

Williamson Art Gallery and Museum, Birkenhead, and by courtesy of the Curator, Mr G. Stratton, were borrowed for examination. The only information concerning them is the statement of Robinson (1898), 'In the course of this work of restoration, in one of the buttresses was discovered a cavity wherein were the bones of a kid with a skull and horns complete. The stones were all properly faced inside, showing that the cavity had been intentionally built.'

The bones, however, are not those of a kid, but the incomplete skeleton of an adult (but not aged) sheep of a small and unimproved type. The bones present are the skull and both mandibles, pelvic girdle, sacrum, right femur, right tibia, right humerus, a scapula, and numerous ribs. Accompanying them is a fragment of a femur of *Bos* sp. (young) and a rabbit. These two latter are clearly extraneous and were probably picked up from the debris excavated at the time of restoration and in error added to the bones found in the cavity. In this Dr J. W. Jackson, who has examined the bones and confirmed their identification as those of sheep, with the two exceptions noted above, agrees.

The senior author was present during the restoration of Birkenhead Priory, and is now (February 1962) the only surviving eyewitness of the discovery of the cavity and the contained bones. His account of the find is given in his own words (19th November 1960) 'Of course I remember the kid's bones. Right in under the south-west buttress of the Prior's House and three feet below the floor there was a

little aumbry-like hole about 24 in. long and 18 in. high, very nicely and carefully made with a plain roll moulding round it. It must have been closed by a slab or door but I do not remember seeing one. Inside, lying in a little heap on the bottom of the "aumbry" was a little pile of bones which was diagnosed as the skeleton of a kid. I cannot exactly remember whether I saw them "in situ" or in a safe place nearby and was told of the find by the excavators. I think the former. Anyway, everybody knew about it at the time and, naturally, I was constantly in and out of the Priory during the whole of the restoration.'

The Williamson Art Gallery and Museum also possess an album of photographs showing in detail the work of restoration of the Priory and including a photograph of the bones, and also one of the aumbry-like cavity in which they were found.

It seems clear that the sheep was deliberately immured in the recess prepared for it, and whether or not this constitutes a genuine example of a foundation sacrifice the facts are here recorded.

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Air Reconnaissance: Recent Results, 16

PLATE VIII

The archaeology of Ireland has until recently been little explored from the air. Part of the country has been photographed in the search for raw materials, and to assist town and country planning. But, survey photography at scales of 1:10,000 or less, taken within a few hours of midday is not designed to record small earthworks, and crop-marks often pass unnoticed. Until recently an assessment of the value of air photography as a method of research in Ireland has hardly been possible [1].

During the last six years widely ranging reconnaissance of Ireland has been undertaken by the Committee for Aerial Photography of the University of Cambridge, the flights being planned for research. In the light of this work a clearer picture emerges of the results to be expected from the application of air photography to Irish archaeology. Compared with England a far greater proportion of the country is under permanent pasture, and for this reason, minor earthworks of all periods from the Bronze Age

PLATE VIII



a



b

AIR RECONNAISSANCE: RECENT RESULTS, 16

(a) Crop-marks SSW of Bridgetown, Wexford (b) Crop-marks S of Ballycullane, Wexford

See pp. 57-9]

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onwards survive in numbers and variety that never fail to astonish. Many of the features are in very slight relief so that their significance is easily missed by an observer on the ground.

Crop-marks are far less numerous than in England, but a first impression that they are so rare as to be relatively unimportant is not borne out by experience. The marks often lack the distinct colour-differences seen in England, so that the surface of the crop has to be scrutinized carefully lest very faint changes in colour pass unnoticed. The development of crop-marks depends much on the weather, and sustained periods of warm dry weather are rare; only in one year (1967) out of the last six have high enough temperatures been reached for parch-marks to develop in rough grass, revealing archaeological sites on river gravel.

Crop-marks are seen in greatest numbers in districts where there is a high proportion of arable land. Thus, counties Waterford and Wexford in the south-east corner of the country, and the arable fields in such river basins as the Nore and Barrow, yield most results, with examples occurring sporadically in areas of mixed farming in the eastern half of the country, and in the lower basin of the Foyle. Nearly all the crop-marks noticed so far have been in cereal crops. Archaeological sites on river gravel promote some of the clearest marks, but they are also seen on varied types of glacial sands and gravels, and on soil derived from the weathering of Old Red Sandstone in the south-east counties. As yet, few soil marks have appeared: future surveys may alter the picture, for reconnaissance has so far been concentrated in the summer, while the peak periods of ploughing in autumn and spring are the best times for recording differences in colour of the soil.

As to the types of crop-marks, ring-ditches have been observed, either singly or in groups. Occasionally there is a small dark mark near the centre of the ring, perhaps indicating a simple cist burial. The majority of crop-marks are of raths, in very considerable variety. Most commonly a rath is enclosed by a single bank and one or more ditches. Modern agriculture may remove the bank, but the ditch usually pro-

motes a broad crop-mark broken at one point for an entrance. Within the enclosure narrow lines may indicate subdivisions, perhaps living-quarters and pens for animals, while blurred rectangular or circular outlines may relate to buildings. In at least one instance the trace of a *souterrain* has been seen. The enclosing crop-marks are not always of ditches. Sometimes one or more narrow lines appear, parallel with the ditch and a little outside it. Excavation should be able to reveal whether these are palisade-lines. The various elements, bank, ditch and narrow trench, occur in different combinations. Thus, crop-marks (S 925094) [2] near Duncormick, in Wexford, comprise a ditch lying outside a palisade-trench. Here, the area enclosed is small, barely 120 ft. (54.8 m.) across. At Newtown (S 840097), north-east of Bannow, in Wexford, there is a narrow crop-mark as of a palisade-trench, and two circuits, set far apart, each with two ditches, the space within the inner circuit being nearly 300 ft. (91 m.) in diameter. Sometimes the crop-marks provide clear evidence that a rath has been enlarged or re-planned. Thus, at a site two miles SSW of Bridgetown (S 983076), in Wexford (PL. VIIIa), a circular rath defined by a single narrow ditch with an entrance, has been enlarged to an elongated enclosure twice the size, having an inner broad ditch and an outer narrow ditch, or palisade-trench. At Ballycullane (S 792120), in Wexford, (PL. VIII b) the sequence is not quite so clear. Two enclosures appear to overlap, but there is such a distinct difference between the broad, evidently deep, inner ditch, and the narrow, rather irregular outer crop-mark as to raise a suspicion that the site may have been re-used in a different age. Thus, the earthworks at Rathconrath (N 317536), in Westmeath, will not have been the only case of a motte built within a rath. Other raths that have evidently had a complicated history have been identified, for example, at a point N 924590, one-third of a mile SE of Tara (Meath), and near Dunsoghly (Dublin), and these are amongst the most complicated crop-marks so far seen. Occasional square and irregular enclosures have been recorded, as well as ditches marking ancient field-boundaries, but 'native settlements' of the

kind familiar in the major river valleys of England do not appear. However, the somewhat limited range of the crop-marks is more than compensated by the numbers and diversity of earthworks occurring in almost every county.

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[1] The first publication of air photographs of

archaeological sites in Ireland seems to have been by D. A. Chart, *ANTIQUITY*, 1930, 453-9, pls. I-VII: the recent volume on County Down, in the *Archaeological Survey of Northern Ireland*, HMSO, Belfast, 1966, includes a selection of air photographs.

[2] The references are to the kilometre grid printed on the half-inch to a mile maps of the Ordnance Survey of Ireland.

More on Models

Bruce G. Trigger, Associate Professor in the Department of Anthropology, McGill University, Montreal, has sent us the following note after reading Dr Colin Renfrew's 'Models in Prehistory' last June (ANTIQUITY, 1968, 132). At our invitation Dr Renfrew has added a brief comment.

Colin Renfrew's note appeared when I was completing a study of the role that models have played in the interpretation of Iroquoian prehistory to present at the 1968 Conference on Iroquois Research [1]. Because of this, I read it with special interest. My study of changing fashions in the reconstruction of Iroquoian prehistory during the past hundred years provides a striking illustration of Renfrew's dictum that 'it is the choice of model which is often decisive, rather than the material evidence'. Moreover, work I have done elsewhere convinces me that this situation is typical rather than exceptional [2]. It is perhaps understandable that in the early days of the development of their discipline, prehistorians, like their colleagues in history, preferred to regard models as being inherently implicit and often treated their reconstructions of the past as personal flashes of insight. With growing historical perspective, however, we can see that most of their reconstructions were in fact based on fairly mundane notions about cultural processes that were fashionable at the time. For example, 50 years ago it was possible for archaeologists to interpret the short period of Sudanese rule over Egypt in the 8th century BC as follows:

But soon the unfailing dynamics of race reasserted their force. No black people has ever permanently maintained its grip on a North African country . . . If a short-lived and unstable black empire has occasionally extended its limits to within view of the Mediterranean, it has

ultimately been repelled all along the line. From Morocco to Tripoli the white North African races have triumphed, . . . and have driven the negroes back to their home in the tropics [3].

These are not the words of racist bigots, but of archaeologists who were uncritically interpreting archaeological evidence in the light of the commonly held opinions of their day about the relationship between race and cultural behaviour. The same ideas about Africans generated the so-called 'Hamitic hypothesis' and led to the stubborn refusal of many people to admit that the prehistoric stone architecture of Rhodesia could be the work of people with black skins. The real danger, in most instances, is less the models themselves than that, because of intellectual inertia, reconstructions based on false models may manage to survive long after these models have been rejected.

It may be argued that for the most part interpretations based on wrong or inadequate assumptions about the nature of human behaviour will eventually run aground on the shoals of accumulating archaeological evidence. In spite of this, I believe that it behoves archaeologists to be aware of the assumptions that underlie their interpretations of archaeological data. This can be done by systematically examining previous interpretations of the culture history of the area in which they are working as well as by studying the history of archaeological interpretation elsewhere. The latter is especially important because, to a large degree, the assumptions that have influenced the interpretations of data in one area at a particular period are likely to have been influential elsewhere. An awareness of the intellectual history of the discipline cannot help but be of assistance in making prehistorians more aware of the