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The Archaeology of Weapons Burials in Ancient Japan

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Keywords: weapons burials / warfare / mortuary archaeology / state formation

Introduction

The study of weapons burials has the potential to reveal a great deal about warfare, ideology, and social structure, and the field of archaeology is well-suited to providing the data necessary for such inquiries. Unfortunately, warfare and military organizations rarely leave significant enough a material trace for direct analysis; archaeologists must therefore rely on data from settlements and burials for inference.

The Japanese case is particularly well-documented, supported by a significant number of development-led excavations per year. This abundance of archaeological data has led to the construction of detailed typochronologies of artifacts and pottery. In this paper, I will utilize this wealth of data to trace the development of weapons burials and the emergence of a warrior elite in the Japanese archipelago from the late 2nd century to the 5th century AD. Special attention has been paid to introducing Japanese research in order to promote comparative analysis.

Geographic and Temporal Setting

Located on the eastern edge of Eurasia, the Japanese archipelago is characterized by an isolation that has long positioned it as the beneficiary of considerable influence from the Chinese continent and Korean peninsula, while remaining more or less exempt from major influxes of outside groups.

The periods under question include the Yayoi and Kofun periods. The Yayoi

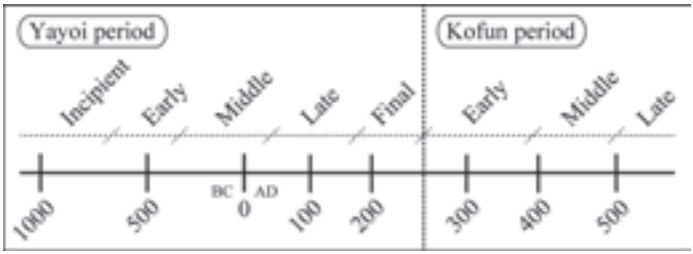

Fig. 1 Chronology of Yayoi and Kofun periods

period stretched from the first half of the 1st millennium BC[1)]to the mid-3rd century AD, and is characterized by the adoption of wet-rice agriculture and increased social complexity and interpersonal violence (Sahara, 2002, etc.). While iron was introduced to Kyushu after the 4th century BC, the majority of the archipelago can only be said to have entered the Iron Age from the 1st century AD.

The succeeding Kofun period stretched from the mid-3rd century to the early 7th century. These 350 years witnessed the construction of monumental keyhole-shaped mounded tombs or *kofun*. Stretching across most of the archipelago, these elite tombs share considerable similarity in structure and composition of burial goods. The distribution of these tombs has been interpreted as the extent of elites composing a cohesive sociopolitical network centered on the Kinai region, which was home to the paramount Yamato polity (Tsude, 1991, etc.).

During the Kofun period, social rank is believed to have been represented in tomb shape and size. Four main tomb shapes were constructed: keyhole with a rounded head; keyhole with a squared head; round; and square. The round keyhole tombs reached the greatest size and were equipped with the most extravagant burial goods, with the degree of burial wealth decreasing accordingly with tomb size and shape (in the above order). That sociopolitical ranking appears to have been materialized in the shape, size, and contents of these tombs has led Tsude Hiroshi to call the sociopolitical structure of the Kofun period the "Keyhole Tomb Order", which he has classified as an Early State (Tsude, 1991, etc.).

Others have categorized Kofun-period society as a chiefdom, complex chiefdom, or other similar formulation. While further treatment of these classifications is beyond the scope of this paper, a significant qualitative difference can be seen between the Yayoi and Kofun periods. The former was characterized by

regional blocs utilizing unique ritual symbols. It has been suggested that these blocs acted to hinder the formation of interregional exchange mechanisms. In contrast, the Kofun period was characterized by a shared elite mortuary culture interlocked within a system of long-distance exchange that relied on iron materials and finished products from the Korean peninsula (Matsugi, 2007, etc.). Between the Yayoi and Kofun periods, we can therefore trace the consolidation of various independent regional blocs into a new widespread polity centered on the Yamato administration of the Kinai region.

The Development of Weapons Burials: Problems of Methodology

Excluding the florescence in North Kyushu of jar burials equipped with bronze and iron weapons at the end of the 1st century BC, weapons burials did not become common until the second half of the 2nd century in Kyushu and North Kinki and not until the 3rd century across most of the archipelago. The extravagance of these weapons burials is generally correlated with tomb size and wealth of accompanying luxury goods.

Weapons burials reached their peak in the 5th century: Some of the most impressive examples include 24 iron cuirasses found from Kurohimeyama (Osaka), over 1612 iron arrowheads and 137 swords/spears from Ariyama (Osaka), over 740 iron arrowheads, 172 swords/spears, and 11 cuirasses from Nonaka (Osaka), and 472 iron arrowheads and 221 swords/spears from Igenoyama (Nara).

Curiously, many of these tombs have peculiar characteristics. For example, compared with the loose distribution of sword lengths seen in typical burials, certain mass depositions display strong uniformity in their lengths (Fig. 2). Additionally, many contain arrowheads of highly unique design compared with those of normal burials, suggesting that weapons burials cannot necessarily be understood at face value and the burial of hundreds to thousands of weapons in a single burial cannot necessarily be understood as reflecting considerable military power (Toyoshima, 2000a). Nevertheless, the development of a military organization is an important facet of state formation and demands consideration. A critical approach to these weapons burials is therefore required.

Setting aside such problematic mass deposits, even the inclusion of a small number of weapons in a typical inhumation must be addressed carefully. Hein-

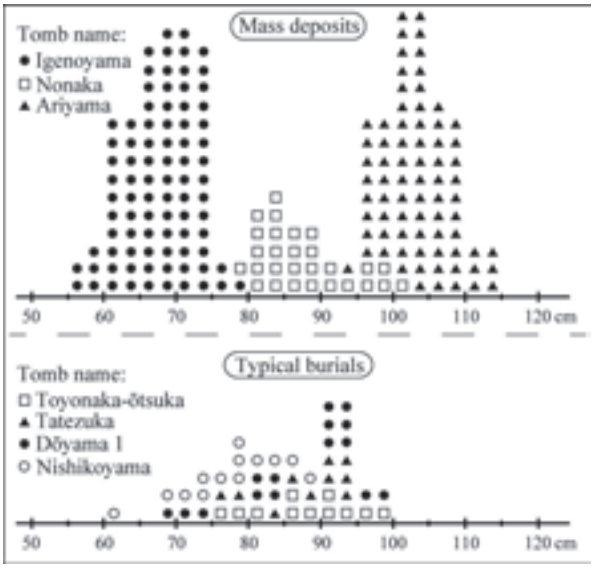

Fig. 2 Sword lengths from mass deposits and typical burials (after Toyoshima, 2000a)

rich Härke's research is instructive: 5th- to 7th-century Anglo-Saxon weapons burials were related more to status and burial extravagance than to actual combat experience; they are best viewed not as signifying the warrior profession, but rather the remains of mortuary ritual informed by martial ideology (Härke, 1990, etc.). This is a much-needed warning that various factors must be considered when interpreting the mortuary record. Such a careful approach is necessary when considering the case of Japan's Kofun period, where evidence of fortifications is lacking from the archaeological record and weapons burials are prominent.

Final Yayoi Period

Let us begin our analysis with the Final Yayoi period, from the late 2nd century through the first half of the 3rd century. The majority of tombs from this period held no weapons. The small number with weapons had either a sword or an arrowhead, but rarely both. During the early 3rd century, however, burials

that would develop into the elite tombs of the following Kofun period appeared with sets of swords, spears, and, often, numerous arrowheads. We can see a strong correlation between the emergent Kofun-style funerary ritual and the possession of a greater number of weapons in burial.

This transitional period witnessed change not only in the types of weapons, but also in their distribution. Toyoshima Naohiro's research on the organic handles of these iron weapons is instructive: during the Final Yayoi, (1) tanged spears equipped with composite shafts made from several pieces of wood carefully bound with string and painted with black lacquer; and (2) double-edged sword handles made from a single block of wood (rather than separate front and back pieces) appeared quite suddenly over a wide stretch of the western archipelago. This development marks a considerable decrease in regional variety

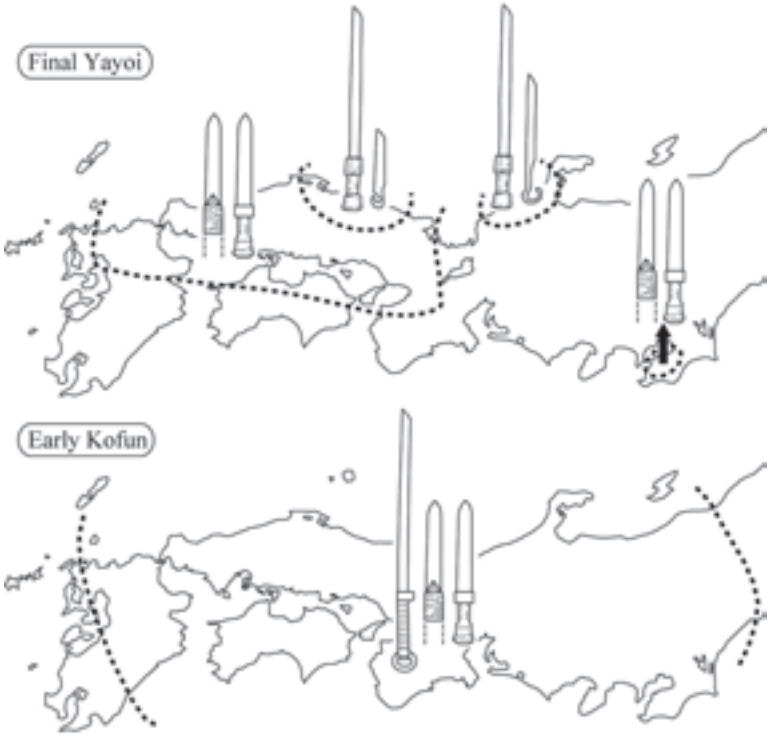

Fig. 3 Consolidation of regional characteristics of swords and spears (after Toyoshima, 2005)

(Toyoshima, 2005; Fig. 3, top).

A further addition to the weapons system of this period is the polyfaceted iron arrowhead (Fig. 4:3-4). Until then, arrowheads had consisted mostly of thin, chisel-cut examples. Attending considerable developments in ironworking (Murakami, 2007, etc.), these new arrowheads were made in complex shapes, bore a thick cross-section and multiple discrete faces, and had a well-defined shoulder between the head and the tang. Limited mostly to burials, their appearance signaled the development of weaponry imbued with a significant visual component (but not necessarily an increased practicality) shared between elites across the archipelago (Kawanishi, 1990; Matsugi, 2007).

During the Final Yayoi, multiple weapons began to appear in burials, presenting a significant development over the previous periods; while the appearance of several dozen iron or bronze arrowheads in a given burial merits attention, swords are normally limited to one or two, with examples of the latter most often a spear-and-sword combination. Weapons were often deposited inside the coffin next to the interred (Suzuki, 1996).

Early Kofun Period: The First Half

The Kofun period is here defined as beginning with the construction of the 280-meter-long keyhole-shaped Hashihaka in the southeastern Nara Basin in the Kinai region. Believed by some archaeologists to be the tomb of the Queen Himiko mentioned in the official Wei Chinese dynastic history, it is three and a half times longer than the preceding Hokenoyama (80m). Together with Chinese records of Himiko's international political activity, this monumental increase in size and the spread of similar keyhole tombs across a majority of the archipelago suggest a significant sociopolitical development from the Final Yayoi.

Turning to weapons, regional differences in sword handles almost completely disappeared accompanying archipelago-wide standardization (Fig. 3, bottom): the Yamato administration is believed to have gathered iron shock weapons into the Kinai region, where they equipped them with centrally produced handles and shafts and redistributed them back throughout the archipelago to subservient local elites (Toyoshima, 2005, 2010, etc.). This generally matches the political-economy strategy seen in other wealth items, as well.

The morphology of Early-Kofun weapons and handles can be traced back to the burgeoning supraregional elite mortuary culture of the Final Yayoi. The most significant difference, however, is found in quantity and method of burial. Burials of iron or bronze arrowheads and iron swords and tanged spears numbering several dozen (sometimes several hundred) became commonplace. While intra-coffin deposition was common during the Yayoi period, the new Kinai-style of weapons burial was characterized by extra-coffin deposition. In contrast, mirrors and other overtly ritual goods were buried inside, close to the body. This change in burial location of weapons can also be seen in wealthy tombs located far away from the Kinai region, suggesting a close connection between the acceptance of the new mortuary rituals and access to superior goods (Suzuki, 1996).

Suzuki (1996) demonstrated that a general correlation existed among keyhole tombs between tomb size and the number of deposited swords and iron arrowheads. By limiting his analysis to keyhole tombs, he was able to consider the possibility of specialization among similar levels of elites. While this general correlation between tomb length and number of weapons no doubt suggests a relationship between social rank and funerary extravagance, significant differences in weapons burials between tombs of comparable size suggest the existence of keyhole tombs with a strong martial character to their funerary rites and the existence of those without. Opinions are divided, however, over the process in which great numbers of weapons were deposited. While some posit the existence of military leaders commanding well-armed units (Sugaya, 1975), others have suggested that this may have resulted from funerary elaboration (Suzuki, 1996).

The nature of the elite prerogative to receive or commission weapons can also be understood through a comparison of iron arrowheads from settlements and those uncovered as burial goods (Fig. 4). As mentioned above, polyfaceted iron arrowheads are found almost solely from burials, while settlement finds continue to be of the same locally produced, technologically simple types seen previously. This gap between settlement and mortuary finds becomes all the more apparent during the Middle Kofun period, when even more advanced technology and peculiar morphology becomes prevalent (Fig. 5, right side). This stands in stark contrast to the almost universal possession of stone swords in the Kinai region around the 1st century BC (Teramae, 2010, pp.195-196). The Final

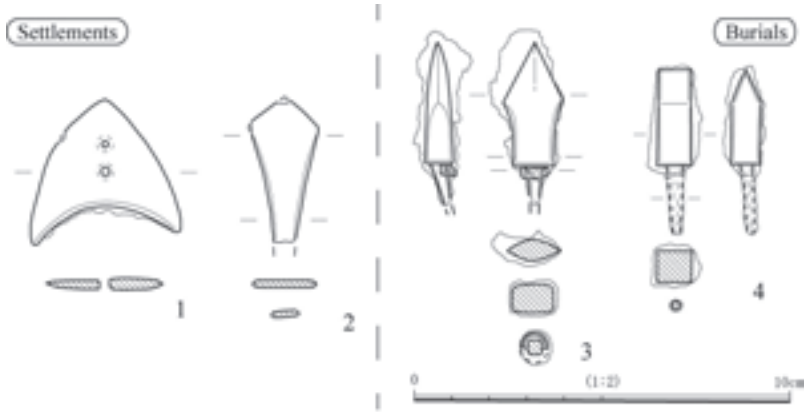

Fig. 4 Comparison of iron arrowheads from settlements and burials
(retraced from respective site reports)
1: Kotani SB14 (Yamaguchi); 2: Tsudera H99 (Okayama)
3: Motoinari (Kyoto); 4: Shinpōin'yama D2 (Shizuoka)

Yayoi thus represents the emergence and the Early Kofun the development of like-minded elites drawing upon martial imagery in their funerary rites.

This narrative can be further bolstered by looking at the iron lamellar helmets of this period. Although iron body armor does not appear until the first half of the 4th century, these iron helmets (14 examples) dating to the Early Kofun period were intimately tied to the political maneuverings of the central Yamato administration. While no contemporaneous examples have been found from the continent, they are morphologically similar to earlier Han Chinese examples (Hashimoto, 1996). Considering (1) the Chinese dynastic records of mid-3rd century diplomatic relations between Queen Himiko and her successor and the Chinese Wei and Western Jin courts and (2) the increase in single-edged ring-pommelled swords and Chinese-made bronze mirrors, it would seem likely that these iron lamellar helmets were also gifted from the Wei within the context of their geopolitical investiture system. The fact that the earliest examples of these helmets are found in the same burial assemblages as triangle-rimmed deity-and-beast mirrors (*sankakubuchi shinjūkyō*, hereafter "TR mirrors") also supports this assumption.

Turning to the nature of their deposition, these helmets were buried solely

in large keyhole tombs bearing extravagant ritual and military implements. We can infer that the central administration bestowed these politically and ritually charged wealth items to subservient elites throughout the archipelago. Participation in this new polity thus offered privileged access to superior goods and a greater number of weapons otherwise unavailable to the local elites, whose burials show no considerable difference from the preceding Yayoi period. Nevertheless, while weapons became a staple of elite burial assemblages, weaponry was only one component of the ritual whole, with various other types of ritual and wealth goods performing an equal if not greater role (Matsugi, 2007, etc.).

Early Kofun Period: The Second Half

From around the second quarter of the 4th century, numerous goods characteristic of the southeastern Korean peninsula began to appear in elite tombs. While the first half of the Early Kofun is characterized by wealth goods from the Wei and Western Jin, the second half is marked by those from the peninsula. The collapse of the Western Jin and the Lelang and Daifang commanderies in the early 4th century is believed to have played a seminal role in this transition (Fukunaga, 1998).

In other words, while the traditional elite had utilized the official backing of the Wei and Western Jin in securing domestic politics, the latter's collapse removed an important source of legitimation. This coincided with the end of TR mirror importation and the start of their domestic casting. However, as the Yamato administration was founded on its preferential access to foreign goods and their distribution to subservient elites, failure to perform this function very likely threatened its raison d'être (Fukunaga, 1998).

It was at this time that peninsular[2)] goods began appearing in insular elite tombs; additionally, increasing finds of insular wealth goods (such as tanged spears, polyfaceted iron arrowheads, arrowhead-shaped stone objects, bronze whirl decorations, and other items) from peninsular elite tombs imply that insular elites successfully forged alliances with polities in the southeastern peninsula, specifically Gaya. While imported peninsular wealth goods no doubt played an influential role domestically, it was the secure importation of iron materials that played an even more significant role and it was this desire for iron materials that

formed the backdrop of these newly formed alliances. As iron production was not achieved in the archipelago until the 6th century, iron materials to be processed into goods were procured through long-distance exchange with neighboring countries, specifically the southeastern Korean peninsula. Access to such iron materials was thus a significant source of power for these new elites.

Significant changes can also be seen in the weapons burials of this phase. From around the second quarter of the 4th century, iron armor appears in limited number (around 20 leather-laced cuirasses of two types). Typological considerations strongly suggest these were produced within the archipelago using technology from the peninsula (Hashimoto, 1996).[3)] Excluding one example, they are not found together with Chinese iron lamellar helmets. It is important to note that while lamellar helmets were only buried in large keyhole tombs, iron plate armor is found from a number of smaller keyhole, round, and square tombs, as well. This has been interpreted as signifying the rise of emergent elites with political ties to the peninsula, evidenced by the inclusion of cylindrical bronze ornaments, socketed spearheads, and other items. That TR mirrors are not a significant component of the plate-armor assemblage and the fact that these tombs are located outside traditional tomb groups confirm their emergent status. While large tombs from traditional groups are found with considerable deposits of a limited variety of weapon types, these emergent elites were equipped with a smaller overall number of a more varied assemblage. This has been interpreted as resulting from the requirements of a new type of military activity (Tanaka, 2013).

As mentioned above, insular desire for iron was a strong incentive for these elite to become politically invested in peninsular affairs. However, this was not the only driving force behind this relationship: Baekje and Gaya are believed to have relied on military assistance from the archipelago. Supplying superior technology and materials to the iron-poor archipelago would have worked in their favor, establishing a mutually beneficial relationship (Park, 2008). This is corroborated not only by the increase in elite goods exchanged between the peninsula and the archipelago, but also by textual and epigraphic evidence: later historical chronicles and inscriptions on the Gwanggaeto Stele of Goguryeo (erected in 414 AD) and the seven-branched sword (with an inscribed regnal year often interpreted as dating to 369 AD) sent from Baekje to Yamato. The tumultuous at-

mosphere of 4th-century East Asia can thus be understood as having prompted these significant changes in insular weapons burials.

Nevertheless, while this period no doubt witnessed military activity abroad, the polyfacted iron arrowheads, decorative bronze arrowheads, arrowhead-shaped stone objects, bronze shield decorations, spear-shaft bronze ornamental ferrules, and other objects suggest that the weapons retained a highly decorative and visual component. Indeed, the weapons exchanged between the peninsular and insular elite have been interpreted as symbols confirming and representing their military alliances (Park, 2008). Elite identity within the archipelago was intimately intertwined with martial symbolism and the ability to procure precious iron materials and goods from the outside.

The Yamato polity of the Early Kofun ruled over a confederation of regional elites[4)] united under the Kinai center. Factionalism and political undulations ensured that regional elites maintained a certain level of autonomy of local rule. Their general inability to acquire iron materials, high-quality weapons, and advanced technology without the aid of the center, however, was the cohesive element to the Yamato polity's governance. This also suggests that the regional elites acted as mediators between the center and the local level. Provisions of weapons and wealth goods received from the Yamato center would surely have been redistributed within the local society at the discretion of the regional elite.

Middle Kofun Period: General Overview

The Middle Kofun dates from the close of the 4th century through the extent of the 5th century and is characterized by the construction of the largest tombs of the entire Kofun period (such as Daisen in the Mozu-Furuichi Mounded Tomb Group in Osaka measuring 486 meters). The transition from the Early Kofun witnessed a major political reorganization, with the construction area of the paramount tombs moving from the Nara Basin to the Osaka Plain and the production of TR mirrors and other traditional wealth goods coming to an end.

This transition also witnessed innovation and reorganization of the weapons system, as well (Fig. 5): most significantly (1) the disappearance of polyfaceted iron arrowheads, bronze arrowheads, and short swords; (2) the appearance of leather-laced framed cuirasses, plate helmets, neck guards, shoulder guards,

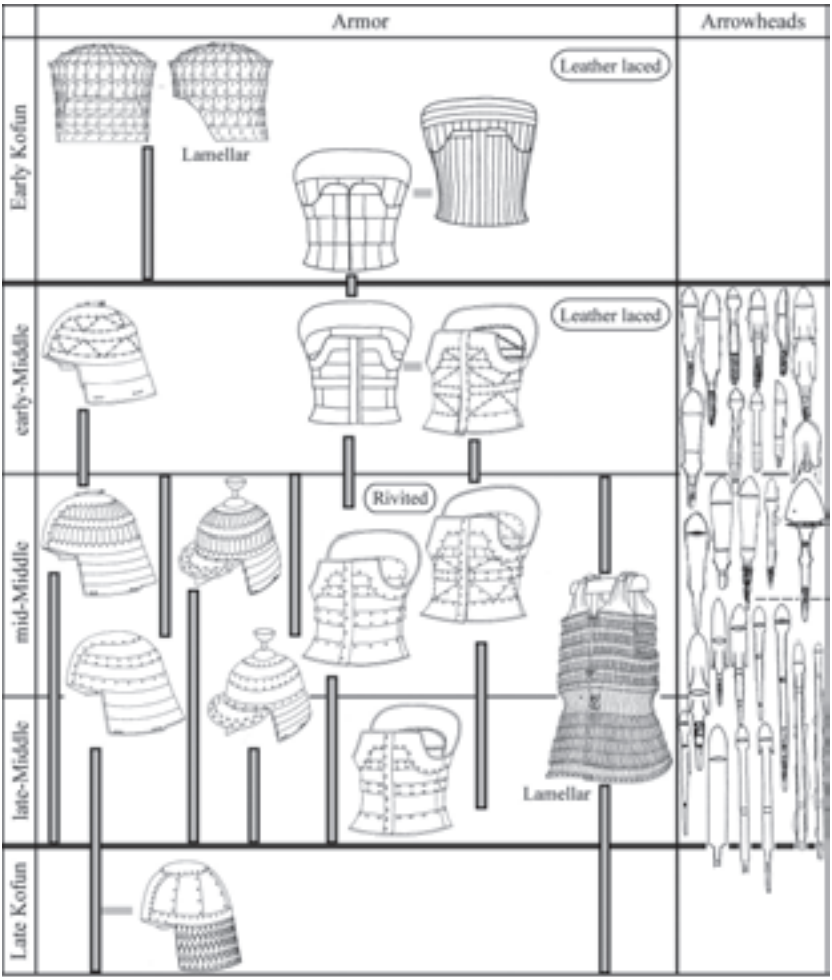

Fig. 5 Chronology of Kofun-period armor and arrowheads (after Hashimoto, 2013)

short-necked iron arrowheads, and decorated leather shields; and (3) an increase in long single-edged swords and socketed iron spearheads. Often these are found together as a set, in stark contrast to the overwhelmingly fragmentary sets of the preceding period (previous armor is found almost solely as a single cuirass without helmets or auxiliary gear; Hashimoto, 2005). While the second half of the Early Kofun presented certain developments that can rightly be viewed as a prel-

ude to the Middle Kofun, they were quite limited in comparison.

While bronze mirrors, beads, and other wealth goods are nevertheless attested to, their relative importance decreased in deference to iron weapons. Additionally, while most weapons were buried outside the coffin during the Early Kofun, upon entering the Middle Kofun, the deposition of numerous weapons inside the coffin became commonplace.

Middle Kofun Period: The Early Phase

The early phase dates from the final quarter of the 4th century to the early 5th century (or through the TG232 phase, according to the Sue-ware typochronology). It is characterized by the centralized production of leather-bound framed cuirasses with either rectangular or triangular plates. While the individual iron plates of previous armor were bound on all four sides to the adjacent plates with leather cords, the new framed cuirasses had iron bands that stretched horizontally across the torso, acting as structural ribs for increased stability. Iron plates, while bound horizontally to the neighboring plates on the left and right, were vertically connected to these ribs. Additionally, a base plate along the bottom and plates that wrapped from the chest, under the armpit, and up across the shoulders, provided even more strength.

While arrowheads of special morphology considered to have had a strong ritual character continued to play an important role, this period is also characterized by the introduction of short-necked arrowheads. These arrowheads were equipped with a solid rod (a "neck") between the blade and the tang (Fig. 6-1), believed to have provided increased piercing strength. The weaponry of this period was monopolized by the elite and the small-scale burials of locally influential families (simple pit burials or tombs without a considerable mound) were for the most part not equipped with weapons (Toyoshima, 2000b).

This phase witnessed the burial of sets of helmets, cuirasses, and auxiliary gear (such as neck or shoulder protectors), seen mostly in the Kinai region and in regionally important elite tombs with strong ties to the political center. Smaller elite tombs were often only equipped with a cuirass, lacking a helmet and auxiliary gear. The mass burial of weapons in elite tombs is instructive in considering this quantitative ranking based on armor-set ownership and amount of

weapons: regional elites tied to the center appear to have received numerous weapons and iron cuirasses and may have redistributed them to the lesser elites of their region (Takizawa, 1994). This demonstrates the continuation into this period of the basic regional structure wherein the center had only indirect control over various local areas through the intermediary elites who received these goods.

Middle Kofun Period: The Middle Phase

The middle phase dates to the first half of the 5th century (the TK73 and TK216 phases, according to the Sue-ware chronology). The production of cuirasses with their plates riveted together began in the first half of this phase (TK73); meanwhile, the production of leather-bound cuirasses was discontinued during the second half (TK216), overtaken by riveted cuirasses. Additionally, the limited introduction of lamellar armor is also witnessed.

Another major development of this phase is the appearance of long-necked arrowheads during the transition from TK73 to TK216. While the short-necked predecessors gradually increased in length, this transition to long-necked examples was drastic. For example, Shukinzuka in Osaka had two burial facilities, built in short succession. The arrows of the first, the southern facility, had necks measuring 6-7cm (Fig. 6-1). The arrows of the latter facility, the northern facility, had necks measuring over 16cm (Fig. 6-2; Suzuki, 2003). These long-necked examples were domestically produced under peninsular influence and are believed to have offered enhanced piercing strength.

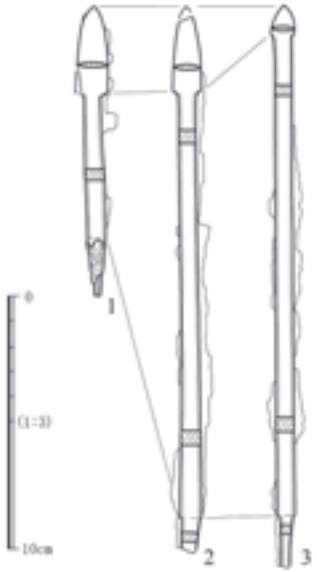

Fig. 6 Arrowheads from Shukinzuka
(1: Southern facility; 2, 3: Northern facility)
(retraced from Suzuki, 2003)

The lack of regional variety in weapon morphology is instructive when considering the nature of production and distribution.

Not only was the introduction of riveted cuirasses and long-necked arrowheads swift, their centralized production allowed their wide distribution to subservient elites over a majority of the archipelago.

Major differences between the early and middle phases of the Middle Kofun can be found not only in artifact morphology, but also in the nature of their burial. During the middle phase, weapons began to be buried in tombs of smaller scale. Often these smaller burials (simple pit burials or tombs without a significant mound) were adjacent to larger elite tombs and only equipped with a single sword or several arrowheads, sometimes both, and almost never armor. From their fragmentary weapon assemblages and proximity to larger elite tombs, it has been suggested that they belonged to locally important families that were privately marshaled and equipped by the regional elite, the latter having received preferential access to weapons and goods through a relationship with the center (Toyoshima, 2000b). This is corroborated by finds of similar characteristic weapons shared between multiple social tiers within a local area.

The middle phase is characterized most saliently by an increase in buried armor. While the greatest amount of armor deposited in a single tomb from the early phase was three cuirasses, the middle phase witnessed 11 at Nonaka (Osaka), eight at Tsukinooka (Fukuoka), and five at Kutsukawa-kurumazuka (Osaka). Tombs with up to four cuirasses are also seen over a wide stretch of the archipelago. Such elite tombs containing numerous cuirasses and mass burials of weapons are believed to have been essential fixtures in the administration's system of weapon distribution; the production and distribution of armor is believed to have been tightly controlled by the central administration and its regional distribution was most likely carried out by these local elites (Kitano, 1969; Fujita, 2006).

There are approximately 540 framed cuirasses dating to the Middle Kofun, and while they are found stretching over a majority of the archipelago, their distribution centers on the Mozu-Furuichi Mounded Tomb Group (Osaka) in the Kinai region. As these centrally produced framed cuirasses are characterized by overwhelming homogeneity, they were effective in establishing a shared identity among their elite recipients (Hashimoto, 2014). The mass burial of cuirasses, helmets, and auxiliary gear in the center has been interpreted as signifying the centralized production, control, and storage of these political symbols. While

disagreement remains, some have interpreted the armor and weapon sets of the center as implying the existence of an elite standing army (Tanaka, 1993) or a military-minded proto-bureaucracy (Fujita, 2006). Either way, debate over what inferences can be responsibly made from the mortuary context of these weapons burials, if any at all, deserves careful consideration (Fujita, 1995; Matsugi, 1994; Tanaka, 1995, etc.).

Middle Kofun Period: The Late Phase

The late phase dates to the second half of the 5th century (TK208, TK23, and TK47, according to the Sue-ware dating scheme). This phase is characterized by the mass production of riveted cuirasses using such labor-saving techniques as using fewer rivets of greater diameter and fewer iron plates of larger size, making them ideal for standardization. This was a swift and concentrated undertaking, evidenced by the general absence of combinations from a single tomb of cuirasses using older small-diameter rivets and those using newer large-diameter rivets (Takizawa, 1994). Additionally, this phase witnessed an increase in the domestic production of insular-style lamellar armor.

The majority of these standardized cuirasses are found buried individually in small-scale tombs, without helmets or auxiliary gear (Tanaka, 1975). This coincides with the general disappearance of mass burials of cuirasses in regional elite tombs, with even the most impressive examples limited to three or fewer cuirasses. The singular exception is the 24 cuirasses from Kurohimeyama (Osaka) in the Kinai region. This virtual disappearance of mass burials of armor in regional elite tombs, the incredible increase in single-cuirass-bearing small-scale tombs, and the mass production of standardized cuirasses by the central administration can be viewed as complementary, as discussed below.

This phase also witnessed a considerable decrease in the amount of weapons buried in elite tombs, as weapons began to be deposited in smaller burials and in dense clusters of small mounded tombs (*shoki-gunshūfun*) not located in traditional tomb groups and believed to have belonged to locally powerful families. These weapons burials displayed a much stronger set relationship between swords (now often multiple) and arrowheads; additionally, spears and standardized armor became commonplace, as well. Not only does the provisioning rela-

tionship seen in the previous phase between elites and local groups seem to have broken down (attested to by the general discontinuance in their weapons burials), the size of elite tombs drastically shrank during this period, as well. Combined with the presence of comprehensive weapon sets and standardized cuirasses, these new recipients are considered to have been supplied with weapons directly from the Kinai center, bypassing the powerful regional elites that had previously amassed, controlled, and distributed centrally produced arms and armor to more or less private militarized groups (Takizawa, 1994; Toyoshima, 2010).

While an overview of the Late Kofun (6th century) is beyond the scope of this paper, a brief mention of the changing nature of weapons burials is necessary to properly understand those of the preceding Middle Kofun. The production and burial of framed plate armor abruptly ceased, overtaken by that of lamellar armor. Additionally, mass depositions of weapons ceased, as well; even regional elite tombs were normally equipped with only one suit of lamellar armor in the Late Kofun (Matsuo, 2008). Such a comparison enables us to understand the specifically Middle-Kofun emphasis on quantitative differentiation within the mortuary ritual. Additionally, the abrupt discontinuance of the Middle-Kofun weapons system and the shift to different types of characteristic weapons suggests that weapons provisioning was imbued with a highly political character and acted to enforce the elite identity and promote cohesion among the elite spread across the archipelago (Hashimoto 2014).

Osteoarchaeological Research

While examples of weapon trauma do exist, they are too few for any meaningful inferences. This is due in part to the highly acidic nature of Japan's soil, which leaves little well-preserved skeletal data. Nevertheless, osteoarchaeological data has made meaningful contributions to the study of social organization, in particular with regards to the evolving nature of elite succession patterns (Seike, 2010), as discussed below.

The society of the Early Kofun period was bilateral, with greater levels of patrilineality among the higher elite. While not uncommon during the Early Kofun, female chieftains gradually disappeared upon entering the Middle Ko-

fun, as patrilineal succession slowly progressed. The first half of the Middle Kofun witnessed the almost complete realization of patrilineal succession among the highest elite, with lesser regional elites and local families continuing to practice bilateral inheritance. Upon entering the late phase, however, all levels of elites achieved virtually complete patrilineality. Local society remained bilateral, albeit with a lower ratio of female family heads than before.

It has become apparent that the transition from bilateral to patrilineal succession advanced from the higher tiers of society, with those most removed from direct contact with the central administration the last to change. Seike Akira posits that the early and late phases of the Middle Kofun witnessed the most significant changes, the former caused by increased importance placed on male regional elites in the military reorganization of society and the latter caused by the direct control of local elites, who were provisioned with the mass-produced standardized cuirasses. This martially informed reorganization of society by the central administration was significant enough to cause considerable changes to the nature of elite succession (Seike, 2010).

Discussion

We have traced the evolution of weapons burials from the late 2nd century through the 5th century and it should be readily apparent that the burials of the Kofun period have an undeniable martial character. However, can we separate the existence of professional warriors or an independent military organization from burials simply drawing on martial ideology within the standard mortuary ritual?

The lack of comprehensive weapon sets and overwhelming dependence on a single type of weapon (such as hundreds of swords or arrowheads), the complementary nature of weapons to other ritual and wealth goods, and the deposition of weapons consistently outside the coffin suggest that while the Early-Kofun burials had a significant military element, the existence of a specialized, independent, and unified military organization cannot be readily parsed from the archaeological record. While the ownership of high-quality weapons became the prerogative of the elite from the Final Yayoi, thereby greatly de-militarizing local society, the weapons found in burials represented only one aspect of the many

practical and ritual functions expected of the elite (Matsugi, 2007, etc.).

Heightened political tensions in the 4th century paved the way for the massive military reorganization of the Middle Kofun, during which the central administration (whose leaders were buried in the Mozu-Furuichi Mounded Tomb Group) established relationships with regional and local elites by provisioning them with arms and armor. The (1) prevalence of arrowheads with peculiar morphology (such as those with strong serpentine curvature, a twisted neck, rows of barbs or superfluous perforations [Fig. 5, right side]), the (2) strong correlation between tomb size, overall burial wealth, and the amount of weapons, and the (3) set ownership of cuirasses, helmets, and auxiliary gear suggest that weaponry maintained an important visual component and the provisioning of arms and armor was carried out as a means of social ranking. Nevertheless, comprehensive assemblages of weapons, their burial within the coffin, and a major decrease in non-military wealth goods suggest a considerably stronger link between the interred individual and the deposited weapons. That the greatest mass weapons burials coincided with the construction of the largest tombs of the entire Kofun period can either be interpreted solely as the manifestation of a physically powerful administration or as the peak of elaboration or aggrandizement within the mortuary ritual; the points of caution raised at the beginning of this article concerning the weapons of mass burials suggest the latter.

While the militarization of the elite character in the early phase of the Middle Kofun was significant, a more qualitative development may be found in the late phase, when the center bypassed the entrenched regional elite and directly incorporated local elites and powerful families into the provisioning system (Takizawa, 1994, etc.). While this reorganization did not continue unchanged into the Late Kofun, this phase saw a considerable expansion of the ranks of individuals allowed to be buried with weapons and armor.

How, then, are we to understand the apparent contradiction between the florescence of weapons burials and the overwhelming lack of evidence of fortifications, barriers, defensive structures, or other archaeological correlates of warfare? As eight-century chronicles record several rebellions by powerful regional elite during the period under discussion, it would, of course, be inappropriate to assert that there was no military activity at all. Kofun-period society, however, was not *characterized* by warfare. An incredible amount of energy was poured

into the construction of giant mounded tombs across the archipelago. Moreover, exorbitant amounts of arms and armor were removed from circulation as burial goods. These factors suggest that while Kofun-period society was highly concerned with martial matters, it was not ravaged by warfare; rather, its structure was intimately informed and legitimated by a martial ideology (Hashimoto, 2014). Martial symbolism and imagery were actively incorporated into the shared elite identity and the provisioning of arms and armor served as a significant means of institutionalizing the sociopolitical hierarchy. Precious iron objects, whether weapons or tools, served as symbols of legitimation, indicating access to raw materials and advanced technology in the secular realm and magico-ritual authority in the sacred (Suzuki, 2002).

Through this brief overview, we have traced the sudden monopolization of the means of force (3rd century), the development of a highly militarized elite bound together across the archipelago (5th century), and the expansion of individuals provisioned by the center with weapons to lower levels of elite society (latter 5th century). Based on the archaeological evidence, it would seem that elites with more or less specialized military functions appeared in the late 4th to early 5th century. It was not until the latter half of the 5th century, however, that this top-heavy organization evolved into one that included local groups, as well. In order to understand the actual nature of the military organization, it is first essential to clarify and then separate the areas in which weaponry was used among the general elite for symbolic, ritual, and sociopolitical purposes from the areas in which it was employed for practical martial purposes. A more detailed and nuanced examination must unfortunately be relegated to a future paper.

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[Notes]

1) The dates of the Incipient and Early Yayoi are still the subject of debate. As this controversy is outside the scope of this paper, it will not be discussed here.
2) The adjectival "peninsular" will refer to the Korean peninsula and "insular" to the

Japanese archipelago (following Barnes, 1999).

3) See (Ryan & Barnes, 2015) for an English overview of Kofun-period armor.
4) Hereafter, the extent of political power and geographic influence decreases in the following order: "regional elites"; "local elites"; and "local groups".

[Sources of Illustrations]

Fig. 1: By author. Fig. 2: After (Toyoshima, 2000a:82). Fig. 3: After (Toyoshima, 2005:65). Fig. 4: Adapted and retraced from the following site reports. 4-1: (Yamaguchi-ken maizōbunkazai senta- [Ed.], 1995:31); 4-2: (Kameyama [Ed.], 1996:289); 4-3: (Umemoto [Ed.], 2014:92); 4-4: (Iwata-shi maizōbunkazai senta- [Ed.], 2006:66). Fig. 5: After (Hashimoto, 2013:56). Fig. 6: Retraced from (Suzuki, 2003:56).

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SUMMARY

The Archaeology of Weapons Burials in Ancient Japan

Joseph Ryan

In this paper, the author presents an overview of the weapons burials of the Japanese archipelago from the late 2nd century through the 5th century. The heightened control of weapon production and ownership coincided with significant sociopolitical consolidation during the 3rd century. In the early 5th century, highly militarized elites were bound together across the archipelago through mortuary ritual informed by martial ideology. While the 5th century witnessed a peak in mass weapons burials, it also witnessed the construction of the largest keyhole tombs of the entire Kofun period, suggesting a correlation between elite aggrandizement and the deposition of arms and armor.

As the 5th century progressed, however, such mass depositions decreased as the burial of weapons and armor increased in small-scale tombs across a considerable stretch of the archipelago. While the focus of the central administration until then had been on social cohesion between elites based on a unified martial ideology, the second half of the 5th century witnessed a significant development in centralized control of militarized lesser elites and local powerful families.

Additionally, the author briefly addresses the methodological issues surrounding research into weapons burials, which have often been interpreted within a purely military narrative. It has become apparent, however, that the presence of weapons cannot be taken at face value to infer warrior status. Weapons burials were informed by martial ideology and influenced by social status. A multifaceted and nuanced approach is therefore required.