

Restoration of Shipboard Life in the Goryeo Period

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ABSTRACT

This study aims at understanding the characteristics of an ancient ship as a residence that moves independently, and preparing basic data for life on ship accordingly. First of all, the excavation location of daily artifacts on ships were classified and reviewed according to Goryeo shipwrecks recovered with shipboard artifacts. As a result, the composition of artifacts in the bottom center space identical to the views of previous studies was confirmed. However, there were ships with uncertain remaining conditions and records, and in the case of some artifacts such as combs, the location is sporadic and there are few cases, so it is difficult to determine the location of the excavation. Daily artifacts on ships show a high proportion of batch artifacts, but there is a limitation in that the absolute number of artifacts in the water is limited. Therefore, in addition to conducting a comparative study, we tried to prepare a basis for the composition of space and artifacts. As for the basis of the living space on ships, a comparison was made between Joseon Dynasty and modern ships. The basis for the composition of artifacts in the space in the center of the ship bottom was sought through comparison of land artifacts of the same period. As a result of comparison with later ships, it seems that until the extinction of modern ships, the space in the center of the bottom was located in the third compartment based on the bow. However, we cannot know the exact time, but when it comes to modern ships after Mado no. 4, there is a difference in that the center space of the ship is changed from the front of the mast to its back. As a result of the comparison to the selected cooking space of daily remains on land, there were fewer distinct examples of artifacts in the cooking area of land living remains than underwater remains. We indicate the importance of a linked study rather than an isolated study of the land and underwater artifacts.

Keywords: underwater archeology, ships of era, life on ships, comparative research

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INTRODUCTION

An ancient ship has the characteristics of a place of limited activity and residence that moves independently, and provides a lot of information on the relevant underwater artifacts, such as the ship's production place, arrival and departure points, and living area. The importance of comparison study with the land artifacts of the same era has already been emphasized in past studies (Ju 2013, 419; Bowens 2009, 27), but in Korea, related research has not progressed due to the lack of excavation materials. Both land and underwater excavation are increasing, remains of the latter of which are small in number compared to the former, but they are in relatively good condition. In addition, daily artifacts on ships, which are distinct from cargo, show essential material and cultural elements of the narrow space in the ship that sailors occupied for a short period of time in the past, and there is a need for research on the restoration of life on ships.

Major research on domestic underwater excavation mainly focuses on history of ship, ceramic, and maritime exchange. On the other hand, there is relatively little interest in research related to shipboard life. Recently, some studies on daily artifacts on ships, including those from sunken ships, have been conducted (Moon 2017; Lee 2021). In addition, as the daily artifacts of the Goryeo Dynasty were classified in various ways according to their function and material, such as metal, ceramic, and wood, chronological and analytical studies of individual artifacts have also been conducted.

THE REVIEW OF SHIPBOARD DAILY ARTIFACTS OF THE GORYEO DYNASTY



Figure 1. Current state of underwater excavations in Korea

It is known that underwater artifacts including shipwrecks are in good condition as the air is blocked by mud and seawater. However, the remaining states of shipwrecks and artifacts are affected by environmental factors such as the angle of the hull, pests, and corrosion. For this reason, the remaining state of ancient ships and artifacts is different for each site. However, as the space in the middle of the hull and the central part of the hull was used as a storage space and cooking space for daily artifacts on ships during the Goryeo Dynasty. Fortunately, there are relatively many cases in which daily artifacts on ships remain. This chapter examines the current status of ships and daily artifacts on ships during the Goryeo Dynasty, and reviews the work log of the overall report and the records of the location of artifacts by area are reviewed in order to identify the context of the excavation of daily artifacts on ships, and to present the composition of collective daily artifacts on ships.

The review indicated there were various cases such as recording method for each excavation report, the location of unrecorded artifacts, and the deviation from the original location of the artifacts according to the remaining hull. However, as shown in Figure 2, the shipboard daily artifacts showed the same composition in the center compartment of the hull, located in the third compartment from the bow.

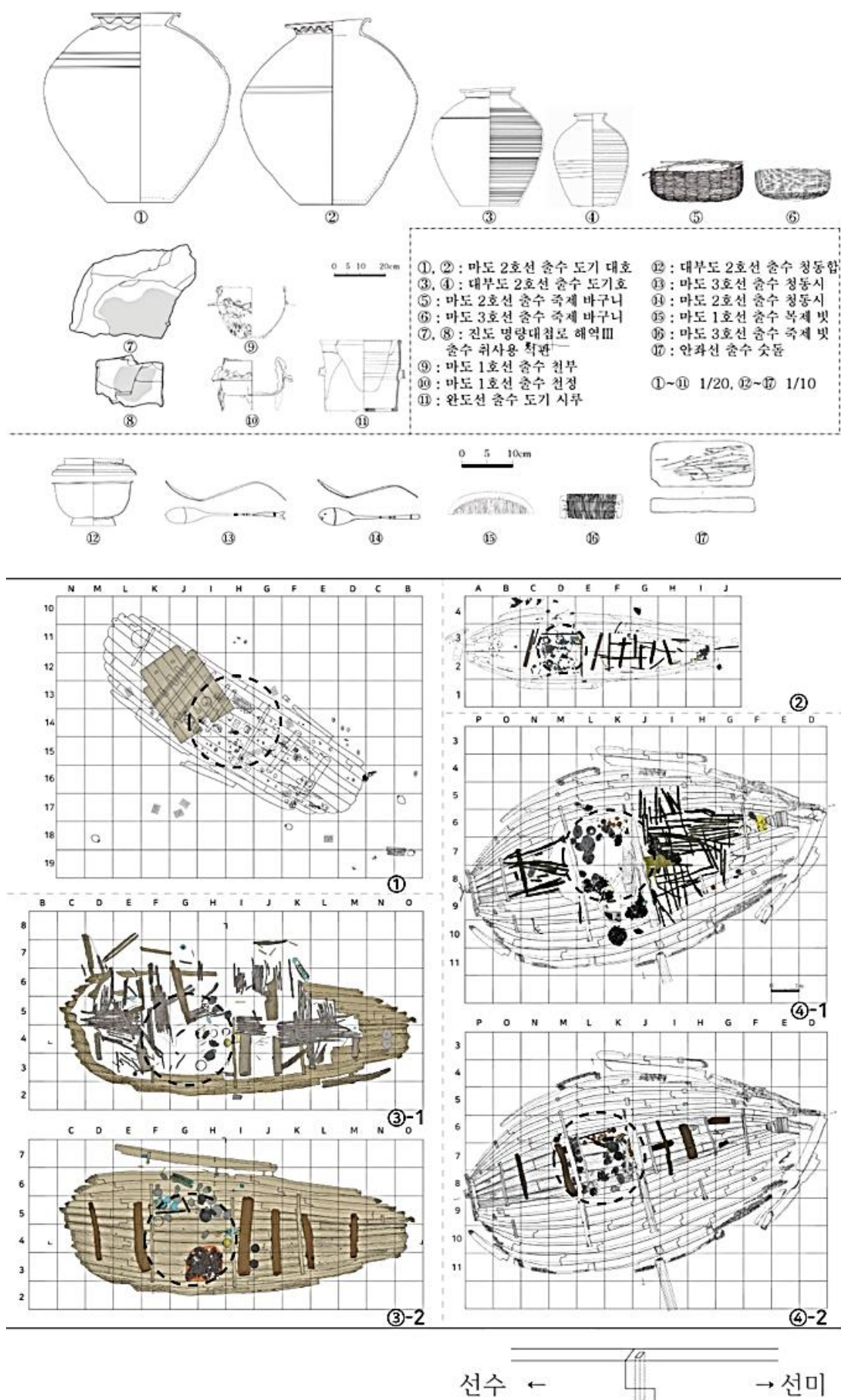


Figure 2. Floor plan of shipwreck and composition of artifacts of shipboard life

Shipboard daily artifacts consist of an iron part, an iron bowl, and an iron steamer for cooking, one or two pieces of pottery with a capacity of 100 L or more for storing drinking water, a jar, a bamboo basket that are situated at the middle of bottom of the ship. Except for them, a bronze spoon, a comb, and a whetstone were recovered. The large pottery pot is presumed to have stored only drinking water, unlike the land one. *Hyunhwasa Goryogojeon*, a memoir of Goryeo's record of personal experience by Seo Kyung, specifically mentioned the supply of potable water to the port of calls, and material, capacity, and name of a large pottery pot. Bongrae no. 3 shipwreck shows same recovery contexts with those of Mado no. 4 in Joseon Dynasty. Pottery is easy to manufacture in large sizes and is light compared to its size, making it suitable for storing and transporting drinking water for ships (Han 2014, 228), and various types of a large pottery pot show a certain capacity, which is closely related to Yangje of the Goryeo Dynasty. (Han 2012, 71). In addition, there is a need to conduct research on comparative study on the drinking water storage method of foreign ships and an review of previous studies on the amount of drinking water and the number of people on a ship, as the limited drinking water capacity on a ship has a mutual relationship with the number of people on a ship, the voyage period, and the port of calls.

In the meantime, artifacts that are relatively small in size and light in weight, such as combs, bronze spoon, bronze chopsticks, and wooden tools, have a high loss rate and sporadic cases. Daily artifacts on a ship include various artifacts, such as wooden hammers, ropes, handle of an adze, and pottery handles, but the number is limited and the excavation locations are scattered, making it difficult to estimate the existing location. Wooden comb for sanitation (Eolraebit) and bamboo comb (Chambit) have been found on Daebudo no. 2, Mado no. 1, and Mado no. 3 shipwrecks, but the number of artifacts is also small and the excavation location of each artifacts is different. Lastly, as artifacts related to play, chess pieces were found in Mado no. 3 and wooden chess pieces were found in Sinan shipwreck. The context of all excavations is uncertain.

RESTORATION OF SHIPBOARD LIFE THROUGH COMPARATIVE STUDY

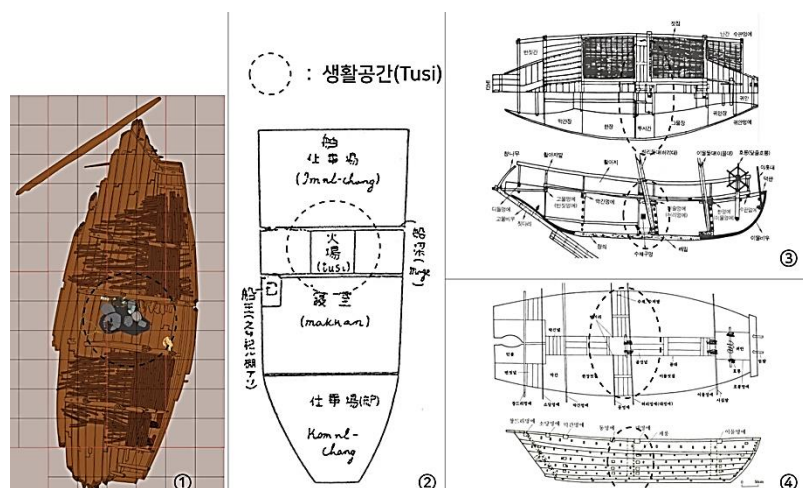


Figure 3. Living space on wooden ships of the Joseon Dynasty and modern times

1: 3rd exposed surface of a Mado no. 4 (1417-1425), 2: Yeonggwang nonpowered ship

3: Jindo Gwanmaedo ship, 4: Sinan Gageo Island Ship

Comparative review of living spaces of a wooden ship in the Joseon Dynasty and modern times

The utilization of the space in the center of the bottom of the ship of the Goryeo Dynasty, as examined above, is also seen in the Mado no. 4 shipwreck in the Joseon Dynasty (Figure 3). The location and name of the central space of the ship bottom is also found in the modern wooden ship. The second picture of Figure 3 is the general layout of the non-powered ship of Sangnakwol Island in Yeonggwang, which was surveyed in 1936 by Saptakgyeongsam. Even though the nature is different from that of a cargo ship, but the name and location of the cooking space is referred to. The name of the cooking room of a non-powered ship was marked as fire field (Tusi). The location of the cooking room is the same as that of the ship examined above, as the third compartment based on the bow, but it is located behind the

mast. The third picture of Figure 3 is also a ship surveyed in the 1920s during the Japanese colonial period, and is a general layout and central section of a ship in Gwanmae Island of Jindo. The fourth one in Figure 3 is the floor plan of the ship of Sinan Gageo Island, which was surveyed in 1996. The location of the compartment of Tusi in the ship is the same as the ships discussed above.

Some of the ancient ship data, literature records, and pictorial data of later ships examined so far have the meaning of comparative research as a basis for identifying that the location of the central space of the ship's bottom is the same as the central compartment from the early Goryeo Dynasty to the modern age until the disappearance of wooden ships. After the discovery of Mado no. 4 shipwreck, the location of the central space in the bottom of the ship is the same as being located in the third compartment, but in modern ships, there is a difference that it is changed not to the front of the existing mast, but to the back of it.

Comparative study of cooking space of land remains in the Goryeo Dynasty

Before the comparison of land and underwater remains, the similarities and differences between land and underwater remains are to be mentioned, and comparison objects are to be selected. Domestic ancient ships show the characteristics of short-term occupied residential area, the good remaining state of artifacts, and the consistent composition of artifacts, but there is a limit in that the absolute number of objects to be analyzed is small. On the other hand, the land remains provide the characteristics of relatively long-term occupied residential area, and a large amount of excavation data, but there is a limit in that it is not possible to see the composition of the state of remaining objects and artifacts in a not good condition, and composition of batch artifacts. These differences and similarities are determined to provide complementary grounds in terms of research on restoration of living between underwater and land remains of the same period.

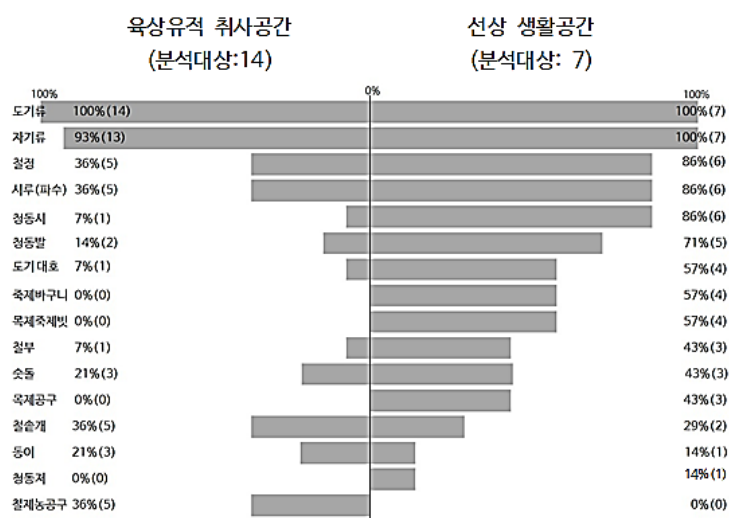


Figure 4. Comparative diagram of batch artifacts of land and underwater remains (left: cooking space of land remains (target: 14); right: living space on ships (target: 7))

The selection method of comparison target is as follows. First of all, about 570 residential areas and pit dwellings were examined for 125 living artifacts in Gyeonggi province, where relatively many remains of the Goryeo Dynasty are distributed. For selecting the remaining objects that have the nature of a cooking space, the remaining objects that have different possibilities in terms of the place that were originally used for reasons such as heating facilities, disposal, production, and exiting, were excluded from comparison. As a selection criterion for this, first, the remaining objects where cooking artifacts such as pottery steamers and iron pots have been reported, second, traces of cooking spaces such as sintering marks, furnaces, and stoves were reported, and finally, the remaining objects with good location records of excavated artifacts were selected for comparison as much as possible.

The results are displayed in Figure 4. The high proportions of batch artifacts in underwater remains with

few objects can be seen as a direct basis for the composition of artifacts related to life at the time. In particular, the fact that there is a high proportion of bamboo baskets, which are rarely excavated, as well as bronze bowl, combs, and bronze spoons and chopsticks, which are mainly excavated from tomb burial items, are found in underwater remains, suggest the need for a linked study of land and underwater remains. However, there are not many excavation data for underwater remains, and there are limitations due to differences in the remaining state of the hull, the size of the hull, and the recording method at the time of the excavation.

In the meantime, in the case of a large pottery pot presented in this study, there is a big difference in the proportions between land and underwater remains. This is due to the fact that it is not that the space in the central space of the bottom of the ship have only the characteristics of a storage space for cooking artifacts. As described in previous chapter, the large pottery pot for storage and transportation on a ship has a different function from the large pottery pot of land artifacts, which stored grains and fruits, as it had potable water in it. In addition, as the location of a large pottery pot of the land remains is separated from the cooking area, there is a need to conduct independent research on potable water for ships and a large pottery pot.

CONCLUSIONS

The overall context of the excavation of daily artifacts from the Goryeo Dynasty was reviewed according to the characteristics of the floor, plane, and internal space of the hull. The examination found the consistent location and composition of certain artifacts in the central space of the bottom of the ship, the third compartment, which is in line with the opinions of the existing studies and reports. The artifacts in the central space of the bottom of the ship consist of artifacts for cooking, such as iron hatchets, iron wells, iron bowls, steamers, cooking slabs, bronze spoons, bronze chopsticks, bronze bowls, and whetstones, as well as artifacts for storage and transportation, such as bamboo baskets, a large pottery pot, and a pottery pot. In the meantime, in the case of a large pottery pot, there are cases where it is located in the 6th compartment of the stern like Daebudo no. 2 shipwreck, but it is mostly concentrated in the 3rd compartment, the central space of the bottom of the ship. Relatively light artifacts in a small quantity such as combs and wooden tools are sometimes located in the central space of the ship bottom, but there are few cases and they have sporadic excavation locations.

The comparison of ships in later age found that there was no big difference in the space in the center of the bottom of Mado no. 4 and the drawings of modern ships. In particular, even in modern ships, it seems that the living space on ships are also located in the third compartment. Although it is still difficult to determine the changes in the space in the center of the bottom of the ship within a wide period, it was found that the location of the space in the center of the ship's bottom continued to be the third compartment from the Goryeo Dynasty to the point of extinction of wooden ships. However, the bottom center space is maintained as the third compartment, but the central space of the bottom of the ship is located in front of the mast until Mado no. 4 and then moves to the back of the mast.

The comparison between the underwater remains and land remains of the same period found that there was a big difference in the composition proportion of the artifacts including iron hatchets, iron wells, and pottery steamer found in the underwater artifacts. Even though the number of life artifacts on ships is small, they show a continuous composition of artifacts and provide complementary grounds with land remains related to studies on life at the time. This shows the need for connected study rather than a disconnected study of both terrestrial and underwater remains. We aim to unify underwater remains with land remains of the same period.

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