

Notes and News

JERICHO AND COMPOSITE SICKLES

Professor Carl O. Sauer, Professor of Geography at Berkeley, California writes:

Having been out of the country much of the past year I am catching up on the things I should have read: thus I have only made the belated discovery by reading *ANTIQUITY* (1956, 132; 184; and 1957, 73 and 82) that there has been great news out of a more ancient Jericho. We have also been underestimating elsewhere the age of cultural advances. In the New World we must not only admit a much earlier presence of man, but concede more time to textile skills, to agriculture, and probably also to metallurgy and to the directed employment of labour in mass. Perhaps this means that the great cultural changes which we like to call ages or periods have had long and varied antecedents.

The revision of prehistoric time is due largely to radiocarbon measurements. Their steady refinement and growing number of accordant results give increasing confidence that we now have something approaching a valid scale of time. Zeuner has noted at Jericho that some samples give a reduced age because of the presence of younger carbon. Such geographic conditions of subsequent additions of later carbon appear to be much more common than the opposite distortion. The question whether radioactive carbon has been formed at a constant rate has been under scrutiny from the beginning. Braidwood has raised no new reservation of validity; there is no reason for singling out the Jericho dates as suspect; if there was variation in rate it was not by geographic location of sites.

The great spring of Jericho, issuing from the base of the Judaeian plateau into the arid Jordan basin, must have been an obligatory place where men met and lived from earliest times. Here physical geography marked, about as precisely and enduringly as anywhere, the exact site where a town must be whenever the time came that men built towns. That the two oldest known towns should have been discovered here is less surprising than the fact that both were fortified towns. Miss Kenyon has considered possible meanings of the walled towns. The implications are rather in favour of the doctrine of original sin, that civilization was helped along by fear and enmity, for which this may be a test site. At any rate Miss Kenyon does not appear concerned about social theories, but about where to dig next and what studies to make of the remains of town living.

Archaeology is assembling a record of remote time and ways that brings better knowledge of culture origins and processes. It is working soundly and thoughtfully with its own evidence. Does it need the reorientation proposed by Braidwood that it learn 'the general philosophy of the social sciences' whatever that is, if there is such? That social theorists, on the other hand, should be eager students of culture history would appear a reasonable expectation, but they think quite otherwise.

In the United States some archaeologists are adjusting their inquiry to fit current anthropological notions of independent parallel evolution. This is pretty much a dusting off of the old theory of stages, garnished with terms that are doctrinal symbols. There has been for some time a vogue of 'culture areas', pretty much based on the premise of autochthonous development and giving minimal heed to intruding peoples and ideas. 'Diffusion' is not reputable at present as 'evolution' is. I think this is 'the conception of the area co-tradition by the Americanists' recommended by Braidwood. He sees the Near East as 'the scene of a single generalized area co-tradition, which has a more or less uniform development'. Its village farming had 'an as yet only vaguely conceptualized era of incipient agriculture before it. This *may* have had its own even vaguer area co-tradition, and this *may* even be what Sauer is talking about.' It is not what I was talking

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about and I can only guess vaguely that he is thinking of the Near East, as I do not, as one self-generated and self-contained development.

The Jericho discussion having raised again the matter of the serrate stone sickles and my comment thereon made in 1952, I need to reconsider their meaning. These implements are being reported from more sites, over a larger area, and perhaps over a larger span of time. They were an invention that gained wide acceptance and must have been considered significantly useful. At first I accepted their interpretation as a grass-cutting tool but doubted their use in the reaping of wild grass seeds because the seed would be lost by shattering. Since domestication involved selection to develop a rachis that would not shatter on ripening, I thought that the presence of such sickles argued for the cultivation of domestic grain. I no longer like the idea. My revised ideas have had the benefit of discussion with Hermann v. Wissmann and Karl Narr, but the responsibility for the following interpretation is my own.

Primitive harvesting of grass seeds, wild or cultivated, makes use of one of several methods, each simple, efficient in saving seed, and adapted to the kind of plant harvested. In the New World the most common procedure is to beat or brush the seeds into a tray or shallow basket. The stick used may be flattened and thinned to an edge, roughly a wooden blade; the receptacle is broad. Or, the seeds may be stripped by hand. Stiff-stalked sorghums are gathered by breaking off the panicles. Where annuals are grown in mixed plantings, as is still done in the Deccan of India where various grains and pulses are sown together, the whole plant is pulled up by the roots. The plants are gathered singly as they become ripe or are wanted.

In undisturbed natural situations the plants of interest to man mainly grew scattered through a diverse vegetation, annual and perennial, herbaceous and woody. Harvesting, as I see it, was of individual plants and small colonies. The primitive forms of cultivation known to me also are mixed plantings. I doubt that the idea of segregating plants, each kind to its own field, occurred to cultivators, or made sense, until plough, harrow, and draught animals were introduced. Cultivation, I take it, was carried on in the Near East long before there was plough agriculture. Under mixed seeding plants matured at different times, there was repeated selective harvesting of the planted ground, and no use for an implement of mass reaping that would leave a field of stubble.

The composite sickles are ill suited for reaping sheaves of grain, wild or domestic. I think they would work well to strip seed heads by a raking pull into a container. In such case the serration is an improvement on the blade of the seed beater. However, the improvement seems an excessive expenditure of labour and skill for the end attained. I refer to the pointing of the flints, their matching, and the care in securing them in the blade. They may have been thus used, but I doubt that they were invented in order to rake off seeds.

The saw-toothed invention makes sense as archetype of the saw. With it man was better able to secure the raw plant materials for building, roofing, house-furnishing and personal equipment. The teeth, drawn back and forth, severed tough stalks and leaves hard to pull or break off but useful because they had strong and long fibres. We know of no people too primitive to make some use of plant fibres. Specialized skills in working with fibre plants were developed very long ago. In the latest years caves and rock shelters in Oregon, Nevada, and Utah have yielded a good many well-made fibre products, such as sandals, mats, baskets, braided and twisted cords, and nets. The artifacts chanced to be preserved because of the dryness of the site. They were made by people who lived near freshwater bodies during the last Pluvial time of the Great Basin, and in part are older by some thousands of years than the earliest known record of Jericho. The fortunate accident of

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preservation gives a different and more advanced cultural picture than would have been construed from the simple and few artifacts of stone. (Sauer, 'The End of the Ice Age and Its Witnesses,' *The Geographical Review*, vol. XLVII, no. 1, 1957.) Kind and level of the old Jericho cultures justify the inference that they also made free and particular use of fibre plants, even without the discovery by Miss Kenyon that they 'had rush mats on the floors, of the same weave as those in use today'.

The spring of Jericho (which may have been even greater before overgrazing and other exploitation by man impoverished the plant cover of the upland) flowed out into marginal marsh, native habitat of such plants as bulrushes, cattails, sedges, canes, and osiers. In native villages of our arid lands, as in Mexico and Peru, a freshwater marsh may be valued as highly for such plants and managed about as well as is the tilled land; the situation at Jericho is suggested as similar. The nearby Judean upland supported tough perennial bunch grasses. Although the esparto grasses are north African and Iberian, there are local *Stipae* and similar siliceous tussock grasses, and also leguminous shrubs ('brooms' such as *Cytisus* and *Genista*). A study of the locally available fibre plants should be rewarding.

I offer these remarks as 'an exercise in imagination' not 'completely untestable'.

CARL O. SAUER

THE SECONDARY IRON AGE IN BRITAIN

The division of the British Iron Age into A, B, and C has proved its value over more than a quarter of a century.¹ But in the highland zone it is often difficult to fit this classification satisfactorily to the known remains. This has been recognized for some time by accepting the presence of a Late Bronze Age Survival culture outside the areas where there is satisfactory evidence for Iron Age A, B, or C. This name gives no indication that the people concerned had adopted the use of iron, and has the additional disadvantage that it is very cumbersome. Perhaps for this reason, very little attention has been paid to the nature of their culture; indeed, there seems to be a tendency to spread the A and B culture-areas as far as the most meagre scraps of evidence permit, or even further.

The object of this note is to urge that the system of nomenclature now accepted for the Neolithic period should be applied to the Iron Age also: that is, the invasive A, B and C cultures which introduced the use of iron should be described as representatives of the Primary Iron Age, while the cultures developed by the descendants of the Late Bronze Age inhabitants who had adopted the full use of iron should be grouped under the title of Secondary Iron Age.

Although it is not the writer's intention to attempt to describe any of the Secondary cultures in detail, it seems desirable to indicate what can be recognized or suspected at present. Only one is clearly defined. On the eve of the Roman conquest much of the eastern part of Britain, from the Forth as far south as Yorkshire, was occupied by people using an exceptionally coarse type of pottery. This was first regarded as 'Votadinian'² but has since been found in quantity at Stanwick.³ In view of its distribution and character, Border ware would seem an appropriate designation, but in spite of its crudity it continued in use after a partial occupation of the territory by an offshoot of the Primary invaders from southern Britain,⁴ and even after the Roman conquest. The palisaded enclosures found in Northumberland and Roxburghshire⁵ are probably the dwellings of the Border ware users. It must be emphasized that this crude pottery cannot safely be used as evidence by itself for cultural connections, except where its distribution is fairly continuous: the remarkable Danish site of Trelleborg (c. A.D. 1000) has produced pottery which seems from the published report to be very similar indeed.⁶

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Another Secondary Iron Age group may be suspected in Caernarvonshire, where the hill-fort defences differ markedly from those known to be associated with Primary Iron Age peoples. There is, however, practically no other cultural material to supplement this evidence. A similar but not identical group probably existed in Pembrokeshire.

It is unlikely, though, that these few examples represent the true position. It is hardly to be expected that Secondary Iron Age peoples will be located when their existence is not recognized. So far as present evidence goes, it would seem that the Iron Age A invasions took place initially at several widely separated points,⁷ so that presumably pockets of the earlier (L.B.A.) inhabitants were left undisturbed for several generations, subject to influences from the Primary invaders but not conquered by them. In such areas further research should make it possible to detect the development of Secondary groups, even though they were later overrun by Primary settlers.

A. H. A. HOGG

¹ C. F. C. Hawkes; ANTIQUITY v (1931), p. 60; *Congresos Internac. de Ciencias Prehist., Actas de la IV Sesión, Madrid 1954*, (Zaragoza, 1956), p. 729.

² Professor I. A. Richmond, *Arch. Aeliana*, ser. 4, vol. xx, pp. 121-132. A. H. A. Hogg, in *Aspects of Archaeology* (London, 1951), pp. 214-9.

³ Sir Mortimer Wheeler, *The Stanwick Fortifications*, Soc. of Antiquaries Research Report No. XVII (1954), pp. 38-44.

⁴ C. M. Piggott, *P. S. A. Scot.*, 1949-50, pp. 131-4.

⁵ *Arch. Aeliana*, ser. 4, vol. xxxiv, p. 152; *P. S. A. Scot.*, 1948-9, pp. 64-7.

⁶ P. Norlund, *Trelleborg, Nordiske Fortidsminder*, iv, i (1948).

⁷ Dr K. M. Kenyon, *8th Annual Report of Inst. of Archaeology* (Univ. of London), pp. 29-78.

THE PREHISTORIC SOCIETY

Congratulations to the Prehistoric Society, which celebrates its fiftieth birthday in October of this year. It began, according to the official records, on 26 October, 1908, at a meeting in the Norfolk and Norwich Library, 'an inaugural meeting of an East Anglian Society for the study of all matters appertaining to prehistoric man'. On 7 December, 1908, the preliminary Committee appointed to draw up a constitution for the Society presented their Report but 'in view of the large number of implements on exhibition, consideration thereof was adjourned'. Apparently the Society was at first called 'The East Anglian Society of Prehistorians' for on 25 January, 1909, when the constitution of the Society was formally adopted, it was decided to change the name to 'The Prehistoric Society of East Anglia'. Seventy-two favourable replies had been received to the first circular suggesting the formation of the Society; when the first volume of the *Proceedings* was published in 1911 over a hundred names are listed as members. These included W. G. Clarke (one of the two Honorary Secretaries), Prince Duleep Singh, Baron von Hugel, Philip Laver, Miss Layard, J. Reid Moir, S. Hazzledine Warren and H. B. Woodward. The first President was Dr W. Allen Sturge, and in his Presidential address he said: 'It is high time that here in England we should begin to draw together, in one district at any rate, those who are interesting themselves in the absorbing but difficult study of the early ages of the human race before the dawn of history'.

The East Anglians were not the first group of people to found a Prehistoric Society. The Société Préhistorique de France had been founded in 1904 under the presidency of Emile Rivière, with seventy-four founder members, including Marcel Baudouin, Cazalis de Fondouce, Chantre, Paul du Chatellier, Léon Coutil, Daleau, Hanotaux, Dr Henri-Martin, Adrien and Paul de Mortillet, Piette, Raymond—a more distinguished and more internationally known group than the East Anglians—but then France was *the* country

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of prehistorians in the first decade of the 20th century, and the East Anglian Society began as a modest group of regional archaeologists. The English Society, however, soon realized that prehistory could not be best served by restricting it to one part of Britain and began to print on its *Proceedings* a notice that its subject matter was not restricted to the district from which it was named.

At the Annual General Meeting in Norwich Castle Museum on 23 February, 1935, Dr Grahame Clark, who had become Editor of the Society in 1933, and who this year assumed its presidency, moved 'That the title of the Society shall be *The Prehistoric Society*'. It then had a membership of 353. Today, as it celebrates its jubilee, the membership is approximately 1,100, including a considerable number from overseas. (Applications for membership to Miss J. M. Bull, 11a Kensington High Church Street, London, W.8.)

Apart from its regular meetings and the publication of its *Proceedings*, which draws material from all over the world and is one of the most worthwhile and best produced archaeological journals in Europe, the Prehistoric Society has in the last few years held short conferences in London and meetings in the field. The next London conference will be held at the Institute of Archaeology of London University during the spring of 1959, and the next field meeting will be held at Bangor between 29 August and 2 September, 1959. This year a field meeting was held at Easter in West Cornwall, and a correspondent sends us this account of it.

Meeting in Penzance on 10 April, the conference was opened by Prof. J. G. D. Clark, the new President, and Mr C. A. R. Radford, the retiring President, gave the introductory lecture. He spoke on recent archaeological work in Cornwall, stressing particularly the dominant pattern of the Iron Age, which can now be seen to fall into three main phases: an apparently brief and derived Iron Age A, followed by the almost classical South-Western B, which develops into the Cordoned Ware of, typically, the 1st and 2nd centuries A.D. The following morning the delegates met to hear a series of short talks. Mr B. Wailes spoke on the excavation of Sperris Cromlech, and the Penwith Chambered Tomb Group as a whole, suggesting that it should be dated to the Early Bronze Age. Mr A. C. Thomas, the Local Secretary of the Conference, gave a brief outline of the archaeological sequence at Gwithian, where he has inaugurated and organized, under the West Cornwall Field Club, a programme of intensive field-work and excavation in a small area: this has yielded a series of sites which give an almost complete record from the Mesolithic to the present day. The excavations of the Lizard Field Club at Kynance, an Iron Age settlement overlying a Middle and Late Bronze Age occupation, were then described by Mr J. I. Thomas, and the last lecture, by Mrs E. V. Clark, concerned the recently excavated fogou (souter-rain) at Boleigh, which has at one side of the entrance a carving, apparently a figure with upraised arms. That afternoon the lately reorganized Museum of the Royal Institution of Cornwall at Truro was visited.

The last two days were spent on excursions round Penwith. On the moors above Zennor the Zennor and Sperris Chambered Tombs were visited, and Miss D. Dudley gave a short lecture at the Iron Age village at Sperris, excavated by the West Cornwall Field Club last summer. The tour continued via the two Scillonian Entrance Graves at Treen, the Romano-British Courtyard House site at Porthmeor, Chun Iron Age Hill-Fort and Chambered Tomb to the strange multiple cairn of Carn Gluze, apparently of Late Bronze Age date. The last stop was the unexcavated Cliff-Fort of Treryn Dinas, peculiar in having two widely-spaced single ramparts, with triple ramparts between them. On the last day, following visits to the fogou at Boleigh and the stone circle of Dawns Men close by, the excursion went to Gwithian, where the sixth season of excavation was in progress. Here delegates were shown round the sites in the area, perhaps the most important being

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an occupation site giving a continuous stratified sequence from the Neolithic to the Late Bronze Age, and containing traces of Middle Bronze Age cross-ploughing, and a similar site nearby, occupied *c.* A.D. 400–1000, the first complete sequence for West Britain in this period. The tour ended at Carn Brea, which Mr Radford emphasized was an Iron Age Hill-Fort, the well-known Neolithic occupation being unconnected with the visible huts and ramparts.

INDIAN ARCHAEOLOGY

When Sir John Marshall assumed charge of the Archaeological Survey of India he inaugurated the series of *Annual Reports* of the Survey. In 1944 when Sir Mortimer Wheeler took over the Director Generalship of the Survey he felt that essential research matter should be published in a more attractive form than the *Annual Reports* and founded *Ancient India* as a Bulletin of the Archaeological Survey of India to contain individual articles relating to the archaeology of India and adjacent lands. The first issue appeared in January 1946 and under his vigorous editorship the first few issues soon established *Ancient India* as a major archaeological journal; they contained *inter alia* Prof. Piggott's article on 'The Chronology of Prehistoric North-Western India', the report on the excavations at Arikamedu by Wheeler, Ghosh and Krishna Deva, and the now classic comments on 'Recording of Archaeological Strata' by Wheeler and Piggott.

Ancient India continues and maintains the high standards of publication which it set itself (and others) over ten years ago. Shri Ghosh, the new Director General of Archaeology in India felt that in addition to *Ancient India* a new series of publications of his department was necessary giving an annual summary of the department's work in excavation, preservation, discovery, publication, museum development and training. The result was *Indian Archaeology 1953–4: A Review*, and the fourth volume in this series, for 1956–7 is now to hand (price 9s. 6d. or rupees 6 from the Department of Archaeology, Government of India, New Delhi). *Indian Archaeology* is well printed and illustrated and is extremely good value; the present volume has 85 pages of text including nineteen text figures and forty plates, two of them (illustrating the report on archaeological chemistry) in colour.

Indian Archaeology will be indispensable to all concerned with keeping abreast of the discoveries of prehistoric and protohistoric India. It will not be invidious to single out two extremely important advances in learning recorded in these four volumes. The first is the deepening of our knowledge of the Harappan civilization by the discovery and excavation of sites such as Rangpur and Lothal south of Ahmadabad in Kathiawar, and the linking of the Harappan civilization with later historical times at Rupar and Rangpur. Excavations at Rupar, sixty miles north of Ambala not only revealed a new Harappan cemetery but showed 'an almost continuous sequence of occupations from the Harappa to the medieval times, thus linking the protohistoric with historical archaeology' (*Indian Archaeology*, 1953–4, 6). Excavations at Rangpur showed that it 'had been a Harappa settlement with a long life' and that 'it provided for the first time a continuous cultural-sequence from the Harappa to the period prior to the Northern Black Polished Ware with hardly any break. Unlike Harappa and Mohenjo-daro, the Harappa culture here died a natural death; for it gradually deteriorated and transformed itself into a subsequent culture, characterized by the use of a lustrous red pottery' (*Indian Archaeology*, 1954–5, 11–12). The map of the Harappa Culture in Western India (*Indian Archaeology*, 1954–5, fig. 7, p. 60) shows the extent of these important discoveries and the possible routes from the mouth of the Indus to Harappan ports in the Gulfs of Cutch and Cambay.

The second major discovery recorded in the pages of these four volumes is that made

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at sites like Nevasa, on the Pravara, a tributary of the Godavari, and at Prakash, on the Tapti. 'Next to nothing was known about the protohistoric and early historical archaeology of central India and the northern Deccan only five years back' says Dr Ghosh in *Indian Archaeology*, 1954-5. 'Persistent field-work has now brought to light a distinct sequence of cultures in this region from a chalcolithic age . . . down to the period when the Northern Black Polished Ware came into vogue'.

All success to this fine venture and to the work of the Department of Archaeology in India which it records and reflects.

RADIO-CARBON DATING AND ARCHAEOLOGY

Sir Mortimer Wheeler has recently reminded us (*ANTIQUITY*, 1958, 4) of how Lord Cherwell told him and Dr Crawford of the C 14 method of dating, and how this scoop made the *ANTIQUITY* editorial for September 1949 which began with the words, 'A discovery has been made in America which may be of the greatest use to archaeologists'. That discovery had first been made public in England in *Science Today* in March 1949, but the first archaeological radio-carbon date was published in a letter from Dr G. H. S. Bushnell (*ANTIQUITY*, 1949, 229). Nearly a decade has passed since the discovery by Prof. Willard Libby and his colleagues at the Institute for Nuclear Studies in the University of Chicago of the principle of radio-carbon dating, and these years have seen the development in America and Europe of special plants to produce the dates, and the determination and publication of results which amply justify the claim that the technique is 'of the greatest use to archaeologists'.

In England the first C 14 dates came from the plant in the Davy-Faraday Laboratory of the Royal Institution started six years ago in collaboration with Prof. F. E. Zeuner of the University of London Institute of Archaeology. This plant was a research project designed to come to an end in the autumn of 1958, and dating work at the Royal Institution is thus finishing. Meanwhile C 14 plants have been established in the British Museum, in the Sub-Department of Quaternary Research at Cambridge, and one is in process of construction at the National Physical Laboratory. The first results from the Cambridge plant, together with a description of its installation and working are published in a paper entitled 'Radio-Carbon Dating and Post-Glacial Vegetational History: Scaleby Moss' by H. Godwin, D. Walker and E. H. Willis in *Proceedings of the Royal Society*, B, volume 147, 1957, 352. And now there comes news of a new C 14 plant set up in Trinity College, Dublin, using a new technique of methanol in a liquid scintillation counter.

But, together with these developments, the last few years have produced some archaeological doubters, and some who, if not Carbon 14 agnostics, have wondered where this scientific dating is taking historians. In the first place there seemed to be no single and certain channel for the publication of radio-carbon dates, and even the most assiduous compiler of lists published in *Science* and elsewhere would meet someone who had just heard another new Carbon 14 date or had a gestetnered sheet of newer dates. Secondly, while many believed the physical principles to be sound, they began to wonder whether individual performance in separate laboratories all over the world was uniform. And lastly some dates began to appear which seemed to upset very considerably the current archaeological chronology built up, admittedly on exiguous data and unreliable premises, by pre-Carbon 14 techniques. Nowhere were these dates more surprising than in the Neolithic of Jericho and the Danube. It is not surprising that many archaeologists have been asking, 'is all well with this wonderful new technique?'

The first objection has now been met. At a conference on Radio-Carbon Dating held at

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Andover, Massachusetts in October 1956 there was formed a Committee for Distribution of Radio-Carbon Dates, and this committee has recently sent round circulars about the service organization it has now achieved. It is producing a complete description of all dated samples 'on punched cards coded for sorting into universally useful categories'. These will be distributed to subscribers in the form of a 'unique set of cards having complete information otherwise next to impossible to assemble'. The intention is to distribute to each subscriber 5,000 cards during the next five years including 3,000 already available. The necessary coding and sorting equipment and index guides will be included and we are told that 'using your own codes you may add more than 79,000 categories specifically related to your research'. All this is breath-taking. Is chronology in prehistory now going to be reduced to a card index? Shall we soon be at a time when, instead of arguing typologies and synchronisms, we merely insert our sorting needle in pre-notched cards 'in one simple motion', as the committee describes it? However that may be, it is clear that no reputable institution concerned with the advancement of archaeology by teaching or research can afford to be without these cards. The address of the Committee is the R. S. Peabody Foundation, Box 71, Andover, Massachusetts. The total cost of these 5,000 cards (if enough people subscribe) is 250 American dollars.

All the dates in prehistory for £100 seems cheap at the price, but will all the dates be right? The doubts of some have been heightened by several recent pronouncements. In *Nature* for 1 December, 1956, Walter Elsasser of Utah together with E. P. Ney and J. R. Winckler of Minnesota referred to a possible source of error, namely the variation in the intensity of cosmic-ray formation, and this was based on the work of the Thelliers on remanent magnetism referred to elsewhere in this journal (p. 167). Prof. Zeuner has referred to the possibility that the carbon content of a sample can be washed out by alkalis with the result that the Carbon 14 age is higher than it should be. And in a recent article entitled 'Zur Anwendbarkeit der C 14—Datierung in der Vorgeschichtsforschung' (*Germania*, 1957, 102-10), Milošević subjects the whole method to searching criticism and concludes, 'a very accurate re-examination and over-hauling is absolutely necessary'. Many of these difficulties will be being discussed at Hamburg when this number of ANTIQUITY is published; meanwhile Mr Barker, who is in charge of the British Museum C 14 laboratory, has agreed to write for ANTIQUITY a comment on the criticisms of the method made by Elsasser, Zeuner, Milošević and others.

And new dates pour in as we write. Tom Harrison reports (*Nature*, 1958, 792) that in the Niah Great Cave in West Borneo charcoal from 100 in. down gave, according to Prof. de Vries's laboratory at the University of Groningen, a date of $39,600 \pm 1,000$ years, and that the tools occurring between this level and a previous Carbon 14 date of $32,630 \pm 700$ (*Man.*, 1957, 211) are uniface choppers with hammer marks on the butt which closely parallel some from the Soan of north-west India. Charcoal from the large wall constructions hitherto of uncertain date at Le Hague-Dike, Beaumont, in the Cotentin peninsula, give dates of $2,855 \pm 75$ and $2,710 \pm 65$ (H. G. Ostlund, *Science*, 1957, 493): these earthworks, thought by some to belong to the Viking conquest of Normandy, are Early Iron Age in date. And M. Giot has recently published in the *Bulletin de la Société Préhistorique Française* a Carbon 14 date for the wood from the floor of a dagger-grave at Kervingar, Plouarzel in Finistère: it is $1,350 \pm 50$ years B.C. With these and other dates coming in daily, the chronological exactness of the prehistoric record is almost outpacing the prehistoric chronologists. When we all have our cards and our needles, a silent revolution in prehistory will have taken place.

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TRAVEL SCHOLARSHIP IN MEDITERRANEAN ARCHAEOLOGY

The Society for Hellenic Travel is sponsoring an archaeological cruise in the Mediterranean in the first fortnight of April 1959. It will visit Monaco, Filitosa in Corsica, Pompeii and Herculaneum, Piazza Armerina, Syracuse, Mistra, Crete, Mycenae, Tiryns, the Cyclades, Athens, Ravenna and Venice; and is being planned by Prof. Stuart Piggott, Lord William Taylour, Mr Michael Gough, and Dr Glyn Daniel, all of whom will accompany the cruise as guide-lecturers. The Society is offering one free place for a student member interested in Mediterranean archaeology and this will take the form of a scholarship providing free travel, accommodation and all meals and excursions from London back to London. The scholarship is intended for men and women between the ages of 16 and 21 years who are in the sixth forms of schools, the first year of their University studies, or suspended between school and University for reasons of military or other service. It will be awarded on the basis of an essay submitted by 15 January, 1959, which should be not less than 3,000 words in length and not more than 7,000 words and should deal with any aspect of Mediterranean archaeology. The essay should be typewritten (or written in a clear or legible hand) and may be illustrated with photographs, diagrams and drawings. It should not have been published previously and should be accompanied by a certificate from a schoolmaster or tutor attesting that it is the bona fide work of the entrant. The successful candidate or two or more candidates who have been short-listed, may be invited to attend an interview in London. If the successful candidate is unable to go on the spring cruise he or she may transfer the free place to a later cruise sponsored in the summer of 1959 by the Society for Hellenic Travel.

The subscription to the Society for full time students is 5s. a year, and full details may be obtained from the Assistant Honorary Secretary, Miss M. W. McCall, 4 Argyll Mansions, Chichele Road, London, N.W.2, to whom information of intention of competing for this Travel Scholarship should be sent by 15 November, 1958, and to whom the essays should be sent. Miss McCall will be happy to resolve any difficulties or obscurities in this scheme (which, if successful, the Society proposes to make an annual event), and her decision, in conjunction with the President of the Society, and Dr Daniel, a Vice-President, will be binding in any interpretation of it. The essays will be judged by a panel of archaeologists drawn from the officials and guest-lecturers, and their decision will be final.

THE PITT-RIVERS MUSEUM, FARNHAM, DORSET

The Pitt-Rivers Museum was founded in 1880 by Colonel Augustus Henry Lane Fox, F.R.S. (born 1827), who, in that year, inherited the estates of his great-uncle, George Pitt, second baron Rivers, and assumed the name of Pitt-Rivers. Since 1927 the Museum has been maintained and extended by General Pitt-Rivers's grandson, Mr George Pitt-Rivers. The Museum has been closed since the death, at the end of last year, of its curator, Major Joyce, whose kindness to visitors so many will remember. The re-organized Museum was opened on 1 July; much of the work of re-organization has fallen on Mrs Joyce, now the resident custodian since her husband's death. Of the re-opening and re-organization, Mr Hugh de S. Shortt writes:

The re-opening of the Pitt-Rivers Museum, on 1 July, was marked by something of the liberal hospitality of the man whose rich and varied collections are housed in this converted Victorian school of an out-of-the-way Dorset village. A very good luncheon was provided for a great number of guests by Captain Pitt-Rivers, the present owner, and coaches had been arranged to take London visitors from and to their trains.

Those who knew the museum well may have felt some qualms about the changes which might have taken place since the beginning of the year, but if so, a walk round the galleries

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might have re-assured them. There has been no major upheaval; the system of illustrating British archaeology by the ethnography of other races is still there, and so are General Pitt-Rivers's superb models of his own excavations. There has been a judicious thinning of the ceramic collections and certain other over-crowded exhibits, but in this there can be no complaint, and indeed it is a policy which might be pursued as time allows in some of the remaining galleries.

In an opening, or should one say a re-opening address, Captain Pitt-Rivers outlined the origins and aims of the museum, one of the very few private museums that remain. He explained how the principles of typology, which first led his grandfather to the study of archaeology, were demonstrated in the museum. His discourse was at times abstruse but never lacked wit and humour. He ended with a plea, which was echoed by an appreciative audience, for a more generous government policy towards an institution maintained for the public good, at private expense, since its foundation.

Sir Mortimer Wheeler also spoke with wit, and with a deeply-felt admiration for a museum which embodied not only the labour, but also the personality, of its distinguished founder. He strongly defended the existence in a Dorset village of an outstanding collection of Benin bronzes, and he might have added Migration period jewellery or half a dozen other collections, which it is so much more exciting to find here than in a metropolis. Only the presence of a Purbeck marble abbot from Cerne Abbas might cause those versed in the principles of Diocesan Advisory Committees to raise an eyebrow. Sir Mortimer gave a warning against too much help from the Treasury, as such help was unlikely to come without attached strings, and he hoped that Captain Pitt-Rivers would carry on as long as he could without it. One had visions of a man with a life sentence being urged to serve as much as he could.

Sir Leonard Woolley, Sir Thomas Kendrick, Dr Harden and many other distinguished personalities of the archaeological and museum worlds were present, but the one living link with General Pitt-Rivers, the man who knew him and worked with him, Mr H. St George Gray, was not there. At the start of the ceremony a telegram announced that he and Mrs Gray had been involved in an accident and, though not seriously hurt, had to return to Martock. We wish them, the Pitt-Rivers Museum and those who work for it, many prosperous years.

THE UNIVERSITY OF LONDON: INSTITUTE OF ARCHAEOLOGY

The Institute of Archaeology of London, founded in 1937 by Sir Mortimer Wheeler, has been an accepted feature in the archaeological scene since that time and the comparative remoteness of its setting in Regent's Park did not prevent it from playing an active part in archaeology before and after the Second World War, first under Sir Mortimer, then under the late Prof. Gordon Childe.

The Institute is now established within the precinct of London University on the north side of Gordon Square (the actual address is 31-34, Gordon Square, W.C.1; telephone no. Euston 6052) within five minutes' walk of the Senate House, in a new building which was completed early in the year and was officially opened by Her Majesty Queen Elizabeth the Queen Mother, Chancellor of the University, on 29 April. Prof. W. F. Grimes, who succeeded Prof. Childe as Director of the Institute in October 1957, writes:

The Institute of Archaeology shares its new building with the Institute of Classical Studies (Director, Prof. E. G. Turner) which, with the Roman Society and the Hellenic Society, has also transferred from its quarters in Bedford Square. This close proximity of several organizations with similar or related interests should be beneficial both to the organizations themselves and to their users.

NOTES AND NEWS

The new building immeasurably increases the space available for the Institute's teaching and research activities. A feature of the Institute's work has always been its attention to the teaching of archaeological techniques, carried out as it was at Regent's Park in increasingly restricted conditions. The technical laboratories for the teaching of conservation take up part of the top (sixth) floor of the building: they consist of a small laboratory, a large restoration laboratory for pottery restoration and similar work, and a fully equipped metal laboratory. The photographic department, on the fourth floor, is laid out to facilitate practical teaching; it incorporates several dark rooms for students. The Department of Environmental Archaeology on the third floor is also fully equipped with laboratories and workrooms which provide for instruction and research in the natural sciences in their special bearing upon man and his activities.

The teaching departments are provided with seminar rooms fitted out with projection apparatus and with storage accommodation for teaching and research collections. The collection-storage arrangements are indeed a feature of the building. A system of standard racks, taking trays and other containers in a series of interchangeable sizes, has been installed in the extensive reserve storage-space in the basement and in seminar and research rooms, which allows for complete flexibility in the use of a very wide range of archaeological material. The method is economical of space and provides amply for future expansion on a basis which will not require to be changed as the teaching collections grow. Another feature of the building is a series of small research rooms which can be allotted as required to higher degree students and others whose requirements may include facilities for laying out research material in circumstances in which it can be left undisturbed if necessary for period at a time. The library is established on the first floor: here, too, expansion is possible on a scale that was out of the question in Regent's Park.

The ground floor is devoted to the administrative offices, a lecture hall seating about 120, and a vestibule which is intended to serve also as exhibition space. The Institute does not, of course, function as a museum in the ordinary sense, but it is hoped from time to time to stage here exhibitions of a specialized archaeological nature, the results of expeditions and the like, which cannot be provided for elsewhere.

No sensible person would regard the physical advantages conferred by this magnificent new building as in themselves a cause for self-satisfaction. A fine building is not a substitute for teaching well-done or research actively pursued; and the Institute is conscious of targets not yet achieved. In its spaciousness, however, the new building makes a number of developments possible that were ruled out before; in its siting it should lead to closer contacts with the rest of the University and make for the fuller use of the Institute and its facilities.

EXTRA-MURAL ARCHAEOLOGICAL TRAINING CENTRE, BIRMINGHAM

The opening on 7 June of the new Archaeological Training Centre at Wroxeter by Sir Mortimer Wheeler marked a significant stage in the development of the plans of the Department of Extra-Mural Studies of the University of Birmingham. Already over the last eight years there had been a gradual expansion in the teaching of archaeology to adult students at various centres in the West Midlands. Out of the original classes have emerged self-organized groups and local societies capable of carrying out programmes of field-work and excavation in their leisure time under the direction of the staff tutor. Experience has shown that evening lectures and private reading and study in the winter, with these various summer activities are not sufficient in themselves to instil the discipline and experience required for excavations of high standards. Intensive training can be given only under specially arranged conditions such as no normal excavation, usually with a time limit,

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can provide. The Wroxeter project has developed out of the valuable experience of the pioneer school at Great Casterton under the inspired direction of Dr P. Corder and organized by the University of Nottingham. The site of the Romano-British town of Wroxeter offers several advantages. There is plenty of space, there are buildings of various kinds, domestic and public, timber and stone. The complications of structural relationship and the vertical stratification in a depth of 12 to 15 ft. set problems in excavation, recording, drawing and interpretation from which the student can emerge with confidence yet humility. The courses are arranged at three levels, taking the student through the basic elements to a broader understanding of the main principles of archaeological techniques, emphasizing the fundamental importance of preparation of material for publication. Finally, each student is responsible for a piece of work brought to this ultimate stage.

The new Centre and the nearby hostel accommodation at Preston Montford are designed with the courses to help the amateur to equip him to carry out his own local work more expertly and so with a wider appreciation of the problems involved. The Foyle Centre consists of two buildings, one a lecture room which can also be used for drawing and study and the other for washing, marking and sorting pottery and small finds and includes also a darkroom and tool store. The number of students is limited to twenty-four, except for the advanced course of fifteen, and the staff will normally consist of two for direction and teaching and two for technical work. Only in this way can each student receive the requisite individual attention. A comprehensive library of excavation reports and background studies has been gradually amassed.

It remains to be seen what kind of impact this will have over the years but already very useful work is being done on the defences of Roman towns. Perhaps the greatest challenge comes from the rural sites. Aerial reconnaissance sponsored by the Department has led to the discovery of a large number of crop marks along the Severn and Avon valleys. In these areas our knowledge of prehistoric and Romano-British settlement is limited to a few casual finds. Work carefully planned and organized on a series of small-scale excavations would undoubtedly have the effect of revolutionizing our knowledge of the early development of these areas and help to explain similar phenomena in other parts of the country. The amateur can still play an important part in British Archaeology, the opportunities are very great and the enthusiasm already there, and with centres like Wroxeter the training in techniques and discipline can be acquired at a modest outlay.

GRAHAM WEBSTER

GORDON CHILDE MEMORIAL

A number of suggestions have been made that there should be some form of memorial to Professor Childe, and it is thought that many people who knew him would wish to help bring this about. The Committee of Management of the Institute of Archaeology has therefore decided to invite contributions to a memorial fund. Decisions on the exact form that the memorial should take have been left until the support forthcoming for it is more certainly known; at the present time the suggestions are that a memorial lecture might be instituted, or a fund established to provide grants in aid for foreign travel. It is thought that either proposal would have commended itself to Professor Childe, for with a sufficient endowment the Institute would be able amongst other things to maintain and strengthen just those links with foreign scholarship which he always had so much at heart. The final decision in this matter will in due course be communicated to subscribers; in the meantime, donations should be sent as soon as possible to: The Secretary, University of London Institute of Archaeology, 31-34, Gordon Square, London, W.C.1.