

Ancient Seascape of Japan: Burial Mounds as Navigation Points

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ABSTRACT

Research of landscape using GIS is progressing in archaeology in recent years, and the significance of the research of landscape from the sea or seascape is also being stressed. Seascape research has important implications for understanding how people perceive the sea and adapt to the sea environment and may contribute to the development of maritime archaeology. This study applies landscape research to Japanese archeology, so it fit in the session of ‘History and Current Trends of Underwater Archaeology around East Asia’. This paper examines the sea scape of the Kofun period, from the third to sixth centuries, from the viewpoint of the location of the burial mounds and shows the possibility that some burial mounds were built as navigation points. GIS analysis and field surveys were conducted to investigate how the burial mounds located near the coast look from the sea and indicate that the burial mounds with good visibility from the sea were located at strategic points of marine routes, such as lagoons and straits. The survey also revealed that the most of these burial mounds were built in the specific period from the first to third quarters in the fourth century. This paper proposes that these burial mounds were built as navigation points to reflect the intention of the Yamato dynasty to control maritime traffics.

List of Figures and Table:

Figure 1: Map of Research Area and Locations of the Sites

Figure 2: Photo of the Goshikizuka Burial Mound (<https://www.feel-kobe.jp/>); Topographic Map around Goshikizuka; Seascape around Goshikizuka

Figure 3: Topographic Map around Yanai Chausuyama; Seascape around Yanai Chausuyama

Figure 4: Topographic Map around Shinmeiyama; Seascape around Shinmeiyama

Figure 5: Topographic Map around Amino Choshiyama; Seascape around Amino Choshiyama

Table 1: A Chronology of the Kofun Period

INTRODUCTION

The Kofun period in Japanese history, spanning from the 3rd to 6th centuries, is characterized by the construction of tens of thousands of burial mounds throughout the Japanese archipelago. These burial mounds, known as Kofun, were monumental structures, with the most distinctive type being the keyhole-shaped plan view; the largest exceeds 500 meters in length. These colossal mounds served as symbols of power and were erected to commemorate kings and chiefs.

The burial mounds were built in various locations, including hills, ridges, plains, and coasts. The coastal burial mounds, referred to as ‘seashore type burial mounds’, are believed to have been constructed by chiefs who were involved in maritime activities and trade (Hirose 2015). Others suggest the burial mounds served as navigation markers for seafarers (Mori 1986). Despite their historical significance, few studies have explored how these burial mounds appeared from a maritime perspective (Ishimura 2017).

In this paper, GIS software is utilized to visualize the view of these burial mounds from the sea. The research reveals that the burial mounds were strategically situated at key points along maritime routes, such as ports and straits. Furthermore, the study indicates that these burial mounds were constructed within a relatively specific timeframe, from the first to the third quarter of the 4th century.

The author proposes the construction of these burial mounds coincided with a historical event, namely the expansion of political power in the Kinai region and the exertion of control over maritime traffic in the Japanese archipelago.

Method and Materials

In this study, the researchers utilized GIS software called 'Kashimir 3D®' to recreate the visual representation of how the burial mounds appeared from the sea. This particular GIS software is capable of generating 3D landscapes from any chosen viewpoint and altitude. To simulate the view from the sea, the researchers set the altitude to 1 meter, taking into account the likely low height of the viewpoint from a boat during the Kofun period.

The analysis focused on four specific sites of 'seashore type burial mounds': the Goshikizuka burial mound in Hyogo Prefecture, the Yanai Chausuyama burial mound in Yamaguchi Prefecture, the Shinmeiyama burial mound in Kyoto Prefecture, and the Amino Choshiyama burial mound, also located in Kyoto Prefecture (Figure 1). The first two sites are situated near waterways, while the latter two are near ports.



Figure 1: Map of Research Area and Locations of the Sites

In this paper, the Kofun period was divided into four distinct phases based on variations in burial structures and diagnostic burial goods. The four phases are: the first half of the Early Kofun period (approximately AD 250-300), the latter half of the Early Kofun period (approximately AD 300-375), the Middle Kofun period (AD 375-475), and the Later Kofun period (AD 475-575). Table 1 likely provides further details on the distinguishing features of each phase and the associated burial practices and artefacts.

Table 1: A Chronology of the Kofun Period

Phase	Date	Burial facility	Diagnostic burial goods
Early KofunPeriod (first half of)	AD 250-300	Vertical stone chamber with wooden coffin	Chinese bronze mirrors
Early KofunPeriod (latter half of)	AD 300-375	Vertical stone chamber with wooden coffin	Variety of Japanese bronze mirrors
Middle Kofun Period	AD 375-475	Vertical stone chamber with stone coffin	Iron armors
Later Kofun Period	AD 475-575	Horizontal stone chamber with stone coffin	Decorated swords

CASE STUDY 1: Goshikizuka Burial Mound

The Goshikizuka burial mound, which has a keyhole-shaped plan view and measures 194 meters in length (Figure 2), is believed to have been constructed during the latter half of the Early Kofun period (around AD 300-375).

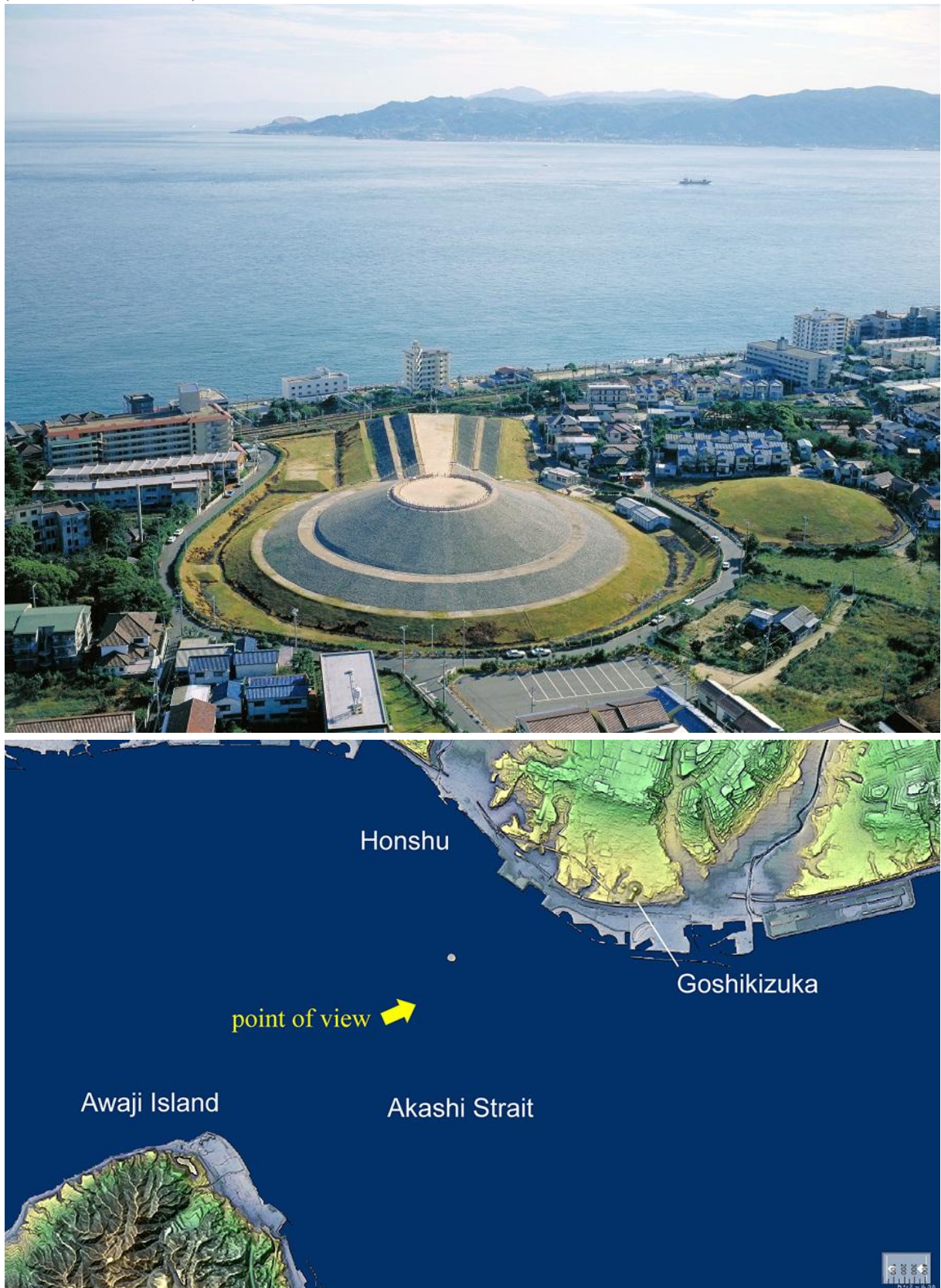


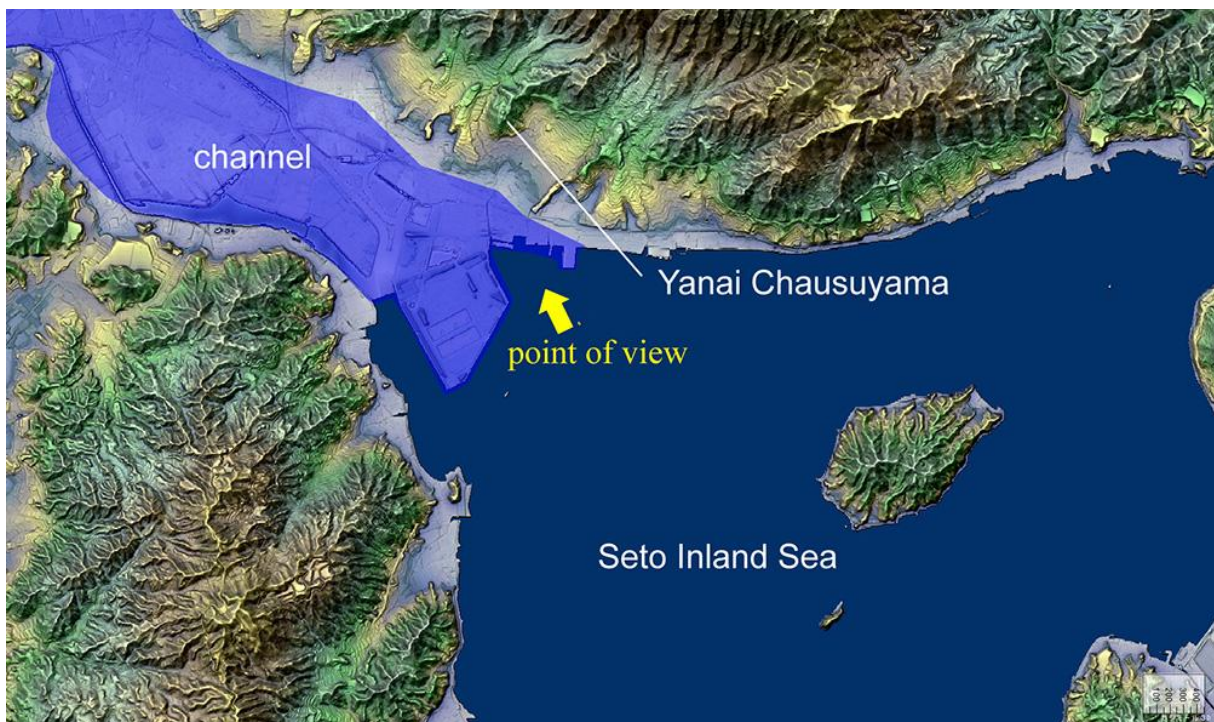


Figure 2: Photo of the Goshikizuka Burial Mound (<https://www.feel-kobe.jp/>); Topographic Map around Goshikizuka; Seascape around Goshikizuka

It is situated along the coastline of Honshu, the main island of Japan, overlooking the Akashi Strait (Figure 2). The location of the Goshikizuka burial mound offers a clear view from the sea (Figure 2). The Akashi Strait serves as the gateway to Osaka Bay and is known for its turbulent waters and swift currents within the Seto Inland Sea. The positioning of the Goshikizuka burial mound holds significant strategic importance along the maritime route of the Seto Inland Sea.

CASE STUDY 2: Yanai Chausuyama Burial Mound

The Yanai Chausuyama burial mound is another keyhole-shaped mound, measuring 80 meters in length. Its construction is estimated to have taken place during the latter half of the Early Kofun period (around AD 300-375).



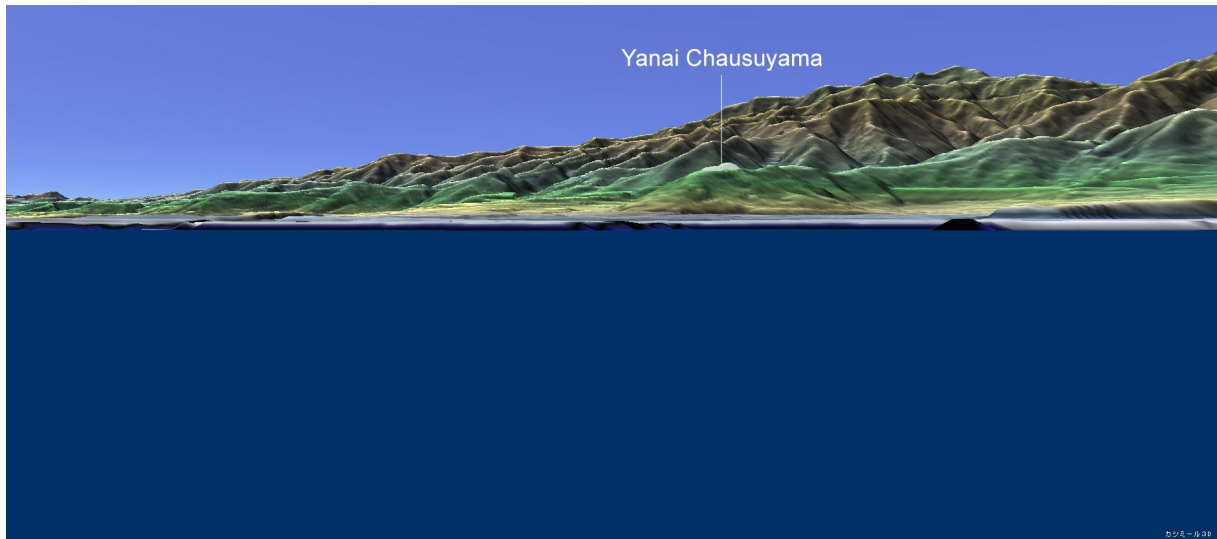


Figure 3: Topographic Map around Yanai Chausuyama; Seascape around Yanai Chausuyama

Situated near the entrance of a channel (Figure 3), this channel served as a shortcut for maritime traffic, allowing vessels to avoid circumnavigating the Murotsu peninsula. The channel held great significance as a crucial point along the maritime routes of the time. The Yanai Chausuyama burial mound is easily visible from the sea near the entrance of the channel (Figure 3).

CASE STUDY 3: Shinmeiyama Burial Mound

The Shinmeiyama burial mound is a keyhole-shaped mound measuring 190 meters in length. It is believed to have been constructed during the latter half of the Early Kofun period, around AD 300-375.

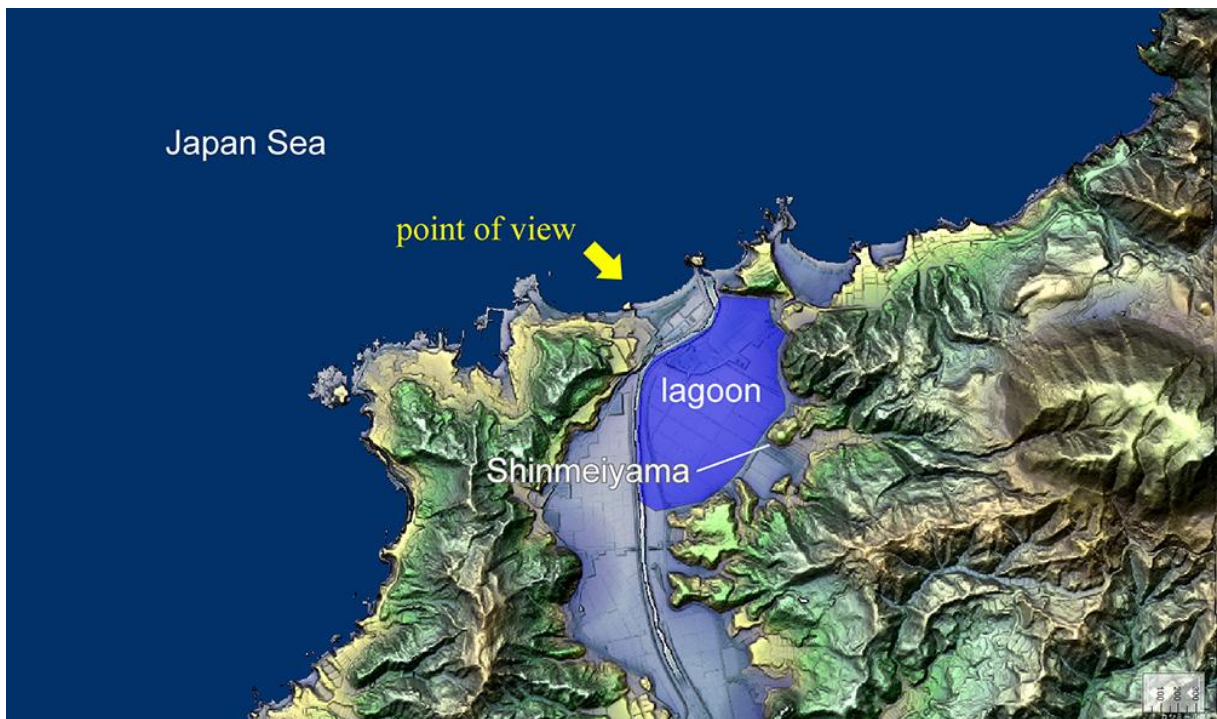




Figure 4: Topographic Map around Shinmeiyama; Seascape around Shinmeiyama

Situated near a lagoon (Figure 4), it is speculated that this lagoon served as a natural harbor in the past. The Shinmeiyama burial mound, being easily visible from offshore (Figure 4), is thought to have served as a navigational landmark, indicating the position of the port.

CASE STUDY 4: Amino Choshiyama burial mound

The Amino Choshiyama burial mound is a keyhole-shaped mound measuring 201 meters in length. It is believed to have been constructed during the latter half of the Early Kofun period, around AD 300-375.



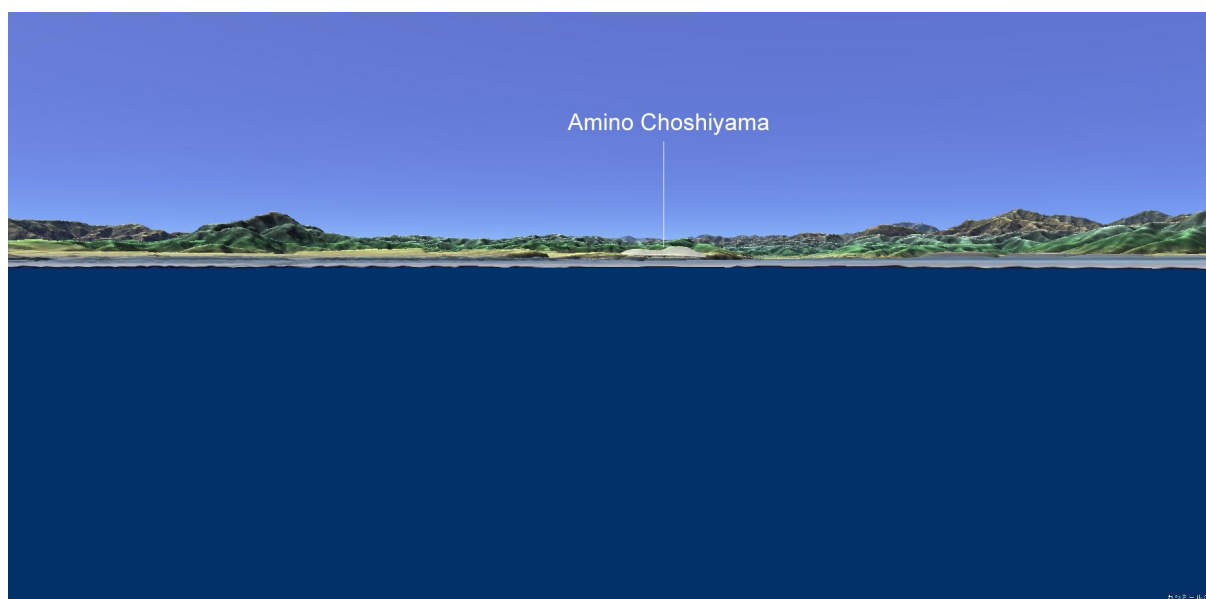


Figure 5: Topographic Map around Amino Choshiyama; Seascape around Amino Choshiyama

Situated near a lagoon (Figure 5), it is believed that this lagoon also served as a natural harbor, similar to the Shinmeiyama mound. The Amino Choshiyama mound is easily visible from offshore (Figure 5). This suggests that it, too, served as a navigational marker, indicating the position of the nearby port.

RESULT

Based on the four case studies presented, several outcomes can be observed. Firstly, the seashore type burial mounds were clearly visible from the sea. Secondly, these burial mounds were located at significant points along sea routes, including waterways, ports, and entrances to channels. Thirdly, it is likely that these burial mounds served as navigational landmarks. Lastly, all four burial mounds were constructed during the latter half of the Early Kofun Period (AD 300-375).

These outcomes collectively suggest the presence of a common factor behind the construction of these seashore type burial mounds. It is plausible to consider that the construction of these burial mounds was influenced by the political situation of the time. As monuments symbolizing the power and authority of chiefs, these burial mounds can be seen as political products.

DISCUSSION

The period when the seashore type burial mounds were constructed coincided with significant changes in maritime traffic, particularly the alteration of the route from the Japanese archipelago to the Korean Peninsula. The emergence of rituals on Okinoshima during this period provides valuable insights into these changes. Okinoshima, situated between Kyushu Island and the Korean Peninsula, was the site of ceremonies conducted from the latter half of the 4th century to the end of the 9th century. These rituals aimed to ensure safe voyages and involved the dedication of Chinese bronze mirrors and various treasures to the island's rocks and rock shelters. These artifacts resemble burial goods found in tombs and were primarily distributed in the Kinai region, the political center of that era. Based on this evidence, it is believed that the rituals on Okinoshima were led by an elite group from the Kinai region with the objective of establishing a new and more efficient route from the Japanese archipelago to the Korean Peninsula. The Okinoshima route offered a shortcut, compared to the previous island-hopping route via Iki Island and Tsushima Island.

It is postulated that the changes occurring during this period were instigated by the political powers in

the Kinai region, who sought to assert control over maritime routes. The construction of the seashore type burial mounds, as discussed in the paper, was likely undertaken by local chiefs with support from the Kinai powers. These burial mounds served to enhance and facilitate maritime routes within the Japanese archipelago. They not only acted as practical navigational markers but also visually demonstrated the control exerted over maritime traffic by the powers in the Kinai region.

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