



Investigation, Interpretation, and Research on a Bronze Age Site on Jungdo: Culture, Chronology, People, and Society

Introduction

A large-scale excavation and investigation of the Hajungdo site in Chuncheon, Gangwon Province took place from 2013 to 2017. It was performed as part of the Gangwon provincial government's pursuit of developing a Legoland Korea project at the site. Five research institutions formed a joint archaeological expedition that divided the area of investigation into nine districts in order to conduct a meticulous excavation. A total of 3,091 features were investigated over an area of 600,792 m², including 2,205 Bronze Age features, 767 Iron Age features, six barrows from the Three Kingdoms period, 58 cultivation features from the Three Kingdoms period, 20 features from the Goryeo to Joseon Dynasty, and 27 features whose ages are unknown. In addition, 8,025 artifacts were excavated, including 6,476 Bronze Age features and 1,380 from the Iron Age.

Hajungdo is an island in Jungdo-dong, Chuncheon-si, Gangwon Province. The Jungdo site is located 127°42'19.31" to 127°42'55.62" east longitude and 37°53'41.81" to 37°53'29.83" north latitude. It spans the most extensive sand bar in the Bukhan River basin, which was formed from gravel, fine-grained sand, and silt deposited over time by flooding and inundation at the mouth and the banks of the confluence of the Bukhan and the Soyang Rivers. Before the Uiam Dam was built in 1967, it was connected to Sanong-dong on the mainland portion of the Chuncheon Basin, with streamlets and wetlands in between. With the completion of the dam, it became an island. Its center was excavated to create a waterway, causing the island to be divided into Sangjungdo (Upper Jungdo Island) and Hajungdo (Lower Jungdo Island). The recent large-scale excavation was conducted on the Hajungdo side.

Due to its location and topographical conditions, Hajungdo experienced severe erosion along its riverbank, and its riverside area began to be inundated

rapidly starting in the 1970s. Over this process, many dwelling sites and dolmens were exposed in a section of the newly-submerged area. A surface survey was conducted by the National Museum of Korea in 1977, followed by small-scale excavation research by various institutions starting in 1980. The representative iron culture of the central region of Korea, now known as the Jungdo type, was established through these investigations of Iron Age sites in Jungdo. Important achievements were also made for Bronze Age tombs in the zone. Among the investigations, the excavation survey related to the Four Major Rivers Restoration Project in 2010 and the 2013-2017 excavation survey were the most revelatory.

As a large area was simultaneously investigated during the excavation of the Legoland Korea construction site, the stratification relationships among the overall features in Hajungdo could be identified relatively clearly. Furthermore, the investigation allowed new interpretations of various features that were previously not clearly identified. Given that the excavation has significant impact on the further materialization of the Bronze Age culture in the western portion of Gangwon Province as well as in Jungdo and the Chuncheon Basin, this study will focus on the research results revealed to date, the primary interpretations made by the research team, the evaluation of these interpretations, and the current status of studies on the Bronze Age culture of the Chuncheon Basin, including Jungdo. The major points in the existing research and prospects for further research will be discussed.

Major Investigations and Achievements

The existence of the Jungdo Bronze Age site was first revealed during a surface survey by the National Museum of Korea in 1977. In the years since, many institutions have conducted surface surveys, trial excavations, and excavation research. The more than 40-year-old survey can be divided into the periods before and after 2010, based on the nature, level, and size of the investigations taking place. Short-term, small-scale surveys were conducted on features in urgent need of investigation from 1977 to 2009, while large-scale surveys have been conducted in connection with major national projects since 2010. This paper will briefly introduce the investigations from these two periods and their achievements.

Period of Small-scale Investigations (1977-2009)

The first survey of features on Jungdo was conducted by the National Museum of Korea in 1977. Following this surface survey, the National Museum of Korea excavated and surveyed selected dwelling sites and dolmens considered in need of urgent survey three times from 1980 to 1983 (Lee et al. 1980a, 1980b; Ji and Han 1982; Ji and Lee 1983, 1984). Iron Age dwelling sites were excavated each in 1980 and 1982, and two dolmens were excavated in 1983. At that time, the investigations of Jungdo being conducted by the National Museum of Korea aimed to explore the material culture of the upper areas of the Han River after excavating the Neolithic Amsa-dong site in the lower section of the Han River from 1971 to 1975.

The investigations conducted by the National Museum of Korea from 1977 to 1983 garnered much attention within the Korean archaeological community since they were conducted for academic purposes by the institution with the greatest academic capabilities at the time. These investigations conducted by the National Museum of Korea proved particularly meaningful. They revealed that the Jungdo dolmens had a unique structure with stone-piled tombs formed under the capstone. Tombs with this structure were found scattered all over Jungdo. They defined as “Jungdo type culture,” the assemblages excavated there consisting of 呂 and 凸-shaped dwellings with clay belt-type hearths, hardened plain pottery, pottery with a paddled pattern, and iron tools. They suggested that these assemblages should define the Bronze Age culture of the Bukhan River basin.

In the wake of the National Museum of Korea surface survey in 1977 and the excavation research undertaken in 1980, small-scale surface surveys and excavations of the Jungdo site were conducted by individual researchers and a university museum based in the Chuncheon area. Informative examples are the 1980 surface survey by Im Segwon (1980), the 1981-1982 surface survey by Choi and Jeong (1982), excavation of Bronze Age dolmens and Iron Age stone-piled tombs by the Jungdo Historical Site Excavation Research Group in 1982 (Jungdo Prehistoric Site Excavation Team 1982), excavation of Bronze Age dolmens by Kangwon National University Museum in 1983 (Kangwon National University Museum 1984), and an excavation of Bronze Age dwelling sites by Hallym University Museum in 1995 (Choi et al. 2002).

Each study is significant in the following respects: the surface survey by Im



Figure 1. Site Map of the Investigated Area (2013, 1:25,000: Two-dimensional Digital Map) (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 1 in Vol. I)

Segwon made relatively detailed observations on the production techniques and firing of pottery from the Neolithic to Iron Ages; Choi Bokyou and Jeong Yeon Woo's surface survey collected and introduced new artifacts, including pottery with a round clay band rim; the Jungdo Historical Site Excavation Research Group's investigation of the dolmens unearthed fragments of pottery with a round clay band rim from the soil preparation layer of the grave-boundary type dolmen; in the investigation of grave-boundary type dolmens, the Central Museum of Kangwon National University estimated the labor force mobilized for tomb construction after classifying by weight the riverside stones used to create a grave boundary and flagstones used to create a stone cist; and the Hallym University Museum excavated Bronze Age dwelling sites for the first time on Jungdo.

Period of Large-scale Investigations (2010-present)

The investigation of the Jungdo site became a large-scale effort starting in 2010. With the government pursuing its Four Major Rivers Restoration Project, test excavations and excavations of the section where embankments were to be constructed were carried out. Five institutions divided the area into sections for investigation. Iron Age sites were discovered along the eastern riverside of Hajungdo, and Bronze Age sites were discovered in the western section. Specifically, 86 Bronze Age dwelling sites, 48 pit features, six dolmens, two moated burial precincts, seven ditch-shaped features in Districts D and E were investigated along the western riverside (Gangwon Institute of Cultural Heritage 2013). In District F, 29 Bronze Age dwelling sites and 14 pit features were examined (Yemaek Institute of Cultural Properties 2012).

The significance of the 2010-2011 investigations is that a full 115 dwellings were investigated within just a limited area. Although several surface surveys and excavations had previously been carried out, only seven Bronze Age dwellings and five dolmens had been investigated over 30 years. Significant sites in neighboring areas within Chuncheon, such as Cheonjeon-ri, Geumsan-ri, and Hyeonam-ri, were intensively investigated in the 2000s. Through the excavation of these sites, the pattern of Bronze Age settlements in the Chuncheon Basin had been identified to some extent. However, even though the investigation of Jungdo started earlier, it remained at an initial level for a long time.

The 2010-2011 investigations discovered: a housing cluster with rectangular or square-shaped stone-lined hearths where pottery with raised bands was excavated; a housing cluster with square-shaped, rectangular, or narrow rectangular unlined hearths and a compacted clay surface where pottery with a perforated rim was excavated; a housing cluster with square-shaped or rectangular unlined hearths where plain pottery was predominantly excavated; moated burial precincts; and dolmens. These investigations have significance in that they revealed aspects of the Bronze Age Jungdo site for the first time. In addition, it was confirmed that a feature-containing layer of a Bronze Age housing cluster was situated under the floor stone of Dolmen No. 5 in Districts D and E (Gangwon Institute of Cultural Heritage 2013, 430), indicating for the first time that some of the dolmens on Jungdo were built later than the Bronze Age housing clusters.

Large-scale investigations of the Bronze Age site on Jungdo were conducted with the excavation of the Legoland Korea construction site. Through consecutive investigations running from 2013 to 2017, 2,205 features, including 1,273 dwellings and 150 tombs, were excavated over a total area of 600,792 m² (Joint Excavation Team for the Jungdo-dong site in Chuncheon 2020). This investigation was the longest ever performed in Korea in terms of duration and the largest of the Bronze Age sites in the Chuncheon Basin in terms of the size of the area and the features investigated. In this regard, the excavation of the Legoland Korea construction site can be considered highly significant. As it is a critical investigation and many features and artifacts have been investigated, this paper will introduce details on the investigation as follows.

Districts E1 and E3 were investigated by the Haneol Research Institute of Cultural Heritage. They are respectively located in the western section of the mid-upper part and the center of the upper part of Hajungdo. Among the Bronze Age features, a square-ditched enclosure (half in District B1) was excavated along with 285 dwelling sites, six aboveground building sites, 87 pit features, 11 dolmens, other tombs, and a network of ditches in District E1 (25,897 m²). In District E3 (33,390 m²), six pit features, a tomb, and a network of ditches were explored. The square-ditched enclosure is unusually large compared to others from the Bronze Age found in Korea. The major axis direction is N-68°-E, parallel to the former watercourse, and the dimensions are 121.6 m in length, 87.2 m in width, 403.7 m in total circumference, and

9,516 m² in internal area. In addition, some dolmens and other types of tombs overlapped over the upper part of the Bronze Age dwelling site.

Districts B (B1 to B4) and H (H1 and H2) were investigated by the Hanbaek Research Institute for Cultural Heritage. They are located at the western (B1 and B2) and eastern areas (B3 and B4) of the middle part and the eastern areas (H1 and H4) of the upper part of Hajungdo. The Bronze Age features investigated were: a square-ditched enclosure (half in E1), 231 dwelling sites, two aboveground building sites, 79 pit features, ten dolmens and other tombs in District B1 (17,068 m²); four pit features and two networks of ditches in District B2 (17,312 m²); seven pit features, a tomb, and two networks of ditches in District B3 (27,373 m²); ten pit features, four dolmens, and other tombs in District B4 (26,892 m²); and 93 dwelling sites, an aboveground building site, 96 pit features, six dolmens, other tombs, and a network of ditches in District H (H1: 11,870 m² and H4: 9,002 m²). In addition, there is a feature containing a layer with dolmens above the layer of a Bronze Age dwelling site.

Districts D1 to D3 and District H3 were investigated by the Korea Institute of Heritage. They are respectively located from the center to the eastern area of the middle part and the eastern area of the upper part of Hajungdo. The Bronze Age features investigated were: 75 dwelling sites, 25 pit features, 19 dolmens and other tombs, and a network of ditches in District D1 (37,882 m²); 129 dwelling sites, 39 pit features, and two tombs in District D2 (7,193 m²); 84 dwelling sites, 35 pit features, seven tombs, and a network of ditches in District D3 (26,995 m²); and three dwelling sites, four pit features, and a tomb with a stone-lined chamber in District H3 (4,911 m²). Dwelling sites and other living features (above) and a network of ditches (below) were found in the same layer, above which dolmens and other tombs were formed.

Districts C1 (38,670 m²), C2 (49,975 m²), and G1 (10,000 m²) were investigated by the Yemaek Institute of Cultural Properties. They are respectively located from the center to the eastern area of the middle part, the center of the mid-upper part, and from the center to the eastern area of the mid-lower part of Hajungdo. The Bronze Age features investigated were: 175 dwelling sites, four aboveground building sites, 104 pit features, a network of ditches, and 17 dolmens and other tombs in District C1; five dwelling sites, 70 pit features, a network of ditches, and 19 dolmens and other tombs in District C2; and four pit features in District G1. In addition, although the layer pattern is similar to that of other districts, five stone-cist or stone-lined tombs and four presumed

wooden-coffin tombs were investigated in Districts C1 and C2 in Layer V, the same layer containing Bronze Age dwelling sites.

Districts A1, A2, and A3 were investigated by the Hangang Institute of Cultural Heritage. They are located in the center to the western area of the mid-lower part, the center of the middle part, and the eastern area of the mid-lower part of Hajungdo, respectively. The Bronze Age features investigated were: eight dwelling sites, 11 pit features, 36 dolmens, other tombs, and a network of ditches in District A1; 63 dwelling sites, 39 pit features, two firing features, 14 dolmens and other tombs, and a network of ditches in District A2; and 13 pit features in District A3. Based on their results from District A2, the Hangang Institute of Cultural Heritage reported that Bronze Age dwellings and dolmens were found in Layer IV-1 (a pale-brown clay layer). However, the reported aspects of the layer are different from those of other institutes, probably due to differences in the interpretation of the layer.

The circulation zone, District F, and District G2 were investigated by the Gangwon Institute of Cultural Heritage. They are respectively located in the eastern and the western areas of the upper part, and from the center to the eastern area of the mid-lower part of Hajungdo. The Bronze Age features investigated were: 75 dwelling sites, 47 pit features, seven dolmens, and other tombs in the circulation zone (20,575 m²). Of the seven tombs, only No. 5 and No. 6 have substructures, i.e., main burial chambers, located in the same layer as the dwelling site, and the remaining five are formed in the layer above the dwelling site (the dark-brown sandy clay layer). Furthermore, a network of ditches was investigated in the yellowish green sandy soil layer below the dwelling site. In addition, one group of Bronze Age pottery, three pit features, and a network of ditches were investigated at a spot in District F (36,083 m²). Two pit features were investigated in District G2 (10,000 m²).

District G3 (21,580 m²) and District H2 (15,142 m²) were investigated by the Gukto Institute of Cultural Heritage. They are respectively located from the center to the eastern area of the mid-lower part and the eastern portion of the upper part of Hajungdo. The Bronze Age features investigated were: 11 pit features and an aboveground building site in District G3 and 47 dwelling sites, 49 pit features, and four tombs in District H2. The tombs in District H2 are scattered within the space of settlements with dense clusters of dwelling sites. However, they do not overlap with the dwelling sites. Although the tombs are classified into stone-cist tombs, stone-lined tombs, and small grave-boundary

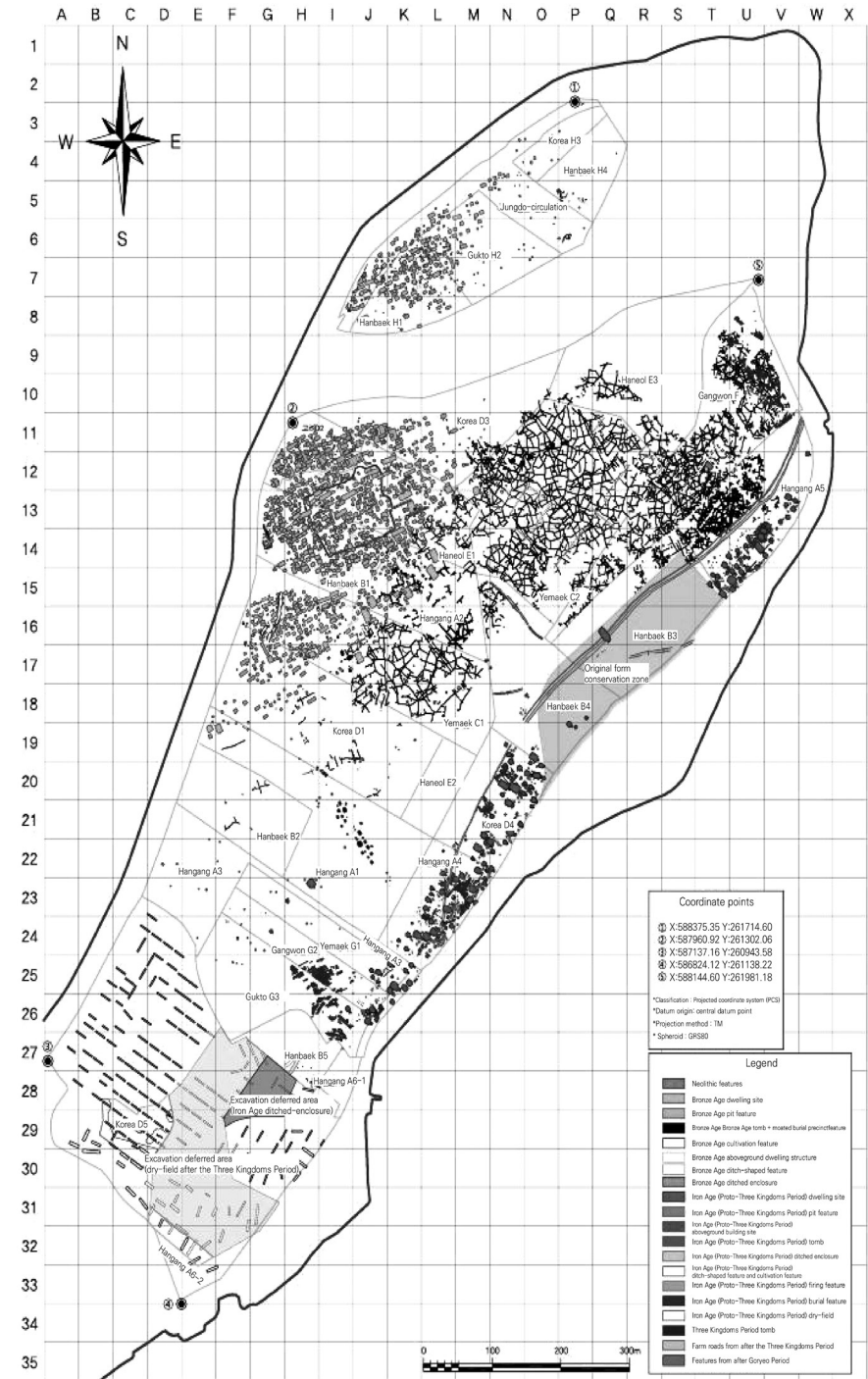


Figure 2. Map of the Features in the Area of Investigation (1:5,000)
(Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 33 in Vol. I)

type dolmens, given the surface of the burial pits and structure of the stone cists, they are presumed to be a substructure of dolmens with the capstones removed.

Current State and Interpretation of Features

With the excavation research that began in 1980 as its starting point, the Jungdo site has been investigated for nearly 40 years. During this period, many features from the Neolithic Age through the Bronze Age to the Three Kingdoms period and beyond have been investigated. Over time, the Bronze Age sites investigated in the Chuncheon Basin, including Jungdo in particular and the Bukhan River basin in general, have been more clearly identified. The recent excavation research of the Legoland Korea construction site was a meticulous and large-scale project unprecedented anywhere in Korea. This paper will discuss only the significant current state of features and some interpretation problems revealed during the excavations at the Legoland Korea construction site on Jungdo.

Significant Current State of Features

The Bronze Age features excavated at the Legoland Korea construction site are found mainly in two layers, excluding the middle layer containing artifacts. In other words, it can be said that there are two feature-containing layers. Although there is a difference in the serial numbers assigned to the layers in each investigated district, the light-yellowish-brown sandy clay layer corresponding to the lower layer contains a network of ditches, Bronze Age dwelling sites, pit features, square-ditched enclosures, and a tiny number of small tombs. In contrast, the dark-brown sandy clay layer corresponding to the upper layer contains most of the Bronze Age tombs excavated at the site. The networks of ditches are at the bottom within the light-yellowish-brown sandy clay layer, and all other Bronze Age features within this layer are densely formed at the top with overlapping relations.

Therefore, among the clusters of Bronze Age features on Hajungdo, the earliest features are networks of ditches. These ditches cross the island diagonally in a northeast-southwest direction from the eastern riverside in the upper part to the western riverside in the middle part of the island. According to the geological survey, the distribution range of ditches is consistent with the former

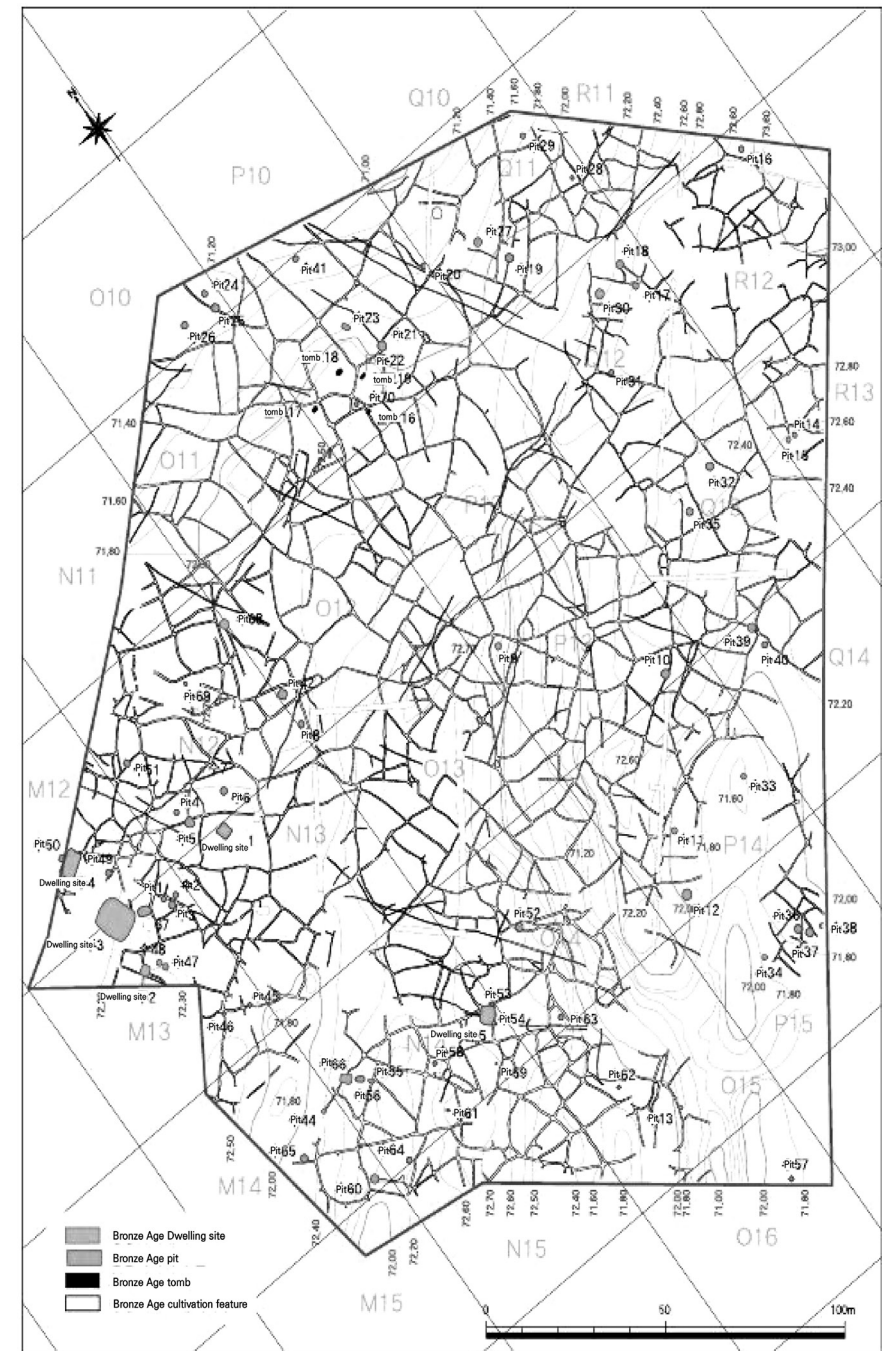


Figure 3. Map of Features and Networks of Ditches in the Lower Layer (Layer V) in District C2 (1/1,500)
(Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5567 in Vol. II-13)

watercourse. The areas where ditches were excavated are: most of District F from northeast to southwest, the area extending from the western half of District A5 to the southern area of District E3, the entire area of District C2, the northwestern area of District B3, a portion of the western area of District E1, the western periphery of District B4, the entire area of District A2, the eastern half of District C1, an area extending from the eastern half of District D1 to a portion of the western area of District A1, and the middle part of District B2.

The ditches are 20 to 40 cm wide and five to 15 cm deep. The shapes of the internal planar surface partitioned by the ditches are either triangular, trapezoidal, pentagonal, rectangular, square, oval, or irregular. The areas of the partitions also vary, ranging from as small as 12 m² to as large as 150 m². The overall topography of the range where the networks of ditches are distributed is generally flat, but there are undulations with a maximum height difference of 1.4 m. Networks of ditches are also formed on slopes. Mainly, they were formed in relatively high places. The joint investigation team interprets such features as having been artificially created by the Bronze Age residents of what is now Sinmae-ri, Geumsan-ri, Hyeonam-ri, and Udu-dong just before a large-scale settlement was established on Jungdo and thus classifies it as a “cultivation feature with a network of ditches.”

In the excavation of the Legoland Korea construction site on Jungdo, 1,287 Bronze Age dwelling sites, including aboveground building sites, were excavated and further investigated. Such a scale is very rare anywhere in Korea. Moreover, the Jungdo site is the only one where such a number of dwelling sites were examined over a series of investigations. This means that a wide variety of dwelling sites were investigated in the excavation of the Legoland Korea construction site on Hajungdo. The investigation team classified the clusters of dwelling sites they investigated in various ways by combining attributes such as plane form, internal facilities, structural facilities, the pottery excavated, and sizes. The keys to classifying the types of features are the plane forms, internal facilities, and pottery.

As a result, the following classification was created: Type I, where the plane is square with stone-lined or unlined hearths, the living floor is bare ground, and pottery with raised bands was excavated; Type IIA, where the area is square with only unlined hearths, the living floor is bare ground, and pottery with raised bands was excavated; Type IIB, where the area is either rectangular or square with only unlined hearths, the living floor is bare ground, and pottery with a

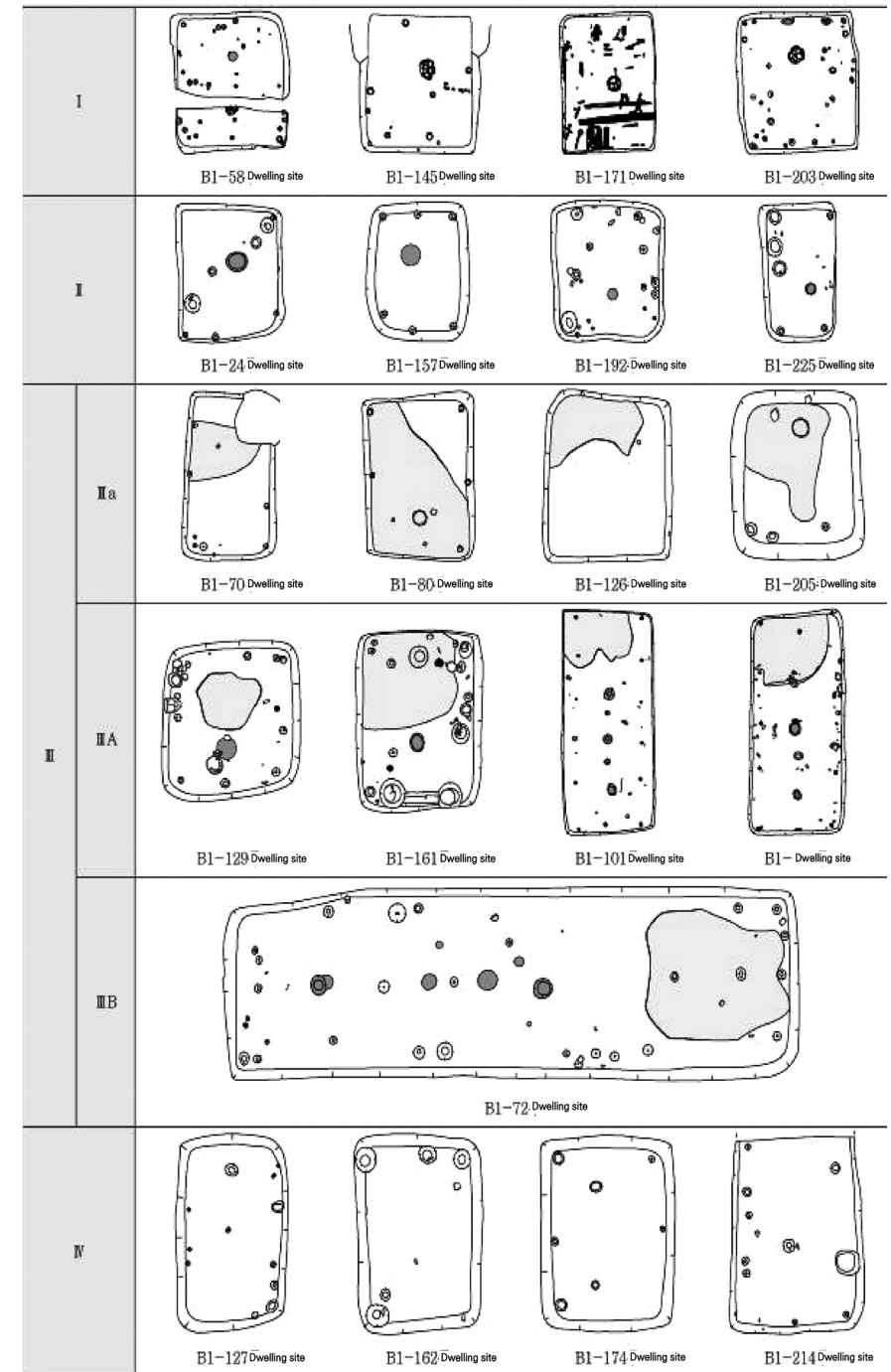


Figure 4. Classification of Types of Bronze Age Dwelling Sites according to the Joint Investigation Team (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5501 in Vol. II-13)

perforated rim was excavated; Type IIIA, where the area is either rectangular or square with only unlined hearths, a part of the living floor has a compacted clay surface, and pottery with a perforated rim was excavated; Type IIIB, where the area is a narrow rectangle with only unlined hearths, the living floor has some compacted clay surfaces, and pottery with a perforated rim was excavated; and Type IV, where the area is either rectangular or square with no or few internal facilities such as a hearth, and pottery with a perforated rim or plain pottery was excavated.

Looking at the number of each type based on District E, where dwelling sites are the most densely found (285 units), among the 278 classifiable units, Type I contains eight units (2.8%), Type IIA has seven (2.5%), Type IIB has 74 (26.6%), Type IIIA has 125 (44.9%), Type IIIB has ten (3.59%), and Type IV has 53 units (19.06%). Similar proportions are found in other areas, except for those areas where only a small number of Bronze Age dwelling sites are distributed. The investigation team classifies the housing clusters at the Jungdo site into separate stages: Types I and IIA, where pottery with raised bands was excavated, and Types IIB to IIIB and IV, where pottery with a perforated rim was excavated. It suggests that the settlement type changed from the former to the latter.

In addition, 150 Bronze Age tombs were excavated at the Legoland Korea site. All are stone tombs (dolmens, stone-cist tombs, and stone-lined tombs) in which stone materials are used for the structural facility, except for MI in A2 and M19 in C2, which are presumed to have been wooden coffin tombs in their initial stage. Based on the current status, the tombs are classified into grave-boundary type dolmens, dolmens, stone-cist tombs with additional stone piled on top, conventional stone-cist tombs, and stone-lined tombs. Although opinions differ slightly from one investigation team to another, it is assumed that the majority of stone tombs without boundaries (except for a small number of stone-cist tombs and stone-lined tombs) may have been grave-boundary type dolmens whose stone tables and boundaries were removed due to modern cultivation of deep-tillage crops, flooding, or destruction by residents.

Among the Bronze Age tombs that were investigated on Jungdo, one of the unusual phenomena specifically revealed during the meticulous investigations is the cremation features in and outside the boundaries of grave-boundary type dolmens. For example, in cases of the grave-boundary type dolmens C1 M7 and C2 M11, charred wood and bone fragments were found

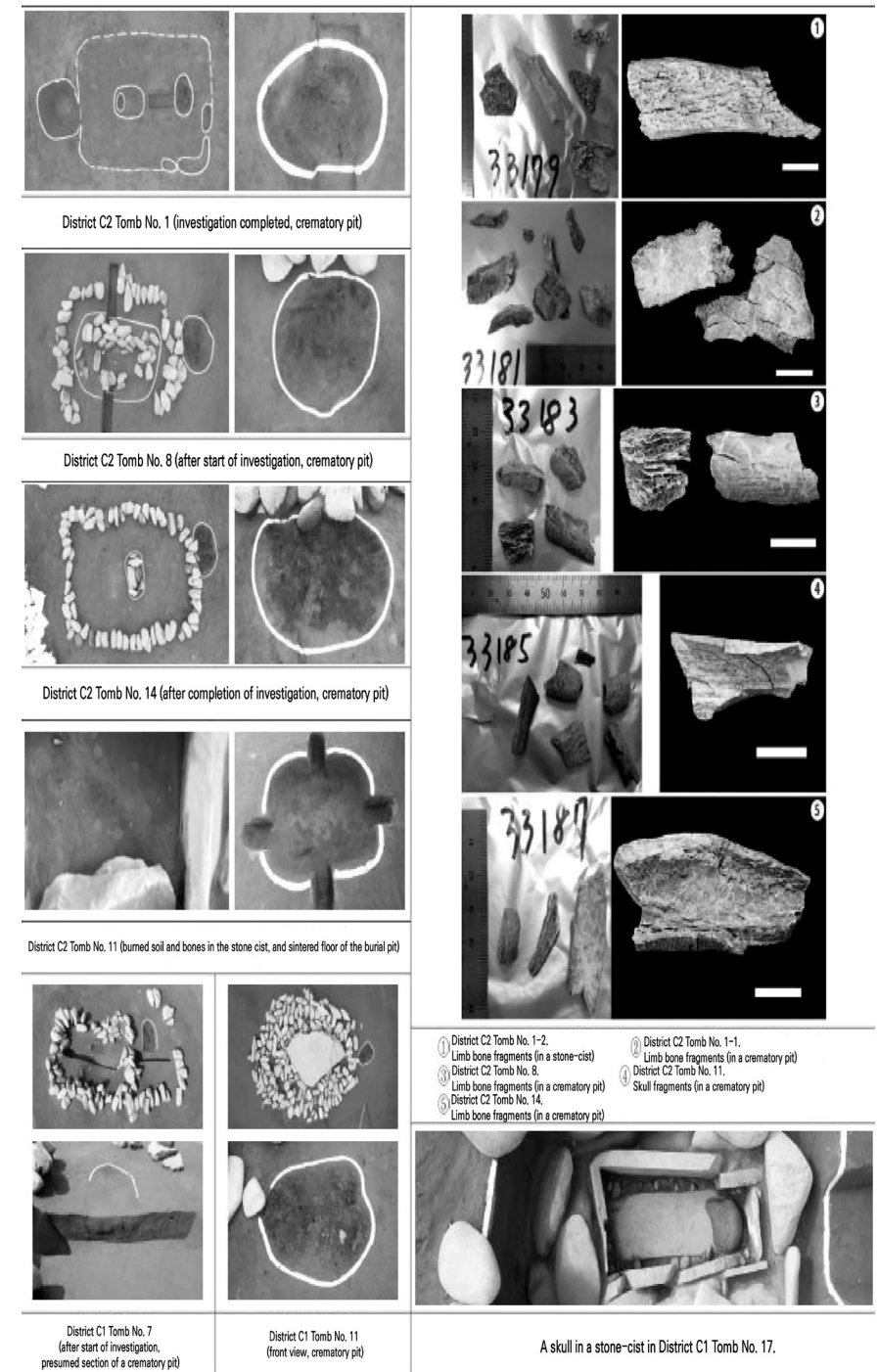


Figure 5. Crematory Pit, Burned Soil, and Bones Excavated at a Bronze Age Tomb in District C (Joint Excavation Team for Jungdo-dong Site in Chuncheon 2020: Figure 5575 in Vol. II-13)

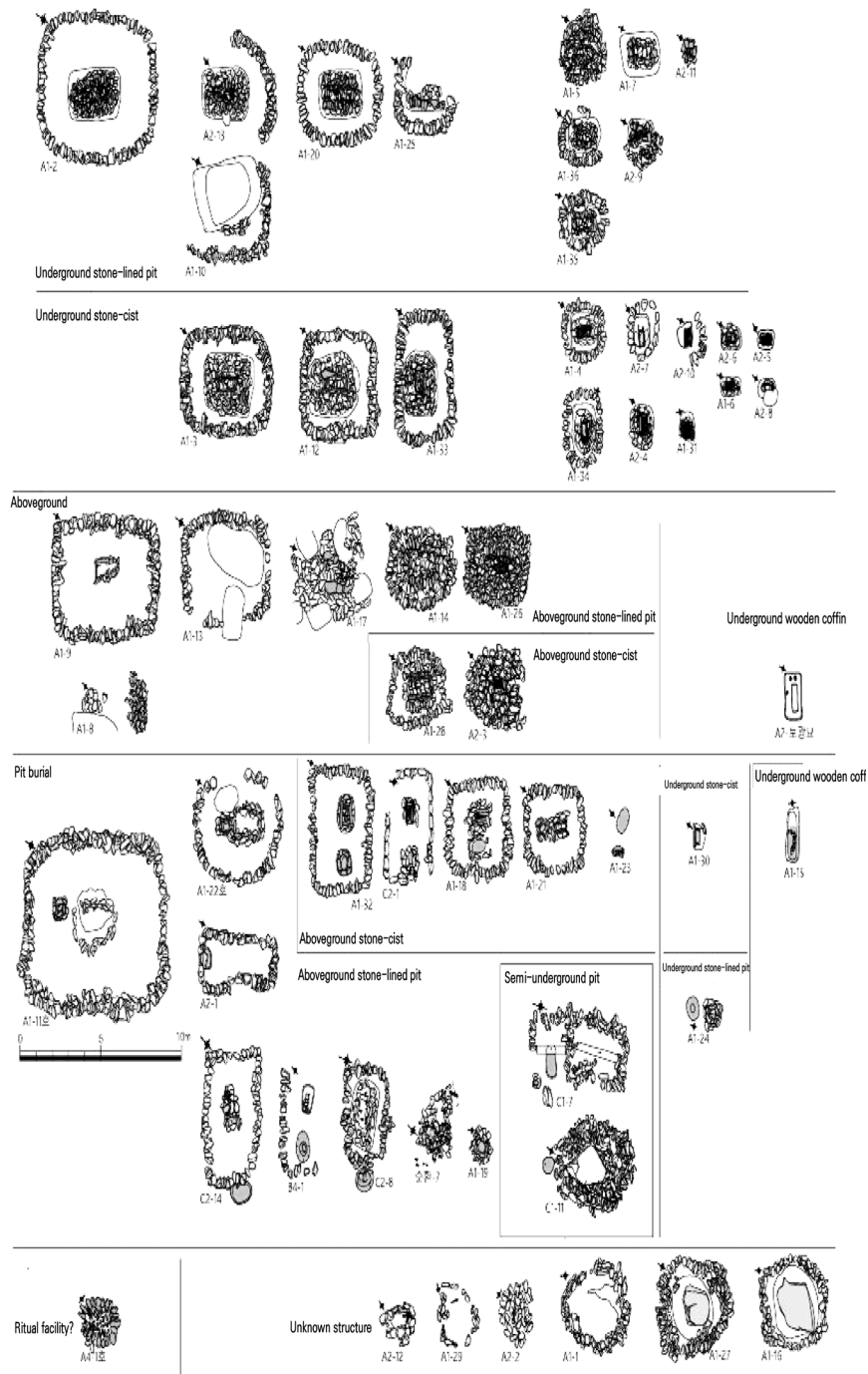


Figure 6. Bronze Age Tombs in District A and their Classification by the Investigation Team (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020, Fig. 5611 in Vol. II-13)

inside an oval pit connected to the outside of a wall of stones piled along the shorter lines of the tomb boundaries. In the grave-boundary type dolmen C2 M11, burned soil and bone fragments were also recovered inside the stone cist. This phenomenon was found in many other grave-boundary type dolmens. The process of identification has revealed some of the fragments to be mammalian bones, mainly human.

This is not the first time that cremation marks have been identified in dolmens on Hajungdo. For example, in the graveyard-type stone tomb 1983 M1 investigated by the National Museum of Korea on the side of the Bukhan River west of the mid-upper part of Hajungdo, a large volume of charcoal and human bones was recovered from the bottom surface of a tomb dug before the stone cist was built. At that time, the investigators suggested that based on the current status of features, cremation may have been performed inside the burial pit before the stone cist was formed, or a secondary burial may have taken place after a cremation was performed externally (Ji and Lee 1983, 4). It is an outstanding achievement of the joint excavation team’s detailed investigation that it provided data from which similar burial behaviors and processes can be inferred.

A square-ditched enclosure is located on the east side of the middle part of Hajungdo. The northeast and east sections of the ditched enclosure waver, but the remaining sections are straight, so it is generally square in shape. The major axis direction is northeast-southwest (N-68°-E), parallel to the former watercourse. It is 121.6 m in length, 87.2 m in width, 403.7 m in total circumference, and its ditch is currently 0.45 to 0.88 m deep, 1.0 to 2.4 m wide, and 9,516 m² in area. The cross-section of the ditches forming the enclosure is U- or nipple-shaped. Still, considering the eroded topography, it is estimated that the entire section was initially nipple-shaped and dug out in two steps. There were no traces of separate defense-related facilities or water. The only related artifact is a stone ax with a shell edge excavated from a wall inside the ditched enclosure.

Interpretation and Evaluation

The large number of networks of ditches investigated at the Legoland Korea construction site on Jungdo are representative features about which there differing opinions even within the investigation team. Even though each

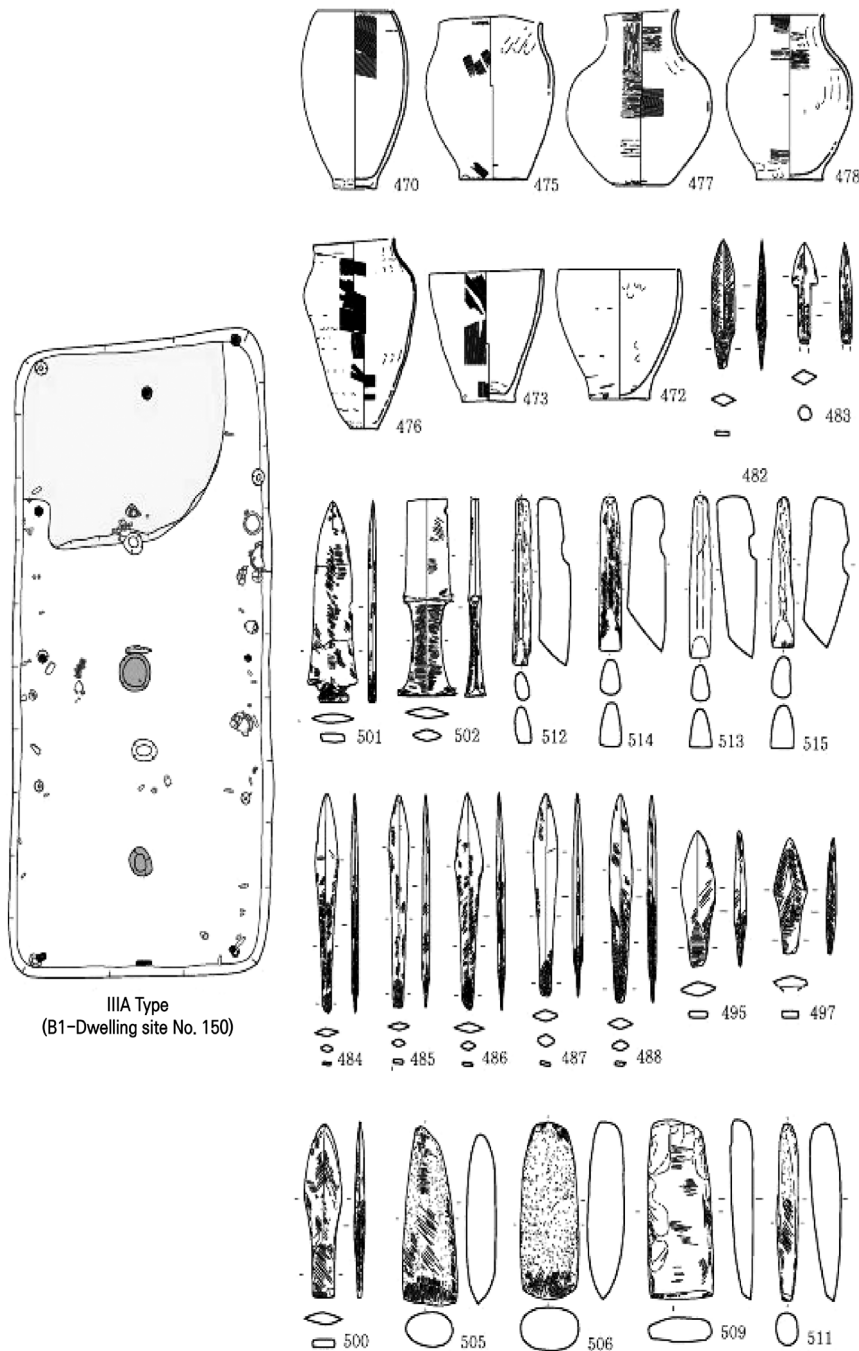


Figure 7. Dwelling Site and Excavated Artifacts in District B1 F150 (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5512 in Vol. II-13)

institution assigned to a different district prepared its analysis and general summary using the same terminology, concepts, report format, and system, interpretations of the nature of the network of ditches differ from one institution to another. However, all of the institutions of the team agree that this feature is a dry field artificially created by people around Jungdo at the very beginning of the Bronze Age, close to the end of the Neolithic Age. Therefore, it was described as a “cultivation feature with a network of ditches.”

If the network of ditches was a cultivation feature, traces such as a path through which people passed for cultivation activities should have been discovered. However, no such traces have been found. Instead, there was just an extensive network of irregular ditches. The investigation team collected samples from various points with good layer conditions and requested analysis of plant opals and carbonized grains to prove that the networks of ditches were cultivation features. No traces of artificially cultivated crops were identified. However, given the soil structure and geological status, the ditched enclosure cannot be regarded as something that was created by natural phenomena, such as soil wedges or polygonal soil cracks. Therefore, it appears that the nature of these features will be discovered only through future analyses.

The location of hearths, the location of the compacted clay surface, the directions of the major axis, the detailed composition of artifact groups, and the overlapping relationship between features are also complicated enough to show differences since the housing clusters investigated on Jungdo vary in shape, structure, and the artifacts excavated. As pointed out by the investigation team, it is true that the dating by some researchers of housing clusters among those on Jungdo to the first half of the Bronze Age is not certain. However, since the housing types are oversimplified when based simply on the shapes of the area, hearth facilities, existence of clay compaction, etc., there are many housing groups that otherwise should have been assigned to separate time units based on overlapping relations of features, major axis directions, and sizes that are assigned to a single housing type without a sufficient basis.

There are housing clusters classified as an intermediate stage between housing clusters with the pottery with raised bands and small square-shaped housing clusters with plain pottery. There are also others where artifacts with a specific temporal background, such as a Shiertaiyingzi or Zhengjiawazi type (Type AIII) lute-shaped bronze dagger, a fan-shaped bronze ax of a later type, or a dagger pommel ornament with pole-shaped projections were excavated.

Based on these and considering the combinations of overlapping relationships among the features of the dwelling sites, major axis directions, internal facilities, and other features, it could be possible to classify housing units into temporally meaningful periods such as the same period or before or after a particular time. However, it is also unfortunate that after grouping all of them into one time unit, the research institutes loosely dated it to a relatively long span depending on their dating values from Accelerator Mass Spectrometer (AMS) analysis.

The soil layers on Jungdo are relatively homogeneous, but there are some partial breaks in the layers and slight differences in soil color and quality. Regarding the feature-containing layers on Jungdo, all tombs in all districts (except for a few small stone-cist tombs) were built on the layer above the Bronze Age housing clusters. In Districts D2 and D3, there are Bronze Age dolmens and other tombs in Layer VII (the dark brown sandy clay layer), under which are Bronze Age dwelling sites and other features in Layer VIII (the light yellowish-brown sandy clay layer). Districts B1 and B2 have a Bronze Age feature-containing layer (Layer VI) in the middle with Bronze Age tombs in the layer above (Layer V, the dark brown sandy clay layer) and Bronze Age dwelling sites and other features below it in Layer VIII (the brownish-yellow sandy soil layer).

Given these aspects, it is clear that Jungdo's Bronze Age tombs were constructed relatively later than the housing clusters. In that case, it can be said that the majority of these Bronze Age tombs were constructed by residents of the housing clusters dated to the later period of the Jungdo Bronze Age, or perhaps by a later settlement group located in an area across the river (such as Hyeonrm-ri, Geumsan-ri, Sinmae-ri, Udu-dong, or another area) after the settlement sites earlier formed on Jungdo had been abandoned (Song 2018a, 39). It seems that the opinions of the investigation teams differ slightly among the pertinent participating institutions. Since the general discussion suggests that the tombs correspond either to the housing clusters in which pottery with a perforated rim was excavated or the housing clusters in which plain pottery was excavated, further review of the related discussions is required.

Furthermore, in addition to the grave-boundary type dolmens, other Bronze Age tombs differing in structure from the more general grave-boundary type dolmens, judging from their remaining aspects, were excavated in the embankment construction section of the Four Major Rivers Restoration Project and the construction site of Legoland Korea, such as stone-cist tombs

with stone piled on top, small stone-cist tombs, and stone-lined tombs. There is no difference of opinion regarding the grave-boundary type dolmen since its structure had been confirmed earlier. However, there may be different opinions about whether tombs with stone piled on top and tombs with only a stone cist or stone-lined pit are distinct from the dolmens. Members of some of the institutions making up the joint investigation team differentiate other types of tombs from dolmens. In contrast, others raise the possibility that the superstructure of some tombs was removed and only the main burial chamber remains, creating controversies regarding the type or structure of these tombs.

In this context, there are a couple of things to note. First, with the stone-cist or stone-lined pits without a grave boundary, there are many cases where stone cists are not exclusively clustered and co-occur with a grave-boundary type dolmen. Second, although there is neither a grave boundary nor capstone, stone cists or stone-lined pits without a grave boundary share commonalities with a grave-boundary type dolmen: there is a burial pit like a stone-cist tomb; it is walled; it is filled with sand and stone; and there is a funerary bed. Judging from the current status of the tombs, even if the grave boundary and capstone were not installed from the beginning when the stone cist was formed, it is highly likely that there was a plan for a graveyard-type tomb to be created simultaneously. Perhaps it was created by a family who, for whatever reason, could not afford a grave-boundary type dolmen that required greater labor and expense.

Finally, the square-ditched enclosure that was revealed received considerable attention since it was the largest ditched enclosure of the Bronze Age found to date in Korea. It seems probable that defense facilities were originally attached to the ditched enclosure and then later disappeared as the ground surface was partially leveled. However, the joint investigation team believes that the enclosure could not be related to defense because there is no trace of such facilities and no unusual phenomena have been found inside the enclosure. In addition, the team also considered that the enclosure had nothing to do with drainage since there was no trace that the ditches were ever filled with water. Meanwhile, the team suggests that the relatively high area in the northeast rugged section is highly likely to be a sacred space and that the square-ditched enclosure is a ceremonial feature created while partitioning this ritual space. This interpretation seems relatively reasonable.

Snapshot and Prospects of Research *Culture, Features, Artifacts, and Chronology*

Bronze Age features in the Chuncheon Basin include the Misa-ri type, represented by pottery with raised bands; the Garak-dong type, represented by double-rimmed pottery; and the Cheonjeon-ri type, represented by a dwelling site with pottery with a perforated rim and a compacted clay surface. Only marginal traces of the Garak-dong type are found at some places in the Geumsan-ri site and at the recently investigated Jungdo site. Therefore, it can be stated that the Misa-ri type and the Cheonjeon-ri type are the most representative of the aspects of the material culture of the Chuncheon Basin. However, there is a group of sites whose characteristics fall somewhere between them in terms of pottery and dwelling types. Relative to the initial (Misa-ri type) and middle phases (Cheonjeon-ri type), academics classify it as the early-phase type.

There are differing opinions regarding this early phase type in the Chuncheon Basin: Some reckon that it was influenced by the Yeoksam-dong type found in the lower reaches of the Han River (Hong 2005, 82; Jung 2007, 33; Kim 2016, 26), while others view that it is a variant of the Misa-ri type (Song 2019, 31). Advocates of the former position consider all pottery types as separate groups and lines. This position implies that the cultural groups in the Chuncheon Basin were continuously replaced, which requires additional explanation. However, according to recent research, the internal and structural facilities of the dwelling sites and pottery groups gradually changed to the Cheonjeon-ri type (Oh 2016, 26; Song 2019, 31). Therefore, the latter view appears more fitting.

Meanwhile, the early-phase type of the Chuncheon Basin has not been classified, and only its characteristics have been described. After defining the early-phase type for the Namhan River basin as the Jodong-ri type (Song 2013b, 15-18), Song Man-Yeong (2019, 33) defined the Bukhan River basin in Gangwon Province, the early-phase type in the Namhan River basin, and the Cheonjeon-ri type as Jodong-ri types, as housing clusters with clay compacted surface were continually excavated in the Namhan River basin as well. Kim Kwon Joong (2004, 20), who conceptualized the Cheonjeon-ri type for the first time, suggests that only the early-phase type in the Namhan River basin should be defined as a Jodong-ri type, given that regional differences exist in the site



Figure 8. The Square-ditched Enclosure and the Distribution of Neighboring Settlements (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5604 in Vol. II-13))

groups for the Namhan River and Bukhan River basins (Kim 2016, 26).

Such controversies indicate that studies on the Bukhan River and Namhan River basins in Gangwon Province, including Jungdo, are still in their inception phase. Recent research shows that both similarities and dissimilarities can be found in the Bukhan River and Namhan River basins. The above argument stems from a difference in perception of whether to view them as regional differences within the same culture or as separate cultures. Given the level of similarities and dissimilarities identified in the two regions, it can be suggested to group the west side of the Taebaek Mountains in Gangwon Province (the area known in Korea as Yeongseo) into a single culture and to establish some subtypes with the main distribution areas in the Bukhan River and Namhan River basins.

The Bronze Age culture of the Chuncheon Basin is generally divided into four major categories: the initial, early, middle, and late phases. The initial phase is represented by the Misa-ri type, the early phase by the early-phase type, the middle phase by the Cheonjeon-ri type, and the late phase by an assemblage of pottery with clay band rims. Some researchers classify the phase of assemblages of pottery with clay band rims as part of the Early Iron Age. The question of

whether or not pottery with a clay band rim should be dated to the Bronze Age arises from a peculiarity of the material culture of the Korean Peninsula. The pottery with clay band rim culture belongs to the Bronze Age based on the time of its introduction. In contrast, it pertains to the early Iron Age when iron tools are also found in its development and declining phases.

In fact, this problem also applies to the Misa-ri type, dated to the initial phase of the Bronze Age and other types dated to the first half of the early phase. This is because bronze tools were not produced or used during this period in most areas of the Korean Peninsula and the Yeongseo area of Gangwon Province. However, they cannot be dated to the Neolithic Age since the making of Neolithic Age pottery ceased with the establishment of the initial phase and the pottery style that appeared in the initial phase continued into the Iron Age. The position of the author is to exclude the cultural period of pottery with a clay band rim from the period classification of the Bronze Age considering that the cultural period of pottery with a clay band rim, in which the existence of iron tools was not known or where they were not found as an assemblage, is only around 70 years.

However, when the target for analysis is limited to the Chuncheon Basin, the complete replacement of the indigenous culture of this region by a culture producing pottery with a clay band rim is not found. It has been previously suggested that the cultural group producing pottery with a clay band rim and the indigenous cultural group defined by their plain pottery coexisted in the Chuncheon Basin (Jung 2007, 37) or that the Cheonjeon-ri type was followed by an independent culture of pottery with a clay band rim (Oh 2016, 30-32; Song 2018b, 26). In the Chuncheon Basin, however, some sites accommodated elements which show characteristics of the culture of pottery with a clay band rim while maintaining their own cultural identities, as found not only at the Jungdo site but also in Hyeonam-ri, Sinmae-ri, Cheonjeon-ri, Geodu-ri, and other sites.

This means that the chronology of the Bronze Age in the Chuncheon Basin should be extended to the assemblage phase of pottery with a clay band rim. Therefore, the existing four-phase division may be considered suitable when analyzing only the Yeongseo area. Currently, several suggestions have been proposed for the time range of each phase. Based on the AMS dating, the initial phase is dated from the 15th to 14th century BC (Kim 2013, 56) or from the 15th to the 12th century BC (Jung 2012, 18). The middle phase is considered

to fall from the tenth to the sixth century BC (Jung 2007, 36), from the eighth to the sixth century BC (Kim 2008, 68), or from the eighth to the fifth century BC (Song 2013b, 34). The beginning of the late phase is estimated to be from the seventh to the sixth century BC (Park 2004, 42; Lee 2015, 112), from the seventh to the fifth century BC (Jung 2007, 36), or from the sixth to the fifth century BC (Gu 2020, 118).

However, there is an issue with using the AMS dating which some researchers use as an absolute basis for chronology, as it is roughly 200 to 300 years older than dates provided in reliable chronological views. Although the Jungdo Legoland construction site E1 F129 is dated from the eighth to the seventh century BC based on some chronological views, the lute-shaped bronze dagger found at this dwelling site is a Zhengjiawazi type, which first appeared in the Liaoning region in the sixth century BC (Oh 2006, 261-66; 2013, 8; 2016, 35). In addition, although the introduction of the culture of pottery with a clay band rim is considered to fall in the seventh to fifth century BC, this culture predominated in its area of origin, the Liaodong region, over the fourth to third century BC (Oh 2020b, 61), so the temporal order appears to be reversed.

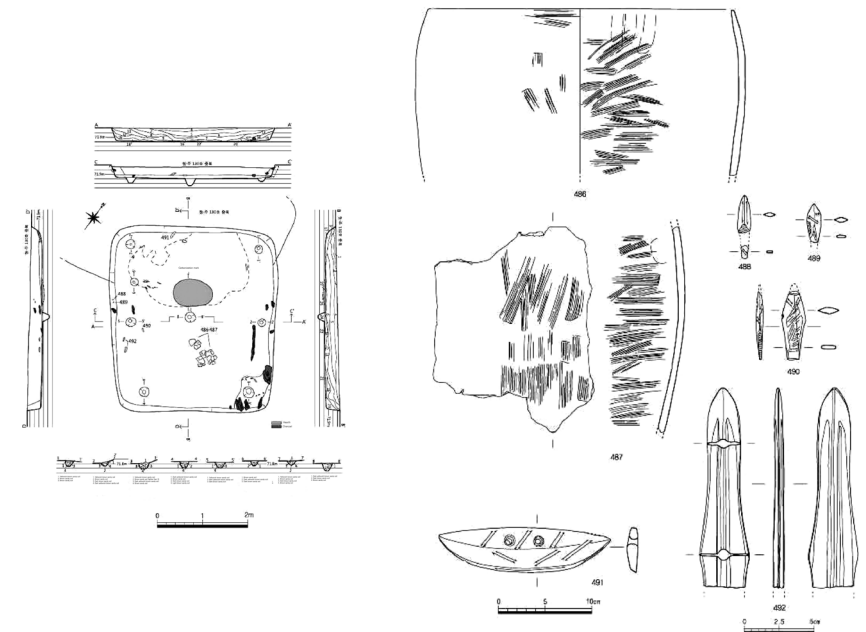


Figure 9. Dwelling Site and Excavated Artifacts in District E1 F129 (Adopted from the Joint Excavation Team for the Jungdo-dong Site in Chuncheon, 2000: Figures 350 and 351 in Vol. II-1)

Pottery from the culture of pottery with a clay band rim found in the Chuncheon Basin includes large clay pots, long-necked jars with handles, and pedestaled bowls. Given each type's combination of properties, Pottery Group 1 from the Chiljeon-dong site is considered the earliest. This is where pottery with a clay band rim with the largest body diameter in its upper part and nipple-shaped handles under the mouth was excavated. The Hyeonam-ri site is dated to the middle period, where, together with the same type of clay band rim pottery as was excavated in Chiljeon-dong, pottery with a clay band rim with the largest body diameter in the lower part or with a degree of curvature that is small enough to create a shape closer to a bowl, or with a mouth rim larger than that excavated in Chiljeon-dong has been excavated. The Cheonjeon-ri site is dated to the latest period. Here, pottery with a clay band rim with an outwardly curving mouth rim, hollowed ritual vessels with a cover and straight handle, and more have been concurrently excavated.

The properties of Pottery Group 1 from Chiljeon-dong appeared later than those of the early pottery from the culture of pottery with a clay band rim excavated at the Suseok-ri site and slightly later than the pottery excavated in the Mangisanseong mountain fortress site. Considering that the early period of the culture of pottery with a round clay band rim in South Korea is dated from 350 to 300 BC (Oh 2020c, 15), the Chiljeon-dong pottery can be dated from the first to the second half of the third century BC. The Hyeonam-ri pottery is dated from the end of the third century BC to the middle of the second century BC. The Cheonjeon-ri pottery is dated to the middle of the second century BC to the middle of the first century BC, given that pottery with horn-shaped handles or stick-shaped handles has been excavated concurrently with small iron tools in the southern region of the Korean Peninsula and that pottery with a clay band rim appeared earlier than the wooden coffin tombs of the late first century BC to early first century AD in Yulmun-ri and Udu-dong made by and for immigrants to the Nangnang (Lelang) District (Oh 2016, 30-34).

Considering the discussion above, it may be appropriate to date the period of the late Chuncheon Basin plain pottery culture to from the third to the middle of the first century BC. The early phase may be dated to the eighth to seventh century BC, given that a group of artifacts from this phase—the time when lute-shaped bronze daggers and Misong-ri type pottery belonging to the early pottery culture appeared together—were found at the Yongam-ri site in Hwacheon (Oh 2022, 53). The middle phase may be dated to the sixth to fifth

century BC, given that Zhengjiawazi type lute-shaped bronze daggers have been excavated. On the other hand, some site groups belonging to a period from the initial phase to the first half of the early phase may be dated to around the 11th to ninth century BC. Meanwhile, it is suggested that double-rimmed pottery groups were, although only rarely, scattered in the Chuncheon Basin during a brief period from right before to the very beginning of the initial phase (Oh 2016, 23).

Recently, considering that most of the burial mounds surveyed on Jungdo were built on the layer above that of the Bronze Age housing clusters, Song Man-Yeong observed that the dolmen in the Chuncheon Basin, including Jungdo, changed sequentially from the aboveground table type to the semi-underground type and then to the underground type. He believed that the small underground stone-cist tombs found in Jungdo came into existence over the course of dolmen shifting underground. He suggests that the Jungdo stone-lined tombs belong to the most recent period in terms of their structure and suggested that they tend to be smaller during this transition. He dated them from the late period of Cheonjeon-ri type to the pottery with a clay band rim phase, which seems to correspond to the seventh to fifth century BC in terms of absolute date (Song 2018a, 38-39).

Oh Kangwon suggests that the Cheonjeon-ri dolmens belong to the earliest period among the dolmens of the Chuncheon Basin and that those from Jungdo 1983M1, where pottery with a round clay band rim was excavated from the soil preparation layer of the graveyard, belong to the latest period. This is based on the fact that diamond-shaped stone arrowheads are the predominant burials found in the grave-boundary type dolmens in the Chuncheon Basin, including Jungdo, that the diamond-shaped stone arrowheads of the Chuncheon Basin was a variant of those from the top-shaped pottery culture in the Northwestern area of the Korean Peninsula (where another variant existed at the same time when its Chuncheon counterpart was made) and that there is a possibility that Cheonjeon-ri grave-boundary type dolmens combined with table type dolmens appeared under the influence of the top-shaped pottery culture's late Pyeongchon-type grave-boundary type dolmen and early Daepyeong-ri type grave-boundary type dolmen. Furthermore, he dates the duration of the grave-boundary type dolmens from the late seventh century BC to the mid-first century BC (Oh 2020a, 42-51).

Regarding the period of formation of dolmens in the Chuncheon Basin,

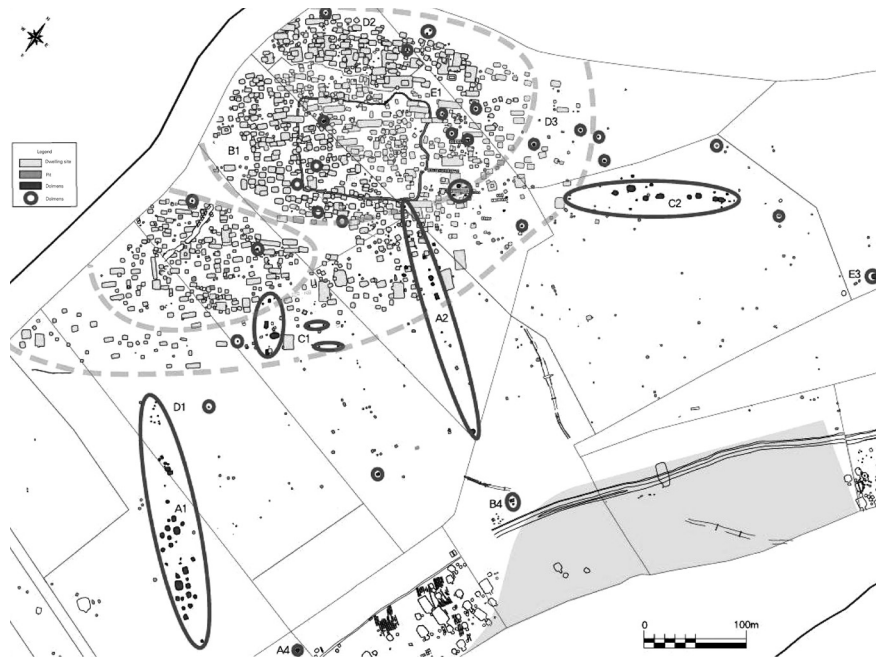


Figure 10. Distribution of Bronze Age Tombs (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5610 in Vol. II-13)

including Jungdo, several chronological views have been presented, including from the eighth to early first century BC (Jeong 2001, 33), from the sixth to fourth century BC (Choi 1998, 25), and from the fourth to first century BC (Kim 2000, 133-35). Since the period from the fourth to the first century BC follows the chronological view established in the 1980s by the National Museum of Korea and the Central Museum of Kangwon National University, it can be said that this time is considered too late based on the present point of view developed from research results. As for the chronological view, which regards the upper limit as the eighth century BC, there are no research results to support this period in the Chuncheon Basin. Given certain aspects of the layers recently found at the Jungdo site, this date can be deemed too early.

In the case of dolmens, which can be viewed as one of the three major axes of research related to the Bronze Age on Jungdo and in the Chuncheon Basin overall, a close examination is required in the future because the layered aspect of the Legoland Korea construction site on Jungdo warrants a new analysis. Furthermore, the difficulty with the chronology of the dolmens in the Chuncheon Basin is that almost no burial artifacts have been found. Even when

there are some, most are of a specific type with an unclear temporality. In the end, the transition process from the aboveground to the underground type, as proposed by Song Man-Yeong, and the influence of the dolmens of the later phase of Pyeongchon-type from the top-shaped pottery culture, as proposed by Oh Kangwon, remain hypothetical.

People, Society, and Subsistence Economy

It is believed that in its initial phase the plain pottery culture of the Chuncheon Basin built a subsistence economy centered on dry-field farming, mostly in the alluvial land of the riverside areas. This is inferred from the fact that the stone tool group related to each stage of production activity was first systematized during this period, even though the stone tool group related to reclamation, cultivation, and harvest had not yet reached its mature form. Some researchers have identified the network of ditches at the construction site of Legoland Korea as a cultivation feature at a coarse level, as did the reporters from the recent excavation. They suggested foxtail millet and proso millet as major cultivated crops (Yun 2020, 53). However, this period's archaeobotanical remains and cultivation features have not yet been identified.

Nevertheless, there are ample reasons to infer that dry-field farming was practiced around the settlements in the alluvial land of the riverside area, which was the preferred location for settlement in the initial phase. It is currently unknown to what degree of skill the dry farming reached. It can be assumed that a certain degree of dry farming was practiced as late as the first half of the middle phase, given the following facts: archaeobotanical remains such as foxtail millet and sorghum and pottery impressed with traces of grain have been excavated from early to middle phase dwelling sites at the Jungdo, Sinmaeri, Udu-dong, and Cheonjeon-ri sites; numerous storage pits were installed at dwelling sites before and after the middle phase, and large ceramic storage vessels have been excavated inside them; and all sorts of cultivation-related stone tools came into existence by then.

The establishment of a subsistence economy eventually resulted in population growth, which in turn is thought to have accelerated social complexity. As society became more complex, the symbolic system must have become more sophisticated to support group solidarity. It can be assumed that over this process the square-ditched enclosure appeared at the construction site

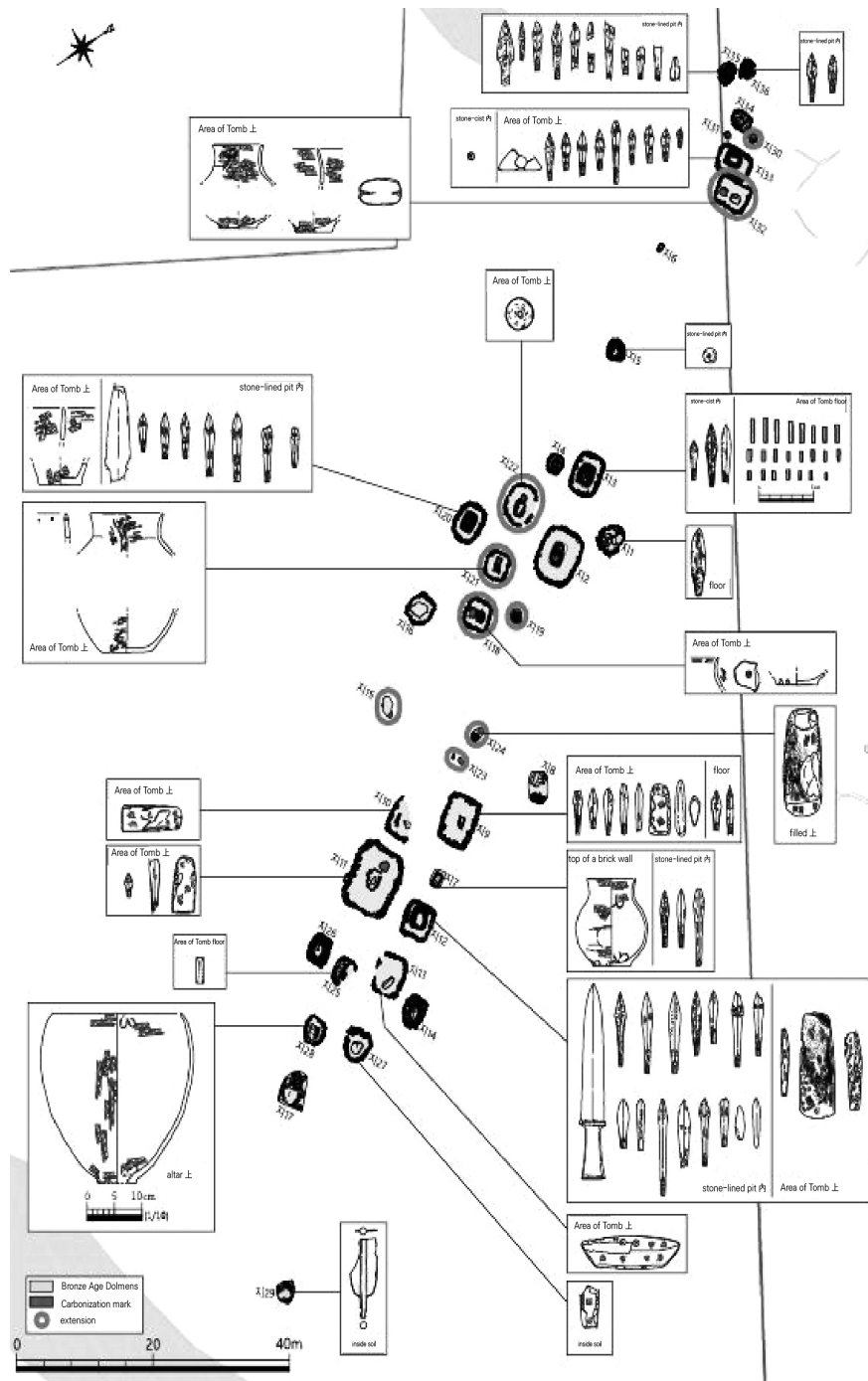


Figure 11. Distribution of the Bronze Age Tombs and Excavated Artifacts in District A1 (Joint Excavation Team for the Jungdo-dong Site in Chuncheon 2020: Figure 5613 in Vol. II-13)

of Legoland Korea on Jungdo and grave-boundary type dolmens were formed on a large scale in Cheonjeon-ri, Jungdo, and other areas. The plain pottery group in the Chuncheon Basin has been suggested to have reached the level of a tribal society (Jo 1967, 43; Jeong 2001, 40) or early state (Kim 1990, 158; Kim 2000, 138), but a full-scale analysis of this has not yet been made.

There are various opinions on the identity of the plain pottery group in Chuncheon. Kim Gyuho (2000, 142) suggests that they may be the Maek people 貊族 mentioned in the “Baekje Annals” and “Geography” sections of the History of the Three Kingdoms or the people of Maek-guk 貊國 or their ancestral group, the Maek people 貊族 mentioned in some historical records and the legend of Mae-guk Royal Palace in Balsan-ri, Chuncheon. It has also been suggested that there were people during the Iron Age who may be regarded as Goguryeo people in a broad conception of this lineage, and they were the builders of the Bronze Age dolmens (Jo 1967, 43). It is virtually impossible to specify the tribal identity of the plain pottery group in the Chuncheon Basin in the absence of definitive historical records. However, it is clear that a group with an identity distinct from their neighbors lived in the Chuncheon Basin.

Conclusion

The Jungdo site is highly significant because it is South Korea’s largest investigated Bronze Age site and the marker site for the Jungdo type, the definitive iron age culture of the central region. After a surface survey by the National Museum of Korea in 1977, surface surveys and small-scale excavations were conducted by the National Museum of Korea, the Central Museum of Kangwon National University, Hallym University Museum, and some independent researchers until 2009. Large-scale excavations started after 2010 in connection with national projects. Among them, the construction site of Legoland Korea was excavated from 2013 to 2017, with 2,205 Bronze Age sites being investigated, including 1,273 dwelling sites and 150 tombs.

This investigation revealed aspects of the features and artifacts of the Jungdo Bronze Age site. It yielded excellent findings that can be used to verify existing research results and conduct future research concerning the material culture and chronology of the Bronze Age on the west side of Gangwon Province and South Korea in general beyond Jungdo and the Chuncheon

Basin in the future. These features include the largest Bronze Age square-ditched enclosure in South Korea, networks of ditches subject to a debate over whether or not they are cultivation features, various types of housing clusters from the initial to late phases, dwelling sites and dolmens, bronze tools such as lute-shaped bronze daggers in a specific style with a clear temporality that can verify the current chronological views, and housing clusters and some dolmens contained in a clearly defined layer.

After briefly introducing the research process and achievements at the Jungdo Bronze Age sites, the main results of the excavation of the construction site for Legoland Korea and the primary interpretations of the joint investigation team were reviewed and evaluated. Next, existing important studies related to the Bronze Age culture of the Chuncheon Basin, including the Jungdo Bronze Age site, were introduced and reviewed. Based on this, suggestions for future research were presented. Although not discussed in detail here, various natural scientific analyzes were also conducted during the survey of the construction site for Legoland Korea. It is expected that advanced new results will come out in conjunction with future archaeological investigations.

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