

Archeological Findings in the Philippines during the last Decade

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During the past 10 or 11 years, the National Museum of the Philippines has been conducting field researches in various parts of the islands, proving definitely that ancient man or his forerunner – *homo erectus* as anthropologists call him – lived in that archipelago some 400 or 500,000 years ago in the northern island of Luzon, a contemporary of the Java and Peking man whose fossils were found many years ago in Indonesia and China, respectively.

This paper will give a summary of the recent findings in archeological excavations in the Philippines during the last decade for the information of scholars of the various Asian countries gathered in Yogyakarta, because these findings have definitely established that man's ancestor roamed approximately at the same time, not only in China and Indonesia but also in the archipelago that we know now as the Philippines.

For the past three years, staff men of the National Museum have been digging at various sites in Cagayan Valley in northern Luzon, and have recorded 64 localities where man-made tools and fossils of extinct animals (including an earlier type of elephant) are being exposed with the erosion of Middle Pleistocene deposits. One of the tools recovered was made from non-silicified ivory, either from the tusk of an elephant or the related stegodont. This tool alone, a beautifully worked scraper of animal skin, would suggest the co-existence of man and elephants in the Cagayan Valley. Paleolithic, or "Old Stone Age" sites have been found in other parts of the Philippines, as in Batangas province south of Manila, in Luzon and on the island of Panay in the central part of the archipelago; but the large number of localities in Cagayan Valley yielded hundreds of ancient tools and the fossils of the much earlier Pleistocene mammals makes this area one of the most promising places in the Philippines to search for early man.

Allow me to digress at this point by explaining the approximately years covered by the various geologic period referred to by archeologists: we are living today in the Quaternary period of the Cenozoic era, which began some 60 million years ago when mammals became the dominant creature on this earth, and when the ancestral horse and the primates first made their appearance. The quaternary period is divided into two epochs of time: the Pleistocene, which began about one million years ago when early man made his first appearance and when ice sheets covered Europe and North America; and the Recent epoch, which began about 50,000 years ago with the development of modern man.

Modern man is called *homo sapien sapiens*, and his precursor was the *homo sapiens* who was widely distributed not only in the Old World (as represented by

the Neanderthal man) but also in Southeast Asia and Africa, as represented by the Solo Man and the Rhodesian man, respectively. Scholars believe that *homo sapiens* evolved some 35,000 years ago. Preceding these two types was a still earlier ancestor, the *homo erectus*, who has been termed by scholars as “at last the true man” and who lived in Europe, Africa, China and Southeast Asia some 200 to 500,000 years ago – that is, during the middle Pleistocene epoch.

The search for early man in Cagayan Valley began in 1936 when two hunter-prospectors in the foothills of the Mountain province in Luzon, at the western edge of the valley, found part of the jaw of a fossil mammal protruding from a small cliff. These fragmentary fossils were examined by Dr. G.H.R. von Koenigswald, a paleontologist internationally known for his work on the Java man, as a new species – the *Rhinoceros philippinenses Koenigswald*. Other new species of fossil mammals which migrated to the Philippines over land bridges during the Pleistocene epoch have also been described by him. One dwarf form of elephant, for example, was named *elephas Beyer* in honor of the late Dr. H. Otley Beyer; this furnishes proof that these extinct mammals were present at the time and that local speciation occurred when the ice sheets regressed, the sea level rose, and isolated the Philippines periodically for great lengths of time. In 1953 and 1957 von Koenigswald returned briefly to visit some of the Cagayan sites, and in a brief dissertation described the artifacts recovered there as a “newly discovered stone age culture”.

Late in 1970, after completing the excavations in the Tabon and related caves on the island of Palawan – a long and narrow island nearest the China Sea in the middle of the archipelago – the National Museum began a systematic examination and excavation of the sites in Cagayan. These fossil and tool localities are situated on rolling hills that were once forested, but are now treeless and covered mostly by cogon grass. Denudation has resulted in extreme erosion and the formation of many gulleys, as well as steep cliffs and rugged ridges. The slash-and-burn technique of agriculture used by settlers in this area has resulted in erosion and consequent exposure of many fossil and tool sites, with the number increasing each year after heavy tropical rains.

The hills bordering the plain are formed of sedimentary rocks of varying composition. The hills were uplifted during the Pleistocene epoch but the sediments were formed during the earlier Pliocene epoch. These deposits in Cagayan are correlated geologically with those found in the central plains of Luzon island and in the Manila area, where fossilized remains of extinct mammals have been found from time to time, including that of a rhinoceros several miles east of the city of Manila. Von Koenigswald has related these fossil-bearing deposits to the Trinil fossil beds of the Middle Pleistocene epoch at Sangiran in central Java. The Trinil beds have yielded fossil fauna generically related to Philippine forms, as well as tools at nearby Patjitan, and early man himself, the *homo erectus*.

Because of these similarities, the opinion has been expressed that the first man to migrate into the Philippines by land bridges would have been the *homo erectus*,

and not the ancestor of the pygmy Negritos or Aetas, as popularly believed by Filipinos to be the aboriginal settlers of the archipelago up to a few years ago.

National Museum diggers have found two classes of man-made stone tools in Cagayan: the pebble or cobble tools, and flake and flaked-core tools. The first kind is made from rolled river stones, generally elongated and large, and the majority are pointed, suggesting that they were used for chopping or picking motions – movements involved when attempting to obtain the marrow of large bones or breaking up skulls of elephants for the brain. Incidentally, similar cobble tools have been found throughout Southeast Asia, such as in the Patjitanian area of central Java and in Tampanian in northwestern Malaya.

Flake tools are made of cryptocrystalline quartz, such as chert, jasper, or an opaline rock, all of which are found in Cagayan Valley. These tools did not basically change in the Philippines, for similar ones have been found in the cave of Palawan, from the middle Pleistocene until the close of the Pleistocene epoch, an enormous period of time spanning hundreds of thousands of years. Dr. Robert B. Fox, the eminent successor to Prof. Beyer in the field of archeology and anthropology, believes that the type of tools used by early man in Cagayan were also the basic types of tools employed by the earliest *homo sapiens*, and much later by the Tabon man in Palawan, the *homo sapien sapiens*. As a matter of fact, Fox has pointed out that one type of ancient flaked core tool, a high angled scraper, was photographed as being used by the Tasaday group of stone Age people in south Cotabato on the southern island of Mindanao in 1971.

To be sure, no fossilized remains of the *homo erectus* have been found in Cagayan up to now. But the presence of man-made stone tools alongside the fossils of Pleistocene mammals such as the stegodont, the elephas, the rhinoceros and eight-foot tortoises show that early man did inhabit the island of Luzon, and it is a matter of time that some human fossils are discovered somewhere in that region.

The same situation exists in the diggings made at Ambrona valley, Spain, almost a hundred miles east and north of Madrid; and in Vertesszollo, Hungary, where the fossilized bones of mammals have been dug out, but none of human beings, presumably to *homo erectus*. As in the Philippines, it is only a matter of time and the money to finance the diggings before human fossils are found. Incidentally, the animal fossils found in Hungary indicate that the site may very well be older than Choukoutien, where the Peking man lived; these have been carbon dated at about half a million years ago, some 100,000 years before that in China.

Since the *homo erectus* can be found in such distantly separate places as China, Java and the Philippines, we naturally wonder how could that happen, when there were no airplanes, automobiles or boats to carry them over such vast distances? The answer lies, of course, in the fact that land bridges connected these three areas for long periods of time during the Pleistocene epoch and even earlier, for there have been six glacial stages during the last two million years in the history of the earth, which, as you all know, has been estimated as 4½ billion years old. During the time ice covered the polar zones, lowering the sea levels, hominids

crossed these bridges in a migratory route along the trail of pre-historic animals that they hunted for food. Eventually, these mammals probably were hunted down and became extinct for this or other reasons. *Homo erectus* either disappeared or were absorbed by later human strains that gradually evolved into the *homo sapiens* of 35,000 years ago.

What did the early man in the Philippines look like? How different is he from modern man? Since no fossilized skulls or bones of the *homo erectus* have been found so far in the Philippines, we will have a fair idea of what he looked like by describing his contemporaries in Java and Peking. Among the basic features of the Java man were: the thick skull bones, a receding forehead, and broad eyebrows. The teeth were invariably longer than they were broad, while modern human teeth have exactly the reverse proportion, specially the molars. Besides, there was an increase in size of the molars from front to back. There was also a space – known as the “monkey or simian gap” – between the molar and the canine teeth in the upper jaw, suggestion that the canine teeth interlocked as in the great apes. It has been suggested that the Java man, on the basis of his brain capacity, had the power of speech. His way of life was primarily gathering food and hunting. In fact, from the manner in which some of the skull bones were mutilated among the Djetis and Trinil specimens, it had been suggested that early Java men, women and children were possibly killed, and their brains eaten.

On the other hand, the bone structure of the Peking man shows a more advanced form. This indicates the possibility that the Peking man was a later development; that is, he was a descendant of the Java man. The eyebrow ridges of the Chinese specimens, for example, are not so heavy; the forehead is slightly higher, and the sidebones of the skull are more rounded. The cranial capacity ranges from 850 to 1,300 cubic centimeters and the limb bones differ very little from those of modern man. Comparatively, the Peking man was shorter, with an average height of about 5 feet 8 inches. The Peking man was also more advanced in cultural adaptation than the Java man. There is no doubt that he was more skillful hunter, as evidenced by the presence of almost 90 identifiable species of mammals in the excavated cave sites. He had developed the ability to use fire. And like his Javanese counterpart, the Peking man also practiced cannibalism.

Next in archeological explorations in the Philippines comes the Tabon cave on the island of Palawan. In 1962 the staff members of the National Museum found at the side of a promontory facing the China Sea in Palawan a cave where the *tabon* bird, a megapode because of its large feet, had thrown up some fossils in the process of building its nest underneath the soil's surface. The fragment of a skull cap was recovered, the first of its kind found in the Philippines. By the comparatively modern process known as carbon dating, this skull cap was placed at between 22,000 to 24,000 years old. The Tabon cave man therefore belongs to the *homo sapien sapiens* class of modern man.

This cave was occupied from about 50,000 to 9,000 years ago, a period which roughly coincided with the period of the last glacial maximum, when a land shelf would have been exposed at its front. About 20,000 years ago, the sea was around

100 meters below its present level, and the sea coast would therefore have been from 30 to 35 kilometers distant. Hence, the total absence of marine shell remnants in the cave. The China Sea assumed its present level, at the base of the cave about 6,000 years ago, when Tabon cave was no longer occupied by human beings.

The number of inhabitants of this and similar caves in Palawan was never large; only a few social groupings, such as families numbering from about 20 to 30 persons, occupied them at any one time. It is probable that Paleolithic man in the Philippines did not usually occupy caves, as in the northern hemisphere during glacial advances when it was extremely cold and predatory animals existed.

The rarity of cobble tools in Tabon cave indicate that the inhabitants were primarily food gatherers, hunting and trapping small game, principally bats and birds. Edible bats, by the tens of thousands, are still found today in these caves, and were unquestionably one of the major sources of protein food for residents of Tabon cave. The bones of a few wild pigs and deer have also been found, and has given rise to the conclusion that deer in Palawan existed on that island until 4,000 years ago. Today, deer is not to be found at all in there, and the reason for their disappearance is not known.

In 1965, after the Tabon cave exploration, field workers of the National Museum moved to the Leta-Leta cave located in one of the many small islands at the northern tip of Palawan. The cave is a broad fissure-like rock shelter protected by an overhanging cliff facing the China Sea. Prof. Carl Guthe of the University of Michigan had made a preliminary study of the site in 1915, and 40 years later government researchers made an intensive exploration and study of the place.

The Leta-Leta cave is an early burial site and the radio carbon testing of the various artifacts found there established that it was used some four to 6,000 years ago. This indicated that the dead buried there belonged to modern man, *homo sapien sapiens*, during the Neolithic or New Stone Age. The skeletons found therein were dark red in color from the ochres of hematite used by early Filipinos in secondary burial rites; that is, after the original burial when the flesh decomposed, the bones were recovered and painted with hematite and then reburied in these caves.

Stone adzes, stone ornaments that served as jewelry, thousands of shell beads, and hone artifacts were found here. Significantly, no metals were recovered, nor were other types of artifacts, such as glass beads, found. The pottery recovered were formed by free-hand modeling, showing no evidence of the use of either a potters wheel or a slow wheel called tournette. The method used by the Leta-Leta people in making pots of clay was by holding an "anvil" of shell or stone against the inside wall of the pot, while the other hand patted the vessel into the desired shape with the use of a paddle, a technique still used today by rural people throughout the Philippines. After drying, the pottery would be fired at a relatively low temperature, as distinguished from high fired pottery such as "stoneware" or "porcelain". It appears that the pots was merely placed on top of the ground, and not in kilns. Fuel of wood, bamboo or straw was heaped around the vessels while

it was being fired. Prior to firing, the surfaces of the pottery, while the clay was firm but still plastic, would be scraped and smoothed. Mostly the potteries were either polished, or surface impressions made by means of a sliver of bamboo or a wooden paddle that had grooved incisions on it, imparting on the clay cross-ribbed impressions.

The presence of this pottery shows an affinity with ceramic tradition found throughout Southeast Asia, a tradition which developed in the south mainland of Asia during Neolithic times. This type of pottery is either totally absent or rarely found in the central and northern parts of the Philippines. One might speculate that this pottery complex was probably carried into Palawan from the Southwest, because it has all the features of the pottery that have been found at the Niah caves in Borneo. Thus, early man's movement – say, about 50,000 years ago – around the southern margins of the South China Sea and along the northwest coast of Borneo played a major role in the peopling of the Philippines.