

Book Reviews

Lothal and the Indus Civilization. S. R. Rao. Foreword by Sir Mortimer Wheeler. xix + 215 pp., bibliography, 41 figures, 50 plates. New York: Asia Publishing House, 1973.

Reviewed by L. M. YOUNG, F.R.A.I.

Lothal, comprising a mound rising to a height of 3.5 m, as the present volume by S. R. Rao describes in detail, owes its importance to proximity to the sea. Situated at the head of the Gulf of Cambay in the province of Gujarat between the Bhogawo and Sabamati rivers, the site, then only 5 km from the sea, dominated the estuaries of the former. After four thousand years of silting, the sea has now receded several kilometers.

Briefly prefacing his exposition with a short recapitulation of the first discoveries that instigated the large-scale operations of Sir John Marshall (1922-33) and other subsequent archaeological investigations that were later extended to the mainland of Gujarat, culminating in 1954 with the discovery of Lothal by the author, Rao summarizes the salient features of the principal centers of the Indus civilization including Harappa and Mohenjo Daro.

Lothal is divided into two phases, the first period of which consists of four subphases (I, IIa-c, IIIa-b, and IVa-b), as is demonstrated in the author's meticulous section reproduced in an excellent plate (Pl. VIa). To the first belongs the formative village culture with a distinctive ceramic ware which Rao distinguishes as Micaceous Red, produced on a fast wheel. Their tool equipment consisted of chalcedony blades which, in the absence of any other implement, the author suggests may have been composite sickles. These early inhabitants of Lothal also knew the use of copper. Further modes of sophistication, including implements and weapons, cubical weights and pictographic seals, were introduced by the Harappans, given by Rao as ca. B.C. 2450, who infiltrated first as a colony and then by absorption as part of the Harappan domain.

Reconstruction on a massive artificial platform after a disastrous flood enabled Lothal to be developed into an industrial center with a township on the familiar Harappan gridiron pattern and a dockyard with hydraulic arrangements. Edifices were of unbaked or baked brick, and the bonding technique was employed. Use of kiln-fired brick was limited to baths, drains, and the more important structures such as the acropolis, which in this instance is enclosed within the walls of the town. Essentially rectangular in plan, Lothal measured 300 m from north to south, 400 m east to west, and was protected against floods by a wall of brick 13 m thick. Two other floods damaged the town but its prosperity remained unimpaired until it was brought to an end by a fourth flood of catastrophic proportions. This had far-reaching consequences in the Harappan area and initiated an epoch of decline and disintegration (Period B, subphase Va-b) dated 1900 B.C.-1600 B.C.

Using the radiocarbon date of 2010 B.C. for the termination of subphase IIIb as a basis, Rao fixes IIIa at 2200 B.C. and the beginning of phase IIa at 2350 B.C. This last period is not only the first wholly Harappan epoch at Lothal but is contemporary with the lowest level at Mohenjo Daro, which was excavated by Marshall. At the former site, the assigned dates for subphase II are sustained by datable objects of Sumerian origin such as disk beads of gold with axial tube and by the occurrence of the Reserved Slip ware also found in the Sargonid levels at Brak.

From archaeological reconstruction, particularly of artifacts relating to the arts and crafts, Rao recreates the type of society that prevailed in Lothal at the zenith of Harappan suzerainty. He envisages a class of rich merchants supported by artisans, including masons, smiths, seal

cutters, and potters. The last produced typical Harappan ceramic forms in the local red ware. Tools comprised the circular saw and a bronze drill with twisted grooves. Lapidaries processed semiprecious stones into beads, and these products and others, including cotton, reached the Euphrates valley, Egypt, and Bahrain. Harappan seals found at Babylon and other Mesopotamian sites have long been recognized and are noted by C. J. Gadd. That an extensive trade flourished is undoubted, and it is inevitable that Rao, and not for the first time, associates the Indus civilization with the enigmatic Dilmun, Magan, and Meluhha frequently referred to in the Sumerian and Akkadian tablets. The first is located on the shores of the Gulf of Oman, but it is the second of these places that the consensus generally associates with the Indus civilization. The texts imply, however, that Meluhha was within the reach of a military expedition from Mesopotamia, which makes this identification less likely. Furthermore, though Kramer has identified the former directly with the area of the Indus as it is represented in the Sumerian legends, this is a kind of equivalent to Paradise, rather than a trading entrepôt.

In the foregoing context Dilmun has been associated with the site of the Danish excavations at Bahrain. It is noteworthy that at both the latter site and Lothal there is evidence of a snake cult. Fire worship is exemplified at Lothal and Kalibangan by the existence of rectangular and circular enclosures suggestive of fire altars, religious traits that differ considerably from those at Harappa and Mohenjo Daro. The last two sites have yielded a large number of terracottas of females that Rao associates with the Mother-goddess, but their widespread, varied, and sometimes crude forms imply fecundity charms rather than the existence of a cult. Seal engravings depict a composite human bovine creature that has affinities with those shown on Sargonid gems to which a mythological significance has been ascribed. Others belonging to this Harappan iconography portray a male

horned deity identified with Pasupati or Siva, sometimes in association with trees. The rites practiced in Lothal and Kalibangan as well as at the latter two sites are regarded by Rao as presaging aspects of the Vedic religion.

Rao rejects the recent interpretations of the Indus script and proffers his own decipherment. He interprets the script as a composite syllabic-alphabetic writing pertaining to a pre-Vedic but Indo-European language that exhibits in its phonology features similar to Hittite and closer affinities to Sanskrit. Certain aspects of the foregoing for which Rao provides an analytical summary appear to elaborate the hypothesis of Hrozny, who, on the basis of its external resemblance to Hittite hieroglyphics, applied phonetical values to the Indus script.

Rao reviews the possible alternatives for the origin of the Indo-European civilization, ranging from the highland cultures of South Baluchstan favored by Fairservis, Piggott, De Cardi and more cautiously by Sir Mortimer Wheeler to the Amri-Nal, Kulli-Mehi, Kot-Diji, Sothi, and Kalibangan cultures stratigraphically attested to be pre-Harappan. However, the initiation of the Harappan civilization and its transition to an urbanized form cannot be demonstrated. As religion was only a secondary as well as an extremely diverse feature, it is likely that the Harappan industrialized society did not develop from a ceremonial center complex, but was a combination of several groups, some quite sophisticated. Basing his opinion on ethnic, religious and linguistic considerations, Rao regards that a large section of the foregoing was none other than the Asuras or the pre-Rigvedic Aryans.

Though this volume is a supplementary account of the author's excavations at Lothal that anticipates in some measure the official report, it has, as the foregoing paragraphs indicate, a wider application which enables the site to be placed within the context of the Indus civilization as a whole. The presentation is impressive and is well sustained by a number of excellent figures and plates.

The Settlement of Polynesia: A Computer Simulation. Michael Levison, R. Gerald Ward, and John W. Webb, with the assistance of Trevor I. Fenner and W. Alan Sentance. Minneapolis: University of Minnesota Press, 1973. vi, 137 pp., 39 maps, 11 tables, 3 appendices, bibliography, index. \$10.75 (cloth).

Reviewed by ROSS H. CORDY, *University of Hawaii*

The questions of how and from where each Polynesian island group was settled have long been the foci of scholars. This volume marks a large step forward in attempting to answer these questions. The authors note clearly that two rival hypotheses (two-way navigated voyages versus accidental drift or one-way navigated voyages) have been the focus of recent arguments with the question whether sailing technology was adequate for returning being vital. They present an unusually clear review of attempts to test these hypotheses. They note that because historical cases are few and information about technology is incomplete (historical cases do not note failure frequencies and knowledge of technology, although increasing, is yet incomplete for long-distance circumstances), what is known may not be applicable to precontact conditions. On this basis these test approaches cannot evaluate the hypotheses. Also, the authors consider traditional data unreliable for evaluation. Archaeological-linguistic data showing two-way contact and simulation of contact processes (followed by comparison to the archaeological-linguistic data) are suggested as the two viable testing approaches. The authors choose the later approach and in this volume look mainly at the accidental drift hypothesis—simulating voyages to find the probabilities of Polynesia having been settled entirely by drift.

I strongly agree with reviewers in *Science* (1974, v. 182: 1012) and the *Annals of the American Association of Geographers* (1974: 456-457) that the authors' simulation is an extremely detailed and impressive one which carefully considers parameters affecting course and survival (e.g., wind, currents, course when lost, technology and resulting distances per day, chances on length of survival, sighting conditions) and rather unusually discusses assumptions and data weaknesses. The authors use sixty-two starting points in their main experiment to simulate 46,848 voyages (having two drifts per day per 366-day year for each starting point). The inclusion of additional experiments (ca. 50,000 more simulated voyages allowing for monthly variation, possible past difference in winds and currents, and the total range of

sources for certain islands) to check their main experiments further strengthens their analysis.

Their results have immense impact on the hypotheses noted earlier. They find the chances of entry into Polynesia by drift extremely slight, as are those of entry into Eastern Polynesia from Western Polynesia and settlement of Hawaii, Easter, and New Zealand, thus suggesting the drift portion of the one-way hypothesis is not viable as an explanation for these occurrences. Secondly, they find the drift hypothesis viable for explaining settlement of the Outliers (see their 1973 *JPS* article, 82[4]: 330-342) and internal settlement of Western Polynesia and central Eastern Polynesia. (One might also add that the drift results seem viable for explaining settlement within Eastern Micronesia, much in line with linguists' hypotheses).

Perhaps more important is their inclusion of an additional experiment which simulates one-way navigated voyages from eleven starting points using a fixed-course direction and assuming that vessels could sail 90° into the wind. Results indicate that on certain courses all islands and the American coast could be successfully reached with limited navigational skill. This makes the concern over navigational skills minor—a vital point. It also makes either one-way or two-way voyages possible. Further evaluation of these hypotheses seems possible in two ways. One-way and two-way navigated voyages between more island groups could be simulated. This would refine the competing hypotheses in giving probabilities of the likelihood of one-way or two-way voyaging between islands. As an example, the authors' simulated one-way voyages due east from Rosé Island (Samoa) yield probabilities of directly reaching the Northern Cooks, Southern Line Islands, Society Islands, Tuamotus, and Marquesas of 3%, 11.6%, 8.3%, 6%, and 6.8%, respectively. This provides a probability hypothesis of one-way navigated settlement of Eastern Polynesia from one island in Samoa (using one course). Once these expected hypotheses based on simulation were formed, they could be evaluated with archaeological (e.g., trace element analyses of stone material, detailed stylistic taxonomies of artifacts) and/or

linguistic data. As it is, archaeologists and linguists have evaluated the competing hypotheses in but a few places (e.g., possible two-way voyaging in Western Polynesia as seen linguistically). This is due to the often-noted fact that in most cases very little is known of early archaeological data and also, in my view, to the use of generalized artifact taxonomies. Evaluation can be continued by this slow means or can be made more rapid, with simulation giving a detailed expected hypothesis to be analyzed at crucial locations by archaeologists and linguists. It may be found that the earliest settlement in Eastern Polynesia was in the Northern Cooks.

In sum, this volume is vital to those interested in settlement sources and how settlement occurred. I have just a few complaints. One is that the authors were too concerned with the island group level. In the long run, it may be that analysis at the specific island level or below may be more vital, for some may want to study societies and not culture areas as the source unit, and few early societies in Polynesia can be conceived as occupying an entire island group. However, the authors do discuss briefly specific island data and note that the computer printed out specific island data, and presumably this could

be had for the asking. (The maps in Appendix 2 show only patterns and not probabilities, and thus are not totally useful.) Further, analysis of the drift paths between island groups itself is not detailed enough. All probability links should be clearly stated for the detailed expected hypotheses. The maps presented (35-37) are unclear in this respect, for they present successive additions of probability patterns and do not map each probability class's links separately.

As a final note, I must agree with two points the reviewer in *Science* makes. One, the truly important analysis of Polynesia seems to be how and why Polynesians adapted to their environments. Tracing settlement sources is only a small aspect of such an analysis, and yet it has received a great amount of attention from scholars. It seems equal attention should, as well, be focused on other aspects of Polynesian cultural adaptation. Second, this volume clearly illustrates the value of simulation in forming refined probabilistic hypotheses which can be evaluated with observed (e.g., archaeological) data. I would strongly suggest such simulations now be applied to the other vital questions of how and why Polynesians adapted to their respective environments.

The Pacific Islanders. William Howells. London: Weidenfeld & Nicolson, 1973. xvi + 299 pp., 31 plates, 14 maps, 6 figures, index. U.K. £5.00 (cloth).

Reviewed by MICHAEL PIETRUSEWSKY, *University of Hawaii*

The Pacific Islanders is the second published volume in a series (Peoples of the World, edited by Sonia Cole) which plans to describe the living peoples of the world from the viewpoint of biological origins and development. This task, applied to the Pacific, is of no small proportions if one considers the mere physical enormity of the area and the cultural diversity which is expressed in each of its regional entities: Polynesia, Micronesia, Melanesia, Australia, and Indonesia (including the Philippines and Formosa), whose racial histories and origins have been inexorably entwined commencing perhaps 50,000 B.C. The author has put together a unique account, synthesizing a large portion of the most recent evidence available primarily from archaeology, linguistics, and physical anthropology. He presents, in the opinion of the reviewer, a feasible reconstruction of the biological origins of Pacific populations based on what is presently known from each of these disciplines. Because any such

reconstruction and interpretation of the evidence is not without some element of subjectiveness, some of the information contained in *The Pacific Islanders* will undoubtedly generate both positive and negative reactions from various students of Pacific Island studies; the most critical responses, perhaps, will be from those whose own area of specialization is being summarized. For example, as a student of physical anthropology, I tend to be more critical of the evidence being reviewed from this field, while summaries of archaeological and linguistic research seemed less problematic. While such reactions to a book of this scope are inevitable, it is hoped that any controversy will promote a continuation of hypothesis-testing research among the various disciplines concerned with Pacific Island studies rather than create a needless exchange of arguments in the literature.

After a brief synopsis (chap. 2) of Pacific geography, census estimates of aboriginal

populations, and the broad features of Oceanic culture, two chapters (3 and 4) are devoted to the physical characteristics of Pacific populations. Chapter 3 summarizes the anthroposcopic (e.g., skin and hair features) and anthropometric features of Pacific Islanders. In dealing with the latter, the author spares his reader the tedious reiteration of over a century's worth of osteological and somatological investigations of Pacific populations (studies whose conclusions are for the most part based on outmoded methods) by summarizing a recent study of his own (Howells 1970). This study conveniently organizes and interprets objectively much of this older data through the application of a multivariate or principal component analysis to seven anthropometric measures for 151 Pacific populations (Indonesia excluded). A similar analysis is performed using seventy skull measurements recorded on 25 world populations. Together these analyses point to a basic distinctiveness of Polynesian, Australian, and Melanesian populations, the last also containing samples from Micronesia. Further implied in these results is evidence which refutes the long-held notion that Melanesians were derived from African populations, an affirmation that, though certain relationships exist between Melanesia and Australia, they are not a single population, that there is a basic affiliation of Pacific and Asian populations, and that, in the author's opinion, originally no more than two basic populations ever entered and settled the Pacific.

The distribution of blood antigen types, serum proteins, blood enzymes, and cerumen (ear wax) among Pacific populations is presented in chapter 4. Agreeing with the majority of workers in this field, the author concludes that the distribution of these genetic marker systems offers very little information concerning the origin of Pacific populations and that genetic drift adequately accounts for the absence of certain alleles among various island groups.

Reflecting, in large part, the enormous amount of activity in this field in recent years, Pacific languages are given in-depth treatment in chapter 5. Reconstructions based on results obtained through use of lexicostatistics and glottochronology are later incorporated into the author's own reconstructions of Pacific prehistory.

The major synthesis tracing the origins of Pacific populations, which are grouped into three regions—Australia and Tasmania, Melanesia and Indonesia, and Polynesia and Micronesia—occurs in the next three chapters. Evidence from

prehistory and other sources (e.g., geography and paleontology) are added to the data already reviewed from linguistics and physical anthropology. In these chapters the physical characteristics of living and deceased human populations are discussed as a basis for recognizing the internal organization of these populations and specifically for tracing their historical-biological development. Some older theories (based primarily on data from physical anthropology) concerning the origins of various groups of Pacific Islanders, such as the tri-hybrid theory formulated by Birdsell to explain the initial peopling of Australia, are reconsidered in view of more recent findings and, as in this example, are laid to rest. With a surprising degree of plausible detail, the author is further able to trace the human development in each region against the background of accompanying geological changes (i.e., changing sea levels and land mass dimensions) and the distribution patterns of flora and fauna. These accounts are greatly enhanced by the author's use of the terms Sundaland, Sahulland, and Wallacea, zoogeographical regions which have been defined in terms of past conditions. Other terms such as "Old Melanesia" (supposed homeland of Melanesians in Sundaland and Philippines) and "Hoabinhia" (post-Pleistocene cultures of Southeast Asia), while less clear as to their exact geographical boundaries, help the understanding of events taking place in and surrounding the speculated homeland of all Pacific Islanders in late Pleistocene times.

Despite the relatively recent dates attributed to the initial peopling of Micronesia and Polynesia compared with other parts of Oceania, countless problems remain to be settled concerning the origins of these Pacific groups. While there is major consensus among various lines of research that the immediate origins of these populations lie in the Fiji-Tonga area at about 1500 B.C., the events just prior to this initial settlement are still far from being fully understood. Two routes which students of prehistory have long regarded as the possible alternatives taken by the precursors of Polynesians (Pre-Polynesians) are the Micronesian and northern Melanesian routes. While the majority of linguists and archaeologists favor the latter, citing eastern Melanesia as a specific center of origin, the author decidedly casts his vote in favour of the Micronesian route. The major evidence cited includes similarities in the archaeological record, such as certain parallels in reef atoll subsistence patterns between Tonga and Micronesia, and the enormous physical and genetic dissimilarities

between eastern Melanesian and Polynesian populations. Once having made his choice, the author presents a detailed reconstruction of the hypothetical events which he believes ultimately brought Polynesians to Fiji and Tonga, where they developed in isolation prior to expanding into the region they occupied when European explorers first sighted them. Projecting farther back in time, the author proposes another fairly detailed set of events to account for what he refers to as the "pre-Polynesian phenomenon" which helps to explain the existence of Polynesian-like populations farther west in Melanesia (e.g., New Britain and New Guinea). These groups, among other things, were making Lapita pottery at a period later than the earliest known settlements in western Polynesia and some of them have dialects and physiques approaching those of "true Polynesians."

In sum, though in intent it goes far beyond this, *The Pacific Islanders* is a book packed with a lot of information (much of it very recent) describing the language, culture, physical attributes, and prehistory of Oceanic populations. The author's forte lies in his skillfully assembling the most pertinent information from several fields of anthropology which relates to the origins and emergence of these populations. His style of writing is both delightful and readily comprehensible to all, from the most advanced student of Oceania to the interested layperson. The frequent use of maps diagramming the finer points of the reconstructed migration routes adds significantly to the clarity of the text. Aside from a few typographical errors, the fine quality printing and the photographs which accompany the text make this a uniquely valuable, handsome, and readable volume on Pacific anthropology, at a very modest price.

Early Hawaiians. An Initial Study of Skeletal Remains from Mokapu, Oahu. Charles E. Snow. Lexington: The University Press of Kentucky, 1974. 179 pp., 76 figures, 31 tables, 5 appendices, index. U.S.\$16.75.

Reviewed by MICHAEL PIETRUSEWSKY, *University of Hawaii*

Professor Snow began his study of the enormous collection of human skeletal remains from Mokapu, Oahu, Hawaiian Islands, in 1951. The collection, comprising approximately 1171 individuals, is held in the Bernice P. Bishop Museum, Honolulu. The author continued these studies intermittently until 1957 when, after a full year's residence at the museum in 1956, he had finished collection of all data. *Early Hawaiians*, posthumously published, is the long-awaited result of this preliminary investigation, brought to fruition after more than two decades through the efforts of the author's widow and surviving close associates who readied the author's original manuscript for publication. In this very attractive volume, which contains many fine photographs, the skeletal and dental characteristics of these early Hawaiians are described in considerable detail, including observations on bone and tooth pathology, as well as some of the sample's vital statistics (age, sex, etc.). While the volume is primarily of interest to students of physical anthropology, the author offers some insights into the appearance of living pre-Cook Hawaiians and the nature of some of their cultural practices, information which will be of interest to students of Hawaiiiana and the public in general. Five

reports contributed separately, which deal with certain aspects of the larger osteological-odontological study, the archaeology of the burial area, the diet, and some cultural practices of early Hawaiians, are appended to the main text. These reports, written by various specialists, will be briefly reviewed along with the main work.

The main text consists of a 77-page narrative summary of the significant findings of the study following by 50 pages of tables. The latter summarize vital statistics, metrical and non-metrical observations of skeletal and dental variation, and some comparative material. The narrative portion is divided into five sections: Introduction, Cranium, Post-cranial Skeleton, Pathology, and Conclusions. The history and objectives of the study, methodology (methods of determining age and sex and how the measurements were taken), census data, and a short synopsis are contained in the Introduction. All together, 162 different measurements and a great many nonmetrical observations, which comprise the "raw" data of this report, were recorded on these remains.

Some of the more important features of Hawaiian cranial and dental morphology (metric

and nonmetric) are discussed in the section dealing with the cranium. Cranial measurements and indices are summarized univariately and are compared with several additional samples of crania from Polynesia. Uniformity of cranial morphology, statistically substantiated through sigma ratio, F-test, and standard deviation measures, is cited by the author as the main evidence for claiming that the Mokapu sample represents an inbred population isolated through time. The author states (p. 17) that he is aware of the limitations of typological classification, a procedure now considered invalid and outmoded. However, his adoption of this method to type each of the Mokapu skulls signifies his reluctance to abandon the procedure as a means of describing morphological variation. Perhaps even more misleading is the depiction (Fig. 14) found on the following page which purportedly illustrates the racial composition (Hawaiian, mixed-Hawaiian, White, Negroid, Australoid, etc.) of the Mokapu population. This diagram conveys very little about the morphological variation found among early Hawaiians, including the Mokapu sample, and at the same time strongly implies a rather serious misrepresentation of the historical-biological provenience of the population and its relationship to other human populations.

One conspicuous feature noted in these remains is the evidence for head-shaping in approximately 44 percent of the adult and subadult crania. These are characterized by varying degrees of frontal and occipital flattening. Curiously, no attempt was made to analyze these two categories of skulls separately, the quantitative summaries of metrical and non-metrical cranial variation presented being based on a combined sample of deformed and undeformed specimens. Two other unusual features of the Mokapu skulls are the frequent occurrence of the so-called rocker jaw condition (mandibles which by virtue of rounded inferior borders "rock" when they are set in motion) and anomalies of the nasal bone ranging from complete to partial absence of one or both of these paired bones.

On the whole, the Mokapu skulls of both sexes were found to be large broad-sided structures possessing narrow foreheads, large cheek bones, and conspicuous parietal eminences. Nasal, orbital, and facial dimensions were all of average proportions while the rocker jaw condition and prominent chins characterized the lower jaws.

The author's examination of teeth reveals that

early Hawaiians had large teeth, some dental decay, and little attrition. Additionally, shovel-shaped incisors, Carabelli's cusp, and absence of third molars were all common.

In the chapter dealing with the observations recorded on the post-cranial skeleton, the reader learns that sex differences in the hip and limb bones are marked while long bones of both sexes generally show considerable muscular development. The author interprets the latter as evidence for the very vigorous and strenuous life of these early Hawaiians. Likewise, many of the nonmetrical features of morphology (squatting facets, septal aperture, curvature of long bones, etc.) are interpreted as functional adaptations which again are related to these people's physically active way of life. Evidence for the use of human bones in the manufacture of tools and ornaments is presented by the finding of splintered and smashed human bones of several individuals revealing characteristic breakage and mutilation patterns.

Under pathology, osteoarthritis and osteophytosis of the vertebral column rank among the most prevalent disorders found. Healed broken bones, which apparently were expertly set by Hawaiian *kahunas*, were rarely found in these remains. Interestingly, Snow also notes that these early Hawaiians experienced more broken noses than limb bones and that scalp wounds were more common in females than in males. The occipital bones of twenty skulls were elevated unilaterally giving these skulls a lopsided appearance. Examples of *spina bifida* and other anomalies of the vertebral column, clubfoot, microcephaly, and left nasal and left facial asymmetries were also found in these remains.

In a short concluding chapter, the author stresses his main hypothesis that the Mokapu sample, on the basis of his observations, represents an isolated breeding group. Also included here, almost incidentally, is a classificatory scheme which categorizes a small portion of the recorded morphological variation into one of two categories: those which are primarily of genetic origin (e.g., nose bone anomalies, rocker jaw, clubfoot, etc.) and others which the author interprets as being largely acquired (e.g., squatting facets, skull deformation, etc.). In the final paragraphs, the author skirts the question of Hawaiian and Polynesian origins, conceding that the problem is too complicated and ambitious for the present study.

Appendix A: "Mokapu: Its Historical and Archaeological Past" by Robert N. Bowen,

formerly a graduate student at the University of Hawaii and a member of the staff of the Pacific Science Center, B. P. Bishop Museum, summarizes the long history and some of the more significant findings of the Mokapu excavations. With no other published account of the archaeology of the Mokapu burial site in existence, this summary stands as a unique record of the major archaeological findings of this important prehistoric Hawaiian site. Here the reader will find a fairly complete and comprehensive summary of the history of these excavations which began in 1912, how Hawaiians traditionally disposed of their dead, what the land divisions at Mokapu were, and what is known (or not known) concerning the chronology, artifact association, dating (radiocarbon and fluorine analysis), grave offerings, burial positioning, vandalization, and other aspects of the site's archaeological record. The author, who conducted separate excavations at the site in 1957, concludes that Mokapu was once an intensively occupied prehistoric (pre-1778) coastal settlement at which was practiced a basic marine and horticulture subsistence economy and which intermittently waged war.

Some of the more obvious and problematic specimens of pathology were sent to Drs. L. C. Kerley and E. R. Johnson at the Armed Forces Institute of Pathology, Washington, D.C., for possible diagnosis. Their findings appear in Appendix B: "Report on Pathological Specimens from Mokapu." Here, possible evidence for vertebral tuberculosis, hydrocephalus, congenital clubfoot (*talipes equinovarus*), bone neoplasms, and possible leukemia in the specimens they examined is discussed.

Appendix C: "An Oral Examination of the Early Hawaiians," by L. J. L. Lai, a dentist practicing in Honolulu at the time of Snow's study, gives the results of a separate study of the teeth and jaws of 261 adult skulls of the original Mokapu sample. This material duplicates much of what Snow presents in his more extensive study of a larger sample of the same.

Appendix D: "Hawaiian Folkways of Posture and Body Molding," by Mary K. Pukui is a reminiscent personal account of beliefs and preferences concerning posture, head-shaping, and body molding once current among the people

of Ka'u, southwestern Hawaii. Such practices seem to have been discontinued and largely forgotten among these and other present-day descendants of Hawaiians.

Appendix E: "The Influence of Foods and Food Habits Upon Stature and Teeth of Ancient Hawaiians," by Carey D. Miller, professor emeritus of Food and Nutrition of the University of Hawaii, is an interesting reconstruction, based on early written accounts and information supplied by modern-day informants, of the diet of early Hawaiians, especially those living in the Kaneohe, Kailua, and Heeia districts of Oahu, districts which include or adjoin the Mokapu area. The nutritive value of the diet of early Hawaiians, in spite of occasional shortages, was judged to be at a level sufficient to sustain good health.

The Mokapu collection is undoubtedly one of the largest collections of a prehistoric population from the Pacific now available to researchers. Because of its completeness—the presence of cranial and infracranial remains representing separate individuals, representation of both sexes and all age groups—it allows students of skeletal biology the opportunity to address a wide variety of possible problems. For Polynesia, it represents one of the few bodies of data available for the analysis, in considerable depth, of the skeletal and dental morphology of an indigenous population from this region of the world, one of the last to be inhabited by *Homo sapiens*. Furthermore, through comparisons of this sample with other well provenienced remains from other parts of the Pacific and the Asiatic mainland, reconstruction of the historical-biological relationships of this early Polynesian population can be envisaged. Snow's initial study of this important collection, though often uncritical and lacking in objectivity (primarily in the methods he chose to characterize variation) nonetheless appears to have achieved his major goal of providing a general summary of the nature of the skeletal and dental variation present in the remains; in addition, some of the sample's unique and distinctive features are noted. Future students of Polynesian physical anthropology will find such information useful in directing their own work.

The Art of Easter Island. Thor Heyerdahl: With a Foreword by Henri Lavachery. London: George Allen & Unwin Ltd, 1976. 349 pp., 63 figures, 335 plates, 2 maps. £21.00.

Reviewed by W. W. SCHUHMACHER, *Institut for Germansk Filologi, Copenhagen*

With this voluminous book, Thor Heyerdahl, who in recent years had been in the headlines because of his *Ra I* and *Ra II* expeditions, has returned to Easter Island. This return is symptomatic, I believe. Therefore a review within the framework of philosophy of science is given.

Within the life cycle of the "Heyerdahl School" or "Heyerdahl Tradition," the theory behind the Kon Tiki expedition in 1947, namely, the assumption of prehistoric Amerindian sea routes to Polynesia, can be defined as the "Pioneer Phase," characterized by a high willingness to take risks and a great openness to new points of view. Creativity, originality, and richness of ideas are the primary criteria used. The Norwegian Archaeological Expedition to Easter Island and the eastern Pacific in 1955-56 then started the "Building Phase," with a primary interest in problem solving. Solidity of and good use of methods are important criteria, as is the credibility of the knowledge (explanations, theories, etc.) produced. With this book, Heyerdahl—having passed the age of 60—has entered into the phase where the focus is upon internal criticism of the results obtained. The "Internal Criticism Phase" is characterized by a dominant interest in improving and refining the form and organization of the knowledge-

problems complexes that have been the output of the previous phase—in particular of the knowledge produced. Hence the willingness to take risks is extremely low, as is the appreciation of new ideas. The dominant criteria are rigor, precision, and transparency, that is, criteria primarily applicable to finished products. Heyerdahl is screening himself off from the outer world, from impulses from other research traditions except those that promise to provide tools useful for his endeavors. Although here and there some lacunae are filled in, the research program no longer furnishes the dynamic of the research process, whose problems now emanate mainly from the task of improving the products.

Often the successful tradition dominates the discipline in question. If a tradition succeeds in monopolizing the academic system, then it may even be identified with the discipline. A symptom of this state of affairs is revealed when the existence of any "schools" within the discipline is denied—a sure sign that the whole milieu is dominated by a single school. As for Heyerdahl, he is monopolized by his "School"; as for the "Non-Heyerdahlians," they are dominated by the tradition that the Polynesian settlement only was an extension of processes already going on in the *western Pacific*.

Archaeological Excavations at Sigatoka Dune Site, Fiji. Lawrence Birks. Bulletin of the Fiji Museum, no. 1. Suva: Fiji Times & Herald Ltd., 1973. 176 pp., bibliog., index, 50 plates, 51 figs. App. 1: Sand temper in prehistoric potsherds from the Sigatoka Dunes, Viti Levu, Fiji, by William R. Dickinson. No price listed (paper).

Reviewed by WILHELM G. SOLHEIM II, *University of Hawaii*

The Sigatoka Dune Site is the first in Oceania from which Lapita pottery, restorable to its original forms, has been recovered, and in some quantity. As it is generally agreed that the makers of the early Lapita pottery were the ancestors of the Polynesians, this pottery, found in widely scattered sites in Melanesia, is of major importance in establishing the immediate origins of the Polynesian peoples. It is of equal importance in our search for the more distant origins of the

Austronesian-speaking peoples who include not only the Polynesians and many Melanesians, but the Micronesians, tribal groups from Formosa, Filipinos, Indonesians and Malays, some groups in eastern Mainland Southeast Asia such as the Cham, and the Malagasy of Madagascar.

The report is straightforward, thorough, and easily understandable. Following an introduction which presents the importance of Lapita Ware and locations in Melanesia and Polynesia where

it has been found, and a description of the Sigatoka site (pp. 2-8), Birks presents an account of the excavation and the general contents of the three levels encountered (pp. 8-17). The major part of the book has to do with the pottery recovered, including a detailed description organized typologically by form and presented by level (pp. 17-46). Unfortunately there were very few artifacts recovered other than pottery, and extremely few features. Four stone adzes were recovered, three from the excavation and one on the surface; these are described and illustrated (pp. 47-48). A few other pieces of worked and unworked stone were found, and are briefly described and illustrated (p. 49, Pl. 49-50). A summary description and comparison is made of the pottery in text and tables (pp. 49-56) and of the stone (p. 57). Two radiocarbon dates are presented, from Level 1 (2460 ± 90 B.P. [Gak 946]) and from Level 2 (1720 ± 80 B.P. [Gak 1206]) (p. 57). Finally there are discussions of the relationship of the three levels to each other (pp. 57-68), the use of the site—most likely used as a camp for turtle-catching (p. 63)—and the decoration on the Level 1 pottery (pp. 64-67). The text is followed with well-done line drawings of many examples of all of the pottery types (pp. 73-150) and plates of the site and excavation, the more completely restored vessels and unusual sherds, and the

stone (pp. 151-174).

Birks makes no attempt at comparisons of the pottery from this site with pottery from other Lapita sites to investigate the wider relationships of the Lapita pottery, but he does use evidence from the pottery of other sites to examine the meanings of the pottery from the Sigatoka Dune Site.

This is a professional report from beginning to end. It will come as a surprise to readers of this report who do not know Birks to discover that he is an amateur archaeologist. He, and his wife Helen Birks, exemplify the best of a tradition found in New Zealand and a few other countries of serious amateur participation in archaeological fieldwork and analysis. I can only wish that such a tradition would develop throughout the world.

Before closing I should mention that an important companion work to this publication appeared in late 1973. *The Lapita Pottery Style of Fiji and Its Associations*, by S. M. Mead, Lawrence Birks, Helen Birks, and Elizabeth Shaw, appeared as a supplement to *The Journal of the Polynesian Society* (Memoir no. 38). Parts 1 and 2 (pp. 1-43) came out in *JPS* 82(3), and Parts 3 and 4 (44-98) appeared in *JPS* 82(4). The two publications, in conjunction, will be very useful for research on Lapita Pottery for many years to come.

Aboriginal Prehistory in New England. Isabel McBryde. Sydney, N.S.W.: Sydney University Press, 1974. 390 pp., tables, appendices, 94 figures, 67 plates, index. \$33.00 (cloth).

Reviewed by RICHARD A. GOULD, *University of Hawaii*

This volume represents the first attempt at a comprehensive archaeological survey of north-eastern New South Wales. As with so much of the archaeology being done in Australia, this book must be assessed in full recognition of the fact that stratigraphic research and systematic surveys have only begun there. McBryde's efforts to provide a fuller view of prehistoric Aboriginal behavior in Chapter 9 are laudable but should not obscure the fact that this book is concerned primarily with presenting basic time and space relationships and an overall assessment of the archaeological resources of this region. The book includes chapters on ceremonial sites (mainly stone arrangements and Bora rings), Aboriginal art (rock paintings and engravings but also including carved trees, an art genre unique to

this region), burial caves and other aspects of disposal of the dead, stone quarries and axe-grinding grooves, and reports on a series of important stratigraphic excavations (including the Seelands Rockshelter, Chambigne Rockshelter, Jacky's Creek Rockshelter, Whiteman Creek Rockshelter, Wombah Midden, the Bendemeer Rockshelters, and the Graman Rockshelters). Reports on some of these sites have appeared elsewhere, but here for the first time we have an effort to relate these individual sites into an overall regional sequence supported by radiocarbon dating, and further to relate these findings to results proposed earlier by McCarthy and Tindale.

Basic reporting of this kind is badly needed in Australia, and the author is to be commended

for her orderly and energetic approach to this ambitious undertaking. Several important archaeological "firsts" appear in this volume:

1. The first definite evidence for the practice of trepanning in Australia, noted on one of the skulls from the Blaxland Flat burial cave.

2. The earliest edge-ground axes found so far in eastern Australia, dating to around 1000 B.C. Although this does not rival the roughly 20,000 B.C. dates for edge-ground axes from Oenpelli in Arnhem Land, it does provide useful evidence when considering the spread of this technology throughout Australia.

3. A rare documented occurrence of backed blades containing traces of adhesive resin was found at Graman Site 4. This evidence lends support to the idea proposed by Mulvaney and others that these small tools were hafted when used.

4. The earliest dated occurrence of backed blades in Australia (3500 B.C. at Site 1, Graman, Area B).

The total sequence of human occupation described in this report extends back to roughly 4500 B.C. in the Clarence Valley (at Seelands) and to roughly 3500 B.C. on the western slopes of the Dividing Range (at Graman). At Seelands there is evidence of early flake and core tools with a high percentage of unifacially retouched pebbles. These latter artifacts, noted to be somewhat similar to pebble tools reported in Hoabinhian assemblages in Southeast Asia, occur in the earliest levels at Seelands but do not appear in sites on the northern tablelands or western slopes of the Dividing Range. Backed blades and other small tools vary among the different sites in terms of the date of first appearance and in their relative frequencies of occurrence. The author does a detailed job of documenting the variations in assemblages between sites at different periods, although she refrains from any ambitious anthropological attempts to interpret these differences, stating

only that "... we have an emerging picture of the regional culture sequence with hints of local variation and a dichotomy between coast and tablelands" (p. 337).

Given the fact that this volume represents an effort at reporting basic site data and deriving a regional sequence, one must also note the poor quality of many of the line drawings. Most of the map figures and drawings of stone artifacts are so poor as to be virtually worthless for purposes of comparison. This might be all right in a secondary source costing only a few dollars, but it is not really acceptable in a primary reference costing as much as this one does. The artist and/or publisher has let the author down badly here, and this is a defect that will be acutely felt by overseas readers who do not have ready access to the collections. The situation is redeemed somewhat by the photographs, which are of excellent quality and show some out-of-the-ordinary aspects of Aboriginal life in this region.

The significance of this volume rests not only with the fact that it is the first of its kind for this region, but also in the recognition that here the Aborigines were subjected early to the deleterious effects of European contact and largely succumbed before detailed observations of their traditional culture were possible. Unlike some other parts of Australia, where ethnography and ethnohistory provide a rich background for analysis, this region is relatively poor in ethnohistorical sources. The author has carefully searched out early documents and collections, and these are discussed throughout the volume, but in the last analysis scholars shall have to rely almost entirely upon archaeological reporting in order to understand the prehistory of this region. With the single exception of the line drawings mentioned above, Isabel McBryde's report does an admirable job of "opening up" this important region of Australia to archaeological interpretation and analysis.

The Pivot of the Four Quarters. Paul Wheatley. Edinburgh: Edinburgh University Press, 1971. xix + 608 pp. £7.00.

Reviewed by L. M. YOUNG, F.R.A.I.

The mode in which the institutional form generally defined as urbanization arose is intricate, and is interwoven with the functional processes dependent upon the responses to the challenges of the regional environment. Paul

Wheatley endeavors to examine the genesis and the evolutionary phases of the Chinese manifestation as it emerged in ancient North China during the first half of the 2nd millennium B.C. The earliest configurations of this kind are

attributed to the Shang, the oldest dynasty of which there is direct cognizance. According to the traditional versions contained in Chinese literature, whose principal sources are briefly summarized, some earlier ones are reputed to have preceded the Shang, namely the Hsia. These, however, and also the period before it, referred to as the reign of the Five Emperors, are still legendary, while the historicity of the Shang is indubitable and has been substantiated archaeologically.

It is this evidence to which Professor Wheatley—and anyone who desires to interpret urban origins, Wheatley's declared purpose—is forced to turn. Before considering the period relating to the Shang, he evaluates two Neolithic phases, one at Yang-shao in western Honan and the other near Lungshan Chen, situated in Shantung, which reveal developments that reflect advanced forms of settlement patterns including agriculture skills. Surprisingly enough, the economy was based not on rice, as publications frequently assert, but on a species of millet. Wheatley accepts the interpretation of An Chih-min that the latter succeeded the Yang-shao, suggesting that it developed within the periphery of the provinces of Honan, Shan-hsi, and Shen-hsi where the former emerged, the Lungshanoid phase diffusing from these areas through all of eastern and southern China.

In regard to this hypothesis it is certainly significant that at Miao-ti Kou near Shan Hsien, an assemblage with proto-Lungshanoid characteristics has been identified overlying a Yang-shao stratum. Others adhere to the alternative hypothesis that these two phases constitute two contemporary and distinct cultures. However, it is the structural form of the Lungshan society, as far as the archaeological evidence allows this to be envisaged, that exhibits the more definite trends of urbanization. Wheatley proposes that the significant archaeological investigations at Cheng Chou suggest that the Shang may have developed out of this phase, but he is unable to demonstrate the consummation of the urban process.

Though the basic techniques of the former period may be discernible in the Shang epoch, even to such practices as scapulimancy, presaging the inscribed dynastic oracular bones, this could equally have resulted from cultural adaptation. It cannot be ignored that sophisticated features differentiating the Shang period, such as the employment of a calendrical system, an advanced form of script concerning whose use Wheatley is more reserved than others, are not manifest in

the earlier simple village farming communities of its Neolithic predecessors. This strongly implies that the urbanized hierarchical society with its specialized institutions was imposed by a group whose traits had originated elsewhere.

Wheatley remarks on the massive ramparts of stamped earth surrounding some Lungshanoid settlements and on the presence of offensive weapons. These are regarded as indications of organized warfare which could have been impelled not so much through the formations of political groups within the neolithic communities as affirmed by the former. The ramparts and weapons represent the infringements of a hostile society whose refinements were gradually absorbed. The transition to urbanization in Mesopotamia is regarded by archaeologists as being distinguished by the appearance in the stratification layers of the elements of a script, which is considered to have been introduced by a fresh racial group, the Sumerians.

More detailed archaeological studies and the excavation of stratigraphical sequences might readjust this interpretation. Some have postulated that the dynastic epoch arose through improved methods of tillage combined with hydraulic irrigation, for which, however, there is no evidence except from Chinese mythology, which attributes to the Great Yu exploits of this nature. As Wheatley notes, throughout the Shang epoch there does not appear to have been any significant advance in agricultural technology. This and all other divisions of the latter were geared to satisfy the requirements of the aristocratic lineages dominating the ritual centers and the accoutrements of the military corps associated with these.

Wheatley sketches the political structure, territorial organization, and history of the Shang as it appears in the literary sources, concerning which a useful summary is included, and continues his exposition into the Chou era, which ancient Chinese history affirms as having overthrown the Shang. Wheatley questions the generally prevalent notion that during this period the Chou were nomadic barbarians inferior to the Shang. On the basis of some pertinent facts recently evaluated by Barnard, Wheatley advances the possibility that the Chou had developed from one of the regional Lungshanoid stages with a culture paralleling that of the Shang. This hypothesis, attributing to a proto-Chou an urbanized cultural complex equal if not superior to that of the Shang, still has to be substantiated by more archaeological evidence than so far has been put forward. To be fair,

Wheatley regards it as being extremely tentative. If these are to be treated as separate and contemporary entities, then both are more likely to have been differentiations of one cultural pattern combining the characteristics of the other two, rather than being the result of independent spontaneity as proposed by Wheatley.

To establish a comparative perspective and elicit the motivations which inspired urban grouping, the author extends the scope of the study to incorporate the other geographical regions where the primary stages of the process are to be discerned. The areas of generation include Mesopotamia, Egypt, the Indus valley, Mesoamerica, the central Andes, and south-western Nigeria. Other areas regarded as secondary centers are Crete, Etruria, Japan, and

Southeast Asia. Though discounting the possibilities of diffusion and preferring rather spontaneous development, Wheatley considers that all the urban centers discussed which consist of a complex array reflecting the same form but at different cultural levels exhibit the same characteristics in the earliest configuration, the ceremonial center, whose components are examined in conjunction with the relevant archaeological and ethnic data. This naturally compels the author to depend upon a large number of outside authorities, but well-documented bibliographical sources are included. The final chapters are devoted to the morphology of the Chinese city, which receives a detailed discussion particularly as a cosmo-magical symbol.

Myths and Legends of the Polynesians. Johannes G. Andersen. Rutland, Vermont and Tokyo: Charles Tuttle, 1969. 514 pp., 16 illustrations by Richard Wallwork.

Reviewed by L. M. YOUNG, *F.R.A.I.*

This volume, a reprint of a work originally published in 1928, gives an account of the mythology and beliefs of the Polynesians which from the time of Captain Cook were recorded by missionaries and government officials—Sir George Grey being particularly prominent—and, toward the latter part of the 19th and the beginning of the present century, by others such as Fornander, Alexander Shand, Gill, Handy, and Stimson. It is principally a representative proportion of these, including those that Johannes G. Andersen himself collected, which comprises the present volume.

The mythological narratives are prefaced with a short account of the people and the region they populated. Though Andersen proffers alternatives such as a possible derivation from America, he adopts the hypothesis which postulates that the Polynesians originally came from the Asian mainland. Unlike the Melanesians and the Micronesians, who exhibit a coalescence of varied elements, the Polynesians, as the author and many ethnologists have observed, retained much of their racial purity, being caucasoid in appearance with skins little darker than Europeans but with characteristics remotely suggesting mongoloid or negroid traits, which makes the original Polynesian type difficult to conjecture.

Andersen notes an abundance of homogeneous dialects, but does not divide these, as is now done, into two main language groups—eastern

and western. Similar patterns are apparent in the mythological cycles pertaining to the various centers depicting deities with different appellations having an ancestral significance in the particular area to which they are related, but performing functions that are very similar to those of neighboring ones. But though deities might change their roles and the myths and epics vary from one part of the region to another, navigational lore has a very obtrusive part throughout the narratives. Andersen pauses to give a brief description of Polynesian boats that touches both the differing types of canoe and their construction.

The selection of mythological, legendary, and allegorical narratives, in accounting for religious practices, customs, taboos, and other motifs, illustrates and illuminates the mode, characteristics, and nature of the people who in spite of their genealogical affinities appeared to have differed considerably. Other stories relate to the spirit world, in which appear ghouls, fairies, goblins, and dwarfs. The presence of heroes and heroines too, able to undergo all kinds of physical torments and yet survive, as Andersen relates, makes it apparent that similar notions were prevalent in Polynesia as elsewhere.

One of the more prominent heroic personages, who ranks more as a demigod than as a hero, is of course Maui. Of Maui, nurtured by Tama-nui-ki-te sea ancestor, numerous myths are related.

In one he is credited with having retarded the sun; in another, taking the guise of a fisher-god, a common motif in both Polynesia and Melanesia, he is portrayed as drawing islands as well as food from the depths, a concept that is frequently encountered in mythologies far removed from Polynesia which conceives of land emerging from the waters of chaos.

As in other mythological motifs there are several cosmogonic versions. Among those given by Andersen are the Manganian account which conceived of the universe as a hollow of a huge coconut whose interior, called Avaika, contained the underworld, and the separation of the sky and earth (Rangi and Papa) by Tan-muhata, like the Egyptian Shu, the Maori version that Sir George Grey recorded. The Marquesan Tangarao, ancestor of all the gods, who also has a place in Maori mythology and among the Society

Islanders as Taroa, fished up the earth from the ocean. In some versions this was Hawaika, to give the traditional fatherland of the Polynesians one of the many appellations applied to it. Considered by some as the ultimate quest or mirage, it is identified with various places in and even outside Oceania. The subject has been adequately debated by Percy Smith.

Andersen tells his narratives in a simple language intended as an approximation to the native vernacular. Some myths are still retained as chants, the form in which the priests and wise men had preserved them from the remotest antiquity. The volume contains a large amount of valuable data, a bibliography that is totally outmoded, a useful glossary and index, and is embellished with a number of illustrations. A little commentary would have brought the book more into line with modern concepts.

In the Beginning: An Introduction to Archaeology. Brian M. Fagan. Boston: Little, Brown and Company, 1972. 356 pp., 99 line drawings, 44 photographs, 5 tables, index.

Reviewed by RICHARD A. GOULD, *University of Hawaii*

As anyone currently teaching anthropology knows, a virtual torrent of textbooks has appeared during the last few years. Most of these texts are devoted mainly to cultural anthropology and, at best, treat archaeology only in an offhand manner. A few texts devoted exclusively to archaeology have also appeared, but these have tended to be of two kinds: those that strive for comprehensiveness and detail, and those that stress concepts and innovative approaches. In the case of the former, one tends to find the style a trifle ponderous, although these volumes do serve as useful references and source-books. In most cases these texts are heavy going for students coming to the field of archaeology for the first time. In the case of the latter, students often respond positively to the ingenuity of argument and, in some cases, the stylistic flair that these texts offer, but they are still left with large gaps in their archaeological background which the instructor is sometimes hard pressed to fill. To use a culinary metaphor, we have been presented up to now with the choice between a heavy meal and a light snack.

So I am glad to say that a text representing a happy compromise between these two extremes has now appeared in Brian Fagan's book, *In the Beginning*. This book is written in a literate but

unpretentious style, and it contains the best series of illustrative photographs and line drawings so far encountered by this reviewer in any archaeology textbook. The illustrations are abundant and well integrated with the text—a vital consideration for archaeologists, since so much of archaeology depends upon seeing as well as reading about stratigraphic profiles, pottery designs, stone artifacts, and other items of this nature. But perhaps most important of all is the author's skillful use of examples to present a balanced view of archaeology as a discipline that asks essentially humanistic questions and uses scientific methods to answer them. The elegance and precision of approach we normally associate with science are presented together with the fortuitous and even sometimes bumbling discoveries that are also a part of archaeology as it really is. So we find, for example, that the original uncovering of the Olsen-Chubbock bison kill site in Colorado did not result from any kind of systematic survey but was accidental. Yet, once found, the archaeological work done at this site followed a careful, systematic plan which resulted in a detailed reconstruction of ancient bison hunting and butchering practices on the Great Plains of North America. We are able to appreciate the

skills of those ancient hunters thanks to the scientifically controlled work of the archaeologists who excavated and reported this site. Like the other examples used throughout the book, the Olsen-Chubbock site represents a good choice by the author of a vivid and informative case of how archaeologists actually learn about prehistoric human behavior.

Of special interest are the last two chapters (written jointly with Linda Cordell) which briefly examine the history of ideas relating to archaeology from the 16th century to the present. Among other things, these chapters trace the

fluctuating "love-hate" relationship between archaeology and anthropology at different times and places, culminating in present-day concerns with systems-oriented, anthropologically based explanations. The discussion of these intellectual trends is comprehensive without being doctrinaire.

In short, this is the most satisfactory textbook for introductory archaeology courses seen so far by this reviewer. It fills the present need for a balanced, readable, and well illustrated text, and I predict that it will see wide use in college and university classes.

Book Notes

Peasant Society in Konku: A Study of Right and Left Subcastes in South India. Brenda E. F. Beck. Vancouver: University of British Columbia Press, 1972. 334 pp., 43 figures and maps, 10 plates, 35 tables, appendices, glossary of Tamil terms, bibliography, index, caste and subcaste index. Price not listed (cloth).

This volume is an ethnographic study of the relationship between social and territorial organization of castes in one section of South India based on nearly two years of fieldwork conducted primarily in the mid-1960s. The material is presented in a framework of territorial organization: the region, the subregion, the revenue village, the hamlet, and the individual household. Adherence to modern ethnographic standards is evident in the listing of informants, the description of conditions of fieldwork, and the presentation of quantitative data.

Kokogaku Ronso [Review of Archaeology]. Vol. 1. Mitsuo Kagawa, ed. Beppu: Société d'Archéologie de la Faculté des Lettres de l'Université de Beppu, 1973.

This is the first number of a new archaeological journal devoted primarily to Japanese research. The articles are written in Japanese (one in French), with contents listed in both Japanese and French. There are numerous line drawings and photographs.

Culture and Population: A Collection of Current Studies. Steven Polgar, ed. Cambridge, Mass.: Schenkman Publishing Co. for Carolina Population Center, 1971. 195 pp., article references. \$8.95 (cloth).

This volume is primarily concerned with population problems in peasant areas of the world today from an anthropological standpoint.

Most of the papers are based on primary field research and study areas including New Guinea, Thailand, India, and the Philippines.

China: A Resource and Curriculum Guide. Arlene Posner and Arne J. de Keijzer, eds. Chicago: University of Chicago Press, 1973. 277 pp., appendices. \$2.95 (paper).

This is intended as a resource volume for beginning programs and classes on the study of China. It includes brief discussions regarding teaching about China and annotated guides to audiovisual materials and an annotated bibliography. It is primarily oriented toward modern China; early Chinese history and prehistory are largely neglected.

Rangiroa: Parenté étendue, résidence et terres dans un atoll polynésien. Paul Ottino. Paris: Éditions Cujas, 1972. 530 pp., 37 figures and maps, appendices, glossary, bibliography, index. 80 F. (paper).

Ottino's work is a substantial ethnography emphasizing Polynesian kinship, social organization, and land tenure on the Tuamotuan atoll of Rangiroa.

Chinese Statelets and the Northern Barbarians in the Period 1400-300 B.C. Jaroslav Prusek. New York: Humanities Press, 1971. 312 pp., 4 maps, bibliographies (Western Languages, Russian, Chinese), index. \$19.00 (cloth).

This is a scholarly work of historical geography focused upon the problem of the location of the Ti tribes and their relationship to North Chinese culture. Archaeological materials are used as a source for much of the discussion but the orientation is more in the realm of traditional Sinology than in that of modern archaeology.

Early Buddhist Japan. J. Edward Kidder. Ancient Peoples and Places Series. New York: Praeger, 1972. 212 pp., 67 figures, 88 plates, bibliography, index. \$12.50 (cloth).

This volume is in the same format as others of the Ancient Peoples and Places Series, including Kidder's *Japan before Buddhism*. It covers the periods from Early Asuka through the Nara and is organized largely in terms of structures: fortifications, palaces, temples, burials, and monuments.

Hindu Gods of Peninsular Siam. Stanley J. O'Connor, Jr. Switzerland: Artibus Asiae, 1972. 76 pp., 2 maps, 16 plates, bibliography, index. \$12.50 (cloth).

This volume is a "view of the past as it can be recreated from a study of monumental statues of Hindu gods discovered in Peninsular Siam" (p. 9). It has a brief introduction to the history and the art of the isthmus which is followed by detailed descriptions and analyses of statues, primarily of Visnu, in regard to their style, dating, and historical implications.

Catalogue of Fossil Hominids, Part III: Americas, Asia, Australasia. Kenneth P. Oakley, Bernard G. Campbell, and Theya I. Molleson, eds. London: Trustees of the British Museum, 1975. 217 pp., 5 figures, 9 maps, 5 plates, index. Price not listed (paper).

This listing of major fossils is in an enumerated form in which information regarding eighteen topics is presented for each fossil, including place name, location, discovery, geological and archaeological contexts, age, documentation, and repository of fossils and moulds. Few illustrations are given in preference for a reference to the source(s) with the best illustrations. Maps showing find-spots are included.

Textiles of the Indonesian Archipelago. Garrett and Bronwen Solyom. Asian Studies at Hawaii, No. 10. Honolulu: The University Press of Hawaii, 1973. 50 pp., 32 plates (24 in color), bibliography, glossary. \$8.00 (paper).

This volume presents a brief introduction to Indonesian textiles and a descriptive catalog of textiles which were exhibited in Honolulu in 1973. Of the 60 textiles described, 49 are illustrated, most in color. The volume is not intended to be all inclusive, but a rather wide geographic range is represented.

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