

A Possible Palaeolithic Site in Northern Mindanao

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The Palaeolithic is the oldest and pioneering period in man's cultural chronology. In the Philippines, different Palaeolithic sites have been studied and all of these sites vary in their time sequences depending on their geographic locations.

The earliest evidence so far of human fossils in the Philippines was recovered in Tabon Cave, Quezon, Palawan (Fig. 1). A skull cap and mandible fragments were recovered in the excavation, which was dated between 22,000 and 24,000 BP (Fox 1970). Unfortunately, these were not recovered in primary context due to disturbance caused by the digging of Tabon birds. Recently, the National Museum of the Philippines conducted analysis and re-dating of the fossils that were recovered by Fox in Tabon Cave. The skullcap and the mandible fragment were directly dated using uranium-series technique to 16,000 +/-2,000 BP (P-XIII-T-288) and 31,000 +/-8,000/-7,000 BP (P-XIII-T-436-Sg19) respectively (Dizon 2003). During their latest excavation, they exhumed another hominid fossil: a tibia fragment,

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Figure 1. Map of the Philippines showing Palaeolithic sites in Luzon and Palawan islands.

dating to 47,000 +11,000/-10,000 BP (IV-2000-T-197) using the same technique (Dizon 2003). Tabon lithic technology is primarily flake tools made mostly of chert and radiolarite from the beginning until its final occupation (Mijares 2004; Pawlik and Ronquillo 2003; Fox 1978). Functional analysis of the recent flake tools recovered in Tabon Cave suggests that they were utilized in manufacturing implements made of wood (Mijares 2004).

According to Peralta (1981), Fox (1979), and Bondoc (1979), the Palaeolithic period in the Cagayan Valley started around 250,000 – 300,000 years ago during the Pleistocene epoch, as indicated by flakes and cobble tools that may be associated with the fossils of extinct large mammalian fauna (Fig. 1). However this inference possesses a lot of problems. There is no direct evidence to show that these megafaunas are clearly associated with these identified tools in the area (Mijares 2006; Paz 2004; Shutler and Mathises 1979; Wasson and Cochrane 1979). These stone tools coined by

Koenigswald (1958) as "Cabalwanian" were all recovered on the eroded surfaces and not in primary context. Vertebrate fossils were excavated *in situ* but not directly associated with the modified lithic materials. Still, the Cagayan Valley has huge potential in contributing to our understanding the antiquity of the human species in the Philippines. A more detailed investigation of the stratigraphy and excavation may reveal significant information on the archaeology of the area and the prehistory of the country in general.

Another probable Palaeolithic site in the Philippines is Arubo, Nueva Ecija in central Luzon (Pawlik and Ronquillo 2003). This site was reported to the National Museum when stone tools were recovered during the construction of a fishpond. In 2001, a fieldschool was conducted in this site upon the auspices of Dr. Alfred Pawlik from the Archaeological Studies Program (ASP) of the University of the Philippines (Fig. 1). A number of artifacts were recovered from the site, including a proto-handaxe, retouched flake tools and cleaver with straight edge. According to Pawlik and Ronquillo (2003), based on morphology and typology of these recovered stone tools, they possess Lower Palaeolithic features. Like those from the Cagayan Valley, these artifacts were not retrieved from a primary context but strewn along the side of a pond. At present, further research is being conducted to establish the absolute age of these artifacts (Pawlik and Ronquillo 2003).

Palaeolithic sites in the Philippines are few and there are only a few studies of these that have been conducted. At the moment, only three Palaeolithic areas are known, and these are located on the islands of Luzon and Palawan. These identified areas possess a huge problem with its artifact assemblages and its stratigraphic association. So far, only Tabon Cave exhibits a direct existence of earliest modern humans in the Philippines with direct association of their lithic assemblages.

In the southern part of the Philippines, no extensive study has yet been conducted in identifying Palaeolithic sites. This paper will present an overview of a potential lithic industry on the island of Mindanao.

The ASP has conducted an archaeological survey and excavation during the last quarter of 2004 in Cagayan de Oro City (Neri *et al.* 2004). Five possible Palaeolithic stone tools were recovered from the Huluga Open Site. Most of these tools were recovered from the ground surface while others were partially buried.

A Survey of Palaeolithic Sites in Mindanao

The Palaeolithic industry in the Philippines was first mentioned by H. Otley Beyer in the early-1900's. As mentioned above, the



Figure 2. Map of the Philippines showing possible Palaeolithic Sites in Mindanao.

archaeological materials for this period are scanty and meager (Beyer 1947; Hutterer 1977). In Mindanao, only two areas were systematically explored and excavated for potential Palaeolithic sites: namely, the two provinces of Agusan del Sur and Agusan del Norte (Figure 2). Other areas were neither properly documented nor reported.

Early Palaeolithic stone tools were found and reported along the sand and gravel pits in Davao by one of Beyer's associates, the late Capt. F.G. Roth in March 1936 (Beyer 1947). According to Beyer, these recovered stone tools are practically similar with the stone tools recovered from the provinces of Rizal and Bulacan, and also with the findings of G.H.R. von Koenigswald at Sangiran village in central Java, Indonesia. Unfortunately,

the collected materials were not recovered from a systematic archaeological excavation and no analyses were conducted.

In Ma-ug, Prosperidad, Agusan del Sur, a team from the National Museum conducted an archaeological exploration (Aguilera 1980). They recovered four Palaeolithic-type stone tools (cobble tools) from the surface of an eroding terrace and at the mouth of a big sinkhole, suggesting that the Ma-ug Site was occupied as early as the Palaeolithic to Neolithic Periods. Identification of these tools were based on the morphology and no further studies were conducted.

Another archaeological study conducted in Mindanao is in Butuan City, Agusan del Norte done in part to understand the geomorphology and geo-archaeology of the Masao-Butuan Plain (Ronquillo 2002). Six major villages were archaeologically surveyed by the National Museum: San Vicente, Bonbon, Pinamanculan, Manapa, Bit-os, and Masao. All of these villages are located in the western side of the Agusan River. In the village of Bit-os, a weathered "stone tool" made of andesite was recovered on the surface of a ricefield. Ronquillo (2002) hypothesized that the area was part of "Episode One," the time dating between 45,000 and 20,000 BP when the area was still part of the Agusan River channel. However, the recovery of this tool is problematic. A single tool is not sufficient to conclude about the antiquity of the area, especially if this was recovered as surface finds. It may also be possible that this was a geofact and not intentionally modified by man. Other identified lithic sites in Butuan are in Bequibel and Bitor in the village of Bonbon. The team recovered a cobble tool in Bequibel, which has a depth of 190 centimeters from the surface just below the shell midden (Bolunia 2006). A stone mortar was also found in Bitor. Based on the cultural materials recovered, Bonbon was dated between 20,000 and 7,000 BP. Although the recovery of the stone tool in Bequibel Site is in context, no technological and morphological analyses have been made to confirm if it was natural or culturally modified.

A Palaeolithic flake tool was recovered by Fr. Jaime Neri in Sindangan, Zamboanga del Norte (Fox 1970). It is a highly developed type of tool that exhibits retouching not usually found in Tabon, Palawan. Unfortunately, no report was made on this flake tool, and proper information where this flake tool was acquired is lacking. Fox (1970) mentions that this particular tool type is not present in the Tabon Cave Complex.

The Site

The Huluga Open Site is located in Sitio Taguanao, Indahag, Cagayan de Oro City in the northern coast of Mindanao (Figure 2). Its geographic coordinates are 124° 37' 57" East longitude and 8° 25' 19" North

latitude and has an approximate elevation of 30 to 45 meters above present sea level. Majority of the Huluga Open Site is privately owned by Edna Dahino and Antonio Gales. Stones that may have been fashioned into tools were recovered in a lot owned by Edna Dahino at the southeast part of the site. The property is partially sloping upward, connecting to the Bukidnon Plateau in the southeast direction. Some weathered limestone outcrop and clastic materials were also exposed at the site. Crops are frequently cultivated in the area.

The site is geologically part of the Indahag limestone formation in the eastern bank of the Cagayan de Oro River. The formation of the said limestone was attributed to the deposition of marine and terrestrial sediments belonging to Pliocene–Pleistocene materials (Sajona *et al.* 2000, DENR 1999). According to the DENR report (1999), these sediments are composed of reef-derived limestone, intercalated pyroclastics, and clastic rocks (conglomerate, shale, sandstone, tuffaceous sandstone, and agglomerate). The Indahag limestone exhibits a karstic topography. Cavities, sinkholes, and caves are copious in the vicinity. This formation is well exposed and vividly clear along the valley walls bisected by the Cagayan de Oro River.

The Implication of Finding Palaeolithic Stone Tools

Among the artifacts recovered at the Huluga Open Site (Dahino's property), only one is a chopping tool or bifacially modified (Plate 5) while the rest are chopper tools or unifacially modified (Plates 1-4). These stone tools were made from andesite, a volcanic material. All of these tools were highly weathered and the ages of these artifacts are difficult to determine since these were recovered from ground surface. The recovery was in a disturbed context similar to the cases of other Palaeolithic sites in the Philippines and some parts of Southeast Asia.

Based on the morphology of these lithic materials, they may be considered to date from the Palaeolithic. Further exploration of the area and proper recovery of materials from proper contexts could reveal the antiquity of these artifacts, and it could be possible that these tools were made during the Palaeolithic period. This idea is not difficult to accept especially if one considers the Plio-Pleistocene geological formation of the area, its geographic location in the northern coast of Mindanao, and the presence of extinct Pleistocene mammals, especially *Stegodon* recovered in Mindanao (De Vos and Bautista 2003; Jocano 1975; Koenigswald 1956)

This study is a preliminary analysis of the archaeological materials recovered from the Huluga area. Thorough archaeological investigations

Table 1. Below are the general characteristics of the stone tools that were found from the site. Five possible Palaeolithic stone tools were recovered from the first systematic and scientific archaeological exploration in Northern Mindanao.

Stone Tool Control number	Type	Size	Weight (Grams)	Length X Width X Thickness (cm)	Flaking	Materials	Accession No.	Description
No. 1 (Plate 1)	Chopper Tool	Cobble	1,380	18.5 X 12 X 6	Unifacial	Andesite	X-1991-Q2-294	A series of flakes was observed on the lateral side of the nodule. The working edges were flaked and the rest of the nodule is unmodified. After cleaning the artifact, a fresh or recent cut was observed at the left lateral edge of the tool.
No. 2 (Plate 2)	Chopper Tool	Pebble	840	13.3 X 10 X 5.5	Unifacial	Andesite	X-1991-Q2-296	This oval shape form has a 90% flaked surface, while the other side has a complete unmodified cortex. The left lateral side of the tool has undulating pattern that has been obviously modified.
No. 3 (Plate 3)	Chopper Tool	Pebble	640	11.5 X 8.7 X 5.3	Unifacial	Andesite	X-1991-Q2-359	A pebble size where 50% of the nodule has been intentionally modified. The tool has an easy grip at the unmodified portion and round enough to be held in the hand for other heavy activities.
No. 4 (Plate 4)	Chopper Tool	Pebble	890	12.5 X 10 X 4.8	Unifacial	Andesite	X-1991-Q2-442	Thirty percent of the nodule has been flaked. This chopper tool has a hand-fitting club-like shape for easy handling. Two distinct large flakes have been removed from the distal edge of the tool.
No. 5 (Plate 5)	Chopping Tool	Pebble	630	9 X 11 X 4	Bifacial	Andesite	X-1991-Q2-295	This type of stone tool has been flaked alternatively on both sides of the nodule with no presence of retouch. The butt of the tool retains the presence of the cortex. It has a convex proximal edge for handling and a straight distal flaked edge for chopping.

should be conducted to garner more information. An extensive reconnaissance at the Dahino's property is needed to produce insights on the prehistory of the area. The presence of Pleistocene fauna must also be considered to better understand the palaeontology and palaeoecology of the area. Artifact morphology and palaeoenvironmental studies could deepen our understanding of this area's antiquity. The island of Mindanao has the potential to yield archaeological evidence of early hominids that may have lived in the Philippines, and future archaeological work is imperative for this potential to be realized.

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Abstract

Five possible Palaeolithic stone tools were recovered from the Huluga Open Site when the Archaeological Studies Program (ASP) conducted an archaeological survey and excavation in the last quarter of 2004 in Cagayan de Oro City. A preliminary analysis was conducted based on reference and morphology of the archaeological materials. Further scientific study and a thorough archaeological exploration at the site may reveal the antiquity of the Huluga Open Site in particular and Mindanao in general.

Plates 1-5. Possible Palaeolithic tools found at the Huluga Open Site.(Drawn by Ms. Andrea Malaya M. Ragragio).

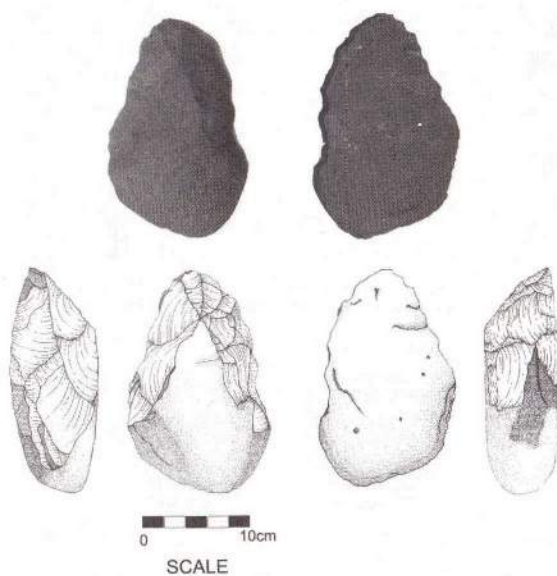


Plate 1

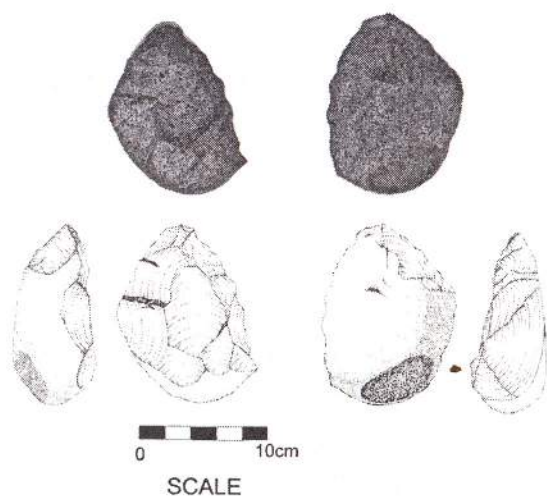


Plate 2

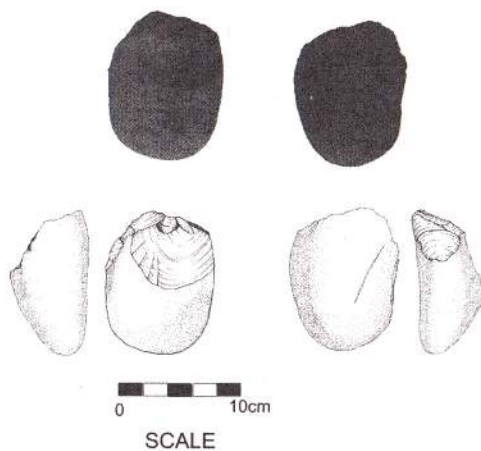
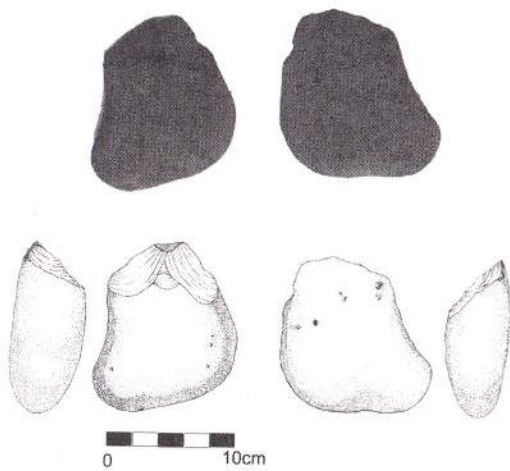
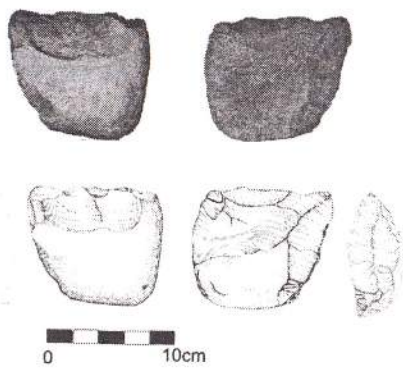


Plate 3



SCALE

Plate 4



SCALE

Plate 5