

Adoption of the Practice of Horse-Riding in Kofun Period Japan: With Special Reference to the Case of the Central Highlands of Japan

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ABSTRACT

Horses were not native to Japan. Not only did horses have to be imported from the Korean peninsula, but equestrian specialists also had to be invited in order to raise and reproduce horses in Japan. In this paper, the author presents regionally distinctive cases of the introduction of horses to the central highlands of Japan in the fifth and sixth centuries A.D. While it is highly likely that the central polity took the initiative to adopt the practice of horse-riding in Japan, the author argues that it was entirely up to local polities how to invite equestrian specialists and import horses from the Korean peninsula in the fifth century. Furthermore, the author suggests the possibility that the central polity in the fifth century was not so powerful to monopolize the diplomatic right that local polities remained so autonomous to maintain their own diplomatic relationships with local polities in the southern Korean peninsula.

KEYWORDS: Horses, Korea-Japan interaction, fifth century A.D. Kofun Period, state formation

1. Introduction

Horses were not native to Japan. Not only did horses have to be imported from the Korean peninsula, but equestrian specialists also had to be invited in order to raise and reproduce horses in Japan. The adoption of the practice of horse-riding as a system has been a very important subject of the Kofun Period archaeology. It was the proposal of the “horse-rider” theory by Egami Namio in 1949 (Egami, Oka, Ishida, and Yawata 1949) that triggered the heated discussion in the 1950's. Egami argued that a large number of horse-riders of the Asian continent arrived in Japan at the beginning of the fifth century, conquered Japanese people, and established a new state.

The majority of Japanese archaeologists, including Kobayashi Yukio (1951), were against Egami's proposal, and made every effort to refute it. Kobayashi discussed that, while the practice of horse-riding was introduced to Japan in the early fifth century, the practice became widespread in Japan toward the end of the fifth century, not the beginning of the fifth century. At first, horse trappings had to be imported, and local Japanese production started after the end of the fifth century.

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At present, very few Japanese archaeologists, if any, consider the horse-rider hypothesis valid. To refute or to support Egami's hypothesis, the Japanese archaeologists have in any case basically depended up on analyses of horse-trappings discovered at mound tomb sites, because the bone preservation is so bad that horses are rarely discovered archaeologically. As a result, research into horse-trappings of the Kofun Period has made considerable progress (see Onoyama 1959, Masuda 1966, Yamada 1974, Chiga 1991, Isahaya 2012 and Uchiyama 2013 for synthesis in Japanese; see Edwards 1983 for good review in English). In a sense, research into horse-trappings is a valid approach to the studies of social ranking of the elite class. For example, Amako (1993) observes a good correlation between the size of burial chambers and the richness of horse-trappings deposited in the burial chambers in the sixth century.

The problem is that researches into the practice of horse-riding are so skewed toward the studies of horse-trappings themselves and their relative chronologies that little attention has been paid to other aspects of the practice of horse-riding (see Momosaki 1993 for very thorough, comprehensive, and critical synthesis in Japanese). An exception to this trend in the 1970's was Mori Kōichi (1974) who called for the necessity to pay more attention to the archaeological contexts of discoveries of horse-trappings, and suggested the possibility of horses intentionally buried wearing horse-trappings in the Kofun Period. Furthermore, Mori (1978) made it clear that the practice of horse sacrifices started in the late fifth century in the Japanese archipelago. At that time, he could only compile eight cases in the Japanese archipelago and the Korean peninsula, and suggested the regional and temporal difference in the practice of horse sacrifice. Mori's suggestion is ahead of the times and is highly noteworthy.

In the 1980's, the archaeological discoveries of horses that may be interpreted as being sacrificed accumulated, and researches into these discoveries were synthesized by Yamada (1989) and Matsui (1991) for eastern Japan and Segawa (1991) for Osaka. In recent years, aspects of horse-pastures became clear in the field of Kofun Period archaeology (Shibata 2008 for southern Kyushu, Takashima 2008 for northern Kantō, Nojima 2008 for Shijōnawate City, northern Osaka Prefecture; Miyazaki 2012).

In this paper, following Mori's (1978) very progressive suggestion, I make clear the regional difference in the adoption of the practice of horse-riding in northern and southwestern regions in the old province of Shinano, present Nagano Prefecture, in the central highlands of Japan. The selection of the Shinano province is appropriate because Nagano is the prefecture where the second highest number of the archaeological discoveries of horse-trapping is reported, the highest being Fukuoka, the prefecture closest to the Korean peninsula. I will compare these two regional patterns with the case of the central polity evidenced by the result of archaeological investigations in Shijōnawate City, northern Osaka Prefecture, and demonstrate that the pattern of the

northern Shinano province is quite distinctive from that of the central polity. Finally, I will argue for the possibility that the practice of horse-riding was introduced to the northern Shinano province independently from the central polity.

2. Introduction of horses to the central polity

Currently, the earliest evidence for the introduction of horses to Japan is a wooden stirrups discovered in a stratum dated toward the end of the fourth century A.D. in a ditch adjacent to the Hashihaka mound tomb in Nara Prefecture. The best evidence for the practice of horse-riding in the region of the central polity comes from several sites in Shijōnawate City, northern Osaka Prefecture (See Figure 1 for the location of Shijōnawate and Figure 2 for the locations of archaeological sites in Shijōnawate). These sites are distributed in a plain of two kilometers in east-west width. The western end of this plain is demarcated by the eastern shore of the freshwater Kawachi Inlet and the eastern end



Figure 1. Locations of Shijōnawate City, Iida basin, and Nagano basin

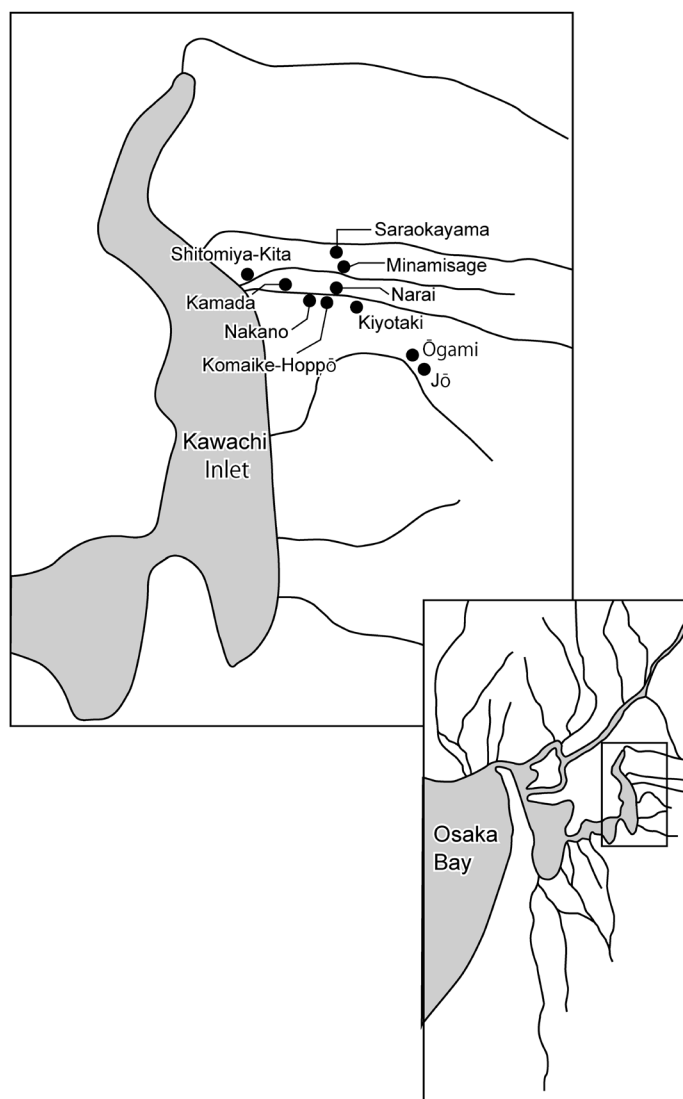


Figure 2. Locations of archaeological sites in Shijōnawate City mentioned in the text

of the plain by the western foot of the Ikoma Hills. Overall, the settlement and pasture sites are located on the plain and groups of burial mounds where equestrian specialist and those who managed them were buried are located on the western slope of the Ikoma Hills. The Kawachi Inlet was connected to the eastern end of the Inland Sea during the Kofun Period, and it is likely that horses and equestrian specialists from the Korean peninsula sailed through the Inland Sea and disembarked on the eastern shore of the Inlet.

In the plain, streams originated from the Ikoma hills flew east to west during the Kofun Period, which must have functioned as a fence to keep the horses inside pastures (Nojima 2008). These streams are, from north, Sara 讃良, Okabe 岡部, Kiyotaki 清滝, and Gongen 権現. Archaeological sites in Shijōnawate City where features and artifacts related to horses have been discovered are spatially separated by these streams, and may be grouped into three clusters. A group of sites situated between the Sara and Okabe streams are, from west to east, Shitomiya-Kita 蒨屋北 site, Minami-Sage 南山下 site, and Saraokayama 更岡山 Mound Group, the second group between the Okabe and Kiyotaki streams are Kamada 鎌田 site, Narai 奈良井 site, and the Kiyotaki 清滝 Mound Group, and the third group between the Kiyotaki and Gongen streams are Nakano 中野 site, Komaike-Hoppō 木間池北方 site, Jō 城 site, and Ōgami 大上 Mound Group. Segawa (1991, p. 125) boldly interprets that three groups of equestrian specialists settled there by the late fifth century. Site reports of relevant sites were published after Segawa's proposal, and here I review the archaeological evidence, from the northern (first) group of the sites to the southern (third) group. In each group, I introduce sites from west to east or the Kawachi Inlet shore to Ikoma Hill.

In the first group, the westernmost site is the Shitomiya-Kita site, at the altitude of 1.0 meter, and dated to the fifth century. At this site, archaeologists discovered a horse burial (Figure 3), horse trappings (Figures 4 and 5), large quantities (76 kg) of pottery sherds used for salt production, ceramics made with southern Korean techniques, and iron slugs



Figure 3. Horse burial at the Shitomiya-Kia site (Iwase et al. 2009)

木製輪鐙〔大阪・葦屋北遺跡〕



Figure 4. Stirrup discovered at the Shitomiya-Kita site (Iwase *et al.* 2009)

(Iwase *et al.* 2009). A complete set of horse skeleton was discovered, evidence that the horse was carefully buried. The horse was identified as Mongolian breed, characterized by very short height of 125 cm. The horse trappings included two wooden stirrups, a part of a lacquered wooden saddle, and a pair of iron horse bits. The horse bits are one of the very early type in Japan, and considered imported from the southwestern Korean peninsula or made in Japan after the Korean prototype. The pottery for salt production was used for transportation of salt from salt production sites on the sea coast, and salt was necessary for feeding horses with sodium. The ceramics made with southern Korean technique were evidence for equestrian specialists arriving from the Korean peninsula and settled in the Shijōnawate area. Iron slugs would suggest that repairing iron horse bits took place at the site. The excavators identify this site and neighboring sites in Shijōnawate City as the site of the historically-known Sarara 讃良 Pasture.

1.2 Kilometers east of the Shitomiya-Kita site is the Minamisage settlement site. At



Figure 5. Saddle discovered at the Shitomiya-Kita site (Iwase et al. 2009)

this site, archaeologists discovered a *haniwa* ceramic figurine of a horse, dated to the middle fifth century. The figurine is very concrete, and the horse-trappings depicted are identical to those real horse-trappings discovered at the Shitomiya-Kita site (Nojima 2016b).

500 meters north of the Minamisage site is the Saraokayama Mound Group. There, horse teeth were discovered in a pit just outside a moat enclosing a circular mound tomb of 19 meters in diameter, dated to the sixth century. The pit is 1.5 meters by 2.4 meters (Nojima 1981). Nojima (2016d) speculates that the horse head was buried in this pit because only the teeth were discovered and the size of the pit was somewhat too small to bury the whole body of a horse.

In the second group situated between the Okabe and Kiyotaki streams, the westernmost site is the Kamada site, at the altitude of 4.8 meters. At this site, excavators discovered a ditch of four meters in width and 1.1 meters in the remaining depth. The discovered artifacts include a wide variety of pottery, including Korean ceramics and ceramics made locally with Korean techniques, various wooden objects presumably used for rituals, 383



Figure 6. Head of a sacrificed horse, discovered at the Narai site (Nojima 2016c)

talc beads for rituals, and bones of two horses. The artifacts are dated to the middle fifth century. The excavators assume that this ditch enclosed a square precinct used for ritual (Nojima 2005b; Murakami 2016), very similar to the one discovered at the Narai site to be discussed below.

0.8 Kilometers east of the Kamada site is the Narai site, at the altitude of 23.5 meters. At this site, archaeologists discovered a square feature of approximately 40 meters per side, enclosed by a ditch of approximately five meters in width, very likely used for a ritual. The feature is dated to the late fifth to early sixth centuries. In the ditch, one horse was buried, carefully placed on a wooden board of two meters long. The heads of six or seven additional horses were discovered in the ditch (Figure 6), apparently their heads chopped off, presumably sacrificed. In the central part of the western ditch were twelve human ceramic figurines and six ceramic horse figurines, dated to the sixth century (Figure 7). In one large Sue-stoneware jar discovered in the ditch, 36 talc beads were deposited. All these evidence strongly indicates that this square feature was a ritual precinct, and horses were an important part of the ritual. In the vicinity of this square feature, archaeologists discovered considerable quantities of ceramics made with Korean techniques and a rectangular feature of one by two meters, paved with stone slabs, where salt was produced (Nojima *et al.* 2012; Murakami and Jitsumori 2013). Nojima (2016c) speculates that living horses were sacrificed until the early sixth century, the ceramic horse figurines came to be used as substitutes of living horses for rituals.

In the ditch enclosing the Kiyotaki No. 2 Mound, horse teeth were discovered in a depression of 20 centimeters in depth, dug into the bottom of the ditch. The No. 2



Figure 7. Ceramic figurines of horses and humans, as well as hand-made miniature pottery for rituals at the Narai site (Nojima 2016c)

Mound is a circular mound of 23.5 meters dated to the early sixth century. The teeth belonged to a single horse, and Nojima (1980) speculates that the horse head was placed in the depression.

In the third group, at the Nakano site at the altitude of 22.5 meters, two pieces of evidence for horses ritually sacrificed have been discovered. At the Locality NN-II, a horse head was discovered to have been placed on burned cherry branches. The head was placed on a bank of a ditch of 3.8 meters in width, 1.4 meters in depth. Nojima (2005a) speculates that the horse head was offered for a ritual. This feature is dated to the very early fifth century, which is the earliest-dated example of ritually sacrificed horses in this region.

At the Locality 10 of the Nakano site, a horse head was placed on a wooden board and deposited in a well. On top of the horse head was a few granite rocks, which were then covered by complete earthenware bowls and jar, and the pedestal of a pedestalled bowl (Nishio 1988). Nojima (2016a) speculates that the horse head was offered when a ritual of discontinuing the use of a well was conducted.

The eastern neighbor of the Nakano site is the Komaike-Hoppō site, and its eastern neighbor is the Jō site. At these two sites, archaeologists excavated a large quantities of ceramics made with southern Korean techniques and horse teeth in a stratum dated to the fifth century filling the feature of a stream. Most of the pottery does not show evidence of being ramblled in water, and some of the pottery was in complete pieces (Murakami 2006). Murakami (2006) speculates that rituals took place where the pottery and horse heads were placed on the bank of the stream.

The northern neighbor of the Jō site is Ōgami Mound Group. In the sixth century, it appears that equestrian specialists or maybe their managers came to be buried in mound tombs. At the Ōgami Mound Group, archaeologists excavated a keyhole-shaped mound tomb of 45 meters in length, dated to the early sixth century. The mound was enclosed by a moat and maybe second, outer moat as well. This suggests that whoever buried in this mound was in a position to oversee and manage a group of specialists, in this case equestrian specialists (Murakami and Jitsumori 2017). Nojima (2008, p. 196) boldly speculates that Kawachi no Umakai no Obito Arako 河内馬飼首荒籠 [Arako, the Leader of Equestrian Specialists in the Old Province of Kawachi] who is mentioned in the chapter of King Keitai 繼体 (r. 507–531) in the *Nihon Shoki* 『日本書紀』 [Chronicle of Japan]. In the vicinity of the Ōgami Mound Group, archaeologists also discovered evidence for rituals, utilizing ceramics made with Korean technique (Murakami and Jitsumori 2017).

In sum, all the archaeological evidence at these sites in Shijōnawate City strongly suggests that pastures for raising horses were located in this area, and Korean equestrian specialists also resided there. Because these sites are located in the region where the central polity was presumably located throughout the Kofun Period, it is very likely that the pasture was under the control of the central polity. It is also noteworthy that in a few cases horses were carefully buried and in many cases were sacrificed and their heads were placed in ditches on the bank of streams or in a ditch enclosing a ritual precinct. In the sixth century, horse figurines were also used for rituals.

3. Introduction of horses to southwestern Shinano

Ample archaeological evidence for horses during the Middle Kofun Period (fifth century) comes from the Iida basin, located in the southwestern Nagano Prefecture or the old province of Shinano. Nagano happens to be the prefecture where the second highest number of the discoveries of horse-trappings have been reported.

Here, I list the discoveries of horse burials in the Iida basin. Mound tombs in the Iida basin are spatially grouped into five areas, namely Zakōji 座光寺, Kamigō 上郷, Matsuo 松尾, Tatsuoka 竜丘, and Kawaji 川路. Among the five, the discoveries of horses

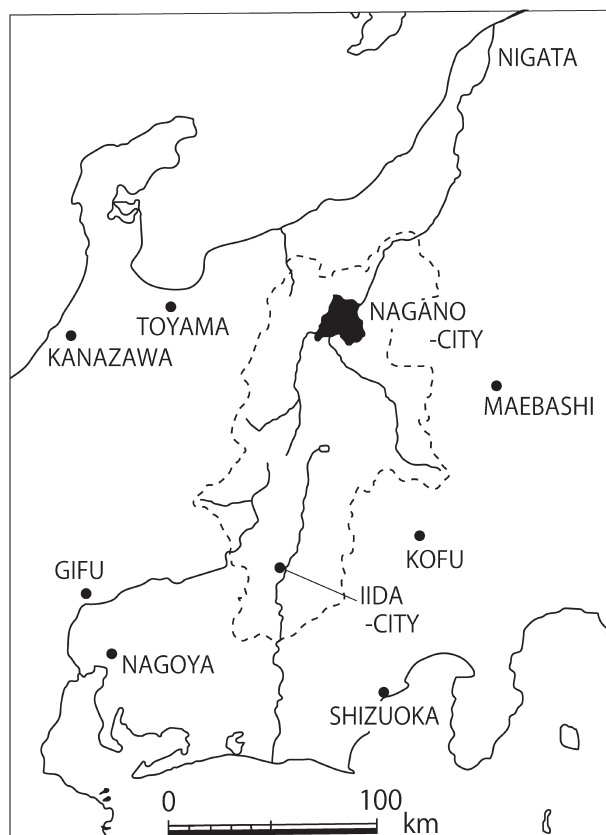
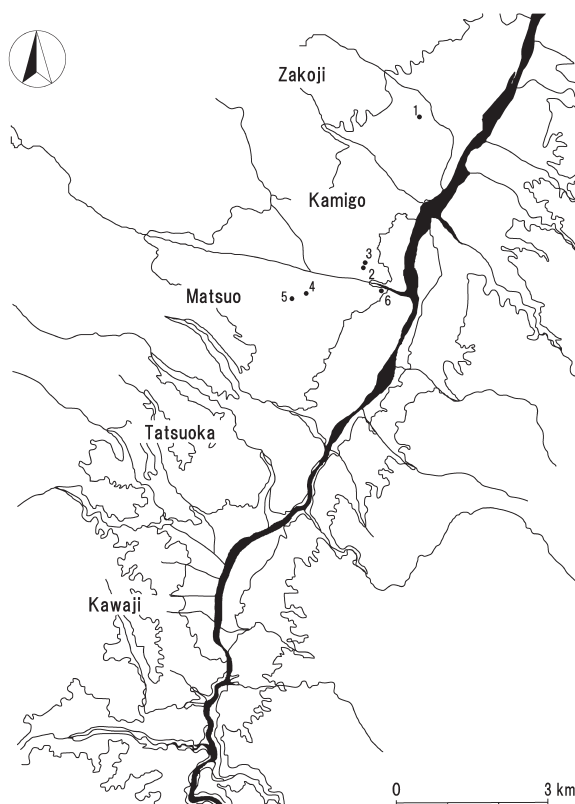


Figure 8. Nagano Prefecture in Japan

have been reported from the Zakōji, Kamigō, and Matsuo areas (see Figure 8 for the location of Iida and Figure 9 for the locations of archaeological sites in Iida basin). In the Tatsuoka and Kawaji areas, fifth century horse-trappings have been discovered.

In the Zakōji area, the discoveries of horses and horse-trappings in the Middle Kofun Period contexts have been reported from the Araibara-Takaoka 新井原・高岡 Mound Group. A horse wearing horse-trappings was buried in a pit of 1.8 by 1.1 meters (Figure 10, right). The pit (Pit No. 4) was situated seven meters apart from a moat enclosing the keyhole-shaped Araibara No. 12 mound of 36 meters in length. Because the horse-trappings discovered in this pit were of the same typological stage of iron arrowheads, iron daggers, and iron cuirass deposited with the dead in the Mound No. 12, the excavators suspect that this horse burial was associated with the Mound No. 12 and dated to the late fifth century (Imamura and Kobayashi 1983).

In the vicinity of Mounds No. 11 and 12, two pits were discovered where horses were

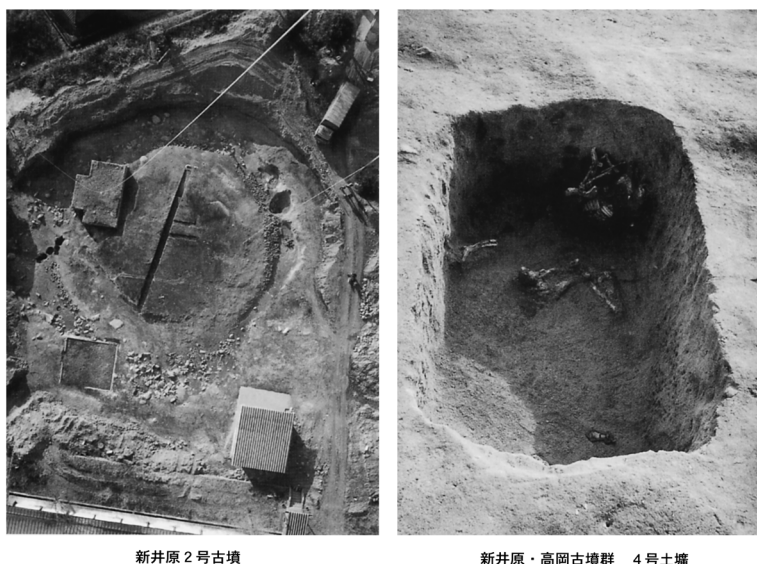


1. Araibara 2go Kofun 2. Miyagaito Iseki 3. Mizoguchinotsuka Kofun
4. Monomizuka Kofun 5. Chagarayama Kofun 6. Teradoko Iseki

Figure 9. Locations of archaeological sites in the Iida basin mentioned in the text

buried. One pit was 2.1 by 1.4 meters, and teeth were only discovered. The other pit was 1.8 by 1.1 meters, and not only teeth but also limb bones were discovered. In the earth filling the second pit, horse trappings dated to the fifth century were also discovered. The excavators suspect that a horse wearing horse-trappings was buried in the second pit, and speculate that the horse in the first pit was contemporaneous to the second pit (Kobayashi 1986, pp. 451–452).

Three horses were buried in a ditch enclosing the circular Mound No. 2 of 30 meters in diameter (Figure 10, left). The horses were placed in pits dug into the bottom of the ditch. Although teeth were only discovered, Kobayashi (1994) suspects that the horse bodies were buried because of the sizes of the pits of 1.8 meters in diameter. In addition, stirrups were discovered in the same ditch. While the horse burial pits were situated to the west of the mound, the stirrups were placed to the east of the mound. Kobayashi



新井原 2 号古墳

新井原・高岡古墳群 4 号土坑

Figure 10. Araibara No. 2 Mound Tomb and a Horse Burial Pit at the Araibara site (Shibuya 2007)

(1994) suspects that whoever buried in the Mound No. 2 was in the position related to horse production.

Another horse was discovered in the Pit SK 47, situated between the Mound No. 11 and No. 13. A horse bit was also discovered in the Pit 33 in the vicinity. Baba (1999) suspects that the horse and the bit are associated with the fifth century Mound 13 because the Mound No. 11 was built in the sixth century, and all the other horses buried in this mound group are dated to the middle and late fifth century (Shibuya 2007).

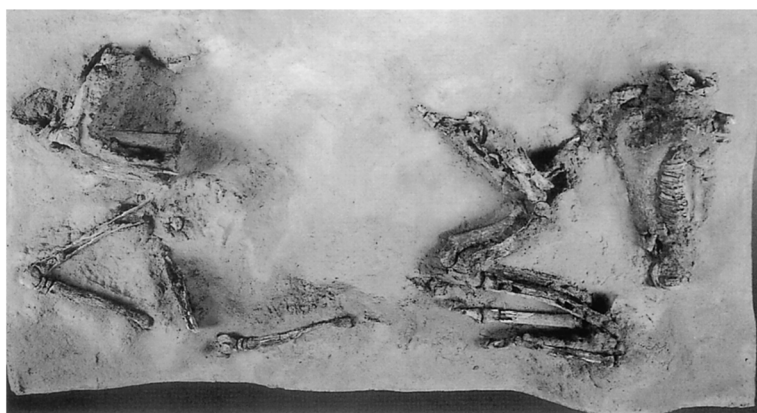
In the Kamigō area, relevant discoveries have been reported from the Miyagaito 宮垣外 site. A horse, wearing a set of horse-trappings, was buried in the Pit SK64, dug into the bottom of a ditch enclosing the low burial mound SM03. The pit was 2.4 by 1.12 meters, and apparently the pit was dug more or less at the same time as the ditch enclosing SM03. Although teeth were only discovered, Shibuya (2000) suspects that the whole body was buried because of the size of the pit, the association with the set of horse-trappings, and the position of the teeth within the pit. The horse is dated to the late fifth century owing to the typology of the horse-trappings. Another horse was buried in a ditch enclosing another low burial mound SM15. The condition of the discovery was so bad that the horse teeth may not be *in situ*. If this horse was associated with the Mound SM15, the horse would be dated to the fifth century (Shibuya 2000).

Four additional horses were buried in four pits (SK10, 11, 42, 68) between mounds. Pit SK10 was 1.64 by 1.04 meters, and a whole horse body was discovered in a good preservation (Figure 11). Shibuya (2000, p. 45) suspects that the horse was intentionally

buried, and speculates that the horse would be dated to the late fifth century because of the similarity in patterns of placing horse bodies in pits to the Pit SK64. In the other three pits, only teeth were discovered. Pit SK68 was 0.51 by 0.49 meters, and it is impossible that a whole horse body was placed in this pit. Since Pit SK11 was 1.02 by 0.42, considerably smaller than Pit SK10, it is very uncertain that a whole horse body was placed in this pit. Pit SK42 was 1.32 by 1.08 meters, and the preservation of the teeth was so bad that it is difficult to speculate the original context of a horse placed in this pit (Shibuya 2000).

Adjacent to the Miyagaito site is the keyhole-shaped Mizokuchinozuka 溝口の塚 Mound Tomb where two iron cuirasses, one iron helmet, one set of iron gorgets, and one set of iron shoulder armor. The amount of iron armor deposited with the dead at the Mizokuchinozuka Tomb is considerable, and it is possible to assume that a local elite who managed equestrian specialists was buried there (Kobayashi, Sasaki and Shibuya 2001). In the vicinity of the circular, rear portion of the Mizokuchinozuka Mound Tomb, horse teeth were discovered in dirt resulted from the destruction of archaeological features, and Kobayashi and Furukawa (1998) points out the possibility that a horse may be associated with this keyhole-shaped mound tomb.

In the Matsuo area, relevant discoveries have been reported from the Monomizuka 物見塚 Mound Tomb, Chagarayama 茶柄山 Mound Group, and Teradoko 寺所 site. In a ditch enclosing the circular Monomizuka Mound Tomb, dated to the middle fifth century, horse teeth were discovered in association with a horse bit. Although it is not certain whether the whole body or the head of a horse was placed, Kobayashi and Sasaki (1992) consider it very likely that the whole body was buried because in most of the cases in the Iida basin whole bodies of horses were buried in the fifth century. While



同 SK 10

Figure 11. Horse burial discovered at the Miyagaito site (Shibuya 2007)

the archaeological context of the discoveries of the teeth and bit suggests that the horse was buried a little after the Mound Tomb was constructed, the typology of the horse bit suggests that the horse was dated to the middle fifth century, earlier than the Araibara Mound No. 12 case. This is the earliest horse-burial in the Iida basin (Kobayashi and Sasaki 1992).

In the Chagarayama Mound Group (Figure 12), six horses were buried in pits dug into the bottom of a ditch enclosing the circular Mound No. 9 of 23 meters or so in diameter. In two of the six pits, middle fifth century pottery was also discovered, and Kobayashi (1994) considers that all the pits and horses were contemporaneous. In addition, horse teeth were discovered in two pits four meters to the north of and five meters to the southwest of the Mound No. 9, and Kobayashi (1994) considers that these two pits were associated with the Mound No. 9. The burials of eight horses associated with a single mound tomb is very unusual, and it also suggests that whoever buried in the Mound No. 9 possessed far more than eight horses.

In two pits six to eight meters to the northwest of the Mound No. 2 of 20 meters in diameter, horse teeth were discovered. The mound is dated before the end of the fifth century. Since the teeth were discovered in the corners of the pits, Kobayashi (1994) considers that the whole bodies were buried in these pits. Among the two, one horse was buried wearing horse bit and a ring of three bronze bells hung from a saddle.

At the Teradoko site, horse teeth were discovered in a ditch enclosing a low



Figure 12. Horse burials at the Chagarayama Mound Group (Shibuya 2007)

burial mound (SM04) of the late fifth century, the same was the case for two other contemporaneous low burial mounds (SM02 and SM03). The burial mounds SM02 and SM04 are circular in plan, and in both cases a part of the ditch enclosing the mounds were left unexcavated, functioning as a bridge to the mound. On the contrary, burial mound SM04 is square in plan, and the mound surface was covered with cobbles. In Pit SK03 situated between SM01 and SM03, horse teeth were discovered in its southwestern corner, which suggests that a whole body was buried in the pit. Yamashita (1999) speculates that the whole bodies were also buried in the moats enclosing SM02, SM03, and SM04. All the low burial mounds are dated to the late fifth century, and Yamashita (1999) considers Pit SK03 contemporaneous to the burial mounds.

In the vicinity of the Teradoko site is the Myōzen-Ōtsuka 妙前大塚 Mound Tomb of 26.5 meters in diameter, where an iron helmet with a visor, five iron daggers, four iron swords, and one iron spear were discovered (Satō 1971). This mound tomb is dated to the middle fifth century. Yamashita (1999) points out the difference in social status between the one buried in the Myōzen-Ōtsuka Mound Tomb and those buried at the Teradoko sites. This case is the same as a relationship between the Miyagaito site and the keyhole-shaped Mizokuchinozuka Mound Tomb. Equestrian specialists were probably buried in small or low burial mounds, while those who managed the equestrian specialist were buried with iron armor.

All these horses are dated to the fifth century. In the Iida basin, the discoveries of horses in the sixth century contexts have not been reported. An exception to this would be the discoveries of horse teeth at two places in a ditch enclosing a late seventh century circular Kitabayashi 北林 Mound No. 5 in Takamori Town, northern neighbor of Iida City (Matsushima 1994).

The archaeological evidence in the Iida basin suggests some important aspect of the practice of horse-riding in the fifth century. First, horses were not buried in mound tombs where iron armor was deposited with the dead. Because iron armor is the status symbols of high-ranking elites in the Middle Kofun Period, this phenomenon suggests that horses did not belong to particular high-ranking individual in the fifth century. I would speculate that horses still belong to equestrian specialists who were buried in circular mound tombs. It is also very important to note that horse trappings were not prestige goods but were practical trappings in the fifth century. Indeed, several horses were buried wearing horse trappings, and no horse trappings were deposited with the dead in fifth century mound tombs where iron armor was deposited with the dead.

In the Iida basin, semi-subterranean residences equipped with built-in stoves appeared in the middle fifth century (Shibuya 2007), which is exceptionally early in the history of the Kofun Period. Stoves were domestic practice introduced from the Korean peninsula, and were widely adopted in Japan since the sixth century. The appearance of built-in stove in

the middle fifth century should be indirect evidence for the presence of Korean immigrants.

4. Introduction of horses to northern Shinano

A case of the introduction of horses to northern Shinano was very different from the case of southwestern Shinano. Evidence for the early introduction of horses comes from the Ōmuro 大室 Cairn and Earthen Mound Group in Nagano City, situated southeastern part of the Nagano basin (see Figure 9 for the location of Nagano City, and Figure 13 for location of sites in Nagano City). The name “Ōmuro” appears in the early tenth century document, *Engishiki* 延喜式, listed as one of the governmental pastures in Shinano. The Ōmuro Group consists of more than five hundred small mound tombs, and characterized by more than one hundred cairns, constructed solely by rocks. Staff of the Archaeology Program, Faculty of Letters, Meiji University conducted archaeological excavations of some twenty cairns and earthen mounds from 1984 to 1996, and archaeological evidence related to horses was discovered at Tomb No. 168 constructed in the third quarter of the fifth century (Kobayashi *et al.* 2008) and Tomb No. 186 at the end of the sixth century (Sasaki *et al.* 2015).

Tom No. 168 is a cairn (Figure 14). Because it is situated on a slope, its diameter is as follows: along the east–west axis 11.2 to 12.4m; along the north–south axis 12.2 to 13.0m. The height of the cairn is more than 0.96m in the upper slope and 2.96m from

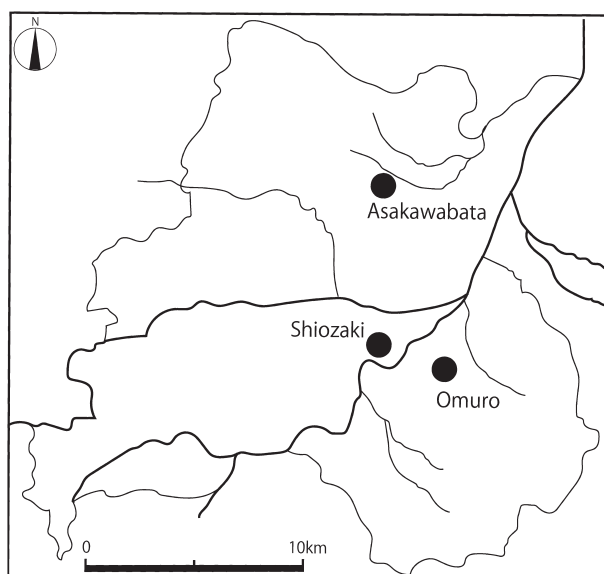


Figure 13. Locations of archaeological sites in the Nagano basin mentioned in the text

the lower slope. A vaulted stone burial chamber was constructed on the top of this cairn. The length of the chamber is 1.82 m, and the width 0.83 m (southwestern end) and 0.86 m (northeastern end). Its height including the top is 0.92 to 1.06 m.

At the foot of the Tomb 168, a ceramic earthenware figurine of a horse was discovered (Figure 15). It is 19.1 centimeters in length, 10.3 centimeters in height. This ceramic

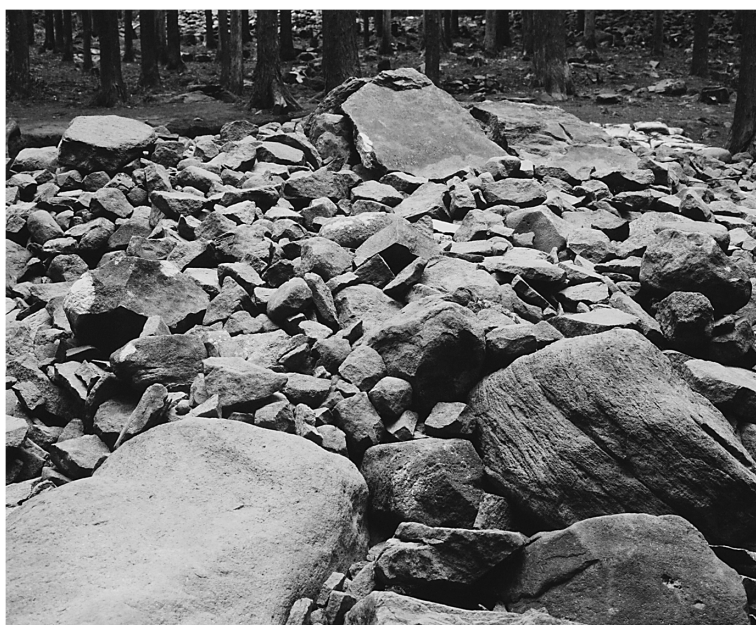


Figure 14. Tomb No. 168, Ōmuro (Kobayashi et al. 2008)



Figure 15. Ceramic horse figurine discovered at Tomb 168 (Kobayashi et al. 2008)

figurine is solid, not hollow as in the case of *haniwa* ceramic figurines. The figurine has a well-fabricated mane, and the back of the figurine retains a trace of a saddle, which is now missing. It was discovered in association of *sue*-stoneware dated to the third quarter of the fifth century. This horse figurine should be distinguished from sixth century horse figurines discovered at the Narai site, Shijōnawate City because the Narai examples are smaller and more abstract, and discovered in a ditch in a group. It is also important to note that the Ōmro horse figurine is earlier than the Narai examples.

The only example very close to the Ōmro horse figurine is two horse figurines discovered at the Ten'nōdan 天王壇 Mound Tomb, Hongū Town, Fukushima Prefecture (Ōkōchi and Yamazaki 1984). The mound is of 41 meters in length, with disproportionately large circular mound of 38 meters in length, and dated to the third quarter of the fifth century. One of the two horse figurines is 19.5 centimeters in length, 10.8 centimeters in the total height, and 7.7 centimeters in body height. The other is 26.5 centimeters in length, 16.6 centimeters in the total height, and 10.9 centimeters in body height. Both of them have manes, and equipped with saddles.

Another archaeological discovery of a horse in the Ōmro Group comes from the Tomb No. 186, dated to the end of the sixth century. The tomb is a small circular mound of 12.5 by 13.5m (Figure 16). A corridor-style horizontal burial chamber was housed in this mound. The chamber is 8.4m in total length, and the main burial chamber is 4.6m



Figure 16. Tomb No. 186, Ōmuro (Sasaki et al. 2015)

in length, 1.8m in height, 1.8m in width at the back wall, and 2.2m in the maximum width. On the eastern side of the entrance were large jars of *sue* stoneware in pieces but *in situ*, as well as a concentration of *haji* earthenware pots and pedestalled bowls. On the western side of the entrance were the remains of a horse (Figure 16). Since the teeth of the horse were discovered without any other body parts, the head might have been ritually severed and placed near the entrance of the burial chamber. The presence of a horse that might have been ritually sacrificed suggests the possibility that an equestrian specialist was buried in this tomb (Uetsuki 2015).

Unlike the case of the Iida basin, mound tombs of high-ranking elite distinguished by the deposit of iron armor were also built in the Ōmuro Group. In the late fifth century, a mound tomb of such a high-ranking elite is the Tomb No. 196 where an iron cuirass, a bronze mirror, and an early type of horse bit were deposited with the dead. I see a difference in social rank between the one buried in the Tomb No. 196 and the one buried in the Tomb No. 168 (Sasaki 2018). The one buried in the Tomb No. 168 may be an equestrian specialist and the one buried in the Tomb No. 196 was a leader who managed equestrian specialists.

A situation is somewhat different in the case of the Tomb No. 186. I consider this tomb as a tomb of high-ranking elite because iron armor was deposited with the dead and because the floor size of the main burial chamber is more or less the same as tombs of higher-ranking chiefs of the central polity in Osaka and Nara (Sasaki 2018). A sacrifice of a horse at this tomb may suggest that the one buried in this tomb was a leader who managed equestrian specialists. This practice of offering a sacrificed horse to an elite burial mound is absent in the Iida basin in the sixth century.

Unfortunately, settlements where those who were buried in the Ōmuro Cairn and Earthen Mound Group resided and ceramics made with Korean techniques have not been discovered, probably because these settlements had been washed away by floods of the nearby Sai and Chikuma Rivers. Consequently, evidence for Korean immigrants in northern Shinano is not very strong. Yet, I believe that equestrian specialists from the Korean peninsula were settled in northern Shinano. Together with the description of the *Engishiki*, the ceramic figurine of a horse discovered at Tomb No. 168 and the possible evidence for horse sacrifice at the Tomb No. 186 strongly suggest to me that equestrian specialists or those who were close to them were buried in the Ōmuro Cairn and Earthen Mound Group and that raising and reproducing horses started in the Nagano basin in the middle fifth century.

In the Nagano basin, another possible evidence of horse burial or sacrifice has recently been discovered at the Shiozaki 塩崎 sites. Excavations are still in progress, and a site report has not been published yet. At the site, scattered fragments of horse bones were discovered in a ditch enclosing a late fifth century circular mound tomb of 12 to 13

meters in diameter. Excavators assume that pottery and horse bones presumably used for ritual on the top of a mound tomb fell into a ditch enclosing the mound (Anonymous 2014; Iijima 2016). This might be distinguished from the cases of the Iida basin where dead horses are carefully buried in ditches and/or pits. Because site reports of the Shiozaki sites are not published yet, the interpretation may be altered in the future.

5. Discussion

The ways in which horses were treated varied considerably from a region to another in the fifth century. In Shijōnawate City, Osaka Prefecture, it was the dominant practice to sacrifice horses by cutting the heads off. The heads were offered at banks of streams and “precincts” for rituals. In the sixth century, the heads were sometimes placed in ditches enclosing mound tombs. This practice may have been replaced by another practice of offering several small ceramic horse figurines. In a few cases, horses were carefully buried in pits. Such a variety of practices may be a reflection of a large number of equestrian specialists settled in the present Shijōnawate region. Although Segawa (1991) speculates that three groups of equestrian specialists resided in this region, I do not see any correlations between localities of equestrian specialists’ settlement and a particular attitude toward horses, such as sacrifice by cutting the heads off or burial of the whole



Figure 17. Discovery of horse teeth at the foot of Tomb No. 186 (Sasaki et al. 2015)

body of a horse. Segawa's hypothesis must be tested against, for example, DNA's of horses discovered at different localities or minute technical difference in the Korean ceramics in association with horses. Still, it is possible to speculate that a few groups of equestrian specialists from different regions of the southern Korean peninsula may have been invited to the present Shijōnawate region because such a variety of attitude toward horses is not present in northern and southern Shinano.

The difference in the attitude toward horses between northern Shinano and southern Shinano is obvious. In the Iida basin in southern Shinano, the predominant practice in the fifth century was to bury the whole bodies of horses carefully. This practice may have been originated from the present Shijōnawate region. If this is indeed the case, it is possible to hypothesize that equestrian specialists first arrived in the Shijōnawate region, probably invited by the higher-ranking chiefs of the central polity, and then move to the Iida basin.

The situation of the fifth century in the Nagano basin, northern Shinano is radically different from the Shijōnawate region and the Iida basin. A ceramic horse figurine was offered to a cairn in the fifth century, and no horses were sacrificed nor buried. Toward the end of the sixth century, a practice of sacrificing a horse was introduced. This practice of horse sacrifice may be introduced from the central polity. Nevertheless, it is highly noteworthy that, although equestrian specialists were already present in the Nagano basin in the fifth century, their attitude toward horses were different from the Shijōnawate region and the Iida basin.

I would argue that a group of equestrian specialists were invited to the Nagano basin independently from the central polity. My hypothesis is that, while it was the central polity that took an initiative of introducing the practice of horse-riding by inviting equestrian specialists and importing horses from the southern Korean peninsula, the central polity entrusted some local polities that maintained interactions with polities in southern Korean peninsula to invite equestrian specialists and import horses. One of such local polities existed in the Nagano basin. My hypothesis must be tested by, for example, DNA's of horses discovered in the Nagano basin, Iida basin, and Shijōnawate City. If my hypothesis is appropriate, the DNA's in Nagano should be distinctive from ones in Shijōnawate City and Iida basin.

It is highly likely that a local polity in the Nagano basin interacted with a polity in southern Korean peninsula since the second century, A.D. At the site of the first- to second-century Nezuoka 根塚 burial mound in the northeastern Nagano Basin, an iron sword with a pommel featuring a whirlpool decoration (Figure 18) was discovered (Yoshihara 2002), and is very likely to have been brought from southern Korea. There are no other discoveries of this type of iron swords in Japan, but several iron swords of this type have been discovered at the Yangdong-ni 良洞里 cemetery site in Kimhae 金

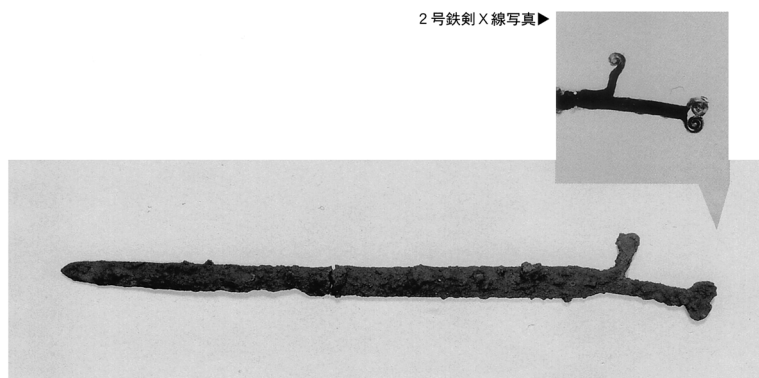


Figure 18. Iron sword with whirlpool-pattern decoration discovered at the Nezuka site (Yoshihara 2002)



Figure 19. Bronze belt buckle discovered at the Asakawabata site (Shimizu and Kazama 2005)

海 (Tongŭi Taehakkyo Pangmulgwan 2000). Habuta (2006, p. 181; 2012, pp. 7–8) argues that this sword was transported directly from the southern Korean peninsula without going through, for example, northern Kyushu or the Nara basin where the central polity was presumably located.

Another piece of evidence for interaction between polities in the Nagano basin and those in the southern Korean peninsula before the fifth century is a horse-shaped bronze buckle (Figure 19) discovered at the Asakawabata 浅川端 site in the central Nagano

basin (Shimizu and Kazama 2005). It is basically the same type as one discovered at the Ch'ōngdang-dong 清堂洞 site, in particular Tomb No. 5, in Ch'ōnan 天安 City, and is also likely to have been brought from the Korean peninsula. The buckle is dated to the third century A.D. based on typological analysis (Kazama 2006). As in the case of the Nezuka iron sword, I argue for the possibility that this bronze buckle was directly brought to the Nagano basin without going through the intermediation of the central polity.

Because of this longstanding practice, it was easy for them to invite equestrian specialists from the Korean peninsula in the fifth century. Furthermore, I argue that the central polity in the fifth century did not fully monopolize the diplomatic right, and local polities at that time had some freedom to interact with polities in the southern Korean peninsula independently. I speculate that by the late sixth century the central polity more or less monopolized the diplomatic right because assemblages of prestige goods of Korean origins tend to be the same in most parts of Japan, suggesting that the central polity imported all of the prestige goods. In this context, while the local elites in the Nagano basin continued maintaining pastures for raising horses, by the late sixth century the central polity may have gained some control over the pastures. This may be a background to the introduction of sacrificing a horse by chopping the head off toward the end of the sixth century.

To conclude this paper, I should like to put these different patterns of the adoptions of the practice of horse-riding in the broader context of the archaeology of immigration. For this purpose, a framework proposed by Kameda Shūichi (1993) is useful. Kameda first distinguishes between the case of immigrants arriving directly from the Korean peninsula and settled down in a local area of Japan and the case in which immigrants first arrived in the central polity region or northern Kyushu and then move to another area of Japan. While the case of northern Shinano would be an example of the first case, the case of southern Shinano would be an example of the second case where Korean equestrian specialists first settled in the present Shijōnawate area and some of them further moved to southern Shinano.

Kameda (2003) who argues for the necessity of utilizing written sources also distinguishes the case of immigrants who were forcefully taken to Japan and the case of immigrants who volunteered to come to Japan. It is not easy to make such distinction depending solely on archaeological evidence. It seems, however, that Korean equestrian specialists volunteered to come to Japan because some of them were buried in mounded tombs, having been incorporated into the local elite social hierarchy of Japan.

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