
Reviewed by Eleanor Mannikka, Indiana University of Pennsylvania

Although Jacques Dumarçay shares a co-author status with Pascal Royère for Cambodian Architecture: Eighth to Thirteenth Centuries, most of the chapters bear his own mark. Four out of the six temples that individually head each chapter were surveyed and published by Jacques Dumarçay. Without a doubt, his extensive publications and personal experience shape this book.

After a brief introductory segment, the text is organized into two parts. The shorter first part covers the constraints imposed on builders and the second and much longer part, as well as the conclusion, examine major temples, wooden architecture, and city planning. Excellent drawings and black-and-white photographs clarify and expand the text, while a chronology, bibliography, and index complete the reference material.

Michael Smithies translated and edited the original French text and for the most part, the translation is easy to read although he should be reminded that “shaft” is a better translation for the French puits than “well.” Readers who do not speak French will not understand why the Khmer put wells underneath their sanctuaries. There are multiple editing mistakes that involve misspellings, faulty grammar, or typing errors that the publisher should have caught and corrected. They do not necessarily represent any failing on Smithies’ part.

The drawings and the photographs are excellent and rank among the best contributions the book has to offer. They represent years of work, and in the case of the drawings, especially enhance and expand the text. Another good feature of the book is the synopsis that appears at the end of several chapters in which the preceding, often abstruse points are brought together in a paragraph that is easy to understand. The chronology of Jayavarman VII’s life and monuments is very helpful and although brief, it clarifies the chronological relationship between the monuments constructed under his reign. That alone is a valuable reference tool.

A topic as broad as Cambodian architecture over a period of six hundred years cannot be covered in a little over one hundred pages. The authors are architects and their focus narrowed this vast range of information to primarily construction techniques and hydrology. If one is not an architect or unfamiliar with both water control and the site of Angkor, then this book is definitely too technical. The writing is directed toward researchers with a long-established interest in Angkor and its temples, and toward anyone working in restoration there.

As far as construction techniques are concerned, there is information on shear points and hooped roofs far too specialized for a general audience but at the same time,
there are interesting insights into the quantity of stone used in building—over 1200 blocks in one corner tower of Ta Keo. I happened to like learning about how sandstone is quarried but not everyone may share that fascination.

Jacques Dumarçay would be the companion of choice for anyone taking a tour through Angkor. His knowledge is encyclopedic and his demeanor both happy and enthusiastic. But when separated from that tour of Angkor and faced with pages of text, the same descriptions and explanations that work well when one is looking at the architecture itself, deteriorate into a tedious rendition of doorways, stairways, and endless architectural detail. It is just not the same as being there.

The long, labyrinthine descriptions are nevertheless, sprinkled here and there with fascinating and little-known facts. For anyone willing to peruse the whole, the architectural insights of the authors offer great vistas in a landscape that tends to be flat and dehydrated, in spite of, or sometimes because of the focus on hydrology.

Among these many gems in which hydrology becomes fascinating, is some anecdotal information on the collapse of a dam on the River Opak that would have caused flooding so disastrous as to force the central Javanese government and population to migrate to east Java (p. xviii). This is a valuable fact to add to the growing list of why this major population shift on Java occurred in the early tenth century.

Another interesting segment in the book concerns the military organization shown in the reliefs on the south side of the third gallery of Angkor Wat (started c. A.D. 1113) as compared to the organization in the reliefs at the Bayon (started c. A.D. 1181). The authors extrapolate the hodgepodge of mixed ethnic groups and a rougher-looking army at the end of the twelfth century and suggest the same mix applies to the workers on the Bayon and other temples. This point is well taken because the almost careless work on Jayavarman VII’s temples is a matter of record.

Sometimes the field of water control is brought into the picture of temple construction in a valuable and thought-provoking way that makes an important contribution to the pool (excuse the pun) of our current knowledge—and sometimes not. When emphasis is placed on water control as the only reason for the rise and fall of the kings at Angkor, it is overkill. Palace intrigues, foreign invasions, a change in religious and political beliefs, changes in the social structure, even a possibly incompetent king are all swept aside. The authors make no compromises in their assertions: “The architecture was the expression of a form of despotic power which control over water resources alone made possible” (p. 109). This aptly illustrates one of the flaws in the book: an overstatement of a theory that is put forward as an established fact without acknowledging other theories by recognized scholars—or contributing factors.

Once cast in the light of a despot, any Khmer king walking onto these pages is robed in blackened raiments. A king’s education in Sanskrit, in the sciences, in the arts, and in other fields mentioned in the inscriptions is not noted in this book. As in certain theories they propose, the authors fail to present a well-rounded picture and instead, rush to judgment.

This judgment is tempered slightly when the authors say “… the [royal] architectural undertakings were begun not only to the glory of a king but also for that of the gods, who were apparently worshiped by everyone [apparently?]. The laying out of the kingdom in the form of a mandala was a way of inviting the gods to come and reside among the subjects of a king capable of self-evidently conforming to divine wishes.” In general, however, the treatment of Khmer kings as nothing but despots is consistent throughout the book.

Another recurrent theme in the book is the mistaken notion that King Jayavarman II was held captive on Java until he escaped and made it back to Cambodia. While this is cited to bolster similarities in a few construction techniques shared by Java and Cambodia, it is not necessary. If the authors bring up architectural evidence that is compelling, that is enough to suggest some sort of contact between the two nations.
Once again, the tendency to hold forth with a heavy hand can undermine their theories rather than reinforce them.

For some time now, it has been noted that the word Jvā (long “a”) in the famous Sdok Kak Thom inscription is not the same word as Java, with no long “a” at the end. The few inscriptions that mention Jvā come from the eastern side of what is now Thailand. This would most likely place Jvā in that area. In more than one thousand Khmer inscriptions, Javanese suzerainty over any part of Cambodia is never even obliquely indicated.

There is another instance when the famous devaraja object is confused with the main image in the king’s pyramid temple, and that is patently never the case. The statements that the faces on the Bayon’s towers are connected to the concept of the temple as the body of a divinity should have been more guarded and definitely not proffered as the solution to what or who the faces represent.

Another Java-related problem is that the authors do not always balance the evolution of Khmer temples on the one hand, and outside influence on the other. Whether intentional or not, statements like “...monuments on the Kulen plateau show a clear influence of [sic] Javanese temples like those at Gedong Songo or the Dieng plateau in Java” (p. xviii) make it seem as though the evolution from brick structures at Sambor Prei Kuk and other early sites was not relevant. The authors would once again be better served if they presented their theories in a larger context, allowing the reader to draw his or her own conclusions.

When the authors leave purely architectural and construction methods behind and delve into iconography, inscriptions, or other nonarchitectural themes they are sometimes right and sometimes wrong. The discussions of Neak Pean, the West Mebon, the Bayon, and a few other temples involve some mistaken notions that a closer reading of the literature would eliminate. For example, Neak Pean’s early dedication to the life of the Buddha as attested by its four lintels is not acknowledged. Instead, the authors step back to a pre-Buddhist period and suggest the temple was Shivaite. This and similar statements left me confused.

In spite of the flaws and problems cited here, there is a wealth of practical information in this book that is quite useful and missing in other publications. On balance, this small book with its photographs and drawings and insights into architectural construction is a handy reference. If readers are able to gloss over theories that they might find objectionable or otherwise unacceptable, then combing the text for information has its rewards.


Reviewed by DOUGALD O’REILLY, Faculty of Archaeology, Royal University of Fine Arts, Phnom Penh, Cambodia

Burnished Beauty, a catalog of stone artifacts from an exhibition organized by the Hong Kong Museum of Art and the Oriental Ceramic Society of Hong Kong is a feast for the eyes. The book is divided geographically into sections. It opens with an introduction and notes leading into a brief discussion of jade culture in Viet Nam by

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the editor, Christopher Frape. This is followed by a short discussion of new excavations in Viet Nam at the Trang Kenh site. The rest of *Burnished Beauty* is divided into sections, northern Viet Nam, central and south Viet Nam, Thailand and Laos, Indonesia, Philippines, and Taiwan. These sections are, in turn, divided into chronological periods, starting with the earliest artifacts.

Frape attempts to address and clarify the definition of terms related to jade in China before turning to briefly discuss the social value and meaning of the stone. Frape then considers the presence of jade through the various “cultures” in Viet Nam such as Phung Nguyen, Dong Dau, Go Mun, and Dong Son and the morphological changes of artifacts made from the material.

The essay following Frape’s is a rather curious inclusion, which is, in effect, an excavation report presenting the findings of research at the jade-working site, Trang Kenh. The authors list the stone and ceramic artifacts recovered. The importance of the site in the production of jade artifacts is only mentioned in an editor’s note. One cannot help feeling that this contribution is out of place in the catalog, although the excavation is mentioned in some instances in photographic notes on artifacts from early Vietnamese sites.

The main body of the book comprises photographs of stone artifacts, divided into sections. Each section of the catalog provides a brief overview of the archaeology of the region, followed by photographs of selected artifacts. An explanatory note, providing information on the probable use and morphology of each artifact, accompanies the photographs.

Each artifact is identified by type, such as halberd or dagger. A broad cultural association is given and dates provided. The color and type of stone and dimensions are also presented. The photography is very well done and serves to accent the beauty of the artifacts. The lack of provenance information is regrettable. This should have been listed in cases in which provenance was known. It is clear, however, that many of the artifacts are in the hands of private owners and hence provenance information may not be available.

*Burnished Beauty* is a good general reference for those interested in the stylistic evolution of stone artifacts in selected parts of Southeast Asia. The astounding beauty of these artifacts make the book a worthwhile addition to any library. This said, *Burnished Beauty* would have made a better reference book if examples of quotidian artifacts could have been included but one must note the title of the book and be satisfied with what is offered.

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*Reviewed by Helen Ibbitson Jessup, Norfolk, Connecticut*

Metal-working skills have always offered a criterion of social development. Artistic expression evolves when utilitarian objects like an iron axe head or a bronze water container, themselves the descendants of stone or clay artifacts, are treated in a manner transcending mere use. The incised and molded ritual urns and ewers of the Shang in China and the drums of Dongsonian craftsmen in Viet Nam offer proof of levels
of sophistication that came to define cultural identity.

It is therefore always welcome news when a publication appears to expand insights into the production of bronze objects. The authors of this book are correct in stating that Khmer bronzes are among the least recognized and understood of Southeast Asian forms. In his definitive analysis of Khmer stylistic evolution of 1955 (La Statuaire khmère et son Evolution. Saigon: EFEO, 1955), Jean Boisselier, for example, devotes 267 pages to stone sculpture but only an appendix of seven pages to bronzes.

The Introduction, in explaining the reasons for the pervasive ignorance of Southeast Asian art, states that “... the first Europeans coming into contact with Southeast Asia’s classical art and architecture took little notice. No mention is made in any records of the striking temples” (p. xiii). This is somewhat misleading. The admiring descriptions of Khmer temples by the Chinese emissary Zhou Daguan (Chou Ta-Kuan), in The Customs of Cambodia (published before 1312 C.E.), had been translated into Italian by the Jesuit mission in Beijing by 1789 and into French by Abel Rémuusat by 1819.

There were published first-hand accounts in Europe even earlier, a Spanish sixteenth-century example referring to the “temple with five peaks” (clearly Angkor Wat) as “one of the wonders of the world.” In 1668 Father Chevreuil wrote of Angkor Wat’s renown, while in 1858 Charles-Emile Bouillevaux published an account of his 1850 visit to Angkor, saying “The Angkor pagoda, which is fairly well preserved, is the jewel of the Indochinese peninsula and worthy of ranking alongside our most beautiful monuments.” Better known still are French publications by Henri Mouhot (1863), Francis Garnier (1873), and Louis Delaporte (1880), all illustrated. At the Universal Exposition of 1878 in Paris the great naga balustrade of Preah Khan (recently brilliantly reconstructed in its entirety in the rebuilt Musée national des arts Asiatiques-Guimet) was presented as an example of the seventy pieces of sculpture brought back to France by Delaporte. In addition, renowned writers such as Pierre Loti (Un pèlerin d’Angkor, 1912), and André Malraux (La Voie royal, 1930) published widely read accounts of Angkor.

While a brief historical overview is useful to introduce works presented in a book like this, the authors’ inevitable and understandable need to generalize has unfortunately led to inaccurate oversimplifications in several instances. There is, for example, no evidence for their claim of a “wave of Indian immigration” to Cambodia (p. 1), and the Chinese they mention (p. 2), if we are to rely on written evidence, were emissaries of the Chinese emperor, not traders. In describing the beginnings of the Angkor kingdom the authors state that Jayavarman II “declared himself the supreme sovereign or god-king” (p. 2). In fact, the epigraphic evidence we have for the ceremonial origins of the state of Angkor in A.D. 802 (the inscription of Sdok Kak Thom of 1052) makes it clear that the king was consecrated as universal monarch (cakravartin) by the Brahman Sivakaivalya in conjunction with the installation of a devaraja. We still have no hard evidence of what exactly the devaraja was, whether a linga symbolizing the king’s protection by his chosen divine patron or a divine spirit that was invoked as the sanctifying power of the reign, or some other entity. The claim that the Khmer kings were perceived as gods is unsubstantiated in historical records but the misconception now seems to be set in stone.

There is no space here to list all the introduction’s inaccuracies, but among the more important are the claims that the “very sophisticated irrigation system served a substantial part of the population” (we have no proof of this, logical though the inference may be); that “gigantic volumes of earth removed for the building of the irrigation system were transported and used to construct a series of artificial mountains of soil capped by temples and shrines” (the baray were diked, not dug, so there were no huge volumes of fill to remove; furthermore, many of the temple mountains were erected on natural hills, while those
that were not had cores of laterite); that Angkor Thom, like Angkor Wat, is a "temple site" (it is a city). Given their inland locations, Ayutthaya and Phnom Penh are strangely identified as centers of maritime commerce (p. 4).

Chapter 2 addresses artistic achievement. Here, too, the reader is somewhat distracted by dubious claims. The shrines of temple mountains do not contain images of "the kings themselves" (p. 7). It is hard to reconcile the remark that "Tenth century Khmer sculpture began to take on a conventional and relatively insensitive massiveness" with the evidence of the extraordinary refinement of the tenth-century Pre-Rup and Banteay Srei styles, among the most delicate in Khmer art. Furthermore, to state that the artists creating the bronzes presented in this book "did not see themselves as artists, but brought a sense of eternity to the act of creation" is to indulge in unfounded though sympathetic speculation.

The chronology is marred by several errors. In the chapter on religion, it is claimed that Buddhism was founded in the sixth and fifth centuries of the Common Era; in fact, it was founded around 500 B.C.E. In Chapter 4, in a chronology table, the reader should be aware that there is no "Deva Raja sect" (see above); that Preah Ko was built in A.D. 879 by Indravarman, not by Jayavarman III, who ceased to reign around 860; that it is an over-interpretation of the evidence to suggest that Jayavarman VII "Believed himself to be the Bodhisattva who gives mercy to all human beings"; that Banteay Srei was dedicated in A.D. 967-968, not the thirteenth century, while Ta Prohm was built in A.D. 1186 by Jayavarman VII. In addition, it should be noted that the Baphuon style encompasses three more decades than the reign of Suryavarman I, and that the Baphuon temple itself dates from the reign of Udayadityavarman II. The builder of Angkor Wat and the key monarch determining the name of that style was Suryavarman II, not Dharanindravarman, while that of the Bayon and the Bayon style was Jayavarman VII, not Vribhuvanadityavarman.

Chapter 5 offers an account of the process of bronze casting. This is a welcome and useful addition to the book.

The book suffers from what is probably the problem of typesetting by non-native speakers of English. A few random examples include misspellings of Narasimha and Parashurama (p. 12), Bakong (p. 15), Tonle Sap (p. 16), usnisa (p. 31), yogini (p. 34), Koh Ker (p. 37), Parvati (p. 38). This problem may also account for the occasionally wrong equivalent of inches for centimeters (Pls. 15, 63, 69, 83). The National Museum of Cambodia is misdescribed as The Phnom Penh Royal Museum of Fine Art.

The descriptions of the plates are marred by several errors, of which a selection follows. There is a misidentification under Plate 18: the standing figure, described as a (Buddhist) bodhisattva (but confusingly also as the Brahmanistic deity Vishvakarman) is clearly Vishnu-Vasudeva-Narayan (see catalog entry No. 69 describing this same object in Sculpture of Angkor and Ancient Cambodia; Millennium of Glory, which is listed in this book's bibliography on p. 47). Under Plate 32, it should be noted that Prajnarama is the bodhisattva of transcendent wisdom, not "the female manifestation of the Bodhisattva." The mudra under Plate 34 is vitarkamudra, not abhayamudra, while under Plate 42, there are insufficient grounds for describing the sculpture as Shiva. In similar vein, attributing the images in Plates 66 and 73 to the Koh Ker period is arbitrary; there is little precedent to judge by—bronzes of that style and period are very rare. Unsubstantiated, too, is the description of the figure in Plate 96 as Vishvakarman. The articles for Plates 44 and 45 have been switched and the resulting descriptions are confusing.

The quality of the plates is good on the whole, but there is unfortunately no identification of the reproductions of the excellent line drawings.

Whatever the shortcomings of this book, it responds to the important need to have a broader exposure to the variations of Khmer sculptural style and to be made aware of objects in private collections,
which too often disappear from public view. The collectors are to be congratulated on their willingness to publicize their holdings and to seek to broaden our understanding of the art of Khmer bronze-making.


Reviewed by Michele T. Douglas, Fort Worth, Texas

*Health in Late Prehistoric Thailand* is Kathryn M. Domett’s Ph.D. dissertation in full. At a cost of approximately $45 (£30), the 180-page paperback volume, brightly bound in red, is an excellent value, especially since the dissertation is not readily available by other means.

The book synthesizes “variation in health” among four prehistoric skeletal series in Thailand that span the early agricultural period, Bronze Age, and Iron Age. Two skeletal samples are from the southeast—Khok Phanom Di (KPD), an early agricultural series and Nong Nor (NN), a Bronze Age series. Two skeletal samples are from the northeast—Ban Lum Khao (BLK), a Bronze Age series and Ban Na Di (BND), an Iron Age series. Three underlying hypotheses shape this synthesis: (1) similar natural environments will result in similar health profiles (KPD = NN, BLK = BND); (2) the health profile of people living in the northeast will contrast with that of people living in the southeast (KPD/NN ≠ BLK/BND); and (3) the cultural and environmental changes over time, such as intensification of rice agriculture, will result in an improvement in health profiles (KPD > NN > BLK > BND). Health profiles are generated using census data, joint disease, trauma, dental pathological conditions, and variables of growth and growth disturbance.

The book is comprised of eight chapters, five appendixes, and the references. The Introduction (Chapter One) details the research aims and hypotheses, provides a very brief review of the prehistory of Thailand, and introduces the archaeological sites and the measures of health used in the analysis. Chapter Two provides more detail on each of the four sites, including summaries of the excavation, skeletal sample, environment, natural resources, technology, and social structure. While two of the sites (Khok Phanom Di and Ban Na Di) are familiar to scholars of Thailand prehistory, the other two sites are recently excavated and this book is the first publication of much of the skeletal data. Noticeably missing from the Khok Phanom Di and Ban Na Di summaries are discussions of previous skeletal analyses. This omission, in the case of the well-published Khok Phanom Di sample, leaves the reader wondering why the author neglects to mention the skeletal evidence for genetic anemia, a crucial component of health for these people. As well, the author gives short shrift to two other well-known skeletal series (Ban Chiang and Non Nok Tha), failing to cite any works by Bayard, White, or Pietrusewsky. Unfortunately, poor preservation of the Nong Nor skeletal sample results in available data for only selected variables in the health profile.

 Chapters Three through Seven present the measures utilized in the synthesis of health. Each chapter begins with an introduction to the topic, review of the methods, presentation of the results for each sample, comparison of the results among
the samples, discussion, and summary. The author uses Tayles' (1992) age and sex estimates and other data collections after checking for interobserver error using a sample of Khok Phanom Di skeletons. Chapter Three (Census) presents very basic palaeodemographic information for the skeletal samples, omitting life table analysis and other estimators (e.g., juvenile/adult ratio, mean childhood mortality) because of poor preservation in several of the samples. No geographical or temporal trends are found, but the very high subadult mortality in the Khok Phanom Di sample and a peak in female mortality at a younger age than in males in the Ban Lum Khao sample are noteworthy.

Growth and growth disturbances are discussed in Chapter Four. Few differences among the series are noted in comparisons of mean humeral diaphyseal length and dental age in subadults, while adult stature estimates demonstrate the peripheral position of the Khok Phanom Di sample. Growth disturbances are assessed using Harris lines (samples are too small for any reliable conclusions) and linear enamel hypoplasias in the deciduous and permanent teeth. Again, the Khok Phanom Di sample stands out for greater adult frequencies of linear enamel hypoplasia than the other three samples. Adult cortical bone mass assessments using radiographs of the second metacarpal show no statistically significant differences between the sexes within each site or among the sites. A model for subadult frailty is presented (pp. 63–66) that incorporates mortality data with data for growth disturbances. This discussion is an excellent example of how skeletal data can be interpreted and provides a nice structure for the synthesis of the evidence for growth disturbances. However, the discussion would have been much more informative had the reader been told about the evidence for genetic anemia in the Khok Phanom Di sample, likely a major factor for the outlier status of this skeletal series.

Chapter Five reviews the prevalence of osteoarthritis of the appendicular and vertebral skeleton in three of the skeletal samples. The author follows Tayles' (1992) handling of these difficult data sets by combining articular surfaces into functional units and examining the upper and lower limbs separately. Osteoarthritis in the spine is discussed by vertebral segment (e.g., cervical, thoracic, lumbar). Although intriguing differences are revealed in the discussion, the level of significance has been set so low (1 percent) that many of the differences are not addressed. In Appendix B the author suggests that in multiple two-sample tests there is an increased risk of both types of statistical errors and that it was more important to reduce the occurrence of Type I errors (accepting a false hypothesis) than Type II errors (rejecting a true hypothesis). However, since these errors have an inverse relationship, as the level of significance is lowered from the customary 5 percent to 1 percent there will be an increased chance of rejecting a true hypothesis and this is what the reader discerns by examining the data.

Chapter Six reviews the evidence for trauma, including “non-vertebral” fractures and spondylosis, in each of the four skeletal series. Eleven figures document the kinds of fractures noted. Fractures of the larger long limb bones are observed in the northeastern samples relative to the southeastern samples. The highest prevalence of all fractures occurs in the Ban Lum Khao sample, but no convincing evidence for warfare is found. The spondylosis analysis suffers from a lack of prevalence data.

Chapter Seven covers dental health and disease, presenting multiple comparisons among the sites by sex and age group (<30 years and >30 years), using the tooth count method. Advanced attrition, carious lesions, periapical cavities, and premortem tooth loss are addressed in all four skeletal series. There is a decline in carious lesions and periapical cavities over time, as well as differences between the northeastern and the southeastern samples. In contrast to other global populations with marine resources, the Khok Phanom Di sample defines the relatively high end of all dental pathological conditions except dental attrition. The temporal decline in carious lesions with intensifying agriculture is explained by the lack of cariogenicity of rice.
Chapter Eight begins with a summary of the skeletal evidence for each of the health indicators, followed by a nice discussion of possible pathogen loads and nutritional data relative to the natural environments of each of the sites. These factors are used to address the first two hypotheses: the health profiles of the two southeastern samples would be similar (no) and the health profiles of the two northeastern samples would be similar (sort of), and secondly, that the health profiles of the southeastern and northeastern samples would be dissimilar (unknown). For the third hypothesis, the cultural aspects (i.e., subsistence, metallurgy, and social structure) of each series are postulated to form a continuum, with an expected improvement in health profiles over time. So the Khok Phanom Di sample lies at the “simple” end of the continuum, the Bronze Age Nong Nor/Ban Lum Khao samples lie in the middle, and the Iron Age Ban Na Di sample lies at the “complex” end. Although this hypothesis must be adjusted because the Ban Lum Khao sample is not similar to the Nong Nor sample, actually falling between the Khok Phanom Di and Nong Nor samples, the amended hypothesis (KPD > BLK > NN > BND) of an improvement in health over time is then accepted.

There are ample tables and figures throughout the text that help the reader visualize the data. Although the burial plan figures in Chapter 2 are blurry, the remaining graphics are of good quality. Other technical problems include several places where sentences were transposed or repeated (pp. 13–14, 139–140), dropped letters from several words (p. 33), and a common and very irritating extra space inserted before many commas and periods. These problems were not present in the original dissertation and so are likely consequences of the conversion process, excusable perhaps but still distracting.

*Health in Late Prehistoric Thailand* adds important skeletal data to the expanding database on prehistory in Southeast Asia and would be valuable to Southeast Asian archaeologists and bioarchaeologists. This study supports the conclusion that the transition to intensified agriculture in Thailand, and by extension Southeast Asia, had few if any of the harmful effects on health that it did in other parts of the world (e.g., North America). Comparisons of these four skeletal series support other analyses that have demonstrated the uniqueness of the Khok Phanom Di sample, and the lack of homogeneity in other localized samples. This heterogeneity, among contemporaneous peoples in similar environments, is also found in the material culture and is a fascinating topic for future skeletal studies in Thailand and Southeast Asia.

**REFERENCE CITED**


**Reviewed by NITTA EIJi, Kagoshima University, Japan**

Little archaeological research has been undertaken in Laos. French scholars, such as M. Collani, conducted general surveys and excavations in the Plain of Jars in Laos during the French colonial regime. It was impossible to conduct field surveys in Laos...
during the Viet Nam War, but until 1975. D. Hein conducted the first excavations after this period on the kiln site, Sisattanak, in south Vientiane in 1989. I briefly excavated in the Plain of Jars in November 1994 and revealed burial pits and a burial jar that contained human bones and teeth; an iron knife and a clay spindle whorl came from beneath the large stone jar. Thongsa Sayavongkhamdy, too, excavated in the Plain of Jars and found the same as I. He also excavated a cave site near Luang Prabang in 1994.

Lao Pako is yet another interesting prehistoric site located in the Mekong Basin. It is situated 40 km from Vientiane on the bank of Nâm Ngum River and is famous for many archaeological finds. Källén and Karlström excavated Lao Pako from November 1995 to January 1996. They identified two cultural layers containing jars and slag, which had resulted from iron-working activities. Based on the jars and iron slag, Lao Pako was determined to be a habitation site with a burial jar cemetery.

I would like to make two observations regarding the jar burials and iron working at Lao Pako. First, one jar excavated at Lao Pako (J23; Plate 14 on p. 17) is critical for examining the cultural ties between Lao Pako and Northeast Thailand via Mekong River transportation. Further, it represents one of the mortuary customs of Mainland Southeast Asia. The jar's appliqué decoration is the key for comparison with other areas. The appliqué decoration at Lao Pako consists of a rope-motif strip of clay applied onto the shoulder of the jar. The decoration is made by pressing a comb-like or flat pallet against the strips. Two horizontal strips are applied on the shoulder, and a crooked handlebar moustache-like strip is set at the "screwhead" knob on the lower horizontal strip. Appliqué decoration is widely distributed in the upper Chi and Songkhram basins in Northeast Thailand, such as at Ban Nadi (Higham and Kijngam 1984: 54–57, fig. 3), Non Pa Kluay (Wilen 1989: fig. 69), Ban Chiang, and Ban Chiang Hian. However, the Lao Pako motif is more similar to that of the burial jars at Karn Luan north of Ubon Ratchathani (FAD 1992). Located on a large mound, Karn Luan is a village and cemetery site where many burial jars were found. I had the opportunity to see the burial jars at Karn Luan during excavations by the landowner and the Fine Arts Department. Here, a jar burial consists of a larger, lower jar and a smaller, upper jar. The smaller jar is placed over the lower one like a lid. Another smaller jar is placed inside the lower jar. This also occurs at Lao Pako. The lower jar at Karn Luan is decorated with an appliqué motif—whose x-shaped crooked strips are pinched by a comb-like pallet (Nitta 1996). According to the burial goods, Karn Luan is contemporaneous with Ban Chiang's late period. Furthermore, red-painted pottery, which is similar to Ban Chiang painted pottery but different from Roi Et ware, is distributed in the region of Ubon Ratchathani. The pottery found at Lao Pako indicates a cultural tie between Nâm Ngum, Sakhon Nakhon, and the lower Mun basins by the river route.

The second observation regards the iron working at Lao Pako. Metallurgical analysis of the slag is required to determine exactly which process was used in iron production. A smelting process using sand iron results in slag containing titanium. Unfortunately we have no data on the metallurgical analysis of the slag. It is difficult to determine the iron-working process only by the shape of the slag. However, the shape and the character of the slag can indicate the method used to produce iron. Smooth-surfaced slag may be formed by a smelting process, and a refining process may produce coarse and porous slag. The photographs of the slag found here indicate that there are three types of slag: slag caused by a smelting process, slag caused by a refining process, and slag from the bottom of the furnace. Most of the slag found here appears to have been produced during the refining process. The authors suggest that laterite was used as the ore for producing iron. As mentioned above, it is very difficult to determine the material without metallurgical analysis. Iron ore is found in the mountainous area near the Phu Lon copper mine, and copper- and bronze-working sites are near the
Mekong. This means that iron-ore deposits are distributed near Lao Pako. It was probably not difficult for Lao Pako people to retrieve iron ore. Prehistoric people used material depending on the ease of extraction; for example, the people of Ban Don Phlong, Buriram Province, used iron nodules as material because they lacked iron ore.

No iron-working features were found at Lao Pako. The excavation of the iron-working site at Ban Don Phlong provides a glimpse of what a prehistoric iron-working site would have looked like (Nitta 1997). I believe Lao Pako used the same features as Ban Don Phlong to produce iron. At Ban Don Phlong they built a shaft furnace of clay, connected a clay tuyere with pipe, and inserted a double piston bellows into the furnace. They produced wrought iron by the direct method, refined it, and made iron tools in the final stage.

Lao Pako is a very interesting site for continued studies on jar burial customs and iron-working activities in Laos and in the Mekong Basin.

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Reviewed by MICHAEL W. CHARNEY, Department of History, School of Oriental and African Studies, University of London

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coherent survey of early western Burmese history.

The book consists of a balance of photographs by Zaw Min Yu and Gutman’s descriptive text. The photographs are of a very high quality and should prove informative to anyone who has not yet visited Mrauk-U, the royal capital of the early modern kingdom of Arakan (c. 1430s–1780s), or the towns that preceded it. Although travel to western Burma was restricted for some time by the Burmese government, it is now open to tourists, and Mrauk-U is accessible up the Kaladan River from the town of Sittwe.

Gutman’s text provides a summary of some of the key events and developments in western Burma’s history in order to put the photographs into context. Forchhammer (1892) provides a more detailed discussion of the temples than that offered here, but Gutman compensates for this by her incorporation of material on Buddhist images and other developments not considered by Forchhammer. Gutman also draws attention to recent developments, such as the “destruction” of the Santikhan mosque, presumed to be an early fifteenth-century structure (p. 86). Along a similar vein, Gutman’s discussion generally raises awareness of the changes that Mrauk-U’s structures have undergone, making on-site analysis difficult (p. 100).

As with any book, there are problems. It is likely the case that the style of this volume appears to be geared to a popular audience. Thus, specific citations of pages and volumes are not used. Only a slim survey of the literature appears in the bibliography, with several crucial works missing (for example, Catherine Raymond’s “Étude des Relations Religieuses Entre le Sri Lanka et l’Arakan du XIIe au XVIIIe Siècle: Documentation Historique et Évidences Archéologiques,” Journal Asiatique 283(2):469–501, 1995, and the various works of U San Tha Aung). This reviewer strongly recommends that any future edition of this book utilize specific citations, and include a broader survey of the literature, so that it will be more useful to scholars.

With a coherent general survey of early western Burmese art and architecture and a very absorbing body of photographic material, this volume will appeal to a wide audience. While its usefulness for researchers is limited, for the reasons mentioned above, those desiring an introduction to western Burma will find this to be an interesting book.


Reviewed by Fredrik T. Hiebert, University of Pennsylvania, Philadelphia

This lush, illustrated volume resembles a catalog for a museum exhibition but in fact was designed to celebrate an idea: the idea of the Silk Road. Cellist Yo-Yo Ma followed up an apparently chance encounter with a collection of traditional Asian stringed instruments in Japan, deciding to deliberately explore the connections between Western and Asian music. From these beginnings, the Silk Road Project he founded has been extended to other performing, decorative, and visual arts. Ma’s use of the Silk Road motif, while partly metaphorical, has allowed him to connect with others who have been exploring newly accessible regions of Central and Inner Asia. Clearly the Silk Road concept has star appeal. The Silk Road Project is a
consortium of artists and scholars, some of whom have distinguished careers working on the history and culture of the region (here, roughly from the former Soviet Central Asian Republics and Iran to China and Japan). In addition to this volume, the project sponsored a traveling concert series of Asian and western music and worked with the Smithsonian to sponsor a festival of Silk Road folk culture on the Mall in Washington during June and July, 2002.

The core of this book is seven chapters, which deal with the cultures and traditions of the so-called Silk Road from a variety of perspectives and on a variety of levels. There are five essays, a photo essay by Kenro Izo on shrines in Tibet and China, and a transcribed conversation between Ma and ethnomusicologist Theodore Levin on their experiences making musical connections between distant traditions. The first essay is a travelogue and account of folk music in the Qinghai province of Tibet and in Xinjiang by Bright Cheng. Cheng picks apart overlapping languages, ethnic and religious traditions, and musical structures as he recounts the persistence and fluidity of Silk Road musical roots. A similar picture of multiple riches emerges from an overview of textiles and clothing (offering the history of wool and cotton in the region as well as, naturally, silk) in Central Asia and western China by Elizabeth Barber. This article also describes some of Barber’s work on the textiles from the Tarim Basin “mummies.” An even longer view is taken in a history of metallurgy along the Silk Road by Merton Flemings, who begins with the geological history of Eurasia and ends with a comparison between the development of the Silk Road and the contemporary Internet. Volume editor ten Grotenhuis observes a similar breadth in her analysis of the synthesis of the Western zodiac and Buddhist cosmology visible in the star mandala of Japan and Cambodia. Last, there is an account of the twentieth-century rise, collapse, and slow rebirth of Iranian cinema by Hamid Naficy. The articles include short bibliographies and there is also an annotated reading list and a brief index. Serious themes are introduced in a few places, such as where Ma and Levin touch on the ethics of cultural appropriation of traditional music in China and where Naficy describes the effects of fundamentalist policies upon artistic expression in Iran. Despite the affectionate treatment given to the idea of contact and trade between West and East in this volume, there is little allusion to, for example, the destruction of Central Asian society by the Mongols or the undermining of Central and East Asian societies during the period of European economic and military domination.

This book is a visually beautiful introduction to the region’s artistic traditions and landscapes. It is also a lively and accessible introduction to the contemporary connections that are emerging between scholars and artists along this ever-vibrant corridor.


Reviewed by HARRY ALLEN, Department of Anthropology, University of Auckland, New Zealand

This volume derives from a symposium held in 1997 with the majority of papers being rewritten to bring them up to date. It is introduced briefly by the editors, who
point to problems with terms such as marine, maritime, coastal, and littoral. They note that a number of papers in the volume argue that the accessibility of coastal resources is socially as well as ecologically and technologically determined.

The first and most provocative paper is by Anderson, who questions many of the generalizations explored in later papers. Anderson queries the evidence for ancient antecedents of maritime behavior in the Indo-Pacific region. Instead he argues that the development of maritime technology is a mid- to late Holocene affair. He further tilts at conclusions drawn from simulated voyages, in particular, Irwin's hypotheses that discoveries in Remote Oceania were rapid and continuous and hence demonstrate skilled and prudent seafaring. Much of the paper develops Anderson's ideas about innovations in maritime technology necessary to allow the colonization of East Polynesia. He links the pause in settlement between Near and Remote Oceania to the period during which it was necessary to improve maritime technology through the development of the double canoe.

The chapter by Spriggs on Southeast Asia provides a useful overview of Pleistocene and Holocene ecological relationships as a background to his discussion of archaeological sites and "cultures." However, much of the archaeological information available for Island Southeast Asia prior to 5000 B.P. is poorly dated and conforms to outmoded methods of stone implement analysis, e.g., the "pebble and flake complex" (p. 58). Rather than summarizing such noninformation, Spriggs could usefully have swept the cupboard clean with some much-needed chorological hygiene. The information for the post-4000 B.P. pottery–Neolithic–Metal Age periods is better.

Contra Anderson, papers by Chappell, by O'Connor and Veth, and by J. Allen argue that the dating of first colonization of Sahul, and subsequent sea crossings supports the idea that early settlers were "ancient mariners." Though most of the Pleistocene to mid-Holocene archaeological evidence from northern Australia and Papua New Guinea shows minimal dependence on sea resources, these authors see the initial voyages as purposeful. There is some repetition of the information regarding early dates for settlement in the region including Birdsell's map of potential routes, which is reproduced in three different papers. Much of the detail of O'Connor and Veth's paper has been published previously but it is useful to have it brought together in a volume that allows a comparative perspective. O'Connor and Veth (p. 131) believe that the introduction of new technology from outside Australia is incompatible with the continuation of pre-existing maritime subsistence strategies. Allen's conclusion is that the emergence of maritime societies in Melanesia was the result of a gradual and logical adaptation to an oceanic world with limited terrestrial resources.

Papers in the second half of this volume, by Lilley, Roe, Barham, Clarke, Fox, and Pannell, deal with the post-3500 B.P. period. To explain post-Lapita developments in northern New Guinea and Vitiaz Strait, Lilley offers a complex argument concerning language and pottery as symbols of identity. However, he does not have sufficient space to present this argument in a convincing manner. Roe's paper discusses Vanuatu and the Solomon Islands. He deals with the bush-saltwater division and presents information from his archaeological work on Guadalcanal. His work, completed in 1993, is the most recent archaeological work cited. Subsequent investigations in Vanuatu by Bedford and others (1998) and in the Solomon Islands by Sheppard and others (2000) and others will extend the arguments presented here.

Maritime societies in the Torres Strait are the subject of Barham's extended essay (90 pages). He concludes that the first colonists arrived in Torres Strait about 2500 years ago and, secondly, that they were Melanesian people who already had a well-developed maritime economy. Barham argues that a Torres Strait Cultural Complex subsequently developed through interaction between aboriginal and indigenous Melanesian populations with influ-
ences and goods passing in both directions. Interestingly, Barham sees the development of large double-outrigger canoes in Torres Strait as an endogenous development. Aboriginal interactions with Macassans are the subject of Clarke's paper. She questions Macknight's recent chronology for Macassan sites on the Australian mainland and argues for an active aboriginal response to these contacts.

Fox and Pannell deal with historic-contemporary developments in maritime eastern Indonesia. Both are useful for reminding us of the complexity of the region. Fox notes that the first state-like structures, those in Ternate and Tidore, were located in a non-Austronesian west Papuan language area. Interaction across the entire region had also occurred in terms of Islam and the use of Malay as a *lingua franca*. Pannell discusses the neo-colonial experience of indigenous peoples from east Indonesia in terms of the disappearance or extinction of maritime societies.

The return of the journal *Modern Quaternary Research in Southeast Asia* from the Dutch publishing house A. A. Balkema is to be welcomed. This journal was a significant source of archaeological, environmental, and anthropological information for the region at a time when there were few scholars and fewer outlets for publication. The current volume 16 is also a very useful compendium of information on maritime societies from east Indonesia, Australia, and Near and Remote Oceania, and their possible antecedents. The articles in this edited volume fall somewhere between the immediacy and freshness of journal articles and the monographic treatment most of the individual subjects deserve. For the meantime, it will remain an essential source for information and arguments concerning the history of maritime societies in the region.

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Reviewed by JIM SPECHT, Australian Museum, Sydney

Since the Lapita Homeland Project (LHP) in the Bismarck Archipelago in 1985, there has been a string of conferences relating to Lapita pottery, its predecessors and successors. Originally, the conferences were designed as a forum for reporting on the outcomes of the LHP, but from 1988 the format was broadened beyond this narrow geographic focus, and now covers the western Pacific Islands from New Guinea to New Caledonia and Fiji-Tonga. The temporal boundaries are also broader than the few hundred years of the span of Lapita pottery.

The 2000 conference was originally planned to take place in Fiji, but the venue...
was relocated to Canberra following the Fijian coup attempt, just two weeks before the start of the conference. This relocation had several impacts on the conference, not least the reduction in non-Australasian participation, as many North American and other colleagues were unable to rearrange at the last minute their schedules and itineraries to accommodate the additional travel. This meant the absence of a number of significant ‘players’ in the region’s archaeology, and a reduction in the overall scope of the conference papers. The resulting volume, however, is a significant one in its own right.

The volume contains 19 of the 40 or so papers presented, covering a wide range of topics, places, and periods, though the period prior to Lapita is dealt with only in general terms in some papers. Geographically, the papers cover the Bismarcks (Summerhayes on Lapita chronology in the Arawe and Feni Island groups; Parr et al. on phytoliths and landscape-subsistence reconstruction on Garua Island; Leavesley on New Hanover earth mounds of uncertain age; Smith on Arawe shell artifacts; Torrence and White on Lapita faces from Boduna Island), Solomon Islands (Felgate on the Roviana pottery sequence), Vanuatu (Bedford on Malakula pottery; Spriggs and Bedford on possible Lapita at Mangaasi; Bedford and Clark on incised and relief pottery of Vanuatu and Fiji), New Caledonia (Sand on nonceramic artifacts), and Fiji (Parke on Vanua Levu pottery handles; Szabo on Natunuku molluscs; Valentin et al. on a late ‘prehistoric’ burial mound on Cikobia). Less geographically focused are papers by Anderson and others on an inventory of Lapita sites, Anderson on Lapita mobility models, Davidson and Leach on “strandloopers” and naïve interpretation of subsistence data, Hagelberg on genetic affinities, Cameron on textile technology, and Bulmer on dogs in the New Guinea region. With such a diversity of topics, this review can only attempt a selective coverage, though all papers warrant reading.

There is a strong representation of the younger generation of Pacific archaeologists. As the editors note, the papers “suggest that there are changing interests in Lapita and its descendant assemblages,” and among these changes is an increasing focus on regional sequences and histories. The extent to which this is possible for any one area depends on the quality as well as quantity of available data, and the kinds of questions and theoretical frameworks within which these data can be articulated. Felgate’s paper on Roviana illustrates this nicely. Following the remarkable results from Kirch’s work on Eloaua and Gosden in the Arawes, the Roviana project focused explicitly on intertidal contexts to address the simple but significant question whether the lack of evidence for Lapita in the main Solomon’s chain reflects lack of field research or Lapita “avoidance” of the region. This oversimplifies his argument, but the preliminary results provide sufficient evidence to instill caution against generalizing across the region.

Sand’s approach to the nonceramic artifacts of New Caledonia warns us to be wary of accepting perceptions based on data derived from a few points on the landscape. The range of nonceramic items is impressive, as are the changes through time suggested by his “seriation table” (p. 87). This invites comparison with Smith’s account of the shell artifacts from the Arawe Islands of New Britain. She concludes that there is both continuity and discontinuity in some categories of *Trochus* shell artifacts from pre-Lapita through post-Lapita that do not match neatly changes or continuity in other aspects of material culture. Such a conclusion invites reflection on the advisability of using ceramic styles as the basis for dividing the human past into packages of time.

Anderson’s paper on mobility models develops from the recognition of several Lapita provinces or regions—call them what you will—each of which probably had differing characteristics in terms of demography and social interaction reflecting their position in time and space. The paper is worth close consideration, though occasionally it resembles the Delphic oracle in terms of its lack of development of some
points. It resurrects Groube’s strophic model, poses the question why did the colonizing thrust seemingly slow down or temporarily peter out, and discusses rates of new “site” establishment. Anderson proposes speculative rates of “community fission” (pp. 19–20) of 10–15 years for Near Oceania and 4–6 years in Remote Oceania, with the extension into the latter accompanied by a form of agriculture that might have been “rudimentary at best.” Another view could be that Lapita agriculture was “rudimentary” throughout its distribution. Within the Bismarck Archipelago and part of Solomon Islands, Lapita subsistence might have been underwritten by the food-producing capabilities of the existing populations. The movement south into unoccupied islands was probably a critical step that required major subsistence adjustments, perhaps even the temporary adoption of a “strandlooper” strategy of food procurement (again, a Groube suggestion of many years ago). Davidson and Leach appeal for archaeologists to better understand human dietary needs, and thereby avoid naïve interpretations and reliance on speculative reconstructions of subsistence patterns based on linguistics. We also need to ask whether “community fission” every 4–6 years in the nearer parts of Remote Oceania would have allowed time for fruit and nut trees to mature sufficiently to yield food (assuming that the distribution of most of these species, and other food plants, was a result of human agency).

Estimates of archaeological site size do not necessarily relate to population size, for the extent of scatters of sherds or other materials that lead to the identification of “sites” is the product of a complex range of human activities and taphonomic processes. Missing from discussions of the dispersal of the makers of Lapita pottery is the issue of settlement structure, for which we have precious little data (the best still being Green’s work at RF-2 site in the Reef Islands). An archaeological site area of 10,000 sq m might represent only a few dozen individuals, not to mention the likelihood that large sites such as ECA on Eloaua are palimpsests created over several centuries as a result of successive shifts of settlement focus. We need much better control over the dating of most Lapita pottery sites throughout their distribution, so that we can see which sites were contemporary and just when new sites were established. Demographic issues of population size and reproductive rates are pertinent here. If most Lapita pottery settlements contained only small numbers of people of reproductive age, then is it possible that the perceived frequency of new site establishment reflected relocation of the population rather than rapid population growth and subsequent community fission? For Remote Oceania at least, this has the implication of leaving behind a series of landscapes that might have been temporarily “empty,” a proposition that many would not find acceptable.

The general papers include a welcome review of human genetic data by Hagelberg, who shows that the situation is more complicated than the interpretations of earlier writers would have us believe. The use of the mtDNA genetic “clock” is treated with the skepticism it deserves and, for the agnostics of historical anthropology at least, the lack of neat correlations between propositions from genetics and linguistics and the archaeological record is pretty much what many would have expected. Her paper keeps “Austronesians” and Polynesian “origins” in the foreground, but she raises an issue about the genetic diversity of Vanuatu and the possibility of this reflecting a pre-Lapita human presence. There’s a long way to go before the genetic data can be integrated with any confidence into the archaeological picture.

Much previous writing about deep human history in the western Pacific was driven by concerns with origins that led to a top–down approach to interpretation in which new data were slotted into a bigger picture. Some of the papers presented here move towards a more bottom–up approach, with a focus on understanding local sequences in which Lapita pottery provides a common starting point but not the sole concern. This set of papers reminds us that
much work remains to be done, and a lot
of it will be baseline stuff involving the re-
covery of new field data and application of
new analytical techniques. We also need to
reconsider the theoretical frameworks that
will guide the data capture and interpreta-
tion. In their diverse ways, these Lapita
2000 papers make a substantial and very
welcome contribution to this endeavor.

Lapita and its Transformations in the Mussau Islands, Papua New Guinea, 1985–1988:
Volume 1, Introduction, Excavations and Chronology. Edited by Patrick V. Kirch.
Contribution No. 59, Archaeological Research Facility, University of California
at Berkeley, Berkeley, 2001. 246 pp, 139 illustrations, 16 tables. ISBN 10882744-
11-X.

Reviewed by David Burley, Simon Fraser University

In the early 1980s, archaeological data for
the Bismarck Archipelago off of northeast
costal New Guinea was provocative but
frustratingly limited. The region long was
suspected to be the source of the Lapita
cultural complex that had colonized Re-
mote Oceania from the Reef/Santa Cruz
Islands through to Fiji, Tonga, and Samoa.
Yet little more could be said, either about
the origin of Lapita or its subsequent trans-
formations in Near Oceania. At the Pacific
Science Congress held in Dunedin in 1983,
Jim Allen began to invite participants to a
potentially exciting research program that
might resolve these critical issues. Dubbed
the Lapita Homeland Project, Allen’s plan
was to have multiple researchers conduct
independent but linked studies throughout
the Bismarcks. The 19 projects that re-
sulted were connected through a shared
logistical network for fieldwork and analy-
sis, through shared data recording proto-
cols, but most importantly through their
focus upon a shared set of research ques-
tions. Patrick Kirch was assigned the Mus-
sau group, where fieldwork in 1985, 1986,
and 1988 included survey of eight islands as
well as limited and more extensive excavations
at many sites. Most important among
the latter is Talepakemalai (ECA), a quite
spectacular stilt-house Lapita village of over
82,000 m² complete with anaerobic pres-
ervation of house posts, botanical remains,
and abundant ceramic collections. Volume
1 of Lapita and its Transformation in Near
Oceania is the first of three analytic and in-
terpretive reports on this study. It provides
an introduction to the project and its re-
search design, a detailed account of survey
and excavations, and an in-depth examina-
tion of chronology.

Kirch invited some 20 colleagues and
graduate students as collaborators in Mus-
sau fieldwork and analyses. The three-vol-
ume set consequently incorporates numer-
ous chapters authored by them as well as
his own contributions. A research team
approach has many important advantages,
including highly specialized analytic treat-
ments and insights. On the other hand, as
Kirch freely laments, the larger the team,
the more difficult it is to get a timely set
of completed manuscripts. The result for
Mussau has been a 13-year delay from end
of fieldwork to the first volume’s release.
Notwithstanding Kirch’s feelings of tardi-
ness, this is only the second published re-
port to be completed for the Lapita Home-
land project as a whole, the other being the
Watom studies of Roger Green and Dimi-
tri Anson released in 1998 as a special issue
of The Journal of New Zealand Archaeology.
In this light Patrick Kirch is to be commended
for his persistence, and his final success.
Volume 1 includes 10 chapters that provide contextual information for the project as well as a highly illuminating discussion of fieldwork, site excavations, and data recovery. The volume begins with Kirch’s presentation of project history and research design (Chapter 1). In typical site report fashion, he, with Carla Catterall, follow with a synthesis of existing as well as newly collected data on the natural and cultural environment (Chapter 2). A Kirch-authored discussion of sampling strategies, excavation methods, recording schemes, and databases provides a final contribution (Chapter 3) leading up to the detailed accounts of island surveys and excavation projects. Kirch (Chapters 4 and 6) authors two of these accounts, two are authored by Marshall Weisler (Chapters 5 and 7), another is authored by Kirch and Weisler (Chapter 9), and a sixth is provided by Nick Araho (Chapter 8). With one principal exception, these tend to be short and almost formulaic in their presentation of setting, excavation approaches, stratigraphy, and other data for a range of site types, most being associated with the post-Lapita era. The exception is Chapter 4 in which Kirch delivers an extensive documentation of site data, excavations and landscape transformations for three Lapita villages: Talepakemalai, Etakosarai, and Etapakengaroasa. The final contribution (Chapter 10) is a presentation, analysis, and interpretation of the project’s radiocarbon chronology by Kirch. This further includes an appendix in which information, including calibration, is provided for each of his 51 radiocarbon dates from ten excavated sites.

As a nonparticipant in the Lapita Homeland Project, I found the introduction to be a most engaging and informative chapter. Integrating his varied research grant proposals, copious and detailed field notes, yearly field reports, and a measure of retrospect, Kirch crafts a lucid narrative in which the reader is taken through virtually every step of the research process. He provides a review of Lapita archaeology as it was in 1984, helping us to understand the goals and research questions of the Lapita Homeland Project. He subsequently reviews his own research problems and agenda for Lapita archaeology at Mussau. And then, for each of his three seasons of fieldwork, he provides an overview account of what was accomplished, where the money came from, his fieldwork collaborators and encounters, and how each new discovery led to modifications and changes in his planning. More than just background to the Mussau project, this chapter allows us to comprehend Kirch’s logic and decision making from beginning to end. It is of critical importance for understanding the chapters to follow. On its own, it also is an excellent case study of how a project is designed, funded, and implemented. It is one that I will recommend to my future students who are struggling with the concept of research design and problem orientation.

Kirch intends the volume to be a comprehensive account of fieldwork and results for every aspect of the Mussau program. Clearly, however, the star of the show for Lapita archaeology is the site of Talepakemalai, and over a third of Volume 1 is taken up with its presentation. First recorded by Brian Egloff in 1973, Talepakemalai was the earliest and most westerly Lapita site in the Bismarcks at the time the Lapita Homeland Project was being planned. Previous test excavations here illustrated an expansive raised deposit situated on a 2 m former beach terrace. Kirch’s initial field assessment in 1985 resulted in a number of quite amazing discoveries. Certainly the most important was documentation of the waterlogged segment of the site with its extensive series of preserved wooden posts. Associated with these remains is an elaborate assemblage of Lapita ceramics and other materials that had been deposited in a subtidal environment. Talepakemalai, at least the waterlogged part of it, clearly was a Lapita stilt-house village. With that discovery our view of Lapita peoples and settlement pattern changed significantly. Much of the 1986 and 1988 field seasons were spent expanding the waterlogged excavations as well as deciphering site geomorphology and chronology.
Kirch's presentation of his findings at Talepakemalai are exceptionally detailed from discussions of transect sampling test units in different areas of the site, to site stratigraphy and sedimentology, to the collection of botanical and other samples. This detail combined with radiocarbon dates and his interpretation of declining sea levels, allows him to convincingly reconstruct site geomorphology and its transformation. What we are presented with, complete with graphic representation, is an intriguing story where the initial occupation of 3500 B.P. incorporated both an on-land settlement above the 2 m beach terrace as well as a stilt-house village some 20 to 30 m offshore on the subtidal sandy reef flat. As sea levels began to fall, reef degradation took place and newly accumulated sediment led to shoreline progradation. The remains of the original stilt-house structures and their midden accumulation thus became buried. The village continued to persist as new structures were built seaward with additional midden accumulation occurring. Indeed it was not until approximately 2500 B.P. that sea-level decline and shoreline progradation literally forced the site to be abandoned. This horizontal stratigraphy, as it has been modeled, is crucial to any understanding of the site and the temporal and spatial associations of its remains.

A radiocarbon chronology based on "different kinds of sample materials" was central to the resolution of many of the research questions established for the Mussau project. The final chapter of Volume 1 accordingly provides an in-depth treatment of these results, especially as they relate to on-going debates over the timing for Lapita settlement in the Bismarcks, the temporal relationships of different site areas at Talepakemalai, and the chronological ordering of sites throughout Mussau. Since 31 of his 51 radiocarbon dates are based on marine shell, Kirch cannot do this without first addressing the significant issue of marine reservoir effect and the appropriate selection of a $\delta R$ correction value. Acknowledging that marine reservoir $\delta R$ values can vary considerably throughout Oceania, and result in quite contentious calibrations, he is wary of applying the worldwide model average value. This problem is appropriately resolved through estimation of a local reservoir effect ($\delta R$ of -320) using paired sets of marine and terrestrial radiocarbon samples. His discussion of the problem and its resolution is worthy of a reading independent of its application to the Mussau samples. Interestingly and almost hidden within this chapter, is what surely will become a major interpretation of the evidence from Talepakemalai with major implications for our understanding of Lapita origins in general. Illustrating that the paleo-beach terrace archaeological remains (Area A) are older than those of the reef flat by 100 to 150 years, he opines that it has "important culture-historical implications because the ceramics from the paleo-beach terrace deposits consist almost exclusively of red-slipped plain wares, with only small numbers of dentate-stamped pottery" (p. 206). Further exploration of this pattern is relegated to Volume III but it takes only a limited imagination to comprehend its importance. The elaborate and extensive decoration of Lapita ceramic wares in Near Oceania are not brought in by migrants from elsewhere, rather they developed out of a largely Southeast Asian Neolithic red-slipped plain ware assemblage in situ. If true, this is a momentous interpretation for contemporary understanding of the Lapita cultural complex and competing hypotheses for its origins.

When I was asked to review this volume for *Asian Perspectives*, I was extremely reticent. Site reports are crucial long-term documentation of project data and interpretations but, by their very nature, they can be dreadfully boring and difficult to assess. I also was reticent because most of the artifactual, botanical, and zooarchaeological data analysis, as well as project interpretations and conclusions, are incorporated in the volumes remaining to be published. I am pleased to say that my assumptions and reluctance were misguided. Though there are occasional descriptive sections that are wearisome to read, this volume makes several important contributions to Oceanic archaeology in its own right. Without a
thorough review, it also will be impossible to evaluate the veracity of interpretations and data analysis that are yet to come. I sincerely look forward to seeing those additional volumes in print in the not too distant future.


Reviewed by J. Stephen Athens, International Archaeological Research Institute, Inc., Honolulu, Hawai'i

This is a nicely produced large format soft-cover book in which 32 papers are presented in honor of Jim Allen, Australian archaeologist. The Introduction section and first paper of the following Perspectives section consist of four papers with informal reminiscences and biographical accounts of the honoree mixed with a good measure of the history of Australian archaeology. They provide the context for the papers that follow. Not knowing Allen, I found these papers especially interesting for their recounting of how the career of a noted professional unfolded. While it is to be expected that the wrtings in this section would be complimentary and effusive, I did not anticipate that such homage would be so explicit in many of the more formal papers of the rest of the volume. In reading these papers one soon begins to appreciate just what an enormous influence Jim Allen has had (and obviously continues to have) on not just Australian archaeology, but Pacific archaeology and beyond. His work, always setting a high standard for excellence and innovative thinking, has encompassed the topics of V. Gordon Childe’s career, historical archaeology in Australia, extensive work on the archaeology of Papua New Guinea, Melanesian trade, organizer of the famous Lapita Homeland Project, and organizer of Southern Forests Archaeological Project in Tasmania. His contributions were wide ranging (temporally from late Pleistocene to historic times, and spatially from Tasmania to Melanesia), and the breath of subject matter in his many publications is astonishing (a bibliography of Allen’s is provided in the first paper of the Introduction by the volume editors).

Besides the Introduction, the volume has three other sections, including one titled Perspectives, another Issues and Evidence: Australia and Papua New Guinea, and a final one, Issues and Evidence: Into Remote Oceania. As would be expected, the authors are a veritable who’s who of Pacific archaeology, though with a significant number of surprises in the roster and topics of the Perspectives section. A few examples here will have to suffice. W. L. Rathje presents his concept of Lapita as the first Holiday Inn, a metaphor he uses to make the point that the famous pottery provided a symbol system shared over a very broad geographical region. This facilitated traveling, trading, and exchanging resources in distant regions or islands by providing a sense of reassurance and trust among strangers much as the familiar logo and surroundings of Holiday Inns reassure weary travelers the world over.

There is also a rather abstract treatise by S. E. van der Leeuw, who initially poses...
the question as to why prehistoric pottery was ubiquitous in New Guinea and elsewhere in Oceania, but absent in Australia and Tasmania. His cognitive-systems approach provides a rather different perspective from the various functionalist and adaptationist arguments concerning this subject with which I am familiar. While there are surely merits to his careful and extremely logical discussion that breaks apart the many cognitive elements that must come together to realize the creation of pottery, I am uncomfortable with the implication that, ultimately, people inhabiting Australia and Tasmania were without pottery simply because they failed to formulate the intricate chain of concepts necessary for its production.

Norman Yoffee's paper on understanding the Chaco phenomenon of the prehistoric American Southwest, neatly conceptualized as reconciling the seemingly problematical opposition of singularities and pluralities, might at first seem out of place in a volume devoted to the Pacific. However, it provides an instructive lesson about the nature of archaeological cultures and their often nonisomorphism with ethnic groups, languages, and communities as well as the evident significance and power of ritualism as a kind of metasociety-polity organizing principal. With so much current discussion on topics such as the Australasian expansion and the Lapita culture, surely Yoffee's paper is a welcome wake-up call to expand our conceptual horizons about the nature of prehistoric human behavior in the Pacific.

Moving on to the next section—Issues and Evidence: Australia and Papua New Guinea—I will single out only the paper by J. F. O'Connell for comment in this review, unfair to be sure because there are so many excellent papers. However, O'Connell's paper was particularly interesting not only for its convincing argument in favor of the overkill hypothesis to explain Pleistocene megafaunal extinctions of Sahul (the joined landmass of Australia, Tasmania, and New Guinea), but for how modern ethnographic observations, when conducted in a theoretically informed manner, can provide needed fuel for warranting arguments and guidance for the direction of research efforts. In this case, O'Connell takes us on an emu hunt with a small group of Aborigines toting 12-gauge shotguns in the central Australian desert. His easy-going first-hand account of the hunt in the present tense draws us in like a good story, but there is plenty of cogent discussion alluding to the larger behavioral, archaeological, and ecological processes involved.

The final section of the book—Issues and Evidence: Into Remote Oceania—contains fine contributions by Matthew Spriggs, Pamela Swadling, R. C. Green, Geoffrey Irwin, Foss Leach and Janet Davidson, Patrick V. Kirch, and Atholl Anderson and Gerard O'Regan. Only a few can be mentioned here.

Irwin's paper, a detailed consideration of what it means to travel the Pacific in canoes, helps develop an understanding of the constraints of voyaging and navigation based on specific geographic, climatic, and oceanic conditions. This is another example of the use of modeling based on contemporary observations to develop testable archaeological hypotheses and insights into prehistoric behavior.

The Leach and Davidson paper provides an excellent overview of their long-term research on prehistoric fishing in the Pacific, though unlike most researchers, their study is actually about the fish rather than the technologies used to catch them. Their observations demonstrate a number of interesting patterns and variations concerning the use of fish spatially and through time in the Pacific, all of which have important behavioral and sometimes ecological-environmental implications.

Kirch's study of pigs on Oceanic islands provides interesting insights concerning ecological energetics and what this implies for human consumers under conditions of resource limitations and high population. Pork was a highly esteemed delicacy in Polynesia, so why did pigs sometimes disappear from the archaeological record? Developing an argument based on trophic competition, Kirch proposes an explana-
tion for the prehistoric extirpation of suids on Tikopia, Mangaia, and Mangareva (this latter case is not as firmly established as the former two).

The volume concludes with Anderson and O'Regan’s paper on the Polynesian colonization of subantarctic islands, “to the final shore,” as their title indicates. The colonization of these islands was an amazing feat given the often turbulent and harsh subpolar weather and sea conditions. As the authors note, “The colonization history of South Polynesia, now filled out by evidence from the southern margins, describes a ‘starburst’ pattern in which all the islands big and small, near or far, and in all directions were discovered and settled, though temporarily in some cases, within an archaeologically-instantaneous event” (p. 450). The Polynesians, indeed, were amazing.

There is much more in this important book than I have been able to discuss. For professionals working in the region, it is well worth having on your bookshelf. All of the articles will not interest everyone, but for those that do make the effort to read the volume from cover to cover (and I would hope this would include most students), they will be rewarded not only with a current understanding about much of the archaeology in a major region of the world, but also an appreciation for one of the seminal archaeologists who laid so much of the foundation for what we have before us in this volume. I give my congratulations to the editors for such a fine job.