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HARWELL RADIOCARBON MEASUREMENTS IX

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INTRODUCTION

The results in this list come from our earlier years of operation and form part of the special series of lists being prepared to clear the backlog of unpublished dates from this laboratory, in this case 49 samples coming from sites in and around Northampton, UK. They originate from excavations directed by John Williams and Helen M Bamford of the Northampton Development Corporation between 1973 and 1982, and all were submitted for measurement and paid for by the Ancient Monuments Laboratory of the Historic Buildings and Monuments Commission for England and Wales.

Samples were measured using either standard liquid scintillation counting (Otlet & Warchal 1978) or miniature gas proportional counting (Otlet *et al* 1983; Otlet, Huxtable & Sanderson 1986). In all cases, the error term quoted is the 1 sigma standard deviation estimate of the full replicate samples reproducibility (Otlet 1979). Calculations are based on the Libby half-life of 5568 years, using NBS oxalic acid standard (x0.95) as modern, both values treated as constants with AD 1950 as the reference year. All results are corrected for fractionation according to the quoted $\delta^{13}C$ (wrt PDB) values measured in this laboratory. National Grid Reference is abbreviated to NGR throughout.

ARCHAEOLOGIC SAMPLES

Northampton series

This series is of 25 radiocarbon determinations from five sites in Northampton, Northamptonshire, England (NGR SP 7560). These dates were measured to establish the origins and early history of Saxon and Medieval Northampton. The measurements were particularly important in helping to establish a chronologic framework, which can be summarized as follows:

Phase I – Early/Middle Saxon sunken-featured buildings
Phase II – Erection of a Saxon timber palace ca mid-8th century AD
Phase III – Erection of a Saxon stone palace in early 9th century AD
Phase IV – Acquisition by site of urban characteristics in late 9th or early 10th centuries AD

The five sites within Northampton were associated with the different chronologic phases, St Peter's Garden with Saxon timber palace (Williams 1979; Williams, Shaw & Denham 1985), St Peter's Street, Chalk Lane (Williams & Shaw 1981) and Black Lion Hill with Saxon pre-urban and urban contexts and Gregory Street with former St Gregory's Church.

St Peter's Gardens

The areas investigated comprised yards and garden areas of Medieval and later properties in Marefair and St Peter's Street around St Peter's Church. The deposits on the site were divided into

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a) deposits antedating stone buildings of Phase II (including large middle Saxon timber hall or palace), b) middle Saxon stone building, c) Late Saxon, d) Medieval and post-medieval. Radiocarbon dates came from Phases I and II, early and Middle Saxon deposits.

HAR-5557. AA441 **1590 ± 60**

AML 831250, charcoal in soil from possible sunken-featured building. $\delta^{13}C = -27.1‰$

HAR-5554. AA479.8 **1680 ± 120**

AML 831255, bone from posthole in construction trench. $\delta^{13}C = -22.7‰$

HAR-5558. AA479.17 **1310 ± 70**

AML 831253, bone from posthole in construction trench. $\delta^{13}C = -22.0‰$

HAR-5552. AA926.11 **1070 ± 80**

AML 831256, bone from posthole in construction trench. $\delta^{13}C = -22.3‰$

HAR-5553. AA479.11 **1220 ± 70**

AML 831254, bone from posthole in construction trench. $\delta^{13}C = -22.5‰$

HAR-5551. AA926/479 **1100 ± 80**

AML 831251, bone from construction trench. $\delta^{13}C = -22.7‰$

HAR-5555. AA465 **1010 ± 70**

AML 831252, bone from construction trench. $\delta^{13}C = -21.4‰$

HAR-5556. AA766.1 **1300 ± 80**

AML 831257, charcoal in soil from charcoal layer. $\delta^{13}C = -27.5‰$

General Comment: Samples relate to timber hall, one of buildings included in Phase I classification. First, HAR-5557, 1590 ± 60, antedates this feature but fits with archaeologic expectations (J Williams, pers commun). The remaining seven dates originate from postholes associated with the hall and thought to have accumulated in these locations shortly after the destruction of the timber building. The group of bone samples, HAR-5551 to -5555 and -5558, might be expected to form the tightest grouping (bearing in mind the time span over which bone assimilates carbon). Although no specific reason could be found, HAR-5554 appears as an outlier of the group and was subsequently rejected in examination (Williams, Shaw & Denham 1985: 64–66). The remaining five bone dates form a better group but this only becomes acceptable statistically, using the test of Ward and Wilson (1978) if HAR-5558 is removed, giving a mean result of 1100 ± 45 BP for the group (uncalibrated). A charcoal date, HAR-5556 (1300 ± 80), is earlier than this but is less reliable in terms of its intrinsic age prior to association with its context. The archaeologically expected time span of building was ca 50–100 years so that, although results fit the expectation of construction and use prior to Danish occupation, which commenced ca AD 875, they do not have the resolution necessary to pinpoint precisely construction and abandonment time.

St Peter's Street

Samples from this site belong to Phase II, the stone building horizon, the main components of which are 1) a large stone hall, 2) a probable minster church and 3) two mortar mixers.

HAR-1245. F56 **1310 ± 90**

AML 753365, bone from mixer spread. $\delta^{13}C = -22.3‰$

HAR-1246. F56 **1300 ± 60**

AML 753366, bone from mixer spread. $\delta^{13}C = -22.3‰$

HAR-1452. F293 **1080 ± 60**

Bone from mixer 2. $\delta^{13}C = -22.5‰$

HAR-1720. N133 **1240 ± 80**

Bone found in layer assoc with minster. $\delta^{13}C = -22.4‰$

HAR-1244. A759 **1110 ± 80**

AML 753364, bone from gully. $\delta^{13}C = -22.3‰$

HAR-1454. A759 **1030 ± 80**

Bone from gully. $\delta^{13}C = -22.1‰$

HAR-1225. K172 **1190 ± 70**

AML 753363, charcoal in soil from sunken-featured building 2B. $\delta^{13}C = -26.2‰$

HAR-1431. K171 **880 ± 70**

Bone from sunken-featured building 3. $\delta^{13}C = -22.0‰$

HAR-1437. K177 **700 ± 70**

Bone from sunken-featured building 2A. $\delta^{13}C = -22.2‰$

General Comment: HAR-1245, -1246 and -1452 were associated with mortar mixers and HAR-1720 with the Minster. The results group fairly closely and show no difference from those obtained for samples associated with the destruction of the timber hall. HAR-1244 and -1454, which came from same gully, agree well with each other. HAR-1225, -1431 and -1437 came from sunken-featured buildings which, on ceramic evidence, fall most probably in the 10th century AD but certainly in the period AD 850 to 1100. This is supported by the radiocarbon dates.

Chalk Lane

These samples came from early sunken-featured buildings, simple rectangular hollows cut down into the ground with a single post at each end.

HAR-3688. D86 **1510 ± 70**

AML 800128, bone. $\delta^{13}C = -23.5‰$

HAR-3689. D86 **1450 ± 70**

AML 800128, bone. $\delta^{13}C = -23.8‰$

HAR-3935. A141 **1320 ± 70**

AML 794858, charcoal. $\delta^{13}C = -27.5‰$

General Comment: HAR-3688 and -3689 were from the same building and dates agree closely. HAR-3935 came from a completely separate building. Samples relate to early Saxon settlement activity in Northampton and can be compared with HAR-5557 from St Peter's Gardens.

Gregory Street

These three samples came from Middle Saxon graves immediately south of St Gregory's Church site. The church is first recorded in the 12th century but it is impossible to determine whether a church or a chapel was contemporary with the middle Saxon cemetery or the relationship of the cemetery to the palace complex.

HAR-4809. C408 **1140 ± 70**

Bone. $\delta^{13}C = -21.7‰$

HAR-4810. C410 **1260 ± 70**

Bone. $\delta^{13}C = -21.1‰$

HAR-4390. C315 **1360 ± 100**

Bone. $\delta^{13}C = -25.0‰$

Comment: although graves may not have been contemporaneous, results agree well with each other.

Black Lion Hill

Only two samples were measured from this site. HAR-5560 came from a timber building which may have been contemporary with the timber hall.

HAR-5560. A110/167 **1340 ± 80**

AML 831259, bone from building. $\delta^{13}C = -26.3‰$

HAR-5561. C15 **1180 ± 70**

AML 831258, bone from ditch. $\delta^{13}C = -22.8‰$

General Comment for Northampton series: Although unable to provide precise dates, the radiocarbon dates, when taken with other evidence, help establish a chronological framework for this important series of sites.

Briar Hill series

This series of 24 samples consists entirely of dates from excavations at the Neolithic enclosure, Briar Hill, Northampton, Northamptonshire (NGR SP 73625923). Samples were measured over

an eight-year period and coll 1974 to 1978 by Helen M Bamford, Northampton Development Corp. A full report on the site can be found in Bamford (1985). The Neolithic enclosure lies at a height of 75 to 85m AOD on the north-facing slope of Briar Hill. The enclosure covers ca 3ha and has two main ditch circuits, dug in concentric arcs. The excavation was a 'rescue' operation before housing construction, and was designed and conducted as a major research project into a site of considerable importance.

Neolithic Ditch Circuits

Fifteen charcoal samples were taken from ditch deposits and features cutting the fill of Neolithic ditches. These are subdivided into the three groups:

1. Primary Phase

HAR-2282. 77A(2) **5440 ± 110**

AML 777409, sample ref P76E8077. $\delta^{13}C = -24.4‰$

HAR-4072. 219 **5680 ± 70**

AML 794870, sample ref P76C2011, *Quercus* sp from mature timber. $\delta^{13}C = -26.5‰$

HAR-4092. 128E(4) **5540 ± 140** $\delta^{13}C = -24.2‰$

AML 794861, sample ref P76A6051, *Quercus* sp, *Prunus* sp, *Rosaceae* sub-family *Pomoideae* and *Fraxinus* sp, all from mature timber.

HAR-5216. 176A(1) **4365 ± 85**

AML 812930, sample ref P76C5241.

Comment: HAR-5216 clearly does not belong to the same distribution as the other three dates in this group, but there is no reason from the laboratory's side to reject the date. In fact, the result is the mean of two replicate measurements on the same sample.

The other three results agree well and, thus, provide a possible date for construction of the earthwork or, at least, a *terminus post quem* for this event.

2. Final Recut

HAR-3208. 52 **4600 ± 90**

AML 781604, sample ref P76D7083. $\delta^{13}C = -24.5‰$

HAR-4071. 199D(2) **4610 ± 90**

AML 794867, sample ref P76C3116, *Prunus* sp from mature timber. $\delta^{13}C = -26.10‰$

HAR-4075. 124E(3) **4660 ± 70**

AML 794865, sample ref P76A7185, *Prunus* sp from mature timber. $\delta^{13}C = -25.2‰$

HAR-5217. 248C(1) **4420 ± 90**

Sample ref P76A3021. $\delta^{13}C = -26.3‰$

Comment: HAR-4071, -4075 and -5217 came from layers in or just above primary fill levels. HAR-3208 came from a cremation which cut the primary infill. Results agree with each other and provide an approximate date for final recutting of the ditch system.

3. Later Neolithic Pits

HAR-2284. 337B **3460 ± 120**

AML 777412, sample ref P76E7041, repeated as HAR-2389. $\delta^{13}C = -25.2‰$

HAR-2389. 337B **3540 ± 90**

Sample ref P76E7041, repeat of HAR-2284. $\delta^{13}C = -25.6‰$

HAR-4067. 228A **3730 ± 70**

AML 794868, sample ref P76C325, *Quercus* sp from mature timber. $\delta^{13}C = -27.0‰$

HAR-4073. 303 **3790 ± 100**
$\delta^{13}C = -27.8‰$

AML 794863, sample ref P76C3503, identified as *Quercus* sp from mature timber.

HAR-4089. 258 **3620 ± 90**
$\delta^{13}C = -25.7‰$

AML 794869, sample ref P76C3335, identified as *Quercus* sp from mature timber.

Comment: These samples came from four Neolithic features which cut final fill layers of inner ditch segments. Results are consistent within themselves and with later Neolithic/early Bronze Age impressed wares and Beaker pottery found in association. HAR-2284 and -2389, which were replicate measurements, agree closely.

Intermediate Dates

HAR-4110. 251B(6) **3410 ± 100**

AML 794862, sample ref P76C3275. $\delta^{13}C = -27.3‰$

HAR-5125. 165B(1) **3900 ± 90**

AML 794860, sample ref P76D6095. $\delta^{13}C = -27.1‰$

HAR-5271. 176A(1) **4780 ± 120**

Sample ref P76C8330.

Comment: Of these three samples, only HAR-5271 fits with archaeologic expectation. At most, a time span of ca 500 years, during which the site was maintained, can be postulated, which would allow an interval of 220 years between major recutting phases.

Interior of Site

Eleven Neolithic features were found in the interior of the site of which five were dated.

4010 ± 90

HAR-2607. 145 $\delta^{13}C = -25.2‰$

AML 780607, sample ref P76B6060, oak, hazel/alder, *cf* blackthorn (*Prunus* sp), willow/poplar, mainly from branches or large timbers.

4290 ± 80

HAR-2625. 156 $\delta^{13}C = -30.4‰$

AML 780606, sample ref P76B7390, identified as oak from large timbers.

4250 ± 70

HAR-4057. 218 $\delta^{13}C = -27.7‰$

AML 794871, sample ref P76B5116, identified as *Quercus* sp from large timbers.

4080 ± 70

HAR-4066. 248B(3) $\delta^{13}C = -26.9‰$

AML 794866, sample ref P76A3020, identified as *Prunus* sp, *Rosaceae* sub-family *Pomoideae*.

4370 ± 80

HAR-4074. 137 $\delta^{13}C = -25.2‰$

AML 794872, sample ref P76B6047, identified as *Prunus* sp, *Quercus* sp and *Corylus/Alnus* sp mainly from mature timber.

Comment: Feature 145 (HAR-2607) was a small, rectilinear structure in the middle of the south half of the enclosure. Finds included later Neolithic Grooved ware. Features 156 and 218 (HAR-2625, -4057) were lobed pits composed of a sequence of four overlapping cuts. The results obtained agree very well and it can be assumed that these two and other pits in the sequence, which were not dated, were contemporaneous. The slow rate of silting can be observed by comparing Feature 248B(3) (HAR-4066), which came from ditch cutting upper fills, with 248C(2) (HAR-5217), which lay 0.3m lower in the fills. Feature 137 (HAR-4074) was 1 of 4 pits in the southwest part of the enclosure. It contained 49 worked flints.

Other Dates

Three other samples were dated from the Briar Hill site, 2 from a cremation cemetery, which lay on the southwest side of the enclosure and 1 from the latest feature on site, Saxon sunken-featured buildings.

Cremation Cemetery

This feature contained 29 small pits, some with bucket-shaped urns, which were intercut, suggesting a fairly long period of use.

3700 ± 150

HAR-4058. 240 $\delta^{13}C = -26.0‰$

AML 794875, sample ref P76B3001, cremation contained tanged arrowhead.

HAR-4065. 275 **3180 ± 70**

Sample ref P76B3168. $\delta^{13}C = -27.1‰$

Comment: HAR-4058 appears rather early; HAR-4065 fits better with results obtained from a similar group of cremations at Brampton Hall some 7km away. On archaeological grounds, the duration of the cemetery is likely to have been ca 200 years.

Saxon Sunken-Featured Buildings

This feature was located on the east side and, along with some pottery, is the only evidence for Saxon settlement.

HAR-2283. 29 **1700 ± 60**

$\delta^{13}C = -24.5‰$

AML 777411, sample ref P76C9025, from fill of early (?) Saxon sunken-featured building.

Comment: Feature 29 contained animal bone, pottery and metal work. The date obtained fits with those for other such features in the Northampton area.

General Comment for Briar Hill series: two semi-distinct periods of Neolithic use for the Briar Hill site can be deduced from excavation, but there are strong indications of continuity between the two which are reinforced by radiocarbon results. The history of the enclosure, therefore, spans a major part of the known Neolithic in Britain and implies that it was a structure of some importance to the local population. Works of analogous permanence in our society are churches and great public buildings.

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