This collection of eight essays on early state formation in Korea is written by Gina L. Barnes, who has conducted research in Korean archaeology in addition to her primary research focus on Japanese Island complex social development. This book covers roughly a millennium, from the early Iron Age until the beginning of the Unified Silla period in the seventh century A.D. In a series of chapters, she discusses historical and archaeological evidence of protohistoric and early historic societies on the Korean peninsula, as well as in its adjacent areas, from mostly an anthropological point of view.

The first chapter is entitled "Early Korean States: A Review of Historical Interpretations," which was first published in 1990. It summarizes the chronology and processes of state formation on the Korean peninsula, which would help an interested beginner to comprehend most of the basic facts and issues in early state formation in Korea. Seven case studies of states as recognized in the Korean historical literature, including Choson, Chin, Koguryo, Samhan, Kaya, Paekche, and Silla, are successively reviewed and evaluated against a framework of the Western anthropological theory of chiefdom—state transformation.

The second chapter, "Thoughts on Pre-State Cultural Development on the Korean Peninsula from an Archaeological Point of View," was first published in 1983, and thus is the earliest written paper among the eight papers in the volume. It summarizes major problems one would face in researching state origins in Korea, especially as a Western scholar. Some of the issues she found problematic twenty years ago may still exist, such as a lack of settlement pattern studies, while continuous archaeological excavation and discovery since then present new challenges in developing an interpretive framework to accommodate the new archaeological evidence.

The next two chapters deal with pottery technology in relation to state formation in Korea. In Chapter 3, Barnes discusses the development of stoneware technology in southern Korea, summarizing two contending schools in Korean archaeology in postulating the beginning of stoneware production in Korea. She declares her position of subscribing to the later dating system, which postulates the beginnings of stoneware production in the early third century. A more recent consensus among Korean scholars, however, seems to emphasize not only the high-firing technology for stoneware but also a new technology of pottery production in the early centuries in the Common Era, which included a reductive firing atmosphere, the use of a mechanical potter’s wheel, and the adoption of new pottery styles, as influenced by the Chinese ceramic technology primarily through the Lelang commandery. In the
following chapter, co-written by M. S. Tite and C. Doherty, fourteen samples of earthenware and stoneware pottery from southern Korea are analyzed and interpreted in relation to their firing technology. Barnes correctly points out the ambiguity in the current archaeological attributions of ceramic wares.

In Chapter 5, entitled “Discoveries of Iron Armour on the Korean Peninsula,” Barnes discusses the types of iron armor found in Korean tombs and carries out a sociological study of their occurrences in ranked burials. Because the majority of iron armor has been excavated from the Kaya tombs in southeastern Korea, she also addresses the relationship between Kaya armor on one hand and Koguryo and Yamato armor on the other.

In the following chapter, “Walled Sites in Three Kingdoms Society,” Barnes investigates the function of walled sites on the Korean peninsula and considers their roles in the political life of the early kingdoms. Most of the walled sites discussed in this chapter are from southern Korea and include not only those from the Three Kingdoms period, but also those from the United Silla, Koryo, and Choson periods.

Chapter 7, “Introducing Kaya History and Archaeology,” is one of the most comprehensive discussions in English of Kaya history and archaeology. Because written sources are scarce and inconsistent, archaeological data, mostly from the Kaya burials, are extensively used to interpret the political, social, and economic aspects of Kaya society. Barnes specifically discusses the origins, ethnicity, development, and geography of a number of Kaya chiefdoms, which never developed into a centralized statehood society.

In the final chapter, entitled “The Emergence and Expansion of Silla from an Archaeological Perspective,” the state formation of Silla is discussed with reference to new discoveries and research in Korean archaeology. This paper was originally presented in 1997, and thus reflects relatively well the most recent status of research on the subject. Barnes discusses the archaeology of the Kyongju Basin between the first and third centuries A.D., the typology and chronology of Silla tombs, the origins and expansion of Silla through archaeological evidence, and Silla’s capital development. She contends that Silla’s material culture roots are indistinguishable from Kaya and that the emergence of an elite lineage claiming separate Silla identity is reflected in the material culture from the fifth century onwards.

This ambitious volume on early state formation in Korea can be considered as one of the most important works in English in the field of Korean archaeology. Each paper is well furnished with a succinct summary and well-balanced critique of major works on the subject and shows the current status of scholarship at the time when each paper was written. It is almost impossible to find such comprehensive and impartial research even in Korean. This book is highly recommended not only for students of Korean archaeology and early history, but also for interested scholars of Japanese and Chinese studies.

It is understandable that this book deals mostly with archaeological data from the southern half of Korea, especially of southeastern Korea. I suppose the archaeology of Koguryo is discussed only briefly, because of the relative inaccessibility to archaeological data, which are scattered in northeast China and North Korea. New archaeological discoveries and research from the southwestern part of Korea in the past decade or so are hardly mentioned; even Korean scholars are facing the challenge of how to make sense of this new body of archaeological evidence. Two catalogs of recent special exhibitions (National Museum of Korea 1998, 1999) might be a helpful source of information for those who are interested in the new archaeological evidence that is not included in this volume. In addition, although it may be a minor point, I would like to remind Professor Barnes, and others who make the same and common mistake, that there is no A.D. 0 year.

As she hoped at the end of the preface, I am sure that Barnes’ research on early state formation in Korea will stimulate the in-
terest of the next generation of scholars in the still enigmatic aspects of early Korean state formation. I also hope that, following her path-breaking lead, more specific studies of each of the Three Kingdoms will appear in the not-so-distant future.


Reviewed by Simon Holdaway, University of Auckland

This work reports on archaeological fieldwork conducted on the small offshore islands of Sohano and Pororan over eight months in 1987, which formed the basis of Wickler’s doctoral dissertation. As is spelled out in Chapter 1, “Introduction and Research Design,” Wickler sets out to test the ceramic sequence proposed by Jim Specht in his 1969 doctoral dissertation, examine the temporal relationships between the pottery styles that Specht proposed, and document more fully the rather insubstantial evidence for Lapita occupation that Specht discovered. In addition, Wickler seeks to provide both a more detailed understanding of occupation and settlement before Lapita through the analysis of nonceramic artifacts and faunal remains.

Wickler’s discovery on Buka of preceramic occupations dating well back into the Pleistocene at Kili Cave is by now well known, but in the book full details of the excavation are provided together with an analysis of the artifacts and fauna. Details are also provided for excavations at Palandraku Cave, where a brief pre-Lapita occupation, dated to approximately 5000 B.P., is inferred. Both caves also provided faunal evidence. However, to document the ceramic sequence, Wickler turned away from the caves, concentrating instead on a series of coastal sites with limited occupation spans. Significantly, some of the sites used are reef deposits, not a site type investigated by Specht, but targeted because of discoveries in similar situations on Nissan and in the Bismarcks. Ceramics from these sites are analyzed using attributes that relate to temper and paste, as well as vessel form and decoration. Analyses aimed at determining the nature of exchange and interaction during and after Lapita are partly based on these pottery studies, but also are based on an analysis of obsidian artifacts. In studying these materials, Wickler is concerned with isolating long-term trends in the movement of pottery and obsidian, and similar long-term patterns are sought in the faunal evidence, particularly information related to the shift from hunting and gathering to agriculture.

The Prehistory of Buka is organized in a way similar to other regionally based Pacific archaeology studies. Chapter 2 backgrounds the natural and cultural environments, while Chapter 3 provides details of the site survey and excavations at a series of sites. Rather than attempt a wide-ranging survey, Wickler targeted the coastal portion of the raised Sohano formation within the Lonaha and Soraken land systems as areas in which suitable places to excavate might be

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National Museum of Korea
found. The sites studied are broken into two groups: the reef sites that provide most of the evidence for Lapita occupation, and excavated sites on land. The reef sites consist of scatters of pottery and stone artifacts distributed across the intertidal reef flats at three locations. Four of the excavated sites are beach deposits while the other three occur in caves or rockshelters. Full descriptions are provided for each of the excavations to a generally high standard, although the reproduction of photographs is poor. A section at the end of the chapter summarizes chronological information based on a sample of 16 radiocarbon determinations, nine of these obtained from the preceramic levels at Kilu Cave and a further two from the preceramic deposits at Palandraku Cave. This leaves only six determinations for the excavated ceramic sites.

Chapter 4 deals with Lapita pottery design and analysis, comparing assemblages from three reef sites, one each on Sohano Island, Buka Island, and Nissan Island. The chapter reports on the analysis of more than 42,000 sherds (the vast majority from one site), although only a much smaller sample (around 15 percent) of diagnostic sherds: those that are either shaped, decorated, or both, are subjected to the full range of analyses. Analysis involves a consideration of vessel morphology, manufacturing and finishing techniques, paste, composition, and decoration and is aimed at answering two questions: providing a fuller picture of Lapita occupation and determining the evidence for Lapita exchange. The temper of all diagnostic sherds is recorded while a small sample is selected for elemental microanalysis as a way of studying potential clay and temper sources.

Chapter 5 deals with Lapita decoration looking first at individual decorative techniques in the assemblage and then at the results of design analysis. Analysis involves calculating the proportion of sherds with the different decorative techniques noting also the proportion of sherds with multiple techniques. Comparisons are then made between the decorative techniques found in the Buka assemblages and those from Lapita assemblages further afield. The motif analysis is based on a consideration of 330 total motif occurrences and follows the Mead-Donovan system, but with the addition of Anson's motif categories for comparisons to other Lapita assemblages. New motifs are described and illustrated via photographs in Appendix B, although in the review copy, several of the photographs were of such poor quality that the motifs were virtually invisible.

Chapter 6 deals with the ceramic assemblages from the excavated sites and is aimed at refining the ceramic sequence originally established by Specht. A series of six styles, Buka, Sohano, Hangan, Malasang, Mararing, and Recent, were defined by Specht with a number of substyles within some of these categories. Specht chose sites with long sequences as the basis for his series, however Wickler approaches the problem from a different direction. Instead of sites with long sequences, he chooses sites with relatively short occupation sequences and a limited number of pottery styles, representing short occupation spans during which ceramic change occurred.

The analytical approach adopted is similar to that used for the analysis of the Lapita sherds. Vessel form, technology, and composition are described together with decoration. Analytical results are presented by style and site in chronological order following Specht's scheme. Transitional pottery sherds are identified as pieces that show a combination of attributes common to more than one style. A small number of radiocarbon determinations form the basis for dating the transition from one style to the next. Wickler concludes that the analytical results suggest continuity in ceramics from the late Lapita Buka style until the recent style.

Chapter 7 reports on analyses of the nonceramic portable artifacts. Of particular interest are the lithics from the preceramic sites and the obsidian from the Lapita and post-Lapita deposits. As reported in previous articles, stone artifacts from DJA (Kilu Cave) produced evidence for starch grains and raphides from taro, representing the earliest direct evidence for use of these root vegetables in the world. Sourcing studies on the obsidian artifacts indicate an increase in the quantities imported from the Bis-
marcks during the Lapita phase, however quantities decline by late Lapita times and into the Sohano phase.

Chapter 8 reports on floral and faunal remains, paying particular attention to evidence for human transportation of animals, faunal extinctions, evidence for the over-exploitation of shellfish, and the evidence for environmental change.

A final chapter provides a synthesis and conclusions, first by summarizing the evidence for each phase within the Buka sequence and then by summarizing the evidence for the changing nature of exchange and interaction. A final section deals with the relationship between the Buka material and other archaeological sites within a wider region.

The Prehistory of Buka is an ambitious volume that, like many numbers in the Terra Australis series, sets out to provide a detailed statement of regional prehistory. In this the volume succeeds and it will no doubt become an essential addition to the library of Pacific archaeologists. For the nonspecialist the book also provides an interesting window into the state of archaeological method and theory in Pacific archaeology. Clearly the sophistication of both the decorative analyses and compositional analyses of pottery is impressive, however, it is equally interesting to note that the goals of the analyses are still very much culture historical. For those of us who spend most of our days looking at small pieces of stone produced by hunter-gatherers rather than small pieces of pottery produced by horticulturalists, the literature over the last 20 years has introduced major changes in the way we think about artifacts. Studies of the way the use-life of artifacts affects form have changed the way we think about assemblage composition. Equally important are studies that consider both the natural and cultural processes that lead to artifact deposition in the archaeological record. We have learned that the relationship between archaeological sites defined as places where artifacts are today concentrated in the landscape, and the reconstruction of prehistoric occupations as they existed in the past, is not as straightforward as we once thought. Although there are indications in the Buka volume that the location of sites is now of major concern to Pacific archaeologists (well illustrated by the discussion of the reef sites), there are surprisingly few analyses related to determining differential deposition and preservation of artifact types or decorative classes. Sourcing studies are sufficient to inform on trade and exchange relationships without the need to consider the technology of manufacture and processes that led to deposition and post-depositional survival. These are not to be read as deficiencies in the current work but they do point to directions for future work now that the sequences for places like Buka have been established.


Reviewed by James O’Connell, University of Utah

Beginning in the early 1960s, Australian archaeology witnessed a major revolution. Sparked in part by the arrival of a wave of intellectually aggressive, personally ambitious Cambridge-trained scholars, and fueled by the energy of an unusually bright, equally aggressive collection of "locals," the field exploded with creativity and discovery. Over the next four decades, members of this emergent cohort, their proteges, and successors extended the documented record of human experience on the continent by
nearly an order of magnitude, generated new ethnographic data and applied them in highly innovative ways, pioneered new approaches to the study of lithic and other technologies, cooperated with colleagues in the natural sciences in formulating comprehensive models of prehistoric man-land relationships, and explored various aspects of human impact on the native biota through studies of anthropogenic fire, megafaunal extinctions, and the development of indigenous agriculture. Their efforts put Australian archaeology on the map worldwide. They also made scientific prehistory an important public issue for Australians, more so than on any other continent. The impact on matters ranging from state and federal resource management policy through Aboriginal land rights to the nation’s sense of history and self was substantial.

Sydney and Canberra formed the axis on which many of these developments turned. Sydney Uni’s well-established anthropology department provided an early and nurturing home for many of the key players, one that was soon matched by similar programs in what were then called the School of General Studies and the Research School of Pacific Studies at the Australian National University. Bright students and post-docs were drawn in, fieldwork was pushed, theses and dissertations generated. The results were reported in various venues, notably the lively, if sometimes unruly seminars in the (in)famous Friday afternoon Canberra series. Debates once joined often flowed on into the night, usually at the Staff Centre bar. If the best ideas occasionally got lost in the shuffle, it was still a very rewarding time and place to be practicing prehistory.

The work in hand is the fifth in a series of festschriften offered in honor of key participants on the ANU pitch (Anderson and Murray 2000; Macknight and White 1986; Spriggs et al. 1993; Torrence and White 1997). Consistent with the style of its honoree, the ex-patriate Welshman, irrepressible raconteur, and self-styled “wild colonial cowboy-archaeologist,” the late Rhys Maengwyn Jones, it is also the most flamboyant. Its 39 parts, drafted by a total of 45 authors, include several accounts of Jones’ early life (highly entertaining, if a bit precious in spots), testimony about his personal and intellectual impact on the field (enormous), celebratory poetry (see Carmel Schrire’s contribution), some extended “riffs” on amusing topics (Harry Allen’s on Blandowski’s fish and Les Hiatt’s on coloniztion by elopement are among the best of these), and finally a set of substantive essays on topics of genuine intellectual interest.

For those who did not know Jones personally (and a few who did), these last ten pieces will likely represent the heart of the volume. Their topical coverage reflects the main themes in the Jones œuvre: chronology, man-environment relationships, and the role of ethnography in research on the distant human past.

Four of them deal primarily with dating. Matthew Spriggs “seeks to illustrate that the basic task of chronology building remains to be achieved in the Pacific, and that different possible answers to the ’when’ questions produce vastly different histories for the region.” He makes his point by reference to arguments about the age of pottery in New Guinea, the spread of Southeast Asian agriculture through Melanesia, the links between Manganese and Lapita ceramics, the possibility of a significant lag between the settlement of East and West Polynesia, and the timing of initial anthropogenic impacts on Pacific ecosystems. As this list suggests, the paper is something of an insider’s delight, but the main message is still an important one and the examples are well chosen.

Atholl Anderson, Linda Ayliffe, Danielle Questiaux, Nigel Spooner, Tarisi Sorovi-Vundilo, and Trevor Worthy describe “current progress in documenting the period at which Fijian megafauna became extinct.” The exercise is rich in detail and related ambiguity. While conceding in principle that the first human colonists of Fiji were likely responsible for these extinctions, Anderson and associates rightly underline the need to establish a reliable chronology before deciding the question, and clearly demonstrate that the requirement has not yet been met.
Sue O’Connor and Barry Fankhauser discuss the results of research on a small slab of “painted” rock from Carpenter’s Gap Shelter (Kimberly district, northwest Australia), dated to about 40,000 B.P. Chemical analysis shows that the pigment is probably ochre. This leads to a brief review of recent work on the dating of Pleistocene rock art, and equally brief discussion of what counts as “art.” On the latter issue, the authors observe that while some analysts are prone to dismiss forms like stencils, prints, and finger making as “not art” but simply “the equivalent of signing the visitor’s book,” such distinctions fail to credit the roles these activities play(ed) in traditional Aboriginal law and cosmology, and may have played in the distant past as well.

Alan Watchman offers a more comprehensive, continent-wide review of rock art dating, with special reference to cases involving the two “absolute” techniques now most commonly employed, AMS 14C and OSL. Sites discussed include Wargata Mina (Tasmania), Gnatalia Creek (coastal New South Wales), Olary (South Australia), Chillagoe and Laura (north Queensland), and several localities in the Kimberley and Top End. Unlike the O’Connor and Fankhauser piece, there is nothing here about symbol or meaning: just a candid and thoughtful treatment of the problems and intricacies of chronometric technique, plus a useful guide to the recent literature.

Two papers deal primarily with ethnographic issues. David Bowman, Murray Garde, and Adam Saulwick present a summary of talks with traditional Arnhem Land elders regarding the use of fire in habitat management and hunting. Most of the excerpts are in Rembarrnga and Bininj Gun-wok, with interlinear translations in English. The authors underline a series of points that emerge from these conversations, giving special attention to patterns in the timing and scales at which Aboriginal fires were applied to the landscape, their effects on local biotic communities, and the foraging returns made available as a result. The paper is a solid addition to the rapidly growing literature on tropical Australian pyrotechnology. Like much of Bowman’s other work on the topic, it has important implications, not only for anthropologists but for state and federal resource managers as well.

Neville White provides an overview of research on traditional and modern Aboriginal subsistence practices in Arnhem Land, with emphasis on some of the results of his own work in the Yolngu community of Donydji. He effectively counters the recurrent proposition that pre-European diets were everywhere made up largely of meat, most of it acquired by men’s hunting (e.g., Kaplan et al. 2000). Instead, he observes that intake was highly variable in content, both seasonally and spatially, with women’s plant collecting often providing the bulk of the regimen. Implications of the recent shift to store-bought foods are also discussed. The presentation is rich in detail and very well referenced.

Two papers engage problems in prehistoric human ecology and archaeology. Sally Brockwell, Anne Clarke, and Robert Levittus revisit Carmel White (nee Schrire) and Nic Peterson’s influential analysis of interassemblage variability in the Alligator Rivers region of the Northern Territory. Their treatment essentially confirms the original White/Peterson proposition that regional-scale differences in assemblage composition were mainly the result of local resource characteristics, the opportunity costs of exploiting them, and the costs of access to toolstone. Though Brockwell and associates contend that “cultural” considerations may also have had significant effects on aspects of resource exploitation, it is not clear that these influenced the archaeological patterns with which White and Peterson were primarily concerned.

Richard Cosgrove and Jim Allen report the results of their reanalysis of more than 600,000 large animal bones collected from several sites in late Pleistocene southwest Tasmania. The question is whether broad patterns in assemblage composition are consistent with the goal of maximizing the rate of energy capture while hunting. Cast in the framework of optimal foraging theory, the exercise involves developing a series of formal hypotheses about the range of large animal prey likely to have been present, the relative appeal of various spe-
cies to lightly armed pedestrian hunters, the utility of various prey body parts, and the transport and processing techniques likely to produce the optimal nutrient yield to consumers at a central place. These hypotheses allow Cosgrove and Allen to generate a range of predictions about archaeological outcomes, which are then tested against the actual record. The results are generally consistent with expectations. Even where predictions fail, the mismatch is informative. This is a very impressive piece of work: easily the most theoretically and empirically sophisticated contribution to the volume.

Jack Golson reviews variation in the form and distribution of stone axes found in late Pleistocene and early Holocene deposits in northern Australia and southern New Guinea, compares the results with parallel patterns in rock art and language, and makes the case for what others have called an "interaction sphere," "information network," or "culture area" extending across large parts of tropical Sahul. The exercise is important in that it undercuts the long-standing proposition that Pleistocene stone tool industries continent-wide were essentially invariant. That point made, the question is whether the inductive approach Golson pursues in developing the argument leads to anything beyond a comprehensive summary of the data.

The last of the ten papers of greatest potential interest is Robert and Myrna Tonkinson's piece on the distinction between "knowing" and "being" in place in Western Desert Aboriginal thought. Arguably the most intriguing contribution to the book, it makes the case for a far broader basis for traditional claims to land and resources than countenanced under current Australian law. Spun out as a thought exercise, the implications are truly arresting.

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Reviewed by Rosalind L. Hunter-Anderson, Micronesian Archaeological Research Services, Guam

On the Margins of Sustainability is a well-produced and important addition to the growing literature on the archaeology of small tropical coral islands. The new facts,
collected systematically and reported in considerable detail, are especially welcome given the general paucity of published information on Micronesian archaeology. (The work could have used a thorough copy editing to catch the typos and verb/person mismatches, however.) In eight chapters and three appendices, and illustrated with numerous maps, drawings, and black and white photographs by the author, the monograph reports the results of surveys and excavations conducted by Weisler and Marshallese colleagues in seven islets of Utrok Atoll in the northern Marshalls. The Utrok research is part of a more comprehensive project of archaeological documentation instigated by the author some ten years ago. This project has included surveys and excavations at Epoon, Wujae, and Maloelap Atolls in addition to Utrok. Students at the University of Otago participated in the initial processing and subsequent laboratory analyses of the data, resulting so far in three Master's theses, the present report, and publications elsewhere by Weisler.

The fieldwork at Utrok Atoll was carried out when Weisler was Chief Archaeologist for the Republic of the Marshall Islands from 1993–1995 and subsequently. From having lived in the islands for several years, as well as having worked in a variety of settings in the tropical Pacific, he has become attuned to the ethnographic and geographic realities of small islands. For example his comments about current fishing practices and their relation to marine habitat attributes and current Marshallese subsistence options enhance the exposition beyond what researchers with less experience and cultural sensitivity might have produced.

The “long-term goal” of the project to which the Utrok results contribute is, “to understand the regional variation of Marshall Islands archaeology and to provide a basic culture-history for the archipelago” (p. xi). Weisler suggests that a key factor conditioning regional variation here is the north–south rainfall gradient, with Utrok at the dry northern extreme. The other atolls investigated during the project are situated southward along this gradient. Another environmental constraint noted by Weisler is islet size. This factor determines the presence of a fresh water lens and clearly affects the potential for sustained occupation of a given islet. Another factor considered in Weisler’s quest for understanding regional variation is sea level, notably the lower levels after c. 650 B.P. (citing Nunn 1998) which may have affected productivity of aroid pits putatively created before this time at Utrok.

The dual orientation, toward geographic factors as causally linked to cultural variations and toward culture history as an ultimate goal is indicated in Chapter 1 and further elaborated upon in the last chapter, Synthesis. Under the research design heading in Chapter 1, several “issues in atoll archaeology” are listed and briefly discussed: origins, chronology, sea level change and islet development, material culture, terrestrial production, and landscape change. These topical discussions provide interpretive contexts for the data to come, based on past and present research orientations in Pacific archaeology. Thus the research program was aimed at filling gaps in mostly predefined problem areas.

Chapter 2, The Archaeological Landscape, contains information about current land use patterns in the Marshalls generally and at Utrok Atoll in particular, as well as results of archaeological surveys within the atoll, at Pike, Allok, Bikrak, Nalap, Utrok, and Aon Islets. The photographs and other illustrations are effective in conveying some of the pertinent details observed during the surveys.

Chapter 3, Excavation of Habitation Sites, describes field methods and stratigraphic details about the excavation units by islet and site (five sites, seven islets). Plans showing the location of the excavations are included for each islet. The large islet of Utrok, with the most extensive habitation area in the atoll, was investigated intensively. At Site 1, a radiocarbon date of 1730 ± 60 B.P. was obtained on charcoal from a buried feature interpreted as an earth–oven (p. 45), the earliest dated feature in the atoll.
Chapter 4, Excavations in the Horticultural Systems, describes the results of systematic investigations of aroid pits, viz., their sizes, shapes, and time of construction. Radiocarbon dates on charcoal from buried A horizon soils near the pits are termed "habitation-related dates" in contrast with radiocarbon dates obtained on charcoal from "habitation areas." Weisler's terminological distinction implicitly recognizes the need to warrant any particular cultural interpretation of nonculturally created soils containing charcoal, in this case, buried A horizon soils lacking cultural materials.

Chapter 5, Chronology of the Natural and Cultural Landscape, presents dating considerations and results in the context of narratives about the natural environment of Utrok Atoll and how it might have been changed due to human occupation. Dating samples were taken from three contexts, emerged beach deposits and cemented sand subsoil; habitation deposits, especially discrete combustion features; and horticultural deposits as inferred from charcoal in buried A horizons adjacent to aroid pits.

In compiling the data in this chapter Weisler was guided by four considerations, "(1) the timing of atoll settlement in general; (2) use of specific areas of each site and the chronological placement of their artefact and faunal sequences; (3) dating the construction of portions of the aroid horticultural systems; and (4) the relationship of habitation sites to emerged beach features" (p. 79). Despite the implications of the chapter title and the above considerations, the chapter is mostly a listing of twenty radiocarbon determinations with brief sample descriptions, associations, and remarks.

In Chapter 6, Material Culture, the emphasis is on "pre-contact items," which constitute 22 percent of the total artifacts collected during excavations and from surface contexts. Weisler considers the twin uses of adze types to infer time and cultural origin to study tool function synchronically as well as diachronically. A relatively great variety of shell tools was found among the 165 precontact items. Described and illustrated are shell adzes, chisels, gouges, abraders, scrapers, fishing gear, hammerstones, worked bone, shell ornaments, and manuports (volcanic and metamorphic rocks). Tables of discrete and continuous attributes of shell adzes are included, as is a table of measurements of marine shell hammerstones. Petrographic descriptions and XRF analysis of selected manuports are presented in tabular form. Among the 585 historic items, glass fragments predominated; metal, plastic, and ceramic pieces were also present.

Chapter 7, Atoll Subsistence Patterns, reviews methods and the analytical sample in light of the practical objectives of the project, i.e., "to locate all archaeological sites on the atoll, then to test excavate the sites for determining the depth and nature of the cultural deposits including ascertaining site size." Among the 45.8 g of nonbone midden were found represented 34 shellfish families and one each of Echino-dermata and Crustacea. Of the 13,546 bones retained for analysis, most were of fish (88.6 percent), followed by smaller quantities of mammal (including rat, dog, pig, and human), bird, other vertebrate, sea turtle, and lizard remains. Of note are prehistoric dog bones, some of which appear to have been present at least by the eleventh century C.E. and the lack of prehistoric pig bone so far in the Marshalls.

Weisler devotes considerable space in this chapter to discussion of taphonomic problems associated with interpretations of bird bone remains as reflecting human predation, as well as to the adaptive significance of changes in fish bone frequencies through time and of changes in mollusk frequencies and size. Of interest is the lack of evidence for changes in the latter through time despite an evident increase in human population and presumably of predation pressure. The author's suggestion is that the atoll resources were insufficient to support a human population large enough to affect mollusk size through predation and that furthermore mollusks were not a major source of food for the atoll dwellers (pp. 116–117).

Weisler was unable to argue (although
he tried) that the archaeological record shows human-caused bird extinctions either, although he speculates that the Micronesian pigeon once may have been present at Utrok but was “depleted soon after colonisation” (p. 106). Just why the early Marshallese would have preyed upon a small land bird unto its extinction (he uses the word depleted) when the “bounty of the marine biota” (p. 4), the “previously untapped stocks of marine fauna (fish, molluscs, turtles and crabs) as well as massive colonies of seabirds” (p. 101), were available is not explained. Such narratives of “probable” initial settlers’ behavior do not add to the credibility of the monograph and seemingly earnest attempts not to appear to counter completely the received wisdom of the recent Pacific archaeological literature on this topic than to follow where the data lead.

Botanical remains were studied for information on possible changing composition of the vegetation on the atoll during human occupation. Phytolith and pollen analyses of soils from breadfruit storage features or other features or soil layers have not been completed but preliminary results from a sample from a “sandy gleyed layer saturated from the tidal movement of the fresh water lens below” in a test pit at Site 1 are promising (p. 47); tentative identifications include *Tacca leontopetaloides*, *Triumfetta procumbens*, and/or *Tournesfortia argente*. A bibliographic omission in this regard is Rovner (1998), cited on p. 66. In an attempt to track an expected increase in the use of trees from a “managed agroforest,” Weisler had charcoal identified from several dated contexts. A clear trend to support this idea is not evident in the data, however; the uppermost layers are the most rich in all kinds of remains, not just coconut and pandanus charcoal. The charcoal data do show that selection of fuels is correlated with size of islet and more to the point, the kind of site in which fuels were used—temporary encampment vs. large residential settlement (p. 121).

Actually, not enough botanical remains in dated contexts were collected to generalize meaningfully about past vegetation composition at Utrok Atoll, and most of the Chapter 7 discussion of this is speculative and provocative. All identified botanical remains were observed in cultural features, that is, none prior to human advent in the atoll. Thus, the “primary vegetation” baseline has not been determined. What has been documented so far is the prehistoric presence of plant species related to human needs (fragments of coconut, pandanus), and the ethnographic record of arboriculture, medicinal herbs, and giant swamp taro cultivation. Assuming these practices originated in the prehistoric past, then the Marshallese have quite clearly enhanced the biodiversity of their atoll vegetation communities, not destroyed or decreased it, at least as regards the larger plant forms.

At the bottom of a possible well feature Weisler found an “organic layer” containing large fragments of coconut shell and husk, as well as pandanus keys, small pieces of wood, a spider conch fragment, and “a few bones” (p. 47). Two of the coconut shell fragments are illustrated on p. 121; they resemble breadfruit peelers used now at Satawal, central Carolines (RHA field obs. 2002). These items may also be discarded parts of coconut shells used to dig the well, a technique I have observed in the central Mortlocks (RHA field observations 1986).

Discussions in Chapter 8, Synthesis, echo the mixed research design: Chronology and Settlement Model, Material Culture, Marine and Terrestrial Subsistence, Sea Level Change and Islet Formation, and On the Margins of Sustainability. In the latter section, Weisler reiterates that the environmental conditions in the northern Marshalls, as exemplified by Utrok Atoll, presented the earliest settlers as well as later inhabitants with some of the greatest challenges faced and overcome through cultural means by Pacific islanders.

By recognizing the formidable adaptive challenges of droughts, typhoons, sea level fluctuations, small land masses, scarce ground water, etc., the author orients his synthesis away from a purely culture-history framework, shifting data interpreta-
tion and speculations toward an adaptationist one. What I find poignant in this honest monograph is the author’s evident struggle to reconcile finding no facts to support the currently popular idea that human populations (whether initially profiteer or later growing too dense for their resources to sustain without damage) in the Pacific islands inevitably decreased environmental diversity through inappropriate farming methods, over-hunting of birds, and unrestrained marine resource procurement: “That resource depression and extinctions were not more visible archaeologically may signal that human populations, albeit quite low in number, lived in a sustainable manner—a unique situation amongst many Pacific islands studied thus far” (p. 128).

Weisler’s solution to this self-inflicted dilemma, of having documented an actual case of Pacific islanders making a “sustainable living” for about two thousand years and counting, is the typical inductivist call for more data, using a “comparative approach” wherein “we may come to understand the breadth of atoll adaptations—technological, economic and social” (p. 128). With On the Margins as an example of the attention to detail in data collection and presentation required, a more economic approach would be for Pacific archaeologists to re-examine their already-collected “data” on allegedly human-caused environmental changes. The Marshallese case (and here I refer to this and other publications of Weisler’s and others cited in the text) shows there are more realistic models of prehistoric human behavior than those imagined by Steadman (1995 and others), and certainly warrants a call for incorporating physical causal factors, such as habitat fragmentation (Burkey 1995) and climatic and sea-level oscillations during the late Holocene (Nunn 1998; Dickinson 2001; Hunter-Anderson 2002) into our explanatory models.

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Reviewed by Marc Oxenham, School of Archaeology and Anthropology, Australian National University

This is the first major publication on the past human biology of a Southeast Asian assemblage to combine a bioarchaeological and more traditional quantitative-
qualitative morphological analysis. The result is a very well-integrated study of the inhabitants of Ban Chiang, who lived some 4100 to 800 years ago on the northern aspect of the Khorat Plateau. Pietrusewsky is a prominent biological anthropologist who has been researching in the Asia-Pacific region for over a quarter century. Douglas analyzed the Ban Chiang assemblage for her doctoral thesis under the supervision of Pietrusewsky.

The monograph is presented as 13 chapters of variable length with five extensive appendices and a CD-ROM that provides a wealth of data on various pathologies, skeletal completeness, nonmetric variation, and so forth. Moreover, a very useful index has also been included. The introductory chapter briefly reviews the history of archaeological work in Thailand previous to the Ban Chiang excavations in the 1970s. The site itself is then introduced followed by the chief aims of the monograph, which include the effects of sedentism and agricultural intensification, evidence for social hierarchy, and patterns of (and explanations for) differential health.

Chapter 2 is a very brief review of methods employed in excavation, skeletal preparation, recording, sex and age-at-death determination, stature estimation, and nonmetric trait pathology recording. While much of these data are summarized in the appendixes, the specific details, including the frequent problems and solutions that arise with fragmentary material concerning age and sex determination, are not reviewed. This is a troubling oversight given skeletal preservation problems detailed in Chapter 3 and reliance on accurate constitutive data in the subsequent palaeodemographic analysis in Chapter 4. Chapter 3 goes on to review aspects of skeletal completeness, mortuary behavior, and general taphonomic factors that can affect skeletal preservation and notes some that have impacted the Ban Chiang assemblage specifically.

Detailed data analysis begins in Chapter 4 with an investigation of the demographic makeup of the assemblage. They note that, overall, the age-at-death distribution approaches that observed in general for archaeological populations. The sex ratios were slightly dissimilar between the temporally earlier and later subsamples of the assemblage, although they suggest this to be more artifactual than indicative of actual demographic sex ratio differences. The mortality profiles differed by sex and this was attributed to increased female mortality during their principle reproductive life stage. The authors also employ a number of demographic formulae that have been demonstrated to be robust to age-at-death estimation and sampling biases. A combination of the juvenile-adult ratio and measure of mean childhood mortality suggested that the Ban Chiang population had low levels of fertility and was likely static or even slightly declining. However, a measure of the proportion of juvenile and old dependents was extremely low and suggested to the authors that life was relatively "easy" in terms of this measure at least.

Chapter 5 describes the sample in terms of qualitative and quantitative measures of cranial morphology. Pietrusewsky has published extensively on morphological variation, microevolutionary change, and migratory patterns within the East Asian and Pacific region. The chief findings in this chapter were that the sample is morphologically consistent with an East Asian and/or Pacific ancestry. Moreover, the study seems to suggest the practice of exogamy at Ban Chiang, with males clustering in terms of specific sets of nonmetric traits. A concise examination of dental morphology notes the relative small size of the Ban Chiang molar dentition and finds some evidence for genetic continuity within the temporally earlier grouping and possible genetic discontinuity between the two samples. The authors also suggest the series, as a whole, is allied with the Sundadont dental pattern. However, the results of this particular analysis can only be provisional given the restricted number of traits examined.

Most dental pathologies examined by bioarchaeologists are reviewed in Chapter 7. This section is somewhat anomalously titled "Dental Paleopathology" given the extensive treatment of oral traits that are not strictly pathological, such as dental
enamel hypoplasia, and culturally mediated alterations to the teeth, task-wear facets for example. While the authors are very thorough in identifying and enumerating the various dental conditions, the discussion of their findings is not as comprehensive as it could have been. For instance, the frequency and distribution of carious lesions (by tooth class and location) is provided in detail but the subsequent discussion is superficial. Reference is made to the relatively low caries rate indicating a mixed economy but no mention is made of the argument for rice having an extremely low cariogenicity (e.g., Krasse 1985; Sreebny 1983; Tayles et al. 2000). Moreover, a more detailed discussion of the specific locations of lesions would have contributed to an understanding on the diet of this sample (see following discussion of Chapter 11). Notwithstanding these comments however, this section and the appended tables are a mine of information that future scholars will find indispensable in studying the past inhabitants of Thailand.

It is worth mentioning their analysis of enamel hypoplasia given the enormous comparative literature available on this indicator of metabolic/physiologic state in childhood. Again, the authors are to be commended on their thorough and detailed presentation of data on this condition by sex and tooth class. However, discussion of the results lacks depth and this is also true of the comparative section on enamel hypoplasia in Chapter 11. It is interesting that their results on the timing of hypoplastic events by tooth class were consistent with many such studies globally. Given their familiarity with the following study it might have been useful to point out that their results provide further evidence in support of Skinner and Goodman’s (1992) work that what is being measured in such instances are not peak periods of stress associated with weaning, or whatever, but rather the time of peak enamel formation. This observation, incidentally, provides a reason why the observed frequency of enamel hypoplasia increases over time (between the two temporally discrete subsamples; see Chapter 11) while the peak period(s) of occurrence remains stable. While the authors examined enamel hypoplasia with respect to subadults and adults they did not look at this condition in relation to their reconstructed age-at-death profiles. This is an unfortunate omission as a number of studies have found a correlation between mortality and evidence for enamel hypoplasia (e.g., Duray 1996; Goodman and Armelagos 1988; Saunders and Keenleyside 1999).

A small chapter (8) follows on postcranial morphology, variation, and stature. Interesting findings included evidence for differential use of the upper and lower limbs by sex. Females tended to use their upper limbs and males their legs more in strenuous activities. The section on nonmetric variation tended to support their view of genetic continuity between the earlier and later skeletal series at the site. This is important when considering intra-sample differences in biology. Overall, their work on nonmetric variation makes a positive contribution to the otherwise poor global and regional database on this aspect of skeletal biology.

Chapter 9 focuses on pathological conditions in the samples and forms the largest single section in this monograph. The authors begin with a competent review and descriptions of the evidence for traumatic injury in the sample. Their cautious conclusion that the patterning of trauma in the sample is consistent with everyday injuries, falls, and general misadventure, is commendable. However, I would have liked to see a more detailed review of the literature examining patterns of trauma and behavior. Regarding the skeletal evidence for infectious disease the authors describe and discuss the material element by element. Given the low frequency of evidence for infectious disease it may have been more appropriate, and certainly more useful in terms of differential diagnoses, to look at appropriate individuals in a series of case studies. One interesting differential diagnosis of a neonate included a compelling argument for Caffey’s disease. This would make it the first such case observed in Southeast Asia to date.
The frequency of cribra orbitalia is presented with 15.2 percent of adults and 41.7 percent of subadults displaying some form of cribrotic lesion. These results are moderate with respect to other Southeast Asian samples. Again, as with the omission with respect to their study of enamel hypoplasia, the authors did not examine the distribution of cribra orbitalia by age-at-death. Some detail is given to enumerating the various skeletal malformations present in this series. While an important contribution to the regional and global database of such conditions, it is of limited relevance to the health and question of sample genetic homogeneity/heterogeneity.

The authors also summarize the nature and prevalence of osteoarthritis (or degenerative joint disease) in the sample. They found the overall frequency of osteoarthritis to be relatively low, with less than 6 percent of the sample showing evidence of moderate to severe forms. Consistent with other bioarchaeological studies, the frequency of male appendicular OA was higher than that for females, which they interpret as suggestive of a division of labor: "males performing more strenuous physical labor than females" (p. 144). However, a more prosaic reason for this difference is available when examining the demographic profile of the sample. Their sample is slightly biased toward males and is strongly biased toward older males. Furthermore, a more critical engagement with the literature would have shown that in clinical studies of modern populations males tend to have a generally higher prevalence of OA up to about age fifty and thereafter it is women who are more at risk (Roberts and Burch 1966, cited in Moskowitz 1993).

Furthermore, Rogers et al. (1997) show a positive correlation between osteophyte development, age, and being male. Osteoarthritis is an extremely complex multifactorial condition with behavior being only one of numerous potentially contributing factors to its occurrence and distribution by joint, age, sex, and so forth. Overall, the authors are to be commended for providing an invaluable series of descriptions and illustrations of the more severe forms of OA in a skeletal series representing an extremely underresearched region of the globe.

Following the section on osteoarthritis the authors detail what they term activity-induced indicators. For the most part this involves describing and illustrating morphological variants, squatting facets for example, or various enthesial and syndesmosal developments. This section is useful in documenting these features, although a more supportive and literature-based discussion of their conclusions regarding inferred behaviors would have been useful. This is particularly pertinent in light of the almost complete lack of clinical supporting literature for occupational and activity-related claims often made by bioarchaeologists (Jurmain 1999; Stirland 1998).

The following short chapter, titled "Noteworthy Burials," details the disposition, burial goods, and biology of a number of individuals and collections of individuals. It is a very interesting and useful addition to the monograph that provides more personal insights into the people of Ban Chiang. It is also a section that may have been better placed near the beginning of this volume in giving the reader a glimpse of things to come later on.

Chapter 11 examines intrasample variability in terms of genetic homogeneity and differential health. In the former case the authors address the questions (1) "is there evidence of a new, morphologically distinct population moving into the area during the second half of the second millennium B.C.?" (p. 190) and (2) does health change with the archeologically visible change in subsistence orientation in the first half of the first millennium B.C.? While the question of genetic continuity between the two skeletal series represented at Ban Chiang needed to be dealt with much earlier in the monograph the authors do conclude, based on nonmetric analyses of cranial, postcranial, and dental traits, that the collective samples are likely genetically homogeneous or in other words display genetic continuity over time.

The remainder of this chapter deals with the second question regarding health in
terms of a select number of indicators: demographic profiles, carious lesions, enamel hypoplasia, cribra orbitalia, attained stature, trauma, and infections lesions. The demographic analyses of the subsamples support the hypothesis for a correlation between changes in health and subsistence orientations. For instance, there appears to be a clear increase in mortality, decrease in average age-at-death, and an increase in fertility with the move to agriculture.

The evidence from their analysis of oral health does not, at face value, support the archaeological evidence for a change to an emphasis on cereal grains in the latter temporal span of the assemblage. One obvious reason for this that is not explored by the authors is the demonstrated extremely low cariogenicity of rice (see discussion of Chapter 7) as compared to other cereals such as maize for which a correlation with increased dental disease is normally associated in bioarchaeological studies. Further, a closer examination of the patterning of caries in the two temporally separate samples (using data from the appendices and CD-ROM supplied with the monograph) shows a marked increase in the proportion of both those lesions affecting the anterior teeth and those affecting noncrown areas of the teeth in the temporally later agricultural sample. These observations are entirely consistent with a move to softer carbohydrate-rich foods in the latter part of the temporal sequence, although not necessarily boiled rice. In concluding this section the authors note that, with a few exceptions such as the demographic results and an observed increase in the frequency of enamel hypoplasia over time, the majority of health indicators examined suggest little health costs associated with a move to agriculture in Ban Chiang.

The chapter finishes with an examination of spatial variation in the site (that portion excavated in the second season only) with the first objective being to define lineally distinct groups. Having accomplished this, albeit only suggestively as they point out, the authors then look for variability between these identified lineally close groups in terms of health markers. The results indicate the possibility of rank or status differences in terms of this analysis, although problems with identifying lineally distinct groups, particularly given the lack of corroborative archaeological evidence (differential distribution of grave goods for example) brings the entire endeavor into question. Nonetheless, it is an innovative approach that may prove useful in other bioarchaeological analyses with greater sample sizes.

The penultimate chapter serves to comparatively place aspects of the Ban Chiang results into a regional context. The first section of this chapter is essentially a further development of Chapter 5 and it is unclear why these two parts were not combined. Who these people were in terms of their evolutionary and/or migratory history is something that needed to be established at the beginning of the study, which was in fact one of the aims of Chapter 5. The remainder of this chapter provides a useful, albeit perfunctory, comparison of the Ban Chiang palaeopathological findings with a number of other studies of assemblages from Thailand, but also, curiously, a study from South Asia, Harappa. Because the authors' intent seems to be to provide summarized comparisons without detailed discussion, it may have been more effective to incorporate the respective regional comparisons of each pathological condition within the appropriate preceding chapters.

Read in conjunction with Domett's (2001) recent monograph that compares most of the significant ancient skeletal assemblages in Thailand (with the exception of Ban Chiang and Non Nok Tha) the reader will be well armed in understanding the health and behavior of the inhabitants of this fascinating and underresearched region. The authors conclude their monograph in five pages highlighting the chief aims of their work but without any attempt at a detailed synthesis.

This is an invaluable piece of published scholarly work that forms the third (after Tayles 1999 and Domett 2001) comprehensive and important thesis examining issues of ancient human skeletal biology in Southeast Asia. This book is professionally
fashioned with clear tabulated summaries of data and well-produced photographic illustrations. This volume will form an important resource for students of the prehistory of East Asia and tropical human biology in general for many years to come. Moreover, any one interested in physical anthropology or bioarchaeology needs a copy of this volume on their shelf.

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This volume, like its antecedents in the series, contains something for everyone: prehistory, historical studies, site reports, and discussions of analytical techniques. Arrangement is by author’s last name rather than topic, so one must scan the table of contents to locate chapters relevant to one’s specialty. On the other hand, most articles are of a sufficient degree of interest and breadth of coverage that nonspecialists in a
By dint of the alphabetical arrangement, the first chapter discusses objects recovered in my excavations in Singapore. Brigitte Borell’s study “Money in 14th century Singapore” analyzes 143 Chinese coins of the Tang and Song Dynasties and one Sri Lankan coin of the thirteenth century excavated at two sites. As she notes (p. 4), “It is remarkable how close the frequency distribution of the almost one hundred identified coins found in Singapore corresponds” to the pattern of production levels. Borell does an excellent job summarizing a wide amount of data from other published sources, and puts the Singapore finds into a regional context. Much remains to be learned from metallurgical analysis, which, as Borell points out, might indicate whether some of the coins found in Singapore might be Javanese copies rather than Chinese-made. Borell concludes (p. 13) that Chinese coins in Singapore “acquired as payment in external trade, were not just valued as a source of metal but were valued as money.” We do not in fact have documentary evidence that Chinese coins were used as an international medium of exchange at this time, but the archaeological data from this and other sites certainly support the inference that the coins were used internally as money at certain sites of Southeast Asia.

Indonesian historical archaeology is treated in several chapters. Jan Christie’s “Weaving and dyeing in early Java and Bali” exploits epigraphic materials to illustrate the sophistication and complexity of the textile industry in the tenth to twelfth centuries. Since it is improbable that we will ever glean any significant information on ancient Southeast Asian textile designs from archaeology, it will be necessary to rely chiefly on documentary sources for such data. Textiles of course have long been one of the major forms of material culture in Southeast Asia, so that we would be unable to form an accurate conception of the region’s ancient technology, economy, or society if we did not incorporate as much information about this subject into our studies as possible. Christie acquired useful additional data on the subject by looking at cloth patterns carved on Javanese statues.

In another chapter on historic Java, M. J. Klokke analyzes decorative motifs found on ancient Javanese temples to clarify cultural relationships and chronology during the period from the mid-ninth to the fourteenth century. Focusing on Loro Jonggrang, Gunung Gangsir, and Kesiman Tengah, she first dispels the mistaken assertion that Loro Jonggrang bore few similarities with east Javanese art; she documents numerous relationships between the two (p. 87). One of the more vexing problems in Indonesian historical archaeology is the dating of Gunung Gangsir (GG). Klokke (pp. 91–92) notes Jacques Dumarçay’s thought-provoking idea that the central Javanese aspects of GG are archaisms, not signs of an early date. This theory thus contradicts the assumption that architectural style in Java evolved unilinearly. Klokke however also sees a very close relationship between GG and Singasari. In the end, Klokke infers that the Singasari antefix motif was copied from GG. Singasari is known to date from the late thirteenth century, so GG must be earlier rather than later than Singasari, contradicting Dumarçay’s conclusion. No compelling reason is given, however, for this conclusion rather than the alternative that GG copied Singasari.

Klokke succeeds in clarifying the situation regarding the relationship between central and east Javanese architecture by dividing temples with central Javanese motifs into three groups: (1) purely central Javanese; (2) temples like GG with a mixture of motifs, the majority of which are derived from central Java; and (3) Singasari temples with a few central Javanese motifs in east Javanese style. Kesiman Tengah fits into this third category. By the Majapahit period in the fourteenth century, no more carry-overs from central Java existed; east Javanese architecture became completely a local creation.

Still in the realm of Javanese historical archaeology, P. Lunsinghe Scheurleer fo-
cuses on the increasing emphasis in east Javanese art on demonic and terrifying traits. This trend coincides with the period from which many of the oldest Javanese literary sources derive, and can be used to show the reemergence of Javanese beliefs. For instance a witch-like figure who appears frequently "is clearly a local, Javanese demon, given Sanskrit names, while the myth, which turns on the liberation from her abhorrent appearance, is likewise a local Javanese story" (p. 220).

In an ambitious and enlightening chapter, Hariani Santiko tackles the major question of "The religious function of narrative reliefs on Hindu and Buddhist sanctuaries in [the] Majapahit period" in Java. The endeavor to resolve this question leads her through a discussion of the various theories that have been advanced regarding the basic function of the Javanese temple (she supports Soekmono's conclusion that candi were constructed to glorify the soul of a king which "has united with his incarnated deity" to achieve moksha and kalepasan, liberation from worldly fetters, by unifying with the Highest Reality).

Unlike India, where according to the Vastusatra reliefs are meant to focus devotees' thoughts on deity inside, east Javanese stories are taken from literature and folktales. Kalepasan stories, connected with lukat-exorcism seem to be correlated with dharma candi, for example the Sudamala which is depicted at Tegawangi, a temple built for the brother-in-law of King Hayam Wuruk. The same themes are, however, also found on non-dharmas, too. Thus it is not possible to correlate different types of candis exclusively with different types of reliefs. This chapter makes an important contribution to our understanding of the interrelationship between temple architecture, narrative decoration, literary sources, and religious beliefs for late classic Java. She includes a useful table of east Javanese candis with dates and identifications of reliefs.

For prehistorians, Truman Simanjuntak provides a report on Braholo Cave, in the Gunung Sewu area of limestone karsts, where numerous Palaeolithic sites have been found. Braholo Cave has a date of 12,000 B.P. for layer 4, which overlies another culture layer for which no dates are yet available. The cave contains abundant artifacts, including many bone tools of types identified by colonial-period Dutch archaeologists, and thus puts this interesting industry in a much firmer archaeological context.

Thailand is represented by two chapters. O. Deshpande reveals the existence of a collection of Thai sculptures of the fourteenth to nineteenth centuries now in the State Hermitage Museum of Russia, formed by a Russian diplomat in 1910–1916 while stationed in Bangkok. D. Hein and I. Edwards discuss a feature called Thanon Phra-Ruang, which extends from Sisatchanalai to Kampongphet via Sukhothai. Prince Vajiravudh in the early twentieth century inferred that it was a road. There are, however, no other examples of such constructions in Thai history. The authors adduce cogent reasons to suspect that it was actually a canal between Yom and Ping rivers, possibly to facilitate trade via Tak to Martaban and the Indian Ocean, dug by Mons in the early thirteenth century, at the same time as the first kilns were built at Sisatchanalai. An artificial quay may have been built at the kiln site about 1550.

One paper deals with Burma, specifically the Mahabodhi complex at Pagan. As T. Frasch notes, little is known about its history. According to legend, it was built by Nadaungmya (reigned 1211–c. 1231). Other Pagan temples also have square Mahabodhi-like sikharas—at least; and at least 5 of them probably predate the Mahabodhi. An important question then arises: why did a Pagan king want to make an exact copy? Frasch thinks it was connected with Muslim destruction of Buddhist sites in northeast India and a flow of refugees from India to Burma. Also, in the eleventh to thirteenth century, several Tamil groups ruled Sri Lanka, the other claimant to the status of true preserver of Buddhist heritage. Some Sri Lanka refugees also went to Burma. Thus Pagan was in 1200 the center of worldwide Buddhism. No Mahabodhi replica was built in Sri Lanka. At Pagan, the site chosen for the
replica was near the palace. Thus the copy was “an expression of Pagan’s newly acquired status as the leader of the Buddhist world, a symbol of Pagan’s Buddhist imperialism” (p. 46).

Viet Nam is discussed in several important papers. John Guy analyzes artifacts known as Kosa masks, which derive from ancient Champa. These are gold or silver sheaths for Rudrabhaga, the upper section of a Siva-lingga. These are well known in India, but rare elsewhere. In Champa, Sanskrit inscriptions mention kosa as among the most important gifts given by rulers to deities. This article describes one particular kosa, which appeared on the art market in London in 1996–1998.

Important 1998 excavations in the Oc Eo complex are described by P.-Y. Manguin and Vo Si Khai. After L. Malleret’s major studies in the 1940s, little was done until 1979. This article contains much new data, including detailed stratigraphy of several excavations. A detailed overall report is expected eventually, but until then this article helps make the situation at this site much clearer than Malleret was able to do. The 1998 excavation was located on a nearby hill, rather than on the plain below, and did much to clarify the relationship between this site and the area where Malleret did most of his research.

The Vietnamese archaeologist Pham Duc Manh adds a chapter regarding “Some recent discoveries about the pre- and proto-history of the southeastern part of Vietnam.” The author uses the term Dong Nai Cultural Complex to refer to the “distinctive cultural tradition” of this area, from 2500–2000 B.C. to the second century A.D. The complex includes five subcultural regions, one of which is the terres rouges area including circular earthworks. Another part of the complex, the marshy coastal site of Cai Lang, provides remains of many stilts for houses. Clearly this complex is marked by a high degree of diversity.

Another important set of excavations carried out during the 1990s took place at Tra Kieu, near Hoi An and Danang between 1990 and 2000. Ruth Prior describes the ceramics excavated during the first four seasons. Three ceramic phases were identified in research at the foot of Buu Chau Hill. The oldest phase, mainly associated with agricultural terracing, yielded 14C dates between the second century B.C. and first century A.D. Phase II dates from the second to fourth centuries A.D. The site then experienced some catastrophic destruction. Oddly little material related to a temple complex excavated in 1927–1928, commonly dated from the ninth to the twelfth century, could be recovered.

Phase I pottery may be related to late Iron Age Sa Huynh culture, but since SH is mainly known from burial sites, it is difficult to discern continuity between SH and early historic [Cham] cultures. Phase II remains are dominated by flat-based jars in Chinese-inspired style and kendis. The kendis display some parallels with third-century Oc Eo, but date from the second century, and are thus the oldest dated kendis in Southeast Asia. Technical analysis of the clays and thin-section analysis yielded interesting results. A number of production sites probably existed in Thu Bon River valley, all making a full range of wares.

Champa receives more attention from William Southworth, who relies mainly on documentary sources to examine Cham political geography during the late eighth and early ninth centuries. Arguing eloquently against Finot’s conclusion that Campa had five provinces, Southworth indicates the differences in chronology for these toponyms and the shifting relationships between them, producing a much more detailed understanding of the nature of Cham polities during this period, as well as the meaning of the word “Champa” itself.

A chapter by Ann-Valerie Schweizer is devoted to a particular region of Champa, Indrapura (Quang Nam). At Dong Duong, thought to be the capital, only a Buddhist sanctuary has been found (no palace or city). A sizable total of 22 inscriptions from here, however, provide much material for discussion. The inscriptions provide much evidence of local autonomous rulers who
acknowledged some sort of suzerainty by a supreme king, who was *primum inter pares* (pp. 210–214). Since most Cham Buddhist monuments belong to the tenth century, the Indrapura dynasty may have tended toward Buddhism. Cham inscriptions contain only thirteen references to Mahayana Buddhism. “This figure shows that it is difficult to consider Buddhism as an essential element in the court culture; it seems wiser to say that if Buddhism were associated with the royalty, it pertained more to the personal choice of each sovereign and the members of his court than to public of political matters” (p. 214). The chapter concludes with a useful list of Buddhist sites according to province.

The volume contains several important contributions on Cambodia. Claude Jacques points out that kings who reigned after Jayavarman VII in the thirteenth century have been unjustly ignored. Significant successors included Indravarman II, a Buddhist who continued Jayavarman VII’s policies for over 20 years, and Jayavarman VIII, who wiped out most Buddhist images at Angkor. This paper presents a new hypothesis for the Royal Square of Angkor Thom based partly on the work of Christophe Pottier at the Elephant Terrace and Leper King Terrace, and an excavation by J. Gaucher at the site of the royal palace. The terminal date for the square’s development may not have been 1432, when most scholars assume that Angkor was abandoned; Jacques believes a small kingdom may have still existed here until the Siamese defeated Lovek at the end of the sixteenth century.

V. Roveda, noting that only five out of eight narrative panels at Angkor Wat were completed in the twelfth century, discusses the later sections, some of which were probably carved as late as the sixteenth century. Some areas may have been influenced by later Chinese and Siamese art. Some areas, however, may have been sketched out in black ink, exerting yet another influence over the realization of these designs.

Son Soubert reports recent research at a site called Sre Ampil, 30 km south of Phnom Penh. The site had been mentioned by a French report in 1935, when an inscription from the seventh or eighth century was discovered. Recent discoveries indicate that this was an important pre-Angkor site, which continued into the Angkor period. Ashley Thompson examines the Middle Cambodia period of the fifteenth to the nineteenth centuries, during which the stupa-vihara-uposathagara architectural set appeared, as well as the image of four Buddhas around a stupa and the worship of Maitreya. This emergence in the author’s hypothesis is linked to the reconstruction of territorial authority and symbolic power after the fall of Angkor.

The important site of Huei Thamo on the left bank of the Mekong River, near Wat Phu in Laos, has been mapped by the Italian Archaeological Mission starting in 1997. O. Nalesini argues that Huei Thamo was possibly located here partly to manage trade with non-Khmer to the east. Huei Thamo was also on an important Khmer military route to the east. After Sreshthapura collapsed in the eighth or ninth century, Huei Thamo became the most important settlement in the area, dominating the Mekong. The eleventh- and twelfth-century renovations of the temple here were perhaps connected with its increased importance.

The last article concentrates not on a region but on a material, ceramic. Brian Vincent reviews technical studies of Southeast Asian pottery, and describes aspects of pottery technology important for archaeology in addition to form and decoration: characterization of materials, interpretation and description of clay preparation, shaping, drying, firing, and sampling. He argues for the efficacy of thin section and petrographic analysis for pottery characterization.

The volume contains a large dose of historical archaeology. Many of these contributions represent important signs of progress in old problems, which have been neglected for decades. The volume also contains several contributions by Southeast Asian scholars, who have few outlets for
their research. On both counts, this latest volume in the series contains much of value, though some sections will become outdated more quickly than others as the pace of research gradually accelerates in the region.


Reviewed by MARSHALL I. WEISLER, University of Otago

It seems just about every time you look around these days there is another edited volume or monograph on Pacific archaeology and prehistory—a far cry from the state of affairs just a decade ago. The editors of *Pacific 2000: Proceedings of the Fifth International Conference on Easter Island and the Pacific* bring together 55 chapters, which are the result of a five-day international conference held in Hawai'i in August 2000. Abstracts of 29 papers delivered at the conference, but not published in the volume as full-length papers, are also included; some of these papers have been published elsewhere. The volume is divided into 12 sections. There are five chapters each on New Horizons in Pacific Research, Archaeology on Rapa Nui, Hawaiian Archaeology, Anthropology on Rapa Nui, Polynesian Physical Anthropology, and Conservation Problems in the Pacific. There are four chapters on each of the following topics: Western Pacific Research, Samoan Prehistory, French Polynesian Prehistory, and Polynesian Languages and Literature. Two sections on Arts of the Pacific contain a total of nine chapters.

The volume begins with Peter Bellwood's excellent keynote address, which outlines the trends and directions in Polynesian prehistory during the past 25 years within the context of Austronesian dispersal, thus setting the broader context for papers in the volume. The restricted length of this review prohibits commentary on each of the 55 chapters that follow; consequently, I have selected papers from each section that are of broad interest to the readership of this journal.

Major themes found throughout many of the chapters include origins, dispersal, and post-colonization interactions—issues that remain at the forefront of archaeological and biological anthropological research. One of the most exciting and fruitful avenues of Pacific research in recent decades has been the application of palaeoenvironmental techniques to help date the human colonization of islands and document subsequent habitat alteration. Athens and Ward have been leaders in this pursuit from Hawai'i across Micronesia. Their identification of giant swamp taro (*Cyrtosperma chamissonis*) in mid-fifth millennium B.P. contexts in Palau suggests the presence of humans at a very early date. However, direct dating of individual pollen grains from multiple cores should please the skeptics. Also working on colonization issues in Palau, Wickler believes that palaeoenvironmental data should be backed up by archaeological evidence—presumably cultural stratigraphy with *in situ* artifacts and food remains. This stance will please some in the early vs. late colonization debates of Pacific islands, but multiple occurrences of humanly transported plants or landsnails associated with charcoal in clear stratigraphic associations should be a reasonable proxy for the presence of humans on islands.

Exploring reasons for the long pause between the settlement of West and East...
Polynesia, Anderson believes that prehistoric voyaging canoes were not as fast and seaworthy as experimental voyaging trials suggest and that long-distance sailing, especially to the margins of East Polynesia, was substantially more difficult than currently thought (p. 35). While this hypothesis is of interest it must be considered in light of the evidence for prehistoric long-distance inter-archipelago interaction documented for numerous East Polynesian archipelagoes between A.D. 1000 and 1500. Perhaps the other side to this question may be of greater interest. If voyaging canoes were, indeed, less efficient watercraft than once thought, then we might ask why long-distance voyaging continued centuries after initial colonization? What social, economic, and political motivations fueled continued hazardous journeys between island groups?

French Polynesian archaeology has enjoyed somewhat of a renaissance in recent years with the opening up of research opportunities to foreign scholars. Anderson and colleagues have continued the discussion on dating issues with renewed excavations and dating of key sites (Vaito'otia-Fa'ahia and on Maupiti)—thus reducing the chronology of colonization in East Polynesia to “no earlier than late in the 1st millennium A.D.” (p. 251). I always find it curious how the pre-1000 A.D. dates for isolated Henderson Island are always ignored in these discussions. The point is that if Henderson, a resource-poor makatea island, was initially occupied between A.D. 800 and 1000, why aren’t there earlier dates for large, more diverse volcanic islands to the west?

Those of us that believe linguistics and archaeology are not so much oil and water will see the implications of Fischer’s paper toward addressing prehistoric colonization and interaction issues in East Polynesia. Inventorying doublets in Mangarevan (MGV) he identifies intrusions from Tahitian and Marquesic, although his suggested dates for the latter, on archaeological grounds, are five centuries or so too early. His historical analysis of language relationships adds to the now large corpus of evidence that Rapa Nui was settled from the Mangarevan region.

The section on biological anthropology was clearly one of the major contributions of this volume. All of the five chapters provided clear evidence that Rapa Nui was settled from southeast Polynesia including some or all of the archipelagoes of the Tuamotus, Mangareva, and the Pitcairn group. There should be no doubt that South America—while contributing the sweet potato, bottle gourd, and probably minor amounts of new human genes—was not the source of the founding population. How gratifying it was to see Chapman reporting on a new biologically derived model of East Polynesian settlement after initiating his Ph.D. research at Otago University on the question of the South American–Rapa Nui connection. Importantly, Stefan uses a more holistic approach to understanding Rapa Nui origins by incorporating a discussion that considers archaeological, linguistic, and nonosteological bioanthropological data. Pietrusewsky and Ikehara-Quebral continue their multivariate approaches to the origins and relationships of human groups throughout Oceania and conclude that, “There is no evidence in these results to support an American origin of Rapa Nui’s early inhabitants” (p. 467). My only caveats for the biological papers are that the skeletal remains on which all authors base their analyses are not well dated and consist primarily of late prehistoric samples. Additionally, important spatial and temporal relationships identified by sourcing studies of basalt adze material in East Polynesia can strengthen and further define relationships suggested by the biological data alone.

While few Polynesian archaeologists will accept Martinsson-Wallin’s suggestion that the development of monumental architecture on Rapa Nui may have been a result of contact with South America and “Influences on monumental architecture could have subsequently reached out from Rapa Nui and back into East Polynesia . . .” (p. 74), many will applaud her consideration of contemporary indigenous values when decisions are made regarding the recon-
struction and preservation of ahu as well as tourist and scientific uses. Butler and Flenley demonstrate the efficacy of dating pollen grains to resolve chronological problems with a core taken from Rano Raraku, but unfortunately do not provide dates for when increased charcoal particles appear in the core—the evidence for forest decline. In one of the more comprehensive papers in the section on the Archaeology of Rapa Nui, Wozniak uses the concept of “landscape” to contextualize the Rapa Nui settlement pattern and investigate how agricultural subsistence systems transformed the physical environment. Are horticultural areas determined solely by geomorphic setting or are there also culturally prescribed rules dictating the location of food-production systems. Like Martinsson-Wallin, the introduction of the sweet potato is seen as a critical juncture in Rapa Nui prehistory stimulating population increase that contributed to chiefly stratification. The comparison to the Hawaiian case is of obvious interest.

Explaining the underlying causes behind the construction of monumental architecture on Rapa Nui is an important avenue of research. While past attempts have suggested that the widespread and colossal size of ahu and moai construction necessitated a depletion of the island’s natural resources which led to cultural collapse, Hunt and Lipo believe that “wasteful” behaviors (such as monumental constructions) tend to keep human groups below maximum carrying capacity, thus maintaining a population that can better survive in environments characterized by unpredictable productivity. While this Darwinian concept will have its disciples, it requires large well-dated prehistoric mortuary assemblages to address the model. Due to contemporary indigenous values throughout Polynesia, it is doubtful that the necessary and sufficient data to adequately test this hypothesis will be available in the near future.

At the northern limit of the Polynesian triangle it is becoming increasingly clear that Hawaiian archaeologists are taking seriously the need to engage the indigenous community in archaeological research and projects by Cordy, Mills, and Lebo and Bayman have sought to collect data as well as to train local groups in archaeological survey and excavation techniques. I, for one, look forward to the time when Hawaiians can write their own indigenous prehistory. Van Gilder reminds us of the importance of women in Hawaiian prehistory and how we may identify gender relations at the household level.

The section on Samoan prehistory consisted of four papers: two were brief reports of inventory surveys on American Samoa, a third described the use of GPS for site survey, and the remaining paper by Ayres and colleagues, described research-oriented surveys and excavations on Tutuila, an island well known for its basalt adze quarries. A large late prehistoric ceramic assemblage recorded at Malaeimi, consisting of 5000 sherds, will add important new information for defining the temporal sequence of ceramic production on Tutuila, if not for Samoa as a whole.

This volume continues to have something for everyone with the inclusion of nine papers on various aspects of Pacific art from Sand’s description of the Lapita design system, Wallace reviewing tooth artifact forms in East Polynesia, Ivory investigating the wood carving traditions of the Marquesas, K. Stevenson focusing on contemporary art production of Pacific women, and Allen describing the symbolic significance of Hawaiian leg tattoos. All demonstrate the importance of prehistoric art forms to the identity of contemporary indigenous societies.

In the final section on conservation Pearson and colleagues remind us that “Everyone has the responsibility to ensure the long-term preservation of the collections which comprise the material culture heritage of the Pacific” (p. 533), a point echoed by Sinoto who laments the unscientific restoration of Society Island marae. He believes that archaeologists, indigenous people, and government ministries must work together to provide accurate restorations for future generations.

Experimental voyaging has certainty
BOOK REVIEWS

built an important bridge between the scientific community and indigenous peoples across Polynesia. Finney and Kilonsky recount the 1999 voyage of Hōkūle‘a from Mangareva to Rapa Nui. While some dismiss the voyage as not representative of traditional seafaring capabilities of ancient craft—due to the use of racing sails and other modern construction materials—this voyage had, perhaps, a grander outcome of reaffirming the place of all Rapa Nui within the realm of Polynesia—a reconnection of island peoples with a common ancestry. As a historical science that has the tools, methods, and theories to access and write about the distant past, developing and maintaining lasting fruitful relationships with the indigenous communities across the Pacific will be to our mutual benefit.

I applaud the editors for getting this volume to print so soon after the conference. Although the papers are of varying quality and interest, the volume as a whole is a worthwhile contribution to the Pacific archaeological literature and should be on the shelves of all those interested in the region’s prehistory, linguistics, biological anthropology, art, and conservation.


Reviewed by MARK J. HUDSON, University of Tsukuba, Japan

As archeologists, how do we begin to understand the real lives and experiences of people who lived in prehistory? In this book, Koji Mizoguchi uses the argument of German sociologist Niklas Luhmann that the human mind tends to see its mirror in the past in order to reduce the psychological “stress” of dealing with the Other. The task of the archeologist is thus to liberate him- or herself from the assumption of sameness. Mizoguchi attempts this task by developing a phenomenological approach to what he calls the “technologies of identity” in prehistoric Japan.

For Mizoguchi, identity is primarily the psychological identity of the Self and the main unit of analysis of the book is the “psychic system/mind” (p. 239). Other identities receive little attention: ethnicity, for example, is only mentioned twice in the whole book. The reconstruction of identity is approached through an analysis of how individuals in the past may have moved through changing social topographies and interacted with other individuals and groups. The theoretical basis of this approach is discussed in Chapter 1. Chapter 2 looks at how contemporary Japanese identities have influenced archeological interpretation in post-war Japan. The main body of the book then moves on to a reconstruction of identities in the Late Paleolithic, Jomon, Yayoi, and Kofun periods in Chapters 3 to 6.

Since many of the arguments made by Mizoguchi are so complex, it is hard to do them all justice in a short review such as this. Here, therefore, I want to focus on what I see as the main strengths and weaknesses of this volume. Perhaps the main strength of the book is that it gives us a way to approach past identities without using historical documents. Despite the originality of his approach, however, many of the basic conclusions reached by Mizoguchi are rather traditional. For instance the idea that identity is derived by reference to the Other, a concept which Mizoguchi takes from Luhmann, was developed in ethnographic studies of ethnicity in the 1960s by Fredrik Barth and others. Mizoguchi’s discussion of the basic social

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changes in each of the four periods considered also tend to follow accepted conventions. Thus, the increased fixity of social relations at the end of the Paleolithic is ultimately derived from ecological factors: the fact that food resources supposedly became more predictable at that time (p. 70).

The analysis of Jomon figurines around the “notion of ‘cyclical’ and the regenerative power of the female” (p. 85) also follows the traditional approach in Jomon studies that has recently been criticized by Nelly Naumann in her book *Japanese Prehistory: The Material and Spiritual Culture of the Jomon Period* (Wiesbaden: Harrassowitz Verlag, 2000). The emphasis on rice paddies and mounded tombs in the discussion of the Yayoi and Kofun periods follows the familiar post-war Marxist problématique of the rise of class divisions in ancient Japan. And the conclusion that in the Kofun period, “the elite and commoners became each other’s Other” (p. 238) is supported, for example, by a wide range of historical studies on elites in premodern Europe.

These frameworks are not in themselves evidence of any fundamental flaw in the book under review here. Rather, they are symptomatic of the very broad level of Mizoguchi analysis and also of the fact that the book does not attempt to develop a new theory as to why identities change over time. Human “identity” is a complex, multifaceted phenomenon that is above all contingent upon individual situations; there can be no more a single “Jomon identity” than a single Japanese or Belgian or Syrian identity today. In investigating the “topographies” of identity that were experienced by the inhabitants of the Japanese archipelago from the Late Paleolithic through to the Kofun period, Mizoguchi deals with only the broadest level, perhaps the shared “baseline” of identity for each period. There is no discussion of the diversity of individual and group identities that must have characterized lifestyles in prehistoric Japan. Thus in Chapter 5, for example, we are told that in the Yayoi period the spatio-temporal movement of people became structured around rice paddies.

While I have few disagreements with Mizoguchi’s argument here as it stands, the chapter contains no acknowledgment that there were Yayoi period groups whose lives were not centered around paddy fields and whose identities must have been very different from those found in the “classic” Yayoi culture around the Inland Sea.

Mizoguchi is to be congratulated for his discussion of Paleolithic society, something which is still unusual even in the English literature. Chapter 3 contains an excellent summary of recent Japanese work on Paleolithic site formation and land use. Mizoguchi’s own view of Paleolithic society is based not so much on flexibility as uncertainty; this uncertainty is, however, quite subjective and not like the concept of risk used in ecological modeling. I can accept that lifestyles in the Paleolithic were generally more mobile than those in the Kofun period, but I cannot see that this means that social identities were necessarily more “fixed” or “certain” in the latter period. Studies of recent hunter-gatherers have shown that their sense of territoriality and place is influenced by a range of ecological and other factors, but the ethnographic literature does not support the notion that foragers can be characterized by “irregular” movements over a landscape (p. 61) or that they were not “bothered too much with future obligation” (p. 230).

On the plus side, one of the most impressive aspects of this book is its discussion of the social context of post-war Japanese archaeology. The analysis of this topic in Chapter 2 is extremely insightful. Mizoguchi shows how the main periods have been read, researched, and contrasted not just by archaeologists but also by the general public. These ideas have been in a process of flux for the last decade or so as the Jomon, rather than the Yayoi, takes on the trappings of the natural, native embodiment of Japanese tradition (pp. 36–38).

*An Archaeological History of Japan* is richly illustrated and contains much detailed information about Japanese prehistory that can be used by readers who are not inter-
ested in all the theoretical aspects of Mizoguchi’s argument. The book is not, however, an easy read. Processual archaeology has been criticized for its presumption of scientific detachment, yet I also find Mizoguchi’s writing curiously detached in its subjectivity. This is a shame because the complex style detracts from what is really an exciting piece of archeology.

Although I have been quite critical about certain aspects of this book, this is not because of any basic disagreement with its main conclusions. Mizoguchi’s methodology and models are a major contribution to the literature. In my view, the main flaw of the volume is that Mizoguchi does not discuss how the very broad identities he talks about may have related to other identities in prehistoric Japan; he does, however, provide us with a methodology for conducting those more detailed analyses. Japanese archaeology has often been criticized for its lack of explicit theoretical discussion, but here is a book written by a Japanese archeologist that will engage even the most theoretically oriented members of our profession. Mizoguchi is one of the very few archaeologists who have published widely in both English and Japanese and this book confirms his position as the leader of a small but growing post-processual movement in western Japan. *An Archaeological History of Japan* firmly engages post-processual theory with Asian archeology and the book deserves to be widely read and debated for its contribution to both the prehistory of East Asia and to archeological theory in general.


**Reviewed by GINA L. BARNES, Department of East Asian Studies, University of Durham**

Following on her innovative studies of ceramic production in Late Neolithic China, Anne Underhill of The Field Museum in Chicago has, in this book, undertaken a massive investigation of the textual and archeological evidence for changes in craft production in relation to the development of complex society between 4000 and 1200 B.C. in northern China. She adopts an unabashedly processualist approach in focusing on social evolution and structuring her work by hypothesis testing. This results in probably the most meticulously systematic argument in the Chinese archeological literature, where a rich array of Chinese historical and archeological as well as worldwide ethnographical data are marshaled in its support. From a survey of the Western theoretical literature on complex social development, Underhill develops expectations about the nature of craft production at different levels of society. However, recognizing that food vessels are a dominant element in the grave goods during her investigative time slot, she uses early Chinese documentary sources together with ethnographic data to develop expectations about the use of food in funerary rituals and the ramifications of doing so for ceramic and bronze craft production. Her resulting model is perhaps most succinctly stated retrospectively in her final chapter, where she equates (pp. 242-243), where + means “plus,” = “results in,” and > “leading to”:

little social inequality + widespread ac-
cess to food surplus > small-scale feasting
in society in general
marked social competition + consider­
able social mobility > large-scale feasting
by a minority to negotiate economic power
high social inequality + restricted access
to food surplus = low social mobility >
small households host large-scale feasts
From models in social evolutionary
theory, we should expect to see a gradual
increase and intensification of both craft
production and feasting in the archaeologi­
cal record. However, Underhill reveals that
the Chinese sequence is different in several
ways—not least in the already mentioned
prominent use of food and drink to nego­
tiate status in funerary rituals. A surprising
result of her analyses is that the Late Long­
shan, where we would expect to find more
“attachment” of specialists to chiefly figures
for production of prestige ceramics such
as the known eggshell-thin blackwares, is
actually a period of considerable regional
variation without clear centers and with
general access to rare goods despite their
technical perfection. Even in the Shang
period, when the production of bronze
vessels is controlled by elites, central work­
shops are lacking, and craft intensification is
evidenced by an increase in the spatial scale
and increasingly fine division of labor. At
Anyang, bronze production is still carried
out with the household but with different
households responsible for different parts of
the production process or for different pro­
ducts, indicating not a change in the “mode
of production” from earlier periods but an
“increase in structural heterogeneity” (pp.
234–235). Nevertheless, Underhill includes
this mode of production under the rubric
of “attached specialization” and notes that
such specialists produced not only prestige
goods but also utilitarian wares for the
elites. And finally, despite some crafts (pres­
tige or utilitarian) being organized under
attached specialists, there were also “in­
dependent specialists” who made goods of
various kinds for all levels of people, in­
cluding elites.
Such variability within one phase of the
Late Shang capital’s existence is amplified
on a regional and temporal basis. Under­
hill’s work makes it very clear that it is dif­
icult to generalize about “China” or even
about “northern China” in terms of the
nature of funerary rituals and productive
activities. She urges more regional analyses
to be undertaken, especially paying atten­
tion to areas other than centers of power
and especially looking at ordinary villages
and cemeteries. Without these controls on
regional and hierarchical variation, it is dif­
ficult to come to conclusions about the rise
of power-holders in the Chinese sequence.
A couple of notes on the language used
in Underhill’s text: in reading it one will
soon become aware of the presence of
the triumvirate “should be,” “would be,”
“could be.” The first should (!) always be
used to identify testable deductions from
the general theory, while the second is ap­
propriate to “if” “then” sequences, and the
third is more speculative or interpretative
in nature. Unfortunately, the use of these
words does not always follow their logi­
cal correlates, so sometimes it is difficult
to identify just where one is within
Underhill’s argument. Words based on
probabilities—such as perhaps, possibly,
seems to, appears to, and is likely—are in
abundant use, reminding us that so much
of Underhill’s conclusions, like most ar­
chaeology, are probobalistic interpretations.
Such statements are in vast contrast with
historical writing which tends to make
positive statements as if fact. Much of the
product of this book is negotiable—with
different emphases on theory, with genera­
tion of new data, or with recourse to dif­
ferent background sources. Underhill has
created a wonderfully new word combina­
tion to reflect this negotiability: her “con­
cluding hypotheses,” in which she states
her interpretations but recognizes and in­
deed invites others to test them by offering
them as hypotheses for future research. Let
us hope some ambitious souls take up this
offer, but as it is, Underhill has contributed
some very cogent cross-cultural examples
with which to both broaden and refine
general theory on the development of so­
cial complexity while offering the Sinolo­
gist a wealth of data on food and ritual to
ponder.
Eleven papers, which resulted from an international conference held at the University of Yunnan in Kunming, China, in June 2000, are published in this slim volume. Nine of the eleven papers focus on genetic diversity in Southeast Asia and neighboring regions, especially studies which utilize molecular genetic marker data, including mitochondrial DNA and the Y chromosome. Three papers provide archaeological and linguistic perspectives for understanding the prehistory and peopling of the region. Four genetic papers, by S. Horai, J. Martinson, S. Marzuki, and M. Stoneking, and one on linguistics (L. Sagart), presented in the same conference, are not published in this volume. One of the main objectives of the conference was to bring together researchers interested in population genetics in Southeast Asia in a collaborative spirit. The papers are divided into four sections: Part 1: Prehistory of Human Populations: Archaeological, Linguistic and Paleontological Perspectives, Part 2: The Peopling of Southeast Asia, Part 3: The Peopling of East Asia, and Part 4: The Peopling of Oceania.

The chapter by C.F.W. Higham, "Prehistory, Language, and Human Biology: Is There a Consensus in East and Southeast Asia?" serves to introduce the major themes covered in this edited volume as well as provide archaeological, and some human biological and linguistic perspective. As acknowledged by Higham, there is little direct evidence for tracing and dating of the first anatomically modern humans in Southeast Asia. The first visible archaeological record for the region dates to only 38,000 years ago with the appearance of late Pleistocene hunter-gatherer sites. Higham summarizes evidence from studies of human biology of surviving hunter-gatherer groups (Negritos), which suggests that early humans may have appeared as early as 100,000 years ago in the region. The main focus of this chapter is the reiteration of an agriculturally (rice) driven demic (vs. cultural) expansion of northern populations, which Higham places in the Yangzi Valley, into Southeast Asia. This expansion, which the author suggests followed the major river systems of the region, is believed to have replaced relic Negrito populations in the region. A similar process of expansion is used to explain the later intrusions of people in Island Southeast Asia and ultimately Melanesia and greater Oceania. The author formulates a similar model, based on available linguistic evidence. The second chapter, by W.S.-Y. Wang, "Human Diversity and Language Diversity," reviews some of the basic tenets of historical linguistics with special attention being given to the major language groupings of Southeast and East Asia and the estimated dates for the separation of major language families. These linguistic reconstructions provide perspective and invite comparisons with archaeological and genetic data. The final chapter in this section, "Before the Neolithic: Hunter-Gatherer Societies in Central Thailand," by R. Thosarat, provides further archaeological context for an agriculturally driven demic expansion of northern populations into Southeast Asia. Archaeological and some human biological evidence from two coastal hunter-gatherer sites in central Thailand, Nong Nor and Khok Phanom Di, are used to substantiate the transition to agriculture in the late third millennium B.C.

Four papers are presented in the second section. The P. A. Underhill and C. C. Roseman paper, "The Case for an African
Rather Than an Asian Origin of the Human Y-Chromosome YAP Insertion," uses the phylogenetically informative paternally derived Y-chromosome to contradict the Asian origin hypothesis for the origin of the YAP Alu insertion and bolsters the original Out-of-Africa scenario for the origins of modern humans. While the timing of this important mutation is broadly consistent with the mtDNA evidence, the authors acknowledge that it postdates the paleoanthropological evidence.

Using Y chromosome and mtDNA data, the paper by B. Su, C. Xiao, and L. Jin, "Genetic History of Ethnic Populations in Southwestern China," confirms historical Chinese records that indicate the existence of three distinct ancient human lineages occupying Yunnan Province. The first two, Bai-Yue and Bai-Pu, reportedly originated in southern and eastern China while the third, Di-Qiang, had a more northerly origin. The genetic data also indicate that there was extensive admixture between the southern- and northern-derived groups.

The paper, "Y-Chromosomal Variation in Uxorilocal and Patrilocal Populations in Thailand," by M. Srikummool, D. Kangwanpong, N. Singh, and M. Seielstad, reports on variation in the Y chromosome in four ethnic groups living in northern Thailand, the Karen, Hmong, Akha, and Lisu. The sex-specific genetics of mtDNA and the Y chromosome make these genetic marker data attractive for investigating sex-specific differences, including postmarital residence rules, in human groups. Although additional work using mtDNA is required, as expected, variation in paternally inherited Y chromosome is highest in the Karen, consistent with higher male than female migration rates for this predominantly uxorilocal (i.e., the husband generally resides with the family of his wife) group. The dendrogram, constructed from distances among the four groups using Y chromosomal data, is consistent with the known linguistic affinities among these groups. The three Sino-Tibetan speaking groups, Karen, Akha, and Lisu, separate from the Hmong, who are members of a distinct linguistic family (Miao-Yao or Hmong-Mien).

The last paper in this section, "Genetic Relationships among Sixteen Ethnic Groups from Malaysia and Southeast Asia" by S. G. Tan, summarizes results using five classical genetic marker protein-coding loci to assess relationships among ethnic groups in Malaysia and surrounding regions of Southeast Asia. Two broad groupings, one containing essentially three non-Mongoloid ethnic groups (Indians, Senoi, and Aetas) and the other containing thirteen Mongoloid groups, were discerned. The author also reports on other analyses of swamp water buffalo using an array of classical and nuclear genetic marker data that support, in his view, the spread of agriculture and people into Southeast Asia from a northern source.

Two papers, "Chinese Human Genome Diversity Project: A Synopsis" by J. Chu and "Origins and Prehistoric Migrations of Modern Humans in East Asia" by B. Su and L. Jin, are presented in Part 3. The Chinese Human Genome Project, discussed in the first paper, began in 1993 with the establishment of cell lines for 15 populations. Twenty-seven more cell lines are anticipated by 2002. The remainder of the paper by Chu provides a succinct summary of the genetic relationships of 28 Chinese populations residing in China using microsatellite data from a study published in 1998. The results of this latter study demonstrate the differentiation of southern and northern groups and, according to the author, also support the Out-of-Africa hypothesis for the origin of modern humans. The authors of the second paper in this section summarize recent results using Y chromosomal and microsatellite marker data that indicate modern humans of East Asia have a recent common origin in Africa beginning with the initial occupation of Southeast Asia around 18,000–60,000 years ago. Later expansions, northward and then southward, account for the peopling of the rest of East Asia, Island Southeast Asia, and ultimately Remote Oceania.

Two papers in the last section on the peopling of Oceania conclude the volume. The paper by R. Deka, B. Su, and L. Jin, "The Genetic Trail from Southeast Asia to the Pacific" focuses on the human colo-
nization of Remote Oceania (Polynesia). After reviewing some of the earlier nuclear genetic marker, globin gene, and mtDNA analyses, these authors focus on Y chromosomal evidence concluding that there is more support for an "express train model" and an origin in eastern Indonesia to explain the peopling of this region. "The Colonization of Remote Oceania and the Drowning of Sundaland" by J. K. Lum handsomely rounds out the volume. In this paper Lum attempts to reconcile, using mtDNA and other genetic marker data, the settlement and interaction of the indigenous inhabitants of the Pacific with archaeological, linguistic, and morphological analyses. After a review of the three main opposing and current scenarios that attempt to explain the settlement of the Pacific, including Remote Oceania, Lum presents the results of recent mtDNA analyses. The mtDNA evidence largely supports the Eden in the East model (Oppenheimer 1998), a novel scenario that links the drowning of the Sunda continental shelf at the end of the Pleistocene with the dispersal of people and ideas. One aspect of this model attributes the spread of the Austronesian language family with a recent expansion, which originated in what is now eastern Indonesia. Ultimately, this expansion led to the initial human settlement of Remote Oceania, which includes Polynesia and most of Micronesia.

Overall, the selection of papers in this volume provides readers with a representative cross-section of some of the current efforts to understand human diversity and origins of people living in eastern Asia, using primarily genetic data. With few exceptions, the papers provide only brief summaries of previously published genetic analyses. Given that geneticists wrote the majority of these papers, nonspecialists will, out of necessity, have to rely on the interpretations and conclusions presented. Although the organizers of the conference held in Yunnan preface this volume (p. vi) with the view that population genetics is a synthetic field that requires the integration of genetic results with those of other fields, the coverage of the data and analyses from other fields is generally uneven, oversimplified, and sometimes confusing. For example, there is little or no discussion of the paleontological and morphological data for the region. While this volume, to some degree at least, helps to resolve the problem of interpreting genetic and other kinds of information, the chasm between the two still remains. A final summary chapter would have helped enhance the volume. Hopefully, the selection of papers presented will encourage continued collaboration among experts in many fields which will help elucidate the rich cultural and biological heritage of the people, past and present, living in Southeast Asia and beyond.

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Reviewed by Kobayashi Ken'ichi, National Museum of Japanese History

This book is a revision of Habu Junko’s Ph.D. dissertation submitted to McGill University in 1996. Before her move to Canada, she had conducted archaeological
investigations in Japan. Even in Canada and presently in the United States, she continues her investigations into Jomon archaeology, and has made considerable contributions to Japanese archaeology as a whole.

Prior to reviewing this important work, I considered it necessary to put Habu’s scholarly contributions into the broader framework of Japanese archaeology. The past twenty years has witnessed English-language publications of Japanese authors dealing with Jomon archaeology (e.g., Akazawa 1986; Imamura 1996; Mizoguchi 2002). Yet, even though the number of publications on Jomon archaeology is high each year, these comprehensive syntheses do not cover the diverse trends and research directions in Japanese archaeology.

The advances in Jomon archaeology are a reflection of its evolution from emphasizing chronology building to studies of new problem orientations. Owing to large-scale, full excavations of settlement sites as a result of rapid economic growth in the 1960s and 1970s, for example, settlement archaeology has become an important branch of Jomon archaeology (e.g., Kobayashi 1973). The excavation of numerous shell middens has led to active discussion on subsistence and paleoenvironments during the Jomon period. Yet, very few attempts have been made to integrate the different branches of Jomon archaeology into the study of Jomon society. In this sense, Habu’s present work successfully combines the studies of settlement patterns and subsistence. To achieve her goal, she adopted theoretical frameworks proposed by Lewis Binford. She should be congratulated for her success in presenting a new, fresh perspective on Jomon studies in Japan.

Habu’s contributions to Jomon archaeology are twofold. One is her model of intersite interaction dating to the Moroiso phase (about 4000 cal B.C.) of the Early Jomon period (5000–3500 cal B.C.). This work is backed by her further-refined pottery chronology of the Moroiso phase. Her chronological framework is unique because she not only relies on traditional methods of pottery typology and stratigraphy, but also adopts frequency seriation of different types of pottery discovered in individual semi-subterranean residences. She also adopts Longacre’s ceramic approach to prehistoric social organization, which is quite new to Jomon archaeologists in Japan. These all serve as the background to her present monograph.

Her second contribution to Jomon archaeology is the subject matter of this monograph, sedentism and subsistence of the Moroiso phase. In eastern Japan, many settlement sites of the Early and Middle Jomon period that have been excavated contain hundreds of semi-subterranean residences with pottery of several chronologically distinct types. Among Japanese archaeologists, debates continue on whether such large settlement sites represent the continuous occupation of more than one hundred habitations for a few thousand years or the intermittent occupation of a small number of residences each season, every few years, or every few decades. As Habu points out in Chapter 3 of this monograph, Japanese archaeologists primarily support the former position. In recent years, the latter position has gradually gained support from young archaeologists, including Habu and myself. However, I disagree with her on the type of intermittent settlement characterizing these sites.

In this monograph, Habu argues for seasonal occupation of camps and settlements. I tend to disagree with her view because I contend that even small, temporary settlements were occupied throughout the year, based on the archaeological evidence of modified semi-subterranean pit dwellings (Kobayashi 1999). The focus of my investigation is the Middle Jomon period, which shows cultural phenomena similar to the Moroiso phase of the Early Jomon period. I propose that similar subsistence-settlement systems were maintained during both the Moroiso phase and the Middle Jomon period and argue that the size and duration of settlement occupation was heavily dependent on the natural environment and other social factors surrounding the settlements. Therefore, as I again stress here, set-
tlemet systems were regionally distinct within the Kanto Plain (Kobayashi 1994).

Methodologically, Habu’s monograph represents the first attempt to apply processual archaeology to Japanese Jomon archaeology. When she published portions of her dissertation in Japanese, Japanese archaeologists were “shocked” because her processual approach was antithetical to the traditional Japanese understanding of historical development. Habu’s argument has been criticized by Japanese archaeologists, most notably by Yamamoto Teruhisa (1991) and Sasaki Fujio (1993). They do not subscribe to the ethnoarchaeological approach or the application of Lewis Binford’s forager-collector model. Japanese archaeologists generally consider it erroneous to make direct comparisons between the ethnography of the Ainu in Hokkaido and the Jomon people. For Japanese archaeologists, any comparison between the ethnographic record of Native Americans and Jomon people is out of the question. As to the application of Binford’s middle-range theory, Japanese archaeologists are aware of, for example, Ian Hodder’s criticisms of this concept. Habu does not fully defend her position of adopting Binfordian concepts and approaches in her monograph, which I consider unfortunate.

Specifically, I question Habu’s application of the forager-collector model to the regionally diverse and complex natural environment of the Japanese archipelago. For example, I tend to agree with Habu that the Jomon society of the Jusanbodai phase at the end of the Early Jomon period (3700–3500 cal B.C.) in the Kamo Plain maintained a subsistence system that was very close to the forager model. As she points out, the Jusanbodai phase is characterized by a dispersed distribution of small settlements, suggesting mobile and migratory ways of life. The problem is, that the forager model predicts a lack of storage features, yet small settlements of the Jusanbodai phase are sometimes accompanied by large underground storage pits. Based on my own investigations, I would argue for a more complex settlement-subsistence system that was well adapted to the natural environment of Japan. Settlements that were the outcome of the collector system and those that were the outcome of the forager system, characterized by small migratory groups of residences, were juxtaposed in the Kanto Plain in the middle phase of the Middle Jomon period (3520–2470 cal B.C.) (Kobayashi 1994). Therefore, the settlement-subsistence system of the Jomon period was much more complex and more regionally distinct than she discusses.

Another shortcoming of Habu’s monograph is her rough chronological control for the purpose of settlement analysis. She divides the Moroiso phase into three chronological stages, although in Chapter 2 she divides it into six stages. Each one of the three stages of the Moroiso phase was probably 100 years long. It is therefore impossible to discuss seasonality based on such a rough chronology. Maybe because of the rough chronological control for this monograph, she proposes that over eleven dwellings were occupied contemporaneously in a single settlement. In her earlier publication (Habu 1988), she argued for only a few residences in a single settlement during the Moroiso phase. This change in her proposal may be a result of her change from a finer six-stage to a three-stage chronological framework. In order to grasp the contemporaneity of residences, I believe that even a six-stage division is not fine enough. For my own settlement study of the Middle Jomon of southern Kanto, I adopted a 31-phase chronology, with the proposal that each phase was approximately 30 years (Tsumura et al. 2002).

In addition to a finer chronology, Habu should have taken into consideration other phenomena that would have been important in considering the contemporaneity of residences and the duration of occupation. Such phenomena include residential abandonment and garbage disposal patterns. The results of my investigations into these patterns show that the appearance of a single settlement changed over time (Kobayashi 1999). Abandoned semisubterranean residences were used for garbage disposal and for other purposes (Tateishi 2000).
factors would have made Habu’s interpretation more convincing.

I also question Habu’s interpretation of variability in stone tool assemblages, but her method of quantifying the variability is innovative and interesting. At the same time, I doubt if this variability represents functional or seasonal differentiation of the camps and settlements. First, stone tools of different functions are not deposited at camps in the same manner. Specifically, the stone tool assemblage at a site does not necessarily represent the function of the site. For example, the more arrowheads hunters at a camp used for hunting, the fewer arrowheads were deposited at the archaeological site of this camp. On the contrary, the more stone mortars used at a settlement for a long period, the more stone mortars would be deposited at this settlement. In other words, the number of stone mortars may well represent the length of human occupation. I would argue that simple quantification of the frequencies of these different stone tools does not indicate the function or the seasonal occupation of a settlement or camp, despite Habu’s proposal.

Furthermore, Habu simply corresponds the function of stone tools to the season of activities supposedly represented by the stone tools. For example, she considers the discovery of hunting tools as representing winter occupation. At the same time, she does not deny the possibility that different assemblages represent the difference in subsistence base depending on the surrounding natural environment. She admits, on the one hand, differences in stone tool assemblages within a region represent the differences in seasonal occupation, and on the other hand, differences in stone tool assemblages among different regions represent the differential contribution of the subsistence base. I find the basis of her argument rather unclear.

Finally, I find her argument for the transition to a forager system at the end of the Early Jomon period in the southern Kanto Plain (present Tokyo-Yokohama regions) unconvincing. She simply associates this transition with marine transgression, without fully examining how subsistence changed over time. Although she argues for seasonal occupation of different camps, the recent results of zooarchaeological analyses at shell middens suggest that some camps were occupied throughout the year (Uetsuki and Kojima 2000). She admits the importance of such faunal analyses, but she does not fully take into consideration recent discussion of seasonality based on practical analyses of faunal remains.

Despite these shortcomings, Habu’s work is a very welcome addition to a short list of Western-language publications on Jomon archaeology. Such contributions are particularly essential today because the archaeological communities in Japan are considered “closed.” While many Japanese archaeologists show strong interests in Western trends of archaeology, including processual and post-processual archaeology, many of them still spend time and energy refining chronologies and conducting rescue excavations of archaeological sites. Several Japanese archaeologists in Japan even point out the possibility that this “closed” environment has facilitated the recent unfortunate scandal of faking Early and Middle Paleolithic sites in Japan. Before Habu, very few Japanese archaeologists have actively allowed Western colleagues access to the results of their research (Aka­zawa 1986; Imamura 1996; Mizoguchi 2002).

Secondly, unlike other synthetic works on Japanese archaeology written in English, her book is a publication of her investigations on a narrowly defined topic. The topic, the settlement system of the Jomon period, is at present hotly debated. Therefore, this book is the subject of considerable discussion among Japanese archaeologists.

In the final analysis, this monograph will certainly occupy an important position in the study of Japanese archaeology. It has successfully demonstrated the validity of Jomon archaeology contributing to hunter-gatherer studies, as well as being state-of-the-art in Japanese archaeology. I hope that this monograph will remain a stimulus for
discussion of hunter-gatherer archaeology and Japanese archaeology.

*Translated by Ken’ichi Sasaki*

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