



Excavation techniques underwater at Cortailod-Est. The site is divided into 2.5 m squares by metal rods. A pumping system creates a current to remove silt particles, thus aiding visibility. From top: finds are lifted and bagged, recorded in situ on perspex, pebbles are removed by squares, and piles not pulled out whole are sawn off. (From volume 1.)

the pottery makes no concessions, and negative conclusions are firmly stated: no correlation between sherd distribution and houses and lanes, nor between sherds and animal remains, due to the spreading and mixing actions of both humans and lake waters.

The third volume by Philippe Ribaux discusses the relation of stones and stoneworking to the settlement; the report is far more than a catalogue of bronze age stone objects. A massive sampling programme involved the collection and examination of lake bottom pebbles and boulders, and some useful correlations emerged: lakeside heavy stones over particularly damp areas requiring consolidation, spreads of broken stones probably representing lanes between and beside houses. Quernstones were concentrated in two distinct areas of the settlement, but the rest of the stone objects were scattered seemingly at random. The environmental setting of the occupation is discussed in volume 4, the work of four authors, and here the real nature of the conditions encountered by

the team becomes apparent; basically there was no surviving stratigraphy on the site due to erosion and water action. Coring provided a useful climatic sequence from the end of the last glaciation but ends itself in a seemingly reworked lacustrine deposit with which the bronze age settlement may correlate. The pollen evidence produced nothing to illuminate the economics and environment of the settlement. Animal bones are in poor condition but of over 9000 pieces, about half were of sheep/goat, with cattle at 30 per cent, sub-adults killed. There is an interesting discussion on the catchment of Cortailod-Est as well as of Auvernier and Bevaix, all late bronze age settlements along a 6 km stretch of the shore edging a deeply indented plain of alluvial soil. This is accompanied by a statement on the role of various economic and environmental factors in the making of the settlement, although much of it has to be theoretical. Volume 5, to come, will hopefully summarize the facts and present the views on the dynamics of Cortailod-Est as well as detailing the dendrochronological basis of settlement structure over time.

The set of volumes is attractively presented with colour photos on the covers and within, good-quality paper throughout, fine line-drawings and photos. To my mind, the pot drawings are bit clinical, and those of the wooden piles rather darkly-faceted, but the overall documentation cannot really be faulted. The work represents a massive undertaking both in excavation and in the studies leading to these reports. Cortailod-Est is, I think, still the only prehistoric settlement totally excavated underwater. And what other drowned site can have been explored first by an archaeologist who descended by ladder into a large pipe set vertically upon the lake bed and pumped clear of water? Vouga did it here in 1925, in a pin-stripe suit with hat. It is not known if he also had wellies.

J.M. COLES

WARP, University of Exeter

Kendrick Frazier. **People of Chaco: a canyon and its culture.** London & New York: W.W. Norton & Co., 1986. 224pp. £17.50 & \$24.

North American archaeology, and public perceptions of American Indian prehistory, have been strongly influenced by continuing attention to certain intriguing and dramatic topics – the earliest migrants from Asia, the mound-builders, the cliff-dwellers, and the people of the great stone pueblos of Chaco Canyon, New Mexico. *People of Chaco* is a compact, competent, and very current review of this last topic, written for the non-specialist. After surveying early work (1849–1969), Frazier synthesizes recent research, especially that of the 15-year Chaco Project.

Before the 1970s, archaeologists focussed largely

on sites in Chaco Canyon proper, such as the monumental Pueblo Bonito – a four-storey masonry structure of some 650 rooms. Archaeologists now recognize that the Canyon sites are only elements in a regional social system that flourished about AD 1000–1140. An area 150 miles in diameter is dotted with ‘outlier’ communities, each a cluster of hamlets dominated by a Chacoan ‘great house’. Straight roads, often tens of miles long, linked many of these settlements with Chaco Canyon.

In recounting archaeologists’ attempts to understand the nature, and the rise and fall, of this system, Frazier ably evokes the dynamic quality of research; new understandings come not only from field discoveries, but from new analytical methods and theoretical models. Surprisingly, passionate arguments and criticism do not seem to be in his archaeologists’ tool-kits.

Current interpretations of the ‘Chaco phenomenon’ suggest that it developed in place, depended on shared religious beliefs and symbols, and operated with the aid of periodic rituals and festivals, probably designed to ensure successful crops. These rituals facilitated movement of people, material, and information through the system, and supported some status differentiation, though not true stratification. Chaco flourished during a time of exceptionally reliable rainfall, and mid-1100s drought may have triggered its collapse.

Frazier ‘brings archaeology to life’ with effective, though perhaps not always defensible, analogies to historic Pueblo Indian life. The book is well-written, but some photos appear muddy.

WILLIAM D. LIPE

Washington State University, Pullman (WA)

George Eogan. **Knowth and the passage-tombs of Ireland.** London & New York: Thames & Hudson, 1986. 274 pp., 91 figs., 11 colour pls., 77 b/w pls. £18 hardback.

This volume is in the Thames & Hudson series *New Aspects of Antiquity* and it reaches the same high standard of presentation as the earlier volumes in the series. It seems to be aimed partly at the well-read general reader and partly at the specialist, for whom it provides a useful interim report on the excavations which began in 1962 of the extensive complex of passage-tombs at Knowth (Co. Meath), by George Eogan, now Professor of Archaeology at University College, Dublin. It summarizes the excavations at the ‘satellite’ tombs which surround the main mound (Site 1); these are already fully published in a series of Royal Irish Academy papers (1968; 1974; 1984). It also describes the work to date on Site 1, beginning with a description of the discovery of the western (undifferentiated) tomb on 11 July 1967, which is as

full of atmosphere as Howard Carter’s ‘Wonderful things’. The eastern (cruciform) tomb was discovered the following year and is even more exciting architecturally.

Excavation of the two tombs in Site 1 is not yet completed but several interesting features are reported outside the entrances to the tombs. There are circular settings of stones in front of each (and also at Site 4) which are closely paralleled at Newgrange nearby. At Knowth, however, there was also a pillar-stone in front of each tomb. During the equinox it is possible that the shadows cast by these stones would fall in line with the carved vertical line of the kerbstones in front of the tomb-entrances. Could the sharply-cut lines in K74 at the entrance to the western tomb (Plate 47) mark the progression of this shadow at sunset on the days of the equinox? Also in front of the tomb-entrances were spreads of non-local stones, mainly quartz and granite, which are surely best interpreted as primary slip from the mound (as at Newgrange) rather than, as is suggested here, a covering deliberately laid before ceremonies on site and removed after the ceremonies. A spread of stones 38 m × 12 m in maximum dimensions would not easily be lifted and replaced.

Unfortunately the digging of a deep ditch in the late Iron Age or early Christian period has removed the outer sections of both passages, so it is impossible to determine if there ever existed a structure like the Newgrange roofbox. Eogan has shown here, however, that the particular type of art which he terms the ‘angular style’ is used as a ‘lead-in’ along the axis of the monument at Newgrange, Fourknocks and Knowth 1 east (Figure 73). In Knowth 1 west it is the rectilinear style which provides the lead-in from the entrances to the sill-stones and backstone. This rectilinear art is paralleled in Breton angled passage-tombs, notably at Gávres which has a ¹⁴C date of 2480 ± 140 b.c.

Knowth is one of the few Irish sites for which convincing external parallels can be found; briefly these include the spectacularly carved ovoid mace head (*ANTIQUITY* 57 (1983): 45–6) and a smaller pestle-shaped one which find parallels in northern Britain and in passage-tombs in the Orkneys. A long decorated sandstone object and a similarly carved pin of bone or antler are paralleled in tombs in southern Portugal. The radiocarbon dates for Knowth indicate a mid-3rd millennium b.c. date for construction of Site 1 (as at Newgrange), and this fits well with the outside parallels and also with Bradley & Chapman’s ‘Theory of Converging Evolution’ (1984) which envisages widespread links of exotic and symbolic items at this time following the general establishment of tomb-building at an earlier date.

However, a few factors disturb this neat model. What of the western neolithic ware under several of the satellite tombs and associated with the house and