

Jomon, Yayoi, and Ainu in Japan : Interaction between the Ainu of Hokkaido and Honshu Japanese during the Past 1,000 Years : Use Pattern Analysis of Wooden Artefacts from the Ishikari Lowland

メタデータ	言語: English 出版者: 公開日: 2015-11-18 キーワード (Ja): キーワード (En): 作成者: 手塚, 薫 メールアドレス: 所属:
URL	https://doi.org/10.15021/00002591

Interaction between the Ainu of Hokkaido and Honshu Japanese during the Past 1,000 Years: Use Pattern Analysis of Wooden Artefacts from the Ishikari Lowland

Kaoru Tezuka
Historical Museum of Hokkaido

INTRODUCTION

In this paper, I examine the potential economic and social effects of both direct and indirect contact with surrounding state-level societies on the formation and maintenance of hunter-gatherers. For several decades archaeological research on the Ainu period has made limited progress because archaeological materials, such as pottery and semi-subterranean houses, are relatively infrequent compared with similar materials from preceding prehistoric societies. Fortunately, well-preserved organic materials recently found in marshland contact sites in the central lowlands of Hokkaido allow us to make a number of inferences regarding the daily life of the Ainu.

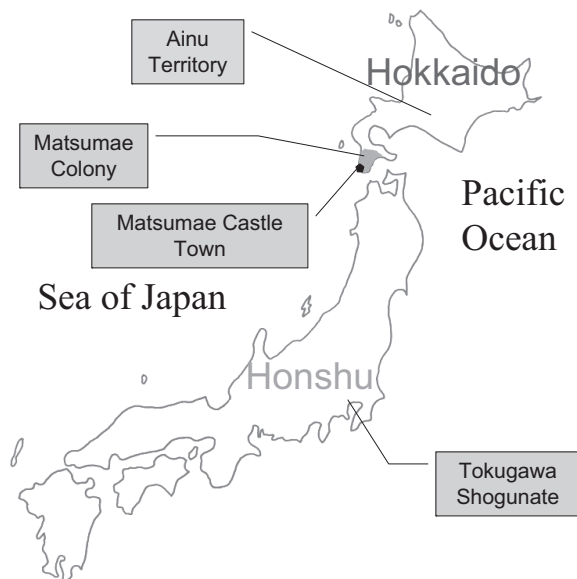


Figure 1 Matsumae Colony and AINU Territories.

From the end of the Middle Ages, groups of main-island (Honshu) settlers, or *Wajin*, began living in the southwestern part of Hokkaido. A prominent lord consolidated *Wajin* power, which led to the establishment of the Matsumae feudal clan early in the seventeenth century AD. It has been widely thought, based on historical documents, that the Ainu gradually deepened their dependence on trade activities as the Matsumae clan increased their dominance over them (Figure 1). However, stratigraphic analysis of wooden artefacts in contact sites in the central lowlands demonstrates that the Ainu depended on trade goods manufactured on Japan's main island of Honshu, and that this trend was persistent from the formative phase through the early modern era.

HISTORICAL BACKGROUND

Ethnohistoric accounts show that the Ainu had developed a unique dialect and recognized themselves as comprising three distinct ethnic groups: Northern (Sakhalin), Eastern (the Kuril Islands), and Southern (Hokkaido and northern Tohoku). In general, they have been described as relatively sedentary and self-sufficient hunters, gatherers, fishers, and occasional farmers, while it has recently been stressed that they were engaged in vigorous trade with neighbours to the north and south, including aboriginal peoples of the continent, Ul'chi, Kamchadals, and Japanese merchants (Tezuka 1998: 352–354).

The Ainu lived in small, isolated settlements. A few may have contained as many as 60 inhabitants, while the overwhelming majority were aggregations of only 10 people on average. Although the number of dwellings varied from one to 30, most of the settlements had only six or seven and it was rare for them to exceed 20 (Council for Conservation Measure of Ainu Culture 1969). Each settlement was conveniently located for transportation, transit and procurement of food and drinking water on the end of a river terrace along a river valley, and was separated from its neighbours by a few kilometres. The number of inhabitants of any one dwelling was usually four or five people.

Direct contact between Japanese settlers (*Wajin*) and the Ainu began by the first half of the fifteenth century AD at the latest, when settlers began to colonise the southwestern part of Hokkaido. These settlers moved into the area and established trading posts, at first peacefully, along the eastern and western coasts of Hokkaido. As they gradually increased and expanded trading opportunities, newly imported goods manufactured on the main island brought about a shift from hunting and fishing for food to hunting for furs, as well as dried salmon production. Japanese manufactured goods, metal cooking pots, knives, axes, needles, lacquerware, cotton, rice wine, Koji fermentation and tobacco later lured the Ainu people to trading posts. They instantly appreciated the efficacy of these manufactured goods. New settlements of the Ainu were established near the trading posts in coastal areas, but smaller settlements nevertheless persisted for obtaining natural resources such as salmon and fur pelts (Takakura 1966: 130).

CONNECTIONS BETWEEN THE CHITOSE AINU AND SHIKOTSU-BASHO

Shikotsu (the former name of Chitose) appeared for the first time in a historic document named *Nihon Buniki Shisho-zu* in 1688 (Compilation Committee of City History of Chitose 1983: 172). It was used as a wide-ranging place name referring to the southern part of the Ishikari Lowland. Japanese feudal lords were fond of falconry in early modern times, and Hokkaido was noted as a source of such birds. There were as many as 400 trapping grounds for falcons in Hokkaido in the seventeenth century, and the Matsumae clan monopolised this resource. Shikotsu was one of the more famous trapping areas.

The Ishikari Lowlands connect Ishikari on the Sea of Japan with Tomakomai on the Pacific Ocean, and a huge amount of traffic and trade goods was conveyed through this area via a network of tangled streams (Figure 2). An abundance of salmon caught in the Shikotsu River (the present Chitose River) and its tributaries were once brought down into the Japan Sea coast along the Ishikari River, but when Ishikari and Chitose were incorporated into different administrative areas under the reign of the Tokugawa Shogunate, the salmon catch from the Shikotsu River was collected at Yufutsu (around the mouth of the Yufutsu River) on the Pacific Ocean (Table 1). In spring the Ainu who inhabited the inland Shikotsu River basin brought dried salmon on their backs by land and then by boat to those posts to trade for Japanese manufactured goods (Katsu 1969).

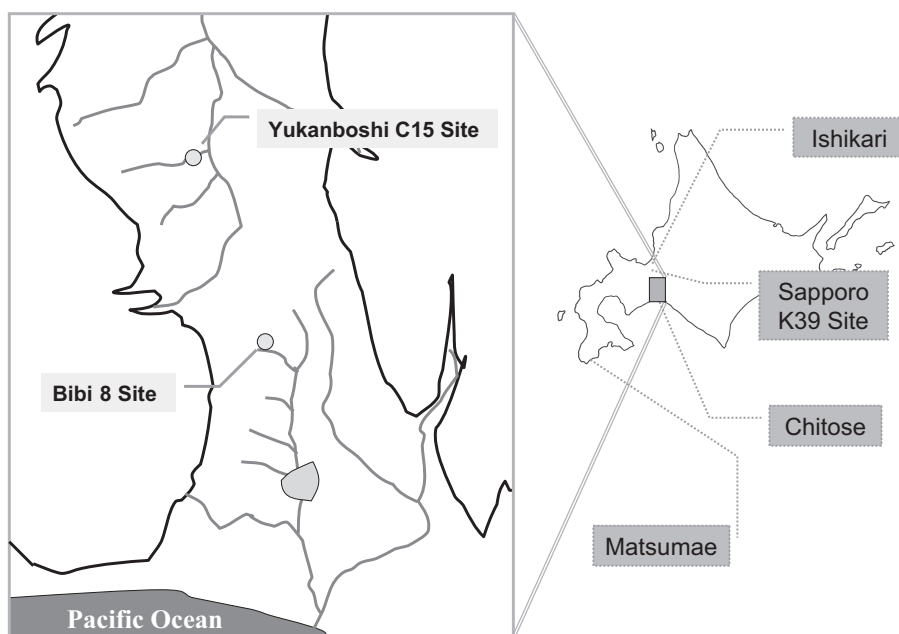


Figure 2 Sites and Localities discussed in the Text.

Table 1 Specialities of Chitose

Year	Staple	Source
1739	Linden Bark Rope, Deer Skin, Bear Skin, Dried Salmon, Salted Salmon	<i>Ezo Shoko Kikigaki</i>
1772-89	Salted Samon, Dried Cod, Deer Skin, Dried Salmon, Linden Bark Rope	<i>Matsumae Zuisho Roku</i>
1801	Dried Salmon, <i>Shiitake</i> Mushroom	<i>To-i Shuran</i>
1807	Whole Salmon Dried, Salmon Cut Open and Dried, <i>Shiitake</i> Mushroom	<i>Nishi-Ezochi Nikki</i>
1811	Dried Salmon, Salted salmon, Shark, <i>Shiitake</i> Mushroom, Fish Oil	<i>Higashi-Ezo Hisohiso Yobanashi</i>

When the Tokugawa Shogunate placed Shikotsu-basho under direct the domain's control in 1799, the eight trading posts were incorporated into one large office in Yufutsu and four branch offices in Shikotsu in 1800. Four branch offices were abolished in 1804 and two exchange offices were set up along the Chitose River, the new name given to the former Shikotsu River in 1805 (Hokkaido Prefectural Government 1969). Those two offices were integrated into one in 1807. The Ainu received a contract for transportation with the branch trading office and obtained wages after exchange and barter was replaced with a monetary system in the Chitose district in 1807 (Takusagawa 1944). The Ainu of Chitose and its environs thus began to deepen their daily connection with the office. In those days the Ainu's major form of subsistence was salmon fishing from autumn to winter, and male Ainu gathered *shiitake* mushroom for trading. They ate fish year-round, and supplemented their diet with *uba* lilies or long-rooted onions. Small-scale farming was also attempted when fertile ground was available (Katsu 1969).

It was only in the early nineteenth century, when official exploration began, that some reasonably accurate information about the Chitose Ainu was recorded. There were 1,238 peoples (adults: 396 males, 396 females; children: 238 males, 208 females) and 238 dwellings in perhaps 19 settlements in the Chitose area at the time of the report in 1811. Unfortunately, the precise location of the settlements is unknown. Osatsu, which is thought to be located near the Yukanboshi C 15 site, had five or six dwellings in 1807 (Takusagawa 1944) and nine dwellings with 39 Ainu (20 males, 19 females) in 1857 (Tamamushi 1992).

CHANGES OF THE TRADE SYSTEMS FROM MATSUMAE CASTLE TRADE TO A TRADE ZONE SYSTEM

According to documents left by Jesuit missionaries (Jeronymo de Angelis S. J. and Diogo Carvalho S. J.) early in the seventeenth century, the Ainu gathered together for an annual trade and ceremony with the Japanese settlers at the castle town of Matsumae (Cieslik 1962: 56, 68–71). Vast numbers of conical tents, made

of grass mats, were set up alongside one another on the beach in front of the castle. Boats were readily dismantled and hauled out onto the beach to let sails, planks, and lashings dry after the long voyage. A group of Ainu from the northern part of Hokkaido brought Chinese silk fabrics, glass balls, and beads, in addition to dried salmon and herring, to trade for rice and Japanese sake. Chinese silk fabrics were obtained from the continent through Sakhalin.

At Matsumae, another group of Ainu from Menashi (the extreme northeast of Hokkaido and a portion of the Kuril Islands) exchanged cotton, silk, lacquerware, and iron pots with peoples living north of them in return for sea otter pelts or eagle feathers, which were highly valued in the Samurai (warrior) class of Japan. Ainu people would also, on a voluntary and a regular basis, embark on long-distance voyages in large sailing boats named *nawatoji-bune* filled with goods and people during the summer months, visiting and trading at several towns in Japan's Tohoku district. Accordingly, during the missionaries' visits, various groups of Ainu were involved in extensive trade networks in which they enjoyed freedom and equal participation.

When the Matsumae feudal clan was incorporated into the Tokugawa Shogunate system in 1604, the Tokugawa Shogunate granted the clan exclusive trading rights with the Ainu. The Matsumae clan consolidated its position in Hokkaido and attempted to control trade by setting up a border and by advancing a new trade zone system (giving vassals the right to trade with the Ainu within a certain zone), eventually limiting Ainu economic activities to within Hokkaido. As a result, Hokkaido was divided into many trade zones. Each vassal-owner dispatched boats to collect trade goods within his own trade zone (Tezuka 1998: 355) (Figure

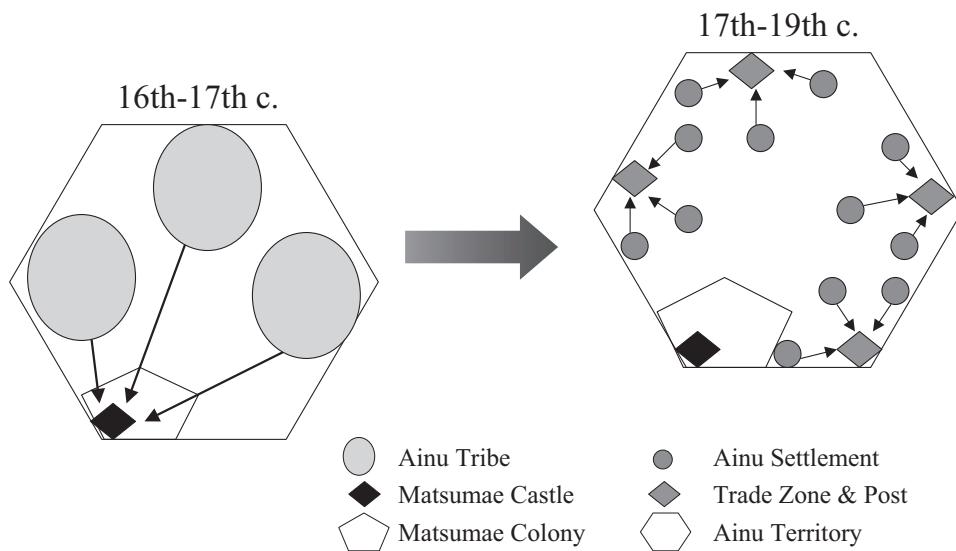


Figure 3 Change of Trade Systems: Castle Trade to Trade Zone System.

3).

The Matsumae clan altered its policy of dispatching one summer ship per zone (Matsumae Fukuyama Sho Okite *c.* 1790s), permitting more ships to visit each trade area. Ships' owners of a trade zone gradually entrusted the management of the trade to a merchant in exchange for a tax.

THE YUKANBOSHI C15 SITE

The Yukanboshi C15 site is located north of Chitose City in the southeastern part of the Ishikari Lowlands and straddles a slightly elevated terrace and low marshy area of the former Yukanboshi River (Figure 2). This is a composite site spanning the Jomon to the Ainu cultural periods (Figure 4). The Hokkaido Archaeological Operations Center conducted archaeological surveys there between 1996 and 1998 and published voluminous site reports on its work (Hokkaido Archaeological Operations Center 1997; 1998; 1999; 2000; 2001; 2002). There are several prehistoric features (pit dwellings, grave pits, remains of fences, and so on) on the river terrace, 8–9 m in height. Although excavation did not cover the entire site, it revealed two surface dwellings, three grave pits, ten cobblestone concentrations, and one depression for the spirit-sending of knives and iron pots, covered by ash, which were associated with the Ainu cultural period.

Yukanboshi C15's schematic profile is as follows, according to the site reports (Figure 5). The successive profile is shown from the elevated terrace to low marshy area. En-L is a loam layer (25–50 cm thick) with an origin of En-a (Eniwa-a pumice fall deposit, which erupted in the latter stage of the last glacial, 13,000–19,000 BP.). There is then a silty clay or drift layer, which was deposited by streams on En-L. IIB



Figure 4 Hokkaido Cultural Chronology.

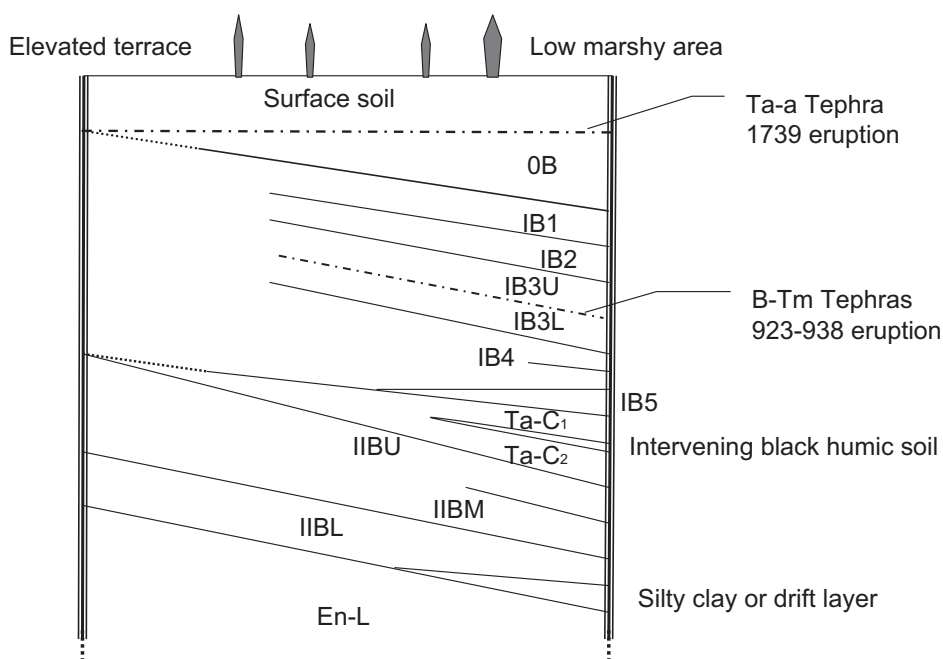


Figure 5 The Basic Profile of the Yukanboshi C15 Site.

Lower is a dark brownish layer (10–20 cm thick) that contained few artefacts. IIB Middle is a brownish silty soil layer (5–20 cm thick) restricted to the low marshy area. IIB Upper is a black humic soil and a Jomon cultural layer (10–50 cm thick). Ta-C consists of pumice fall deposits named Tarumae C and is divided into Ta-C₂ and Ta-C₁ with an intervening black humic soil (1–2 cm). IB5 is a peaty cultural deposit (5–15 cm thick) from the terminal Jomon to Epi-Jomon periods. IB4 is a black rich humic soil containing Epi-Jomon- to early Satsumon-period materials. B-Tm is a set of light-grey ash fall deposits (from an eruption at the beginning of the tenth century AD) and is subdivided into lower IB3 and upper IB3 dark brown peat deposits corresponding with the middle Satsumon to the medieval Ainu periods. IB2 is the primary cultural layer of the medieval Ainu period containing a large amount of wooden objects, as well as native tree remains and is also a dark brown peaty deposit (10–20 cm thick). IB1 is a black humic soil layer affiliated with the early modern Ainu period with a large amount of wooden artefacts and macrobotanical remains. 0B is a purplish peat deposit equivalent to the early modern Ainu period. Ta-a is a pumice-rich Tarumae ash fall from an eruption in AD 1739 and is 30–40 cm thick. There are surface soils and farmland on the top of the archaeological deposits.

The marshy area yielded approximately 120,000 pieces of wooden products, including fragments, of which 46% corresponded to the Satsumon culture and the medieval Ainu cultural periods (IB3: ninth to thirteenth centuries AD) and 42% were

from the medieval through to the modern Ainu cultural periods (IB2–0B: thirteenth to nineteenth centuries AD). The remaining 12% of the items belonged to other cultural periods. It is rare and significant that a large quantity of wood products of the Ainu period, spanning more than 1,000 years, were recovered from the cultural layers of these deposits.

Identification of 11,612 of these wooden artefacts indicates that four families and six genera of conifers and 27 families and 40 genera of broadleaf trees were used. The surrounding flora consisted mainly of broadleaf trees with sporadic conifers during the last 2,000 years, which is similar to present-day floral distributions.

ANALYSIS OF WOOD PRODUCTS

Much research has already been carried out on wooden products, but its primary interest has lain with the cultural, periodical, and regional distinction of the production techniques and wood species used, rather than with their use as indicators of cultural contact (Mino 1994, 1996, 2000; Miura 2003; Taguchi 1994, 1999). Analysis of wooden artefacts from early contact sites in the strategically situated Ishikari Lowlands provides data for understanding cultural exchanges of various types that could not otherwise be understood from the written records relating to the area. This paper shows that an analysis of wooden products based on accurate taxonomic identification made to the genus level for site reports holds great potential for the measurement of the scale of permeation of foreign goods and their recycling, as well as for understanding when and how the communities concerned were involved in the interregional trade networks. Since the purpose of this research is to examine the wood products found in association with the Ainu cultural period, I shall not deal here with other materials, such as bone, ceramic, or metal.

I have dealt with distinct wooden artefacts, excluding fragments and debris, that could be identified to genus or species, and illustrated them in photographs and drawings in a series of site reports (Hokkaido Archaeological Operations Center 2001; 2002; 2003). The Ainu cultural period was divided into three layers (IB3, IB2, IB1) and wooden artefacts were classified into nine categories (HF, BE, TO, TW, CO, RT, RM, PW, BM) referring to the description of the site report (Table 2). Artisans in Honshu normally manufactured round and square chip boxes of *Chamaecyparis obtusa* or *Cryptomeria japonica* with line-marking gauges that are major constituent elements of CO (Figure 6). These were brought to Hokkaido as finished products and were introduced into Ainu settlements through institutionalised exchange (Figure 7). According to the Yukanboshi C15 site report, while most chip boxes made of thin sheets were made of exotic materials, only 8% in Layer IB2 were made of local wood (Hokkaido Archaeological Operations Center 2002: 49).

The number of artefacts in each layer selected for this research in proportion to its yield of artefacts and the categories for artefacts are as follows.

Layer IB1: 220 pieces; Layer IB2: 598 pieces; Layer IB3: 775 pieces

HF: Hunting and Fishing Gear; BE: Boat and Equipment; TO: Tool; TW: Tableware;
CO: Container; RT: Ritual Tool; RM: Raw Material; PW: Processed Wood; BM:
Building Material

I do not discuss layer 0B in this paper because few artefacts were recovered

Table 2 Classification of Wooden Products.

Abbreviation	Category	Principal Contents
HF	Hunting & Fishing Gear	Bow, Arrow, Harpoon, Float
BE	Boat & Equipment	Boat Part, Oar
TO	Tool	Mallet, Hilt, Hoe, Wedge, Fire-making Board and Stick
TW	Tableware	Chopsticks, Ladle, Spatula, Skewer
CO	Container	Lacquer Ware, Chip Box, Bent Box, Bucket, Barrel,
RT	Ritual Tool	Libation Stick, Prayer Stick
RM	Raw Material	Board, Disk, Lid
PW	Processed Wood	Wood with Groove or Hole
BM	Building Material	Pillar, Pole, Stake, Ladder

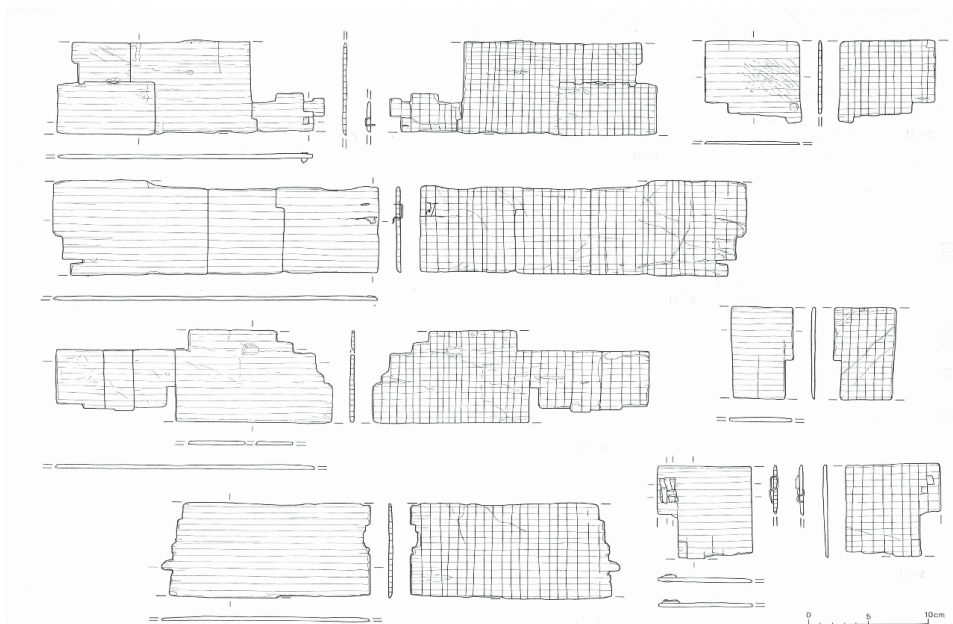
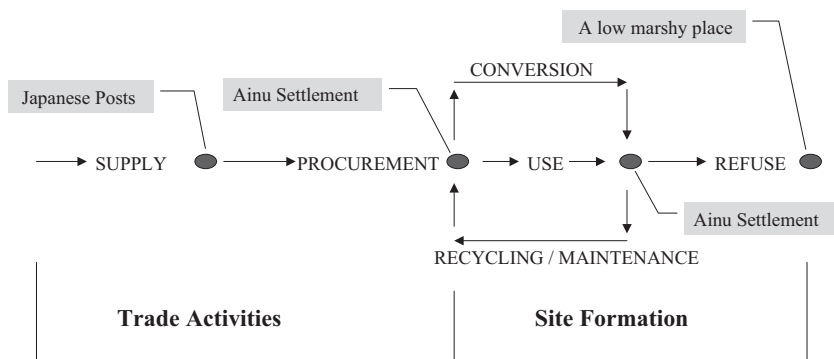


Figure 6 Honshu-Made Round Chip Box Parts with Line-Marking Gauges Excavated from the IB2 Layer of the Yukanboshi C15 Site. (Hokkaido Archeological Operations Center 2002: 92)



Circles indicate points where transaction, distribution or storage may take place.

Figure 7 A Flow Chart for the Passage of Wooden Products Through Institutional Structure.

from this cultural layer that have been assigned to the period from the mid-seventeenth century to the eighteenth century, and only 23 wooden products were reported in the site report. This suggests that the site was effectively no longer functioning at this time.

Most of the wooden products corresponded to the Ainu cultural period and indicate what Ainu life was like at the time. I made a comparison of the proportions of exotic and local wood species used as raw materials for wooden artefacts in the assemblages. Exotics include the following six species naturally occurring in Honshu: *Larix* sp., *Cryptomeria* sp., *Thujopsis* sp., *Fagus* sp., *Aesculus* sp., and *Take* sp. Among these species, some are suitable materials for producing Japanese merchandise. Although there is the possibility that southern species arriving as flotsam or driftwood were occasionally utilised in artefact production, this should have negligible influence on results presented here because of limited availability and the inland location, far from the coast, of the site discussed.

DISCUSSION

The common assumption is that the extensive replacement of traditional Ainu materials with those of Japanese manufacture did not begin until trading posts were established locally. The establishment of trade zones and exposure to Japanese merchants and goods has often been advanced and widely accepted, principally by historians, as the reason for compulsory market participation by, and acculturation of, the Ainu (Figures 8–10).

Despite an assumed gradual increase in the availability of Japanese commodities, Figures 8–10 show a persistent dependence on exotic species throughout the Ainu period. A high frequency of exotic species is especially evident in four categories: TW, CO, RT, and RM. These top categories, heavily dependent

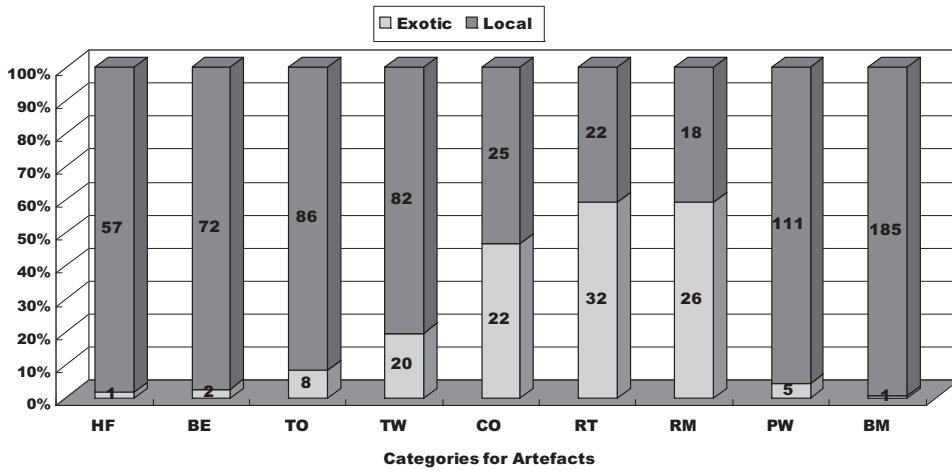


Figure 8 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage IB3 (ca. 9th -13th c.) from the Yukanboshi C15 Site.

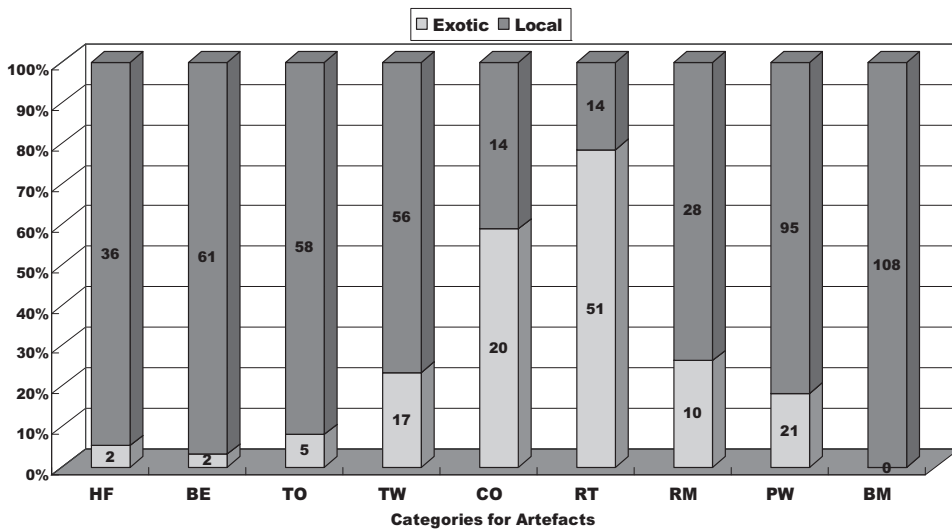


Figure 9 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage IB2 (ca. 13th -16th c.) from the Yukanboshi C15 Site.

on exotic species, remained unchanged throughout all assemblages in the Ainu cultural period. This means that Japanese commodities were largely made of arboreal species found in Honshu alone and a considerable number of broken or dissembled materials, especially from Japanese wares, were recycled and altered into distinct tools from the early stage of the Ainu cultural period. This reflects a continuous reliance on various Japanese commodities produced in Honshu as a

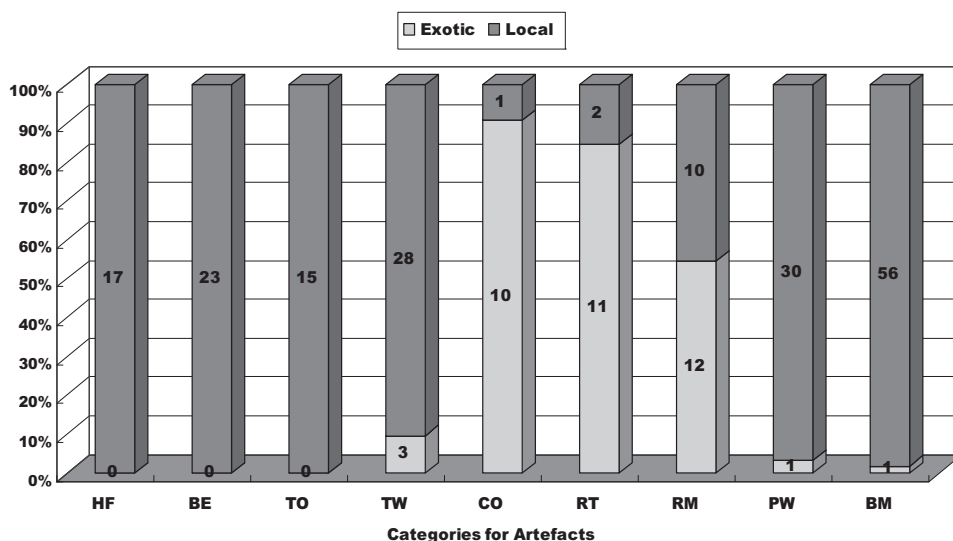


Figure 10 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in Assemblage IB1 (ca. 16th -17th c.) from Yukanboshi C15 Site.

result of flourishing trade activities.

It could be argued that the IB1 layer does not reflect the activities of the Ainu of the site and its environs because of its limited number of artefacts. Yet this trait holds not only for the Yukanboshi C15 site but also for the Bibi 8 Low Marshy site, which is located on the left bank of the Misawa River (Figure 2) and has produced a great quantity of wooden products ranging from the latter half of the seventeenth to the early eighteenth centuries (Hokkaido Archaeological Operations Center 1997) (Figure 11). The assemblage 0B (1667-1739 AD) from the Bibi 8 site appears to be from a time period subsequent to the assemblage IB1 (sixteenth to seventeenth centuries AD) from the Yukanboshi C15 site.

While cultural assemblages from both IB3 and IB2 are marked by broader dependence on exotic wood species in categories such as HF, BE, and TO, exotic wood species are utilised in more limited categories in IB1, suggesting that establishment of the Castle-Town trade systems had some impact on exchange goods. The assemblage 0B (1667-1739 AD) from the Bibi 8 site again indicates a broader dependence on exotic wood species in almost all categories. However, the structure of reliance on foreign goods remained fundamentally constant from the long distance Castle Town Trade Era (sixteenth to seventeenth centuries AD) through the Trade Zone System (seventeenth to nineteenth centuries AD) (Figure 3). No particular relationship is evident between the structure of this reliance and changes in the trade system. The amount of exposure to Japanese goods did not have any definite correlation with involvement in market exchange. This research instead suggests that the village or area where people could invest the most time and labour in production of important trading articles of high commercial demand within the

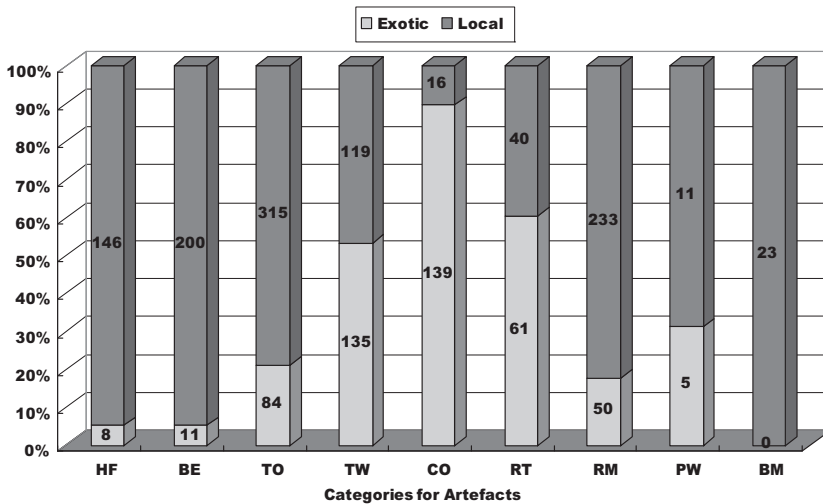


Figure 11 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage 0B (17th -18th c.) from the Bibi 8 Site.

Japanese market, such as salmon and *shiitake* mushrooms, was most involved in distant market activities. Chitose and Ishikari, blessed with rich salmon resources, were such places. In the Ishikari Lowland the rapid reliance on market exchange took place earlier than previously realised, since persistent reliance, illustrated in the graphs accompanying this paper, accounts for the Ainu's earlier engagement in commercial activities. The report on Kaifumaru's voyage to Ishikari in 1688 stated that all metal knives, as well as other tools of good quality, were not produced in Hokkaido, but came from foreign or neighbouring countries (Kaifumaru Ezo Kikigaki n.d.).

The initiation of commercial salmon production is still the subject of some controversy among scholars, both historians and archaeologists. Kobayashi's (1999) study proposed an increasing importance over time for salmon fishing by the Ainu to meet Japanese demand sometime after the sixteenth century. Suzuki argued that Satsumon salmon production was not for trading with the Japanese, but rather for intraregional distribution. He notes that the Tohoku district is rich in salmon resources and importation would have been unnecessary (Suzuki 2003: 39–41). Segawa (2005), on the other hand, argues that commercial salmon production for trade dates back to the Satsumon period, based upon site location and salmon fishing technology throughout the Ishikari River valley, which enabled the Satsumon people to conduct intensive fishing. He postulates that the Satsumon people began to supply Aomori communities in northern Tohoku across the Tsugaru Strait with salmon products no later than the tenth century. Sawai's (1998: 392) opinion is similar to Segawa's in that the production of salmon in the late Satsumon period along the coast from the Okhotsk Sea to the eastern part of Hokkaido was bound for Honshu.

It seems that most archaeologists support the idea of interregional trading with Honshu Japanese (Tsukamoto 2003) because the Satsumon people expanded into eastern Hokkaido to procure important trade goods, such as skins, furs or feathers. These products were exchanged for metal tools produced in Honshu. Recent archaeological and historical research demonstrates that the tenth century (middle Satsumon period) brought about evolutionary changes in subsistence, economy, and resource distribution throughout Hokkaido (Minoshima 2001; Oguchi 2006: 182–184; Suzuki 2005, 2006: 67–68). In exchange for imported Japanese merchandise, Satsumon people exported skins, furs, feathers, and marine products. Although the precise mechanisms for, and the timing of production in, the establishment of exchange are still uncertain, the result of this wood artefact analysis suggests that the Ainu participated in the production of natural resources such as marine products and furs prior to the establishment of Japanese institutionalised trade systems sometime around the sixteenth century. Since the B3 layer (ninth to thirteenth centuries) reflects both Satsumon and Ainu archaeological components, it is not evident when production for interregional trade began. Three assemblages from different phases of the Satsumon period, which yielded more than 100 wooden artefacts, were selected for comparative purposes from the Sapporo K39 site. The site is located on the east side, upstream from the former Kotoni River, in Sapporo City (Figure 2). While the site extends from the late epi-Jomon period to the early modern era, most of it is from the Satsumon period, and a number of features and artefacts, including knives, snowshoes, bowls, and boat parts, have been unearthed.

Cultural assemblages relevant to the Satsumon period were found in Layers 6g (the latter half of the ninth century to the early tenth century), 5c (the latter half of

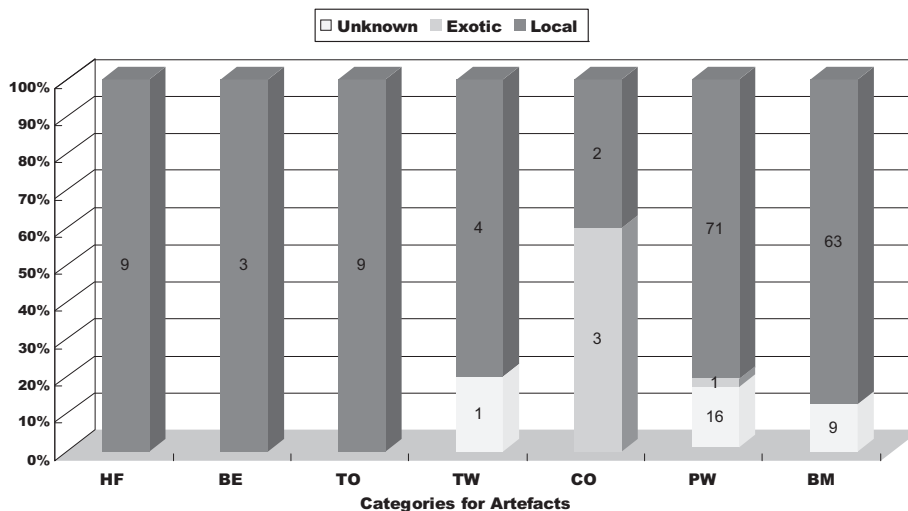


Figure 12 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage 6g (ca. 9th - 10th c.) from the K39 Site.

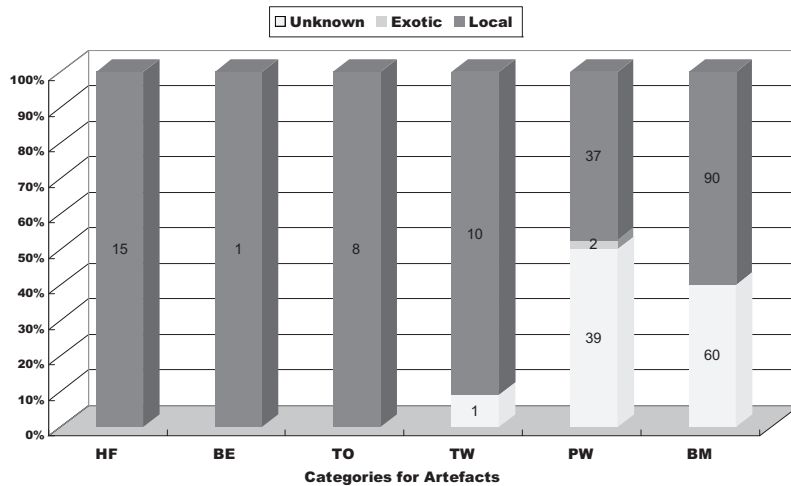


Figure 13 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage 5c (ca. 11th - 12th c.) from the K39 Site.

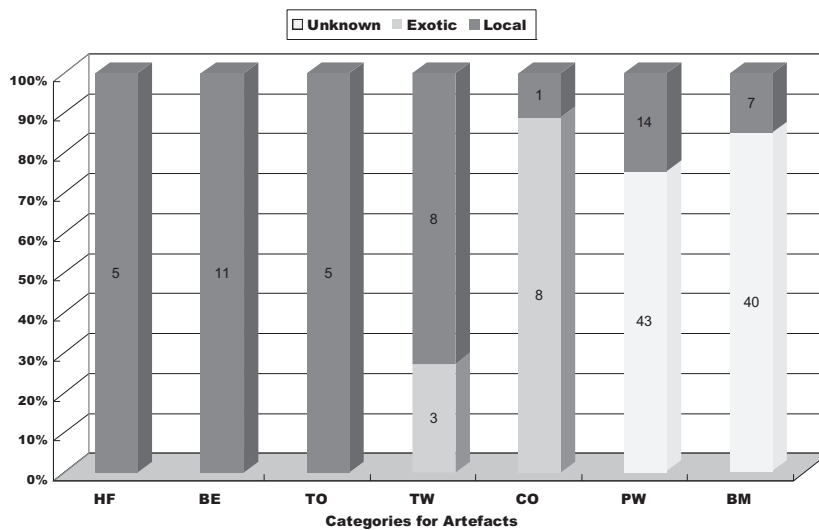


Figure 14 Proportions of Exotic and Local Wood Species Used for Wooden Artefacts in the Assemblage 5a (Late Satsumon Period, ca. 12th - 13th c.) from the K39 Site.

the eleventh century to the first half of the twelfth century), and 5a (the latter half of the twelfth century to the thirteenth century) (Board of Education of Sapporo City 2001 Part 1: 92). Since much of the bark excavated from these assemblages could not be identified, it was excluded from the analysis. Figures 12–14 summarise

changes over time in the ratio of exotic materials to local materials for wooden artefacts on a category-by-category basis. As shown in Figure 12, the use of exotic sources for the CO and PW categories, in particular, had clearly begun by the early tenth century. With so many unidentified materials from Layer 5c (Figure 13), the use of exotic resources in this deposit is limited to PW and the ratio is higher than the ratio in Layer 6g on the other hand. As shown in Figure 14, Layer 5a is characterised by a more stable and broad use of non-local woods for both TW and CO. These results reflect the fact that it was not until the latter half of the twelfth century that a stable supply of Japanese merchandise was established, while utilisation of non-local wood for CO is noticed in the earliest of the three Satsumon assemblages.

In addition to lacquerware, which is indispensable for Ainu rituals, most of the libation sticks from the Yukanboshi C15 site were also made of exotic wood species

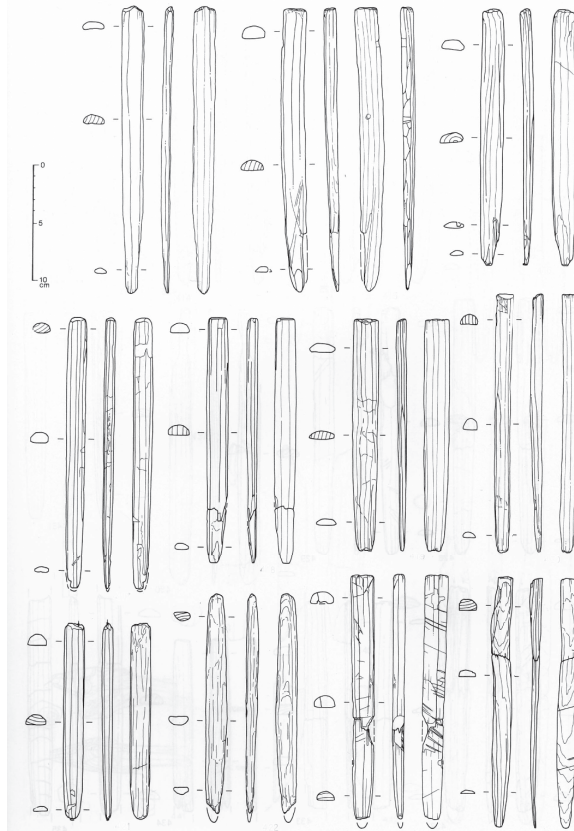


Figure 15 Libation Sticks Excavated from the IB3 Layer of the Yukanboshi C15 Site.
(Hokkaido Archaeological Operations Center 2001: 103)

(Figure 15). A similar example of a libation stick made of Japanese red cedar (*Cryptomeria japonica*) was found within a deposit dated to the Keicho era (1596–1615) at the Miyanosawa-gawa Right Bank Point site in the town of Kami-no-kuni (Board of Education of Kaminokuni Town 2000: 57–58). Japanese *sake* is poured into a lacquer bowl and offered to the Ainu gods with a libation stick during prayer. The Ainu handcrafted libation sticks, whereas lacquerware was produced by Japanese artisans in Honshu.

According to many ethnographic reports, libation sticks were made of local woods such as *Acer*, *Syringa*, *Euonymus*, *Salix* and *Quercus* spp. (The Foundation for Research and Promotion of Ainu Culture 2005: 127–128; Hokkaido Board of Education 1989: 35; Kayano 1978: 242) (Figures 16–17). This contradiction is noteworthy because it shows that there was once a prosperous practice of converting discarded parts of Japanese-made containers, consisting of barrels, bent wood boxes, square boxes, etc., into precious ritual tools. If stocks were plentiful, one would predict that prayer sticks, as well as libation sticks, must have been made of exotic wood species. As a matter of fact, the fact that most prayer sticks with wooden shavings from the Yukanboshi C15 site were made of local woods coinciding with modern ethnographic data (Chiri 1976: 58, 104; Historical Museum of Hokkaido 1975: 82–88; Inukai and Natori 1939: 265–266) (Figures 18–20). Whenever a ritual



Figure 16 HMH #126428 Libation Stick or Ikupasuy, wood, pre-1980, Biratori.

Material	Artefacts from Sites	Ethnographic Information
Exotic	Dominant (<i>Thujaopsis</i> , <i>Abies</i> , <i>Cryptomeria</i>)	Absent
Local	Rare (<i>Kalopanax</i> , <i>Staphylea</i>)	Dominant (<i>Salix</i> , <i>Acer</i> , <i>Syringa</i> , <i>Euonymus</i> , <i>Quercus</i>)

Figure 17 Comparison of Wood Species Used for Libation Sticks in Terms of Sites and Ethnography.

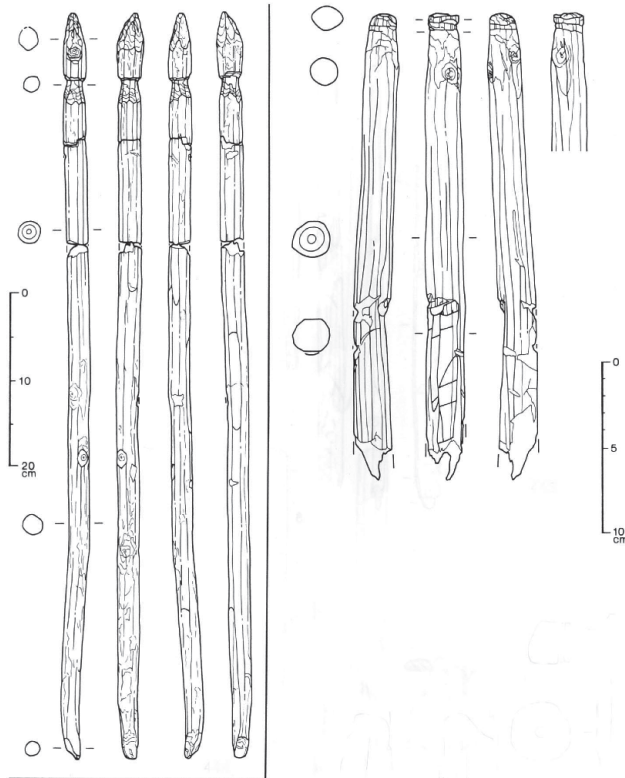


Figure 18 Prayer Sticks Excavated from the IB3 Layer of the Yukanboshi C15 Site. (Hokkaido Archeological Operations Center 2001:106)



Figure 19 HMH Prayer Stick or Inau wood, 1980, Shiraoui.

Material	Artefacts from Sites	Ethnographic Information
Exotic	Absent	Absent
Local	Dominant (<i>Fraxinus</i> , <i>Salix</i> , <i>Magnolia</i>)	Dominant (<i>Phellodendron</i> , <i>Cornus</i> , <i>Alnus</i>)

Figure 20 Comparison of Wood Species Used for Prayer Sticks in Terms of Sites and Ethnography.

is held, new prayer sticks have to be made and used; however, libation sticks can be reused many times. It is reasonable to think that, in terms of woodworking technology, thin parts from discarded or broken Japanese containers were more suitable for conversion into similarly thin libation sticks than prayer sticks.

CONCLUSION

A quantitative analysis on the inflow of Japanese merchandise to the Ainu settlement at Yukanboshi C15 was conducted. It involved comparisons between the proportions of exotic species and local species used as raw materials for the manufacture of 3,788 distinct wooden artefacts. Two important points should be made clear. First, this research produced a new understanding of the Ainu and Satsumon periods, both of which lack detailed historical sources. Furthermore, it demonstrates an earlier involvement in commercial activities by these two groups than was previously thought.

The Ishikari Lowland of Hokkaido played an important role as a point of influx for Japanese merchandise, and it was probably true that the range and amount of exotic goods utilised there differentiated it from other districts in terms of not only material but also spiritual culture. Because ironware as a trade good is normally poorly preserved in archaeological sites, and because most unearthed ironware was recycled or turned into secondary products, erasing its original form, this material is not a reliable measure for the circulation of trade goods. Wooden artefacts from anaerobic wet sites not only provide important information about raw-material production, resource availability, and past environmental conditions, but are also the sole means for measuring change in the quality of production in terms of the interplay between ecological adaptation and political economy.

Trade items originally spread into the Ishikari Lowland as CO or RM categories, and their materials were gradually reused or recycled into other categories such as TW and RT. This process also provides an opportunity to examine the ways in which the indigenous people expressed their social identities and values, which separated them from both Japanese settlers and other indigenous people who inhabited the peripheries of the Ishikari Lowland, through the recontextualisation of

exotic materials coming into their societies as trade items.

Most historians have thus far attributed the decay of Ainu culture and social organisation to its integration with the market economy imposed by Japanese settlers. Market exchange is indeed larger than a subsistence economy and drives production and consumption. It is also characterised by high economic specialisation and impersonality, as well as by low reciprocity and redistribution. Since it is said that libation sticks supplement the deficiency of human words in prayer and functions as an intermediary between humans and the gods, it is very suggestive and significant that libation sticks, which play an important role in establishing a reciprocal relation between gods and humans, were made out of material derived from Japanese ware.

The example of libation sticks can be seen as one of a flexible adaptation to overflowing Japanese commodities rather than as a sign of the decline of the Ainu culture as a harmonious whole. Materials, especially from Japanese goods, were probably valued for their prestige, and recycled into ritual tools from the early stage of the Ainu cultural period. It should be stressed that the exclusion of foreign wood species in modern times, as derived from the ethnographic record, was connected to the reconstitution of Ainu belief systems with emphasis on their equilibrium with their surrounding ecological environment.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. James W. Taylor for his vigorous editing and appropriate comments on the draft.

REFERENCES

- Board of Education of Kaminokuni Town
 2000 *Shiseki Kaminokuni Katsuyama-date ato XXI (National Historic Site "Kaminokuni Katsuyamadate" (Fortification) 21)*. Kaminokuni: Board of Education of Kaminokuni. (in Japanese)
- Board of Education of Sapporo City
 2001 *K39 iseki dai rokuji chosa (K39 Site: the Sixth Investigation) Part 1-5*. Sapporo: Board of Education of Sapporo City. (in Japanese)
- Chiri, M.
 1976 *Chiri Mashiho chosaku shu (The Complete Works of Chiri Mashiho). Supplementary Volume 2. Bunrui Ainu-go Jiten-dobutsu hen (Classified Dictionary of the Ainu Language: Plants and Animals)*. Tokyo: Heibonsha. (in Japanese)
- Cieslik, H.
 1962 *Hoppo Tankenki — Genna Nenkan ni okeru gaikokujin no Emishi houkoku sho. (An Account of an expedition to Northern Japan: A report of Ezo by Missionary during the Tensho Era)*. Tokyo: Yoshikawa Kobun Kan.
- Compilation Committee of City History of Chitose
 1983 *Zouho Chitose shi shi (Town History of Chitose)*. Chitose: Compilation Committee of City History of Chitose. (in Japanese)

Council for Conservation Measure of Ainu Culture

- 1969 *Ainu minzoku-shi (Ainu Ethnography)*. Tokyo: Daiichi Hoki Shuppan. (in Japanese)
- Inukai, T. and T. Natori
1939 Iomante (Ainu no kuma matsuri) no bunkateki-igi to sono keishiki (On the Significance of the Bear Festival (Iomante) in Ainu Culture and its Local Forms). Part 1. *Studies from the Research Institute for Northern Culture 2*: 237–271. (in Japanese)

Historical Museum of Hokkaido

- 1975 *Minzoku chosa hokokusho soshu-hen (An Omnibus Edition of Ethnological Research Report)*. Hokkaido Kaitaku Kinenkan Kenkyu Hokoku (The Research Bulletin of the Historical Museum of Hokkaido) 2: 1–104. (in Japanese)

Hokkaido Prefectural Government

- 1969 (1808–1811) Higashi Ezo chi kakubasho yosu taigaisho (General Conditions of Trade Zones in the Eastern Ezo). In Hokkaido (ed.) *Shin Hokkaido shi (New Hokkaido History)*, Vol. 7 (Historical Sources). Sapporo: Hokkaido. (in Japanese)

Hokkaido Archaeological Operations Center

- 1997 *Misawagawa ryuiki no isekigun 20 — Bibi 8 iseki teshitsubu (A Group of Sites of the Misawa River Basin XX: Bibi 8 Site Low Marshy Place)*. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)
- 1998 *Yukanboshi C15 iseki (Yukanboshi C15 Site Reports)*. Vol.1. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)
- 1999 *Yukanboshi C15 iseki (Yukanboshi C15 Site Reports)*. Vol.2. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)
- 2000 *Yukanboshi C15 iseki (Yukanboshi C15 Site Reports)*. Vol.3. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)
- 2001 *Yukanboshi C15 iseki (Yukanboshi C15 Site Reports)*. Vol.4. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)
- 2002 *Yukanboshi C15 iseki (Yukanboshi C15 Site Reports)*. Vol.5. Ebetsu: Hokkaido Archaeological Operations Center. (in Japanese)

Hokkaido Board of Education

- 1989 *Ainu no kurashi to kotoba (Ainu Mukei Minzoku Bunkazai Kiroku Kanko Series) Life and Language of the Ainu 1 (Publication Series 2. Records of Immaterial Folkloric Cultural Property of the Ainu)*, pp.509–601. Sapporo: Hokkaido Board of Education. (in Japanese)

Katsu, T.

- 1969 (ca.1801) *To-i shuran (Reproduction Series of Local Documents 6)*. Hakodate: Library of Hakodate. (in Japanese)

Kayano, S.

- 1978 *Ainu no mingu (Folk Utensils of the Ainu)*. Tokyo: Suzusawa Book Seller's. (in Japanese)

Kobayashi, M.

- 1999 Hokkaido no sengoku jidai to chusei Ainu minzoku no shakai to bunka (The Age of Civil Wars of Hokkaido and the Society and Culture of the Medieval Ainu). In N. Irumada *et al.* (eds.) *Kita no naikai sekai (World of Northern Inland Sea)*, pp. 83–112. Tokyo: Yamakawa Press. (in Japanese)

Mino, N.

- 1994 Senshi jidai ni okeru mokuzai no Riyo — Satsumon oyobi Okhotsk bunka ki no jyukeyo ya yogurui nado no seisaku ni mochiirareru mokuzai (Utilization of Wooden

- Materials in the Prehistoric Period: Wood used in making Houses and Tools during the Satsumon and Okhotsk Periods). *The Annual Report of the Historical Museum of Hokkaido* 22: 11–25. (in Japanese)
- 1996 Senshi jidai ni okeru mokuzai no riyō 2 — Hokkaido no Jomon jidai oyobi Zoku Jomon jidai no jyukyo ya yougu rui no seisaku nado ni mochiirareru mokuzai (Utilization of Wooden Materials in the Prehistoric Period 2: Wood used in making Houses and Tools during the Jomon and Epi-Jomon Periods in Hokkaido). *Bulletin of the Historical Museum of Hokkaido* 24: 27–48. (in Japanese)
- 2000 Senshi jidai ni okeru mokuzai no riyō 3 — Ishikari teishicchi-tai ni okeru mokuzai riyō no chikiteki jidai teki na sai ni tsuite (Utilization of Wooden Materials in the Prehistoric Period 3: Regional and Historical Differences of Utilization of Wooden Materials in the Ishikari Lowland). *Bulletin of the Historical Museum of Hokkaido* 28: 1–25. (in Japanese)
- Minoshima, H.
- 2001 *Kodai shakai to hoppo Shakai (Ancient State and Northern Societies)*. Tokyo: Yoshikawa Kobunkan. (in Japanese)
- Miura, M.
- 2003 Jomon Zoku-Jomon no ki no bunka (Wooden Culture of the Jomon and Epi-Jomon). In T. Nomura and H. Utagawa (eds.) *Zoku-Jomon Okhotsk no bunka (The Epi-Jomon and Okhotsk Cultures)*, pp.70–93. Sapporo: Hokkaido Shinbun Sha. (in Japanese)
- Oguchi, M.
- 2006 Bogyosei shuraku no jidai haikai (The Historical Backgrounds of Defensive Settlements). In K. Miura, M. Oguchi and T. Saito (eds.) *Kita no bogyosei shuraku to gekido no jidai (Defensive Settlements of the North and a Turbulent Age)*, pp.173–296. Tokyo: Dosei Sha. (in Japanese)
- Sawai, G.
- 1998 Hokkaido toubu ni okeru Satsumon bunka no kakusan to syu-matsu ni tsuite (The diffusion and Termination of the Satsumon Culture in the Northeastern Part of Hokkaido). In Editorial Committee of Celebration for the Sixtieth Anniversary of Nomura Takashi's Birthday (ed.) *Hoppo no kokogaku (Archeology of the North)*. Furano: Editorial Committee of Celebration for the Sixtieth Anniversary of Nomura Takashi's Birthday. (in Japanese)
- Segawa, T.
- 2004 *Sake to koeki (Salmon and Trade)*. In T. Nomura and H. Utagawa (eds.) *Satsumon Ainu bunka (The Satsumon and Ainu Cultures)*, pp.90–93. Sapporo: Hokkaido Shinbun Sha. (in Japanese)
- 2005 *Ainu eco-system no Kokogaku (The Formative History of Ainu Ecosystem)*. Sapporo: Hokkaido Shuppan Kikaku Senta Printing Co., Ltd. (in Japanese)
- 2006 Ibunka, Sho-hin, Kyosei — Koeki to kodai Hokkaido shuryō saishu shakai no tenkan (Cultural Contacts, Commodities, and Coexistence: Trade and Transformation of Ancient Hunter-Gatherer Societies in Hokkaido). *Kokogaku Kenkyū (Quarterly of Archaeological Studies)* 53(2): 40–53. (in Japanese)
- Suzuki, M.
- 2003 Zoku-Jomon — Satsumon bunka-ki no tokai koeki no hinmoku ni tsuite (A Study of the List of Crossed Sea Trade Articles between Northern Tohoku and Hokkaido in the Epi-Jomon and Satsumon Periods). *Hokkaido Kokogaku (Journal of the Hokkaido Archaeological Society)* 39: 29–47. (in Japanese)

- Suzuki, T.
 2005 Satsumon bunka ni okeru butsuruyu koeki no tenkai to sono tokuse (Development and Characteristics of Trade in the Satsumon Culture). *Hokkaido Kaitaku Kinen-kan Kenkyu Kiyou (Bulletin of the Historical Museum of Hokkaido)* 33: 5–30. (in Japanese)
 2006 Kita nihon ni okeru kodai makki no hoppou koeki (Northern Trade of the terminal Period of Ancient Times in Northern Japan). *Rekishi Hhoron (Review of History)* 678: 60–69. (in Japanese)
- Taguchi, H.
 1994 Ainu no mokki to sono genryu (Ainu's Wooden Implements and its origins). *Kikan Kokogaku (Archaeology Quarterly)* 47: 66–70. (in Japanese)
 1999 Teishicchi iseki kara shutsudo shita Ainu bunka-ki no mokuseihin (Wooden Implements of Ainu Period Excavated from a Marshy Sites). In Executive Committee of 1999 Meeting in Kushiro of Japanese Archaeological Association (ed.) *Kaikyo to kita no kokogaku (Archaeology of Strait and North)*. Kushiro: Executive Committee of a Meeting in Kushiro of Japan Archaeological Society. (in Japanese)
- Takakura, S.
 1966 Ainu buraku no hensen (Transition of Ainu Settlement). In Takakura Memorial Committee (ed.) *Ainu Kenkyu (Ainu Research)*, pp.129–162. Sapporo: Hokkaido Daigaku Seikyo. (in Japanese)
- Takusagawa, D.
 1944 (1807) *Nishi-Ezochi nikki (The Daybook of the Western Part of Ezo)*. Tokyo: Ishihara Kyuryu Do. (in Japanese)
- Tamamushi, S
 1992 (1857) *Nyuhoku-ki —Ezochi Karafuto jyunken nisshi (Visit to the North: A log of a Tour of Inspection to Ezochi and Karafuto)*. Sapporo: Hokkaido Shuppan Kikaku Senta Printing Co., Ltd. (in Japanese)
- Tezuka, K.
 1998 Long-distance Trade Networks and Shipping in the Ezo Region. *Arctic Anthropology* 35 (1): 350–360.
- Tukamoto, H.
 2003 Satsumon jidai no iseki bunpu no hensen ni tsuite (Spatial Analysis of the Site Distribution in the Satsumon Period). *Bulletin of the Department of Archaeology, the University of Tokyo* 18: 1–34. (in Japanese)
- The Foundation for Research and Promotion of Ainu Culture
 2005 *Rosia minzokugaku hakubutsukan Ainu shiryō (Russian Ethnological Museum's Exhibition of Ainu Materials)*. Sapporo: The Foundation for Research and Promotion of Ainu Culture. (in Japanese)