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The Bruff Aerial Photographic Survey

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Introduction

The Bruff Aerial Photographic Survey was initiated in 1986 by the Office of Public Works and the Department of Archaeology, U.C.C. The aim of the project was to assess the potential of medium altitude vertical aerial stereo photographs for the recording of hitherto unknown archaeological sites. The area chosen for study was flown under ideal weather conditions at a height of 10,000 ft. (1:10,000 scale).

The photographs were taken so that each frame has a 60% overlap with the subsequent photograph. The prints were then viewed through a stereoscope at varying magnifications. The resulting 3-dimensional effect greatly enhances low relief features such as weathered earthworks, thus making them more visible.

The Study Area

The survey covered a 70 sq. km. area roughly centered on Herbertstown, co. Limerick. It extended from Caherconlish to the north, to Knocklong in the south and from Bruff eastwards to Emly. Although the survey extends only slightly into co. Tipperary, it covered an area corresponding to parts of Ordnance Survey 6" scale sheets for co. Tipperary 57, 58, 65 and 66.

The area was chosen for 2 main reasons:

1. It was of known archaeological importance, incorporating as it does the Lough Gur region. A previous survey by O'Kelly in the early 1940s documented some 800 sites in a relatively small area in the region (O'Kelly 1942).
2. Farming in the area is largely pasture. It has consequently avoided much of the destruction of archaeological sites associated with farm modernization in tillage areas in recent decades. The result is the preservation of a largely, or at least relatively, undisturbed archaeological landscape.

Results

This type of aerial reconnaissance proved to be very effective in recording hitherto unknown archaeological sites. Several hundred new sites were recorded, increasing the number of archaeological sites by up to 200% in some areas. The 1:10,000 scale proved particularly effective for discovering smaller sites such as the mainly Bronze Age ring barrows or burial sites with diameters of less than 10 metres, which are largely undetectable using 30,000 ft. Geological Survey of Ireland photographs. The survey was especially effective for outlining extensive landscape features such as field systems.

The 2nd edition Ordnance Survey maps for the area of co. Tipperary covered by this survey record 107 archaeological sites. These are mostly earthworks of ringfort size with some smaller mounds. Following on the present study, 79 sites have been added to the archaeological record in the area. This represents an increase of almost 74%; of these 42 were earthwork enclosures, ring barrows being the most common site type identified. There were 20 recorded instances of



single barrows, 4 of pairs of barrows and 3 barrow cemeteries of 3 or more barrows. The remaining sites were field systems, trackways, and stone features — possibly buried walls, houses, etc.

Discussion

The greatly increased visibility of ring barrows resulting from this survey has significant implications for archaeology in general and for settlement archaeology in the later prehistoric period in particular. Prehistoric settlement sites are under-represented in the Irish archaeological record. This is largely so because until recently there was a lack of a concerted programme of research aimed at locating them. What sites are on record have to a large degree emerged as a result of extensive earth moving operations such as the construction of the Natural Gas pipelines in the early 1980s (Cleary et al 1987, and Gowan 1988).

The limited body of evidence on record suggests that enclosed sites were common and that a wide variety of site types existed. At Ballyveelish 2 Co. Tipperary, a ditched sub-rectangular enclosure without a bank was dated to the Later Bronze Age (Doody 1987 and 1991). Sites enclosed by stone walls are known from Aughinish, Co. Limerick (Kelly 1974) and Carrigillihy, Co. Cork (O'Kelly 1951), while simple palisade enclosures such as that at Curraghatoor, Co. Tipperary (Doody 1987 and forthcoming) may be far more common than the present evidence suggests.

The increased incidence of barrow complexes resulting from the present study is likely to be significant in terms of the broader settlement evidence, as the associated habitation sites are likely to be located closeby. Ring barrows have a broad date range and are known from the Neolithic to the Iron Age. Barrow excavations during the construction of the Limerick-Waterford Gas Pipeline (Gowan 1988) have produced dates in the Middle Bronze Age. It seems likely that a study of enclosures close to barrow complexes, especially those similar to that at Ballyveelish 2, may prove rewarding in terms of Bronze Age Settlement.

This approach is currently being pursued by the Ballyhoura Hills Project, which is part of the Discovery Programme — a government-sponsored programme of research into aspects of the Later Bronze Age/Iron Age in Ireland. Drawing heavily on the results of recent archaeological survey, the Ballyhoura Hills Project is undertaking an intensive survey of potential settlement sites in south Limerick, west Tipperary and north Cork, using the most up to date geophysical and topographical surveying techniques followed by trial excavation.

Based on the Bruff Survey, four enclosures were chosen for study. These were located at Baggotstown near Bruff, co. Limerick, and at Lattin (plate 5) Ballyrobbin (plate 2) and Chancellorsland (plate 8) in co. Tipperary. All excluding Baggotstown were located close to barrow cemeteries. Trial excavation took place at Chancellorsland, where two habitation sites were associated with at least 4 ring barrows. Middle to Later Bronze Age dates have been processed for the oval double ditched enclosure at Site A (Plate 8). Further work in this complex will endeavour to establish more firmly the chronological relationship between the ring barrow cemetery and the domestic sites.

Conclusion

The Bruff Survey has clearly demonstrated the value of 1:10,000 scale aerial reconnaissance in recording a variety of archaeological sites. It is a very cost-effective survey technique, which quickly and efficiently illustrates the archaeological landscape and which is particularly effective for pinpointing new sites, increasing our knowledge of known sites and for documenting site destruction.



Acknowledgements

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Plate 1 Ballynacree. OS sheet 58, 85 51, Photograph ref. 2029.
Possible ringfort, diameter 30 metres, adjacent to stream. L-shaped earthwork with rounded corners may be contemporary. Arrow denotes ring barrow.



Plate 2 Ballyrobbin. *OS sheet 58, 235 92. Photograph ref. 2030.*
Rectangular and circular platforms, both with ring barrows. Circular example partly destroyed.
Subject of detailed topographic and geophysical survey by the Discovery Programme.



Plate 3 Ballynacree. *OS sheet 58, 156 73. Photograph ref. 2030.*
Henge monument with two outlying ring barrows to the south-west.



Plate 4 Killeenagallive. *OS sheet 57, 765 230. Photograph ref. 3616.*
Bivallate earthwork, diameter 80 metres. The outer bank and ditch are not recorded on the ordnance survey map. Second bivallate enclosure 150 metres to the south-east.



Plate 5 Lattin North. *OS sheet 66, 270 472. Photograph ref. 2037.*
Sub-rectangular enclosure, largely destroyed. Measurements 80 metres \times 60 metres. Barrow cemetery in the same field. Subject of detailed survey by the Discovery Programme.



Plate 6 Moanmore. *OS sheet 66, 35 190. Photograph ref. 2090.*
Barrow cemetery, including two ring barrows on platforms.

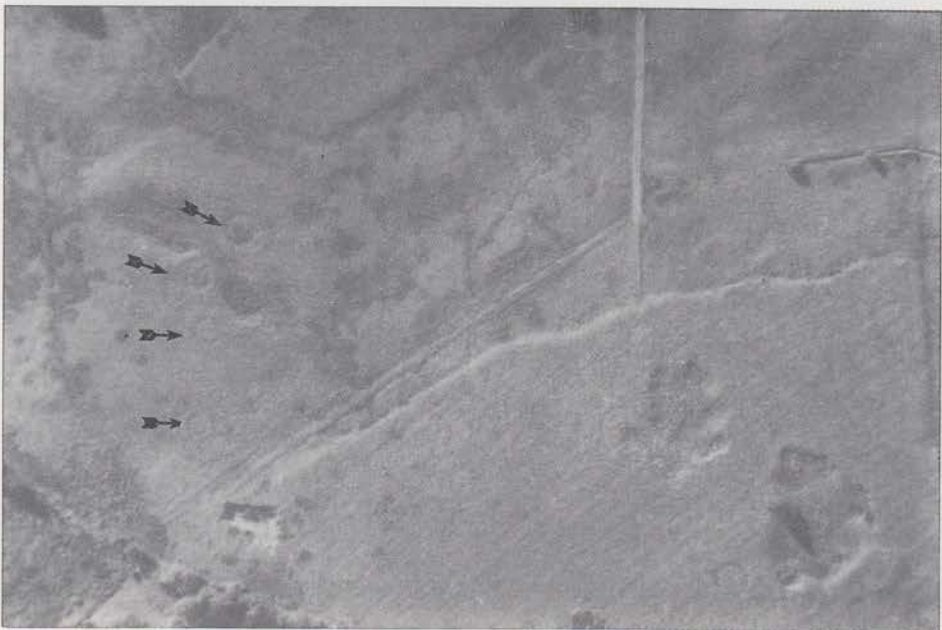


Plate 7 Ballynagranna. *OS sheet 66, 160 305. Photograph ref. 2090.*
Barrow cemetery.



Plate 8 Chancellorsland. *OS sheet 65. Photograph ref. 2041.*
Oval-shaped habitation site and barrow cemetery. Subject of detailed investigation, including excavation, by the Discovery Programme.

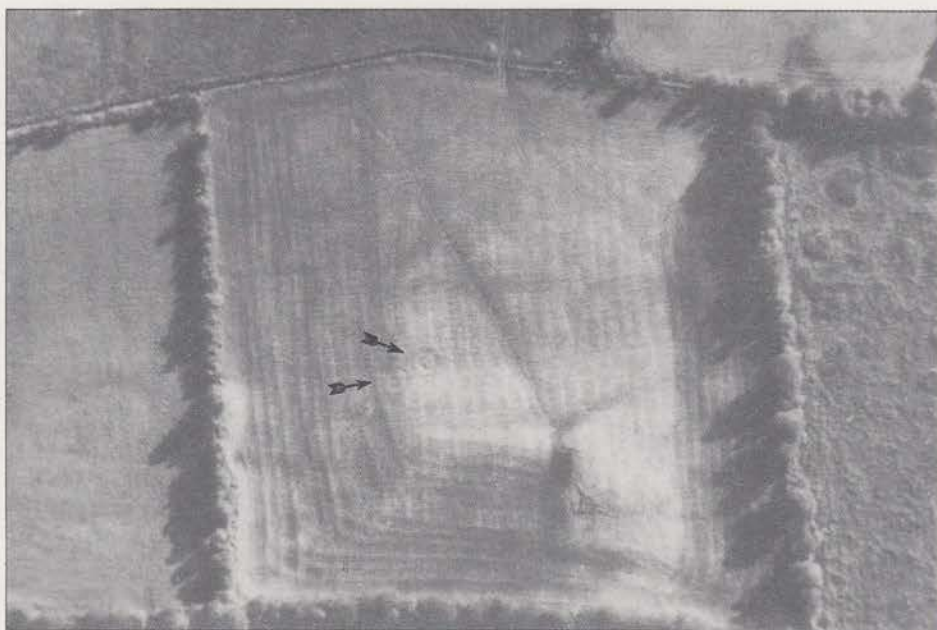


Plate 9 Ballyvitea. *OS sheet 65, 630 580. Photograph ref. 2043.*
Ring barrows in freshly mowed pasture.

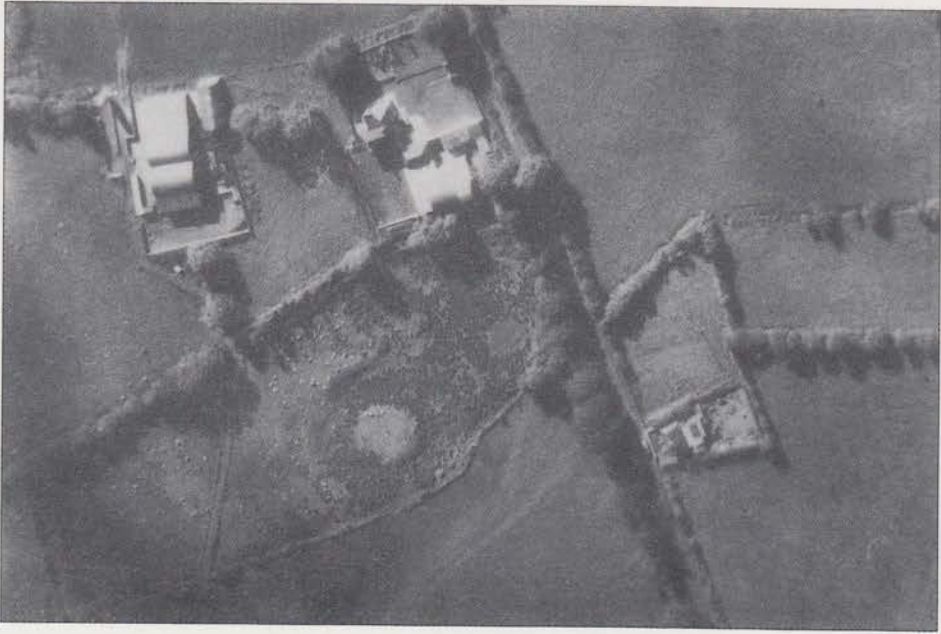


Plate 10 Moanmore. *OS sheet 66, 45 190. Photograph ref. 2090.*
Large circular earthwork; diameter 70 metres. Possible henge with central mound.

