Southeast Asia and the West

Prehistoric and early historic relations between these areas are evident but not yet specific.

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Southeast Asia has been much in the news for most of the last decade, yet, as in the beginning of this period of international prominence, it is an area poorly and inaccurately known to the world. Even the people living in the countries of Southeast Asia previously knew little about their own background. The general high school history texts in these countries, written by Europeans, began with the arrival of the European in Southeast Asia. There was little or no thought about what had gone before.

Independence has changed the focus of interest of these peoples to their pre-European history. Their interests are sharply focused on their own history and each country wishes to use its history to unite its people. There is, as yet, relatively little interest in the history of neighboring countries or in the historic relationships between countries. There is even less interest in general relationships of the area as a whole. This is not to say that there is not a common knowledge of contacts with other areas and, in particular, contact with India or China, but that these contacts and relationships with more distant areas are hardly thought of.

The subject of relationships between Southeast Asia and the West has been touched upon by two small groups of scholars, neither of which includes native Southeast Asians. The first group is made up of geographers and historians looking from the West toward the East. Their interest has been in the knowledge of the East held by the Mediterranean world at the time of the Roman Empire. In this case Southeast Asia was a relatively unimportant area, China and India being of major interest, with Southeast Asia, of necessity, the area in between. There was some interest in Southeast Asia for itself, however, as some of the ancient names for areas or population centers in Southeast Asia indicated that there was gold there.

The second group of scholars were Western "colonial" archeologists specializing in the pre-European history or prehistory of the colony in which they lived. Though a number of these scholars lived the majority of their lives in Southeast Asia they still tended to interpret their results, as is natural, in terms of their Western European, essentially Victorian, upbringing.

It is only now that we are beginning to see that some of the assumptions made by the European scholars may have been wrong. All of us today doing research on these subjects in Southeast Asia, whether we are native-born or foreign, were trained with the traditional European interpretations. Archeological data demonstrated a certain amount of contact between West and East. Traditional interpretation held Southeast Asia to be the passive receiver in these contacts. But it is possible that all action and actors did not move in one direction. Possibly there was action, and actors, moving at one time or another in both directions. Indeed, it is likely that Southeast Asia gave as much to the West as it received, or more.

The term Southeast Asia is used differently by different people. During the 11th Pacific Science Congress held in Tokyo in August–September 1966 a committee of the Anthropology Division of the Congress recommended that Southeast Asia should include two major subdivisions: Mainland Southeast Asia, consisting of the area from the thirtieth parallel north (roughly the Yangtze) to the southern tip of Malaya and from the shores of the South China Sea to the Irrawaddy in Burma; and Island Southeast Asia, consisting of all the islands off the shore of Mainland Southeast Asia, including Formosa and Indonesia as far east as West Irian. This recommendation was approved by the members of the Anthropology Division of the Congress and of the Far-Eastern Prehistory Association in attendance with the understanding that these boundaries were flexible and in no way meant to be inclusive or exclusive. When I use the term Southeast Asia here I am referring to these two areas combined.

In this paper I use the term West to mean Europe (west of the Urals), Africa, and the Middle East. In reviewing the data I have tried to be neutral in my interpretations and inferences, though my point of view is primarily from Southeast Asia looking west.

The artifacts I use as data start with Early Paleolithic forms from Middle or possibly Early Pleistocene times through intermediate forms and times up to the end of the Funan Empire at about 600 A.D. The data available for such a study as this are extremely variable in space, time, quantity, and quality. The archeological program of each country in Southeast Asia, past and present, concerns itself alone. Most of the archeologists who worked in the field before 1950 came in archeology from training in some other field and had little or no formal training in archeological techniques. There is not a single published final report on a major prehistoric site in Southeast Asia that can be considered acceptable under present-day standards. Reasonable final reports on one or two small sites have been published but these are not sufficient to build a reliable sequence with a reliable chronology for any area, large or small. Indonesia had more prehistoric archeological research before the Second World War than any other country in Southeast Asia, with the possible exception of the former French Indochina, yet there is today not a single known neolithic site in that country. There is no dated sequence for any area in Indochina before the beginning of Funan.

The lack of reliable data for Southeast Asia will soon be remedied for several local areas. Excavations have been underway for the last 4 to 10

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Fig. 1. Selected archeological sites in Southeast Asia.

years in west-central Thailand, northeast Thailand, northern Sarawak, westcentral Palawan in the Philippines, and in Formosa (1). Final reports will start appearing this year from some of these excavations and we will finally have reliable data with which to work.

Paleolithic

Southeast Asia is a part of the broad zone from Africa through the Middle East and India to the South China Sea in which the earliest pebble tool industries (the earliest tool types of man) have been found. While most of these "chopper-chopping tool" traditions of Southeast Asia are dated from the Middle Pleistocene and on, the Tampanian of Malaya has been suggested on geological evidence to date from the initial stages of the Second Glaciation (2). With the early evolution of Homo leading to the Pithecanthropoid stage apparently taking place in Africa, this would mean that the first contact between Southeast Asia and the West involved the entry of a hominid form from the West sometime during the first interglacial, or at least by the end of the Second Glacial if he was to reach Java without a long swim before the Third Glacial. Once the hominids had arrived in Southeast Asia, whatever the time, there was apparently no contact with the West for hundreds of thousands of years. The area that does not have indications of the later Paleolithic tool traditions of the West, besides Southeast Asia, includes northeastern India and portions of China. Movius states, "Since the archaeological evidence indicates that as early as Lower Paleolithic times the region seems to have been a marginal area of cultural retardation, it is unlikely that it played a vital and dynamic role in early human evolution. It is quite apparent, however, that very primitive forms of Early Man persisted here long after types at a comparable stage of physical evolution seem to have become extinct elsewhere" (3).

Archeologists are not in full agreement with this theory of the isolation of Southeast Asia. Some Russian archeologists disagree and Boriskovsky has reported on the finding of Chellian hand axes and other Western tool types from a workshop site about 170 kilometers south of Hanoi. This disagreement can be resolved only with much more field work. In any case, Boris-



Fig. 2. Bronze axe from Non Nok Tha, Northeastern Thailand.

kovsky suggests only Early Paleolithic contact from the West and agrees that there is no evidence of western Upper Paleolithic tool types in the area (4).

The statement quoted from Movius expresses the feelings of most prehistorians and historians about Southeast Asia from the earliest presence of man. It is thought to be a cul-de-sac, lagging far behind the rest of the world in cultural and human evolution; anything of a progressive nature found in the area is thought to have been introduced from the outside. Linton, in referring to some elements of early Southeast Asian culture, states, "It is impossible to say with certainty whether such elements are as old as the Neolithic, but they certainly belong to the relatively primitive pattern of life which existed in this region prior to the introduction of Hindu and Chinese culture elements" (5) (emphasis mine). Clark says, "One of the main reasons why the mainland of south-east Asia merits study is that it forms a kind of funnel through which peoples have spread over Indonesia, Melanesia and farther afield. Another is its intermediate position between the two main foci of culture in India and China respectively" (6). These statements are from two open-minded men who present a positive view of Southeast Asia. Others who know less about the area dismiss it completely as having nothing of interest in prehistoric times. Only the botanists have something positive to say about Southeast Asian contributions to the world.

Neolithic-Bronze

Vavilov appears to be the primary source presenting the primacy of Southeast Asia in the origin of many important cultivated plants, and several botanists and geographers have extended his hypothesis (7, 8). Sauer, in one of his Bowman Memorial Lectures, said, "As the cradle of earliest agriculture, I have proposed Southeastern Asia. . . I shall attempt to show that farming culture in origin is tied to fishing in this area, that the earliest and most literally domestic animals originated here, and that this is the world's major center of planting techniques and of amelioration of plants by vegetative reproduction. I accept the familiar premise that man learned to plant before he grew crops by seeding" (8). Sauer's hypothesis cannot be strongly supported without extensive archeological data from Southeast Asia.

Until very recently there has been no data to suggest an early domestication of either plants or animals in Southeast Asia. Excavations by Kwang-chih Chang in Formosa in 1964-65 and pollen analysis of a core from the bottom of Sun-Moon Lake in Formosa suggest that a continuing burning of the forest after 9000 B.C. was the result of slash and burn horticulture with fruit and root crops (9). The archeological culture that Chang associates with this horticulture he calls the Corded-Ware Culture, as the pottery of this culture is predominantly cord-marked. Though Chang can point to no specific antecedent culture on the mainland, he notes that an early cord-marked pottery is found over much of Mainland Southeast Asia. This pottery is often found in the upper levels of caves with Hoabinhian-Bacsonian deposits (10). Associated with this pottery and the stone tools-the typical Hoabinhian monofacially flaked tool would serve as a fine hand hoe-are quantities of freshwater shells or seashells (depending on the location of the site), and animal bones. Thus we have a hunting-gathering culture with good tools for working in the soil, a promising situation for domestication of root plants. The traditional interpretation of Hoabinhian has been that it was retarded and long-lasting Mesolithic. According to this interpretation, the Bacsonian tools and their edge grinding resulted from the edge grinding of typical Hoabinhian tools after the Hoabinhian peoples came into contact with a fully neolithic people who came in from the outside, and who taught the new technique of stone working to the natives. I think it quite possible that as we recover more data from Mainland Southeast Asia we will find that the first domestication of plants in the world was achieved by the Hoabinhian peoples sometime around 10,000 B.C.; that the Bacsonian was a local evolution of Hoabinhian without outside influence; that northern and central Mainland Southeast Asia had progressive cultures within which the first stone grinding and polishing in Asia, if not the world, developed and pottery was invented; that not only did this first domestication of plants, as suggested by Sauer, provide the idea of agriculture to the West (and later a number of the plants to India and Africa) but that Mainland Southeast Asia continued as the progressive area in the Far East until China took over this momentum during the first half of the second millennium B.C. A second bit of new data supports the progressiveness of northern Southeast Asia at the late end of the time span involved.

In April of this year I presented two early dates for bronze in northeastern Thailand at about 2300 B.C. (11). The traditional entrance of bronze-working into Southeast Asia came with the socalled Dongson Culture dated either around 800 B.C. or, more widely accepted, around 300 B.C. This culture, which by many is considered the "Bronze Age" culture for Southeast Asia, came about, directly or indirectly, through the migration of a bronze working tribe from eastern Europe or western Russia (12, 13) bringing with it numerous patterns that were popular in Europe and the Middle East in Bronze and Early Iron Age times. These geometric patterns were found widely in Southeast Asia on the "Dongson" bronzes and the Sa-huỳnh-Kalanay pottery (14) and many of them are still popular today in the textiles of various areas of Indonesia (15).

The bronze (copper alloy) materials from northeastern Thailand have not yet been analyzed. The two ages for charcoal from layer 19 in Non Nok Tha are 4275 ± 200 years (TF 651) and 4120 ± 90 years (GaK 956). These dates, for a carbon-14 half life of 5730 years, would be 2325 ± 200 B.C. and 2290 ± 90 B.C. Three double, sandstone molds (16) were found on the top of layer 20, so presumably bronze was worked at this site somewhat ear-25 AUGUST 1967 lier than these dates for layer 19, say about 2500 B.C. Non Nok Tha (near the present hamlet of Ban Nadi) is today in a remote area close to the headwaters of one of the major tributaries of the Mekong (Fig. 1). It is unlikely that this site would have the earliest working of bronze in Southeast Asia, so a relatively sophisticated technology of bronze casting with a double mold must have come into Southeast Asia sometime previous to 2500 B.C. With



Fig. 3. (A) Exhibit of axe molds from a display in the National Museum, Manila, Philippines. (B) Sandstone mold for bronze axe from Non Nok Tha, Thailand.

the lack of dated comparable data anywhere else in the Far East the best we can say is that some sort of contact with the West, roughly the area of present-day Afghanistan, resulted in the introduction of bronze (copper alloy) working. What other results may have come from this contact are not known. How widely this bronze technology spread in Southeast Asia at this time is not known. The site of Mlu Prei in northern Cambodia has similar bronze axes, fragments of molds, and associated artifacts that indicate some relationship with Non Nok Tha (17). Bronze axes found on the surface in several islands of Indonesia (13, plate 1 and fig. 2) look similar to the plaster cast from one of the molds from Non Nok Tha (16, plate 1) and to the one bronze axe we recovered (Fig. 2). A mold made from pottery found in a cave site on the west coast of Palawan in the Philippines would produce an axe with a rounded bit similar to that which a mold found at Non Nok Tha (Fig. 3, A and B) would produce. The dating for these axes and molds found outside of Thailand is not known but all of them have been equated with "Dongson" bronzes.

The geometric decoration found on the "Dongson" bronzes has been considered as of Western origin. The decoration found commonly on the Sahuynh-Kalanay pottery has also been considered as having the same origin (18). The recent excavations in Formosa and northeastern Thailand have shown that a number of these typical geometric patterns found on the bronzes and the pottery date from the third millennium B.C. or earlier (19). One of the most typical of the patterns found on the "Dongson" bronzes and the Sa-huynh-Kalanay pottery is an interlocking or running scroll with triangles filling areas left blank by the scroll (Fig. 4). Van Heekeren calls this "spiral ornamentation" and says, "this method of decoration is characteristic of the Early Iron Age of the Caucasus and for the full Bronze Age of Europe. It appears at the end of the Neolithic in the Danubian Cultures and in the Ukraine. A succession of waves carried these designs through East Asia" (13, p. 97). This pattern is found in the lowest two or three layers at Non Nok Tha (Fig. 5), including layer 21 which appears to be a totally Neolithic layer. The date for layer 21 is logically before 2500 B.C. on the basis of dates by the carbon-14 method for layers above it, and we have one date by the carbon-



Fig. 4. Earthenware pot with incised running scroll and triangle pattern, from a National Museum exhibit on Philippine pottery, Manila, July 1966.

14 method from layer 21 of 3420 ± 320 B.C. (GaK 1034). I do not know the earliest appearance of this design in Europe or the Middle East but this dating in northeastern Thailand is as early or earlier than I know of anywhere in the Middle East. I can think of three possible interpretations of this dating: (i) this design, and other associated triangular patterns, developed first in Southeast Asia and moved west: (ii) it developed first in some undiscovered area further west and moved both west and east; or (iii) it developed in a wide area over which people were in contact from northern Southeast Asia to eastern Afghanistan, and then spread west. The last possibility seems most unlikely because of the tremendous distance involved over very inhospitable territory. Whatever the case, various designs used on pottery and later on bronze in Southeast Asia were shared with people of Western bronze and iron cultures. How this sharing came about and what other cultural elements were shared we can only discover through more excavation.

Southeast Asian Expansion

The first half of the third millennium B.C. probably saw the beginning of movements out of northern Southeast Asia. It is not unlikely that people moved out in all directions. The traditional view of this Late Neolithic movement is that it began in the first half or the middle of the second millennium B.C. from central (Wei river valley) China and moved south. Presumably the "Chinese" of the north moved into northern Southeast Asia and this started from there the movement of the Malayo-Polynesian (Austronesian) speakers (20). In the light of the new data from Taiwan and northeastern Thailand I believe that the opening statement of this paragraph is probably correct, with the movement to Taiwan and possibly north into central China coming before bronze reached Non Tok Tha. Relative dates for these cultures in north and south China (northern Southeast Asia) are not known, and it is only assumed that the cultures started in the north and moved south. Until dates by the carbon-14 method are available for the different neolithic cultures found in presentday mainland China, the alternate dating of south older than north is just as possible. Whatever may develop, Southeast Asian cultures had reached Taiwan in the first half of the third millennium B.C. (19) and west-central Thailand early in the second milennium B.C. (21).

The early dates for Southeast Asian culture in Taiwan make suspect the traditional dating for the arrival of Late Neolithic cultures in the Philippines, Indonesia, and other portions of Southeast Asia. The admittedly questionable dating by glottochronological methods, according to Grace, has Austronesian languages in Taiwan, major parts of Melanesia, and probably in parts of the Philippines and Indonesia by 1500 B.C. Because of this dating, I had in 1964 moved back my beginning date of the spread of the people speaking these languages to 2500 B.C. (22). This early date, now a few hundred years earlier, no longer bothers me.

The movement of Southeast Asian peoples is thought of as involving Island Southeast Asia and Oceania, thus movement south and east. Much less well known is the movement to the west. The Late Neolithic of most of eastern India is Southeast Asian in origin and it has even been hypothesized that the Neolithic of India as a whole is of Southeast Asian origin (23). This westward movement of Southeast Asian peoples reached East Africa and brought many important plants as well as items of material culture (24). These people ultimately reached Madagascar where peoples of "Indonesian" origin make up a major portion of the population. The strong evidence of Southeast Asian contact with East Africa and Madagascar, except for the Malayo-Polynesian language of Malagache, is general in nature. The only specific archeological evidence of contact that has been pointed out is the close similarity of a jar from Madagascar to one from Sumatra and this is probably less than 1000 years old (25). The only bit of dated evidence in Africa that I know of is the arrival of the chicken, a Southeast Asian domesticated animal. into Egypt about 1450 B.C. (24, p. 104). It is possible that the chicken arrived in Egypt through an intermediary, but this need not have been so. The Southeast Asians were excellent sailors who traveled between Easter Island and Madagascar and, although there is no evidence either for or against this, it seems to me that they must have been of major importance in the sea traffic of the Bay of Bengal and the Indian Ocean from as early as 2500 B.C. Whatever the dating, several inventions of Southeast Asian sailors were acquired by Western cultures, including spritsails, probably the use of two equal masts on boats, the ketch rig, and the standing lug, while the double outrigger was and is used in Madagascar and the central east coast of Africa, and "Indonesian" sails are used in northern Madagascar and the Gulf of Aden (26).

Very little detail is as yet known about this expansion period of the Southeast Asia peoples to the west from about 3000 B.C. to 500 A.D. Only further excavation can provide us with the data needed to go much further on this subject. Events of this period, however, do lead up to a time when there is definite contact between Southeast Asia and the West in the earliest historic times of Mainland Southeast Asia.

Funan and the West

The "Empire" of Funan is the first historic "state" in Southeast Asia. One of its ports, Oc-Èo, was a major port in the trade route between China and the Mediterranean world during the first half of the first millennium A.D. Funan was the first Indianized state in Southeast Asia. The Indianization that took place in Southeast Asia, beginning close to 2000 years ago, and the formation of many small states patterned on Indian models was not the result of colonization or migration from India. Rather, it probably came about because of the high prestige among many Southeast Asian peoples of this Indian model and the coming to Southeast Asia of numerous aristocrats from Indian states who married the local chieftain's daughter and set up the state on the model of the state they had come from in India (27). But why would this Indian model have such



Fig. 5. Scroll and triangle pattern as painted (top) and as incised and impressed (bottom) on earthenware vessels from Non Nok Tha, Thailand.

high prestige that the Indian princes were able to come in peacefully and, in effect, take over?

We know cultures of eastern India were oriented toward Southeast Asia in their Late Neolithic. It is likely that there was regular contact between the people living on the east coast of India, and some distance up the Ganges, and people living in present-day Burma, Thailand, Sumatra, and to a lesser degree to the east. These seafaring people would have known the developing states of India and carried back firsthand accounts to Southeast Asia. The wealth and organization of these Indian states must have been impressive.

India was trading with the Roman world in the late centuries B.C. Southeast Asian boats and sailors must have been involved, directly or indirectly. This trade had been extended to China by the first century A.D. Such a trade route could not develop overnight. It would seem logical to me that the beginnings of this trade would go back to the second century B.C. when Han China took over south China and started to hear firsthand reports from the local seafaring people of the world further south and west.

Janse, among others, has been impressed with indications of Mediterranean contacts found at the site of Dongson and other sites in northern Viet-

nam, going back as far as the first and second centuries B.C. These sites were a part of the new southern Han China. On the basis of a number of bronze figurines that he excavated Janse has suggested a Dionysian-type fertility cult in Vietnam with its origin in the eastern Mediterranean. He has also suggested that the heptatonic scale, which he says is the basis of traditional Vietnamese music, was brought in at the same time from the eastern Mediterranean. This scale was passed on to Indonesia from Indochina (28). If these suggestions prove to be correct the most logical route for this influence to have come by would be the sea route, possibly with the sailors themselves being the agents. Whatever the source and route of these numerous indications of contact between north Vietnam and the Western world we are archeologically on much firmer ground when we get to Funan.

Funan was known historically long before it was known archeologically in any way. The major historical work on Funan appeared in 1903 and the major archeological work appeared between 1959 and 1962 in four large volumes (29). Precise boundaries of Funan probably never existed, nor is it known what sort of power was exerted in what way over what area. It is known that Funan began sometime in the first century A.D. and came to an end, at least in its center, at the end of the sixth century A.D., and that in area it extended from the Mekong Delta north through Cambodia, west through Thailand and possibly all the way to the Bay of Bengal. Malleret thinks that the center and area of its first development was in the Mekong Delta with the site of Oc-Èo as its major port. Boisselier, from exploratory field work in Thailand from 1964 and on, thinks that the Menam basin may have been its first center with Uthong, about 80 kilometers northwest of Bangkok, its first capital (30). Malleret summarizes the evidence for contact between Funan and Greek and Roman sources and points out that these contacts with the West show up more clearly than do contacts with China. These data include Roman and Greek coins, bronze statuettes, beads and other forms of jewelry, and Roman-type lamps (31). Several of this same sort of lamp have been found, made of earthenware, in various locations in Thailand, including Uthong (32). There appears to have been a period in the history of Funan between about 350 and

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430 A.D. when Scythian royalty took over. One possible element of this period found both at Oc-Èo and Uthong is a head of a smiling lion apparently used in architectural decoration (33).

Funan was apparently in contact with the Mediterranean because of its position in the trade route between China and the West. From the wealth of Oc-Èo, as reported by Malleret, it would seem to me that Funan was contributing actively to this trade and not just serving as a way station, but there is no definite data to support this. It is interesting to note that, while both Arikamedu in India and Oc-Èo were important ports on this trade route between East and West and do show similarities to each other, there has been nothing definitive found in these sites to indicate any direct exchange between the two (34).

Summary

Traditional reconstructions of the prehistory and early history of Southeast Asia contain two periods of contact between Southeast Asia and the West, these being the beginnings of the so-called Dongson Culture and the first historic state of Funan. There has been controversy as to whether the Western contacts which gave rise to the "Dongson Culture" came directly to north Vietnam around 800 B.C. or whether they were filtered through Chou China and reached north Vietnam about 300 B.C. In either case, primarily decorative patterns, ultimately from the European Bronze and Early Iron Age, and bronze-working came in together. The "Dongson" patterns spread over much of Southeast Asia and are still being used today in some areas. Research by historians and geographers indicated that the Kingdom of Funan existed somewhere in coastal Mainland Southeast Asia. From this work it was apparent that Funan was in some way connected with the trade between China and the West during the first millennium A.D. up until the end of Funan around 600 A.D. In both of these models of contact Southeast Asians were the passive recipients of whatever came from the West.

New data from Taiwan and northeastern Thailand for the first time support the suggestion made by botanists that Southeast Asia was the area of the earliest domestication of plants and animals. On the basis of the very early dates for possible slash and burn agriculture in Taiwan (around 9000 B.C.) I have suggested the possibility that northern Southeast Asia was an area with progressive cultures from about 10,000 B.C., with the first domestication of plants, to as late as 2000 B.C., by which time the center of progressive development had moved to north China. The patterns found on the "Dongson" bronzes are now, many of them, known to have been in this progressive area of Southeast Asia well before 2000 B.C. and could have moved from here to the Western world rather than the other way around. Recent archeological work has located Funan sites in Thailand and the Mekong Delta and artifacts from these sites have demonstrated definite contacts between Funan and the West. It may be that the artifacts of apparent Western origin found in "Dongson" sites of north Vietnam owe their presence to the beginnings of the sea trade between China and the West rather than to "Dongson" origins.

The reconstruction of Southeast Asian prehistory has been done by Western scholars and archeologists with a Victorian background. It seems to me that unconsciously these scholars followed the old Victorian assumptions that Western Europe was at that time, and before, the highest cultural center of the world and that everything good developed in the West and moved out. New data suggest that we can modify these old ideas and see Southeast Asia not as a passive cul-de-sac but as an area with internal evolution which added to world and Western culture as much or more than it received.

References and Notes

- 1. References to the numerous preliminary reports, dates by the carbon-14 method, and hyresulting from this work by the Thai-Danish Expedition in Kanchanaburi and the Thai Fine Arts Department-University of Hawaii Expedition in Northeastern Thailand, the work in the Niah Caves in Sarawak, and the work in the Tabon Caves and others in Palawan can be found in the relevant sections of Asian Perspectives from 1957 to date and in the Council for Old World Archaeology Surveys and Bibliog-World Archaeology Surveys and Bibliog-raphies for area 19 on Southeast Asia and area 20 on Indonesia. The only report out on the Formosan research is "Recent Advances on the Prehistoric Archaeology Formosa" by Kwang-chih Chang and Minze Stuiver in Proc. Nat. Acad. Sci. 55, (3), 539 (1966). Further reports on this work will be appearing shortly in Asian Perspectives.
- 2. A. Sieveking, Astan Perspect. 2, (2), 98 (1960).
- 3. H. L. Movius, Jr., J. World Hist. 2 (3), 539 (1955).
- 4. W. G. Solheim II, Asian Perspect. 6, 24 (1963).
- 5. R. Linton, The Tree of Culture (Knopf, New York, 1955), pp. 173-174.

- 6. G. Clark, World Prehistory (University
- Press, Cambridge, 1961), p. 201.
 J. Barrau, An Ethnobotanical Guide for Anthropological Research in Malayo-Oceania AND Comparison of Comparison (UNESCO Science Cooperation Office for (ONESCO Science Cooperation Onice for Southeast Asia, Bangkok, 1966); I. H.
 Burkill, J. Linnean Soc. London (Botany)
 56 (367), 319 (1960); N. I. Vavilov, translated by K. Starr-Chester, Chronica Botanica,
 13 (1/6), 1 (1951).
- 8. C. O. Sauer, Agricultural Origins and Dis-persals (Bowman Memorial Lectures, Series 2. American Geographical Contents of C American Geographical Society, New York, 1952).
- 9. K. Chang and M. Stuiver, Proc. Nat. Acad. Sci. U.S. 55 (3), 539 (1966); M. Tsukada, *ibid.*, p. 543; K. Chang, Asian Perspect., in press.
- 10. W. G. Solheim II, Asian Perspect., in press. -, paper presented at the 42nd Annual 11. Meeting of the Hawaiian Academy of Sci-ences in Honolulu, April 1967.
- V. Goloubew, Bull. de l'École Française d'Extrême-Orient 29, 1 (1929); R. Heine-Geldern, Saeculum, 2, 225 (1951); B. Karl-gren, Museum Far East. Antiq. 14, 1 (1942). 12.
- H. R. van Heekeren, Verhandel. Koninkl. Inst. Taal-Land-en Volkenk. 22, 1, 92 (1958). Koninkl.
- 14. W. G. Solheim II, Ed., Asian Perspect. 3, (2), 97 (1961).
- 15. A. N. J. Th. à Th. Van Der Hoop, Indo-nesian Ornamental Design (Koninklijk Bataviaasch Genootschap van Kunsten en Wetens-chappen, Bandoeng, 1949).
 16. W. G. Solheim II. J. Siam Soc. 55, 87 and plates I-II (1967).
- P. Lévy, Publ. de l'École Française d'Extrême-Orient 30 (1943).
 W. G. Solheim II, Asian Perspect. 3, 187 (1961); _____, in H. Otley Beyer Memorial
- Volume (University of the Philippines, Manila, in press).
- 19. K. Chang, Asian Perspect., in press
- H. O. Beyer, Nat. Res. Council Philippines, 29, 38 (1948).
- 27, 50 (1940).
 21. P. Sørensen, Felicitation Volumes of South-east-Asian Studies, 2, 307 (1965); it is curious that no bronze was found here; while they are not Malayo-Polynesian speak-ers, I consider the speakers of the Mon-Khmer languages as also members of South-east Asian cultures east Asian cultures.
- G. W. Grace, Current Anthropol. 5 (5), 364 (1964); W. G. Solheim II, tbid., p. 400.
- A. H. Dani, Prehistory and Protohistory of Eastern India (Firma K. L. Mukhopadhyay, Calcutta, 1960); E. C. Worman, J. Wash-ington Acad. Science 31, 199 (1949).
- 24. G. P. Murdock, Africa, Its People and Their Culture History (McGraw-Hill, New York, 1959), pp. 207-209.
- 25. These general conclusions were brought out at a conference on "East Africa and the Orient," held in Nairobi, Kenya, in early April 1967; see papers (to be published) of this conference by W. G. Solheim II and P. Verin; see also W. G. Solheim, *Taloha* 1. 33 (1965).
- 26. R. L. Bowen, Jr., Amer. Neptune 19, 158, 288, 290, 296, 305 (1959).
- 27. R. Heine-Geldern, Conceptions of State and Kingship in Southeast Asia (Data Paper No. 18, Southeast Asia Program, Cornell University 1956).
- O. R. T. Janse, France-Aste/Asia 165, 1645 (1961); Asian Perspect. 6, 143 (1963).
 P. Pelliot, Bull. de l'École Française d'Ex-
- trême-Orient 3, 248 (1903); L. Malleret, Publ. de l'École Française d'Extrême-Orient 43, vols. 1-4 (1959-1962).
- J. Boisselier, Silpakon 9 (1), 27; (2), 35 (1965); Nouvelles Donnés sur l'Histoire Ancienne de la Thailande (published report of a lecture given for the Alliance Française, Bangkok, 1965)
- 31. L. Malleret, Bull. de l'École Française d'Extrême-Orient, 3, pp. 379-99; ibid. 51, 99 (1963).
- 32. O. R. T. Janse, Asian Perspect. 6, plate 3b (1963); Archaeological Information about Uthong (in Thai) (Department of Fine Arts,
- Bangkok, 1966), plate opposite p. 19. Archaeological Information about Uthong 33. (32), plate opposite p. 67.
- 34. Sir R. E. M. Wheeler, A. Gosh, Krishna Deva, Ancient India 2 (1946).
- 35. Illustrations by Bruce Erickson.