

## **Introduction**

Seán P. Ó Ríordáin began a campaign of excavations in Lough Gur in 1936 when he started work at Circles O and P (Ó Ríordáin 1937). Apart from 1952–3, this work continued until his death in 1954. Ó Ríordáin's investigations were the first scientific excavations at Lough Gur and were on a broad range of sites including fifteen Neolithic and Bronze Age sites on Knockadoon, nine of which were published in the *Proceedings of the Royal Irish Academy* (1954) and a further six were published posthumously by Grogan and Eogan (1987). Ó Ríordáin's excavations on Knockadoon were undertaken prior to radiocarbon dating and a programme of excavation began in 1986 to address the issue of dating prehistoric settlement at Lough Gur (Cleary 1995; 2003). Ó Ríordáin based much of his dating of sites on artefacts, particularly pottery and the sequence produced a chronology for settlement which was not fixed in real time. Pottery typologies have been the lynch-pin of dating settlement sequences uncovered on older excavations at Lough Gur and evidence from elsewhere can be used to update typological sequences and dating but the information is not specific to the Lough Gur ceramic sequences.

The development of AMS dating has allowed the use of small samples which may be used to reverse the dearth of secure dating from artefacts particularly pottery from Lough Gur. AMS dating was used on organic residues from Grooved Ware recovered on Ó Ríordáin's 1939 excavation at the Great Stone Circle at Grange (Ó Ríordáin 1951; Cleary 2015). Three dates from residues preserved on Grooved Ware pottery recovered during the 1939 excavation returned determinations extending from 3020–2680 BC. A review of the radiocarbon evidence provided a construction phase for the bank in the period 2950–2850 BC.

## **Results of 2018 Dating Programme**

Funding for three samples was received under the Royal Irish Academy Radiocarbon Dates Scheme. The samples were taken from pottery from Site C (1940). The pottery sequence at Site C was studied by Ó Ríordáin and M. J. O'Kelly (Ó Ríordáin 1954, 342) and examined relative to the depth at which it was found. The pottery was divided into three types – Class I, Ia and Class II. Ó Ríordáin (1954, 326–333) concluded that Class I and Ia were in use at the beginning of Site C occupation and gradually replaced by Class II. Modern excavations elsewhere in Ireland and radiocarbon dating has confirmed that Class I and Ia may be dated to the early/middle Neolithic (3800/3700–3300 BC). Class I and Ia were large round-bottomed

bowls with rim diameters of up to 28cm, estimated heights of 20–22cm. Class I pottery was distinguished from Class Ia where expanded rims were decorated with incised lines. Class II pottery from Lough Gur is now firmly placed in the Bronze Age (Cleary 2003).

Date from Site C (1940) Museum Number E275:1092

The pottery was recovered from the old ground level (NEQ 13 & 16) and identified as Class Ia, Lough Gur.

**UBA-38827** Radiocarbon Age BP 5560±67; 4679–4358 Cal. BC (2 sigma)

Date from Site C (1940) Museum Number E275:1004

The pottery was recovered from a habitation layer (NEQ 13 & 16) and identified as Class II, Lough Gur. The vessel has a row of perforations below the rim.

**UBA-38826** Radiocarbon Age BP 2580±38; 818–552 Cal. BC (2 sigma)

Date from Site C (1940) Museum Number E275:1082

The pottery was recovered from a habitation layer (NEQ 39; no depth) and identified as Class II, Lough Gur. The pottery is decorated with impressed cord motifs on the vessel wall.

**UBA-38828** Radiocarbon Age BP 2922±32; 1214–1018 Cal. BC (2 sigma)

Review of dates

Class Ia (E275:1092) UBA-38827 – 4679–4358 Cal. BC (2 sigma)

The date returned is early for the Irish Neolithic and will need to be supported by further dating of similar pottery (Class Ia). There are problems attendant with this single date as the vessel may have been in contact with old wood (oak) which had been used as a structural timber and contaminated the residue from the vessel rim. There is also the contaminant of carbon within clay which can result in dates that are too old.

Class II (E275:1004) UBA-38826 – 818–552 Cal. BC (2 sigma)

Pottery with perforations below the rim has been recovered from Tinoran Hillfort, Co. Wicklow and dated from a residue to 1214–1001 BC (O'Brien and O'Driscoll 2018, fig.

6.72). Perforations below the rim were also recorded on vessels from late Bronze Age layers on the hillforts at Rathgall and Freestone Hill Co. Wicklow (Grogan and Roche 2010, 41) and from Navan Fort, Co. Armagh (McCorry 1997). The Rathgall pottery has a date range of 1381–931 BC and a radiocarbon date of 1260–1045 BC was returned from a residue on a vessel and provides a closer date span for this type of pottery. The pottery date from Site C (1940) is later than perforated pottery from the hillfort sites and appears to continue into what can be considered Early Iron Age.

Class II (E275: 1082) UBA-38828 1214–1018 Cal. BC (2 sigma)

Decorated flat-based pottery is now confirmed as Bronze Age (contra Grogan and Eogan 1987) and a series of radiocarbon dates from excavations on Knockadoon have produced a timeframe of *c.* 1600–800 BC for the period of use (Cleary 1995; 2003). The new date from a residue on the pottery confirms the dates of a layer on Site C (1940) and will enable a better understanding of the settlement sequence.

## References

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