Early Paleolithic of Korea¹⁾

CHUNG Young Wha²⁾

The research of the Paleolithic age in Korea began in the 1960s. Many Paleolithic sites and remains have been found since then, and Paleolithic archaeology in Korea has been progressed steadily. As far as Early Paleolithic of Korea is concerned, 10 excavated sites and 1 surface collection site are reported in this article

throughout the Korean Peninsula. Among them 3 sites are believed to be worth explaining. It is also desirable to mention briefly about the sites excavated one after another so far and unearthed materials.

I. Preliminary Survey of the Sites

1. Sokchang-ni Site

The excavation of Sokchang-ni open-air site of South Korea was commenced in 1964. Geological layers of the site were subdivided into 27 units as a whole, whose 12 units represent archaeological layers comprising only lithic tools (SOHN, 1967). It has been also claimed by the excavators of the site that 6 archaeological layers from bottom to top comprise Lower Paleolithic stone tools such as choppers, picks, handaxe, knives, scrapers, points and others (SOHN, 1972). But most of the paleolithic archaeologists, including the present author, in Korea do not agree with this opinion, judging from typology and geological background and it makes many arguments till now.

2. Sangwon Komunmoru Cave

The excavations of Komunmoru cave site of North Korea had been conducted from 1966 to 1970. This limestone cave contains five layers whose three layers (the first, the third and the fourth layers from the bottom upward) have yielded rich faunal remains corresponding to early period of Middle Pleistocene (KIM and KIM, 1974). It was also reported that the fourth layer of the site comprised particularly Lower Paleolithic stone tools. Therefore Komunmoru cave site is believed to offer both lithic tools and faunal evidence supporting the relative chronology of its stone implements.

Fig. 1 Early Paleolithic sites in Korea

1) Read in the Symposium of the Japan Association for Quaternary Research 1988.

2) Yeungnam University, Gyongsan 800, Korea 嶺南大学校, 大韓民国.

Fig. 2 Stone tools of Kumunmoru

1. biface, 2. trapezoidal, 3. point, 4. , 5. flake tool, 6. hammer stone

3. Ch'ongch'ong-am Cave

This site is a limestone cave located in Sangwon-up, Pyongyang and had been excavated from 1969 to 1970 (KIM, 1974). In this site, 6 layers were identified and they all contain faunal remains representing middle period of Middle Pleistocene. However, no stone implements were reported. Accordingly Ch'ongch'ong-am cave is a site presenting paleontological materials only.

4. Haesang Cave

The site, situated in Pyongsan county, Hwanghae Pukto of North Korea, had been excavated in almost the same period as that of Ch'ongch'ong-am cave (KIM, 1974). This is also a limestone cave which has produced only paleontological materials of late period of Middle Pleistocene.

5. Chommal Yonggul Cave

This is a limestone cave or fissure, located in

Pochon-ni Chaech'on county, Ch'ungch'ong Pukto, South Korea. The campaign of the site first took place in 1973 and continued for several years until 1980 (SOHN, 1980). Yonggul cave contains 7 layers altogether and it is claimed that the third layer from the bottom has offered the faunal remains corresponding to Middle Pleistocene. However, it requires at present that the final decision of the animal species should be supported by more evidence. Yonggul cave is also believed to be a paleontological site not including stone artifacts.

6. Turupong 2nd Cave

This limestone cave, situated in Nohyon-ni Chongwon county Ch'ungch'ong Pukto, South Korea, had been excavated from 1976 to 1978. It is claimed in the report that the deposit of rich faunal remains including fossils of *Dicerorhinus Kirchbergensis*, *Hyaena ultima*, and *Macaca robusta*, accompanied by a large number of bone artifacts, corresponds to Middle Pleistocene or to Lower Paleolithic (Yi, 1981). Because of disputable bone implements and of lacking stone implements, this claim for a Lower Paleolithic culture may have to be also supported by scientific evidences.

7. Turupong 9th Cave

The site had been excavated from 1977 to 1978 and presented 4 layers altogether (SOHN, 1983). The second layer from the bottom is claimed to comprise both the faunal remains representing Middle Pleistocene and the stone implements made of limestone, however, general character of the site appears to be the same as that of Turubong second cave.

8. Chongok-ni Site

This open-air site, located in Chongok-ni Yonchon county, Kyong-gi province South Korea, had been excavated from 1979 to 1983. Chongok-ni is one of the most important paleolithic site which produced a lot of typical Acheulean handaxes and became a type site of Lower Paleolithic of Korea (CHUNG, 1981).

9. Kum Cave

This limestone cave, situated in Todam-ni Maep'o-up Tanyang-gun Ch'ungch'ong Pukto, South Korea, had been excavated from 1983 to 1985. It is claimed that the first and the second layers of the site comprise respectively the Early

Paleolithic stone tools together with Middle Pleistocene faunal remains (SOHN, 1985).

10. Simgok-ni Site

Simgok-ni is located in Myongchu county, Kangwonto, South Korea, and was excavated in 1984. Though the excavation report is not yet published, this site is claimed to present Early Paleolithic stone tools which might be older than that of Chongok-ni on the basis of its geological background.

11. Tohwari Site

In 1984, some paleolithic stone tools were collected on the land surface of Tohwari, Yangyang county, Kangwonto and it was claimed that there were Lower Paleolithic stone implements. However, it needs more research to support this claim in terms of typology, geology and paleo-environment of the site.

II. Early Paleolithic in Korea

The following three sites are believed to represent the Korean Early Paleolithic, judging from typology, geology and paleontology of the site.

A. Chongok-ni Site

Chongok-ni is located in Yonchon-gun, Kyong-gi Province in the central part of the Korean peninsula, about 50 km to the north of Seoul (longitude E 127°03'45", latitude N 38°01'16", altitude 61 m). The site is formed in small hills situated on the Hantan River, a tributary of the Yimjin River, which meanders through the northern part of Kyung-gi Province from the east to the west until it finally enters into the Yellow Sea. This large open site (about 1 square km) is divided into five localities.

Most of the Acheulean-type stone artifacts have been discovered in the reddish brown clay deposits formed on volcanic rocks (KIM and CHUNG, 1979). These deposits are believed to have been formed during the Mindel-Riss Interglacial or Riss Interstadial. The maximum thickness of the clay deposit is 5 m. Precambrian metamorphic bedrocks are also found under the volcanic rocks whose date (of formation) has been determined between 0.6 and 0.3 Ma by K-Ar dating. The metamorphic rocks

Fig. 3 Stone tools of Chongok-ni (1)
1. handaxe, 2. cleaver, 3. pick

are represented by gneiss, micaschist, phyllite and hornblendite (CHUNG, 1975). Apart from these rocks, cobbles of quartz or quartzite, basalt and scoria tuff were collected on the surface.

Up to the end of December, 1980, 686 pieces of lower Paleolithic stone artifacts of Acheulean-type made of quartz or quartzite flaks were collected on the surface of 5 localities of the Chongok-ni site (CHUNG, 1981). Surface collec-

Fig. 4 Stone tools of Chongok-ni (2)
1. polyhedral stone, 2. chopping-tool, 3, 4. scraper
5. Ssall

tions are biface, cleaver, polyhedral stone, chopper, chopping-tool, scraper, flake, hammer stone, raw material and others. The Acheulean-type handaxes in particular have been measured and classified into ficron, lanceolate, amygdaloid, proto-limande, limande, ovate and micoquian.

During the excavations, five layers were identified; three of these contained lower Paleolithic stone tools including Acheulean-type handaxes. The stratigraphy of pit SIW2-1 is as

follows (CHUNG, 1984).

1. Humus (0.15 to 0.20 m thick)
2. Reddish brown clay (0.44 to 0.50 m thick); archaeological layer.
3. Yellowish brown compact clay (0.15 to 0.77 m. thick); archaeological layer.
4. Brownish fine sand (0.09 to 0.20 m thick).
5. Coarse sand and brownish angular gravel (0.15 to 0.28 m thick); archaeological layer.
6. Bedrock (basaltic lava).

This represents the general aspect of the stratigraphy in the lower part of the area. However, the stratigraphy of the higher part of locality 2 does not include sand and angular gravel layers, but consists of reddish brown or yellowish brown clays which produce a large percentage of lower Paleolithic stone tools.

Most of the stone artifacts were discovered in the clay or sandy clay layers. 1851 stone artifacts (all of quartz or quartzite cobble flakes except for a few pieces of gneiss or other rocks) were collected in the archaeological layer. These stone artifacts were classified into biface, cleaver, pick, polyhedral stone, chopper, chopping-tool, scraper, backed knife, point, burin, bec, notch, denticulate, flake, blade, spall, core, hammer stone and others.

The bifaces in particular were studied typologically and classified into asymmetrical lanceolate, lanceolate, ovate and amygdaloid. These bifaces are all Acheulean in type. The other heavy tools together with the bifaces have also shown characteristics of lower Paleolithic stone tools. The flake tools are considered to have been manufactured with the flakes detached from heavy tools. Most of the flakes appear to be unutilized, and their flaking angle is between 105 and 108 degrees.

It is now clear that the lithic assemblage of Chongok-ni is important evidence of the Acheulean-type handaxe industry of northeast Asia, judging from typology and geology. Moreover, the lower paleolithic stone tools of the site represent for the first time a typical Acheulean-type handaxe culture in this region, where MOVJUS denoted as an area of Chopper and Chopping-tool Culture. Consequently, it is

expected that his hypothesis will be changed in near future. It is here suggested that this culture be named the "Chongok-ni Culture", considering the importance of the lower Paleolithic industry of this site.

B. Komunmoru Cave

This limestone cave is situated in the Sangwon district of Pyongyang and had been excavated for five years from 1966. In the cave, 5 layers have been identified as follows; from bottom to top,

1. Sand and gravels with fauna; 0.3 to 1.7 m thick
2. Yellowish sandy clay and gravels; 0.09 to 0.15 m thick
3. Fine sand and gravels with fauna; 0.2 to 0.24 m thick
4. Reddish brown gravels with fauna; archaeological layer ; 0.5 m thick
5. Stalactite ; 0.1 to 0.2 m thick

The animal fossils fo Komunmoru cave are rich and identified roughly as *Cuon* cf. *alpinus* PALLAS, *Ursus arctos* L., *Ursus spelaeus* BL., *Hyaena briviostris*, *Felis tigris*, *Dicerorhinus kirchbergensis*, *Equus sangwonensis* K. GIOGEN, *Sus scrofa*, L., *Pseudaxis grayi* ZDANSKY, *Megaloceros* cf. *fiabellafus*, *Megaceros sangwonensis* KIM SINGIU, *Bubalus* sp., Cercopitheicidae gen. sp., *Mimomys* F. MAJOR, *Ochotona* sp., *Castor* L., Muridae and others.

It is notable that both *Mimomys* F. MAJOR and *Equus sangwonensis* became extinct after the Middle Pleistocene among many other species of the site (KIM and KIM, 1974).

The fourth layer of the site comprises particularly the lower Paleolithic stone tools such as biface, trapezoidal heavy tool, heavy point, large flake tool and hammer stone. The raw material of the stone tools is mainly siliceous limestone and hammer stones and scrapers are made of vein quartz. Heavy flakes and cores were produced by the hurling technique, followed by a few direct percussions to form the cutting edges. No secondary retouches were made in most cases.

C. Kum cave site

This limestone cave site is at the elevation of 135 meter above sea level and is facing shortly submerged area by the construction of Ch'ung-

Fig. 5 Stone tools of Kum cave
1. handaxe, 2, 3, 4. pick, 5. chopping-tool, 6, 7. chopper

ju Dam. It is now confirmed that there are 7 cultural layers which comprise the lithic tools as well as animal fossils (SOHN, 1985). The first and the second layers from the bottom of the site upward belong to the Early Paleolithic age on the basis of typology and paleontology.

The lowermost cultural layer yielded no pollen grains, however, only one species of fauna *Cervus* was unearthed. The industry contains choppers, chopping tools, crude proto-handaxes, a scraper and a cleaver, all of which are heavy

and primitive nature. Technological as well as typological feature reveals Early Paleolithic type.

The second layer presented the fauna such as *Dicerorhinus*, *Bos primigenius*, *Hyaena brevioris*, *Pseudaxis grayi* and *Panthera cf. Leo*. In this layer, there are stone implements like missile stones, handaxes, choppers, chopping-tools, and scrapers. The tools are fairly large and crude; the cutting edges are zig-zag shape. The tools in the majority are of heavy duty. Large flakes by

block-on-block techniques were discovered and boulders were used as anvils on which beaten marks were observed. The flaking techniques correspond to the category of Early Paleolithic.

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