

THE DISTRIBUTION OF TRIDACNA SHELL ADZES IN THE SOUTHERN RYUKYU ISLANDS

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INTRODUCTION

This report explains the distribution of *Tridacna* shell adzes found in the southern Ryukyu Islands of Miyako and Yaeyama. These adzes are considered to be one of the main features of Southern Ryukyu prehistoric culture; they are not found on the northern Ryukyu islands of Okinawa and Amami, or in mainland Japan. *Tridacna* adzes have a wide, well known distribution in the South Pacific, including Palawan and Tawi Tawi in the Philippines. Are the southern Ryukyu adzes related to them? This paper provides comparative data for such studies.

OVERVIEW OF RYUKYU ISLANDS PREHISTORY

The Ryukyus lie in an arc between Taiwan and Kyushu, to the southwest of the main islands of Japan. Southern geographic divisions are shown in Fig. 1. The prehistory of the area can be divided into two culture areas: the north, including Amami and Okinawa, and the south, comprising Miyako and Yaeyama. The North Ryukyu Culture Area was settled by people from the main Japanese islands during the Jomon Period, and cultural contact was maintained until the Yayoi Period. Contact declined after that period. Hunting and gathering persisted until the 11th century AD.

The South Ryukyu Culture Area has yielded no human fossils or artifacts accepted as of Palaeolithic Age. Human bones have been found at Pinzaabu Cave, Miyako Island, but they are not accepted as Palaeolithic. The Neolithic culture here has no relation to the cultures of the northern Ryukyus or the Japanese main islands. More than 3000 years ago, people occupied low hills near the coast, living on fish and shellfish taken from adjacent coral reefs. They used many edge-ground adzes and made pottery of the Shimotabaru Type, pendants or weapons of perforated shark teeth, and tools from the sharpened projections of the *Chiragra* spider conch. By about 2500 BP they moved to coastal sand dunes, this settlement change marking the division between the Early and Late Periods.

Shellmounds deposited in vast areas indicate that they had further developed their utilization of lagoon food resources.

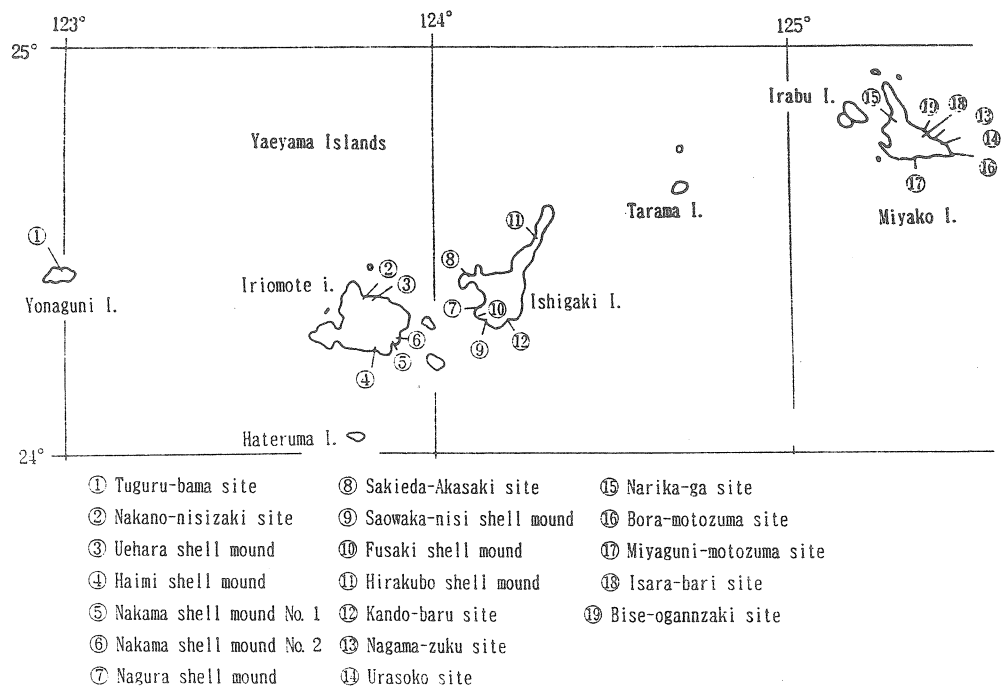


FIGURE 1: SITES WITH SHELL ADZES IN THE SOUTH RYUKYU ISLANDS

They also abandoned the use of pottery, changing to a cooking method of steaming with heated stones. Burned pebbles are found in heaps in the sites. The edge-ground adzes persist, but are slightly larger with larger polished bit areas. Shark tooth and *Chiragra* spider conch tools were also used in the Late Period.

Tridacna shell adzes, the topic of this report, are also found. They seem to have been used from 2500 to 1500 years ago. At present, Early Period sites exist only in the Yaeyama Islands, while Late Period sites are found both in Miyako and Yaeyama. Most of the sites belong to the Late Period. Major sites yielding *Tridacna* adzes are described below. The adzes are illustrated in Figs 2-4.

YAEYAMA ISLANDS

A. Yonaguni Island. This island is the southernmost part of Japan today, and from it Taiwan is visible in clear weather. The mountains, mostly of sandstone, are not high but are rugged, and plains are limited. Proximity to the Black Current produces abundant swordfish, tuna, and bonito.

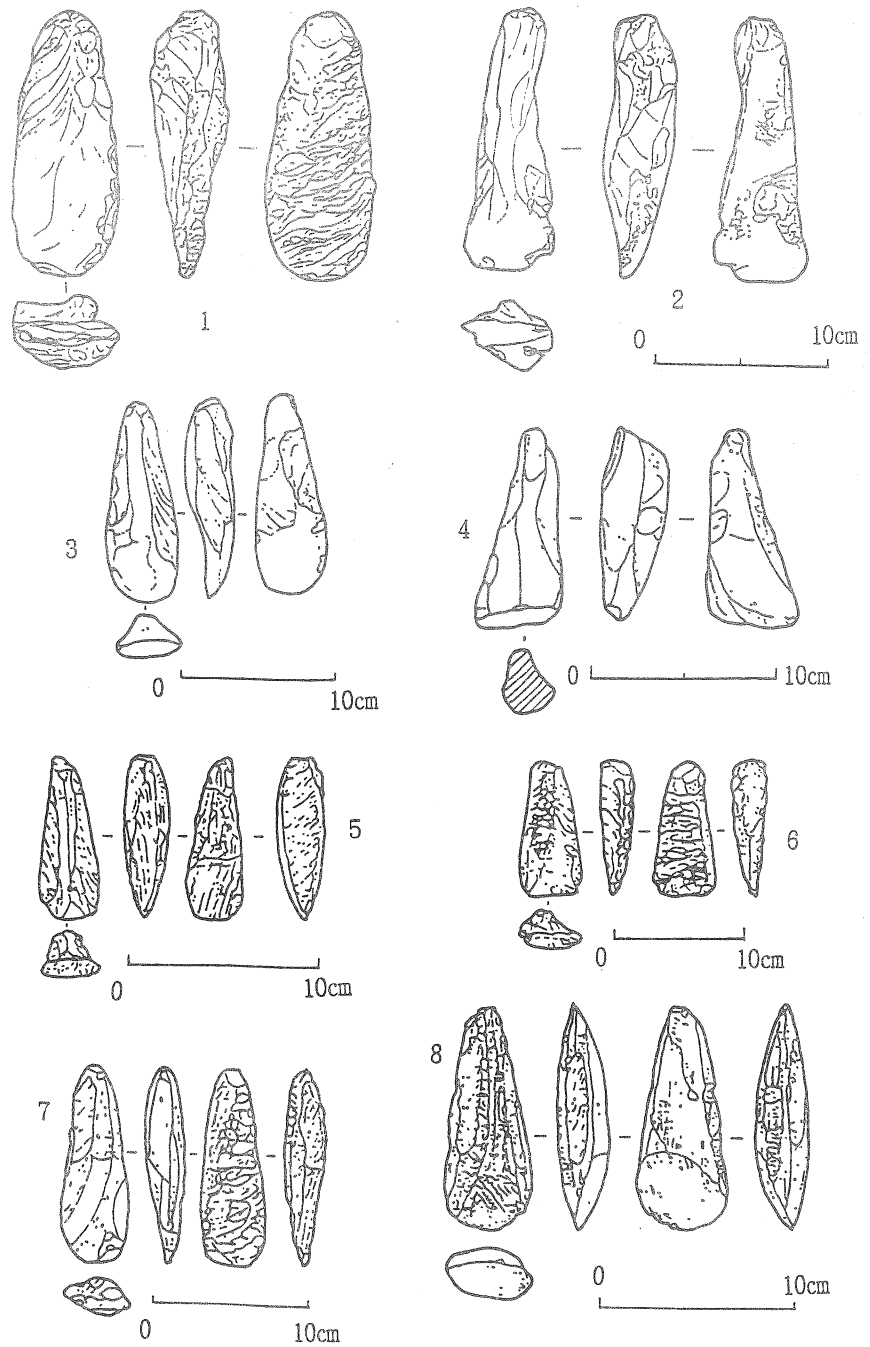


FIGURE 2: TRIDACNA ADZES FROM THE ISLANDS OF YONAGUNI, IRIOMOTE AND ISHIGAKI

1. The Tugurubama site. This site is located on the northern coast on a limestone terrace 6 to 8 meters above sea level. A sand dune is located nearby. The site yielded many stone adzes, plus perforated shark teeth and scrapers fashioned from chipping the operculum of the large *Turbo marmoratus*. One shell adze, fashioned from the hinge and clearly recognizable despite the lack of the blade portion, was found on the surface of the site.

B. Iriomote Island. This island is the largest of the Yaeyama group and second largest in all of the Ryukyus. From it, all the islands of Yaeyama are visible. Most of the mountains are 200 to 300 meters in height, and are jungle covered. Rivers with mangrove swamps at the mouths are common. Prehistoric sites are found in sand dunes along the coast and on low terraces. Shell adzes have been found in sand dune midden sites.

1. Nakanonisizaki Shellmound. Located on the north coast, this non-ceramic site yielded 10 *Tridacna* adze fragments, all fashioned from the hinge.
2. Uehara Shellmound. A non-ceramic sand dune site on the north coast, yielding 3 *Tridacna* adze fragments made from the hinge.
3. Haimi Shellmound. A southern coastal sand dune shell mound yielding polished stone adzes and a fragment of a *Tridacna* hinge adze. A shell adze probably from this site was found in nearby Haimi Cave.
4. Nakama Shellmound No. 1. This site is a thick, non-ceramic shellmound on the southeastern coast at the mouth of the Nakama River. It yielded many edge-ground stone adzes. Many burnt pebbles were uncovered. One *Tridacna* hinge adze was found.
5. Nakama Shellmound No. 2. On the northeastern side of Nakama Shellmound No. 1, this site is situated on a layer of red soil on a low limestone terrace. One *Tridacna* hinge adze was recovered from the surface. The site belongs to the Yaeyama Early Period in which the oldest pottery in Yaeyama, the Shimotabaru Type, is found. The adze is the only specimen to come from an Early Period site.

C. Ishigaki Island. This island has the second largest area and the largest population in Yaeyama. A mountain runs from the center to the west side, while a limestone terrace extends to the east side, supporting many fields and villages. The island is surrounded with coral reefs. Shallow lagoons exist extensively between the shore and the coral reefs. There are many sand dunes along the coast.

1. Nagura Shellmound Group. Situated on a large flat sand dune at the mouth of the Nagura River on the western coast, this group of sites has several locations. No pottery has been recovered. There are abundant burned pebbles. Many stone adzes, including those with edge grinding, have been found. The site is famous for the number of *Tridacna* adzes recovered. The total is said to be over 60, although many have not

been published. With only one exception they are all made from the hinge. This exception is nevertheless from a position close to the hinge.

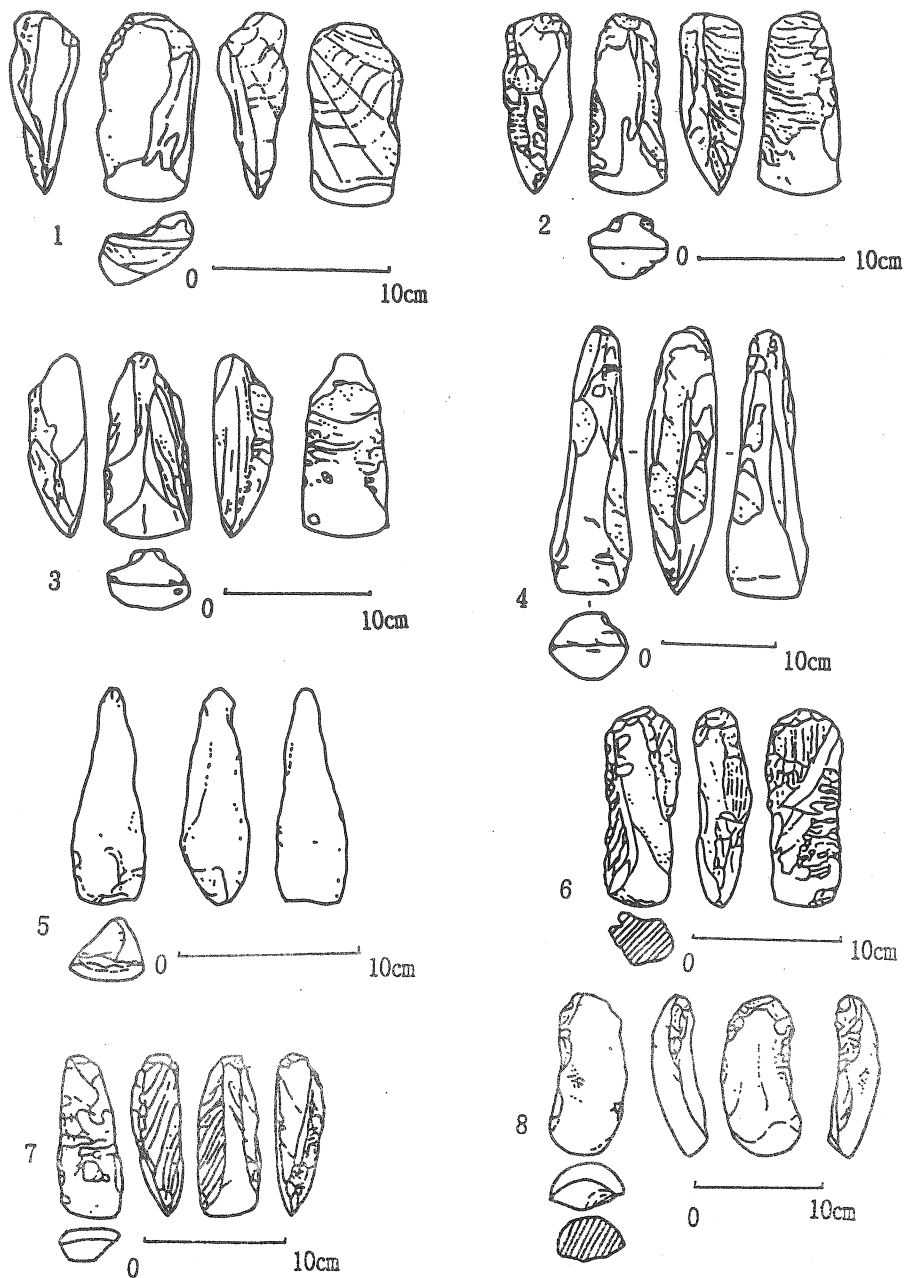


FIGURE 3: TRIDACNA ADZES FROM MIYAKO

2. Sakieda Akasaki site. A non-ceramic shellmound in a dune on Nagura Bay, west coast. Two *Tridacna* hinge adzes were recovered. Coins from the Chinese Tang Dynasty (AD 618-907) found in association with the shell adzes and stone tools give an absolute date for the Late Period.
3. Fusaki Shellmound. A non-ceramic south coast shellmound which yielded one *Tridacna* hinge adze.
4. Saowakanisi Shellmound. A non-ceramic south coast sand dune site which yielded one *Tridacna* hinge adze.
5. Hirakubo Shellmound. A Late Period, non-ceramic coastal shell mound on the Hirakubo Peninsula. One *Tridacna* hinge adze was recovered.
6. Kandobaru Shellmound. A southeastern coastal site dating to the 15th to 18th centuries AD. A shellmound appears to be in association with the site. One *Tridacna* hinge adze was recovered.
7. Other *Tridacna* hinge adzes have been found but have not been published, or have disappeared.

MIYAKO ISLANDS

These islands, in the northern part of the southern Ryukyus, are all composed of raised limestone terraces. There are no mountains. Extensive shallow lagoons are created by an offlying reef and the coastal flat is wide, with many long sand dunes. Most sites date to after the 14th century, leading to the belief that the islands were populated only in the 14th century or later. Only 3 prehistoric sites, found 8 years ago, are known. One of these, the Urasoko site, yielded many shell adzes. This site has attracted the attention of archaeologists to the island's prehistory.

A. Miyako Island. Only the main island of Miyako has yielded *Tridacna* adzes. The sites all belong to the Late Period. No sites of the Early period have been found on the island.

1. Nagamazuku site. Situated on a sand dune on a bay on the east coast, this site is an extensive non-ceramic shellmound. It yielded stone adzes, some of which were edge-ground, and a large quantity of burned pebbles. Eleven *Tridacna* adzes were found, nine made on the hinge, and one fashioned from the shell rib, slightly gouge shaped. One remaining shell adze is of a small completely polished type - the part of the shell is unidentifiable.
2. Urasoko site. This site is on a long wide sand dune on a bay near the Nagamazuku site on the east coast. Excavation was carried out from 1987 to 1988. The site belongs to the Late Period and has yielded 5 radiocarbon dates¹. Only two stone adzes, of exotic materials, possibly from Ishigaki Island, were found. A considerable number of earth ovens with heaps of burned coral were found. They indicate cooking by heating rocks

COMPARISON WITH THE SHELL ADZES OF MICRONESIA AND THE PHILIPPINES

In the southern Ryukyu Islands there are no shell adzes made by cutting small shells diagonally, of the type widely found in Micronesia. On the other hand, in the Philippines there are some *Tridacna* adzes made of the hinge and also the rib. In view of this, the shell adzes of the southern Ryukyus share strong similarities with those of the Philippines.

As pointed out at the outset of this report, the prehistoric culture of the southern Ryukyus is considered distinct from that of mainland Japan in regard to origin. It is said to have relations with areas in Southeast Asia. It is necessary to advance comparative studies of material culture such as shell adzes, stone tools and pottery of these areas to explain their cultural relationships.

FOOTNOTE

1	Layer III	1,880±75 B.P. N-5428 (charcoal)
		2,180±75 B.P. N-5430 (charcoal)
		2,200±75 B.P. N-5429 (charcoal)
	Layer IV	2,340±75 B.P. N-5432 (charcoal)
		2,520±80 B.P. N-5431 (charcoal)

These dates were measured by Nihon Isotope Kyokai, Tokyo.

SOURCES OF FIGURES

Fig. 2:1,2. *Nagura kaizuka gun hakkutsu chosa hokokusho* (Report on the Excavations of the Nagura Shellmound Group) (1985). Okinawa Ken Kyoiku Iinkai.

Fig. 2:3. *Ishigakijima no iseki* (Archaeological Sites of Ishigaki Island) (1979). Okinawa Ken Kyoiku Iinkai.

Fig. 2:4. *Toguruhama iseki* (The Toguruhama Site) (1985). Okinawa Ken Kyoiku Iinkai.

Fig. 2:5,6,7,8. Ari, Naoji (1981) Yaeyama Shoto hatsumei shakogai kaifu ni tsuite (Concerning the *Tridacna* shell adzes found in the Yaeyama Archipelago), In *Nagura kaizuka gun hakkutsu chosa hokokusho*. Okinawa Ken Kyoiku Iinkai.

Fig. 3:1,2,3. Shimoji, Kaoru (1981) Miyako Gusukube cho Boramotojima iseki oyobi Kaara kaizuka no shakogai kaifu ni tsuite (Concerning the *Tridacna* shell adzes from the Boramotojima (Kaara) Site, Miyako, Gusukube cho), In *Nagura kaizuka hakkutsu chosa hokokusho*. Okinawa Ken Kyoiku Iinkai.

Fig. 3:4. Shimoji, Kazuhiro 1981 Miyakojima Narikagaa iseki hatsumei no shako kaifu ni tsuite (Concerning the *Tridacna* shell adzes discovered in the Narikagaa site, Miyako Island). Okinawa Ken Kyoiku Iinkai.

Fig. 3:5. *Miyako no iseki* (The Archaeological Sites of Miyako). Okinawa Ken Kyoiku Iinkai.

Fig. 3:6,7. Oshiro, Kei 1981 Miyako, Miyakuni Motojima iseki hatsumei shakogai sei ono ni tsuite (Concerning the *Tridacna* shell adzes from the Miyakuni Motojima site). in *Nagura kaizuka hakkutsu chosa hokokusho*. Okinawa Ken Kyoiku Iinkai.

Fig. 3:8 Sunagawa, Kensei 1984 Hirara shi Bise Ogannzaki iseki hatsumei no kaifu (The shell adzes from the Ogannzaki site, Bise, Hirara City). In *Nagamazuku iseki*. Okinawa Ken Kyoiku Iinkai.

Fig. 4:1-11. *Nagamazuku Iseki (The Nagamazuku Site) (1984)*. Okinawa Ken Kyoiku Iinkai.