

Painted Barrel-Shaped Vessels of the Middle Jōmon Period

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SINCE the excavation of Idojiri and related sites in Nagano Prefecture in the years following 1960, much attention has been directed towards an unusual group of vessels whose distinctive features invariably embody collar ridges and perforations along their rims. Other features may include smooth surfaces covered with red paint, an occasional design painted in red or an anthropomorphic figure in relief, barrel-like shapes, or bodies built up in convex sections. The entire group is generally devoid of the customary cord-marking that characterizes most Jōmon pottery.

These pots are so distinctive, their traits so basically alien to our common concepts of Jōmon pottery—that is to say, traits without recognizable antecedents—that they prompt investigations into their origins and use, as well as into the causes for their ultimate disappearance.

These painted, barrel-shaped vessels belong primarily to the earlier half of the Middle Jōmon period. If we accept the handful of Middle Jōmon radiocarbon dates, we are dealing with material ranging from 3000 to 2500 B.C.

SITES

So far, we are uncertain in which site the type first appeared. In an article, "The Heart of the Katsusaka Culture Zone," Yawata deals with the Ōmiyama site in Nagano Prefecture, near the Yamanashi border, which he dug for several seasons (Yawata 1965) (see map, Fig. 1, site number 31; a site name identified on Fig. 1 is followed hereafter with a key number in parentheses). One gets the impression that the large yield from this site encouraged Yawata to look on it as a possible cradle of the type—and he believes the type is somehow connected with the rise of the Katsusaka culture—but he does not make such claims for it in specific terms. Ōmiyama is characteristic of the large community sites of this period, and one cannot discount the possibility that the earliest examples may have appeared in Ōmiyama.

Possibly the latest date for barrel-shaped pots in the Middle Jōmon period would be suggested by the finds at Kitano, Mitaka City (39) that I with others excavated. One small fragment of a rim with a pair of holes was brought to light just outside the pit of a house; and

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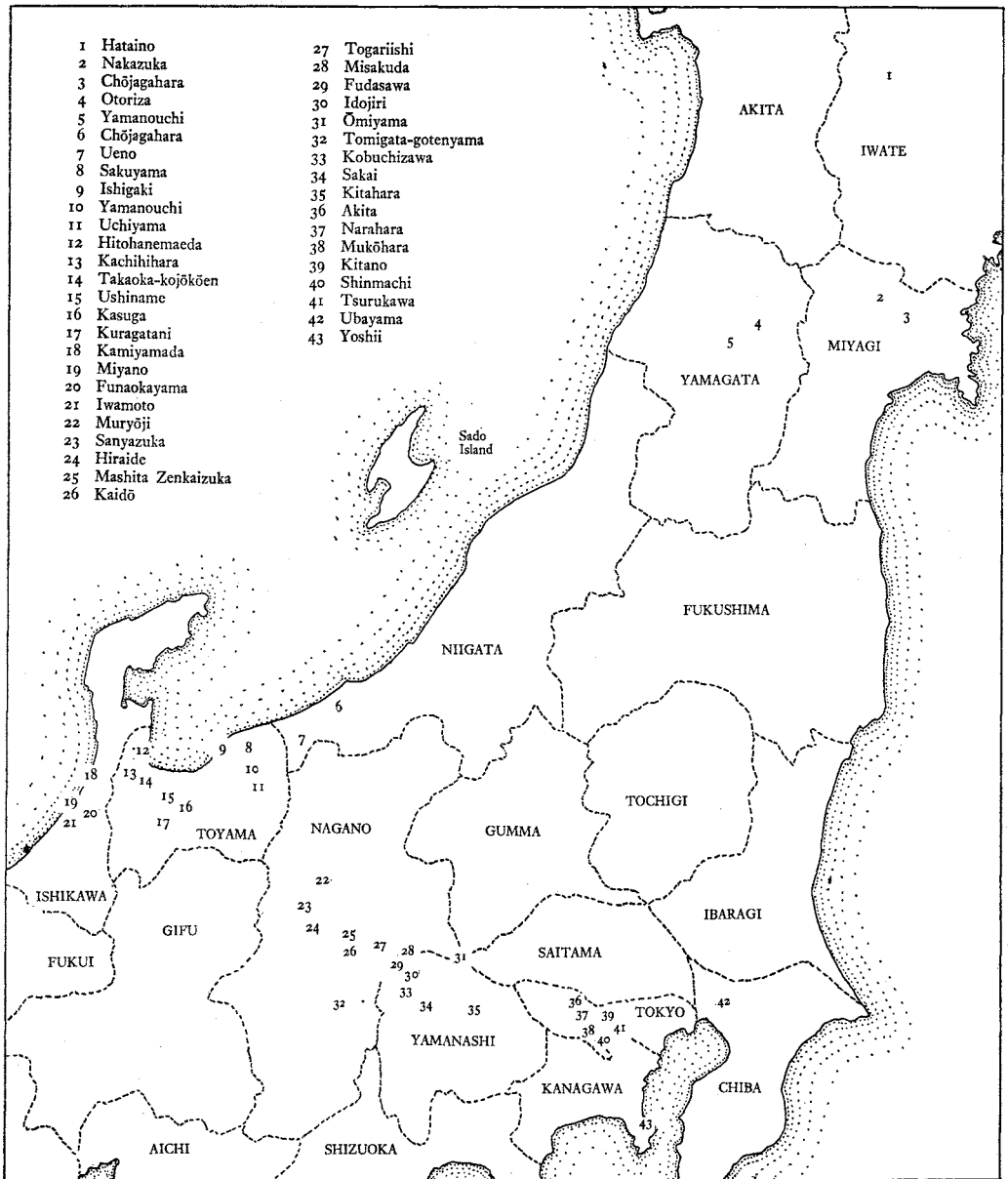


Fig. 1 Map of sites showing distribution of barrel-shaped pots with neck holes. Middle Jōmon period.

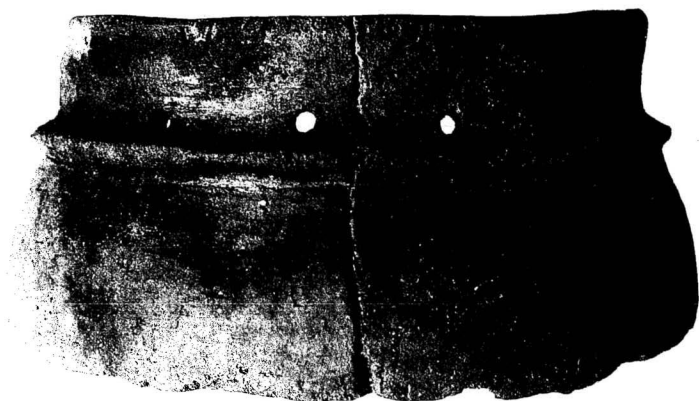


Plate 1a Rim sherd of vessel with neck holes, from Kitano, Mitaka City, Tokyo. Length 18.7cm. Early Middle Jōmon period.



Plate 1b, c Rim sherds of vessel with vertical neck holes, from Kitano, Mitaka City, Tokyo. Length 23 cm. Late Middle Jōmon period.

approximately one-fourth of the rim of another small vessel with what must have been fifteen evenly spaced holes was found inside what was perhaps another house pit (Plate 1*a*). Large areas of black encrustation concentrated on the exterior (the interior looks as though it had received more care in cleaning) show it was used for cooking. Both of these vessels should be Katsusaka in time, although their lack of decoration makes identification not entirely certain, but the farmer-landowner had at some time earlier dug up about one-third of a rim of a small pot of an obviously later date (Plate 1*b, c*). The mouth diameter would have been 21 cm, and nine pairs of holes run vertically through the neck ridge. Small quantities of red paint may be seen on the inner surface and on the top of the rim, and two holes near the rim on either side of a crack show an effort had been made to retard a break by someone who thought the pot worth saving. Most astonishing for this type, however, is the lateness of its date. The walls are thin; the decoration takes the form of an early zoned cord-marking, here applied multidirectionally in the Late Jōmon manner. But other features of the decoration are typically late Middle Jōmon; in other words, the pot is a borderline case.

Distribution of Finds

The distribution of these vessels with collar and neck perforations follows fairly closely the western distribution of the typical pottery of the earlier half of the Middle Jōmon period, the type that commonly goes by the name of Katsusaka and by at least a dozen other names for regionally related types. Such vessels are quite rare in the eastern half of this Katsusaka distribution zone. Some 7 sites lie on the west side of Ishikawa Prefecture, 3 in Kanazawa City, i.e., Miyano (19); about 12 in Toyama—including 3 in Uotsu City, i.e., Ishigaki (9); and 2 in south Niigata. Across the mountains and on the southwest side of the slope in Nagano Prefecture are to be found 11 major sites, and examples come from the subsites around Togariishi and Idojiri, lumped together in this report under chief site names for numbering purposes on the map. Three sites are known in Yamanashi, including the well-worked area around Sakai (34); 6 in metropolitan Tokyo; 1, the Ubayama shell mound (42) in Ichikawa City, Chiba Prefecture; and another, the Yoshii shell mound (43), in Kanagawa Prefecture. The widely scattered places in Yamagata and Miyagi Prefectures and the lone site in Iwate Prefecture of Hataino in Morioka City (1) are well outside the distribution belt, but perhaps help to bear out certain other implications that aspects of this Middle Jōmon culture eventually moved both east and north. It may be that examples will show up later in Niigata and west Fukushima Prefectures.

The greatest concentration of sites therefore lies on the west side of the mountains, with a lesser concentration farther to the east, while the most elaborate of the vessels comes from east Nagano Prefecture, not too far from Yamanashi.

Many of these sites in the central mountains average about 1000 m above sea level and are fairly large by all Jōmon period standards. As community sites, they are much larger than any of their predecessors, and their occupants produced female figurines in some quantity, used stone male symbols, erected altar-like arrangements in the pits of dwellings, and made pottery in phenomenal quantities, apparently to meet their storage needs, and in new shapes that show for the first time a differentiation of shape according to function. All of this cultural explosion has led to a considerable amount of speculation on the possibility that simple forms of cultivation were practiced that would therefore have provided greater economic stability for the population than would normally have been the case in a simple hunting, gathering, and fishing system.

Possible Functions of Barrel-Shaped Pots

Among the many vessels or thousands of sherds recovered from a site, there may be only one of these barrel-shaped pots or, at best, only a small number. Yawata studied this particular ratio at Ōmiyama in Nagano Prefecture. Out of several tens of thousands of sherds, he found pieces of 15 of these pots, and these were chiefly rim sections (Yawata 1965: 4). (I take it that many body pieces went unrecognized.) From 8 fragments, almost nothing about the vessels could be determined, but from 6 others, 4 pots were evidently highly polished on the exterior; the same pots bore red paint (iron oxide), also on the exterior; 1 had paint on the interior, while the other showed no evidence of paint whatsoever. The fragments of 1 vessel looked as though the vessel had originally been painted black and later received a coat of red paint. The diameters of the rims of these vessels were calculated to range between 7 and 24 cm or an average of 15 cm—possibly slightly larger.

Yawata notes that in some pottery the holes are evenly spaced, while in others the holes are in pairs, and he thinks that this difference reflects different uses to which the vessels were put (1965: 3) (see Fig. 2). He reconstructed one of these vessels to have had five or six pairs of holes.

Yawata claims no special insights on the use of such vessels at Ōmiyama, but since he excavated more than 50 pit dwellings, he feels that the ratio of ownership for these pots may have been roughly 1 such pot to 12 houses (11 houses without) (1965: 5). He does hold a general theory that these vessels served as ceramic drums, but he himself says that this idea does not fit the Ōmiyama examples.

Jars with perforations were mentioned in Japanese archaeological literature around 1897; perhaps the references were to these barrel-shaped, painted pots. A study of the prehistory of Etchū, published in 1936 (Hayakawa) included an example from the site of Chōjagahara in south Niigata Prefecture. It has been the Idojiri excavations, however (Fujimori 1965), coupled with investigations in the last five years into the likelihood of agriculture in the Middle Jōmon period, that has brought this interest to its present peak.

The large jars from Idojiri and Togariishi have evenly spaced holes, polished surfaces, red paint sometimes taking the shape of designs, handles at the shoulders, and may bear a human-type figure, arms and legs widespread, applied in relief on one side only. The height of these is as much as 51.2 cm, and the diameter at the rim 24 cm.

At Idojiri and its related sites, the Middle Jōmon culture has been divided into three chronological stages, the first two belonging to Early and Late Katsusaka, the third to Kasori E (or called Ubayama in most English books) (Miyasaka 1965).

According to Miyasaka, in Early Katsusaka, clay figurines were fashioned and rather large standing stones were put up, apparently installed at appropriate places in the villages. By Late Katsusaka, the figurines had disappeared from these particular sites (but did exist elsewhere in Nagano Prefecture) and were more or less replaced by zoomorphic faces on the rims of vessels in rather many examples that have been found apart from other relics. In the third stage, Kasori E or Ubayama, the figurines were again not made, and the rim heads were abandoned, but stone altars were erected in pits of dwellings, standing shafts were placed on these, and phallic stones were produced.

In respect to these particular vessels, the earliest are the largest. Some were built up in sections; they were provided with handles and rather narrow rims and were painted. During the middle stage the vessels became smaller and tended to degenerate in quality. In the last

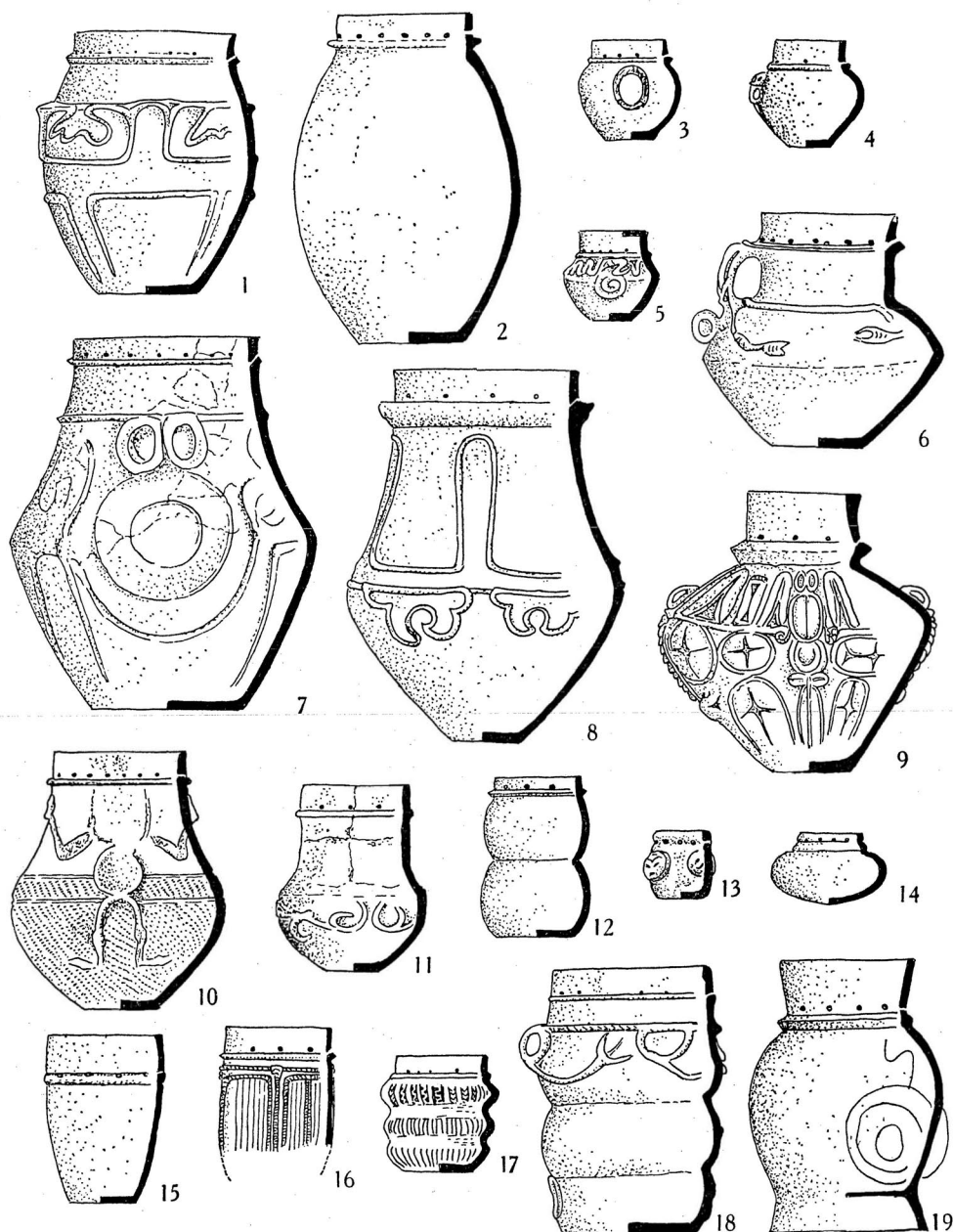


Fig. 2 Examples of pots with neck holes, showing variety of shapes: 1, Shindō, Fujimi-chō, Nagano Prefecture; 2, Hataino, Morioka City, Iwate Prefecture; 3, 5, 7, 16, Tōnai, Fujimi-cho, Nagano Prefecture; 4, Sori, Fujimi-chō, Nagano Prefecture; 6, 8, 18, 19, Idojiri, Fujimichō, Nagano Prefecture; 9, Nakadōone, Fujimi-chō, Nagano Prefecture; 10, 15, Fudasawa, Fujimi-chō, Nagano Prefecture; 11, Ubayama shell mound, Ichikawa City, Chiba Prefecture; 12, Togariishi, Chino City, Nagano Prefecture; 13, Sakai, Nirasaki City, Yamanashi Prefecture; 14, Kamiyamada shell mound, Unoki Village, Kawakita County, Ishikawa Prefecture; 17, Nakahara, Inume-machi, Hachiōji City, Tokyo Prefecture; 19, Mashita Zenkaizuka, Okaya City, Nagano Prefecture. Height of 1: 35.4 cm. Others to scale.

stage, they were largely forgotten except for only one or two that seem to be merely a vestige of an earlier stage.

These changes around Idojiri have been interpreted to mean essential differences in food-storage practices and therefore in the diet itself. Miyasaka describes these jars as storage vessels and assumes that they were used above ground in a suspended position. But in the last stage of Middle Jōmon, they were replaced by storage vessels that were sunk in the ground. In other words, the former was devised for preserving foods which had to be kept dry, while the latter was suited to foods that were immune to moisture and might possibly require a fairly constant temperature. If this analysis is true—and it does impress one as a fraction tenuous—it points to a considerable amount of ecological change during the Middle Jōmon period in this region and the necessary adjustments in domestic equipment to meet it.

Carbonized seeds of wild grapes were found in one vessel, so it was concluded that the jar had been used in the making of a kind of wine (Fujimori and Muto 1962). One of the excavators felt that these vessels were intended as storage jars to hold seeds for spring planting, and the neck was shaped to take a lid. Presumably, the lid would have been of wood, but leather or perhaps even a mat could have served. Yawata specifically says that no clay lids were found at Ōmiyama (1965: 5), and I cannot recall any reports of lids from anywhere else, although there are objects that I would call flat clay plates. Esaka Teruya, one of the leading exponents of simple forms of cultivation in the Middle Jōmon period, believes the jars acted as containers for starch that had been removed from chestnuts, horse chestnuts, acorns, other nuts, and the roots of ferns and *imo*, a yam-like plant (Esaka, in Yamanouchi 1964: 166).

The one vessel of this type unearthed at the Hataino site in Morioka City, Iwate Prefecture, is quite plain. It was found to have a very much heat-weakened lower body, a fact that was taken to mean that the jar had been used for cooking and had been suspended over a fire with the aid of cords passed through the neck holes (Kusama and Yoshida 1960: 7). This may have been true, and a ridge to protect the cords would make good sense, but the finely painted examples from Idojiri, for instance, do not look as though they were intended to be subjected to such profane use. The Hataino jar is entirely devoid of decoration, Morioka City is certainly a long way from the main centers of manufacture of the type and, despite the fact that the finding of only one pot in a site fits the known pattern well, this example need hardly be taken as typical.

At Kitahara, Yamanashi (35), a barrel-shaped vessel lay beside a large pot with an animal-face handle and over an "incense-burner," the whole group giving the impression of an intentional arrangement. The excavator took these relationships to be the result of a special deposit and believes the barrel-shaped pot had been used in fermenting wine for ritual use (personal communication from Akira Kamikawana).

Speaking of the large pots at Idojiri and Togariishi, the strongest case for pottery drums has been made by Yamanouchi (1964: 152). He compares them with clay drums used by unspecified people in Asia, America, and the Near East and believes a skin was stretched over the open end and was held in place by small wooden pegs driven into the holes. The drums were important pieces of ritual paraphernalia and were used in religious exercises. The anthropomorphic figures in relief were inspired by dance postures and gestures.

The Idojiri sites have yielded 6 of these vessels to the best of my knowledge and undoubtedly some unpublished fragments. These 6, in other words, were complete or restorable. They are made of pure clay, in contrast to the coarse, gritty clay of other pottery at the sites, and some examples are fully painted, both outside and in.

Excavations at many Jōmon sites—particularly from the Middle Jōmon period on—have revealed a few fragments of painted pottery out of the thousands of sherds that each site normally yields. Some sort of overall coverage with red paint was occasionally done, red oxide beginning as far back as Earliest Jōmon, with some preference for cinnabar in the Late Jōmon period in the Kantō region. Very rarely in late or latest Jōmon periods may examples of painted designs be found, and these are usually limited to central Japan, and primarily to the Kantō. Such paint was applied after the vessels were fired and can now be easily washed off. But on this particular type of vessel, the paint was applied before the firing and has become a permanent part of the decoration. It is a technique almost unknown in Japan until the Middle Yayoi period, or in this case, about the first century B.C. or A.D., and therefore constitutes a highly significant departure from the rare but otherwise customary procedure at this juncture.

Any utilitarian point of view towards the question of surface painting leaves too much unaccounted for. By all rights of consistency, it is a point of view which should be held by those who believe in the “unbroken stream of Jōmon developments,” although I have yet to see this view baldly stated in print. Stated simply, one holding this view would look on the application of pre-fired paint as an attempt at both lining and veneering a vessel in order to improve its capacity for holding liquids. This is not to say that the effort was necessarily successful. Jars of this approximate time period are said to lose about 2 percent of their contents if they are filled with water and left to stand overnight. Nevertheless, such a view would give Middle Jōmon potters the credit for a technical invention, despite their inability to impress its value indelibly on successive generations.

HISTORICAL BACKGROUND

Painted, barrel-shaped vessels must be examined against a background of what is conceded by all to be the sudden emergence of the Middle Jōmon culture—an upper plateau or low mountain culture—and in the process, it would be well to give a widely held Japanese opinion that the Jōmon period, once begun, tended to exist in isolation to all neighboring countries. In studies in which the entire period has been viewed in breadth, the evolution of Jōmon pottery has been spoken of as though its traditions created a fathomless reservoir; and that from this bottomless well the antecedents for every decorative motif may be seined (Yamanouchi 1964: 156–158) as well as the prototypes for every shape. I doubt that this could have been strictly the case, as conditions in Japan have been historically demonstrated to have been quite the opposite, except in instances where conscious efforts were made to obstruct foreign entry. These conscious efforts came in reply to an awareness of possible encroachment on established traditions and vested interests and can hardly apply to primitive life of a Neolithic stage.

Admittedly, the farther back one goes, the more imprecise may be the registration of continental traits in Japan, and presumably, the longer the cultural lag. It also seems likely that the location of the first point of an introduced trait would be more difficult to pin down.

Barrel Shapes and Yangshao Pottery Compared

Casting around for possible connections, certain parallels with features of the Yangshao stage of Chinese painted pottery come to mind, and so far as I am able to ascertain, it is only in the Yangshao stage that these parallels may be seen.

I would like to line up the parallels with new traits of the earlier half of the Middle Jōmon period and the geographic zone under question. The time correspondence may be suitable, but it is open to argument as long as radiocarbon dates are lacking for China; and one should recall that the Painted Pottery culture is now known to have spread far beyond the inland regions once attributed to it.

The twin-shoulder handles compare favorably in the Yangshao and the Japanese material and are a feature almost entirely unknown at any other time in the Jōmon period (Plate II*a*).

The anthropomorphic figure was skeletonized in China, painted on one side of the vessel only (Plate II*b*). In what should have been a fairly normal transformation to Japanese techniques, the motif was applied in Japan in the simple plastic tradition of Middle Jōmon pottery.

The figure's arms and legs are shown less zigzag but outspread, and usually three fingered (Plate III*a*).

Snake motifs are common to both Chinese and Japanese cultures and in Japan the motifs are limited to the earlier half of the Middle Jōmon period. It would be pointless to suggest any connections if it were not for their relationship to the heads to which they are attached. The famous Yangshao "lids," or whatever they may be, have parallel lines painted on their faces; a snake runs up the back of the head and over the crown (Plate III*b,c*). Middle Jōmon figurines from Nagano Prefecture have the snake coiled behind and above the head (Plate IV*a*). The incised "weeping" eyes of the Japanese types might well be a non-painted form of the lines descending from the eye in the Chinese examples.

The most outstanding Togariishi vessel has what vaguely resembles a large face on which stylized "eyes" like hooks are painted; unfortunately, they are not clear in a black and white illustration (Plate IV*b*). Eye-like patterns again are not sufficiently infrequent to work with, yet it is a fact that Jōmon pottery does not use them in any other way, and the similarity of stylization in the Chinese and Japanese examples is too noticeable to ignore, especially at a time when attitudes towards decoration were poles apart (Plate V*a*). Interestingly enough, large bowls (Plate V*b*) appear with this Middle Jōmon pottery and also disappear as other features of the culture fade out.

An undecorated vessel from Shensi province of sagging globular shape bears many perforations along the rim, but it lacks the ridge collar (Academia Sinica 1962: Plate VII 3). It is mentioned here because of its general similarity to the type under consideration, but beyond that, it would be unconvincing to press the point. There is a clay object, however, that is identical. It is spoken of as a stand in Japan, and examples range between 20 to 25 cm in diameter and around 8 cm in height. It has several large rounded holes in the wall (Plate V*c*). Like the barrel-shaped pots, only 1, or a very small number, is recovered from a site. The

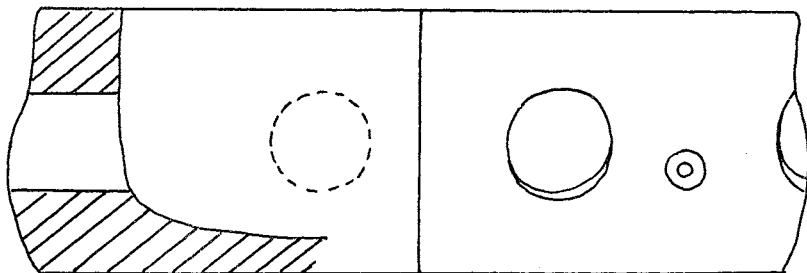


Fig. 3 Pottery object, shown as illustrated, from Tsou-hsien, Shantung. Chou Dynasty (*Kaogu*, 1965, 12: Fig. 12-21).



Plate IIa

Vessel with double handles,
I.C.U., Loc. 27A, Mitaka City,
Tokyo. Height 32.5 cm. Late
Middle Jōmon period.



Plate IIb

Painted vessel with skeletonized
figure, from Pan-shan, Kansu.
Yangshao stage. (Andersson,
BMFEA 15, pl. 189).



Plate IIIa

Vessel with anthropomorph,
from Tōnai, Fujimi-chō, Nagano
Prefecture. Height 51.2 cm. Early
Middle Jōmon period. See fig. 2(7)
for opposite side.



Plate III *b, c* Painted clay "lid" with head, from Pan-shan, Kansu. Yangshao stage (Andersson, *BMFEA* 15, pl. 187).



Plate IV *a*

Head of clay figurine with coiled snake, from Tōnai, Fujimi-chō, Nagano Prefecture. Height 10.5 cm. Early Middle Jōmon period.

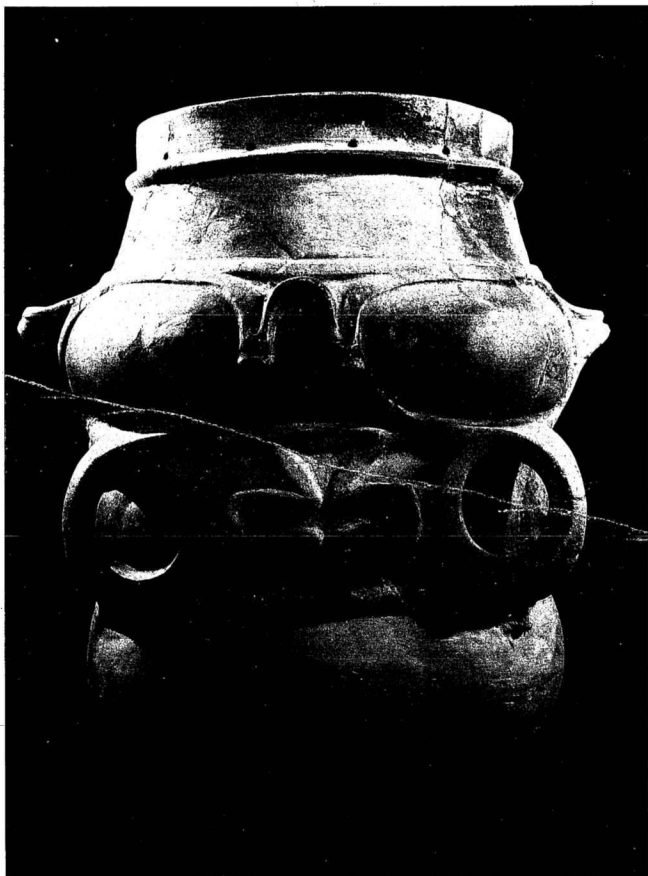


Plate IV*b* Vessel with painted patterns, from
Togariishi, Chino City, Nagano
Prefecture. Height 40.1 cm. Early
Middle Jōmon period.

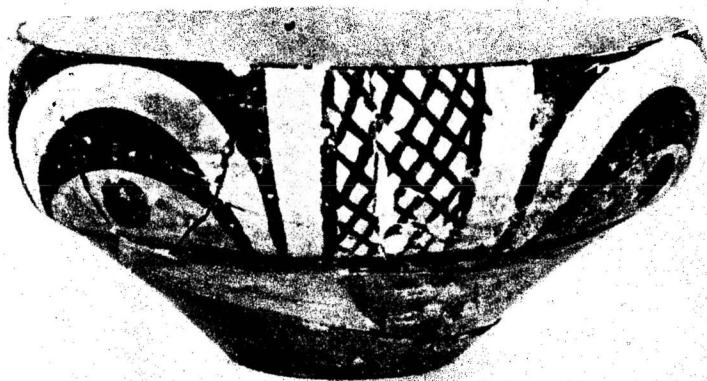


Plate V*a* Bowl with painted patterns, from San-men Gorges,
Honan. Yangshao stage (Academia Sinica 1962, pl.
VIII (3).

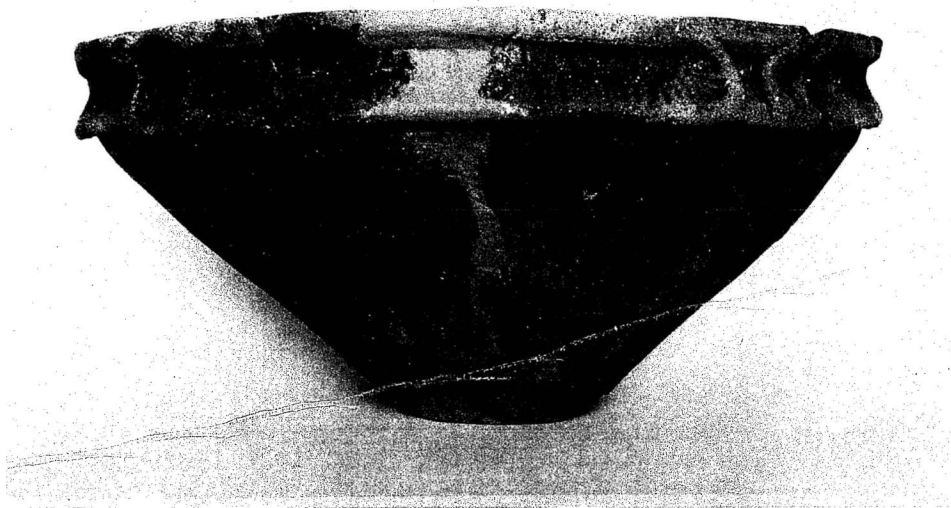


Plate Vb Large bowl, I.C.U., Loc. 1D, Mitaka City, Tokyo. Diameter of rim 48.7 cm. Early Middle Jōmon period.



Plate Vc Pottery stand, I.C.U., Loc. 1B, Mitaka City, Tokyo. Diameter at base 17.4 cm. Early Middle Jōmon period.

large Narahara site at Hachiōji contained no fewer than 7 when dug in the 1930s. Their use at that time was quite unknown. The description concludes with the frank admission that the investigators did not know which end was up (Gotō 1933: 31). One and perhaps a sherd of another have been found on the large International Christian University site in Mitaka, Tokyo. These objects are now believed to be ritual offering tables. An example from Shantung of a little later date is shown upside down, if this interpretation is correct (Fig. 3). Without the caption, history could be repeating itself thirty years later; it is called an object of unknown use.

CONCLUSION

In conclusion, the vessels that comprise this curious intrusion in the Jōmon period apparently disappeared because the need to which they were put ceased to exist. All but one of these new features vanished by the end of the Middle Jōmon period as rapidly as they had come: gone were a general lack of cord-marking, the pre-firing technique of painting, double handles, large bowls, stands, snakes—and the way they were used in relation to figurines, the zigzag anthropomorphs, and “eye” patterns. They make up a series of traits that could hardly have accumulated casually. The only one that left any lasting impression was the relief anthropomorph. One example may be seen from Hirosaki City of the Late Jōmon period, where, in fact, a figure appears on either side of a vase-shaped vessel (Kidder 1959: Plate 16). Admittedly, the barrel-shape itself and its accompanying rim holes, both apparently an integral part of the function of the vessel, and the latter the indispensable key to the identification of the type, are difficult to relate to any neighboring areas. Both are intrusions at this juncture, however, and are historically important to Jōmon pottery in the sense that now function dictated form. I would suggest that we may be dealing with the ultimate extension of the Yangshao stage of the Painted Pottery culture of China to which minor traits have attached themselves and that Yangshao-like elements may even have had some connection with the formation of this Middle Jōmon culture.*

* [Barrel-shaped earthenware vessels very similar in form to these of the Middle Jōmon period have been found in a few sites in the Philippines; see Wilhelm G. Solheim II, *The Archaeology of Central Philippines: A Study of the Iron Age and Its Relationships*. Manila: Monographs of the National Institute of Science and Technology, No. 10. Ed.]

REFERENCES

- ACADEMIA SINICA [Institute of Archaeology]
 1962 *Archaeology in New China*. Peking.
- FUJIMORI, EIICHI
 1965 *Idojiri*. Tokyo.
- FUJIMORI, EIICHI, and YUROKU MUTŌ
 1962 Chūki Jōmon doki no chozokeitai ni tsuite [On the conditions of preservation (in the use) of Middle Jōmon pottery]. *Kōkogaku Techō* 20: 1-6.
- GŌTO, SHŪICHI
 1933 *Tokyo-fu shiseki hozonbutsu chōsa hōkoku* [Report of the investigation of historic remains of Tokyo-fu] 10. Tokyo
- HAYAKAWA, SOSAKU
 1936 *Etchū no Shizen Bunka* [The prehistoric culture of Etchū]. Privately printed.
- KIDDER, J. EDWARD, JR.
 1959 *Japan Before Buddhism*. London and New York.
- MIYASAKA, MITSUAKI
 1965 Jōmon Chūki ni okeru shūkyōteki ibutsu no suii [The changes in the religious objects in the Middle Jōmon period]. *Shinano* 17, 5: 338-348.
- KUSAMA, SHUNICHI, and YOSHIAKI YOSHIDA
 1960 *Iwate-ken Morioka-shi Hataino iseki chōsa hōkoku* [Report on the excavation of the Hataino site, Morioka City, Iwate Prefecture]. Morioka City.
- YAMANOUCHI, SUGAO
 1964 *Nihon Genshi Bijutsu* [Primitive arts of Japan] I. Tokyo.
- YAWATA, ICHIRO
 1965 Katsusaka-shiki bunkaken no chūshin [The heart of the Katsusaka culture zone]. *Shinano* 17, 5: 325-329.