

ARCHAEOLOGICAL RESEARCH IN THE PHILIPPINES, 1951 - 1983*

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INTRODUCTION

This paper summarizes archaeological research conducted in the Philippines in the last thirty years. An informative essay on the state of the field of archaeology in the country from its inception during the Spanish Period to 1950 has already been presented by Evangelista (1969), and this includes a discussion of 'where the science of archaeology stands in the Philippines at the end of the first half of the twentieth century' (Evangelista 1969:97).

Since 1950, substantial changes have taken place in the science of archaeology, both in theoretical and methodological aspects, directly affecting the way archaeological research has been and is still being conducted in the country. This paper, however, will be predominantly descriptive and will not attempt to judge the merits or demerits of the various archaeological works undertaken.

The last three decades of archaeological research in the Philippines (1951-1983) have seen the involvement of more Filipino archaeologists as well as the continuation of research work by foreign archaeologists. The National Museum has slowly but surely gained control, direction and coordination of archaeological research in the country, resulting in the intensification of cooperative efforts between the National Museum archaeologists and foreign researchers.

THE 1950's

From 1950 to 1954 Wilhelm G. Solheim II worked in the Philippines, concentrating primarily on jar burial sites in different parts of the country. In 1951, with the assistance of Alfredo E. Evangelista and other students, several sites were excavated in Batungan Mountain on Masbate (Solheim 1954; 1968). These were the first Neolithic sites to contain pottery found in the Philippines, and no metals were recovered. A C14 date of about 750 B.C. was obtained from a charcoal sample from one of the sites, thus dating the pottery - plain and red-slipped with or without decoration - and the associated artifacts.

In 1952, several jar burial sites on Fuga Island in northern Luzon were investigated by Solheim, followed in 1953 by excavations of jar burial sites on Batan in the Batanes Islands, the northern-

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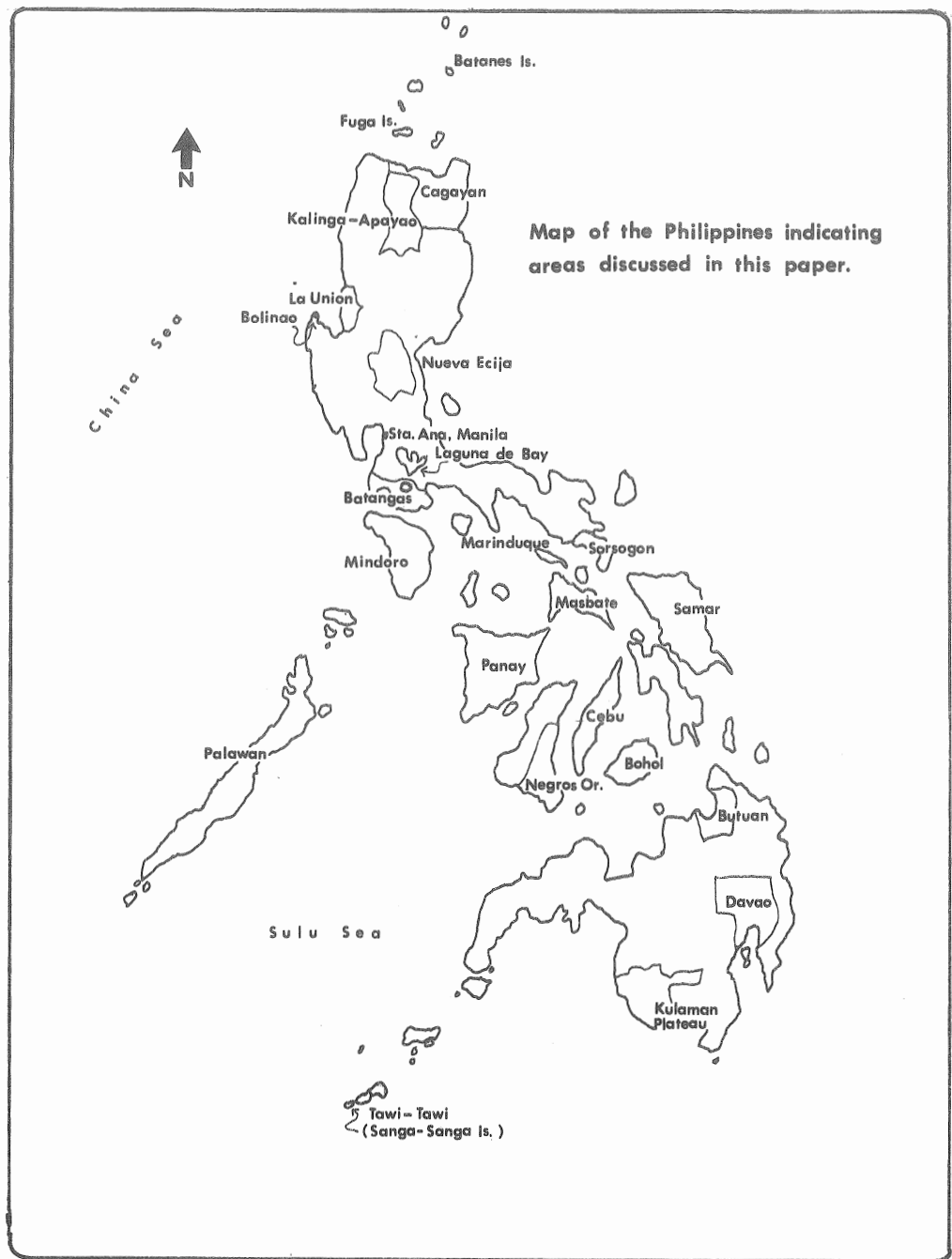


Figure 1. Map of Philippine archaeological projects.

most of the Philippine island groups (Solheim 1960). The Kalanay Cave site on Masbate was first excavated in 1951, and continued in 1953. The finds from this site were collated with the archaeological materials from the Guthe Collection recovered from the central Philippines in the 1920's and stored at the University of Michigan. The analyses resulted in the publication of The archaeology of Central Philippines: a study chiefly of the Iron Age and its relationships (Solheim 1964).

The major fieldwork of the 1950's was undertaken through the National Museum by Robert B. Fox, Alfredo E. Evangelista, and several other members of the Museum Staff. In 1956, Fox and Evangelista undertook archaeological excavation at Bato Cave in Sorsogon Province, southern Luzon. A jar burial/stone tool assemblage with no metal remains was recovered and a C-14 date of 2280 ± 250 B.P. was established from one of the sites. In 1957, several cave sites were likewise explored and excavated on small islands off the east coast of southern Luzon. Better known as the Cagraray Cave Sites, these yielded an assemblage similar to that of the Bato Caves, although Chinese porcelain and stoneware jars were also recovered (Fox and Evangelista 1957a, 1957b). The results of the excavations at these different sites formed the basis for the eventual challenge to Beyer's assumption that the technology of pottery manufacture did not reach the Philippines before iron (Evangelista 1967).

Prior to the excavation of the jar burial site at Carranglan in Nueva Ecija (Evangelista 1957), jar burials in the Philippines had been found only along the coasts or in near-coastal regions. This site was the first inland jar burial site to be recorded in the Philippines. Metals were absent, and stone stepped adzes were found associated with the small spheroid burial jars, which had similarly-shaped jars for covers (Fox 1970:159).

The most extensive archaeological project in the 1950's involved the excavation of burial sites at Calatagan, Batangas, south of Manila (Fox 1959). Over 500 burials were excavated in two large burial sites, resulting in the recovery of 1135 pieces of trade pottery - Chinese and Siamese porcelains and stonewares of the late fourteenth to early sixteenth centuries A.D. (Fox 1959:334). These excavations were undertaken by the National Museum staff who were also conducting relatively small but important excavations during the 1950s as a result of finds reported to the museum (Evangelista 1960, 1961, 1962, 1963).

THE 1960's

In a number of caves along the west coast of Palawan, archaeologists from the National Museum conducted major exploration and excavation activities from 1962 through 1966. With adequate financial support from the Asia Foundation, the National Science Development Board and the National Geographic Society, archaeological work in the Tabon Caves resulted in the establishment of the first

reliable evidence for an ancient human presence in the Philippines. Six successive periods of Late Pleistocene occupation were identified at Tabon, covering a period of 30,000 years. The six occupation levels identified all have C-14 dates, the earliest being $30,500 \pm 1100$ years ago and the most recent being 9250 ± 250 years ago.

The results of the archaeological work at the Tabon Caves have been published by Fox (1970). This publication includes data on the recovery of human bone fragments which, although recovered from a disturbed area of the cave, have been dated from 22,000 to 24,000 years ago - so far the earliest skeletal evidence for *Homo sapiens* in the Philippines. From the Tabon Cave data Fox (1970:1) established four broad cultural 'Ages'; the Paleolithic Age; the Neolithic Age; the Metal Age, and the Age of Contacts and Trade with the East.

In 1963-64, Marcelino Maceda of the University of San Carlos in Cebu City conducted archaeological excavations on the Kulaman Plateau in Mindanao, resulting in the recovery of a number of limestone burial jars (Maceda 1964). In 1966, Samuel Briones, then a graduate student at Silliman University, reported the presence of limestone burial jars north of the area excavated by Maceda. This resulted in the excavation of the site in 1967 by Edward B. Kurjack and Craig T. Sheldon, also graduate students at Silliman University (Kurjack, Sheldon and Keller 1971).

In March 1964, archaeological work began at Balingasay in Bolinao, northwestern Luzon, under the direction of Avelino Legaspi, then an archaeologist at the National Museum. Fifty two burials were encountered, including one infant jar burial. The wide array of associated materials recovered from the excavations included locally made earthenwares (the most numerous of the artifacts recovered), Chinese tradewares from the late 12th to the 15th centuries A.D., iron bolos and daggers, gold ornaments of various forms, bronze and copper earrings, spindle whorls, shell objects, a bone bracelet, and glass beads of various sizes and colors (Legaspi 1974).

Another significant archaeological project conducted by the National Museum, with the help of the Research Foundation in Philippine Anthropology and Archaeology, Inc., was the excavation at Santa Ana in 1966. Located right in the heart of the city of Manila, the area exhibited both habitation and burial sites which 'date more than 400 years before the arrival of the Spaniards in Manila' (Fox and Legaspi 1977). Associated Chinese tradewares recovered from the graves date from the late 11th to the 14th century A.D. A total of 71 human graves was excavated in the site, which was originally an archaeological mound on which the present Spanish church was built.

In 1967, two students from the University of the Philippines - Julieta G. Fernandez and Amelia O. Rogel - carried out archaeological excavations in the Laguna de Bay area, south of Manila, in a joint project with the National Museum supported by a grant-in-aid from Esso Standard Philippines (Fernandez and Rogel 1968). The recovered

archaeological materials included obsidian flakes, iron implements which appear to have been locally manufactured (as evidenced by the large quantities of iron slag), spindle whorls for making thread, net weights, tradewares, local earthenware vessels, and pottery stoves. The first evidence for cremation in Philippine prehistory was discovered in this site.

Alexander Spoehr of the University of Pittsburgh also undertook archaeological research in Sanga-Sanga and Tawi-Tawi in the Sulu Archipelago in 1967 (Spoehr 1973). In Cebu, Karl Hutterer and Rosa Tenazas of the University of San Carlos conducted salvage archaeology right in the heart of Cebu City during the course of construction, resulting in the recovery of prehistoric artifacts (Hutterer 1973). From 1968 to 1969, Rosa Tenazas undertook archaeological excavations in the Laguna de Bay area, where tradewares from the 10th to the 14th centuries were recovered associated with burials (Tenazas n.d.).

Jonathan Kress of Yale University (Kress 1978) worked in Tabon Cave during 1968 for his doctoral dissertation, and Warren and Jean Peterson worked for theirs in northern Luzon during the same year. Warren excavated Pintu Rock Shelter in Nueva Ecija (Peterson 1974), and Jean carried out ethnographic work among the Negritos of Isabela Province (Peterson 1978). From 1968 to 1970 a team of graduate students from Ateneo de Manila University carried out archaeological excavations at Lemery in Batangas, south of Manila. This resulted in a joint M.A. thesis by Locsin, Ongpin, and Paterno (n.d.).

THE 1970's

The 1970's saw a profusion of archaeological research in the country, both by Filipino and by foreign archaeologists. The National Museum shifted its focus to the various Pleistocene archaeological sites in the Cagayan Valley in northern Luzon, where over one hundred sites have been identified. These sites revealed the fossilized remains of large extinct mammals such as Elephas, Stegodon, Rhinoceros, crocodile, giant tortoise, pig and deer, as well as stone tools such as flakes and cobbles (Fox and Peralta 1974). From the start, archaeological research here was burdened by geological problems, the solutions of which are of utmost importance to the Early Man Project.

From 1976 through 1978 Dr. Richard Shutler Jr., then of the University of Iowa, undertook archaeological research in the Cagayan Valley in cooperation with the National Museum. In 1976 Dr Shutler spent three weeks in the Liwan Plain region to facilitate the effort to establish the association of Paleolithic artifacts with the extinct Pleistocene fauna. This work resulted in a moratorium on archaeological excavations of Pleistocene sites in the valley, and the beginning of the necessary geological and geomorphological research activities.

The geological group from Iowa State University which began

work in 1977 was headed by Carl Vondra, a noted Pleistocene geologist who at one time had worked with Richard Leakey in East Africa. Field studies were conducted 'to define the Plio-Pleistocene terrestrial sequence in the Cagayan Valley basin, demonstrate the in situ association of artifacts and Pleistocene fauna, the age of artifacts, and the Plio-Pleistocene environments of the valley' (Vondra et.al. n.d.). This geological research has since solved the majority of the problems of the Pleistocene geology of the area, but the debate over the age of the artifacts still continues.

In 1970, a Neolithic shell-mound was excavated by the National Museum at Lal-lo in Cagayan Province. Although the excavation was preliminary, significant archaeological materials were recovered, including earthenware pottery sherds, polished stone tools, clay pendants, a shale bead, a probable spindle whorl made of pottery, several bone tools made of marine turtle shell, and a fossilized elephant bone tool (Cabanilla 1972).

In 1974, archaeological excavations were undertaken by the National Museum at a jar burial site in Cabarruan, Solana, Cagayan Province. This open-air site was the second inland jar burial site to be excavated in the country, and based on the porcelain and stoneware materials recovered it can be dated to the 15th century A.D. (Evangelista, Ronquillo and Flores 1974).

Also at the start of this decade, preliminary reconnaissance work on Panay Island was undertaken by a team from the University of the Philippines to confirm earlier reports of possible Pleistocene sites. In 1971, Karl Hutterer returned to a previously discovered area in southern Samar and continued archaeological work there. The University of Hawaii conducted a summer field school in the same area, headed by David Tuggle, in conjunction with Hutterer's work. The results of this fieldwork have been published (Hutterer 1969; Cherry 1978; Tuggle and Hutterer 1972).

In 1972, Solheim and Legaspi started a joint project between the National Museum and the University of Hawaii, funded by the Ford Foundation, to conduct archaeological exploration and excavation in southeastern Mindanao (Solheim, Legaspi and Neri 1979). One of the most significant results was the excavation of a cave on Talikod Island where numerous shell tools, manufactured employing a flaking technique similar to that used in making stone tools, were recovered.

Robert Maher of the University of Western Michigan at Kalamazoo returned to Ifugao in northern Luzon in 1973 to conduct archaeological work. His aim was to document dates for the Ifugao rice terraces. A C-14 sample from a house terrace at Banaue gave a date of 2950 ± 250 B.C., but rice terrace construction could not be dated with certainty to earlier than 200 to 300 years ago from the excavated evidence (Maher 1973).

From 1974 to 1976 an ethnoarchaeological investigation of humid tropical hunters and gatherers was conducted by Bion Griffin and his wife Agnes Estioko-Griffin in northeastern Luzon. The objective of the study, on Agta Negritos, was to provide ethnoarchaeological models for adjustments to hunting and gathering in wet, seasonal jungles (Griffin 1978). Special interest was focussed on relationships between aspects of non-material culture (such as social organisation) and configurations in material culture (such as arrowhead styles, and trash distribution in and around campsites). It is hoped that such information can be used for an archaeological understanding of hunters in tropical environments.

From 1975 to 1976 William Longacre of the University of Arizona conducted another ethnoarchaeological study, in this instance in a pottery-making village in Kalinga-Apayao, northern Luzon. His aim was to provide data of 'direct relevance to archaeological methods for inferring patterns of behaviour and organization of peoples who existed in the past'. The results of this research support the suspicion that 'aspects of the behaviour and organization of people are subtly encoded in stylistic correlates in the materials they make and use (Longacre 1981).

In the summer of 1974, Rosa Tenazas headed an archaeological project in Barrio Magsuhot, about eight kilometres inland from the coastal town of Bacong, Negros Oriental. Three jar burials in one pit were excavated, a peculiar feature being 'the lining of the grave with what appeared to be deliberately broken pots' (Tenazas 1974:135). The analysis indicated that the jars had been used for multiple primary burial of an adult female and two children. All the burial jars excavated were large, and were deemed to have been used for primary burials.

During 1977 and 1978 archaeological explorations and excavations were undertaken in Iloilo Province, Panay, by Australian archaeologists led by P.J.F. Coutts and R.K. Fullagar of the Victoria Archaeological Survey. Their research focused on the establishment of a regional sequence, and also on the study of Southeast Asian tradewares on Panay Island, on the recording of local pottery-making traditions and the trading networks associated with these wares, and on the collection of osteological samples of introduced and native pigs for comparative studies (Coutts and Fullagar 1980:260; see also Coutts 1983).

In 1977, Barbara Thiel, then a graduate student of the University of Illinois, conducted archaeological excavations in two cave sites in the Penablanca limestone formation in Cagayan Province, northern Luzon (Thiel 1978, 1980a, 1980b). Arku Cave is a burial site where Thiel found six different types of secondary burials, including jar burial. Many of the bones unearthed were covered with red ochre, and associated materials included pottery, beads, earrings, shell bracelets, flake tools, a barkcloth beater, and spindle whorls. C-14 dates for the various burials ranged from

c.6500 to 2000 B.P. The second cave, Musang, had both burial and habitation levels. Cultural Level I contained flake tools, river shells and animal bones and had C-14 dates between 11,500 and 9000 B.P. Cultural Level II, in addition to the same types of materials found in the lower level, produced earthenware sherds, porcelain sherds, human bones, beads, a pendant fashioned from a boar's tooth, a fired clay earring, bone points, four cowrie shells and a brass needle. C-14 dates between 5200 and 4000 B.P. were obtained from this second level. Thiel assumes a discontinuous occupation for Musang Cave - first as a campsite for hunters and gatherers, then as a burial site for agriculturists after a hiatus of about 5000 years.

In 1970, Karl Hutterer of the University of Michigan started what was to be 'a long-range, interdisciplinary program concerned with the prehistoric social and cultural development of a small geographical area in Negros Oriental' (Hutterer and Macdonald 1982). Although the main objective of the research was to be prehistory, interest was less on a mere chronological sequence of artifact types than on 'how human populations interact with, and adapt to their natural environments, and on how both change in interaction with each other'. The researchers of the Bais Anthropological Project gathered archaeological, ethnographic, biological and geological data to provide an over-all understanding of prehistoric societies in Negros, and of 'how and why they evolved into the contemporary configurations and cultural groupings of the island'. The preliminary results of this undertaking were published in an edited work by Hutterer and Macdonald (1982).

Throughout the 1970's Filipino archaeologists from the National Museum were undertaking archaeological research all over the Philippines, based on the major archaeological projects in the different regions. While geologists from Iowa State University were working in the Cagayan Valley the National Museum archaeologists concentrated their research on the exploration and subsequent excavation of cave sites in the limestone formation of Penablanca, about 15 kilometres east of the Pleistocene open sites. In 1976 and 1977 over 97 caves and rockshelters were recorded, and eight of these have been excavated (Ronquillo and Santiago 1977).

The primary goal of the Penablanca archaeological research was to explicate the structure and define the spatial and temporal distribution of the Paleolithic industries of the area (Ronquillo 1981). Investigation of technological variability in the Rabel Cave flake tools showed that a single technique of manufacture - direct percussion flaking without the preparation of a core - was used to produce flakes regardless of the raw materials used. The andesite and chert flake tools recovered from the excavation in Rabel Cave had generalized functions and were used as maintenance tools (Ronquillo 1981:11). The C-14 dates available from this site range from 4260 ± 360 to 2910 ± 230 B.P.

Laurente Cave, also in the Penablanca limestone formation, produced lithic and pottery materials which have been analyzed by Henson (1978). His study of the cryptocrystalline flakes revealed an unchanging morphology through time, which was attributed to controlled flaking, the exploitation of a broad resource base, and the sharing of a mental template. The preliminary identification and classification of the pottery and the ecofactual materials resulted in the possibility that Laurente Cave may have been frequented or inhabited by broad-spectrum hunters and gatherers who probably maintained contact with sedentary agriculturists (Henson 1978).

Other excavations in caves in the Penablanca limestone formation have been undertaken, both by National Museum archaeologists (Barbosa 1979; Cuevas 1980), and by the faculty and students of the Ateneo de Manila University. Dalupan (1981) presented an analysis of the earthenware materials recovered from the excavation of Lattu-Lattuc Cave as a Master's thesis at Ateneo de Manila University. She suggested that variability in the distribution of the archaeological materials in the different chambers of the cave resulted from differential use of the cave's natural divisions (Dalupan 1981:142).

In 1978 Dr Richard Shutler, with Jamie Evrard and Michael J. Fokken, excavated two sites on Fuga Moro Island in north-eastern Luzon (Snow and Shutler, in press). It was also in 1978 that the Andarayan site in Solana, Cagayan Province, was excavated by Dr Shutler and his group. The Andarayan site may well be one of the most important archaeological sites in Philippine and Southeast Asian archaeology. It has produced the earliest evidence of rice in the Philippines, and perhaps the most securely dated old rice in Southeast Asia. A short article on the results of the archaeological research here and the available dates are to be published in Nature (Shutler, personal communication).

In 1977 and 1978 archaeological excavations were undertaken at La Union, northwestern Luzon. Two burial sites were excavated - Calincamasan and Aludaid - resulting in the recovery of varied archaeological materials such as porcelain, bronze beads, spindle whorls and iron slag (Tidalgo 1979). The porcelain and stoneware materials range in date from the 12th to the 15th centuries A.D.

As part of the National Museum's salvage archaeology program, various sites have been investigated recently and excavated by archaeologists. One such site is in San Juan, Batangas, south of Manila. This site - called Calubcub Segundo - yielded both primary inhumation and secondary jar burials (Salcedo 1979). Sixteen primary burials and six secondary jar burials were excavated, and the associated materials indicate a Contact Period date for the site.

In 1978, a jar burial site was excavated by Dizon (1979) in Sorsogon Province, also south of Manila. Both primary and secondary burials were encountered, and the jars had both earthenwares and stones for covers. No Chinese tradewares were recovered at the site,

but the most significant associated materials are multi-colored flat, round and spherical opaque glass beads and some iron implements. Relative dating for this site ranges from 200 B.C. to A.D. 200 (Dizon 1979).

THE EARLY 1980's

One of the most significant events ever to occur in Philippine archaeology was the recovery of two ancient Philippine boats from Butuan, Agusan del Norte, on the island of Mindanao. The location of the two wooden watercraft appears to have been a former shoreline, and separate C-14 dates from the 4th and the 13th-14th centuries A.D. for the two boats indicate a method of construction continuing apparently unchanged for over a thousand years (Peralta 1980; Scott 1981). Chinese Yueh-type wares have also been encountered by the National Museum in Butuan; the first of their class to be encountered in Philippine archaeological sites. These 12th century materials are considered significant for the study of Chinese ceramics in Southeast Asia.

The first archaeological site in Luzon to exhibit the presence of Yueh-type wares was Laurel in Batangas, on the edge of Taal Lake. Here, the attention of the National Museum was attracted by the unabated pot-hunting activities of the local people. An archaeological team was sent to undertake systematic excavation of areas not disturbed by the pot-hunters. One of these areas produced no traces of tradewares, while another located by the lake yielded a mixture of local earthenwares and Chinese tradewares. Recovered from the second site was a supposedly Tang Dynasty porcelain sherd with a polychrome glaze, but Professor Mikami of Japan suggests that this piece may well have been a product of the Middle East. Until further tests are made, the origin of this sherd is still a problem. The Laurel site is thus another which exhibits the presence of Yueh-type wares, and it may well prove to be significant in the study of Chinese ceramics in the Philippines (Cuevas 1982).

In 1980, National Museum archaeologists started the excavation of an apparent Neolithic site at Ma-ug, Prosperidad, Agusan del Norte (Mindanao). This open site is located on a hill overlooking the Ma-ug River. Preliminary excavations resulted in the recovery of earthenware sherds, chert flakes and a shouldered stone adze. Further excavation has been postponed owing to the unfavourable peace and order situation obtaining in this area (Aguilera 1980). The site is deemed highly significant since the National Museum has relatively inadequate data on the Neolithic in the Philippines.

In 1981, archaeological exploration work commenced in the limestone formation of Anda, in the island province of Bohol in the central Philippines. Here, National Museum archaeologists have recorded over 130 caves, the majority of which are archaeological sites. Numerous caves exhibit wooden coffin burials, and archaeological excavations are still in progress in a number of them (Santiago 1982).

The National Museum archaeologists are now supported by a modern physics and chemistry laboratory that assists in the quantitative analysis of recovered archaeological materials. The laboratory also undertakes major and minor conservation work on archaeological and ethnographic specimens, the most noteworthy example being the conservation of the two prehistoric boats from Butuan.

The latest addition to the archaeological endeavour of the National Museum is the underwater archaeology unit, which has worked on various shipwreck sites in the country. The first of these lies off the southwestern coast of the island of Marinduque, and the archaeological materials recovered from a possible Chinese boat include porcelain and stoneware plates, bowls, jars and jarlets, dated to the late 16th century and believed to have originated from Swatow (Shantou) in southeastern China. A second sunken vessel examined by the underwater archaeology unit lies off Puerto Galera on the island of Mindoro. Here, numerous porcelain and stone-ware materials dating to the Ming Dynasty were recovered, including a blue-and-white stoneware jar which is in near-perfect condition. In both of these underwater archaeology projects the National Museum engaged the services of private scuba diving teams to augment the manpower and equipment essential for this type of archaeological work (Conese 1983). Due to the archipelagic nature of the Philippines more underwater wrecks are expected to be encountered in the near future, making the underwater archaeology project of the National Museum a major part of the archaeological research work in the country.

This presentation of over three decades of archaeological activities undertaken in the Philippines may lead one to the assumption that archaeological research in the country is adequate. This is not the case. Although the National Museum now has a team of young archaeologists their number is hardly enough to cover the entire country. One of the most pressing problems in Philippine archaeology is that of salvage archaeology. Scientific excavation of archaeological sites endangered by construction work, natural calamities, and by looting both by professional and amateur pot hunters is a task that calls for immediate and responsible action.

The Philippines is a rich country in so many ways, and archaeologically it is very wealthy. A great amount of archaeological work still remains to be done before the fascinating account of Philippine prehistory is completed.

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