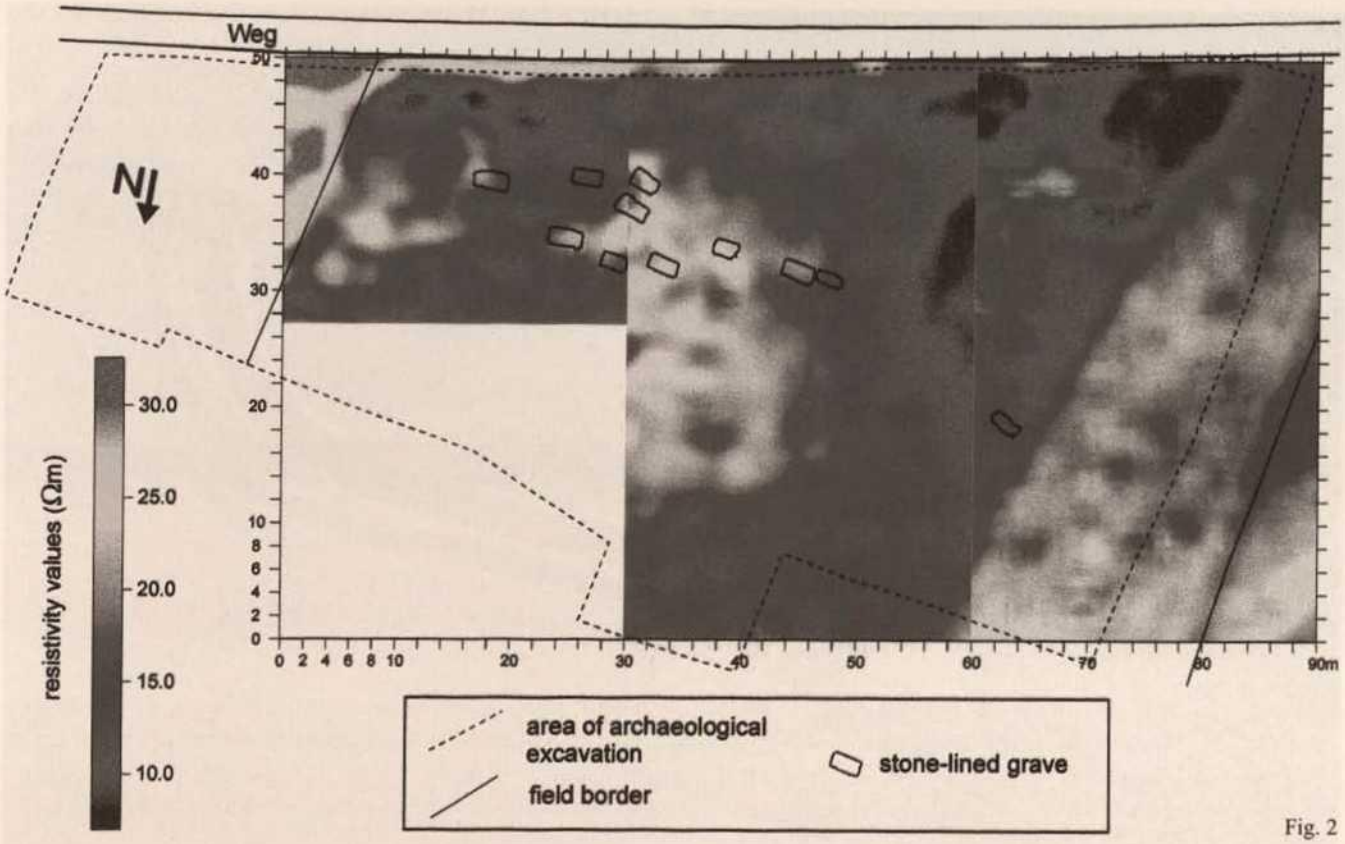


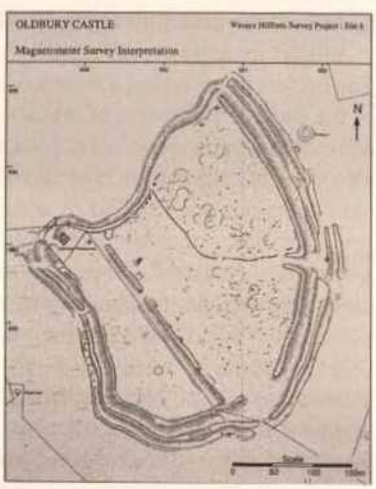
Fig. 2

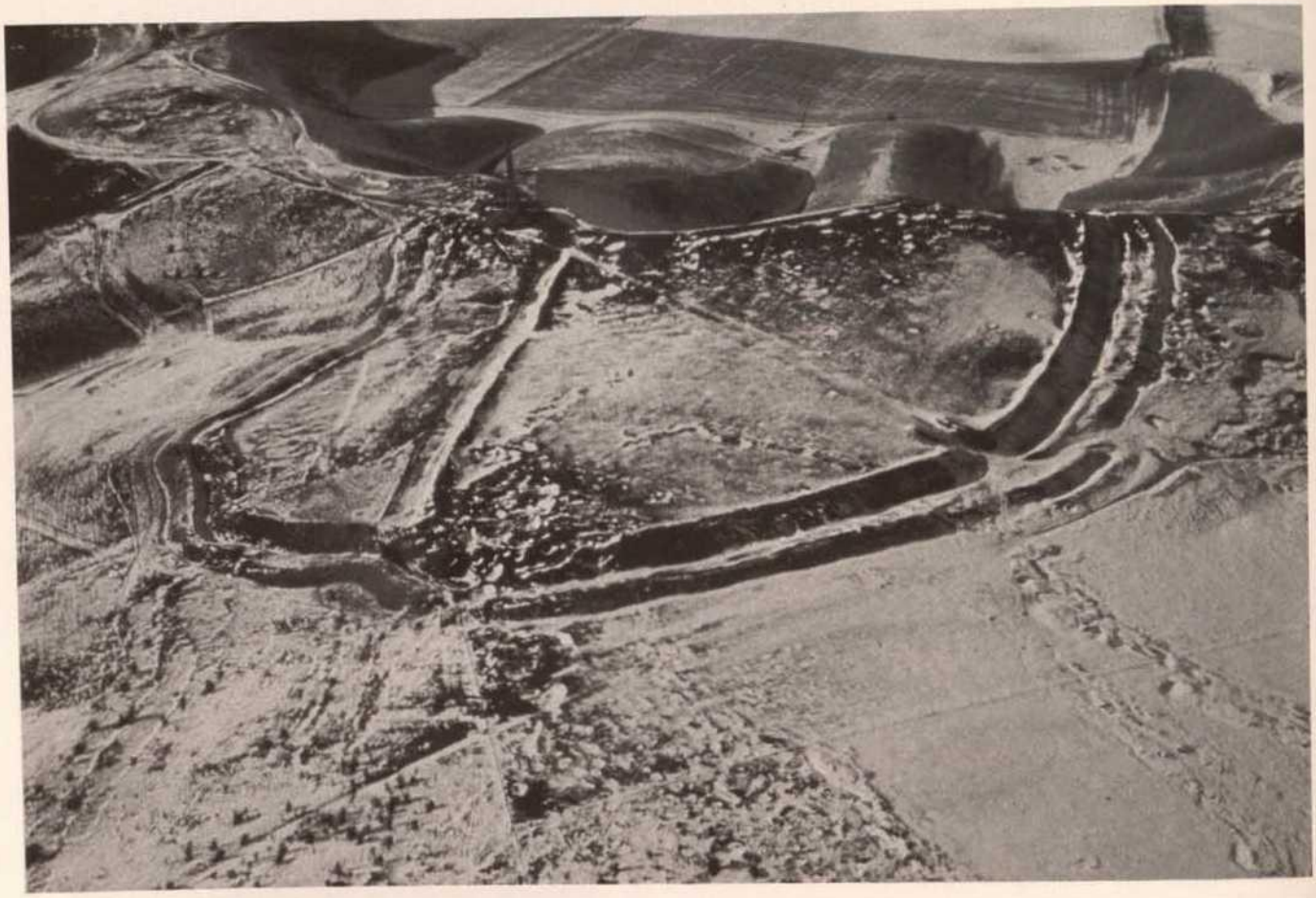
A. Payne

Functional Variability in Wessex Hillforts : New Evidence from Geophysical Survey

Hillforts have attracted archaeological interest for much of this century, and debate on their function and significance continues to be central to the academic study of the Iron Age. The term hillfort covers a multitude of different types of site and their varying sizes, morphologies and situations strongly suggest a range of different functions. Reliable interpretation of the role of hillforts in Iron Age society continues to be hampered by the small number that have been extensively examined archaeologically. Despite major investment in excavation of hillfort sites in Central Southern England, even here the majority of sites still remain a poorly understood resource.

Two years ago a major programme of archaeological geophysics was started by English Heritage in partnership with Oxford University to investigate a wideranging sample of hillforts (20 sites in total) in the dense hillfort zone of Wessex. The project was





designed to build on the potential of rapid magnetometer survey for investigating hillfort interiors on chalkland geology shown by earlier surveys at sites such as Maiden Castle and in the Danebury Environs.

The project aims were to:

i) better define and assess the archaeological resource preserved inside hillforts in order to help guide future management and conservation initiatives and

ii) expand the presently limited extent of our understanding of hillfort interiors across a single region.

The project has revealed a wealth of new evidence for the nature of the internal utilisation of Wessex hillforts. While supporting some of the existing models of hillfort development, the surveys also show that the pattern is considerably more complex and varied than previously realised. A complete set of results from the project will be presented publicly for the first time and their interpretation discussed (discussion of significance of the results among participants will be very welcome as their interpretation is currently only at a preliminary stage)

If time permits, Wessex hillforts will be contrasted with geophysical results just obtained from the concentration of hillforts around the foothills of the Cheviots in the Northumberland National Park. The different geophysical approaches required to optimise the information recovered from these sites (of intrinsically different character to their Wessex counterparts) by nondestructive means will briefly be discussed.

C. Peters, M. Church, C. Mitchell

Investigation of Hearth Fuel Sources on Lewis Using Mineral Magnetism

As part of a wider research progamme of experimental archaeology at Callanish Farm, Isle of Lewis, Scotland, a number of experimental hearths were constructed, based on excavated evidence from the Late Iron Age houses at Bosta. Controlled and repeated burning of different fuel sources, for example well-humified peat, fibrous-upper peat, peat turf and wood was carried out over a number of burning episodes of three day durations.

A range of mineral magnetic measurements, including remanences and the variation of susceptibility with high temperature, were taken from the resulting ash samples. The high temperature susceptibility measurements show that the fibrous upper peat and peat turf have a single magnetic component, with loss of susceptibility between 570 and 600 °C. In comparison the well-humified peat and the wood display a loss in susceptibility at significantly lower temperatures, with many samples having two distinct magnetic components. Stepwise discriminant analysis