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A Late Bronze Age field system and settlement on the Antrim Plateau: preliminary results

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Upland landscapes were challenging environments for the settlement and subsistence of past communities because of their elevation and environmental sensitivity. These challenges have, however, contributed to the preservation of abundant archaeological remains, many of which are now wholly or partially covered by blanket peat. In this paper we report the results of some initial investigations into relict field and settlement evidence on the Antrim Plateau. The use of airborne laser scanning and orthoimagery, including that from an infrared band which recorded landscape features outside the visible spectrum, has enabled the identification and mapping of a series of stock enclosures, round houses and field walls in the area. A ground survey carried out over a period of six years has allowed these to be recorded in detail. Excavation and radiocarbon dating of one of the field walls and one round house suggest that they were both constructed in the Late Bronze Age. Previous palaeoenvironmental evidence showed that the plateau supported extensive woodland, but that localised clearance took place in the vicinity of the fields. Pollen evidence suggested that the fields were used primarily for pasture rather than arable agriculture.

INTRODUCTION

Ploughing and land improvement, particularly over the last 250 years, have had a major impact on the lowland landscape of Ireland. It is in the uplands that the best evidence survives of earlier landscapes of prehistoric and historic date, though some of these areas are too high and the soils too poor ever to have been used for settlement. The lower parts of the uplands, above the limits of recent cultivation, are the locations at which remains are mostly likely to be preserved. A number of surveys have shown that in such locations it is possible to identify extensive prehistoric and later landscapes. One of the most notable examples of such work was the survey conducted by William O'Brien (2009) on the Beara Peninsula in Counties Cork and Kerry, in which he was able to identify traces of prehistoric walls, enclosures and buildings. At the opposite corner of Ireland, in the north-east, work on the Antrim Plateau has similarly located extensive remains. Late-medieval and early modern settlements and boundaries there were examined in an earlier study (Gardiner 2018). The present paper seeks to draw attention to the evidence for prehistoric remains in the blocks of land between Glencloy to the south-east and Glenariff to the north-west (Fig. 1).

The potential of this area of the Antrim Plateau has been known for some years and it has been the subject of study by a number of Belfast-based archaeologists. Peter Woodman, who was brought up in the area, first identified its potential and, in the early 1980s, began to record remains (Woodman 1983). He later excavated the Middle and Late Neolithic site which became known as Windy Ridge, named after its bleak setting (Woodman *et al.* 1991/2). Meanwhile, Fred Hamond excavated the nearby early medieval enclosure of Lough na Trosk, revealing traces of a series of huts (Manning and Hurl 1989/90, 68, No. 13). A further Neolithic site at Nappan was excavated by Alison Sheridan (1986). On the slopes of the Antrim Plateau at Gortin, Jim Mallory and a group of Queen's University Belfast students examined an oval-

shaped building which was not dated but can now be recognised as late medieval (Gardiner 2010).

The particular importance of the area lay not only in the individual sites, but also in the fact that these were set in a more extensive ancient landscape with field walls and enclosures. Preliminary work recording these was undertaken by Barrie Hartwell (Queen's University Belfast) and sorties were made to take aerial photographs of the area. The dates of the field walls remained uncertain until Elizabeth Francis (1987) undertook a doctoral study on the environment of the plateau. She obtained a radiocarbon date from the peat immediately under the stones of one of the walls (Galboly Lower — GLWS1: UB-2792, 2750±75 BP, 1110–790 cal BC), which suggested that it was constructed in the Late Bronze Age. A further radiocarbon date from under a second wall 4.3km to the south-west at Lough na Trosk also pointed to the Late Bronze Age (LNTWS2: UB-2760, 2825±55 BP, 1190–830 cal BC). Peat lay immediately under Francis's wall and had also formed above it. Consequently, the course of these and a number of other prehistoric walls could not be readily traced in their entirety. Indeed, although many lengths of wall have now been surveyed, reconstructing a complete pattern remains a difficult task using conventional field-based methods.

RECENT WORK

Our initial ground survey, carried out from 2010 to 2015, suggested that there was a multi-period landscape of some complexity with good surviving features marked by lines of stones and earthworks still visible across the landscape. This survey was subsequently augmented by airborne laser scanning (ALS) and/or LiDAR data. That technique has been widely and effectively used on the island of Ireland in recent decades to identify archaeological sites and features (examples include Shell and Roughley 2004, Megarry and Davis 2013 and McNeary 2014). In 2014, the Historic Environment Division of the Department for Communities commissioned an ALS survey of Garron Point, at the north-east end of the Antrim Plateau. This survey covered an area of roughly 4km² at a 0.2m resolution. To aid the interpretation of the data, a number of visualisation techniques, including multi-directional hill shading and a sky-view factor were applied to the digital terrain model (DTM) to emphasise linear topological features. Ordnance Survey of Northern Ireland orthoimagery was also used, including an infrared band captured at 0.4m resolution. These surfaces were used to undertake a remote survey of relict field systems (Fig. 2). All features were digitised, typologically characterised (Fig. 3) and, where there was field evidence for stratigraphy, placed in sequence.

Using this approach, we can now see that the dated wall examined by Francis (1987) was part of a larger pattern of parallel boundaries (Fig. 3, Phase 1) that ran at right angles from the eastern plateau edge into the interior. Some of these walls were joined by looping ends, showing that they were part of a contemporary system of divisions, but others seem unrelated and perhaps of a different phase. It is possible to infer that a number of walls elsewhere on the plateau may be contemporary. For example, a block of land between two streams — Ardclinis Burn and Crearlagh Burn — in the townland of Fallowvee is divided into three equal parts by two parallel walls, which run for at least 800m until all trace of them is lost in the bog (Fig. 4). An even more extraordinary wall runs from near the edge of the plateau above Drumnasole for a distance of 1.8km, down a deeply incised valley and up the other side, disappearing beneath the bog in some places (Fig. 1). Its destination was the hilltop known as Craigatinnel or Turnly's Seat. On top of the hill is a nineteenth-century structure from which the hill takes the second of these names, but that sits upon an earlier, presumably prehistoric, cairn.

Two types of wall can therefore be identified. The shorter walls are situated towards the plateau edge and enclose the better soils. These are often looped at their distal ends so that they form complete, albeit elongated, fields. The examples at Nappan and Galboly Lower have

been illustrated above (Fig. 3). The second are the longer walls, which are part of a pattern of major land divisions rather than a field system. These extend much further into the heart of the plateau, but, because they run through areas of blanket bog, they can rarely be adequately traced to their ends. Examples of these are at Fallowvee and Drumnasole (Figs 1, 4).

Scattered amongst the many field walls are a number of round houses, some of which are mapped in Figs 2 and 3. Most of these seem to be set on their own, but some have associated small, rounded enclosures, such as one below Little Trosk Mountain (Fig. 5). The wall of the round house is marked by a circle of stones with a diameter of about 5m and it is integrated into a small enclosure. The entrance to the house may lie to the south-east, where there is a slight gap in the ring of stones. However, the absence of a clear stratigraphic relationship between the round houses and the field walls that lie in the vicinity makes it impossible to determine whether they are contemporary.

In addition to the small enclosures, there are much larger structures which are often situated at the head of routes down to the lowland. The position of these can be inferred from the topography and later trackways. To the east and north-east of the enclosure above Ardclinis are a series of round houses (not visible on Fig. 6B) and a single round house lies at the centre of a further enclosure lying a little to its south (Fig. 6D). Only the enclosure in Bay does not seem to have associated round houses (Fig. 6C). Perhaps the most impressive enclosure lies at the head of Glenariff, with a view down into the glen and the sea beyond (Fig. 7, No. 60). It is situated on a sharp slope near the junction of two streams — Cloghcor Stream and Collin Burn. It is a complex structure which has been enlarged on at least one occasion and has walls up to a metre wide, representing a substantial investment of labour in its construction. Two round houses lie within the enclosure (Fig. 7, Nos 70, 94) and others can be identified on the adjoining slopes. The purpose of the enclosure may have been to corral livestock, either on their way up on to the plateau or on their way down to the lowland. There are traces of surviving field walls nearby. A number of short lengths of wall can be found at the head of the glen, but they cannot be traced for any distance as they disappear into the bog. One short length is marked by two low orthostats apparently marking the entrance into a field.

One of the major problems for all upland surveys is to determine the dates of the remains. Finds are often sparse and, unless there is a direct stratigraphic connection between the earthworks, it is difficult even to place the remains in a relative chronological relationship. In order to clarify the dating of some of the remains at the head of Glenariff, we excavated a small section, one metre wide, through the wall of one of the round houses at Cloghcor (Fig. 7). The house is set on a slight platform in an area of pasture with a probable entrance on the downhill side, facing east. The aim was to locate and sample the buried soil beneath the wall. Radiocarbon-dated samples taken from the top of buried soils can provide useful dates for construction, although there is always a risk that the results may be affected by residual organic matter. In the event, although the stones from the wall of the round house could be clearly identified during excavation and in the section, the buried soil was much more difficult to distinguish. The round house had been built over a layer of soil containing numerous fragments of charcoal and burnt clay. Three bulk soil samples were taken from the top of this layer and the charcoal was subsequently extracted using flotation. Amongst the charcoal, mixed species of wood were identifiable, including willow, hazel and ash. Short-lived single-entity samples were selected and two pieces of hazelnut shell as well as one fragment of ashwood were submitted for radiocarbon determination in the ¹⁴CHRONO laboratory at Queen's University Belfast.

Soil sample	Lab code	Material	¹⁴ C age	Calibrated age range (2σ)
3	UBA-39209	Charred ashwood	2894±28 BP	1200–990 cal BC
3	UBA-39210	Charred hazelnut fragment	2884±32 BP	1200–940 cal BC
2	UBA-39211	Charred hazelnut fragment	6248±32 BP	5310–5077 cal BC

Table 1: Dated material from Cloghcor.

The dates from two of the pieces of carbonised material (UBA-39209 and UBA-39210), both from Sample 3, taken from beneath a large stone that formed part of the wall of the hut, are effectively identical and, when calibrated, date to the Late Bronze Age (Table 1). The third, taken from Sample 2, which was taken from a spread of charcoal which was found not only beneath the wall, is considerably earlier, dating to the Mesolithic, and presumably derives from residual material within the soil. Sample 3 does not date the hut circle, but provides a *terminus post quem* for its construction. However, the absence of any deposit between the stone structure and the charcoal might suggest that the latter immediately preceded the former. This is not a certainty, however, since the episode of burning could have taken place any time before the construction of the house, with the land subsequently stripped to form a surface for building. Nevertheless, it adds a further piece of evidence that points towards extensive Bronze Age activity on the Antrim Plateau.

On the basis of the pollen studies undertaken by Francis (1987), we can contextualise the later prehistoric activity in the Antrim uplands. For much of the post-glacial period, the landscape evidently supported extensive woodland, comprising in the later prehistoric period mainly oak, hazel, alder and birch, with elm, ash and willow also present. The canopy was first disturbed during the Neolithic period and areas of heath began to develop from the Late Neolithic or Early Bronze Age. Woodland continued to decline through the Bronze Age, but nevertheless remained a dominant feature of the general area. More substantial evidence for land clearance can be seen in the proximity of the Late Bronze Age field systems at Lough na Trosk and Francis’s site at Galboly. There, low representations of arable indicators suggests that the fields were used primarily for pastoral activity. Occupation persisted for several centuries before abandonment enabled woodland to reestablish itself. Further signs of human activity can again be seen from during the Iron Age. Data are lacking for later periods.

CONCLUSION

The existence of late-medieval and early modern fields was demonstrated in previous papers (Gardiner 2012; 2018). This study demonstrates, based on new radiocarbon dates, that there are, in addition, remains from the Late Bronze Age and that these features may be more extensive than previously thought. The survival of such large areas of landscape with archaeological remains is no doubt due to the difficulties of accessing the plateau with machinery to improve the pasture, which has ensured very little recent disturbance. This study also illustrates the efficacy of remote sensing techniques and imagery (specifically ALS and Ordnance Survey of Northern Ireland four-band red, green, blue and infrared orthoimagery) in these marginal landscapes. As part of an integrated fieldwork strategy where excavation is used to refine the chronology of remote observations, there is considerable potential for further fieldwork to date more definitely the extensive remains on the plateau.

NOTE

All radiocarbon dates above were calibrated using Calib 7.1.0 (Stuiver and Reimer 1993) and the INTCAL13 calibration curve (Reimer *et al.* 2013).

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- Fig. 1—Relief of the Antrim Plateau between Glencloy and Glenariff, with key sites mentioned in the text. Relief mapping used with the permission of the Controller of Her Majesty's Stationery Office, © crown copyright and database rights MOU203.
- Fig. 2—Multidirectional hillshade model (top) and infrared-green-blue orthoimagery (bottom) of landscape features in Nappan townland, Co. Antrim. Orthoimagery is reproduced from Land and Property Services data with the permission of the Controller of Her Majesty's Stationery Office, © crown copyright and database rights MOU203. ALS imagery is used under Open Government Licence v3.0.
- Fig. 3—Orthoimage of Nappan and Galboly Lower townlands, Co. Antrim, showing field systems, hut sites and the location of Elizabeth Francis's radiocarbon-dated field wall, GLWS1. Orthoimagery is reproduced from Land and Property Services data with the permission of the Controller of Her Majesty's Stationery Office, © crown copyright and database rights MOU203.
- Fig. 4—The archaeological features on the Antrim Plateau above Fallowvee. The purple lines mark probable prehistoric walls (Survey Nos 702, 304/703) that extend for a considerable distance to the south and divide the promontory into three areas.
- Fig. 5—Enclosure and integrated round house on the slope below Little Trosk, looking towards the south-east. The sheep seated amongst the remains provide a scale. Photo: Peter Woodman.
- Fig. 6—Larger enclosures and round houses in Ardclinis and Carrivemurphy townlands, Co. Antrim. Orthoimagery is reproduced from Land and Property Services data with the permission of the Controller of Her Majesty's Stationery Office, © crown copyright and database rights MOU203.
- Fig. 7—The archaeological features (with survey numbers) at the south-west end of Glenariff.