[RADIOCARBON, VOL. 16, No. 2, 1974, P. 269-276]

BELFAST RADIOCARBON DATES VII

A G SMITH, G W PEARSON, and J R PILCHER
Palaeoecology Laboratory, Queen's University,
Belfast, Northern Ireland

INTRODUCTION

The dating equipment and operating conditions remain essentially as previously described. All samples are from Ireland unless specified.

ACKNOWLEDGMENTS

Pretreatments and routine operation of the dating apparatus have been carried out by Florence Qua and Annice Colville to whom we are much indebted. The Ministry of Finance for Northern Ireland continued to give financial support for the dating of samples relating to the work of the N Ireland Archaeological Survey. The Office of Public Works, Dublin, gave financial support for the dating of the Monknewtown samples.

I. ARCHAEOLOGIC SAMPLES

Monknewtown series, Co Meath

Charcoal from henge site and pit dwelling at Monknewtown, ENE of Slane, Co Meath (53° 30′ N, 6° 30′ W; Irish Grid Ref O 0076, alt ca 35m). Site excavated by P W Sweetman, Natl Parks and Monuments Branch, Office of Public Works, Dublin. Site produced abundant Beaker pottery and remains of a house. Coll 1971 by PWS. Subm 1972 by Office of Public Works, Dublin.

UB-728. Monknewtown, Sample V — **3810 ± 45** / **1860 BC** / $\delta^{13}C = -24.2‰$

Charcoal from young branches (*Quercus* and *Betula*) and some older wood (*Betula*), id by J Hillam, from around hearth of pit-house dwelling. *Comment* (PWS): on archaeologic grounds probably most reliable sample of series. Result as expected.

UB-729. Monknewtown, Sample VI — **2445 ± 40** / **495 BC** / $\delta^{13}C = -24.3‰$

Charcoal (*Corylus*), id by JH, from gray cultural layer stratified above gravel surface. *Comment* (PWS): date more recent than expected.

UB-730. Monknewtown, Sample VII — **2495 ± 70** / **545 BC** / $\delta^{13}C = -24.9‰$

Charcoal (*Corylus*), id by JH, from small hearth directly on gravels. *Comment* (PWS): sample was from primary cultural layer. Date is much too late.

UB-731. Monknewtown, Sample IX — **1130 ± 70** / **AD 820** / $\delta^{13}C = -24.9‰$

Charcoal including twigs of *Alnus,* id by JH, from 2 small hearths directly in gravels. *Comment* (PWS): sample was from primary cultural layer. Date is much too late.

UB-732. Monknewtown, Sample X — **4750 ± 65** / **2800 BC** / $\delta^{13}C = -25.2‰$

Charcoal including *Alnus,* id by JH, from small hearth directly in gravel. *Comment* (PWS): date somewhat older than expected.

UB-733. Monknewtown, Sample XI — **2440 ± 65** / **490 BC** / $\delta^{13}C = -25.6‰$

Charcoal including small branches of *Fraxinus,* id by JH, from small hearth directly on gravels. *Comment* (PWS): date much later than expected.

UB-734. Monknewtown, Sample XII — **3465 ± 80** / **1515 BC** / $\delta^{13}C = -24.7‰$

Charcoal including *Ulex,* id by JH, from small hearth directly on gravels. *Comment* (PWS): date as expected and agrees well with UB-728. *General Comments* (PWS): monument is a henge type which produced a Carrowkeel bowl containing a cremation, ca 11 pit burials, a miniature barrow and a Beaker pit dwelling containing ca 4000 sherds of Beaker pottery. All samples except UB-728 are from Burial area, N half of site. Dates for all samples from gravels (except UB-731) are ca 500 BC and may represent termination of activity on site. Still, dates seem rather late. (AGS, GWP, JRP): site was superficial and charcoal from different occupations may have become mixed without this being stratigraphically obvious to excavator.

Ballymacdermot Court Cairn series, Co Armagh

Samples from Neolithic Court Cairn in Ballymacdermot Td Co Armagh, 3.5km SW of Newry, Co Down (54° 9′ N, 6° 23′ W; Irish Grid Ref J 063238; alt ca 200m). Site excavated 1962 by A E P Collins and B C S Wilson. Coll and subm by AEPC. Ref: Collins and Wilson (1964).

UB-705. Ballymacdermot Cairn, Sample 2 — **3515 ± 85** / **1565 BC** / $\delta^{13}C = -24.4‰$

Charcoal from dark soil below stones blocking forecourt. *Comment*: comparable with previous date for same layer, UB-207: 3660 ± 60, R, 1970, v 12, p 292.

UB-698. Ballymacdermot Cairn, Sample 3 **4715 ± 190**
2765 BC
$\delta^{13}C = -24.0‰$

Charcoal from under fill of tightly packed granite blocks and on scattered flat slabs in Chamber 1 of gallery.

UB-694. Ballymacdermot Cairn, Sample 4 **4830 ± 95**
2880 BC
$\delta^{13}C = -25.1‰$

Charcoal from brown earth in N part of Chamber 3 of gallery together with charcoal from same layer containing Western Neolithic pottery under flat stone. *Comment*: could possibly date funerary use of gallery. See General Comment.

UB-695. Ballymacdermot Cairn, Sample 5 **4295 ± 90**
2345 BC
$\delta^{13}C = -25.7‰$

Charcoal from brown earth (Layer 8) in N part of W half of Chamber 3 of gallery. *Comment*: could date funerary use of gallery but possibly a mixture of charcoal of different ages. See General Comment.

UB-693. Ballymacdermot Cairn, Sample 6 **1180 ± 75**
AD 770
$\delta^{13}C = -25.7‰$

Charcoal from S end of Chamber 3 of gallery. Sample came from dark brown soil (Layer 8 of Collins and Wilson, 1964) which contained sherds of Western Neolithic pottery and a little burnt bone. *Comment*: charcoal is clearly not Neolithic.

UB-697. Ballymacdermot Cairn, Sample 7 **940 ± 75**
AD 1010
$\delta^{13}C = -25.6‰$

Charcoal from deposit under large stone in SW corner of Chamber 3 of gallery. *Comment*: thought by excavators to be from period of use of chamber. If charcoal is not a mixture, date shows that this use was in Viking, not Neolithic time. See General Comment.

UB-700. Ballymacdermot Cairn, Sample 8 **1025 ± 40**
AD 925
$\delta^{13}C = -25.2‰$

Charcoal from among stones and soil overlying pre-cairn soil in Cutting 9 through body of cairn (see Collins and Wilson, 1964, Figs 3 and 5). *Comment*: sample thought by excavators possibly to relate to construction of cairn. Date shows more likely origin is Viking activity on surface of cairn, the charcoal having been washed down between the cairn stones.

UB-703. Ballymacdermot Cairn, Sample 9 — **975 ± 70** / **AD 975** / $\delta^{13}C = -25.3‰$

Charcoal from among stones and soil overlying pre-cairn soil in Cutting 9. *Comment*: as for Sample 8 (UB-700).

UB-702. Ballymacdermot Cairn, Sample 10 — **6925 ± 95** / **4975 BC** / $\delta^{13}C = -25.1‰$

Charcoal from low levels in cracks between lowest cairn stones in Cutting 9. *Comment*: sample thought by excavators to be contemporaneous with construction of cairn. Date shows sample to be material of Mesolithic age, probably present in pre-cairn soil and incorporated in cairn during construction.

General Comment: UB-697, -700, -703 and possibly -693, are indistinguishable; they suggest that charcoal from Viking period activity has persisted intact and infiltrated into low levels of cairn from surface. UB-697 and -693, however, may have been protected by roof of burial gallery until AD 1816 and could be admixtures of Neolithic and modern charcoal. UB-698 and -694 which are indistinguishable, could date funerary use of burial gallery but this is not certain due to possible adulteration with modern charcoal, as may have occurred, eg, with UB-695. UB-705 agrees well with UB-207 (R, 1970, v 12, p 292) from similar stratigraphic position. Together these determinations suggest forecourt was left open after initial construction of cairn. For further discussion see Smith, Pearson, and Collins (in press).

II. PALAEOECOLOGIC SAMPLES

Sluggan bog monolith series, Co Antrim

Further samples from Sluggan bog, Ballylurgan Td, 2.4km NE of Randalstown, Co Antrim (54° 46′ N, 6° 18′ W; Irish Grid Ref J 009921; alt 52m). Samples taken to amplify changes of deposition rate indicated by previous series, R, 1971, v 13, p 454-456.

UB-748. Sluggan monolith, 100 to 104cm — **2130 ± 45** / **180 BC** / $\delta^{13}C = -25.0‰$

Sphagnum peat from 100 to 104cm depth. Acid pretreatment.

UB-749. Sluggan monolith, 330 to 334cm — **7855 ± 115** / **5905 BC** / $\delta^{13}C = -25.9‰$

Particulate fraction of mossy reedswamp peat from 330 to 334cm depth. At beginning of increase of pine pollen.

III. TIMBER SAMPLES

Samples from sub-fossil and other timbers taken to aid construction of floating tree-ring chronologies.

UB-745. Allistragh, Bog Oak 453

2080 ± 30
130 BC
$\delta^{13}C = -24.2‰$

Bog oak from pit dug into bank of R Callan at Allistragh Td 4.8km N of Armagh, Co Armagh (54° 20′ N, 6° 40′ W; Irish Grid Ref H 866494; alt 30m). Sample from yr 47 to 66 of 163-yr-old tree. See also UB-618 (R, 1973, v 15, p 225).

UB-744. Roddans Port, Bog Oak 922

7640 ± 70
5690 BC
$\delta^{13}C = -24.1‰$

Bog oak weathered out of submerged peat bed on shore at Roddans Port, 3km S of Ballywalter, Co Down (54° 31′ N, 5° 28′ W; Irish Grid Ref J 640658, alt ca high tide level). Sample from yr 65 to 84 of 242-yr-old tree. See also R, 1971, v 13, p 463 for geochemical samples from this site.

Teeshan series, Co Antrim

Oak wood from crannog (lake dwelling) in Teeshan Td 150m E of Teeshan Primary School, Co Antrim (54° 54′ 30″ N, 6° 19′ W; Irish Grid Ref D 083078, alt 100m). See also UB-266 (R, 1971, v 13, p 125).

UB-742. Teeshan, No. 1

1495 ± 35
AD 455
$\delta^{13}C = -24.4‰$

Sample from yr 225 to 244 of 250-yr-old tree.

UB-743. Teeshan, No. 273

1605 ± 30
AD 345
$\delta^{13}C = -23.1‰$

Sample from yr 20 to 39 of 271-yr-old tree.

UB-747. Stranmillis, Bog Oak 930

7815 ± 50
5865 BC
$\delta^{13}C = -23.8‰$

Prostrate oak trunk from estuarine clay by Stranmillis Embankment, Belfast (54° 35′ N, 5° 55′ W; Irish Grid Ref J 339732; alt ca −2.0m). Found in excavation near entry of R Blackstaff diversion into R Lagan in clay under marine shelly layers at depth of 3.3m. Sample from yr 28 to 47 of 189-yr-old tree.

UB-746. Derrykeeran, Bog Oak 69

6340 ± 40
4390 BC
$\delta^{13}C = -23.8‰$

Bog oak from Derrykeeran Td 5km N of Portadown, Co Armagh (54° 28′ N, 6° 27′ W; Irish Grid Ref J 003590; alt ca 20m). Sample from yr 143 to 152 of 169-yr-old tree. See also UB-598 (R, 1973, v 15, p 228) for other sample from site.

Cullyhanna Bog Oak series

Fossil oaks weathered out of lake muds at margin of Cullyhanna Lake 5km N of Crossmaglen, Co Armagh (54° 7′ N, 6° 36′ 30″ W; Irish Grid Ref H 915198; alt 105m). See also UB-342 (R, 1971, v 13, p 462) and UB-682-3 (R, 1973, v 15, p 608).

UB-762. Cullyhanna, Bog Oak 481 — **5435 ± 40**, **3485 BC**, $\delta^{13}C = -24.0‰$

Sample from yr 61 to 75 of 204-yr-old tree.

UB-763. Cullyhanna, Bog Oak 492 — **5385 ± 40**, **3435 BC**, $\delta^{13}C = -23.2‰$

Sample from yr 153 to 173 of 179-yr-old tree.

UB-764. Cullyhanna, Bog Oak 497 — **5705 ± 40**, **3755 BC**, $\delta^{13}C = -23.5‰$

Sample from yr 113 to 133 of 218-yr-old tree.

UB-765. Cullyhanna, Bog Oak 479 — **3655 ± 35**, **1705 BC**, $\delta^{13}C = -24.0‰$

Sample from yr 53 to 73 of 175-yr-old tree.

UB-766. Cullyhanna, Bog Oak 501 — **5855 ± 35**, **3905 BC**, $\delta^{13}C = -22.9‰$

Sample from yr 46 to 66 of 100-yr-old tree.

Lough Macnean series, Co Fermanagh

Bog oaks from Lough Macnean Lower, 12.5km WSW of Enniskillen, Co Fermanagh (54° 17′ N, 7° 49′ W; Irish Grid Ref H 121376; alt ca 65m). Mostly from below normal water level of lake. See also UB-679, -680 (R, 1973, v 15, p 607).

UB-759. Lough Macnean, Bog Oak 861 — **2405 ± 35**, **455 BC**, $\delta^{13}C = -24.2‰$

Sample from yr 128 to 148 of 212-yr-old tree.

UB-760. Lough Macnean, Bog Oak 864 — **2165 ± 35**, **215 BC**, $\delta^{13}C = -24.1‰$

Sample from yr 68 to 88 of 243-yr-old tree.

UB-761. Lough Macnean, Bog Oak 862 — **3725 ± 40**, **1775 BC**, $\delta^{13}C = -24.4‰$

Sample from yr 108 to 127 of 202-yr-old tree.

Balloo Cottage series, Co Down

Additional timbers of bog oak from saddler's cottage in Balloo Td, 19km SE of Belfast, Co Down (54° 28′ N, 6° 34′ W; Irish Grid Ref J 486607; alt 50m). See also UB-620 (R, 1973, v 15, p 226).

UB-756. Balloo Cottage, Bog Oak 814 — **2340 ± 30**, **390 BC**, $\delta^{13}C = -23.4‰$

Sample from yr 70 to 90 of 167-yr-old beam.

UB-757. Balloo Cottage, Bog Oak 816 — **1510 ± 30**, **AD 440**, $\delta^{13}C = -23.6‰$

Sample from yr 127 to 147 of 171-yr-old beam.

IV. GEOLOGIC SAMPLES

UB-750. Toome Bay stump — **8000 ± 45**, **6050 BC**, $\delta^{13}C = -25.4‰$

Outer part of trunk of tree stump (*Salix*), id by JH, submerged in Lough Neagh ca 30m from present shore at Toome Bay (53° 44′ N, 6° 29′ W; Irish Grid Ref C 980902). Coll 1969 by AGS. *Comment*: stump was apparently *in situ* and roots were ca 50cm below lake level which has been recently artificially lowered. Date confirms period of relatively low water level in Boreal times, deduced by Jessen (1949). Date is similar to that for Mesolithic layer in nearby reedswamp deposit (Mitchell, 1955) 7680 ± 110 (Y-95) or 7880 ± 110 with allowance for Suess effect (*cf* Godwin, 1960).

UB-689. Cushendun, Lower Lagoon silt — **7395 ± 65**, **5445 BC**, $\delta^{13}C = -27.0‰$

Wood from upper part of lower lagoon silt at Cushendun, Co Antrim (55° 8′ N, 6° 3′ W; Irish Grid Ref D 248325; alt ca 2.4m). Coll 1934 probably by HL Movius; subm 1972 by PC Woodman from collns of Ulster Mus, Belfast. *Comment*: site excavated 1934 by Harvard Archaeol expedition (Movius, 1940). Pollen analysis by Jessen (1949) shows Lower Lagoon silt belongs to Pollen Zone VIb. Result shows marine transgression indicated by nature of sediment started before ca 7400 BP. Result may be compared with LJ-903: 6550 ± 300 (R, 1965, v 7, p 83) which dates transgression contact at ca +3.0m inland in Co Down (Singh and Smith, 1966; 1973).

REFERENCES

Collins, A E P and Wilson, B C S, 1964, The excavation of a court cairn at Ballymacdermot, Co Armagh: Ulster Jour Archaeol, v 27, p 3-22.

Godwin, Harry, 1960, Radiocarbon dating and Quaternary history in Britain: Royal Soc [London] Proc, ser B, v 153, p 287-320.

Jessen, Knud, 1949, Studies in late Quaternary deposits and flora-history of Ireland: Royal Irish Acad Proc, v 52, sec B, p 85-290.

Mitchell, G F, 1955, The Mesolithic site at Toome Bay, Co Londonderry: Ulster Jour Archaeol, v 18, p 1-16.

Movius, H L, 1940, An early post-glacial archaeological site at Cushendun, Co Antrim: Royal Irish Acad Proc, v 46, sec C, p 1-84.

Singh, G and Smith, A G, 1966, The post-glacial marine transgression in N Ireland—conclusions from estuarine and 'raised beach' deposits: a contrast: Palaeobotanist, v 15, p 230-234.

———— 1973, Post-glacial vegetational history and relative land and sea-level changes in Lecale, Co Down: Royal Irish Acad Proc, v 73, ser B, p 1-51.

Smith, A G, Pearson, G W, and Collins, A E P, Are ten radiocarbon dates no radiocarbon date?: Antiquity (in press).