

# Lineages of Deer Antler Sword Ornaments

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## ABSTRACT

*This article discusses the historical significance of deer antler sword ornaments with reference to the sites from which they were excavated and the shapes of the ornaments. Three lineages (A, B, and C) were detected and the periods when the ornaments were made and used were clarified based on reference artifacts in the same site. It was found that early lineage A deer antler sword ornaments were more frequently excavated from salt-making and settlement sites than in kofun sites and that some of the sites were the ornament production sites. Most of the lineage B and C ornaments were excavated from kofun as opposed to underground corridor and cave tombs, and there was a tendency especially for those of lineage C to be excavated from kofun with strong traits indicating immigration from the continent. Early deer antler sword ornaments appear to have been made and used by itinerant people, while the later lineage B and C ornaments were manufactured by rulers and local ruling elites, who imitated and enhanced items of lineage A and distributed improved versions to people of itinerant occupations and immigrants in order to construct or strengthen relationships with them.*

**KEYWORDS:** deer antler sword ornaments, Kofun period, Japan

## Editor's note (by SASAKI Ken'ichi)

This is a full translation of YAMADA Shunsuke's paper published in No. 42 (2017) of *Nihon Kōkogaku*, the Japanese-language journal of the Japanese Archaeological Association. Yamada received the Japanese Archaeological Association Award for this publication in 2018. This paper is a good contribution to Kofun-Period (middle third to early seventh centuries A.D.) archaeology, as sword ornaments made from deer antler had previously been rarely investigated. Based on careful analyses of the sword ornaments, the author has proposed a convincing hypothesis on the historical background of these rather unusual artifacts.

Because this paper was originally written in Japanese and intended for a Japanese audience, its structure and logical flow are of Japanese style, i.e., the author takes a strictly inductive approach. The author first conducts analysis of the deer-antler sword ornaments, paying attention to their morphologies and the parts of the deer antler from which the raw

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materials for the ornaments were taken. Correlation between the two attributes lead the author to distinguish three “lineages” of the ornaments. The author then investigates the association of ornaments of each lineage with other artifacts whose dates are relatively known. This allows the author to determine when the ornaments of the three different lineages were produced and used: lineage A from the late fourth century to the beginning of the fifth century; lineage C from the middle fifth century to the beginning of the sixth century; and lineage B, albeit lacking sufficient data, probably appearing at the beginning of the fifth century.

Finally, the author investigates the nature of the archaeological sites where these sword ornaments were discovered. He finds that those of lineage A have been predominantly discovered at salt-production sites and settlement sites in the coastal region. Meanwhile, those of lineages B and C have been discovered at burial sites. Particularly noteworthy is that the burial sites where those of lineage C have been discovered are underground corridor and cave tombs, which are very unusual in the context of the Kofun Period, during which the construction of mounded tombs was predominant. These rather unusual burial sites are often associated with immigrants. The author concludes that lineage A ornaments were first produced by itinerant people and that those of lineages B and C, which were modelled after the lineage A ornaments, were distributed to strengthen the relationship with itinerant and immigrant peoples in peripheral regions.

As is the case with this paper, the first two-thirds of a Japanese archaeology paper are devoted to typological and chronological analyses of artifacts in detail. Reading the first two-thirds might give readers from the English-speaking world the impression that Japanese archaeologists pay little attention to theory. As this paper demonstrates, however, the author successfully sheds light on the nature of Kofun-Period society. The editor hopes that readers outside Japan will not only gain some understanding of Kofun-Period history, but will also become familiar with the Japanese style of writing.

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## **Introduction**

Research on deer antler sword ornaments dates back to a 1905 study by Ōno Nobutarō<sup>1</sup> (1905) and to the ensuing discussion concerning the use of the ornaments for sword decoration among Takahashi Kenji (1908, 1913), Umehara Sueji (1920), Suenaga Masao (1938), and others. More recently, drawing on findings from new excavations and reexamining many

specific artifacts, Kobayashi Yukio (1976a) published a study that corrected errors in previous studies on the restoration of deer antler sword ornaments. However, he focused his attention solely on the arc-and-straight-line patterns (*chokkomon*) engraved on the ornaments, and did not provide an adequate chronological perspective and view of production and distribution of sword ornaments. Research came to a halt for over 30 years, but basic study has again progressed in the past decade. Inoue Kazuki (2010a), for example, produced a complete compendium of the study of deer antler sword ornaments excavated from some 292 sites, thereby laying firm foundations for study in this field. Nagatomo Shin (2011) presented a thorough analysis mainly of the deer antler parts chosen for crafting ornaments. The author of the present paper, too, provided basic data on some 60 deer antler sword ornaments in the collection of the Tokyo National Museum, as well as outlined the changes that took place in these ornaments based on examination of the deer antler parts used for the ornaments and the methods of engraving the *chokkomon* patterns (Yamada 2013).

This paper charts the lineages of deer antler sword ornaments and organizes the ornaments chronologically. It clarifies the historical significance of the ornaments based on a typological study of artifacts by excavation site.

## Typological Examination

Deer antler sword ornaments are located at the pommel, the collar of the sword grip, the mouth of the scabbard, and at the tip of the scabbard (see Figure 1 for the terminology of this paper). Kobayashi Yukio (1976a) further divides the collar ornament into three parts—“protruding handguard” (*hamidashi-tsuba*, the central widest part), “collar” (*tsuba*; the pommel-side part decorated with arc and straight-line patterns), and the “blade collar” (*habaki*, the scabbard-side part), but here I describe these three parts as “grip side,” “center,” and “scabbard side,” respectively.

### Pommel Ornament

Pommel ornaments can be roughly divided in two in terms of shape: cylindrical and wedge-shaped. Among wedge-shaped finds, however, no example preserves their original shape in entirety, so this analysis will examine cylindrical pommel ornaments.

Cylindrical pommel ornaments are of four types, as shown in Figure 2. Type A consists of the pommel, grip (*tsuka'ai*), and collar made from a single piece of antler. The piece is cut from the section from the antler base and first tine base to the beam between the first and second tines. This type corresponds to Type A II of wooden sword hilt ornamentation as classified by Okita Masaaki (Okita 1985a). Among Type A artifacts are those excavated at the Ōi Hirano site S01 No. 5 burial facility, Fukuoka prefecture (Shiraki 2004), Shakameyama tomb No. 1, Ehime prefecture (Sakamoto 1981), Kozakaai site, Osaka prefecture (Yao-shi

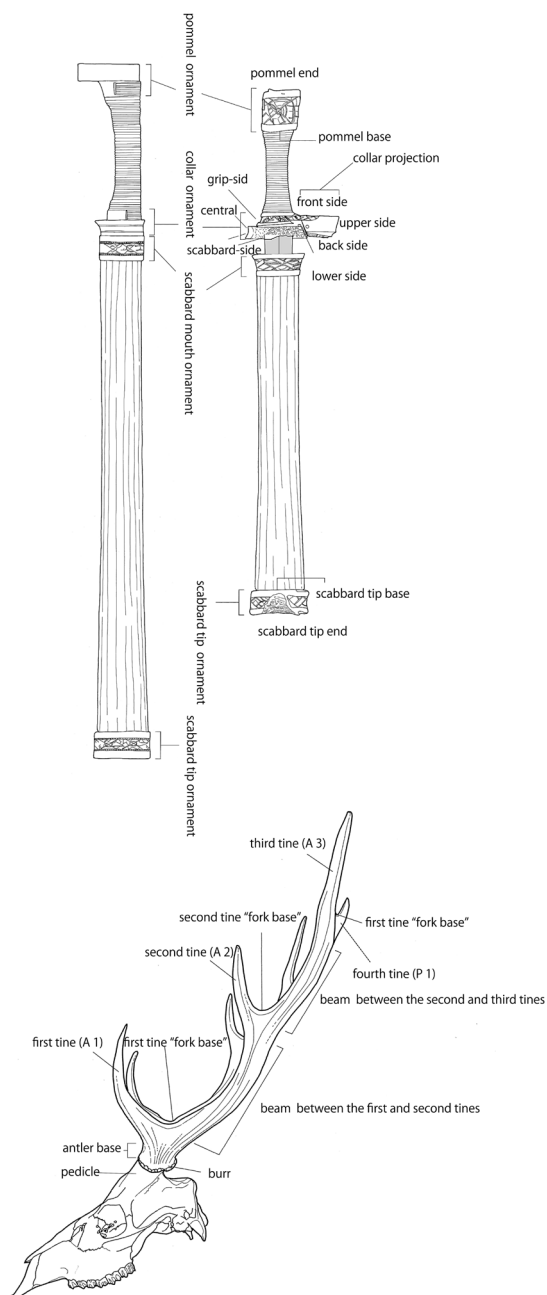


Figure 1. Deer Antler Sword Ornaments and Antler Parts  
(Compiled by altering a figure in Inoue and Yamada eds. 2013)

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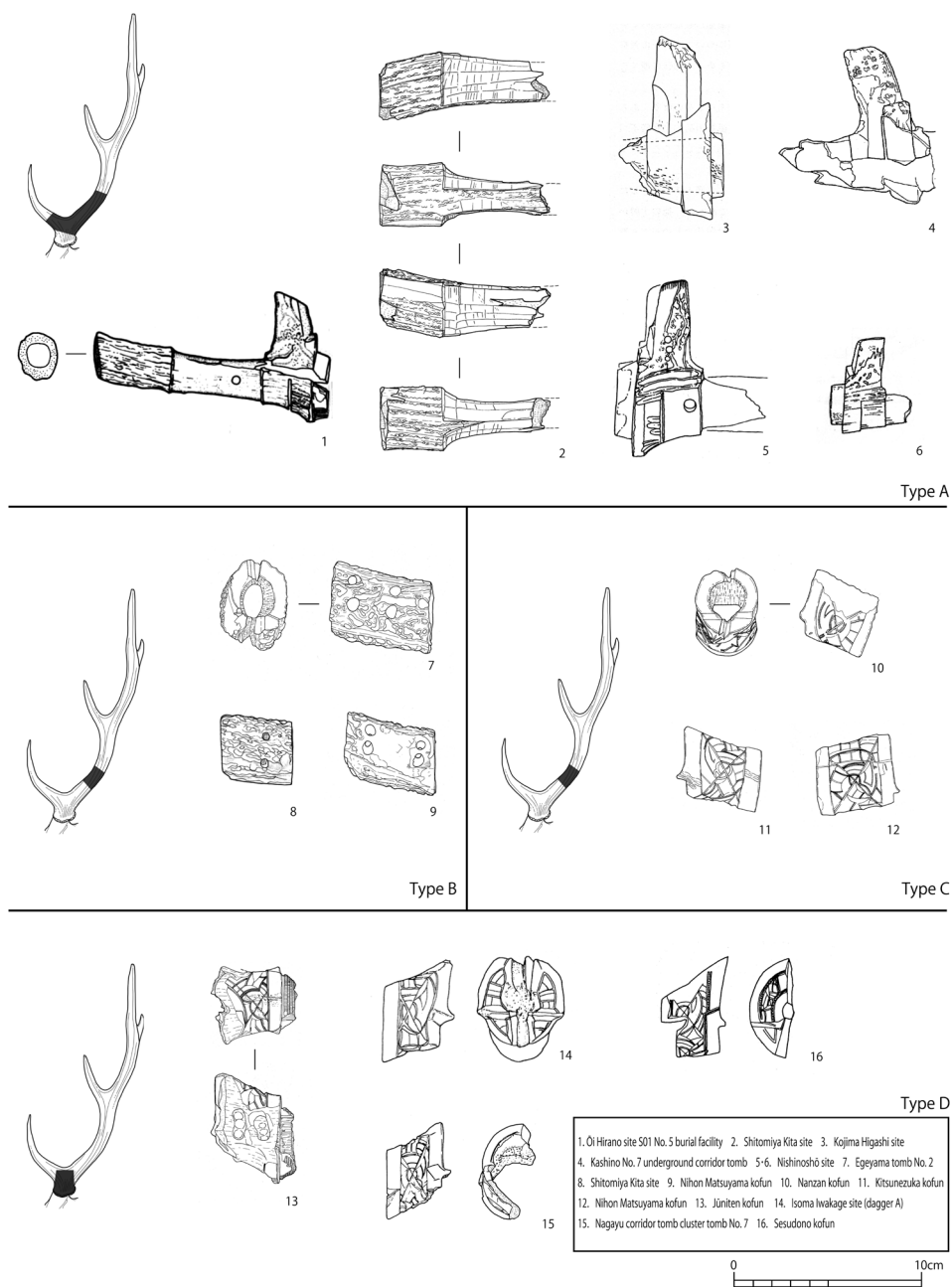


Figure 2. Cylindrical Pommel Ornaments: Classification by Shape and Antler Location (Compiled by altering figures in Inoue and Yamada eds. 2013, Iwase *et al.* 2010, Kai *et al.* 2004, Katada 1994, Sata *et al.* 1984, Shiraki 2004, Hirose 1977, Fukami *et al.* 2003, and Yabe 1986)

Bunkazai Chōsa Kenkyūkai 2007), and Shitomiya Kita site, Osaka prefecture (Iwase *et al.* 2010). Type A objects with the pommel missing include that from underground corridor tomb No. 7 at Kashino site, Miyazaki prefecture (Yabe 1986), Hamane site, Fukui prefecture (Ishibe *et al.* 1966, Morikawa and Ōmori 1971, Irie *et al.* 1985), Kojima Higashi site, Osaka prefecture (Hirose 1977), Nishinoshō site, Wakayama prefecture (Fukami ed. 2003), and Tobayama Cave, Nagano prefecture (Seki and Nagamine 2000). There are also artifacts with damaged surfaces and missing pommels, which may make it difficult to judge whether they are of Type A, but the pieces excavated in the south casket at the Aizu Ōtsukayama site, Fukushima prefecture (Itō and Itō 1964) and from the coffin at the Shukinzuka kofun in Osaka prefecture (Suenaga ed. 1991, Hosokawa 2007) are most likely of Type A.

Regarding the beginnings of Type A, some researchers hold that Type A originates in the Deer Antler Y-shaped swords found in eastern Japan that date back to between the second half of the Middle Yayoi period and the Early Kofun period (Ōmae 2001, Kikuchi 2013). Considering significant differences in shape, distribution, and period, however, it is difficult to regard those artifacts as belonging to the same lineage as Type A (Toyoshima 2010), and I consider the Deer Antler Y-shaped swords as representing a different lineage from the Type A defined here.

Artifacts consisting of the pommel alone are divided into three other types: cylindrical pieces with plain antler surface, no *chokkomon* (arc and straight-line pattern) (Type B), cylindrical pieces with a *chokkomon* pattern (Type C), and cylindrical pieces that open outward toward the pommel end, with a *chokkomon* pattern (Type D). Types B and C are like Type A in that the porous core of the antler is hollowed out. With Type D, the porous core is carved out in a conical shape but not hollowed out completely, and a pattern is carved on the wide pommel side.

Artifacts of Type B include those found at Egeyama tomb No. 2, Tokushima prefecture (Suenaga and Mori 1966), the Shitomiya Kita site, and the Nihon Matsuyama kofun, Fukui prefecture (Takahashi 1908, Saitō 1986, etc.). Belonging to Type C are those from the Kitsunezuka kofun, Ōita prefecture (Takeda 1901), the Tsukayama kofun, Nara prefecture (Date and Kitano 1957), and the Nihon Matsuyama kofun. Both Types C and D are made of the beam between the first and second tines. Type D are those that flare out toward pommel end. The piece from the Sesudono kofun in Fukuoka prefecture (Sada *et al.* 1984) shows the burr (basal area) of the antler used for the edge around the pommel end, indicating that it is made of the area from the burr to the base of the antler. Among Type D objects are many that have grooved or dotted lines along both edges of a *chokkomon* pattern, as found in those excavated at the Sesudono kofun, Wakayama prefecture's Isoma Iwakage site, (Katada 1970, Kobayashi 1976a, Katada 1994), and Tochigi prefecture's Sukedo Jūniten kofun (Takahashi 1913, Mochizuki 1981).

Of the four types of pommel ornaments, Types A, B, and C are all alike in that they are

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cylindrical and made of almost the same part of the antler. Type D is different from them not only in shape and antler section used but also in that Type D has a pattern engraved on the pommel end.

### Collar Ornaments

For collar ornaments (Figure 3), the section of antler from the base of the first tine fork is used. There are two cases, one in which the collar ornament is made as an integrated part of the collar projection (Type  $\alpha$ ) and the other in which they are made separately (Type  $\beta$ ). Most of the Type  $\alpha$  pieces have no engraved pattern, with a few exceptions including the ones found at the Egeyama tomb No. 2 site (with a hook pattern [*kagite-mon*] engraved on the back side of the collar projection), at the Shimauchi underground tunnel tomb cluster ST105 tomb in Miyazaki prefecture (with *chokkomon* pattern) (Nakano 2010), and dagger A (with a *chokkomon* pattern) at the Isoma Iwakage site (Kobayashi 1976a).

Types  $\alpha$  and Type  $\beta$  can be further divided by the way the antler is cut. There are three patterns: Type 1 is cut so that the central part of the antler beam forms the blade collar. The

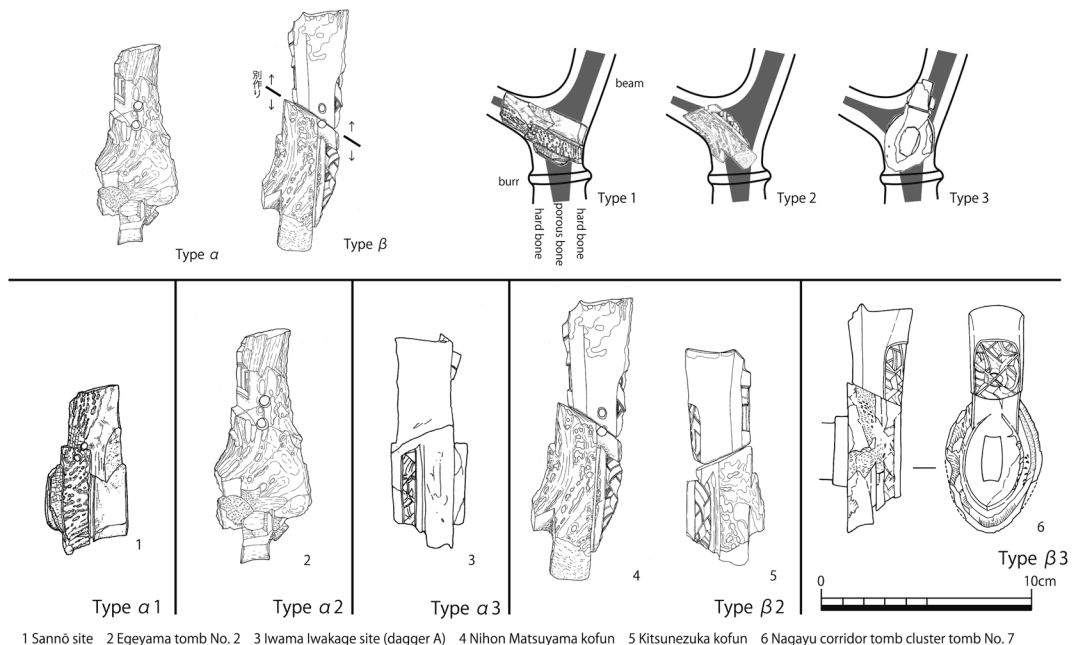


Figure 3. Collar Decoration: Classification by Shape and Antler Location

(Compiled by altering figures in Inoue 2010a, Inoue and Yamada eds. 2013, Kai *et al.* 2004, and Sugawara *et al.* 1994)



porous core of the beam falls at the central portion of the collar projection, the scabbard side of the collar projection, and the base of the front side of the collar projection, while the porous core of the first tine falls on the upper side of the collar projection. This cutting configuration is the same as for Type A, in which the decorated portion from pommel to collar is made of a single piece of antler. Type 1 and Type A, therefore, can be considered to be of the same lineage. As for the second pattern of cutting (Type 2), the hard bone at the base of the first tine is cut for the blade collar. The porous core of the antler beam falls on the lower side of the grip side of the collar projection and on the lower side of the center of the collar projection, while the porous core of the first tine falls on the upper end of the center of the collar projection and the upper end of the tenon-like stub inserted into the collar projection. Regarding the third cutting pattern (Type 3), only the antler beam is cut for the collar ornament; the first tine is basically not used. The porous core of the beam falls on the lower end of the scabbard-side portion of the collar projection and on the upper and lower ends of the central portion of the projection; the porous core of the first tine also falls on the upper end of the central portion of the projection. Type 3 is recognizable for the use of the porous core for both ends of the upper area of the central portion of the collar projection.

The types of shapes and cutting configurations may be combined into several types—Types  $\alpha 1$ ,  $\alpha 2$ ,  $\alpha 3$ ,  $\beta 1$ ,  $\beta 2$ , and  $\beta 3$ . Examples of Type  $\alpha 1$  include those from the Sannō site, Miyagi prefecture (Satō *et al.* 1994), Type  $\alpha 2$  from Egeyama tomb No. 3 and the Shimauchi underground corridor tomb cluster ST105 tomb, Type  $\alpha 3$  from the Isoma Iwakage site (dagger A), Type  $\beta 2$  from the Kitsunezuka kofun and the Nihon Matsuyama kofun, and Type  $\beta 3$  from the Shimauchi underground corridor tomb cluster ST20 tomb (Nakano 2001), the Nagayu corridor tomb cluster No. 7 tomb (Kai *et al.* 2004), the Sesudono kofun, the Isoma Iwakage site's dagger B (Kobayashi 1976a), and Nagano prefecture's Mizoguchi-no-tsuka kofun (Straight Sword 3) (Kobayashi *et al.* 2001). No example of Type  $\beta 1$  has yet been confirmed.

### Scabbard Tip Ornaments

There are two types of scabbard tip ornaments (Figure 4)—one in a spindle shape (Type I), the other in an isosceles triangle shape (Type II), as viewed from the scabbard tip end. Type I has a shape that fits a dagger but is also used for the larger sword (as in the case of Straight Sword 2 from the Mizoguchi-no-tsuka kofun). Type II has a shape intended for a sword. The ornamental piece is cut from the antler in two ways—cut diagonally at the base of the first tine, the first tine fork base, and the antler base (Type a) and cut vertically across the antler base, the burr, and the first tine fork base (Type b). These two types can be distinguished by the presence or absence of the burr.

As in the case of the collar ornaments, we may put together the types of shapes and cutting configurations into several combinations—Types Ia, Ib, IIa, and IIb. Examples of Type Ia



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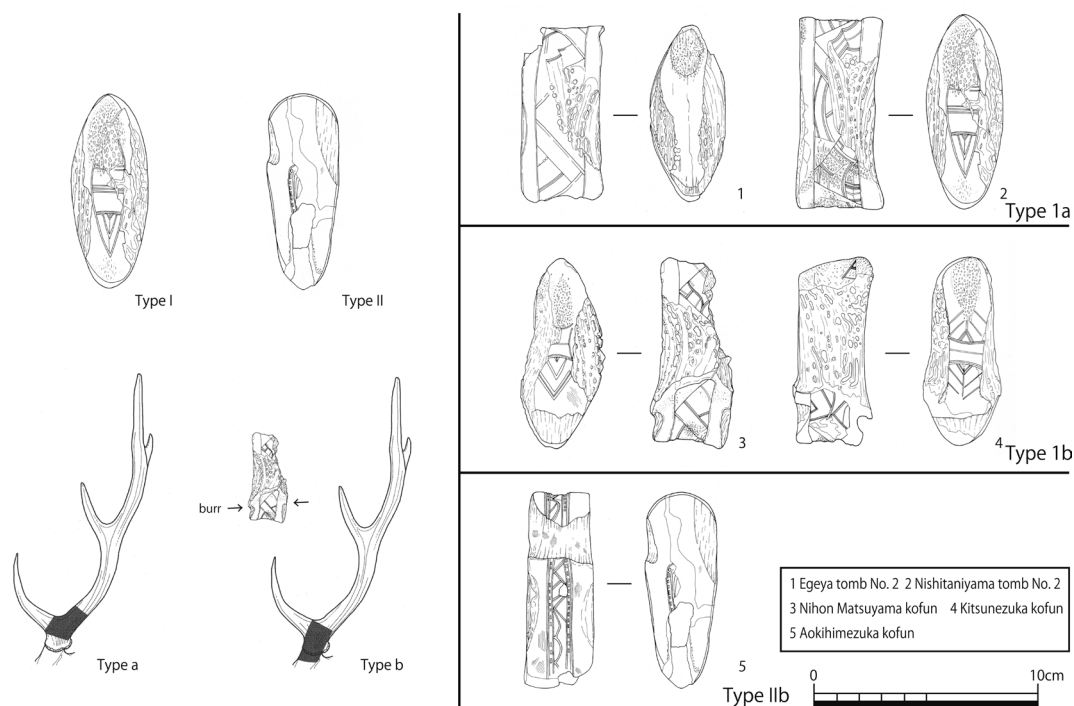


Figure 4. Scabbard Tip Decoration: Classification by Shape and Antler Location  
(Compiled by altering figures in Inoue and Yamada eds. 2013)

include those from the Egeyama tomb No. 2, the Shitomiya Kita site, the Nishitaniyama tomb No. 2 in Fukui prefecture (Ueda 1919, Kubo ed. 1984), and the Namani site in Nagano prefecture (Ono ed. 2001). Among Type Ib examples are those found at the Kitsunezuka kofun and the Nihon Matsuyama kofun. Type IIb items include one at the Aokihimezuka kofun, Chiba prefecture (Ozawa 2003). As for Type IIa, there are likely objects such as one found at the Enshōji Hakayama kofun (Inoue 2010b), but they are not preserved in their full, original form, which makes it difficult to confirm.

### Combinations

The various types discussed above can be organized as shown in Figure 5. In the table, site names are arranged in chronological order from oldest to newest and, in the case of pieces that can be considered to come from the same period the site names are given from west to east in the country.

The poor state of many deer antler sword ornaments is such that not all the combinations can be determined. But, if we focus on pommel and collar ornaments the following four combinations can be confirmed.

[illegible]

Figure 5. Combinations of Types for Deer Antler Sword Ornaments

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*Combination I.* The pommel and collar are combined as a single piece (Type A). Examples are from the Ōi Hirano site S01 No. 5 burial facility, the underground corridor tomb No. 7 at Kashino site, the Shakameyama tomb No. 1, the Kozakaai site, the Shitomiya Kita site, the Kojima Higashi site, the Nishinoshō site, the Hamane site, the Tobayama cave, and so forth. This combination corresponds to Nagatomo's "Ōi Hirano-style technique" (Nagatomo 2011).

*Combination II.* This is a combination of a Type B pommel ornament and a Type  $\alpha 2$  collar ornament. The only authentic example of this combination is an artifact excavated from Egeyama tomb No. 2, although there is a good possibility that such pieces may be found in the Shingū Higashiyama tomb No. 2, coffin No. 1 (Kishimoto 1996) and Uchioroshi kofun, Shiga prefecture (Takashima Museum of History and Folklore ed. 2004). Opinions about the ornament found at the Sannō site are divided, but Combination II corresponds to Nagatomo's "Egeyama-style technique" (Nagatomo 2011).

*Combination III.* This combination of a Type C pommel ornament and a Type  $\beta 2$  collar ornament is observed among artifacts from the Kitsunozuka kofun, the Tsukayama kofun, and the Nihon Matsuyama kofun. This combination corresponds to Nagatomo's "Tsukayama-style technique" (Nagatomo 2011).

*Combination IV.* This combination of Type D pommel ornament and Type  $\alpha 3$  and  $\beta 3$  collar ornament is observed among artifacts from the Shimauchi underground corridor tomb cluster ST20 tomb and the Sesudono site, and in Isoma Iwakage site daggers A and B. Although a pommel ornament is missing, Straight Sword 3 from the Mizoguchi-no-tsuka kofun likely belongs to Combination IV. This combination corresponds to Nagatomo's "Isoma-style technique" (Nagatomo 2011).

### Arc-and-Straight-Line Patterns

The *chokkomon* (arc and straight line patterns) (Figure 6) can be divided into four groups according to the depth of engraving and forms. Group 1 consists of examples of deep engraving, Group 2 is those with shallow engraving and three-dimensional patterns, and Group 3 are those with shallow engraving and flat patterns. While the *chokkomon* patterns for these three groups are three-dimensional, Group 4 show examples in which the pattern is formed mainly of thick vertical and horizontal lines (*tossen*). Examples of Group 1 are from the Tsukayama kofun, the Nihon Matsuyama kofun, Nishitaniyama tomb No. 2, and Miyagi prefecture's Kyōnozuka kofun (Hasebe 1924), those of Group 2 from the Sesudono site, the Kitsunozuka kofun, the Mizoguchi-no-tsuka kofun, and the Sukedo Jūniten kofun, those of Group 3 from Hyōgo prefecture's Minamiyama kofun (Kitani 1972), and those of Group 4 from the Aokihimezuka kofun. As to the composition of the pattern, there is not much difference between Groups 1, 2, and 3, but with Group 4 the composition seems to have been reduced to the bare essentials.

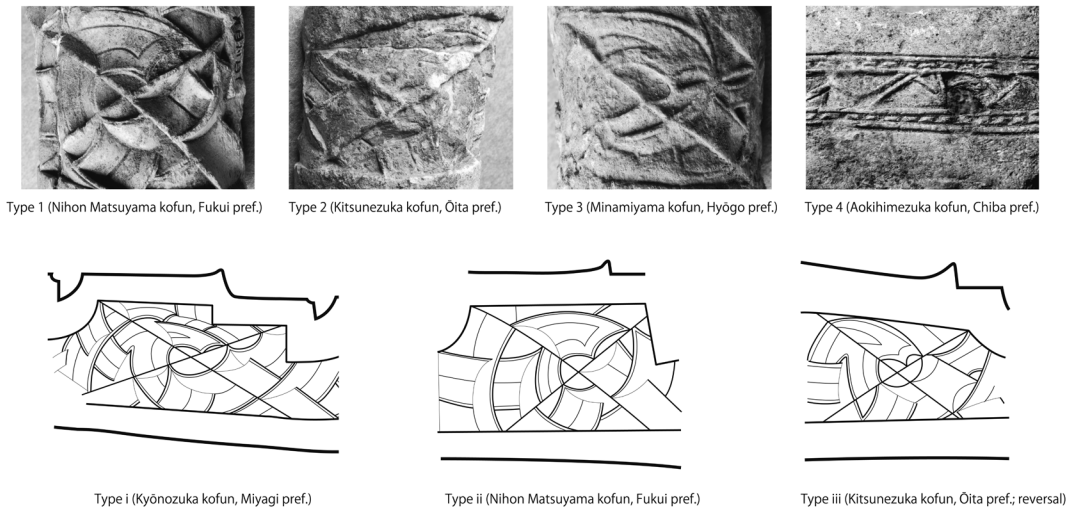


Figure 6. Deer Antler Sword Ornament Arc-and-Straight-Line Pattern Types  
(Cited from Yamada 2013)

A comparison of the *chokkomon* pattern among the groups shows there are three types, i, ii, and iii. The pattern on the artifacts from Group 1 sites like the Tsukayama kofun and the Kyōnozuka kofun is engraved on a rectangular surface that is stepped from the upper edge to the lower edge, and this is Type i. In the case of the Nihon Matsuyama kofun example, which also belongs to Group 1, the *chokkomon* is engraved on a smooth, rectangular surface, and this is Type ii. As for Type iii, the pattern is depicted on a trapezoidal surface that has a wide upper edge and decreases in width toward the bottom as found in objects from Group 2 sites such as the Kitsunozuka kofun and the Isoma Iwakage site (dagger A) and Group 3 sites like the Minamiyama kofun. From the *chokkomon* pattern we not only know how much care was given by looking at the depth of engraving; we can also assume that the surface on which it is engraved evolved from a stepped rectangle, to a smooth rectangle, and then to a trapezoid.

With some ornaments, grooves and/or dotted lines are engraved on both sides of the *chokkomon* pattern. Grooves are found in artifacts from such sites as the Isoma Iwakage site (dagger A), the Mizoguchi-no-tsuka kofun, the Sukedo Jūniten kofun, and Ibaraki prefecture's Sanmaizuka kofun (Saitō and Ōtsuka 1960). Both grooved and dotted lines are executed on examples from the Sesudono kofun, Okayama prefecture's Tenguyama kofun (Matsugi *et al.* 2014), and Osaka prefecture's Minegazuka kofun (Shimoyama and Yoshizawa 2002). Dotted lines presumably began being used under the influence of sword ornaments made of metal.

## Lineages and periods

This section organizes the various types discussed above into several lineages. We can also identify periods of production and use of specific ornaments as suggested by the other artifacts excavated with them.

The three patterns of cutting pieces for collar ornaments from an antler were explained above. They show significant differences in understandings of the characteristics of deer antler parts and the idea of cutting, suggesting that the ornaments were made by different groups of people. Only cutting pattern Type 3 shows grooved lines and/or dotted lines on both sides of the *chokkomon*, indicating a correlation between decorative pattern and cutting configuration. Based on ways of cutting antler for collar ornaments, we can establish the following three lineages.

Lineage A: Type A pommel ornament and Type 1 pattern of cutting for collar ornament.

Corresponds to [abovementioned] Combination I.

Lineage B: Type B pommel ornament and Type 2 pattern of cutting for collar ornament.

Corresponds to Combinations II and III.

Lineage C: Type D pommel ornament and Type 3 pattern of cutting for collar ornament.

Corresponds to Combination IV.

Among items of lineage A there are differences in the details of the contour of the ornament (Figure 7). For example, some have a clear step or steps in the grip-side and central portions of the collar ornament (Shakameyama tomb No. 1, Kojima Higashi site, Nishinoshō site), and others show only grooves on the grip-end and central portions (Ōi Hirano site S01 No. 5 burial facility, Nishinoshō site, Sannō site). On the back side of collar projection some have two steps (Kojima Higashi site), others have one step (Nishinoshō site, Sannō site), still others have no step (Ōi Hirano site S01 No. 5 burial facility). Such differences can be taken to indicate that the crafting of these deer antler sword ornaments was not concentrated in specific workshops. All the examples of lineages B and C, on the other hand, have a step or steps on the grip-side and center of the collar ornament and these are demarcated by grooved lines. The upper side of the collar projection has two steps in all the examples. These two lineages each have a high level of uniformity as well as precise engraving of a complicated *chokkomon* pattern, suggesting the high possibility that the artifacts of these lineages might have been produced at specific workshops.<sup>2</sup>

Among the early artifacts of lineage B are those of Combination II that are thought to be faithful imitations of lineage A items like one from Egeyama tomb No. 2. Combination II items are few in number, perhaps because designs were still in the process of being standardized. No examples of lineage C suggest any direct relationship with lineage A.

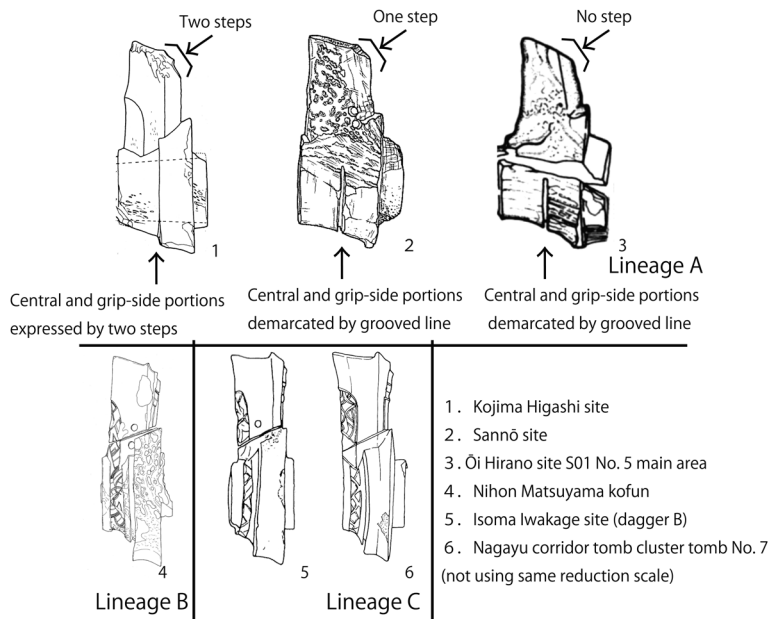


Figure 7. Diversity in Lineage A and Uniformity in Lineage B and in Lineage C  
(Compiled by altering figures in Inoue and Yamada eds. 2013, Kai *et al.* 2004, Katada 1994, Shiraki 2004, Sugawara *et al.* 1994, and Hirose 1977)

Objects of lineage C and those of lineage B look alike, but they are vastly different in terms of where in the antler, the piece was cut to make pommel and collar ornaments. That suggests that they were manufactured by different groups of people. Lineage C items are highly decorative, as found in the engraving of a pattern on the pommel end of pommel ornament and in the adding of grooved and dotted lines to both sides of a *chokkomon* pattern. While apparently modeled after lineage B precedents, lineage C artifacts added various elements and, therefore, are estimated to have emerged the latest.

When lineage A appeared can be learned from the Shitomiya Kita site and the Kozakaai site, among other places. At the Shitomiya Kita site, lineage A examples were excavated from the lower layer of ditch 11 in excavation area H, the layer that is estimated to date to the second half of the early Kofun period (Fujita 2010). At the Kozakaai site (the 41<sup>st</sup> investigation area), too, a deer-antler ornamented dagger of lineage A was unearthed from the site of a river dating to the second half of the early Kofun period. Such discoveries led to the conclusion that lineage A emerged in the second half of the early Kofun period. A [slender, S-shaped-bladed] arrowhead (*chōzetsuzoku*) found at the Ōi Hirano site S01 No. 5 burial facility can be dated to the TK73 phase [beginning of the fifth century; the oldest-stage of Middle Kofun period] according to the Sue-ware typo-chronology.



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The oldest item of lineage B is from Egeyama tomb No. 2. Lineage B is thought to have emerged around the TK73 phase. Objects of the standardized Lineage B with an engraved *chokkomon* can be dated from accompanying artifacts found at the Tsukayama kofun and the Nihon Matsuyama kofun. From an iron arrowhead and armor excavated there, the Tsukayama kofun is estimated to have been built during the TK216 phase [second quarter of the fifth century; the newer-stage middle of Middle Kofun period] (Tanaka 2004) and the finds such as *haniwa* figurines have placed the date of the Nihon Matsuyama kofun in the TK208 phase [middle fifth century; middle stage of Middle Kofun period].

Lineage C can be dated from accompanying artifacts found at the Mizoguchi-no-tsuka kofun and the Sukedo Jūniten kofun. The former is presumed to have been built during the TK208–TK23 phases [third quarter of the fifth century; middle to late stages of Middle Kofun period]. Finds such as horse harness and *haniwa* placed the estimated date of the Sukedo Jūniten kofun during the TK47 phase [late fifth century; terminal Middle Kofun period]. The newest item of lineage C is one from the Minegazuka kofun. This tomb, judging from its iron arrowheads and *haniwa*, can be dated to the MT15 phase [beginning of the sixth century]. A deer-antler-ornamented long sword (*tachi*) with a wedge-shaped pommel appeared in the TK10 phase [second quarter of the sixth century], objects from which were excavated at the Mozume Kurumazuka kofun in Kyoto prefecture. The long sword has grooved and dotted lines on both sides of a *chokkomon* pattern, as in the case of lineage C, and can be presumed to have been made by a group of people of lineage C. That is to say, between the MT15 and TK10 phases the deer-antler ornamented swords of lineage C evolved into the deer-antler-ornamented long sword.

The three lineages of deer antler sword ornaments can be organized as follows. Lineage A made its appearance in the second half of the Early Kofun period. There are detailed differences in shape among artifacts of this lineage, which makes it unlikely that they were produced by the same group of people. Lineage B faithfully emulated lineage A pieces, producing Combination II pieces, such as one found at the Egeyama tomb No. 2, and led to standardized forms such as seen in Combination III pieces engraved with the *chokkomon*. Lineage C appeared in the time between the TK208 and TK23 phases and led to innovated deer-antler-ornamented long swords engraved with the *chokkomon* pattern. Lineages B and C have a high level of uniformity and their production appears to have been concentrated at specific workshops. These two lineages, however, differ in form and decorative pattern, as well as in terms of what parts of the deer antler were used, and therefore are thought to have been produced by different groups of people. Especially, there is a good possibility that lineage B artifacts found at such sites as the Kitsunozuka kofun and Minamiyama kofun might have been made prior to the emergence of lineage C, suggesting that lineages B and C existed together for a certain period of time. Proper estimation of the three lineages requires further examination of the sites where artifacts of these lineages were excavated.



## Sites yielding artifacts of the three lineages

Let us first look at the sites that yielded lineage A objects, that is, early deer antler sword ornaments. Many more deer antler sword ornaments of lineage A were excavated at salt-making and settlement sites—such as Hamane, Kojima Higashi, Shitomiya Kita, and Nishinoshō sites—than kofun sites. At the Hamane and Nishinoshō sites not only deer antler sword ornaments but iron arrowheads were also discovered. Early swords with lineage A ornaments were short and both the sword blades and lineage A ornaments were most likely made at these sites.

At the Hamane site, unfinished deer antler sword ornaments were found in Layer 1, excavated by the Wakasa Kōkogaku Kenkyūkai (Morikawa and Ōmori 1971). Deer antler ornaments that were in the process of being made were excavated from Layers 6 and 7 by the Ōi town commission for protection of cultural properties and the Doshisha University group for the Ōimachi archaeological excavation (Ishibe ed. 1966). Layer 7 yielded no Sue ware but only Haji ware while Layer 6 yielded TK23-phase Sue ware. Remains of various kinds of fish and shellfish were excavated at the Hamane site, but it is notable that many remains of boar, deer, and other animals were also found. They include parts of the skulls of two deer (Figure 8).<sup>3</sup> Both artifacts were from Layer 7 and both are the left side of the skull from which the antler was cut off (see cut lines 3 and 6). The fore skull was cut vertically in the middle (cut lines 1 and 4), together with a horizontal cut at a level above the eye (cut lines 2 and 5). This shows that the deer skull was expertly cut, probably to remove the spinal fluid. Deer are thought to be the source not only of antlers but leather.

A collar ornament found at the Kojima Higashi site that has a decorated *tsuka'ai* space between the collar and pommel, belongs to Type A as mentioned earlier in our discussion of pommel ornament. No trace of rust is found in the scabbard-end area around the “blade collar” (*habaki*), indicating the possibility that it is an unfinished piece. The site resembles the Hamane site in that both yielded numerous relics of fish and shellfish and land animals.

At the Shitomiya Kita site, deer antler sword ornaments, bits from horse harness, *tōsu* knife handles, and deer antlers were found in the lower layer of a large ditch along the western edge of the settlement. Among them is a Type A piece consisting of a pommel with the *tsuka'ai* area that was in the process of being made. On its pommel end, too, the center has yet to be hollowed out. Obviously the piece was unfinished, suggesting that deer antler sword ornaments were made at the Shitomiya Kita site. No structural remains from the “Shitomiya Kita 1 era,” which can be dated before the TK216 phase [of Sue ware], or from earlier times were discovered at the site. Located on a natural river bank, the site is thought to have been surrounded by marshy land. Some point out that various types of Korean-peninsula style pottery (*Kanshiki-kei doki*) have been excavated at this site, suggesting that was a place where people of diverse lineages intermingled.

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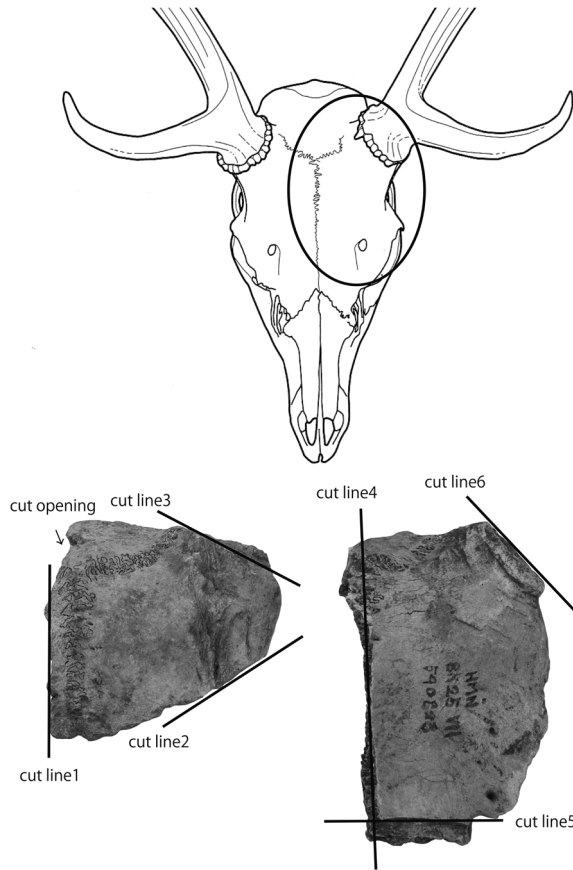


Figure 8. Marks of Antler Skull Cutting

(Compiled by altering figures in Inoue and Yamada eds. 2013. The photographs of a deer skull at the Hamane site are used with the permission of the Doshisha University Historical Museum)

The Nishinoshō site is located at a slight elevation on a dune as well as in a lagoon-like lowland area. The area around the site was low-lying and damp, making cultivating difficult. Instead of rice farming, people there presumably engaged mainly in pottery salt production and fishing. The settlement was at its peak during the TK23–TK47 phases (Fukami 2007, Tanaka 2013). Deer antler sword ornaments of lineage A were excavated from D-district III “Layer c” and F-district III “Layer c.” The former can be dated before the appearance of Sue ware because the layer yielded only Haji ware objects, accompanied by legged salt-making pottery. The only structural remains for this period of time are pits and scorched clay; there are no remnants of a settlement.

Conspicuously many of the sites that yielded early deer antler sword ornaments are seaside places where salt was made, such as Hamane, Kojima Higashi, and Nishinoshō sites.

Especially at the Hamane and Kojima Higashi sites, numerous remains of fish and shellfish and land animals were found, including the expertly carved remains of animals introduced earlier.<sup>4</sup> There are two possible theories regarding what kind of people lived in the Hamane and Kojima Higashi sites. One theory goes that people who engaged in salt making and fishing also engaged in hunting of land animals; the other holds that groups engaged in salt making and fishing and other groups that hunted land animals mingled at the Hamane and Kojima Higashi sites. Determining which theory is valid requires a comprehensive investigation of structural and other remains at the sites, but there is no doubt that the people of both sites were not settled, farming people but unsettled people. The same can be said of the Shitomiya Kita site before the “Shitomiya Kita 1 era.”

At Tobayama Cave, deer antler sword ornaments were excavated in the deepest part of the cave along with handled bowls of Haji and Sue ware dated to the TK73 phase. Some distance away in the cave, a group of objects were found including a “ring” cheek plate of horse bit [環鏡板轡] (one of the oldest items of horse harness found on the Japanese archipelago to date), a deer antler *narikabura* arrowhead (that makes a whistling sound), *koto* (zither)-bridge-shaped stone objects, grinding stones, a Sue ware double *hasō* (small wide-mouthed pot with many holes on the body). The finds at these two different locations in the cave were from more or less the same period. There are various theories as to who was buried in the cave, one holding that it was a graveyard for a group of local people who traveled to and from China and the Korean peninsula (Nagamine 2000), and another theory suggesting it was a burial place for a group of fisherfolk from other areas who settled there (Seki 2000). The theories agree on the point that the graveyard was for people who moved about widely on the Japanese archipelago and/or China and the Korean peninsula.

Study of the excavated sites indicates that early deer-antler-ornamented swords were made and used by itinerant people, most likely people engaged in marine fishing over a broad region. Accompanying objects found at the Tobayama Cave suggest that the area of people’s activity extended beyond the Japanese archipelago to the continent as well.

The vast majority of lineages B and C were excavated from tombs and tumuli. A few exceptions include an object from the Nangō Kadota site in Nara prefecture (Ban ed. 1996). At this site no finished objects were found, all being fragments. The *chokkomon* are deeply engraved, indicating fragments that belong to Group 1 as discussed in the section “Arc-and-Straight-Line Pattern.” There are small and large types of collar ornament, indicating the presence of multiple standards for making deer-antler-ornamented swords. Nangō Kadota is a site of the early phase of Sue ware, and the items found there can be seen as among the oldest standardized deer antler sword ornaments with *chokkomon* patterns. With no grooved line on either side of the pattern, they are thought to be sword ornaments of lineage B. Although no clearly unfinished pieces were discovered, the number of excavated ornaments is quite large for a single site, indicating the high possibility that the Nangō

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Kadota site was a place where lineage B deer antler sword ornaments were made.

Lineage C ornaments include items found at the Shimauchi underground corridor tomb cluster and Nagayu corridor tomb cluster tomb No. 7, among other sites. It has been pointed out that underground corridor tombs differed from kofun in that (1) few farming tools are found in the former, suggesting that hunting and gathering was the major source of livelihood, and (2) multiple burial was the norm, suggesting that the tombs were not those of tribal heads (Hashimoto 2012). Lineage C items were also unearthed in seaside cave graves at such sites as Isoma Iwakage and Chiba prefecture's Ōderayama caves (Okamoto *et al.* 1999). Given the locations, the graves were most likely those of people engaged in marine-related activities including coastal or overseas trade. From the Uedomari site on Hokkaido's Rebun Island, too, lineage C scabbard tip ornaments were discovered (Ōba 1977). This is a good evidence that lineage C items were supplied to people who moved about widely in the archipelago. Elsewhere, lineage C items were found from kofun with strong links to immigration from the continent, such as the Mizoguchi-no-tsuka, Tenguyama, and Sesudono kofun. The Minegazuka kofun is also considered to have links to migration from the continent because its stone chamber was constructed at the same time as the earth for the upper part of the mound was piled up (*kōchiku bokō*) and clay was used to fill the gaps between the rocks used for the walls (Yoshizawa 2002). These two practices are very unusual among keyhole-shaped mounded tombs. As the above shows, lineage C items tend to be found either from tombs other than kofun such as underground corridor tombs and seaside cave graves or from kofun with strong links to immigration from China and the Korean peninsula.

### **Conclusion: Historical significance of deer antler sword ornaments**

Our examination of various sites from which deer antler sword ornaments were uncovered indicates that early lineage A ornaments were made and used by people who moved widely around the Japanese archipelago and likely had contact with people of China and the Korean peninsula. Among the sites where lineage C ornaments were found as burial goods, conspicuously many are underground corridor tombs and seaside cave graves rather than kofun, or kofun with strong links to immigration from the continent. People who made and used lineage A items and people who were buried with lineage C items were alike in that they both were peripheral to the rulers and local ruling elites. The lineage A deer antler sword ornaments these people made and used seem to have been remade by rulers and local ruling families into lineage C ornaments with the addition of engraved arc-and-straight line patterns. It is most likely that the ruling and local ruling elites distributed the refurbished swords to people in the attempt to build relationships. The Nangō Kadota site, where lineage B ornaments were made, was a place where weapons were made in the Nagara and Nangō

site cluster, part of the territory of the Katsuragi family. The activities of the Katsuragi ranged over a very broad region including the Korean peninsula, and these activities were presumably supported by seafarers (*kaimin*). In order to construct and/or strengthen relationships with these seafarers, the Katsuragi made and distributed swords with improved versions of deer antler ornaments. That is to say, the deer antler sword ornaments of lineages B and C were quite likely produced at workshops of the rulers of the kingdom of Wa and local ruling families and distributed selectively to specific people.

The presence of such widely roving people, while considered peripheral by the rulers and local ruling elites, created links among scattered agricultural communities and, in island-nation Japan, they were also seafarers who played an important role in connections with the maritime areas of East Asia. Tomizawa Hisao (1997) has observed that the peripheral areas of states in the eastern part of the Southeast Asian maritime world partly overlapped and that it was the seafaring people of those overlapping areas engaged in fishing and trade who held the keys to the survival of those states. A similar connection is worthy of attention in considering the ancient state in the context of the Japanese archipelago. Ishimoda Shō (1971; p. 11) argues that “the signs of the incipient state apparatus first appeared in the border areas between states.” Amino Yoshihiko (1990; pp. 331–332) suggests that “the way ‘border areas’ were controlled or the relation [of those border areas] to society may have determined the character of individual states.” In order to enhance our understanding of the Kofun period as a formative period of the state, it is necessary not only to study the central polity (*chūshin seitai*) but also to deepen investigations of such peripheral or “border areas” (*kyōkai ryōiki*).

This article addresses the possibility that the fifth-century rulers and local ruling elites held the people of peripheral areas in high esteem, and skillfully enhanced the deer antler sword ornaments made and used by these people and distributed the refurbished versions to them in the effort to strengthen relationships with them. To further clarify the relationships of rulers and local ruling elites with people on the periphery requires further research.

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### Notes

- 1) Throughout this paper, Japanese names are mentioned according to the Japanese order; i.e. the family name first, given name last.
- 2) Finds from Fukuoka prefecture's Takaueyama 高上山 kofun (Inoue 2010b) and Miyazaki prefecture's Ōhagi 大萩 No. 3 underground corridor tomb (Hongō *et al.* 1984) have a separately-made tenon for connecting the collar with the collar projection as well as a *chokkomon* pattern that is somewhat different from others. They were probably made as local imitation objects. But such examples are rare.
- 3) I would like to thank Wakabayashi Kunihiro and Hamanaka Kunihiro of the Doshisha University Historical Museum for their permission to use these previously unpublished objects, as well as Teshima Mika of the museum for her help with paperwork.
- 4) At Nishinoshō site, too, many remains of land animals were found. Since no items from the same period as “Layer c” of D-district III or “Layer c” of F-district III are listed in the report of the site, this article excludes them.



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