

CHAPTER 1

THE EARLIEST SOCIETIES IN JAPAN

Japan's oldest extant chronicles, the *Kojiki* and the *Nihon shoki*, describe the trek of Kamu-yamato-ihare-biko no Mikoto from south Kyushu to the Yamato plain accompanied by hand-chosen clan (*uji*) heads. He is referred to by later historians as the first emperor, posthumously called Jimmu. At every step he was opposed by well-entrenched people whose conquest often required ingenuity and guile. The degree of their decimation seems to have been determined by the degree of their physical abnormality. For the bulk of his adversaries, the killing of their chiefs was all that was needed to bring them into line. But in extreme cases, such as the Tsuchigumo (earth spiders) who were people too primitive even to have responsible chiefs, pockets had to be eliminated by a process that was not completed until at least the time of the ruler Keikō, sometime in the fourth century A.D. When the physical and social differences were too great, it seems that assimilation was inconceivable and neighborly relations impossible.

These stories may look at first like an unnecessarily candid admission of the presence of other peoples, as the Eight Island Country of Japan was implicitly created for the enjoyment of the descendants of the Sun Goddess (Amaterasu). But by stressing the existence of others, the chosen were sharply distinguished from the undeserving, and the Yamato people could legitimately place themselves at the top of a scaled social ladder. The right to rule was therefore not predicated on prior occupation or existing status but on the act of divine creation. Beyond that there had to be proof of worthiness and a demonstration of dependence on the counsel of native deities called *kami*.

What basis in truth there may be for these stories will long be argued. There is, however, no question but that various groups existed on the Japanese islands before one particularly powerful clan initiated a centralization process that led to the formation of the Yamato kingdom. The first Chinese historians to mention Japan spoke of the people collectively as Wo (Japanese: Wa), and they implied the existence of numerous advanced tribes or chiefdoms. These historians also de-

scribed in some detail the largest and most prominent locality, called Yamatai. Indeed, the Japanese certainly would not have called themselves *Wa*, which apparently was a pejorative term. Local people doubtless identified one another by the names of places and natural features and later by occupations, in a slowly emerging self-awareness fostered by Chinese attitudes toward their neighbors. Tribal names, clan names, family names, and eventually personal names gradually emerged, such as Kumaso, Emishi, Nakatomi, Imibe, and Keitai. The pre-Yamato people discussed in this chapter were the precursors of, and participants in, the process that led to the emergence of the Japanese state.

When first identified by historians, ancient peoples often show little cultural distinctiveness. Any differences must therefore be determined by archaeological means, through types of pottery, stone tools, pit dwellings, skeletons and burial styles, subsistence systems, and other remaining evidence of social life. Periods are therefore marked by typological terms for which consistency is a forlorn hope. Problems of translation further complicate the situation. Some terms are more useful in their Japanese form, such as Jōmon and Yayoi, and others are not, hence Paleolithic and Mesolithic. Japanese terms have emerged in irregular fashion: Jōmon is descriptive, used initially to characterize pottery decoration, and Yayoi is a place name, although it has been used only in this century for the area. Neither term – and Yayoi less so – embodies diagnostic traits like those of Paleolithic and Mesolithic, but three generations of experience have established them as indicators of specific cultural developments. On the other hand, the terms Old Stone Age and Preceramic have a history in Japan of only thirty years, and Sōsō-ki (Subearliest) Jōmon far less.

We now see the following general process of development: first, bands roaming about rather widely; second, people using Mesolithic inventions to ensure their survival; third, Jōmon people of different regions living a more sedentary tribal life based mainly on food gathering; and fourth, Yayoi agricultural societies ruled by shaman chieftains and engaged in metallurgy and other activities linked with the emergence of social stratification. The critical agents in this process were geography and floral–faunal resources. Throughout much of this early period these were basic factors of change in a land that was not yet separated from the continent by water. Long afterward, when the level of the seas rose and the islands of Japan were formed, their development was affected by prolonged isolation from the continent, a time of dramatic maturation and subsequent decline of the Jōmon culture.

Finally, increasing contact with the continent, after about 500 B.C., was associated with the introduction of continental rice and the emergence of Yayoi's agricultural economy, leading directly to the times of recorded history (see Chronology at the beginning of this volume.)

THE PRE-JŌMON PERIOD

The Late Paleolithic stage (ca. 28,000–10,500 B.C.)

The Japanese islands are visible projections of the great east Asian continental shelf. A generally accepted view sees the existence of land bridges until about twenty thousand years ago, making the whole area accessible to immigrants. Then increasingly warm Late Pleistocene temperatures caused the sea to rise, flooding the lowlands and forming islands. Earlier land bridges and inundations had existed. Under moderating climatic conditions, the last inundation separated the islands from the continent and created an environment in which a distinct insular culture began to take shape.

The progressive shaping of the Japanese islands began with the opening of a sea passage between Yaku Island of the Osumi group and the smaller islands of the Ryūkyū chain (now the Tokara Strait), and between Japan and Korea (the Tsushima Strait), both of which are located over elevated parts of the continental shelf. The two straits are now about 140 meters deep. This process occurred later in the north where a somewhat higher segment of the continental shelf left a narrow spit, which eventually became the Tsugaru Strait. The Soya Strait, between Hokkaido and Sakhalin, which is 60 meters deep, is the shallowest of all. Until it and the Bering Straits were opened, these regions had overland routes to north Asia and North America, but they were probably not fully opened until the beginning of the Christian era. The longer period of contact and replenishment from north Asian faunal sources accounts for the more northern character of Japan's animal life.

During Middle Pleistocene times, randomly fluctuating temperatures forced continental animals to migrate to the east, seeking more suitable habitats. The most prominent of these were the Oriental elephants (*Stegodon orientalis*). Somewhat later, as the temperature rose, they were displaced by Naumann elephants (*Palaeoloxodon namadicus naumanni*) that crossed the Korean bridge. They were joined by giant deer (*Megacervus*), an elklike creature from the north China plain, and various mammoths, chiefly *Mammuthus primigenius*, that entered Hok-

kaido from Siberia. Numerous bones and teeth and a few virtually complete skeletons of elephants have been recovered from scattered sites, mainly from the bed of the Inland Sea and, more recently, from the marshy edge of Lake Nojiri.¹ They had adapted themselves to the changing weather and were able to survive alongside the brown bear (*Ursus arctos*) and the Japanese deer (*Cervus nippon*).

The geology of Japan exhibits little actual glaciation during the Pleistocene age except on the summits of the Japan Alps where the highest peaks rise to three thousand meters and in the Hidaka Mountains in Hokkaido where peaks are somewhat lower, up to two thousand meters. In this last Ice Age, as atmospheric dust from considerable volcanic activity reduced the solar radiation and kept the temperatures low, ash was spewed out over large areas of the country, producing thick layers of fertile soil. The Kantō Loam of the major eastern plain of Japan was formed by substantial eruptions of the Hakone volcanoes to the south and the Akagi volcanoes to the north. First was the Tama Loam, which began about 350,000 years ago and was followed by three Late Pleistocene depositions: the Shimosueyoshi, Musashino, and Tachikawa. The Musashino Loam, or Musashino Upland, was formed at a time of cooling, when conifers were the chief growth in the woodland areas. The deteriorating climate forced northern wildlife, including horses and bison, to move into this region from the loess area of north China, entering by way of the Korean bridge. Brown bears, wolves, monkeys, Japanese deer, and mammoths mingled with southern animals to make this a time of extraordinary variety in Japanese fauna.

Mammoths never reached Honshū, perhaps cut off by the formation of the Tsugaru Strait or deterred by an undesirable climate to the south. Temperatures fell after the formation of the Musashino depositions to about 9°C below present averages, creating subarctic conditions at the beginning of the Tachikawa deposition, roughly 35,000 years ago. The Tachikawa Loam reached a depth of approximately five meters, in some places over a span of around 25,000 years. The modest conifer growth of the time consisted largely of spruce and larch.

These deposits from the Hakone volcanoes are especially well stratified in the south Kantō plain, as the upper atmospheric winds tended to carry the ash from successive volcanic eruptions in an easterly direction. Gradations within this Tachikawa Loam, consisting of eight geological layers (Layers III through X), help archaeologists recognize the stages of cultural change. No other region of Japan provides nearly

¹ Nojiri-ko hakkutsu kenkyū-kai, *Nojiri-ko* (Tokyo: Kyōritsu shuppan, 1975).

as many time-depth data. It is often said that Japan lacks well-stratified Paleolithic sites, indicating considerable mobility caused by relatively poor environmental conditions. But this is not the case with the Kantō plain. The cultural remains there reveal nine successive stages of habitation, starting around thirty thousand years ago. Claims for an even earlier occupation by Paleolithic people, such as the existence of Lower Paleolithic life before about 35,000 B.C. at Babadan and Zazaragi and related sites in Miyagi Prefecture could be strengthened by more precise geological and artifactual associations, clearer evidence that “artifacts” were manufactured, sharper technological distinctions between “Lower” and “Upper” Paleolithic tools, and more reliable dates for these early times.²

In 1947 an amateur archaeologist noticed stone artifacts and debris below the usual Jōmon strata in the Kantō Loam at Iwajuku in Gumma Prefecture. By 1949 these were identified as preceramic and eventually recognized as Paleolithic.³ At about the same time, geologists agreed on the concurrent existence of land bridges and that the presence of Paleolithic people in Japan was no longer unreasonable.⁴ Thousands of Paleolithic sites, scattered throughout the main islands, have been found since then. Most are rather far inland, and surprisingly few are in caves. Indeed, among the many caves known to have been occupied in early times, only four contain Paleolithic layers, and all of these are located on the island of Kyushu. Several rock shelters elsewhere have yielded Paleolithic artifacts.

Despite considerable volcanic activity, the Kantō plain afforded the most hospitable environment during the Paleolithic period. Crossed by five major rivers (Sagami, Tama, Ara, Tone, and Kinu), fed by innumerable springs and tributaries, adequately supplied with sources of stone from gravel beds, sheltered by the refuge of mountains in the distance, and blessed by a mild winter climate and mixed flora and fauna, the Kantō plain and its foothills provided satisfactory year-round subsistence. Protracted periods of habitation and periodic re-

2 Serizawa Chōsuke, “Saiko no karyūdo tachi: Kyū-sekki jidai,” (in Narasaki Shōichi and Yokoyama Kōichi, eds.; *Kodai-shi no hakkutsu*, vol. 1 (Tokyo: Kōdansha, 1974), pp. 97–116; Serizawa Chōsuke, “The Stone Age of Japan,” *Asian Perspectives* 19 (1978): 10–14.

3 Sugihara Sōsuke, *Gumma-ken Iwajuku hakken no sekki bunka* (Tokyo: Meiji daigaku kenkyū-sho, 1956).

4 Minato Masao, Gorai Masao, and Hunahashi Mitsuo, eds., *The Geologic Development of the Japanese Islands* (Tokyo: Tsukiji shokan, 1965), pp. 349–53. Studies in the 1980s have since questioned earlier research and raised serious doubts about the conventional dates. The thirtieth anniversary issue of *Quaternary Research: Daiyonki-kenkyū* (Tokyo: Tokyo University Daiyon-ki kenkyū kai, 1968) deals with tectonic movements, deep-sea tephras, flora and fauna, formation of terraces and lowlands, and related topics, some of which suggest a considerably earlier disappearance of the land links with the continent.

turns to familiar sites indicate that the region was by then a suitable place for human life.

People moved into the southern Kantō plain during its first habitable stage around thirty thousand years ago, and despite fluctuations in temperature, it was continuously occupied. About eight thousand years later, there was a stage of heavier plant growth, as is revealed by a layer of much darker soil known as Black Band II, presumably formed when slackened volcanic activity permitted more vegetation, creating a kind of humus. A gradual warming, about twenty thousand years ago, fostered the growth of vegetation composed of herbs (*Scabiosa*), weeds of the thistle family (*Compositae*), and sagebrush (*Artemisia*). Grasses (*Gramineae*) were rampant in open spaces, and maples (*Acer*) and deciduous oaks (*Quercus*) were on the increase.

Between about twenty thousand and thirty thousand years ago, the temperature dropped to its coldest level, approximately 7°–8°C below present averages, and the subalpine forest fell to three hundred to four hundred meters lower than it is currently. Tundra grew in the mountainous districts of north Honshū. Little bands of people left rather coarse cultural artifacts in the lower layers of south Kantō sites, best represented along the Nogawa stream and consisting of large, heavy-duty flake and pebble tools along with some large (and a few partially backed) blades of irregular shape. Although most of these early tools were made of sandstone, slate, and chert, some were of andesite and obsidian, and a few were of agate. Agate was brought from mountains north of the plain or from Yamanashi Prefecture.

Chunks of obsidian for making fine-edged tools were carried great distances. Most of the material originated in the Shinshū Mountains of Nagano Prefecture, at least 150 kilometers from the Nogawa sites, but occasionally the material came from the Hakone Mountains 80 kilometers away. The use of obsidian at places far from its sources suggests that it was collected on hunting expeditions and served as an item of trade in order to ensure a steady supply of this high-quality volcanic glass.

The population increased noticeably between about fifteen thousand and eighteen thousand years ago, as temperatures continued to rise. Southern land bridges were flooded, and the population tended to become concentrated in the best hunting and foraging areas. Oaks were plentiful. Willows (*Salix*) and hackberry (*Celtis*) multiplied, and shrub-sized hazel (*Corylus*) flourished in many areas. Much of the traditional big game was dying out, and the wild nuts, berries, and other plant foods that had once been largely supplements came to be

basic ingredients of the human diet. Greater dependence on flora lessened the people's mobility, and striking changes were taking place. The sites became larger and more numerous, increasing the quantity of cultural remains.

In the southern Kantō sites, this expansion is most evident in Layer IV. Backed blades were widely used, and projectile points were first chipped on one side and later on both. Because greater range and balance were demanded, bifacial points of small and refined size were made. Clusters of unworked fist-sized stones from the river gravel beds – many of which are fire blackened, heat reddened, and often cracked – had appeared in all earlier occupation layers. They can now be found in Layer IV in great numbers and are associated with signs of cooking, including the use of heated stones for roasting meat. Recent recognition of the significance of these stones adds to our knowledge of Paleolithic life beyond that provided by the usual artifact debris of camp sites.⁵

Major points of entry to “Japan” were widely separated from one another: The Hokkaido bridge was far to the north, and the Korean and Ryūkyūan bridges far to the south. But the areas around the northern bridge were too cold for human survival for long periods, leaving the moderately temperate Korean route from north China and the more temperate southern avenue as the major points of entry. The earliest chopper-using people probably came in by the Korean bridge nearly thirty thousand years ago. There can be little doubt that new arrivals constantly appeared on the scene during the next ten thousand years while the southern land bridge still existed. The north finally became hospitable under warming temperatures, making Japan more accessible from north Asia, but this did not occur until shortly before that bridge was flooded, after which access became impossible except by sea.

Fragmentary human bones claimed to be Paleolithic have been found in Akashi (Hyōgo Prefecture), Kuzū (Tochigi Prefecture), Ushikawa, Mikkabi, and Hamakita (Shizuoka Prefecture), and in a few other sites, but taken collectively they provide few data on the physical appearance of Japan's early inhabitants. The so-called Akashi Man was named after a 1931 discovery of a small left pelvic bone that was destroyed in Tokyo during World War II and that is known today only through a cast. Naora Nobuo, who found the bone, maintained a

5 J. Edward Kidder and Oda Shizuo, *Nakazanya iseki* (Tokyo: International Christian University Archaeology Research Center, 1975), pp. 176–9, 204–17.

Paleolithic date against almost universal opposition and proposed a *Sinanthropus* relationship. He was at least partially vindicated when a Paleolithic stage of human existence in Japan was finally proved. Although argument over the bone itself is likely to continue, it has been made less important by the discovery of other skeletal material with claims of roughly equal antiquity.

The Kannon-dō cave in Hiroshima Prefecture yielded a femur fragment with a fossil antler; and the Hijiri-dake cave in Ōita Prefecture contained cranial fragments and fossil bear bones with Paleolithic artifacts, the only case of human skeletal material being found together with artifactual remains. The skull fragments were compared by Ogata Tamotsu with those found in the burials of the Upper Cave at Choukou-tien in the Peking area.⁶

The Mesolithic stage (ca. 10,500–7500 B.C.)

A brief and unusual drop in temperature, which caused the sea to fall between twenty and forty meters below its present level, was followed by a period of rapid warming (and rise in the sea level) about twelve thousand years ago, lasting a little over two thousand years. The subalpine forest receded quickly then, and wildlife headed for higher and cooler altitudes, followed by their Paleolithic hunters. Caves were sought out, perhaps because they offered relief from the rising temperature.

Fauna were greatly depleted as land areas were sharply reduced in size, and with their improved hunting techniques, the larger population killed off the heavier and slower animals. Some species were unable to adapt themselves to the warmth. Roe, musk, and giant deer, tigers, panthers, wildcats, bison, rhinoceroses, north Asian horses, and Naumann elephants all died out. Wolves and brown bears barely survived. The more adaptable creatures lived to become important sources of food for later Jōmon people: Japanese deer, wild boars (*Sus leucomystax*), raccoon-dogs (*Myctereutes procyonoides*), Tōhoku hares (*Lepus brachyurus*), and badgers (*Meles anakuma*). Before the new forests acclimated to warmer conditions had appeared, grasses, ferns, weeds, and other ground plants and shrubs flourished.

To the chronological divisions for the Jōmon period an earlier division was added to accommodate a stage known as Sōsō-ki, which I

⁶ Ogata Tamotsu, "Dōkutsu iseki shutsudo no jinkotsu shoken josetsu," in *Nihon kōkogakkai*, ed., *Nihon no dōkutsu iseki* (Tokyo: Heibonsha, 1967), pp. 391–2.

have called “Subearliest” Jōmon. Since it does not have full Jōmon characteristics, its transitional features permit calling it Mesolithic.

Cultural developments in Japan were greatly affected by worldwide changes of climate. Two local inventions, apparently arising in response to such climatic change, revolutionized life and immeasurably increased chances of survival: the bow and arrow in the north and pottery in the south. Both can be explained as indigenous responses to deteriorating subsistence conditions. Neither seems to have been introduced from the outside.

Improved hunting techniques were most conspicuous in the mountains of north Honshū. Numerous long slender spear points have been recovered from many caves and rock shelters of the period. Such points were used – more in some areas than other – as far south as Shikoku. The larger ones found in the subalpine zone were probably for hunting bison and giant deer, and the smaller ones in temperate zones, for Japanese deer and wild boar.⁷ The smaller ones were used interchangeably as darts and arrowheads, as the supply of larger game dwindled and hunting turned to smaller and quicker animals.

For example, Layer IX in the Kamikuroiwa rock shelter in Ehime Prefecture on the island of Shikoku (with a radiocarbon date of $10,215 \pm 600$ B.C.), contained spearpoints, but no arrowheads, and the oldest pottery of Shikoku. Layer VI (with a date of 8135 ± 320 B.C.), on the other hand, had many arrowheads.⁸ The progressive effectiveness of hunting techniques is well illustrated in the faunal remains of the two layers. The earlier Layer IX contained large quantities of Japanese deer, boars, bears, and monkeys and also some Japanese serows, badgers, Japanese wolves, lynxes, frogs, and ring-necked pheasants, but to Layer VI, otters and giant flying squirrels were added. In Layer IV, with rouletted Jōmon pottery (dating about 7000 B.C.), in addition to the usual creatures found in quantity (deer, boars, raccoon-dogs, and monkeys) the bones of martens, badgers, many Japanese dogs, rabbits, giant flying squirrels, ermines, rats, and pheasants were excavated. In the Iwashita cave in Nagasaki Prefecture on the island of Kyushu, Layer VI showed deer; Layer V had both deer and wild boars; and Layer IV had otters, raccoon-dogs, rabbits, and Japanese monkeys.⁹

7 Yasuda Yoshinori, “Prehistoric Environment in Japan: Palynological Approach,” *Science Reports of Tōhoku University* 28, no. 2 (1978): 171.

8 Carbon 14 dates from the Mesolithic are converted directly to B.C. dates, with the caution that modest adjustments are required. These are generally too recent up to about six thousand years ago. Calibration for older dates is more speculative.

9 Suzuki Michinosuke, “Jōmon jidai sōsō-ki shotō no shuryō katsudō,” *Kōkōgaku jānarū* 76 (1972): 16–17.

Shikoku's direct land connections with Honshū permitted a natural enrichment of fauna and, as time passed, allowed for substantially larger catches than those of less fortunate places in Kyushu.

Not one but several types of evidence – stratigraphic relationships, typological developments, and a sequence of radiocarbon dates – suggest that northwest Kyushu was the home of Japan's earliest pottery. These show that the making and use of pottery spread from Kyushu to other parts of the country. The oldest known pots were found in Layer III in the Fukui cave at Nagasaki, with a date converted to $10,750 \pm 500$ B.C.; Layer II has a date of $10,450 \pm 350$ B.C. The lowest ceramic layer (Layer IX) in the Kamikuroiwa rock shelter at Ehime is dated to $10,215 \pm 600$ B.C. The oldest layer in the Iwashita cave at Nagasaki is thought to be 9250 ± 130 B.C. These dates become more recent as we move from Kyushu to Shikoku and Honshū. They are doubtless subject to some calibration, but by just how much is now hard to say. Doubts about the extreme antiquity of pottery in Japan usually have been grounded in the possibility of contamination by volcanic action, a phenomenon certainly not limited to Japan. But the earliest dates are for charcoal samples in pottery-bearing layers deep in caves and rock shelters where at least later volcanic fallout should have had no noticeable effect. The one dubious date is for a shell from the Natsushima shell mound, placed in the Earliest Jōmon period after people had begun to subsist on lower riverine and marine foods. But even that is substantiated by the date of a charcoal sample from the same site.

The location of Fukui on the northwest coast of Kyushu suggests continental connections, but as of this writing the oldest date for Chinese pottery is still substantially later than the earliest Jōmon pieces, and no known comparable pottery has been found in China.¹⁰ Old pottery may eventually be uncovered on the continent. If so, it should be in a Mesolithic context and/or be recognizably transitional.

Subearliest Jōmon pottery is extremely primitive and breaks into sherds the size of postage stamps. The restored vessels are small, round bottomed, low fired, and dirt brown in color. At the Sempukuji cave, not far from the Fukui cave, the excavator claims to have found even older pottery with pellets decorating the otherwise plain surface – a “bean pattern.” The Fukui cave pottery, on the other hand, has a

¹⁰ One dubious date of 8920 ± 240 B.C. is given for a shell associated with cord-marked pottery at Hsien-jen-tung, Wan-nien, Kiangsi Province (China). Otherwise, dates of 5630 ± 410 and 5415 ± 410 B.C. are available for bone found with coarse red Neolithic pottery from Tseng-p'i-yen, Kueilin, Kuangsi Province.

decoration that consists of linear-relief and raised parallel ridges that are generally wider in the south and narrower in the north. It has been found on a roughly south–north line from Kyushu to Yamagata Prefecture. This Fukui-type pottery is followed at many sites by nail-marked pottery. But sites yielding both types are seldom found west of the Kansai area. The people who made them were apparently leaving southwest Japan for cooler regions.

The invention of pottery making was not limited to Japan. Wherever it was made, it was quite likely a product of accident and astute observations. Conditions in Kyushu at that time offered only marginal chances of survival. The inhabitants who stayed on were driven to find alternative sources of nourishment. Boiling otherwise indigestible plants, especially certain grasses and ferns, made them edible and sometimes even palatable. Making pottery was probably the housewife's chore, as all the raw materials – clay, water, and firewood – were outside her back door. Pottery contributed greatly to the quality of life. It enlarged the range of action, freeing people from fixed water sources. Storage techniques allowed habitation near nut-yielding forests, contributing to a more sedentary life and to a population increase into the Middle Jōmon. Before the Jōmon period came to a close, pots were used not only for cooking and storage but were adapted also for burial, ritual, and aesthetic use. They reflected at a personal level the interests of the smallest communities and were the first artifacts to register cultural change.

Microblades as well as pottery were used in Kyushu. These were small flake bladelets hafted perhaps on a handle and aligned for reaping grasses and ferns. Elsewhere these microliths may have been attached to the end of a tapered shaft and used as projectile points but were soon superseded by arrowheads.

Microblades are a well-known type of tool found in Sakhalin and Siberia, west to the Yenisei valley, and represent a major cultural link between Japan and north Asia at about the close of the Paleolithic period, before land connections were severed by the rising sea.

THE JŌMON PERIOD

The Earliest Jōmon stage (ca. 7500–5000 B.C.)

The Kuroshio, a warm-water current sweeping up from the south, and the Oyashio, a cooler current from the north, met along the east coast to provide exceptionally good spawning grounds for marine fauna. Shellfish in bays, inlets, and tidal pools were discovered to be a rich

source of food, even during the winter months, and supplemented the diminishing supply of animal life. The word *jōmon* (literally, “cord pattern”) comes from a description of pottery found in the first shell-mound excavation of modern archaeology. The excavation was made by an American scientist, Edward S. Morse, who came to Japan in 1877 and proceeded shortly thereafter to excavate the shell mounds of Ōmori, which he had noticed when traveling by train between Yokohama and Tokyo. In his book *The Shell Mounds of Omori* (1879) Morse refers to the excavated pottery as “cord-marked,” noting especially a great profusion of such pottery. For a time, this was described as “Ainu school pottery” or “shell-mound pottery,” but a literal translation of Morse’s original description (*jōmon*) gradually came to stand for the entire period in which such pottery was produced.

Typology lagged until the 1930s but then rapidly developed after a chronological system was set up by Yamanouchi Sugao around 1937.¹¹ His scheme divided the Jōmon period into Earliest, Early, Middle, Late, and Latest, a temporal arrangement in which all types of pottery were placed in historical order, paralleled by cognate types found throughout the country. Moreover, Yamanouchi’s stages were of about equal length. Progressively more detailed studies of hundreds of pottery types did little to change this scheme, but the advent of new dating techniques makes it clear that although the basic sequence is tenable, the strong regionality of culture is obscured if the scheme is left unqualified. Local differences created substantial time overlaps, and each phase became somewhat shorter with greater cultural complexity.

Use of the Jōmon term begs the question of whether the period is genuinely neolithic. The hunting of fossil creatures was basic to the economic life of the preceramic stage, hence the term Paleolithic. The addition of microliths and pottery to an essentially hunting economy is regarded as characteristic of a Mesolithic age, but there are no signs of plant cultivation in early Jōmon. The possibility of simple manipulation of cultigens in later Jōmon stages is being debated. The period is therefore protoneolithic. For want of a better name, Jōmon is thus the most useful.

Following the discovery of “pre-Jōmon” pottery in Kyushu and elsewhere, Yamanouchi added an earlier stage that he called Sōsō-ki (the “grass-roots” stage). It has been adopted by some and rejected by others on the ground that the pottery is not “Jōmon” and that the

¹¹ Yamanouchi Sugao, “Jōmon doki keishiki no saibetsu to taibetsu,” *Senshi kōkogaku* 1 (1937): 29–32, used the stages Sōki, Zanki, Chūki, Kōki, Bunki.

subsistence system of this phase was Paleolithic-style hunting. Some Westerners use this term, which I call Subearliest in order to distinguish the phase from, and to show its relationship to, Earliest Jōmon. Some prefer “Incipient.”

Natsushima is the site of the oldest deposit of shells left by early people in the Kantō plain, with radiocarbon dates of 7290 ± 500 and 7500 ± 400 B.C. Its lowest layer contained mostly oysters and *Anadara granosa*, a warm-water mollusk.¹² Shells in that layer, which yielded the Earliest Jōmon bullet-shaped pots, included those of *Yamato shijimi* (a freshwater clam), as well as perch and gilthead bones (both freshwater fish), suggesting habitation near the mouth of a reasonably large river. *Asari* and *hamaguri* (clams) were commonly found on the top layers with slightly later pottery, where gilthead was replaced by red seabream (*madai*) that inhabits deeper waters. The bay was then moving inland, forcing the Jōmon people to retreat to higher ground and inundating some earlier community sites.¹³

By and large, the sites of this phase are rather few, and their cultural content is relatively meager. Bone fishhooks, usually not barbed, were rapidly improved along the northern coast. Arrowheads were small, used more frequently by inland hunters. Plant bulbs and starchy roots were dug with large, adzlike tools that were made of sandstone, slate, or other soft stone. Nuts and possibly seeds were pulverized with grinding stones.

Hanawadai in Ibaragi Prefecture is the first recognizable Earliest Jōmon community site.¹⁴ Five house pits lying about 10 meters apart contained two successive Hanawadai pottery subtypes, probably meaning that not more than three houses were occupied at any one time. The little bands of occupants could hardly have numbered more than ten or fifteen. One pit is not quite square, measuring 4.6 by 3.8 meters, and has twelve holes for posts. Outdoor fireplaces were used. Seemingly inconvenient bullet-shaped pots stood upright in the soft, loose surface soil. Dogs were kept around the house, the *Canis familiaris japonica* (small, short-haired, Spitz-like dogs) that were perhaps ancestors of the present-day Shiba.

Most of the few human skeletons excavated from sites of this phase have been found intentionally buried among the shells, lying on their

12 Sugihara Sōsuke and Serizawa Chōsuke, *Kanagawa-ken Natsushima ni okeru Jōmon bunka shotō no kaizuka* (Tokyo: Meiji daigaku bungaku kenkyūsho, 1957).

13 Esaka Teruya, *Jōmon doki to kaizuka*, vol. 2 of *Kodai-shi hakkutsu* (Tokyo: Kōdansha, 1973), pp. 89–90.

14 Yoshida Itaru, “Ibaragi-ken Hanawadai kaizuka gaihō,” *Nihon kōkogaku* 1 (1948): 27–33.

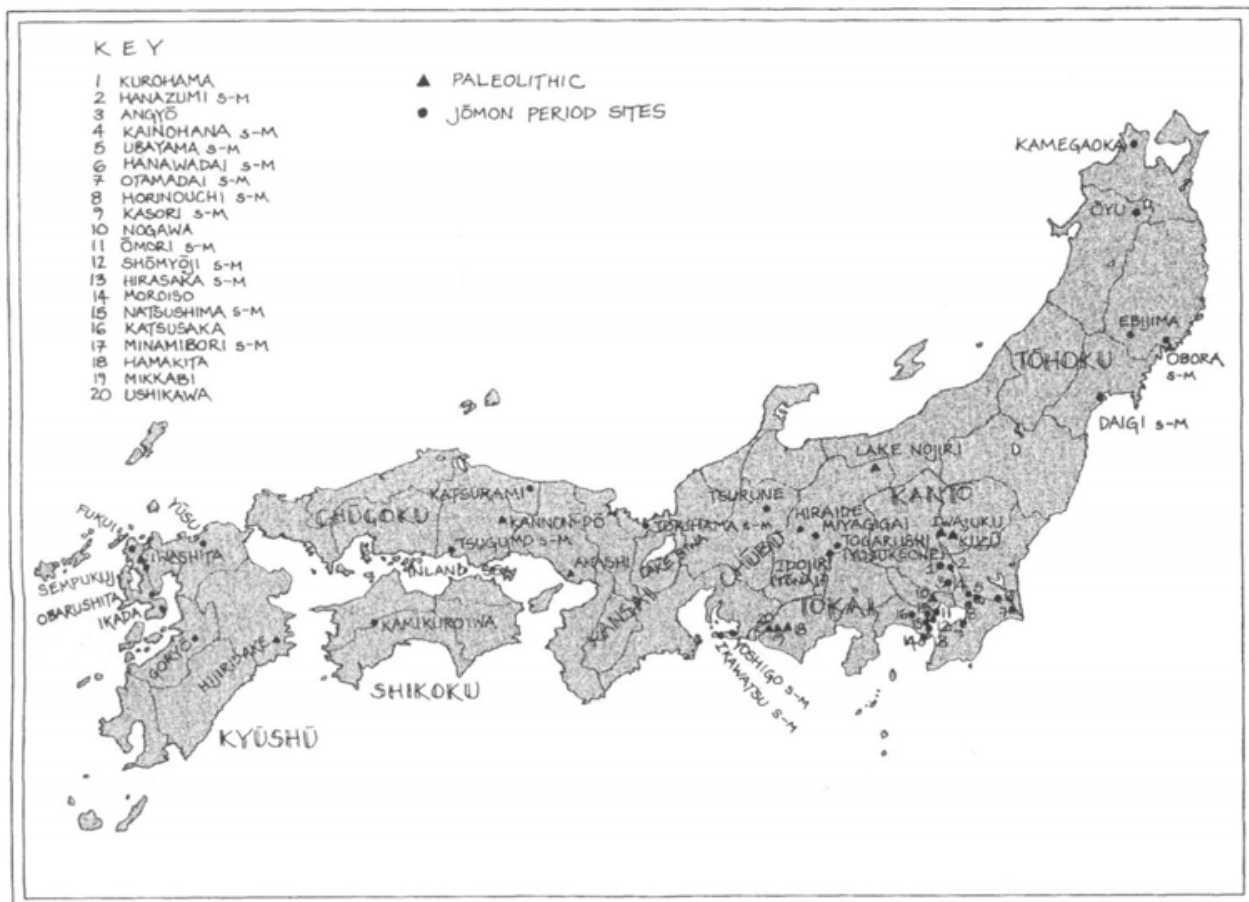
backs in flexed positions. They dramatize the severe conditions faced by the people of that day. The earliest known Jōmon man was uncovered in 1949 below a shell layer in the Hirasaka shell mound in Yokohama City. He stood rather tall for a Jōmon person: about 163 centimeters. His lower left molars were worn down to the jawbone, probably caused by years of pulling leather thongs across them, and X-rays of his bones showed growth interruptions, interpreted as near-fatal spells of extreme malnutrition during childhood. The joints testify to early aging. Virtually unused wisdom teeth are partial evidence for a life expectancy of about thirty years, an estimated average through the Middle Jōmon, with an increase of only one year during the next two millennia, until the adoption of rice as a dietary staple.

Subcultural divisions of the Earliest Jōmon period are located in the south, the Kantō, and the north. From Kyushu to the Kantō plain, pointed-bottomed pots were decorated by rolling a carved stick over the surface. In the Kantō a rudimentary form of cord marking was used. But to the north of that plain and at about the same time, decorative techniques were dominated by shell marking and imprinting.

The last complete listing of sites published for each prefecture by the Cultural Properties Commission shows 2,530 for the Earliest Jōmon, or 9 percent of the Jōmon aggregate. Almost half of these are located in the lowlands of the Kantō (1,213), with Tokyo claiming the lion's share (349). The mountainous Chūbu region follows (377), then the Tōhoku in the north (249), and Kyushu in the south (243). The entire Chūgoku region has only 83, or 3.28 percent of the total. (See Map 1.1.)

Koyama Shuzo calculated the population of the Earliest Jōmon to be around 21,900.¹⁵ Inhabitants had moved to higher land in the valleys of the lower-central mountains and established communities to the northeast. Concentration in these areas throughout most of the Jōmon period can be accounted for by a variety and abundance of plant, mammal, and sea life, where northern and southern environmental zones overlap in central Japan. With the exception of the Latest Jōmon, and possibly the Middle Jōmon, the Kantō sites are usually more numerous and frequently larger. Over half of the Earliest Jōmon population was strung out along the banks of Kantō streams, with ready access to water supplies, for the same reason that earlier and later people – amounting to teeming millions in modern times – congregated there. Yet until the

¹⁵ Koyama Shuzo, "Jomon Subsistence and Population," *Senri Ethnological Studies*, no. 2 (Miscellanea no. 1) (Osaka: National Museum of Ethnology, 1978), pp. 6–7, 56.



Map 1.1 Paleolithic and Jōmon period sites. Notation s-m after site name indicates shell mound.

medieval centuries it was always a rather uninventive area – with the possible exception of the unusual sixth-century *haniwa* – where relatively little initiative was demanded for survival.

The Early Jōmon stage (ca. 5000–3500 B.C.)

Consistent warming and a rising sea level pushed the coastal population farther inland during the Early Jōmon period, with the temperature peaking several degrees higher than today toward the end of this stage. Water flooded low valleys, and some Kantō sites are as much as fifty kilometers from the present shore. In the Kitakami plain of the Tōhoku region a few sites lie about thirty kilometers inland, but elsewhere the steep eastern coast prevented such extreme marine aggression. Farther south, the Inland Sea joined the ocean, leaving Shikoku and Kyushu as islands.

The shell mounds of this stage contain chiefly freshwater clams (*Yamato shijimi* or *Corbicula japonica*, and marine *haigai* or *Anadara*

granosa) and oysters (*magaki* or *Crossostrea gigas*).¹⁶ Animal bones – not numerous – are chiefly those of deer, boars, flying squirrels, and Siberian mountain lions. Investigations indicate that mainly older deer were hunted, that the fast-breeding wild boars were killed indiscriminately, and that mountain lions were dying out. In the more isolated areas of western Japan, animal life was reduced, leaving fewer resources for human survival. The higher temperature encouraged the growth of the evergreen oak forests (*Quercus*) that covered much of west Japan.

The warmer temperature was also conducive to the growth of warm-water *Anadara granosa* as far north as the Daigi shell mound near Matsushima Bay, although its habitat is now south of Tokyo. On the other hand, the coldwater mollusk (*Pecten yesoensis*), now thriving in northeast Honshū, could not stand the warmth and is therefore missing from the Early Jōmon shell mounds of that area.

Around the middle of the Early Jōmon, reliable food sources and somewhat longer stays near the coast produced a dramatic increase in population. According to Koyama's calculations, the Early Jōmon population numbered around 106,000, or five times that of the Earliest Jōmon, an increase unmatched at any other stage of the Jōmon period.

Small Early Jōmon villages, developed on bluffs, had pit houses grouped in the form of a horseshoe. The presence of pottery of several successive types at a single site indicates continuous habitation. As this occurred, family demands fostered advances in house construction. The older, poorer shelters or huts were now transformed by the introduction of substantial inner posts strong enough to hold a roof over a rectanguloid floor. Rainwater shed by the pitched roof was drained off through surrounding ditches. *Kaya* (a miscanthus) was probably the roofing grass, fifteen centimeters of which would have been enough to keep the interior dry. Toward the end of the Early Jōmon, the inner space took the form of a square with rounded corners. Some fireplaces were moved inside, though rarely were placed in the middle of the floor. Indoor living now offered more attractions.

Houses were occasionally extended to accommodate growing families, but archaeological evidence reveals few repairs and almost no overlapped houses so often found at Middle Jōmon sites. The forty-eight houses of the Minabori shell mound, located on a rather level

¹⁶ Kaneko Hiromasa, "Gyorō no tenkai," in Esaka Teruya, ed., *Jōmon doki to kaizuka*, vol. 2 of *Kodai-shi hakutsu* (Tokyo, Kōdansha, 1973), pp. 119–24.

plateau in Yokohama and distributed to form a rough arc, had doors facing an open space to the north.¹⁷ Because successive rebuilding did not alter this fundamental plan, it is thought that use of the common area had become well established. An improving economy is suggested by storage pits found both inside and outside houses. Such pits were lined by alternating layers of leaves and nuts in order to keep most of the pit's contents dry, allowing cupboard raids to expose only a little at a time.

Most of the house pits of Minabori contained Kurohama-type pottery belonging to the middle years of the Early Jōmon. These flat-bottomed pots were designed for cooking, and their new shapes made them more practical for indoor living on intensely used floors that were tamped hard. A short-lived spell of tempering the clay with small fibers – a practice that perhaps started in the Tōhoku and moved south – may have been connected with attempts to strengthen the walls of the pots when increasing their size and experimenting with flat bottoms. Heavy cord marking is typical, and before the Early Jōmon phase was over, Moroiso-type pottery appeared, bearing imprinted and incised decorative arcs and parallel lines made with the end of a small split bamboo stick.

Recent excavations at the Torihama shell mound in Mikata-chō of Fukui Prefecture point up hitherto unknown advances in the Early Jōmon.¹⁸ One of the rather few kitchen middens found on the west side of Japan, it lies beside the Hasu River in a laurel (*laurilignosa*) forest area dominated by oak. These excavations show that boars, deer, monkeys, raccoon-dogs, bear, serows, otters, martens, and badgers were hunted; several kinds of fish were caught; and a variety of freshwater shellfish, saltwater mollusks, clams, oysters, and ark shells were collected. Walnuts, hazelnuts, and acorns were also gathered. But of special interest are the bottle gourds (*Lagenaria siceraria*) and “green beans” (*Phaseolus* sp.) that were pea shaped and found in long narrow pods averaging eleven centimeters in length and thirteen beans to a pod. Many Japanese archaeologists regard both as cultivated plants, indeed suggesting that pollen changes indicate environmental alterations caused by clearing and that trees of foothill forests were cut and used for building materials, wooden tools, and firewood.¹⁹

17 Mikami Tsugio, ed., *Nihon no akebono*, (vol. 1 of *Zuzetsu Nihon no rekishi* (Tokyo: Shūeisha, 1974), pp. 106–7.

18 Toriyama Kaizuka kenkyū gurūpu, ed., *Toriyama kaizuka 1980 Nendo chōsa gaihō: Jōmon zenki wo shu to suru teishitsuchi iseki no chōsa gaihō*, 2 (Fukui-ken kyōiku iinkai, 1981).

19 Yasuda, “Prehistoric Environment,” p. 242.

Preserved remarkably well are ropes, reed baskets, and many wooden objects, including oars, boards, adzes, bows, and carved bowls and a comb which are the oldest pieces of lacquer ever found in Japan. Other innovations were polished stone axes, bone needles, and thimblelike bone rings. Vertically angled blades were changed to adz-shaped tools by the use of right-angled tree forks, probably for better hacking and digging of new forms of vegetation.²⁰

Torihama is no longer an isolated case. Gourd seeds have also been found in the Early and Latest Jōmon sites of Gifu and Saitama. The Middle Jōmon Idojiri “bread,” which has long defied analysis, is now thought to have contained some eight skins of beans. The Middle Jōmon Tsurune settlement site in Takayama City, Gifu Prefecture, yielded two carbonized beans (*Leguminosae*) that are reportedly similar to a cultivated continental Asian bean for which there was nothing comparable in Japan.²¹

The Middle Jōmon stage (ca. 3500–2400 B.C.)

The Middle Jōmon culture emerged rapidly in the central mountains of Japan around 3500 B.C., flourished for roughly a thousand years, and faded almost as rapidly. It was a warm stage with temperatures that slowly dropped but never declined to today’s average.

Explanations for this dramatic florescence of culture include different theories: that it was associated with the external introduction of domesticated root plants, that it was a product of an indigenous development of primitive agriculture, that it arose from an exploitation of rich nut crops on the southern slopes of the Yatsugatake Mountains, and that it was linked with an escape from the insufferable summer heat of the lowlands. It is likely that the introduction of yams and taro (said to have come from south China) and the application of plant manipulation techniques (including the transplanting of horse chestnut seedlings at lower areas) contributed to a population explosion.²² Yams (*yamanoimo*: *Dioscorea japonica*) and lily bulbs (*ubayuri*: *Cardiocrinum cordatum*) were cultivated for their starchy content and preserved for winter use. Starch was leached out in springs, and chunks were steamed on wicker trays in pots to make rolled bread (*koppepan*). Charred bread was unearthed in house no. 4 at Sori and in house

²⁰ Ibid., p. 203.

²¹ Reported by several participants at the Old Cultural Properties (Kobunkazai) Symposium in Nagoya (November 1979), sponsored by the Japanese Ministry of Education.

²² Esaka Teruya, *Nihon bunka no kigen* (Tokyo: Kōdansha, 1967), pp. 88–94.

no. 9 at Tōnai, at the Idojiri sites in Nagano Prefecture.²³ Horse chestnuts also produced large quantities of starch with relatively little effort. The proliferation of adz or axelike tools made of stone unfit for cutting trees, such as sandstone and slate, is taken as evidence of spading needed for cultivating starchy roots and bulbs.

The rise of an incipient agriculture would not have required the introduction of foreign flora. Long residence in an area could have led to the selection and some manipulation of root plants to improve yields. Escape from the heat is less facetious than it might at first appear to be. Resources were plentiful along the coast, but animal life was more abundant in marginal forest areas. Nagano Prefecture alone has 2,408 Middle Jōmon sites, many at altitudes of between eight hundred and twelve hundred meters. The average drop in temperature of one-half degree centigrade for every one hundred-meter increase in elevation would make a difference of four or five degrees between the mountains and the plain, certainly a difference that added considerable comfort. Animals avoided the steamy coastal heat, and people followed. Winters in the mountains were windy and cold, but seasonal trips to lower ground – made more practical with chunks of obsidian being used as a medium of exchange – were probably made.

The higher forest line in central Japan was an appropriate area for all nut crops. Acorns (chiefly *Quercus serrata*, *Q. mongolica*, *Q. acutissima*, and *Q. dentata*), walnuts (chiefly *Juglans sieboldiana*), chestnuts (*Castanea crenata*), and horse chestnuts or buckeyes (*Aesculus turbinata*) all were available in the Chūbu. Walnuts grew in northern zones; they had grown only in south Japan in the cold Earliest Jōmon. Chestnuts thrived in the north and in the Chūbu region, and acorns could be found on the east coast, in the Chūbu region, and toward the southwest.

The sequence of harvests in the overlapping central zone (horse chestnuts in early September, chestnuts in September to early October, acorns and walnuts in October and November) offered great advantages. Chestnuts were the most practical. They could be efficiently stored after they had been heated to kill the vermin, and dried, but like horse chestnuts, they are far inferior to walnuts and acorns in caloric value. Walnuts are the most nutritious but the least efficiently stored. Many species of oaks yield a variety of acorns. Nuts from evergreen, shiny-leaved oaks (especially *Cyclobalanopsis*) in west Japan can usually be eaten with little preparation, but those from deciduous

²³ Fujimori Eiichi, *Idojiri* (Tokyo: Chūōkōron bijutsu shuppan, 1966), pp. 139–42.

trees (especially *Q. mongolica*) in the east contain bitter tannic acid that needs to be leached out in running water for days or even months before they become edible.²⁴ This accounts for the location of many Middle Jōmon sites near springs. Supplementary foods included wild grapes, butterburr (*Petasites japonicus*) for the salinity of the flower buds, bracken or young fronds of eagle fern stalks (*Pteridium aquilinum*), kuzu vine (*Pueraria lobata*), an arrowroot starch, and several kinds of mushrooms. Meat was only nominally important in the Middle Jōmon because of the abundance of other foods.

Middle Jōmon sites frequently occupy thousands of square meters and include scores of house pits, many of which were rebuilt, frequently in overlapping locations. Few sites contain only one pottery type; most have several. The usual house was round, about six meters in diameter, with a floor forty to fifty centimeters below the surface. Five or six posts, each up to forty centimeters across and deeply sunk below the floor, supported a conical superstructure. Fireplaces were located in the middle, sometimes outlined with stones or provided with a bowl or pot. The hearth furnished light and warmth in the evening and became the center of family life around which developed, over the millennia, highly ritualized relationships.

Of the house pits of the Ubayama shell mound in Chiba Prefecture, one occupied 12.2 square meters and contained five skeletons, four adults and one child. Because the disarray of the bones rules out the possibility of burials, these persons must have died by accident or violence. Whether or not they were members of the same “family,” each had an average housing space of 2.45 square meters. Another house pit at a different site shows, by its extra postholes and shifted hearths, that it had been enlarged seven times, each addition averaging three square meters. From such information and the usual size of a Middle Jōmon house, it can be deduced that an average abode could comfortably accommodate five occupants. Judging from the pottery types, five to eight houses were normally in use at a given time.

Supporting posts were often repositioned, fireplaces relocated, and surrounding ditches redug, perhaps more frequently than natural deterioration required. Abrupt changes of fortune, such as disease, death, and poor harvests, might have been signals to move, as the spot would have been perceived to be ill fated and therefore to be vacated. But the area itself was usually too good to be abandoned. A ritual removal is exceptionally well attested to at Yosukeone (a branch site of Togariishi)

²⁴ Watanabe Makoto, *Jōmon jidai no shokubutsu shoku* (Tokyo: Yūzankaku, 1975), pp. 53–55.

in Nagano Prefecture, the site of a somewhat-larger-than-average community. Pits of twenty-eight houses have been uncovered. Some were rebuilt only a few meters away, using fireplace stones that matched holes left in earlier houses. Standing stones, figurines, and stone phalli of the second set of houses had been moved from the first. When the entire village was abandoned, the fireplace stones of only five houses remained in place.²⁵

Known Middle Jōmon sites numbered 10,893 in 1966, or 2.47 times that of Early Jōmon. Of these, 36.5 percent are in the Kantō region and 27.49 percent in the Chūbu, the highest ever recorded for the central mountainous belt. This belt, when joined with the western end of this transverse zone, contains 73.5 percent of the Middle Jōmon sites. The entire population of Japan at that time, estimated to have been 262,500, was much larger than at any other Jōmon stage. On the other hand, in the area extending from the Kinki to the southwest – the whole southern half of the country – can be found only 3.67 percent of all Middle Jōmon sites. They are very scarce in Shikoku. Kyushu continues to have relatively few: Earliest: 243 sites, Early: 233, and Middle: 221.

A more settled and leisurely life, with more mouths to feed, led to the making of large vessels that were often fluted. For the first time there was variety: upright pots for cooking and storage, large bowls for cooking, narrow-necked vessels for steaming foods, and cups for drinking. There were also lamps and other objects for ritual use. For pottery developed in the mountains during the early Middle Jōmon, coarse clay was used for thick walls and plastic decorations that included ridges, handles, and rim ornaments. In the latter half of the Middle Jōmon, potters turned to dense oblique cord marking.

Pottery of the early half of the Middle Jōmon is classified as Katsusaka (a site in Kanagawa Prefecture dug around 1926) and as Otamadai or Atamadai (a shell mound in Chiba Prefecture reported since about 1894). Pottery for the later half is known as Kasori E (a spot in the often-excavated Kasori shell mound in the same prefecture, dug especially since 1937). All were fired in the open at a relatively low temperature, with Katsusaka becoming burnt reddish, Otamadai dirt brownish, and Kasori E salmon orange.

In north Japan, pots followed the Early Jōmon tradition, having roughly cylindrical shapes and bearing heavy cord marking. In south Japan, they were rather nondescript. The Middle Jōmon people

²⁵ Tsuboi Kiyotari, ed., *Jōmon bunka ron*, vol. 1 of *Nihon rekishi* (Tokyo: Iwanami shoten, 1967), pp. 118–21.

avoided or failed to occupy the east side of Kyushu, and the volcanic activity of Mt. Aso in north Kyushu was then so violent that the area was too hazardous for habitation. Earliest Jōmon pottery of that area lies in a lower layer of volcanic ash, and Late and Latest pottery was found in an upper layer, with none for Middle Jōmon, indicating that Middle Jōmon people gave this area a wide berth.

Mountain dwellers made the more dramatic Katsusaka pottery and related types, whereas lowland and coastal dwellers produced the more modest Otamadai pottery and its subtypes. The latter extends from Tokyo to Lake Kasumigaura in Ibaragi and southern Fukushima. Some relationships apparently formed between the two, causing Katsusaka houses to contain many Otamadai fireplace bowls.

The trademark of Otamadai is pottery in which clay is tempered with phlogopite, a kind of mica found mainly in mountains north of Tokyo but also in clay and sand deposits along old streambeds in the Kantō region. The Otamadai pottery is widely distributed, despite the rather limited sources of mica, raising questions about production, sites, trade, the transportation of clay, distribution systems, and, of course, tribal relationships. As intriguing as these questions are – leading to speculation about intermarriage and dowries or gifts between tribal groups – their answers are currently little more than guesswork. This “fool’s gold” added a fine decorative element to Otamadai pots and also gave them greater functional value, for it produced a more heat-resistant clay that baked well and contracted less while drying.

The Katsusaka people, in contrast with the Otamadai, had a hyperactive subculture centered in Nagano Prefecture and diffused toward opposite coasts. Scores of sites are located by springs on the terraces and plateaus of the Yatsugatake Mountains along the eastern edge of the route to the obsidian sources in the Shinshū Mountains south of Lake Suwa. It was in these cooler mountains where the sturdy houses and indoor fireplaces were first constructed and from which they spread to the lower regions of Honshū.

Notable features of Katsusaka pottery are its many snake motifs and animal-like heads in rim decorations. These snakes are accepted as representing *mamushi*, the most poisonous snake on Japan’s main islands and one that prefers higher altitudes and cooler weather. Snake cults survive in several regions today, especially in mountainous areas and around Lake Suwa. The toxicity of the *mamushi* bite upsets mental faculties before death, and the Jōmon people, who must have known this, may have regarded the effects as a form of spirit possession. Just

the hibernation and skin shedding of snakes must have caused Katsusaka people to conclude that this creature was truly mystical. Pottery rim-heads with rodent-shaped faces, having slant eyes and sometimes harelips are found most frequently on steaming vessels. These faces may have been a protective symbol.

Clay figurines first appeared in Earliest Jōmon, but their number increased noticeably in Middle Jōmon, particularly in the mountains. Their faces are animal-like, and their bodies are upright with enlarged breasts and exaggerated buttocks. A few heads are crowned by a coiled snake, suggesting incipient snake-cult ceremonies performed by female shamans. Figurines and lamps are found together in houses too often to be coincidental, but how Jōmon people connected them is far from clear.

One fire-destroyed house at the large Hiraide site in Nagano Prefecture was set well apart from others, and it contained almost all the figurines recovered from that site.²⁶ Stylistically dissimilar and therefore not in the house of their maker or makers, the figurines were apparently abandoned in what may have been a polluted parturition house that was intentionally burned. The figurines may have afforded protection during childbirth, after which they were abandoned. Over a thousand were found at the unique ritual site of Shakadō in Yamanashi Prefecture, all in small pieces, where, it is believed, they were broken in order to effect cures.

Phallic stones appear in all sizes, from a few centimeters to two meters in height. When their original positions can be determined, they stood at the entrance to or on a kind of platform in the house. If inside they were usually accompanied by one or more figurines. The relationship between the two suggests a greater awareness of the role of males in the fertility process.

Clusters of ritual objects are rare, but pit dwelling no. 3 at Idojiri in Nagano must have been that of a group leader, either male or female. It contained all the ritual trappings of the time, as though this person either controlled or was involved in every aspect of the group's ceremonies: a lamp, a pot with a rim head, figurines, stone phalli, and a barrel-shaped vessel.

Early Middle Jōmon symbols found in the mountains were connected primarily with birth and regeneration, but those from the latter half of Middle Jōmon, found more frequently in the lowlands, seem to have been associated with the care of the dead. As the culture mel-

²⁶ Hiraide iseki chōsakai, *Hiraide* (Tokyo: Asahi shimbunsha, 1955), pp. 46–48, 151–3.

lowed and spread, people producing Kasori E pottery buried “placenta pots” under entrances to their houses and used large inverted pots for remains of the dead, chiefly those of children.

Placenta burial is ethnologically known to have been practiced in the Suwa region of Nagano.²⁷ However, the discovery of traces of an infant in a pot found in Miyagidai of Suwa City supports the claim that such pots were used primarily as burial jars. The practice of burying remains in inverted pots spread from the mountains into the Kantō and, before the end of Middle Jōmon, as far north as Morioka in Akita Prefecture. Such pots have no bases or have holes drilled in their bottoms, as though ritually “killed” and made unfit for any other use. At inland sites the remains of adults may have been placed in enlarged postholes of abandoned house pits located on the fringe of a village. Location no. 7 of the International Christian University site (in Mitaka City of metropolitan Tokyo) had impractically large postholes in two house pits. The floors of these houses were heaped with broken pots and other debris, apparently disposed of there by the villagers. On the floors of the houses are sometimes found scores of chipped stone axes or adzes made of materials ranging from slate or sandstone to the harder andesite and hornfels. Over three hundred have been recorded for the floor of a single house, suggesting a great deal of breakage and replacement. Most retain a cortex, that is, a part of the original water-worn surface.

Arrowheads are chiefly of obsidian or chert in V or triangular shapes. They are rather small in the Chūbu and Kantō areas but somewhat larger in Tōhoku and southern Hokkaidō. The stone spoon (*ishisaji*) is a small stemmed knife that perhaps originated in the north during Earliest Jōmon. By Middle Jōmon it had become larger and was often made of poorer stone. At first, the knife was perhaps used as a scraper and cutter of skin and meat, but by the Middle Jōmon it may also have become a reaper or peeler.²⁸ Hammers and grinding stones for cracking and pulverizing nuts are common.

The effort expended in digging the ground, cutting trees, and preparing food produced sturdy physiques, and as people’s muscles enlarged, so did the bones to sustain them. Hard manual work, such as kneading clay for making pots, pounding and grinding nuts and starchy plants, was done by women. This exercise lengthened their clavicles (collarbones). But the heavier work and other activity that

27 Fujimori Eiichi, *Jōmon no sekai* (Tokyo: Kōdansha, 1969), p. 214.

28 Fujimori Eiichi, “Jomon chūki ni okeru ishijaji no kinōteki henka ni tsuite,” *Kōkōgaku zasshi* 49 (1963): 35–43.

resulted in broken bones took its toll on five times as many men as women.²⁹ Softer foods and improved tools spared teeth from the inordinate wear experienced by their ancestors, leaving men at this time with slightly better teeth than women, perhaps due to the latter's loss of calcium during pregnancy. Middle to Late Jōmon dentition shows a very high level of carbohydrate consumption.³⁰

Serious environmental deterioration began around 2400 B.C.³¹ Excessive rains for consecutive seasons ruined the nut crops and disheartened the populace, which had little choice but to go elsewhere. Most settled in the lower river valleys and near the coast, abandoning their montane practices and turning to seafood for basic diet. From a high of 2,995 sites in the Chūbu, the number plummeted to 918 in the Late Jōmon and to 250 in the Latest Jōmon.

The Late Jōmon stage (ca. 2400–1000 B.C.)

Such unsettled conditions characterized the early centuries of the Late Jōmon stage, as the search for adequate subsistence intensified. But the moves of people into other regions, which had begun several hundred years earlier, was the reverse of what had occurred at the beginning of the Middle Jōmon. Kasori E type pottery was therefore far more widely distributed than any type found in the earlier half of the Middle Jōmon, appearing in areas from the Kinki to southern Tōhoku. The total number of known sites throughout the country dropped by 39 percent, as the middle areas of Japan were depleted by emigrations to the Kinki, Chūgoku, Shikoku, and Kyushu. In south Japan the number of Middle Jōmon sites was low but more than doubled in Late Jōmon. There was a 10 percent increase in the north, where 27.23 percent of all Late Jōmon sites are located. Such mobility had the effect of eroding regional distinctions and mixing local traits. Cord marking, the trademark of Jōmon pottery, was finally introduced to Kyushu, and a special kind of decoration confined to zoned areas on the vessels, known as erased cord marking (*surikeshi jōmon*), was used all over the country, making it the most common of Jōmon pottery styles.

29 Tamotsu Ogata, "Physical Changes in Man During the Jomon Period of Japan in Accordance with the Climatic and Geological Alterations," in *Anthropology*, vol. 1 of *Proceedings of the Eighth International Congress of Anthropological and Ethnological Sciences* (Tokyo: Science Council of Japan, 1968), 95–97.

30 Christy G. Turner, II, "Dental Anthropological Indications of Agriculture Among Jomon People of Central Japan," *American Journal of Physical Anthropology* 51 (November 1979): 633.

31 Tsukada Matsuo, *Kafun wa kataru* (Tokyo: Iwanami shoten, 1974), pp. 177–8.

Coastal communities expanded, leaving the remains of many immense kitchen middens. One of the two Kasori shell mounds is 170 meters long, and the other 100. Middens are scattered around bays and major rivers, largely in north, east, and south Japan. A few have been found in such scattered areas as Hokkaido; on the Sanriku coast of north Honshū and Matsushima Bay; along the Tone, Ara, Tama, Tsurumi, Ōoka, Hanamizu, and Sagami rivers of the Kantō; in the Atsumi and Ise bays of the south Tōkai coast; along the Inland Sea; around the Ariake and Kagoshima bays of Kyushu; and on islands farther south. The generally rugged, beachless Japan Sea coast has very few middens. Rings on shells show that most of the clamming was done in early and late spring (65 percent) followed by late summer (15 percent). Larger fishhooks were used, and detachable barbed harpoon heads were developed in north Japan. Deep-sea fish, especially tuna (*maguro*) and bonito (*katsuo*) supplemented the supply of inshore fish. Porpoises, salmon, and trout were important food sources for the northern population. Dugout canoes, in some cases made by burning out logs, were about six meters long and paddled with one or more oars, aided by some kind of outrigger. Deer and boar bones are rather common in Late Jōmon sites, but gradually deer disappeared from northern areas, perhaps because of overhunting. Fewer boar bones are found in the Latest Jōmon sites. By and large, the acquisition of food had a seasonal cycle, beginning with clamming in the spring and continuing with fishing in the summer, nut gathering in the fall, and hunting in the winter.

Most Late Jōmon villages continued to be occupied into the Latest Jōmon phase. Their shallow pit houses have been hard to locate. In the Kantō, one or more in a group of about ten had floors that were paved with smooth stones. These appear to have been houses of shaman chiefs, as some contained phalli and abnormally shaped pots; but not all of these floors had holes for posts, and some may have been open places for communal rites.

In the Late Jōmon, chipped stone axes – profuse in the Middle Jōmon – virtually disappeared. There was less need for them in coastal areas, and food gathering elsewhere was more diversified. The few found are often not large, and some are pecked, ground, and polished. Most are broken. Arrowheads may be tanged and were used with a one-piece bow about a meter in length, a weapon thought to have had a range of between fifty and sixty meters. Because small points could not have been very effective against large creatures, they were probably tipped with alkaloid poison from the root of aconite

(ranunculaceous genus), a poison so deadly that only 0.4 grams is required to dispatch an animal weighing up to 50 kilograms (a small deer). Aconite grew throughout the country in cooler times; nowadays it is limited chiefly to north Japan, and its use has been declared illegal.

The rugged flamboyance of Middle Jōmon pottery was replaced by trim shapes and modest linear decoration in Late Jōmon. Pots, vases, bowls, ewers and a few bizarre shapes were now made in manageable sizes, all with thin walls of rather fine clay and, in contrast with those of the Middle Jōmon, with decorations that reveal an appreciation of shape. Somewhat more controlled firing produced a dirt brown color. Red paint was occasionally applied, for either decoration or waterproofing. Northern pieces were often polished. Zoned cord marking continued into Latest Jōmon, except in Kyushu where it was rapidly replaced by black polished walls of the Goryō type of pottery. Goryō is radically different, looking as though an effort was made to simulate metal. It is concentrated in central Kyushu, not in the north. Without clear Jōmon antecedents, it must reflect the influences of China's Black Pottery, introduced – as rice may have been – directly from the Chinese east coast. Kantō sites often yield vessels with mat marks on their bases, defined sharply enough to allow us to recognize many different weaves at a single site. Basketry was a developed but still unsystematized art, each maker evidently searching for the most satisfactory weave.

Clothes are thought to have been made from long narrow strips of mulberry bark removed from young trees. These supple strips were rendered more pliable by light pounding on a stone and woven into serviceable, long, sacklike vests. The straw rainwear cape worn until recently by farmers is a relic of this style.

Social development is reflected in the ritual use of open and centrally located spaces between houses, the emergence of the cemetery concept, and the construction of stone circles in north Japan. The Kainohana shell mound north of Matsudo City in Chiba Prefecture contained the discards of people from Middle through Latest Jōmon.³² At least thirty-five house pits have been identified. Among the shells is the usual selection of bones: those of turtles, whales, dolphins, monkeys, and birds. Fish bones are fewer than expected, considering the large number of net weights. Many ritual objects have been recovered from the site, mostly taken from the communal space of public use.

³² Bunkazai hogo iinkai, *Kainohana kaizuka* (Tokyo: Yoshikawa kōbunkan, 1973).

Such objects include eight stone phalli, thirteen stone swords (*sekiken*: shafts with an elliptical section narrowed to a blade along one edge), twenty-seven perforated clay disks, sixteen clay plaques, and sixteen clay figurines. Toward the end of the Latest Jōmon, a much smaller population seems to have used the space more intensively, as more of the ritual objects found there belong to this period.

Two houses – perhaps those of successive Late and Latest Jōmon shaman/chiefs – with Horinouchi and Angyō pottery, contained several ritual objects. One had three stone phalli, two figurines, one plaque, and four fragmentary stone swords, and the other had four figurines, two clay plaques, two perforated clay disks, and four chunks of stone swords.

Dozens of figurines are often recovered from large shell mounds, which probably means that by this time almost every household possessed one. Zoomorphisms of mountain types gave way to more obvious human features, as if interest in the fertility of nature as a whole had shifted to the fertility of humans. Several figures of north Japan are of persons in a squatting position, perhaps representing childbirth or flexed burials. Those may have been used for facilitating childbirth and simulating interments or as effigies for the exercise of sympathetic magic when attempting to cure a person's sickness.

The skeletal remains in many shell mounds are concentrated in "cemeteries," sometimes in pairs within a "reserved" area, such as that at Ebijima in Iwate Prefecture. By devoting a special area to burials, Late Jōmon people were isolating the dead, allowing the gap to be bridged by mediums who eventually drew the rational world of the living further away from the spirit world of the dead. This development is undoubtedly related in some way to an increasingly large number of skeletons painted with red ochre (evidence of secondary burials) and to a trend toward burial in a flexed position. Whether the paint was seen as a preservative or a simulation of blood (the substance of life), whether flexed positions suggested the completion of a life cycle, or whether a corpse was wrapped in order to prevent a return to life, considerable religious evolution is indicated. But flexed burials never became exclusive. Tsugumo had 179 skeletons, but after archaeological recording became more thorough, a precise tabulation of burial positions shows that 55 out of 57 were flexed. In the Latest Jōmon, the Yoshigo shell mound of Aichi where 307 burials were counted, 148 out of 161 in-place skeletons were flexed.³³ A majority lay in an easterly

³³ Bunkazai hogo iinkai, *Yoshigo kaizuka* (Tokyo: Yoshikawa kōbunkan, 1952).

direction. At both Tsugumo and Yoshigo, shell bracelets and clay earrings were associated with female skeletons, probably symbolizing social status.

Another ritual practice, for which a southern origin has been claimed even though it is found no farther south than the Inland Sea, was the removal and filing of teeth. This was done at an early age, apparently no later than the age of about fifteen, and about 70 percent of the total were males. The practice moved into the Tōkai, Kantō, and south Tōhoku from Early Jōmon onward, reaching a peak in Latest Jōmon. It was especially popular in the south Tōkai region. In about 20 individuals at the Ikawatsu shell mound in Aichi, the canines are usually missing and the incisors filed. At the Yoshigo shell mound, 114 out of 121 skeletons had some teeth knocked out, but only four had undergone filing, two men and two women. In no group of burials is the practice consistent, and in some shell mounds it is totally absent. Such inconsistencies are best explained by intermarriage between practicing and nonpracticing neighbors.

Late Jōmon inhabitants of north Japan left the remains of many sacred areas encircled with stones. Although the stones close to the surface have often been removed by farmers who saw them only as nuisances, over thirty such sites still exist. Stone placements are thought to have been connected somehow with the salmon-fishing season, and some with cemeteries as well. The most spectacular circles are at Ōyu in Akita Prefecture, where thousands of stones form two huge pairs of concentric circles about eighty meters apart.³⁴ Set between each pair are stones in the shape of a sundial, having one centrally upright stone with other stones radiating from it like the spokes of a wheel. These “sundial” circles have been given calendrical value. It is usually believed that whatever their use, the stones were brought from a river and put in place before the fishing season and that many dead were buried in rectangular pits within such stone rings. It may be assumed that people were drawn to the rings each year for seasonal rites. The ceremonial theory is reinforced by the lack of ordinary residences in that neighborhood and by the presence of Late Jōmon pottery that is small and of strange and nonutilitarian shapes.

Both signs of minor specialization in crafts and clearer forms of communication were now beginning to appear. Clusters of similar objects exceeding local needs, in various states of completion, or made of materials from distant places are the best evidence. For example,

34 Bunkazai hogo iinkai, *Ōyu-machi kanjō resseki* (Tokyo: Yoshikawa kōbunkan, 1953).

the Shōmyōji shell mound in Kanagawa Prefecture yielded far more fishhooks than would be expected for the size of that community, leading to the conclusion that fishhooks were made available to neighbors. Kainohana had tools of different kinds of stone from several, quite diverse sources. Elsewhere, pots for salt evaporation have been identified. Dried seafoods, including seaweed, from the coast must have been exchanged for obsidian and perhaps bone and horn artifacts from inland areas. Asphalt, used for repairing clay pots and figurines and for attaching spearheads and arrowheads, comes from only a few places in Akita, and yet objects touched with asphalt are distributed all over the Tōhoku region.

The Latest Jōmon stage (ca. 1000–300 B.C.)

The conventional view is that in south Japan, the Latest Jōmon period began around 1000 B.C. and ended in the third century B.C., at about the time that rice and perhaps metals were introduced. But discoveries of the last decade may force a revision of stages, especially in Kyushu where economic changes were beginning to occur. The north continued to have a large number of sites dating from the Latest Jōmon. A phenomenal 52.47 percent of Latest Jōmon sites are in the Tōhoku, whereas the Kantō – farther south – has an all-time low of 10.24 percent. From a countrywide total of 6,687 sites for Late Jōmon, the number dropped to 3,135 in Latest Jōmon. Life in the north was not uncomfortable during this fairly warm stage. The ample supply of horse chestnuts, chestnuts, and walnuts was augmented by deer, salmon, and other seafoods. Evidence of forest destruction around some sites suggests a dynamic balance between a gathering economy and a limited plant-manipulating one. Shell mounds on marshy and high-ground sites contain great quantities of finely fashioned small, polished, burnished, or lacquer-painted vessels, many demonstrating a ritual use. Each member of the family may have had his or her own cup or bowl. Other, usually larger, vessels were made for heavier domestic use. Figurines are numerous in both Kantō and Tōhoku sites, some being hollow and frequently in quite grotesque shapes. The well-known “goggle-eyed” type includes a few rather large examples.

The northern culture of this stage, including that of south Hokkaido (known as Kamegaoka after a site in northern Aomori Prefecture), is today thought to have contained the distinctive life-styles of these people whose pottery typology is that of the Ōbora shell mounds in the southeast corner of Iwate Prefecture. House pits are rarely found

there, and settlement plans are not clear. The dwellings may have been constructed on the surface with Ainu-style Y-fork posts and horizontally laid poles for floors and roofs.

Lacquer (*Rhus vernicifera*) was by now a specialized art. Applied to red ochre pigment on pottery and wood, it may have been used first for waterproofing, but its decorative potential was soon recognized, causing its value to rise. The low, damp sites have produced lacquer combs and baskets, most notably a ceremonial lacquered "sword." After the Jōmon period, preference was given to black lacquer.

Kyushu's population expanded considerably in consequence of Late Jōmon immigration. From the record low of 2.3 percent (221) of all Middle Jōmon sites, the proportion of Kyushu sites rose to 6.27 percent (419) in Late Jōmon and to 8.26 percent (261) in Latest Jōmon. Pressure on available resources mounted, and searches were initiated for additional sources of food. Interior Kantō was apparently on the verge of exhaustion, its floral replenishment too sluggish after ten thousand years. The region's larger Late Jōmon population seems to have been too much for it. But Kyushu's proximity to the continent was a major geographical asset.

Southwest Japan was then wet and cool. Rice (*Oryza sativa*) grain imprints have been noticed on Latest Jōmon pottery from eleven sites, eight of which are in Kyushu.³⁵ The first rice pollen was accompanied by a striking increase of weeds (*Artemisia*), the usual testimony to some forest reduction. There was no native rice, but rice pollen was much in evidence by about 500 B.C., accompanied by Yūsu-type pottery. There is now good evidence for advances beyond what had been assumed. The discovery in 1978 of scores of footprints in a rice paddy at the Itazuke site in Fukuoka, at a level associated with Yūsu pottery, requires a reevaluation of this Jōmon stage and perhaps a different beginning point for the Yayoi period, if not a redefinition of Yayoi culture. These footprints were made by a man, a woman, and a seven- or eight-year-old child working in a slushy-bottomed rice paddy that had been drained and dried out before being buried by later soil deposits. The big toes in these prints project at a sharp angle, unlike those of any known Japanese feet. The failure to wear slippers or shoes does not explain their grotesque shape, which might have been caused if clogs with thick, wedge-shaped thongs had been used almost as soon as a child could walk.

A good case has been made for the light cultivation of native millet,

35 Satō Toshiya, *Nihon no kodai mai* (Tokyo: Yūzankaku, 1971), pp. 77–80.

hardy grain *Gramineae* plants called *hie* (*Echinochloa frumentacea*) and *awa* (*Setaria italica*). Barley (*Hordeum*) is also identified with the Latest Jōmon period, and shortly after Itazuke (the important transitional Jōmon-to-Yayoi site) in Fukuoka Prefecture, a modest amount of wheat (*Triticum*) was being grown.³⁶

The Jōmon people were once identified with the Ainu, now occupying parts of Hokkaido and often regarded as having northern caucasoid connections. This view has been revised somewhat, and archaeologists now consider only the Latest Jōmon culture of the north as Ainu, who can probably be associated with the historic Ezo or Emishi, people who first appeared in Japanese literature as settlers in scattered pockets. As a group, they were seen as a threat to Japanese expansion only in the north. After a century of warfare, they slowly fell back, having suffered a disastrous defeat at the hands of Japanese armies toward the end of the eighth century. They remained in the Tōhoku region, according to much more recent historical records.

Archaeologically, the Ezo had many cultural features in common with the Japanese, but as they withdrew into Hokkaido, they remained at a hunting-and-gathering stage of development, although they may have made some major contributions to early Japanese thought, especially to views of the spirit world. Nonetheless, the Japanese ignored them as long as Hokkaido was thought to be devoid of resources. The discovery of rich coal mines and a rice-growing potential radically changed that attitude in the nineteenth century, however.

The Ainu skeletons are distant from those of modern Japanese, but physical anthropologists regard the Jōmon population as osteologically rather close to the Hokkaido Ainu and the upper Paleolithic Eurasian population.³⁷ It should be remembered that migrations into Japan came through two and sometimes three points of entry. There was relatively little mixing; otherwise the pottery typology would be less complex. Physical differences in the Jōmon period people were not very great and resulted primarily from improved nourishment and greater exercise, not from racial mixing. The skulls are almost brachy-

36 Kokawa Shōhei, "Shokubutsu-sei ibutsu ni yoru kodaijin no seikatsu to kankyō ni tsuite no kenkyū," *Shizenkagaku no shuhō ni yoru iseki kobunkazai no kenkyū*, 1976 Reports, B-5 (Tokyo: Kobunkazai kenkyūkai, 1977), pp. 1–13; Kotani Yoshinobu, "Implications of Cereal Grains from Uenoharu, Kumamoto," *Jinruigaku zasshi* 80 (June 1972): 159–62.

37 Ainu and "Japanese" can be differentiated by skeletal material. The Ainu were apparently one surviving group of various non-Japanese populations in pre-Yayoi Japan. See William W. Howells, "Cranio-metry and Multivariate Analysis: The Jomon Population of Japan," *Papers of the Peabody Museum of Archaeology and Ethnology, Harvard University* 57 (1966): 3, 36–38; Yamaguchi Bin, "Physical Anthropology of the Jomon Population," *Proceedings of the Thirty-first International Congress of Human Sciences in Asia and North Africa* 2 (1984): 927.

cranic after Middle Jōmon. Tsugumo and Yoshigo people had an average height of 157 to 158 centimeters, somewhat shorter than Hirasaka people. Some physical anthropologists tend to see much physical continuity from Jōmon to historical times, maintaining that the changes were of degree, not of kind. Never was a local population overwhelmed or supplanted by enough newcomers to cause distinctive change.³⁸

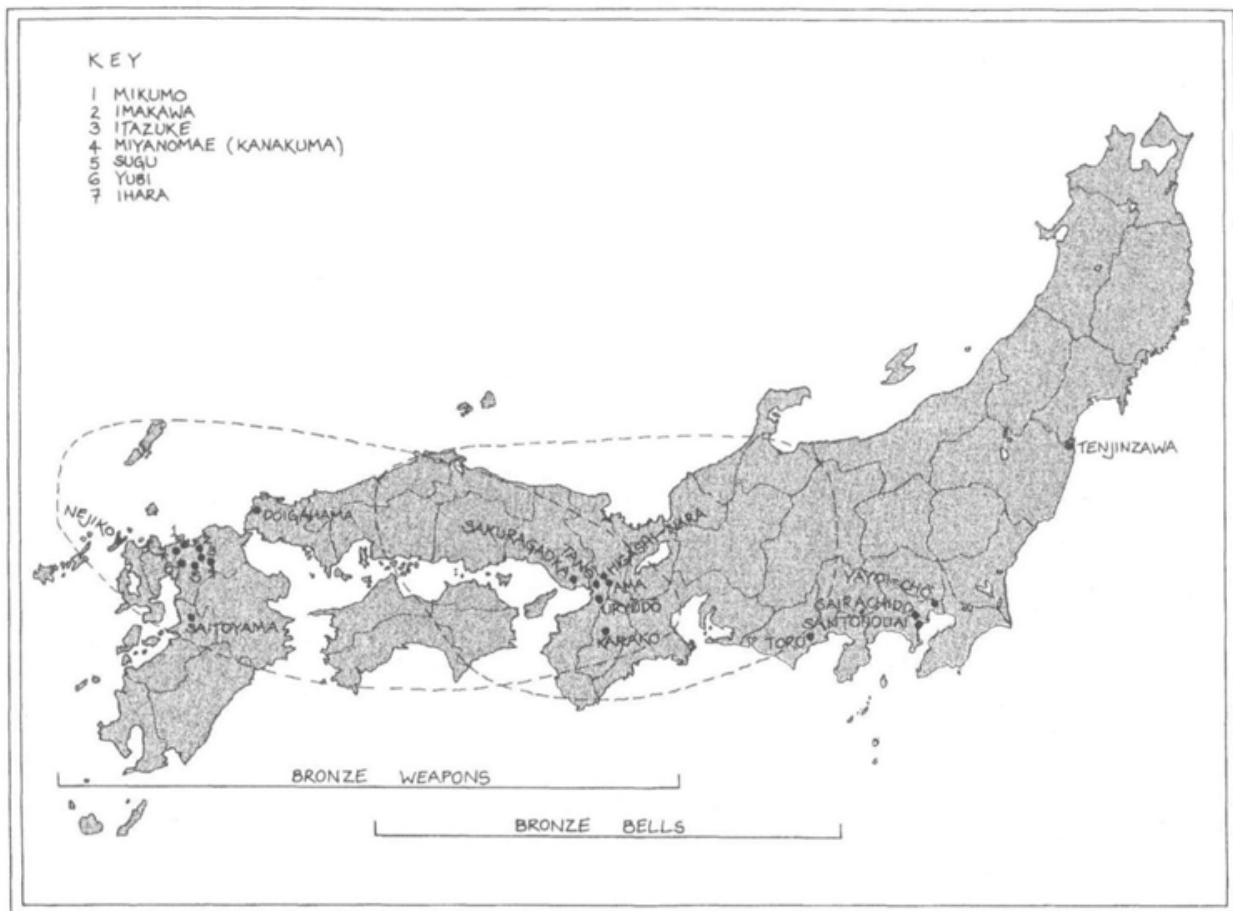
THE YAYOI PERIOD

Japan entered the civilized orbit of east Asia with the appearance of rice-growing villages and the use of iron near the beginning of what is known archaeologically as the Yayoi period. The Chinese referred to these agricultural islanders as Wo (J: Wa), long before the people apparently had a word for identifying themselves. China's interest in its neighbors to the northeast emerged from cultural curiosity and trading interests. Yayoi corresponds roughly to the Former and Later Han dynasties of China (206 B.C. to A.D. 220), although Yayoi began somewhat earlier and ended a century or more later.

The name *Yayoi* comes from Yayoi-chō, a northern section of the University of Tokyo campus. Late in the nineteenth century, an army firing range was situated opposite the back gate of the university overlooking the town of Nezu. The small Mukōgaoka shell mound lay just northwest of the range in a grassy area normally populated by rabbits and raccoon-dogs. Archaeologists excavated there several times. The first pot uncovered is listed in one of the digger's memoirs as a find of 1884. But the Yayoi name of the area entered geography books somewhat later.

Initial study made it clear that Yayoi materials were not Jōmon, but more than half a century passed before these Yayoi finds were dated and their significance was recognized. A formal report was not made to the Archaeological Association until March 1, 1923, after a lapse of time that attests to the quandary that the findings created. For a long time the period even lacked a name. Neil Gordon Munro excavated another site to verify his suspicions regarding their distinctiveness. In his massive corpus *Prehistoric Japan* (1911), he called the period Intermediate and described its bronze bells and weapons in his Yamato section, associating them with later mounded tombs. The landmark discovery of Yayoi culture came in 1943 with the finding of and subsequent ambitious excavation of the Toro village site in south Shizuoka City. (See Map 1.2.)

³⁸ Suzuki Hisashi, *Hone* (Tokyo: Gakuseisha, 1960), pp. 51–68.



Map 1.2 Yayoi period sites and concentration areas of bronze weapons and bells.

As a result of such developments, this period – frequently referred to as the first stage of Japanese history – has become the subject of intensive historical study.

Speculation on the origins of the Yayoi culture has given rise to theories ranging from foreign invasion to indigenous development. Virtually all cultural features of the period were introduced from China and Korea through north Kyushu, and arrived at irregular intervals over hundreds of years. The Latest Jōmon sites in the Tsukushi area of Kyushu total only 106 (Nagasaki: 40, Saga: 16, Fukuoka: 50), but the number of Yayoi sites (within only five hundred years) rose sharply to 681 (252, 172, and 257, respectively). Eventually more Yayoi sites were found farther south (Kumamoto: 472, Kagoshima: 588, Miyazaki: 94) where rice did well under warmer conditions but where metal was virtually nonexistent. The three thousand or four thousand inhabitants associated with the 261 sites (scattered around the island of Kyushu) of the waning Jōmon centuries were not numerous enough to resist invasion.

One view of Yayoi culture that once caught the popular imagination – like the theory of a later “invasion” of Japan by horse riders – is that it is connected with the Hsu Fu naval expedition dispatched by Ch’in Shih-huang-ti in 219 B.C. to search for the Taoist isles of the immortals. This was an elaborately mounted and well-stocked expedition, lacking nothing, as the romanticized story goes. Hsu Fu reappeared some nine years later with a request for more bowmen, and his description of the islands he visited fits Japan. But iron and bronze did not arrive in Japan at the same time, not even as close as the nine years between the two visits. Even less likely is the introduction of rice by Hsu Fu, as his fleet departed from the Shantung coast, far north of the rice-growing areas of China.

The indigenous development theory, based on such ideas as the cultivation of wild-rice seeds that had drifted to Japan, can be disposed of in fewer lines. It presupposes a culture of considerable vigor, which is far from the case. The Jōmon culture of south Japan was debilitated, virtually exhausted. Desperation could not have led the people to domesticate nonexistent plants or to produce iron and bronze without technological tutoring. The “woman’s knife,” a continental reaper, was introduced, but surely not for harvesting domestic plants.

The beginnings of rice cultivation and metallurgy

Yayoi culture is complex because its earliest elements arrived from continental fringe areas where unsinicized cultures are harder to define. Other elements came from Korea and from areas where the Han dynasty had consolidated its control and established an intricate network of trade. Yayoi culture replaced that of the Jōmon in north Kyushu but did not supplant the people, adding depth to existing Jōmon traditions as it moved up the island of Honshu. In cooler areas fewer inhabitants felt that rice was essential to existence, especially because the effort required to grow rice was too great for the results achieved.

An accelerated pace of change on the continent hastened human displacement during the two centuries that followed the collapse of the Chou dynasty, the centralization of the Ch’in, and the empire building of the Han. Japan had always received its share of refugees and advantages from the violence of China’s dynastic upheavals. The establishment of commanderies in north Korea under the domination of Lolang in 108 B.C. placed Japan in touch with a major distribution center

of Chinese goods and, as long as Korea remained friendly, offered a port to port trip to China that was safer than crossing the open sea.

Local pottery typology, imported Chinese bronze mirrors, and associated Korean artifacts (such as stone replicas of daggers in both Korean and Japanese sites) help date Yayoi artifacts in Kyushu. Fragments of iron and bronze weapons, bronze mirrors, and spinning equipment of Former Han times (first and second centuries B.C.) allow us to place related finds in Early Yayoi. Later Han mirrors and other Chinese artifacts of the first century A.D., on the other hand, permit us to place related finds in the Middle Yayoi period, during which the Yayoi culture moved up the Inland Sea to the Kinki and Tōkai regions and beyond. The major period of Yayoi expansion into the Kantō and Tōhoku continued from Middle to Late Yayoi, with rice cultivation moving rapidly to more distant regions than was once thought. It was being cultivated in northern Tōhoku before the Yayoi period came to a close.

Early Yayoi Ongagawa types of pottery, named after a river in north-east Fukuoka Prefecture, are distributed in sites all the way from north Kyushu to the Inland Sea and the Kinki, reaching Shizuoka on the Tōkai coast. Beyond Shizuoka lay dense cryptomeria forests, which formed a rather strong deterrent to land clearance for farming and beyond which Jōmon traditions were deeply entrenched.

The Yūsu pottery, the Latest Jōmon type of north Kyushu, is difficult to separate from the earliest Yayoi type. Gradually the firing of Yayoi pottery became more standardized, and finished products took on a rather consistent reddish brown color. Every family seems to have filled its basic needs by making pots for cooking and storage, later on producing ritual stands and vessels. Storage pots are the trademark of Yayoi culture.

Excavations at several very large Yayoi period sites, usually made before constructing a highway or urban housing complex, have opened up new perspectives on the spread of rice cultivation and satellite villages, as well as on changing burial practices and the consolidation of tribal groups. The commonly held view that the Jōmon and Yayoi people sought out different environments because of different life-sustaining needs has been disputed as a result of finds at two large sites that contained both Jōmon and Yayoi remains: the Kusakari shell mound of Ichihara City in Chiba Prefecture, a site where a 100,000-square-meter area was excavated in 1983, disclosing 270 pit houses, of which 76 were Late Yayoi, with the remainder Jōmon, and the Higu-

chi Naijōkan community site of Tatsuno City in Nagano Prefecture where 133 pit dwellings were uncovered, 66 of which were Yayoi, with the remainder Jōmon (57), Burial Mound (2), and Heian (8).

Investigations made at two other large sites have produced valuable data on burial practices over a considerable length of time: (1) the Uenodaira site near Yamanashi City, which contained over 100 Yayoi graves, and (2) the Hattori site of Moriyama City in Shiga Prefecture, lying along the Noshū River, where an area of 360,000 square meters was excavated and yielded 360 graves, mostly dating from the Middle Yayoi.

In the Kantō and southern Tōhoku, as well as at a few sites in the Chūbu region, burial systems have been found that evolved in late Jōmon times and continued into the Middle Yayoi, when they were replaced by trenchlike burials grouped in squares. Human bones were squeezed into narrow-necked jars that were then placed in a ring inside round pits. The Tenjimmae site in Sakura in Chiba Prefecture has seven pits, six of which contained nine burial jars each. At the relatively small site at Izuruhara (684 square meters) in Sano in Tochigi Prefecture were found thirty-seven burial pits, some of which were filled with burial jars.

For the earliest stage of Japanese cultivation, rice growing had to have been introduced from some area in the temperate zone between about the thirtieth and thirty-fourth parallels, a zone that only touches south Korea. For Japan it can be traced to the Yangtze delta region, occupied during the Chou ascendancy by the Wu and Yueh kingdoms. Yueh had absorbed Wu by the late Chou and was in turn absorbed by the central state of Ch'u in 334 B.C. (Some of the phonetic elements of the Japanese language have been linked to the speech of this area.)

Rice was dried, sometimes toasted, and could be efficiently stored in compact spaces. But it was especially attractive to egg-laying moths. The later Yayoi people devised elevated storehouses to counter the humidity of summer rains and the predations of field mice. Carbonized rice and pots with rice imprints are not at all infrequent in Yayoi sites because of the toasting process. Toward the end of the period, many sites yield *tategine* (straight wooden pounding sticks shaped like elongated dumbbells) that were used for pulverizing grass to fertilize seedling beds.

Japanese rice is short grained, awned, and highly nutritious. The highest yield in the monsoon region comes from flooded paddy fields of transplanted seedlings. Kyushu and Chūgoku rice tended to be thicker grained than Tōkai and Kantō rice, due either to the existence

of a variety adapted to slightly cooler conditions in the east or to less sunshine during the growing season.³⁹

Paddy farming is the hallmark of Japanese agriculture, but rice production at first included both marsh and dry-field planting. In Kyushu and elsewhere, rice was only one of several food-production systems of the Early Yayoi period. A number of shell mounds of that stage have been found. Dwelling sites like Itazuke in Fukuoka have yielded shells and the bones of boar and deer. With the passage of time, Itazuke pollen becomes more frequently that of rice, water plants, and *pinus* and less often the forest pollen of chinkapin and oak. Pine always multiplied in the wake of much forest clearing. Other sites show comparable environmental change.⁴⁰

The first agricultural communities

Itazuke, the site of a substantial Yayoi community, is situated south of the present Fukuoka airport along the left bank of the Mikasa River. Artifacts have been surfacing in that area for about a century. Excavation at several places was started in the 1950s and has continued with increasing interest, once Itazuke was recognized as a threshold site of Yayoi culture.⁴¹ It was inhabited in Earliest Jōmon times, in the Latest Jōmon phase, and again in Early and Middle Yayoi. There are many pits for storage and burial, but none is positively for a dwelling. Surface dwellings may have been preferred, as depressed floors would have been too damp for comfort; thus no settlement pattern is revealed.

Much of the Itazuke pottery is marginally Latest Jōmon or Early Yayoi, with coarse surface scraping and notched ridges around the necks of vessels. Storage pots with lids, however, have distinctive Yayoi shapes. Wooden stakes were used to outline rice fields. A long, surrounding ditch has been identified as either a water supply system or a defensive moat. Cultivating was done with wooden rakes and hoes. Iron tools were essential to all woodworking, but as yet no iron scraps have been found. Stone lunate reapers with paired holes (the “woman’s knife”), roughly polished axes, and clay spindle whorls were the tools used in this new style of life, signs of economic and cultural advance.

In the north part of the Itazuke site, occupying an irregular area of slightly higher ground roughly forty by sixty meters in dimensions, lay

39 Satō, *Nihon no kodai mai*, p. 74. 40 Yasuda, “Prehistoric Environment,” p. 242.

41 Fukuoka-shi kyōiku iinkai, *Itazuke* (Fukuoka: Chūetsu Fukuoka kojō, 1976).

an isolated cemetery. It contained sixty-three jar burials and fifty rectangular pits, at least a dozen of which were obviously designed to accommodate wooden coffins. Thirty-seven of the jar burials are thought to have been for children and twenty-six for adults, the children usually in one jar and the adults in paired jars whose openings were sealed with clay. Most of the rectangular pits were oriented north and south, but either style might run in any direction.

Jar burials were extremely popular in Middle Yayoi and were at first laid horizontally, as at Itazuke. Later, and in order to counter the weight of the earth above, they were set at an angle and finally buried upright, mouths turned down. Bones painted red have been found at some sites but not at Itazuke. By Late Yayoi, simple pits for mat-wrapped bodies had become common. A two-stage burial system continued from Jōmon times onward. Cemeteries average about ten jars each in southwest Japan, but occasionally some were much larger. Yoshinogari in Saga had about two thousand. The Kanenokuma graveyard in Fukuoka contained 145 burial jars, both single and double, dating from Early to Late Yayoi. A small number of jar burials have been found in the Kinki, chiefly for the remains of children.

Some jars of the Middle Yayoi period, such as those at Sugu in Fukuoka, are enormous in size and are seen as products of quasi-commercial activity by specialized potters. In a few sites in north Kyushu, clustered jars were covered with immense stones in dolmen-like formations, apparently following a Korean practice. Stone cists in west Honshū, north Kyushu, and on the islands in the Korean strait are also of a type introduced from Korea. Though somewhat more pretentious than jars, they rarely contain grave goods.

Cemeteries with several kinds of burials reflect differences of age, status, sex, and ethnic background, or combinations thereof. Doigahama in Yamaguchi Prefecture is a case in point. Dating from the second half of Early Yayoi, it is variously said to have included 121, over 150, or more than 200 skeletons.⁴² The majority lay in extended positions with their heads pointing east. Five scattered stone cists were more or less in the middle of the cemetery and contained the skeletons of adults. Only these included burial goods – articles of jasper and shell ornaments. Some female skeletons found in cists lay at the feet of male skeletons, and one stone cist had been lengthened to accommo-

42 Patricia Hitchens, "Technical Studies on Materials from Yayoi Period Japan: Their Role in Archaeological Interpretation," *Asian Perspectives* 19 (1978): 159 (more than 150); Hiroshi Kanaseki and Makoto Sahara, "The Yayoi Period," *Asian Perspectives* 19 (1978): 24 (more than 200). Expanded digging since 1953 has revealed consistently more human remains.

date nine bodies. About sixty-nine men, twenty-eight women, and most of the children were buried in the cemetery to the east, and eleven men and thirteen women were placed to the north. Teeth mutilation was still extensively practiced. A recognizable degree of segregation is thought to indicate distinctions between blood relatives and outsiders married into the group, an idea supported by practices that have survived in western Japan until modern times.⁴³

Recent interest in a possible association of Yayoi burials with later mounded tombs, and in the origin of the latter, has focused attention on rectangular pits grouped in squares, now referred to as “square-moated graves.” Because these are more prominent in the Kinki, connections between the two forms of burial seem more likely there. At Ama and Uryūdō in Osaka, Saikachido in Kanagawa, and even in southern Tōhoku, communities buried some of their dead in rectangular pits, with the four sides paralleling those of a square mound surrounded by a ditch. A pit center may have been used initially for a single wooden coffin burial, but the usual form was that of a square outlined with bodies. Rather deep burials left few visible surface traces, but what is known places them closer to the Yayoi tradition of subsurface burial than to the later “hilltop” style of the early mounded tombs.

Objects found in or near jar burials of north Kyushu (*pi* of glass, Han mirrors, jade beads, bronze halberds and swords) are similar to goods put in Chinese graves of north Korea, except for the weapons. These were symbols of status and were, in all likelihood, personal treasures deposited in the graves of north Kyushu owners.

Large quantities of bronze objects were excavated from north Fukuoka sites as early as the eighteenth century: Ihara (1781–8), fifty mirrors; Mikumo (1822), thirty-five mirrors; and Sugu (1899), over twenty mirrors.⁴⁴ The Sugu material has been better preserved and is therefore better known. It includes bronze daggers, halberds, sandstone molds for weapons, jade objects, and burial jars. Such a concentration of wealth has aroused a great deal of speculation about this possibly being the location of Yamatai, the kingdom of Japan described by Chinese historians in the *Wei-chih* section on the country of Wo (Wa).

Such burial sites signify great cultural change. What may at first

43 Kanaseki and Sahara, “The Yayoi Period,” p. 25.

44 Shimada Sadahiko and Umehara Sueji, “Chikuzen Sugu shizen iseki no kenkyū,” *Kyōto teikoku daigaku bungakubu hōkōgaku kenkyū hōkoku* 11 (Kyoto: Kyōto teikoku daigaku, 1930), pp. 40–55.

have been little more than burials for settlements of shipwrecked fishermen became, by Middle Yayoi, communities of farmers with social elites or entrepreneurs owning and accumulating through trade certain status symbols that suggest a sharpened awareness of economic differences in an early step toward social stratification.

Two Late Jōmon sites in Kyushu – Obarushita and Ikada in Nagasaki Prefecture – have reportedly produced iron objects, but most archaeologists have been skeptical about the appearance of iron before Yayoi and have considered the bladelike items taken from the Early Yayoi Saitoyama site in Kumamoto Prefecture to be the oldest-known evidence of iron in Japan.⁴⁵ A more recent find of an iron sword lying at the side of a skeleton in a wooden coffin in the large cemetery of the Okamoto-chō, 4-chōme, site of Kasuga City, Fukuoka Prefecture, is at least as old. Both are thought to belong to the second century B.C. The Chinese people's experience with high-fired ceramics had led them to cast iron at temperatures over 1,300°C. This also was the method first used by the Japanese, although forging would have been far more suitable for their level of technological achievement. Most early Yayoi artifacts, of Chinese-style foundry-made iron, were probably items of trade, but after the Chinese began to forge iron in the Han dynasty – associated with their phenomenal military progress – the forging process reached Japan. Very little Early Yayoi iron has been found in Japan. A tabulation of Kyushu sites made in 1974 shows that a total of 157 Middle Yayoi iron items and 118 Late Yayoi ones have been found.⁴⁶ But iron is deceptive. Unlike bronze, its deterioration is extremely rapid under the moist conditions of Japan, and given a prolonged period of erosion, much of it may have disappeared.

The argument that most iron goods were objects of trade is based on the observation that the greater the distance is from points of entry, the fewer iron objects will be found. But one suspects that the phenomenal increase from Early to Middle Yayoi cannot be explained simply in terms of trade with Chinese colonies. The more extensive use of native ore for forging iron must have been a primary factor. Iron axes, for example, were modeled on a finely developed continental style of stone axe that was by then being locally made. As their production increased, the number of stone axes decreased. The inevitable search for ore must have spurred a rather rapid expansion of rice

45 Mori Kōichi, ed., *Tetsu* (Tokyo: Shakai shisōsha, 1974), pp. 20–21.

46 Kubota Kurao, *Tetsu kō kogaku* (Tokyo: Yūzankaku, 1974), p. 59.

cultivation in new areas, and the digging of wells made it possible for innumerable branch communities to grow rice on higher ground. It is believed that even small and remote villages used iron tools.

Iron may have been imported from the “iron mountains” of Korea, but the Japanese may also have gathered limonite or iron sands from their own riverbeds. Local production occurred in at least two places in Kyushu: in Ōita Prefecture to the east and in Miyazaki Prefecture to the south, where primitive bloom furnaces appear to have been capable of refining about ten kilograms of iron at a time.⁴⁷

By Late Yayoi, and as far north as the Kantō, iron was used for such tools as plows, hoes, and sickles for farmers; axes, adzes, chisels, planes, scrapers, and gravers for carpenters; spearheads and fishhooks for fishermen; and arrowheads, spearheads, swords, and halberds for fighters. But only about fifteen pieces of iron have been discovered in Late Yayoi sites of the Kantō itself, where in the deepening conservatism of the north, cultural development was slow. And in the Tōhoku, only one piece has been found, a fishhook, in a shell mound on Matsushima Bay in Miyagi Prefecture.

Wooden tools and utensils were especially useful in the marshy fields of Yayoi times. The wood of cryptomeria (Japanese cedar) and oak was usually selected, but wooden objects in the Karako site of Nara Prefecture were made of cherry, mulberry, and zelkova. Apart from farming tools, which were later tipped with iron, pieces of looms, drills used in making fire, cups and bowls turned on a simple lathe, small pieces of furniture (such as weavers' stools), trimly carved and painted shields, wooden human effigies, and birds have been dug up. The body of a *koto*, an ancient stringed instrument, was unearthed at Kasuga City, Fukuoka Prefecture. *Geta*, large clogs used when transplanting young rice plants, were discovered at Toro but, surprisingly, no plow, although plows had appeared at earlier sites. One would expect that at least fragments of their wooden frames would have been preserved.

Craftsmanship was best in the Kinki. Pottery was sometimes painted; wooden cups, bowls and utensils were meticulously carved; and bronze bells superbly cast. A popular pattern in all Kinki arts was the *ryūsui* (flowing water), a series of parallel horizontal lines sweeping back and forth, combed on pottery and drawn in wide relief on wooden vessels and in thread relief on bells, evoking the impression of water. Imaginative writers have had a field day with the bells, some-

⁴⁷ Ibid., p. 61.

times identifying this motif with sympathetic magic meant to ensure adequate water for rice farming.

Yayoi pottery found north of Toro in Shizuoka Prefecture includes pieces with highly refined cord marking and red painted surfaces. That of north Honshū is almost as rich as northern Jōmon pottery is in its shape and variety of decoration, and it includes zoned cord marking that can easily be confused with the Late Jōmon style.

The traditional line of demarcation between north and south crosses south Tōkai. Rightly or wrongly, much is made of the different forest patterns on the opposite sides of the Ōi River: laurel to the west and cryptomeria to the east. Middle Yayoi sites along or near this line show a substantial increase in evergreen leaf trees and pine, which always do well in unenriched soil after deforestation, usually attributable to farming. On this line lies the Toro site of Shizuoka, where cord marking is first encountered on Yayoi pottery.

Developed Yayoi communities

Toro is the most intensively analyzed of the mature, relatively self-sufficient Yayoi agricultural communities.⁴⁸ The village, located along the Abe River, prospered until a catastrophic flood wiped it out, leaving the wooden debris of houses lined up in the direction of the flood's flow. No iron objects and almost no personal possessions of any worth have been found there, either because the villagers had ample warning or because they returned to recover their valuables. But iron tools had been used to shape the thousands of cryptomeria slats placed along the edges of the rice paddies and beside the paths.

Toro had a highly developed rice cultivation system for over fifty paddies occupying seventy thousand square meters (or about seventeen acres) with sluice-gated irrigation ditches and wells available when needed. The rice yield was too large for customary storage methods, and there was almost no pottery. Toro and a few other communities of that time and region constructed storehouses that were raised, windowless structures standing one to two meters above the ground and supported by six or more posts. Built with planks of regular shape and with floors, doors, and a structural style making it possible to include windows, these storehouses embodied the major architectural advances of the time, and their status value as resi-

48 Ōba Iwao, *Toro iseki kenkyū* (Tokyo: Ashikabi shobō, 1948); Nihon kōkogakkai, *Toro* (Tokyo: Mainichi shimbunsha, 1949); Komai Kazuchika, *Toro no iseki* (Tokyo: Shibundō, 1955).

dences was soon recognized. Individuals who could afford to build them lowered the floors for convenience but then had to suffer the discomfort of hearthless interiors during colder weather. Tribal leaders and/or shamans made them into palaces (*miya*), taking one step toward the earliest Shinto shrines (*gū*). Their architecture and names were apparently interchangeable, reflecting the dual role of secular-religious leaders.

Yayoi dwellings were sometimes erected over shallow pits – dug on higher ground to avoid wet floors – which were usually oval in shape (averaging six by eight meters) with four heavy posts set on sunken wooden plates for support in the soft soil. Many houses seem not to have had fireplaces, perhaps because of dampness. The style appears to have originated in south Japan during a period that was in any case warm. Houses in the southwest were usually square. Beams and slanted poles were covered with thatch and crowned by an *irimoya* roof with a flared section that served as a ventilator and sunshade. The interior was banked with earth at the foot of the wall, forming a surrounding bench supported by wooden slats and a dike for the outside ditch.

The community was almost fully collectivized. At Toro, numerous wooden tools were clustered on the floor of one house, suggesting public rather than private ownership. One storehouse served about five houses. Some Toro houses were so close together – no more than a meter apart – that grain had to be dried in a common area. A multiplying population certainly created a variety of social and political problems, arising especially from competition for suitable land and the control of water sources. Communities were subdivided into branches that settled in highlands where wells were dug. Some added considerable dry-land farming to rice growing. Millet, soybeans, red and broad beans, and peas were raised. Traces of barley and wheat, neither of which were native plants, have also been found. Peaches were introduced and became a major fruit. Silverberry seeds, musk melon, and wild grapes were available, and akebia vines were used for basketry.

The Chinese descriptions of Japan mention wars, and archaeological findings support the veracity of those descriptions. There was a stage of intense production of stone weapons, and the building of defensive villages, especially from the eastern Inland Sea to the Kinki. Hunting tools and then actual weapons were used in fighting. One person at Doigahama had apparently been killed by a stone arrowhead that had struck his skull, and a woman at Nejiko in Nagasaki Prefecture has a bronze arrowhead in hers. Several skeletons at Yoshinogari are com-

pletely headless. Villages were located over a hundred meters in altitude, higher than necessary for peaceful agricultural existence. This appeared to be a time of tightening tribal ties when friends were differentiated from enemies, a critical stage in the formation of power centers, especially in the Kinki.

One lightly fortified village, with a ditch around it, was located at Santonodai on the bluffs of Yokohama Bay, on a low plateau measuring approximately 110 meters from north to south and 80 meters from east to west.⁴⁹ Scores of houses were built and rebuilt there from the Middle Yayoi to the Yamato period, with numerous overlapping pits. The community must at times have been quite crowded. Rice was raised on the lowland near springs on the east side of the hill where water could easily be obtained and managed. Satellite villages were scattered about. Eight houses, loosely distributed over the plateau, apparently burned in one tragic day of destruction – by accident or hostile attack – leaving in their wake the exact size and format of a Middle Yayoi village. Seven house pits measured six to seven meters in diameter, but one was over ten meters across and contained large pots. The Late Yayoi houses here had storage pits inside them, and two large deep shafts had been dug at the edge of the site where villagers may have collectively stored their rice.

Local bronze production

Bronze and iron came to have the same patterns of use as on the continent: bronze as upper-class symbols of status and weapons of war, and iron as lower-class tools for manual labor and farming. Bronze casting required highly trained artisans and the supervision of a few production centers in order to ensure quality and controlled distribution. But iron could be made in “backyard furnaces” with only a little instruction. Consequently, bronze had greater ritual significance in the Yayoi period than at any other time in Japanese history.

A second- or third-century B.C. “winged” arrowhead, discovered in late 1979 at Imakawa in Fukushima, is probably the oldest bronze object found in Japan. Other Yayoi bronze categories were heirlooms, religious equipment, weapons, and decorative items that included Chinese mirrors, northeast Asian mirrors with geometric thread-relief patterns, dagger-swords, spearheads, halberds, sword ornaments, shield whorl ornaments, bracelets, coins, vessels, and horse bells. *Huo-chuan*

⁴⁹ Itō Nobuo, “Sumai,” in *Nihon no bijutsu* 38 (Tokyo: Shibundō, 1969), pp. 22–23.

(J: *kasen*) coins, bronze mirrors, vessels, and sword ornaments were not copied by the Japanese at the time, but daggers, socketed and tanged spearheads, halberds, and small horse bells were at first reproduced and then greatly enlarged as major religious symbols.

Yayoi bronze finds are concentrated in two geographical zones: weapons in north Kyushu and as far east as the middle Inland Sea; and bells in the eastern Inland Sea, the Kinki, and as far east as the southern Tōkai. The overlap in the Inland Sea is the first archaeological indication that this was the critical arena of conflict between Tsukushi tribes of the south and Kinki tribes of the east. The strategic Kibi region in between controlled the traffic of vital materials destined for the Kinki, making it necessary for any Kinki tribal leader interested in consolidating his position and expanding power to subjugate the Kibi, mollify its leaders, or resort to the use of diplomacy. An early emperor tried to control the Kibi area through intermarriage.

The earliest bronze swords and spearheads had probably been introduced by the first century B.C. and locally reproduced within the next hundred years, in all likelihood just in north Kyushu. Sandstone molds for weapons and bracelets have been found at several sites. One of the molds is a foreign one, probably brought in as a model. Immigrants were directly involved at first, as the technical level is not inferior to that of Korea. In time, local castings became progressively longer, wider, and thinner. Japanese-made weapons were rarely interred with the dead. But special deposits of several bronzes laid together horizontally have been found, sometimes in graded sizes and presumably buried at selected spots to ensure the fertility of crops and the protection of territory. If placating spirits of earth and harvest was intended, as is sometimes thought, these bronzes may have been periodically unearthed and reburied.

Bronze bells (*dōtaku*) represent very different technological problems and solutions to them. Small bells (*bataku*, or horse bells), not usually more than ten centimeters long, were first discovered in 1960 (three in Kasuga City sites in Fukuoka and one in a site in Usa City, Ōita) and were thought to have come from Korea.⁵⁰

Conventional views were based on the assumption that no bronze bells were cast in Kyushu, but this has been disproved by recent discoveries. Stone and clay fragments of molds for small bells – previously

⁵⁰ Takakura Hiroaki, "Kyūshū no dōtaku," in Kagawa Mitsuo, ed., *Usa: tairiku bunka no Nihon kodai-shi* (Tokyo: Yoshikawa kōbunkan, 1978), pp. 201–12.

found in the prefectures of Osaka, Kyoto and Hyogo – have recently been found in the Kyushu prefectures of Fukuoka and Saga. From the debris of a workshop site at Yasunagata in Tosu City, Saga Prefecture, came a fragment of a sandstone bell mold that had become discolored by use, two molds for bronze spearheads, and some copper slag and a small quantity of refined tin. The bell mold was for a Middle Yayoi bell about twenty centimeters high, of a type usually recovered from sites in prefectures along the eastern shores of the Inland Sea.

The earliest bells taken from Inland Sea sites are small (between twenty and twenty five centimeters high) and poorly made. Surface flaws resulting from unescaped gases were patched and smoothed. A small number, found only in Hiroshima and Okayama, bear elliptical, straight, and curved relief lines drawn in crude attempts to represent faces. Others from Hyōgo and Shimane are also very mediocre productions. It was not until about the second century A.D. that casters solved technical problems. The wall panels and flanges of these bells have pictorial or geometric patterns in sharp, linear relief. In the third century, bells became increasingly thin walled, tall, and slender. The thread-relief pictures were discontinued, and the decoration became more crisp and stereotyped, probably reflecting a slackening intensity of interest in ritual.

About 10 percent of the over four hundred known bronze bells bear small thread-relief pictures that, ranging from early randomly dispersed ones to later well-organized ones on panels, are remarkably graphic representations of mammals, birds, reptiles, amphibians, fish, insects, ecstatic shamans, storehouses, couples pounding rice, fishing, and hunting with a long bow and trained dogs. In sum they illustrate hunting, collecting, preparing and storing activities, perhaps as seasonal symbols used in ceremonies associated with planting and harvesting.

The discovery of identical bells has led to the assumption that most foundries existed in the Osaka–Nara area. The evidence for this is seen in bells that are clearly products of the same mold. For example, eight bells from widely scattered Kinki sites are thought to have been cast in the same mold. From five other sets of two or more bells from a single mold, at least one bell of each set was found in the Kinki. The recent discovery of a mold in Ibaraki City in Osaka Prefecture reinforces the view that foundries existed mainly in that area.

A few fragments of other molds have turned up by accident, but the Ibaraki one has a complete sandstone matrix for a Middle Yayoi style of bell 34 centimeters high. It was found with chunks of other bell

molds and with molds for casting curved beads (*magatama*), glass *magatama*, and mouthpieces for bellows. A possible sandstone source is about 30 kilometers away. Bells produced at Ibaraki have been found up to 150 kilometers distant, one in the prefecture of Kagawa on the island of Shikoku.⁵¹ Manufacture and distribution in the Kinki leads to further speculation that the increasing size and quantity of the bells were directly connected with the rising power of a dominant tribal group and that their distribution indicates the extent of the group's influence over other tribes.

Bells are usually found isolated on terraces or hillsides above fertile fields. Like weapons, they probably were ritually buried, doubtless with elaborate ceremony in order to ensure a good harvest. They have also been uncovered in caches of seven or eight or even more. The most impressive collection contains fourteen bells of different sizes and seven halberds – all found by chance in 1965 on a forested ridge at Sakuragaoka-chō above the city of Kobe. Two of the bells bear panels of relief figures. One is so unusual that it was quickly designated as a National Treasure.

Any question about the source of bronze ingredients brings up the *Shoku Nihongi's* reference to the discovery of copper in the Chichibu region of Musashi Province (now Saitama Prefecture), an event sufficiently important to warrant great celebration, and the adoption of Wadō (Japanese copper, or refined copper) for the name of the era that began in 708 and ended in 711. But if it is true that no copper was found locally before the early years of the eighth century, enormous logistics problems would have existed.

The recovery of hundreds of Yayoi bronze weapons and bells – and especially bronze mirrors, horse trappings, and other objects from later ancient tombs – indicates a massive circulation of bronze, of which only a small part is known today. Many of the bronzes thus accumulated were used for casting the late-sixth-century Buddhist statues, causing a great strain on the supply of metal, especially in the closing years of the seventh century when large temples were having monumental sixteen-foot bronze images made. Because this was after Japan was driven out of Korea in 663 and was forced to trade directly with China, most of the material may have been transported directly from China. All this suggests that long before Buddhist statues were cast, efficient barter and trade relationships had been established for stockpiling foreign bronze.

⁵¹ Tsuboi, *Jōmon bunka ron*, p. 161.

There seem to have been many sources for both raw and recycled material: the use of Chinese or Korean ore, or both; the importation of Chinese and/or Korean artifacts for melting down and recasting; a combination of raw and recycled material; and the exclusive use of Japanese ore. But the findings of research tend to rule out the last-mentioned source, leading scholars to accept the *Shoku Nihongi's* date for the discovery of copper. The current tendency is to favor the view that most of the material was obtained by acquiring Korean and Chinese bronzes and melting them down for recasting in desired forms. Because there was little change in the metal mixture once percentages for acceptable quality were determined, probably no more than one source of materials was exploited. No matter how the material was procured, an appropriate political setting had to exist or to be created.

The isotopic ratios of lead in fifty-three Japan-made bells, mirrors, arrowheads, and horse trappings of Yayoi and Burial Mound period artifacts have been compared with those of Chinese and Korean galenas (lead sulphide) in Former Han mirrors from north China, in Later Han and post-Han mirrors from central and south China, and in one so-called fine-line and off-center knob mirror from Korea.⁵² The tested bells were of all types and from different periods, ranging from early to late. They have a relatively uniform composition of 90 percent copper, 4 percent tin, 4 percent lead, and traces of other elements. Comparisons showed that the two oldest bells were recasts of Korean bronze artifacts, that thirty-three bells were of Chinese bronze dating from the Former Han and that eighteen were bronze dating from the Later Han.

Bronzes produced in Japan after 714 have only trace levels of lead, or 5 or more percent that was intentionally added. The twelve Japanese coins issued between 708 and 758 contain added lead, but the bronze epitaph of Ō no Yasumaro, compiler of the *Kojiki* who died in 723 and whose grave was accidentally discovered in 1979, has less than 1 percent – typical of bronzes made in Japan during and after the eighth century.

These discoveries have led to the conjecture that lead ingots were imported from China in order to supplement the lead recovered from recycling continental bronzes. Thus the volume of imported bronze materials was probably much larger than previously imagined.

52 Mabuchi Hisao, "Seidōki genryō wa umi o wattatekita," *Kagaku asahi* 12 (1985): 23–27; Yamazaki Kazuo, "Dōkyō, dōtaku nado seidōki no kagaku seibun," *Kōkogaku no shizen kagaku* 15 (1982): 13–21; Mabuchi Hisao and Hirao Yoshimitsu, "Namari dōi taihi kara mita dōtaku no genryō," *Kōkogaku zasshi* 68 (1982): 42–62, 168.

Further evidence that many imported bronzes were melted down can be obtained from studying the loss of tin content when imports were recast in Japan. An analysis of three Chinese mirrors and one Japanese copy shows that the Chinese mirrors are 20 percent tin but that the Japanese copy is 13 percent. Six Japanese bells of different periods proved to have a tin content of 12 percent or less, and tests on a spearhead showed that it had very little.

Shamans and chieftains

To understand Japan at this time, we must consider Chinese descriptions of the people of Wo (Wa), despite the long and heated debate over the original location of Yamatai that drew attention to errors of direction and distance. The Chinese authors of the *Wei chih* dated A.D. 297 described Hsieh-ma-t'ai – which the Japanese have usually called Yamatai – as the strongest of many “states,” “kingdoms,” or “countries.”⁵³ In earlier accounts Wo was described as having around one hundred countries, some thirty of which were known to be in direct contact with China. The Chinese inability to gauge distances on water, measured by travel days, produced a puzzle of overwhelming proportions. A host of theories concerning the location of Yamatai – first appearing in the Kamakura period – has clouded the information. Perhaps the confusion was not entirely unintended, as many of the descriptions are far from flattering, beginning with the one that accepts Wo (dwarfs) as the name of Japan.

The accounts provide valuable glimpses into the religious practices as well as the political and economic life of early Japan, and they supply strong testimony of social differentiation in the Late Yayoi period. Yamatai was victorious after years of warfare, and it was ruled by Himiko (or Pimiko), a female shaman of extraordinary power who was served by one thousand women and one man and guarded by one hundred men but was accessible only to her brother. Chinese histories state that she lived between A.D. 183 and 248.

These Chinese accounts report that in Japan the government collects “taxes”; marketplaces are centers of trade in each district; upper-class people are attended by others, a man of lower rank gets off the

53 For a translation, see Ryusaku Tsunoda and L. Carrington Goodrich, *Japan in the Chinese Dynastic Histories* (South Pasadena: P. D. and Ione Perkins, 1951), pp. 1–21. The most useful Japanese volume, a history of the study and encyclopedia of the topic, is by Yasumoto Biten, *Yamatai koku handobukku* (Tokyo: Kōdansha, 1987), which capsulizes the theories of 157 writers and lists 363 separate studies in the bibliography.

road and kneels to show his respect when meeting a man of higher rank; and men of status have four or five wives. They also state that the Japanese have several titles, for which there are no clear Chinese or Korean equivalents,⁵⁴ leading some scholars to accept this as impressive evidence for the uniqueness of the Japanese language at that time. Also, professional abstainers were said to have been employed. Unwashed and unshaved, they did such things as accompany ocean travelers in order to ensure the safety of their passage. If misfortune occurred, they were killed because of the belief that they had broken their vows. The Chinese accounts also report that the Wo ate with their hands and drank heavily. Divination was practiced by burning bones, mourning lasted for ten days, and burial was in a single coffin. The accounts say that political chaos followed Himiko's death and that an ineffectual male ruler had to be replaced by a thirteen-year old girl to keep the peace. Himiko was reportedly buried in a large mounded tomb, about one hundred meters in diameter, at which time one thousand male and female attendants were immolated.

As elsewhere, Chinese compilers of dynastic histories showed a fondness for large round numbers. Great distances were given in hundreds and thousands of *li* (a *li* was probably about one-sixth of a mile). To reach Yamatai, travelers leaving Tai-fang – the present Inchon on the west coast of Korea – sailed south and then across the strait by way of the islands of Tsushima and Iki to Matsuura, Ito, Na, and Fumi. These first “countries” of Japan were long ago identified as places in north Kyushu, but from there the trip to Yamatai required another ten days by sea and thirty by land. This revealing statement, plus the fact that land could be sighted during the island-hopping trip from Korea (and Kyushu was not that far away), would seem to make it unnecessary to give such an elaborate description of a place so close as Kyushu. In any event, despite all the arguments to the contrary, the description eliminates north Kyushu as the center of Wo. Hsieh-mat'ai (Yamatai) was probably a Chinese phonetic word for Yamato of central Japan.

The long and largely fruitless exercise of trying to locate Yamatai was inspired by the need to disassociate Himiko from the imperial line after it was realized that she could not be identified with “Empress” Jingū. Tokugawa historians wanted an unbroken, male genealogy that was more strictly defined than that delineated in the *Nihon shoki*,

⁵⁴ Ranging between two to four and graded. Each “country” has its own titles; Yamatai alone having four, a fact in itself that indicates a larger population and a more complex administrative system.

whose compilers were attempting to maximize the antiquity and authority of the Yamato line.

The existence of customs mentioned in Chinese accounts, such as scapulimancy, have been verified archaeologically by the discovery in several widely scattered Yayoi sites of bones bearing burnt pits. Wooden coffins were simple in Japan, whereas wealthy Chinese were buried in a box within a box. The Chinese claim that Japanese ate with their fingers was probably correct, as is suggested by the lack of chopsticks among the mass of wooden objects taken from Yayoi sites. The Japanese are also said to have grown plants and trees and to have made silk, linen, cotton, and hemp. Parts of wooden looms show that they wove cloth twenty to thirty centimeters wide, and fragments of such cloth have been recovered from wrapped human bones and bronze mirrors. Impressions on the bottoms of pots from several sites seem to be those of wild ramie fiber. The S-twisted warp weave had a warp of six to ten threads and a woof of eleven to twenty-four threads.

Social stratification is frequently alluded to in the Chinese records, as implied in the efforts of tribal leaders to secure territory and in the consequent collective and personal needs for maintaining power. The manufacture and use of bronze, and to a lesser extent the control of textile distribution, must have contributed to social stratification. Archaeological evidence provides strong support for this generalization, despite arguments that burial variations within a single cemetery reveal distinctions between foreigners and natives (which may still be social differentiation) or represent temporal change.

The Tanō site in Osaka demonstrates social grading. Amid vast debris of mostly Middle Yayoi pottery have been found pits of both small and large houses, the larger being associated with wooden coffins and the smaller ones with burial jars.⁵⁵ Most of the skeletons are of adult males lying in an extended position on their backs. Coffins located near large houses contained grave goods such as beads, bronze bracelets, and nonlocal jasper; one coffin was painted on the interior. Other burials contained nothing.

Considerable archaeological evidence points to trade – apart from that involving bronze weapons and bells – all over the country.⁵⁶ Some of the evidence is indirect but suggests trade in rice, cloth, iron, stone tools, wooden objects, salt, and other commodities and raw materials: rice in north Tōhoku sites where it is unlikely that rice was grown;

⁵⁵ Murakawa Yukihiro, *Tanō* (Tokyo: Gakuseisha, 1967), pp. 155–80.

⁵⁶ Peter Bleed, "The Yayoi Cultures of Japan," *Arctic Anthropology* 9, no. 2 (1972): 16–17, 20.

iron tools in sites where the local geology made iron production unlikely; and pots at places that produced more salt than the local people could use. The dispersal of more communities far from the coast where the Jōmon people had lived increased the demand for salt, and salt-producing sites have been identified.⁵⁷ North Kyushu has provided particularly strong evidence of trade in stone tools. From Early and Middle Yayoi onward, numerous rice reapers (women's knives) made at the Tateiwa site in Iizuka City (Fukuoka Prefecture) have been found in more than a dozen sites within a fifty-kilometer radius, whereas Tateiwa itself yielded twenty-six reapers, some unfinished. Polished stone axes made at Imayama in Nishi-ku of Fukuoka City are also widely distributed, many at a single site. Tateiwa and Imayama are about forty kilometers apart: Tateiwa is thirty kilometers up the Ongagawa River, and Imayama is at Imajuku on the coast. Many polished stone tools at Tenjinzawa in Fukushima Prefecture suggest that this was a production and distribution center. In the vicinity of the Uryūdō site of Higashi Osaka City (Osaka Prefecture), finished wooden tools have been found at sites on the plain and many roughed-out tools at the borders of forests, as though the latter was where people supplied the blocks and/or finished products for piedmont residents.⁵⁸ A male skeleton interred in a jar at Tateiwa had fourteen shell bracelets on his right arm, all made from semitropical and tropical shells, *Strombus latissimus* Linné, of the south Pacific area, the closest source of which is the Ryūkyū Islands.

It has been concluded that the fundamental Altaic characteristics of the Japanese language were already established by Yayoi times, having been brought by immigrants who passed through a sparsely occupied Korean peninsula during the neolithic period, well before the northern part of the peninsula was blocked off by Han expansion. Some secondary Malayo-Polynesian linguistic features had entered Japan from a southern coastal area. But the number of arrivals in Early Yayoi was apparently not enough to overwhelm the existing language, although there doubtless were modifications. If the fundamental characteristics of the Japanese language were Yayoi or more recent, far less effort would be required to trace their origins and connections. The small upper class of Middle and Late Yayoi – if that is what it was – probably had little effect on the language. Note that northern Korea did not adopt the

57 Yoshiro Kondo, "The Salt Industry in Ancient Japan," *Salt* (Essex: University of Essex, 1975), pp. 62–63: Yayoi period salt-manufacturing sites on the coasts of Okayama, Kagawa, Tokushima, and Wakayama prefectures.

58 Yasuda, "Prehistoric Environment," p. 235.

Chinese language despite centuries of Chinese rule. Divergences between Korean and Japanese must have been very great by the time of the fourth-century ruler Yūryaku. Indeed, interpreters were needed by Korean heads of *be* (saddlers, weavers, potters, and painters) when communicating with their craftsmen.

Evidence for the physical characteristics of the Yayoi people comes from about a thousand skeletons found in southwest Japan, mostly belonging to Early and Middle Yayoi periods when the jar-burial system (which provided the best conditions for preservation) was popular. No evidence of population displacement has been found in the physical remains of north Kyushu. Early Yayoi people in north and west Kyushu were taller by an average of two centimeters, but they were otherwise little different from their Jōmon predecessors. It is now known that the Early-to-Middle Yayoi people of northwest and south Kyushu were rather similar to the Tsugumo people of the Late Jōmon.⁵⁹ Not until the end of Yayoi was the impact of better nutrition and new genetic types felt. By that time, differences between Yayoi and Jōmon people had become clear. Their faces were then markedly flatter, beginning a slow trend toward mongoloid features that continued until the sixteenth century. The stature for males had increased to about 162 centimeters in the Early Yayoi but declined noticeably during the Middle Yayoi. Longevity, it is estimated, was by then one year longer. Like the Jōmon people, the Yayoi people were not homogeneous, but they were looking more alike by the end of the Yayoi period. On the whole, the weapons-burying people of the southwest tended to have long skulls, and those of the bell-burying people of the east were rounder.⁶⁰ Some nine thousand footprints of feet 23 to 25 centimeters long were found 3.5 meters below the surface of the Middle Yayoi Uryūdō site in Higashi Osaka City. The feet were 25 to 27 centimeters long at Itazuke. Even today the Kawachi people of central Japan are regarded as smaller than those of Kyushu. Nutrition had a greater effect on physical change than did new racial strains, although the latter must have been quite important. Indeed, the dramatic change in the size and height of the younger generation in Japan after World War II is likewise attributed to the availability of larger

59 Naito Yoshiatsu, "Seihoku Kyūshū shutsudo no Yayoi jidai jinkotsu," *Jinruigaku zasshi* 79 (1971): 246.

60 Kanaseki Takeo, "Yayoi jidaijin," in Wajima Seiichi, ed., *Yayoi jidai*, vol. 3 of *Nihon no kōkōgaku* (Tokyo: Kawade shobō, 1966), pp. 460–71; Nagai Masafumi and Sano Hajime, "The Ancient Inhabitants of Southwestern Japan," *Proceedings of the Eighth International Congress of Anthropological and Ethnological Sciences*, pp. 174–5.

amounts and greater varieties of more nutritious foods, not to foreign racial infusion. To a degree, the same can be said of the Yayoi people.

Koyama counted 10,624 Yayoi sites and calculated a total population of 601,500, almost 3.7 times that of the Latest Jōmon period. Continuous and long occupation of a site, as shown by evolving pottery types, indicates that the area was climatically stable and agriculturally advantageous. Intermittent and short occupancy was probably due to sudden or protracted weather changes that were extreme enough to force the inhabitants to leave. In some cases they seem to have returned, in others not. At the north Kyushu sites, occupation was relatively short, but the Kinki sites were occupied continuously for the longest periods of time, indicating that the environment there offered the greatest benefits and safety.⁶¹ It was thus in the Osaka–Nara area that the early rulers settled and maintained control until the capital cities of Nagaoka and Kyoto were built at the end of the eighth century. Even the later removal of capitals to other places did not destroy Nara’s image of stability and continuity.

Events of Middle-to-Late Yayoi – reflected in the stories of the first emperor (Kamu-yamato-ihare-biko no Mikoto, or Jimmu) – centered on the efforts of Yayoi chieftains to stake out claims to the best territory. According to the *Nihon shoki*, Jimmu and his followers battled their way from south Kyushu through the Inland Sea, overcame resistance in the Kibi region, and, unable to penetrate the Kinki defenses around Osaka, skirted the peninsula and entered from the lightly occupied east to settle finally in the lower Nara basin.

At every step of the way, especially at the most hopeless moments, Jimmu is said to have sought the advice of the kami and, after performing sacrifices and practicing abstinence, fought successfully. The literature makes it unmistakably clear that there was a blind reliance on shamans and that a tribal leader served as a medium between his people and the supernatural world. The Chinese accounts of shamans and wars, the Japanese description of leaders pushing east into occupied areas, and Late Yayoi archaeological evidence of the rise of a power center in the Kinki all present a convincing picture of the emergence of a strong tribal group in that area during the second and third centuries A.D.

Another region reconsidered in the light of recent archaeological finds is Izumo in western Japan. Apparently that region was occupied by a far stronger political group than archaeologists and historians

61 Kanaseki and Sahara, “The Yayoi Period,” p. 24.

have been willing to admit. According to the *Kojiki* and the *Nihon shoki*, the region was a bastion of resistance, a major stumbling block to outside control and therefore earmarked for subjugation. Modern scholars have tended to accept the Yamato view of Izumo, seeing it as something like a wretched netherworld to which obstreperous and unreconstructed individuals were properly exiled. Indeed, Yomi no Kuni, the land of the dead vividly described at the end of the famous Izanagi–Izanami myth, was traditionally identified with a cave on the Shimane coast. The hostility of the region evoked evil connotations that were then personified in Susa no Ō no Mikoto, the brother of the Sun Goddess who justified the righteous behavior of Yamato toward the villainous Izumo.

Since 1984, when a logging road was being constructed, Izumo suddenly rose high in the estimation of people when a cache of 358 bronze swords was uncovered at the Kōjindani site, which is more than the total number found elsewhere in Japan.⁶² Seven other sites in Shimane Prefecture had yielded only 16 bronze swords. The site also contained 16 bronze spears and 6 bronze bells. Kōjindani is a hillside site on the Hikawa plain, twenty-eight meters above sea level and six kilometers west of Lake Shinji. The southern plain is watered by the Hii River as it flows into Lake Shinji. The Great Izumo Shrine is fifteen kilometers away, and this area contains numerous ancient burial mounds.

All the Kōjindani swords are of the tanged type, measuring between fifty and fifty-three centimeters in length and so much alike that one suspects that they were produced locally. They were found in a hollowed-out oblong pit on the slope, aligned in four rows. A short row on the west had 34 swords, the points of which alternately faced in opposite directions. The next row of 11 swords were in a similar arrangement, with the exception of four at the south end that all pointed west. All the swords of the last two rows, one with 120 and the other with 93, pointed east. A thin layer of blackish brown organic soil lying directly over the swords appears to have been originally a cloth covering, and the postholes found there are thought to indicate a superstructure.

Susa no Ō no Mikoto's activities are first described in the mythological sequence that preceded earthly events. Because of his reprehensible behavior, he was ostracized from the Takamahara community of

⁶² Adachi Katsumi, "Shimane-ken Kōjindani iseki dōken hakkutsu chōsa gaihō, *Kōkogaku zasshi* 70 (1984): 1–8, 144.

kami and forced to descend to the bank of the Hii River. He established himself there as the ruler of Izumo by slaying an eight-headed serpent, the symbol of evil. From him was descended Ōkuni Nushi, who was the chief protagonist of the Sun Goddess's descendants and had to be brought to terms before Yamato could establish control over the Eight Island Country.

Ōkuni Nushi is a kami with many local manifestations. In the Nara basin he is Ōmono Nushi; in the Tokyo area Ōkunitama no Kami. He is also known as Yachihoko no Kami, or the kami of eight thousand spears. All of the weapon-connected myths are of Yayoi origin. Ōkuni Nushi was pacified through a negotiated arrangement by which he was established in a large palace with a generous income, in exchange for his agreement to withdraw from political affairs. Thereafter, according to the *Nihon shoki*, the Izumo rulers were responsible for the conduct of religious affairs, and the Yamato rulers took care of political affairs.

Later writers continued to associate the area with distinctive local customs and gave it deferential treatment. One legacy lingered on into historical times, a penalty not required of other leaders from other regions: that when appearing at court, the governor of Izumo had to swear a special oath of allegiance. The Izumo Shrine continued, however, to be an important shrine throughout the Nara and Heian periods, a visible reminder that the region had once held a position of great influence. After 1248, the shrine was rebuilt on a much smaller scale but was again enlarged somewhat in 1667.

At first glance, the Izumo region would appear too geographically remote to constitute a threat to more centrally located political groups. But apparently this was not the case. Direct trade with Korea may have accounted for its unusual accumulation of wealth. Whatever the reason, the fears reflected by Yamato rulers were not unfounded. Izumo was a formidable political unit that successfully hoarded its resources, and the area was better protected than was the Yamato basin's low hills and open plain.

Another center was Tsukushi, the large lowland portion of north Kyushu, where most of the early myths are set. The sun spear (*hiboko*), figuring prominently in these myths, was undoubtedly a special spear used by the bronze spear-honoring, male-dominated Tsukushi clan group that had amassed great power and expanded eastward toward central Japan. According to the recorded myths, the sun spear (instrumental in creating the Eight Island Country of Japan), was a grass-wrapped weapon used in luring the Sun Goddess

from her cave and in subduing the Izumo region. But as the bronze-spear people of Tsukushi entered the Kinki area, bronze bells and later bronze mirrors – not spears – became their major religious symbols. The matriarchal tradition of the east was taken over by the new arrivals among whom male chieftains were dominant.

Long experience with female shamans in the east had fostered the practice of venerating a female kami as the chief deity, but this early eastern tradition was altered by later chronicle compilers who were intent on sanctifying male-ruler descent. Some nine rulers before Sujin were apparently fabricated in order to enhance the male line with antiquity and seniority. Accounts of these reigns contain no verifiable historical evidence. Still, by the time the *Kojiki* and *Nihon shoki* were compiled, the idea of the state's highest kami being a female was not considered contradictory, possibly because of the influence exerted by strong empresses.

Mimaki-iri-biko-inie no Mikoto (later called Sujin), the tenth ruler in the official chronology who died in A.D. 258 or 318, was probably the first major Yamato ruler. The *Kojiki* says that he “first ruled the land.”⁶³ Sujin established a male-centered, quasi-religious pattern of rule that was characteristic of the end of the Yayoi period and the beginning of the Yamato period. One particular tumulus located south of the city of Tenri and identified as that of Sujin is the first imperial tomb to have a keyhole shape and other features of the late third- and early fourth-century A.D. tomb style.

In reviewing early stages of human life on the Japanese islands before the introduction of rice agriculture around 300 B.C., one first notes the claims of archaeologists that a Lower Paleolithic culture existed in northern Japan before 35,000 B.C. and as early as 180,000 years ago. But more research is needed before such claims can be accepted. Additional evidence is also required by those who are trying to push back the dissolution of land bridges to earlier millennia and by those advancing the theory that water craft were used to reach Japan in Lower Paleolithic times.

But Upper Paleolithic culture, beginning about thirty thousand years ago and lasting for about twenty thousand years, was widespread throughout most of the country and regionally different. This was succeeded by the Mesolithic (*Sōsō-ki*) period, in which pottery

63 Donald L. Philippi, trans., *Kojiki* (Princeton, N.J.: Princeton University Press, and Tokyo: University of Tokyo Press, 1968), p. 208.

appeared and the bow and arrow were invented. The Earliest Jōmon (Sō-ki) period introduced the Jōmon way of life with the discovery of coastal seafoods and the formation of shell mounds.

The Early Jōmon period (after about 7500 B.C.) was marked by rising temperatures and a phenomenal population increase. In the Middle Jōmon period, large settlements appeared in eastern and central regions, thriving on nut crops, starchy root vegetables, and the meat of wild boar and deer. Toward the end of the Middle Jōmon, natural calamities disrupted established ways of obtaining food, forcing most inhabitants to leave the central mountains. Climatic instability was then accompanied by a rapid population decline. Some Late Jōmon sites contain a preponderance of ritual remains, suggesting that people under stress were turning to ritual and ceremony. By the end of the Jōmon period the population was reduced to almost half its maximum size and was widely scattered, the largest communities continuing to exist in the north. These developments are commonly attributed to environmental exhaustion and slow flora and fauna replenishment.

As early as the Late Jōmon (from about 1000 to 300 B.C.), rice was being cultivated in northern Kyushu and, before the period came to a close, in areas as far north as the Tōhoku. The spread of wet-rice agriculture early in the Yayoi period (around 300 B.C.) was linked, by the second century B.C., with the introduction and use of iron and bronze. After that, small Jōmon communities in northern Kyushu were absorbed or displaced by Yayoi immigrants from south Korea and east China who were physically larger than the Jōmon people (who are now thought to be closely related to the Ainu). Yayoi immigrants built moated villages with watchtowers, imported bronze weapons and mirrors, as well as iron weapons and tools, and formed tribal alliances with mechanisms of control described as small kingdoms. Both Chinese accounts and archaeological finds indicate that these kingdoms fought among themselves over land and access to water and metallic ore.

Eventually some of their shaman leaders, utilizing both military and ceremonial power, established federated kingdoms in northern Kyushu, along the Inland Sea, and as far east as the Kinai and Izumo. Those in western Japan were strongly influenced by continental cultures and made much ritual use of bronze weapons and mirrors, whereas those farther east – less influenced by the original Yayoi immigrants – favored the ritual use of bronze bells. Large Yayoi communities also emerged in the Kantō employing little bronze or iron,

yet organized their social life around the cultivation of rice. The strongest federation, located in the Nara basin of central Japan, subsequently developed into the Yamato state, whose leaders figured prominently in the history of Japan and buried their predecessors in huge mounds (*kofun*.)