Sydes, South Yorkshire Archaeology Unit.

Comment (B.S.): Dates the *terminus ante quem* for the construction of the bank.

Hob Ditch 1987 series

HAR-8874. 32/8/1 **2530 ± 90**
$\delta^{13}C = -27.3‰$

Soil, AML 878267, from the smaller of two ditches at the second lowest fill of recut, one of several layers that accumulated rapidly after the recutting at Lapworth, Warwickshire (52°19′50″N, 01°45′04″W, NGR SP 1695 7036). Collected Aug. 1987 and submitted Oct. 1987 by S. Cracknell.

Comment (S.C.): Result establishes the earthwork as pre-Roman.

Jubilee Hall series

950 ± 60

HAR-9134. 003/107 $\delta^{13}C = -23.3‰$

Bone, AML 881225, from the fill of a pit cutting through a sequence of layers, which, in turn, seal a grave. Stratigraphically, this is the latest feature at Covent Garden, London WC2 (51° 30′40″N, 00°07′14″W, NGR TQ 3040 8085). Collected May 1985 by R. Whytehead; submitted Oct. 1987 by R. Whytehead and L. Blackmore, Museum of London.

Comment (L.B.): Dates the back-filling of the feature and provides a date range for the accumulation of urban deposit above the grave. The result provides a guide to dating the phasing of the site and complements pottery-dating evidence for the mid-Saxon period.

Glastonbury series

Wood samples from a series of late-Saxon features at Glastonbury, Somerset (51°08′43″N, 02°43′09″W, NGR ST 4970 3875). Other ^{14}C dates from this series are HAR-7044 and -7045 (Walker, Williams & Otlet 1990) from the 10th century monastic enclosure ditch.

1120 ± 80

HAR-9207. GCF87/09 $\delta^{13}C = -30.7‰$

Wood, from a clay bank in Trench C. The sample is from sharpened revetment stake from the bank of a watercourse. Collected July 1987 and submitted March 1988 by C. and N. Hollinrake (1991).

Comment (C.H. and N.H.): Dates the construction of this feature.

1340 ± 100

HAR-9208. GCF87/12 $\delta^{13}C = -32.8‰$

Wood, from GFF 87 Trench BB, Ditch D (51°08′40″N, 02°43′11″W, NGR ST 4965 3865). The sample is from a sharpened stake from primary fill of a ditch sealed by the bank of the same watercourse, above. Collected July 1987 and submitted March 1988 by C. and N. Hollinrake (1991).

Comment (C.H. and N.H.): provides a suitable *terminus post quem* for this watercourse.

Raunds Area Project: River Nene Palaeochannels series

4300 ± 150

HAR-9241. RAC1 $\delta^{13}C = -31.6‰$

Peat, AML 881262, from a monolith from a small exposed section through a paleochannel at Nene floodplain, near Raunds, Northantshire (52°20′39″N, 00°34′07″W, NGR SP 975 728). Collected June 1987 by A. G. Brown and M. Keough; submitted June 1988 by A. G. Brown, Department of Geography, University of Leicester.

Comment (A.G.B.): Dates paleochannel abandonment and provides a basal age for the pollen profile.

1970 ± 80

HAR-9242. RAPD1 $\delta^{13}C = -29.9‰$

Peat, identified as sediment type and pollen and plant macrofossil, AML 881263, from Trench B139, cut across a paleochannel (52°20′23″N, 00°34′39″W, NGR SP 973 724). Collected Oct. 1987 and submitted June 1988 by A. G. Brown.

Comment (A.G.B.): Result should provide a reliable *post terminum* date of paleochannel abandonment.

9370 ± 170

HAR-9243. RAPE1 $\delta^{13}C = -31.6‰$

Peat, AML 881264, from the basal 5 cm of a monolith from Trench B4141 across a paleochannel (NGR SP 969 723). Collected Oct. 1987 by A. G. Brown and M. Keough; submitted June 1988 by A. G. Brown.

Comment (A.G.B.): Dates abandonment of the paleochannel and provides a basal age for the pollen profile.

Cripps River series

2900 ± 90

HAR-9188. CRO-1 $\delta^{13}C = -28.2‰$

Peat, AML 878292, from the base of peat overlying clay, Feature 13, containing briquetage, Trench A, at Cripps River, East Huntspill, Somerset (51°11′25″N, 02°54′11″W, NGR ST 369 439). Collected Oct. 1986 by R. McDonnell, V. Straker and A. Caseldine; submitted Sept. 1987 by R. McDonnell, Somerset County Council (McDonnell 1985, 1986).

Comment (R.M.): Dates salt production activity in an area of peat deposition.

Lower Great Moor series

1560 ± 60

HAR-9145. X4802512 $\delta^{13}C = -30.6‰$

Peat, AML 881221, at 1.05 m depth, overlying organic silty clay and fine gravel at Lower Great Moor, Tithe 1422, on the floodplain of River Wolf, a raised area on river gravels (50°42′09″N, 04°13′42″W, NGR SX 4266 9165). Collected Jan. 1988 by T. Pearson and V. Straker; submitted Jan. 1988 by V. Straker, Exeter City Museum.

Comment (C.H.): Archaeological excavations and pollen analysis of the Wolf Valley are underway, before the area is flooded by the Roadford reservoir.

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