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## The Impact of Hunter-Food Producing Society Relations on the Ainu's Subsistence

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## **The Impact of Hunter-Food Producing Society Relations on the Ainu's Subsistence**

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### **ABSTRACT**

The Ainu have been widely accepted by scholars as a representative example of complex hunter-gatherers with a delayed return economic system. Recently, doubts have arisen regarding the role of small-scale food production in Ainu society, especially in the Early Contact Period. The Colonial Department of Japan banned fishing for salmon and deer hunting in the 1870s, which brought about changes in the ways that Ainu obtained the resources necessary for their livelihoods. Assessment of archaeological and ethnohistoric evidence suggests that the Ainu were incipient cultivators and that they developed an individual style of farming. Rice and other goods were also obtained through trade with food-producing societies. After an uprising known as the War of Shakushine in 1699, Ainu fishing labor was incorporated into the larger Japanese system. Agricultural activities expanded steadily, with traditional techniques such as broadcasting of seeds in unridged fields, rather than hiding some of them in remote places because of the prohibition of farming by the Matsumae Domain. Diverse methods were employed in agricultural production, and a sizable number of different crops were grown. The article concludes with a new interpretation of archaeological, historical, and ethnographic evidence regarding the complexity of Ainu subsistence and settlement systems.

### **INTRODUCTION**

Until recently it has been commonly assumed that the Ainu freely hunted, fished, gathered, and conducted small-scale farming throughout Hokkaido. It is true that fishing and hunting provided a significant component of the Ainu diet until after the Meiji Restoration, when the Colonial Department banned salmon fishing and restricted deer hunting in the 1870s, with the intention of restoring these resources. To supplement their daily diet, some Ainu petitioned the government to be allowed to continue deer hunting using spring-bows and poisoned arrows. This shows that the Ainu definitely conducted a hunting life

until the 1870s. However, as a revision of Ainu subsistence practices arguments have been raised that depart from this conventional hunter-gatherer model. Some scholars insist that the Ainu were forced to work at fishing grounds, whereas others argue that they were in direct contact with food producing societies to the south and north to obtain various foreign commodities, including rice.

Recently excavated Ainu sites in Hokkaido exposed graves above and below a layer of volcanic ash referred to as *Tarumai B*, which was deposited in AD 1667. From the cultural layers above this ash, knives, flints, pipes, igniting metal, and lacquer ware were discovered, together with a few hoe-heads, swords and iron pots. The war of *Shakushine*, one of the largest uprisings of the Ainu, occurred in 1669. It was suppressed three years later by the Matsumae Domain, with emergency support from the Tokugawa Shogunate. It has been widely accepted that as the result of this defeat Ainu material culture underwent substantial change. In particular their food self-sufficiency ended and, subordinated to the Matsumae Domain, they rapidly lost any form of social hierarchy.

Some documentary evidence indicates that the Ainu were forbidden by the Matsumae Domain to have grain and farming tools. Based on this the hypothesis was proposed that the once flourishing Ainu farming was prohibited by the local government in the latter half of the 17<sup>th</sup> century. However, this hypothesis may not be still convincing. By reexamining both documentary and recent archaeological evidence, this article demonstrates that farming continued to play a vital role in Ainu culture, and illustrates the significance of Ainu farming in terms of its adaptability to social change.

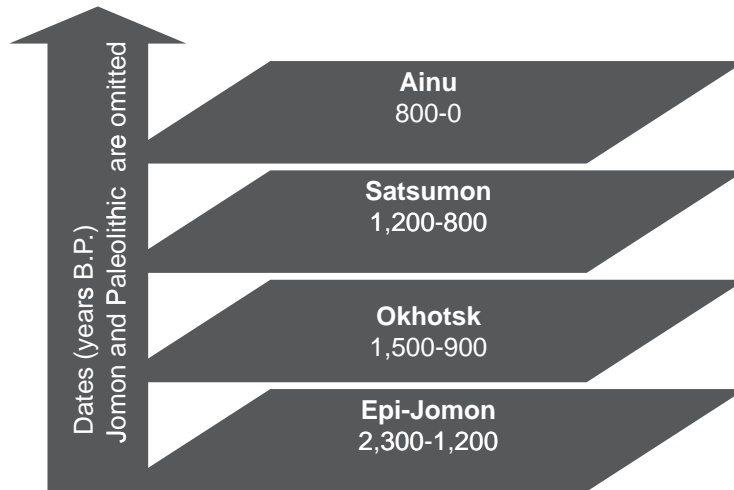
## HOKKAIDO CULTURAL HISTORY

Archaeological research in Hokkaido has identified four general prehistoric periods after the Last Glacial Period (approximately 12,000 BP). These are the Jomon Period, the Epi-Jomon Period, the Okhotsk Period, and the Ainu Period (Figure 1). Arrowheads and polished axes adapted to post-glacial environments developed in the Jomon Period. People lived in pit dwellings and had a more sedentary way of life than Paleolithic occupants.

Although fish (herring and Atka mackerel) and shellfish were often found in Hokkaido shell middens of Jomon, plant seeds, such as chestnut (*Castanea crenata*), acorn (*Quercus*), and Plum-yew (*Cephalotaxus harringtonia* var. *nana*) were also an important resource. Analysis of collagen remaining in human bones shows clearly that Jomon people in Hokkaido exploited more marine mammals (Steller's sea lion, fur seal, and sea lion) than did their contemporaries on Honshu.

### Earlier Phase of the Epi-Jomon Period

Cultures of the first half of the Epi-Jomon period (2,300–1,700 BP) were fundamentally maritime focused. Their site locations tend to be seashore-oriented and permanently inhabited. From their substantial exploitation of aquatic



**Figure 1** Hokkaido cultural chronology

resources, it appears that Epi-Jomon people reached the peak of maritime adaptation, as is amply exemplified by the many thick shell middens containing rich aquatic resources and a variety of bone and antler fishing tools. In particular, diagnostic large bifacial knives are specialized tools for butchering large sea mammals and salmon. Similar tools are distributed along coastal areas of the North Pacific-Bering Sea, and probably account for the beginning of intensive use of salmon. In the latter half of the Epi-Jomon Period (1,700–1,300 BP), regional variation dissolved and the dominant Kohoku culture spread across Hokkaido and adjacent regions. Shell mounds decreased in number, and sea mammal hunting and marine fishing declined sharply. River fishing became predominant throughout Hokkaido and northern Honshu. It seems that the main economic focus was on northern Honshu rather than Sakhalin and the Kurils, as demonstrated by an increasing number of sites that contain pottery pertaining to the Epi-Jomon Period.

The Okhotsk Culture, which appeared on Sakhalin Island, expanded into northern Hokkaido during the terminal Epi-Jomon Period. Its sites are located in coastal areas where a large amount of fish, sea mammal, and whale bones have been unearthed. However, the Epi-Jomon people raised pigs, which were brought from the Amur River Basin and are thought also to have been horticulturists because a few seeds of cultivated cereals have been found.

While Okhotsk Culture occupied the northern and eastern coasts of Hokkaido, the Satsumon, another prehistoric group with great cultural homogeneity, appeared from Epi-Jomon antecedents. Satsumon people used earthen pottery, built square pit houses with kitchen stoves or hearths, and resided in large, aggregated settlements. Satsumon Culture appears to have engaged in intensive trade with the ancient Japanese State and to have obtained iron goods in exchange for marine

products and pelts. It seems that the Satsumon Culture had merged gradually with the Okhotsk Culture by 1,000 BP, and, in about 800 BP, was replaced by the Ainu Culture. Because it is believed that the Ainu Culture evolved primarily from the Satsumon Culture, and was influenced by the cultures of Honshu and northeastern Asia, there seems to be no significant genetic difference between the Ainu and the Okhotsk.

## FARMING OF THE SATSUMON AND THE AINU

Most archaeologists agree that Satsumon Culture subsistence broadened during the Epi-Jomon from one based on hunting-gathering to one with an element of agriculture. It has been suggested that the introduction of farming techniques occurred through frequent contacts with Honshu society, and it is highly probable that direct migrations from northern Honshu brought about farming. The discovery of seeds of cultivated plants on floors and hearths of pit houses suggests that the Satsumon cultivated foxtail millet (*Setaria italica*) and common millet (*Panicum miliaceum*) in central Hokkaido during the early and middle phases of the Satsumon Period (1,300–1,000 BP) (Naganuma and Koshida 2011: 129). Wheat (*Triticum*) was added to the fundamental combination of the two millets in northern and eastern Hokkaido in the middle and late phases (1,000–800 BP). It is not clear whether wheat was brought in from outside or it was truly cultivated. Since a number of farming tools (hoes, plows and sickles) were found in the sites, small-scale farming seems to have been practiced, at least in central Hokkaido. However, it remains unclear to what degree farming continued throughout the Satsumon Period. Fields have not been confirmed at any Satsumon sites, and the insufficiency of human remains does not allow inference of the dietary habits using stable Isotopic analysis.

## WAR OF SHAKUSHINE

In the Kanei Period (1624–44), a freely operating long-distance trade on equal terms gave way to a more controlled trading. Supervised gates were constructed along the border between the Japanese settlements (Matsumae Colony) and the Ainu territory, thereby separating the southwestern corner of Hokkaido from the rest of the island (Figure 2). The Ainu were no longer able to travel freely between the areas, but were restricted to their own territory and banned from travelling for trade to Matsumae or any city in Honshu. Further, the Ainu were forbidden to trade with anyone except the Matsumaes. The Matsumae Domain then established trading posts, called *akinai-ba*, at the mouths of major rivers or in good harbors, where numerous Ainu houses were concentrated. These trading posts were managed by Lord Matsumae himself and some of his vassals. The posts started large-scale harvesting of salmon and other fish in both the rivers and the ocean, as a way of increasing profits. The search for alluvial gold was

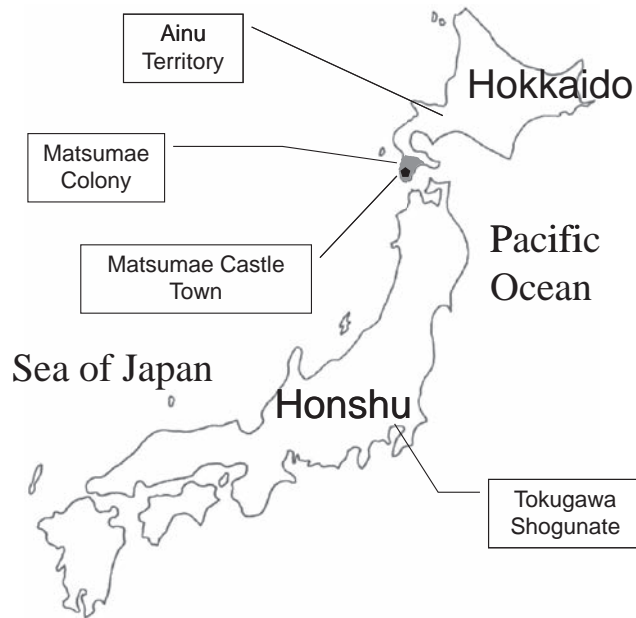


Figure 2 Matsumae Colony and AINU territory mentioned in the text

pursued so vigorously by a large number of miners from Honshu that it disturbed, and in some cases destroyed, many places along the river where traditionally the Ainu lived and made a livelihood.

These widespread practices directly undermined Ainu freedoms and traditional lifestyle and led quickly to open warfare. In 1669 AD *Shakushine*, a distinguished Ainu chief, led an uprising against the Matsumae retainers and traders in an attempt to reverse their destructive practices and recover Ainu traditional lifestyle. However, the Ainu lost the War of *Shakushine*, which resulted in an even greater control over their lives by the Matsumae Domain, and further erosion of their traditional lifestyle (Tezuka 1995: 15).

### THE AINU LABOR FORCE EMBEDDED IN FISHING GROUNDS AFTER THE WAR OF SHAKUSHINE

The Matsumae Domain at last changed its policy of dispatching one summer ship per *akinai-ba*, permitting more ships to visit each trade zone. Beginning in the 1700s, the management of *akinai-ba* was contracted to independent merchants by the Matsumae Domain, in exchange for payment of a tax (Tezuka 2009: 183). The activity of the *akinai-ba* trading posts changed quickly from trade to organized fishing, with Ainu being forced to supply the labor. Now, instead of being traded for, the Hokkaido seafood was harvested through the forced labor of

the Ainu at fishing grounds, under the *basho-ukeoi* labor system. The catch was collected at one of three ports in the Japanese section of Hokkaido: Esashi, Matsumae, and Hakodate, and shipped south to Kyoto, Osaka, and other places in Honshu. Abalone, sea cucumber and *konbu* kelp were dried and transported to Nagasaki, the only port then open to foreign countries, for trading to Chinese merchants.

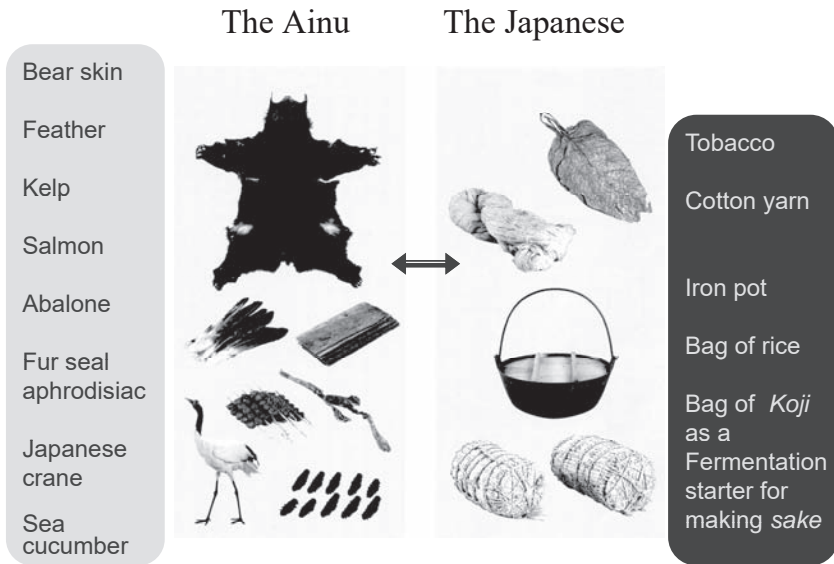
The population of Japanese around these ports in southern Hokkaido increased rapidly as a result of the wealth created by marine product exports. The ports grew rapidly in size, with the construction of new houses and port and warehouse facilities. These centers soon came to equal Edo (present day Tokyo) and Osaka in both traffic and economic importance. The Ainu were excluded from most of the benefits of this increased wealth. In the 18<sup>th</sup> century in southwestern Honshu, production of such commercial agricultural crops as cooking oil, lamp oil, cotton, indigo, and mandarin oranges became widespread. This development created a demand for more fertilizer than the local sardine industry could supply. Fertilizer made from herring caught and processed in Hokkaido emerged as a substitute and, by the middle of the 18<sup>th</sup> century, large quantities were shipped to Osaka from Hokkaido. To meet this increased demand for fertilizer, as well as the continued demand for high-quality seafood, more Ainu were forced to labor in the herring fishing grounds (Tezuka 1995: 16).

Ainu labor was usually paid with Japanese manufactured goods by the Japanese merchants at the *unjoyo-ya* posts, built near the fishing grounds. Iron cooking pots, knives, needles, axes, lacquer ware, cotton, rice, sake, Koji fermentation starter, and tobacco lured the Ainu to the posts (Tezuka 1998: 356). They came quickly to appreciate the efficacy and convenience of these manufactured goods (Figure 3). Whereas new settlements were established near the posts in coastal regions, smaller original settlements persisted in inland areas, where the elderly, invalids and infants remained.

## **AINU FARMING IN THE MODERN ERA AS RECONSTRUCTED FROM ETHNOGRAPHY**

After the Meiji Restoration, in 1868, the Japanese government encouraged the Ainu to engage in agriculture. Each Ainu household was supplied with a plot of land along with seeds and farming tools. This meant a substantial change from a gathering to a farming life. Of course, even before this change occurred, the coastal Ainu and some interior Ainu had engaged in small-scale shifting cultivation. Farm work was performed mainly by females (Figure 4). Groups who practiced farming gathered roots less frequently and in smaller quantity than those who did not (Watanabe 1968).

The economic importance of salmon and deer was so great for the Ainu that they could maintain more stable year-round residences than other hunter-gatherers. For edible plants, the Ainu relied on wild plants; for example they made starch



**Figure 3** Trade Goods between The Ainu and the Japanese (modified from Hokkaido Kaitaku Kinenkan 2002)



**Figure 4** Farming Style until the 1870s (Ainu Bunka Hozon Taisaku Kyogikai ed. 1970)

and dumplings from wild lily bulbs. The Ainu cultivated barnyard millet (*Echinochloa esculenta*), common millet, broomcorn millet, buckwheat (*Fagopyrum esculentum*), wheat, beans, and turnips. Of these, barnyard millet was essential for making porridge and brewing beer that was particularly important in bear worship. The average yield of barnyard millet per 1,023 km<sup>2</sup> is estimated roughly to be 450 liters (Hayashi 1960: 32).

Since the Ainu farming methods were characterized by simply scattering



seeds over a field, rarely covering them with earth or forming ridges or furrows, it has been classified as shifting cultivation, as in Honshu (Hayashi 1960: 61). It has been suggested that Ainu farming was primitive, owing to the scarcity of farming implements. Based on ethnographic studies (Hayashi 1960, 1961, 1969; Watanabe 1968), Ainu farming can be characterized as being subsidiary subsistence (supplements staple food with crops), usually performed by women, using primitive or simple techniques and tools, and unridged fields.

Those characteristics are also valid for the Ainu from the late-18<sup>th</sup> century to the 1850s. According to the book *Ezo-seikei-zusetsu* (“Figures and descriptions of the livelihood of Ezo”), which provides a wealth of reliable ethnographic information about the early 19<sup>th</sup> century, farm labor, consisting of both weeding and reaping, is performed by females (Figures 5, 6). Slash-and-burn farming was practiced in southern Hokkaido by immigrant farmers from Tohoku (northern Honshu). However, the Ainu did not practice slash-and-burn because they believed that faith spirits existed in all things.

#### ENFORCED LABOR AND A PROHIBITED FARMING HYPOTHESIS

Based on a few historical documents, some archaeologists believe that the Matsumae Domain prohibited the Ainu from practicing agriculture. As far as the author is aware, the first archaeologist to propose this was Yoshizaki Masakazu, who suggested that the Mastumae Domain had cut off the supply of ironware and prohibited the Ainu from farming from the 16<sup>th</sup> century, to force them to work in the fishing grounds (Haniwara *et al.* 1972: 242–243). Yoshizaki (a co-author of the Haniwara *et al.* 1972 publication) which mentioned that the idea was conceived from a similar instance that occurred in Africa.

Indeed, this hypothesis seems to be attractive because it is reasonable to believe that fishing grounds managed by Japanese merchants from the main



**Figure 5** Harvesting (Hata 1990)  
The man on the right is smoking a pipe.



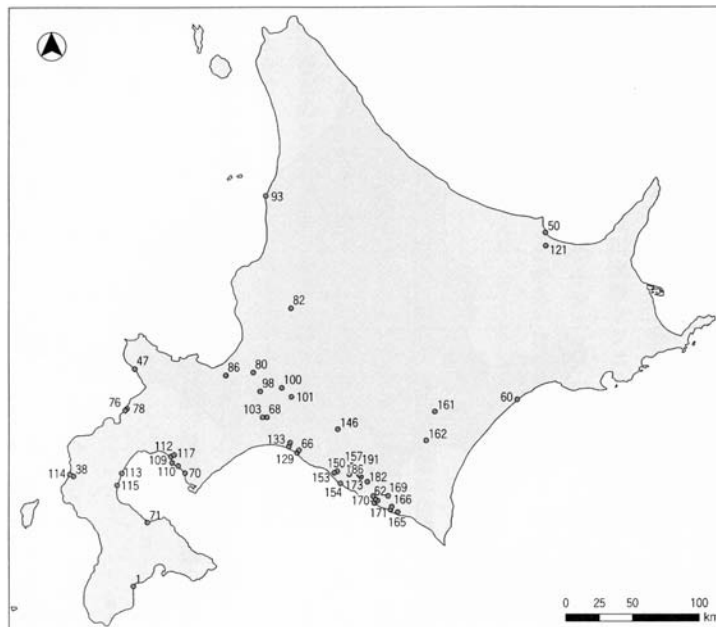
**Figure 6** Reaping (Hata 1990)

islands of Japan required an indigenous labor force, and so that many Ainu worked for them. The Ainu were deprived of their farming tools and the seeds of their preferred crops by the managers of fishing posts under the *basho-ukeoi* labor system. Yoshizaki's hypothesis greatly influenced the archaeologists who were instructed by him.

However, this "prohibited farming hypothesis" does not hold true in every case. Indeed, it is possible that settler merchants, who were entrusted with managing fishing grounds, banned Ainu farming. In that case, they generally prohibited the growing of crops like rice and tobacco that they wanted to use to pay for Ainu labor.

The distribution of barnyard millet fields identified by Matsuura Takeshiro during 1856, 1857, and 1858 survey missions funded by the Tokugawa Shogunate, is shown in Figure 7. They covered a wide area of Hokkaido, but were concentrated in the southwest. This suggests that it was difficult to regulate Ainu farming.

Fukazawa thinks that this landscape of fields would be seen throughout Hokkaido were it not for the negative effects of the prohibition against farming enforced by the Matsumae Domain. Repeated prohibitions compelled the Ainu to conceal their fields in places far from settlements. The difficulty in seeing Ainu fields promoted the idea that the Ainu were hunter-gatherers, rather than farmers



**Figure 7** Barnyard Millet Fields identified by Matsuura T. during a survey mission in 1856, 1857, 1858 (Fukazawa 2012)

(Fukazawa 2012: 182).

On the other hand, Yamada appreciated the Ainu as a potential farmer; since the Satsumon used advanced techniques to produce 16 kinds of crops, it is little wonder that the Ainu who inherited the Satsumon way of life worked on ridged fields with iron farming tools (Yamada 2005: 65).

To borrow an argument from both Yamada and Fukazawa, after the War of *Shakushaine* the Matsumae Domain adopted a policy toward the Ainu akin to a “sword hunt” to prevent any further uprisings. Implementation of this policy caused a shortage of iron farming implements, without which the Ainu could no longer make ridged fields for barnyard and foxtail millet (Yamada 2000: 112–113) (Figure 8). A famous document, *Shotoku go nen Matsumae-shimanokami sashidashi soro kakitsuke* (Takakura 1982), with detailed descriptions of Hokkaido in 1710’s, was issued more than 40 years after the War of *Shakushine*. It stated that the Ainu produced foxtail millet in many places, despite a shortage of plows and hoes (Takakura 1982: 138). Fukazawa offers the following evidence that may help explain such a policy (Fukazawa 1995: 284). A historical document, the *Kaifu-maru kiji*, compiled about 1688 AD (Kodama 1971: 459), mentioned that the Matsumae Domain deprived the Ainu of all metal tools after the war of *Shakushine*. The point that requires clarification here is that this article dealt mainly with a petition from descendants of *Shakushine*, who revolted against the Matsumae in 1669. They plead with a lord of the Matsumae Domain to retract its restrictions. Although this seems to be a kind of disarmament rule, alternatively it could be argued that its subject is restricted to descendants of the persons who played leading roles in the uprising. For example, although an official record of the Matsumae Domain, *Kishomon no koto*, issued just after the war, contained provisions concerning new trading rates between the Ainu and the Japanese

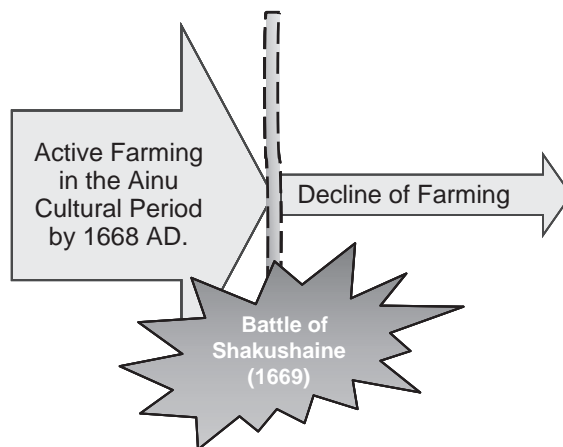


Figure 8 Prohibited Farming Hypothesis

merchants, trading partners, and free travel of the Japanese without hindrance, nobody has identified any regulation pertaining to iron products in the record (Anon. 1969a: 646-647). If the Matsumae Domain had tried to take effective disarmament measures, it would have demanded that the Ainu submit poisoned arrows which, along with firearms, were responsible for the most casualties. (It is matter of common knowledge that the Ainu in the latter half of the 17<sup>th</sup> century possessed some 30-40 matchlock guns (Anonymous 1969b: 125.)

What is true for Fukazawa's assertion also holds true for Yamada's. Yamada claimed that the cultivation of Japanese barnyard and foxtail millet was carried out successfully in fields with furrows during the early Ainu Cultural Period that followed the Satsumon Culture (Yamada 2005: 65). He stated that the Ainu were confronted with a situation where they were forced to abandon cultivation owing to the limiting of ironware and the ransacking of the work force after the battle of *Shakushine*. Quoting Mogami Tokunai's (a government official) account written ca.1790 (Mogami 1943: 315): "It is prohibited that all kinds of grain is introduced into Ezo area (Ezo was used as a former name of Hokkaido and its neighborhood by 1869 AD). Therefore, the Ainu never knew a method of agriculture and names of crops produced on farms." Somehow, Yamada did not quote the last sentence of the passage, which says "the Ainu never knew how to use edible plants that grew wild in fields and mountains, they would just eat animal meat and fish as staple foods." It is obvious that this view despising non-agricultural peoples is full of factual errors and prejudice resulting from Confucian ideas.

## A NEW INTERPRETATION OF HISTORICAL DOCUMENTS

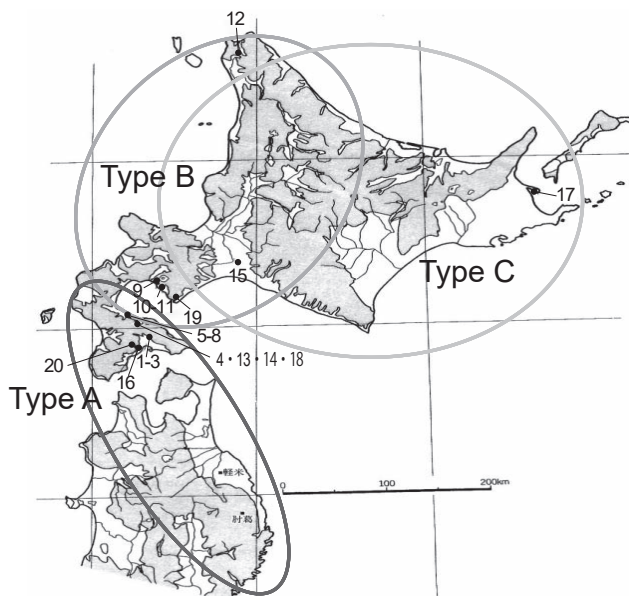
It is likely that Yamada's assertion also is incorrect. Because this sort of discourse very often emanated from officials of or other persons related to the Tokugawa Shogunate, which had accused the Matsumae Domain of implementing immature policies toward the Ainu and were convinced that the Ainu were uncivilized and could not know agriculture, which was a symbol of civilization. Concerned that the waters surrounding Ezo were infested with naval vessels and survey ships from England and Russia, in 1799 the Tokugawa Shogunate, began putting eastern Ezo under its direct control, replacing the rule of the Matsumae Domain. Inevitably, the Shogunate was seeking legitimate reasons to put Hokkaido and its environs under its direct control. Therefore it was to be expected that government officials and others directly involved tended to criticize Matsumae policy.

No decree prohibiting cultivation has yet been located in the archival records of the Matsumae Domain (Minami 1976: 211). Thus reliable proof of its prohibition is lacking. Takakura, another historian, also insisted that the Matsumae Domain never prohibited Ainu farming; rather it attempted to promote it, and that Ainu cultivation had spread as far as the western side of Erimo (southern central Hokkaido) by 1791 (Takakura 1966: 222).

## INTEGRATION BETWEEN THE ARCHAEOLOGICAL AND ETHNOLOGICAL EVIDENCE RELEVANT TO AINU AGRICULTURE

So far a total of 20 agricultural field sites thought to belong to the Ainu cultural period have been discovered in Hokkaido (Figure 9). The earliest known field was discovered in 2003, at Tateno (Figure 9: number 16) and found to date back to the 15<sup>th</sup> century AD. New evidence of fields is turning up further north and east. It is noteworthy that their distribution is biased toward southern Hokkaido, which was densely populated by settler Japanese at that time. Although not claiming that this limited number of gazetted sites with ridges reflects the situation of cultivation during the early modern era of Hokkaido, the authors consider it unlikely that northern and eastern Hokkaido were “hot spots” of cultivation.

Of the 20 sites, archaeologists have assumed site numbers 9–11, 12, 15, and 19 were Ainu, based on the characteristics of artifacts excavated from them and the distance to neighboring Ainu settlements. The remaining sites were associated with settler Japanese. There is no doubt that number 17 belonged to Japanese from a local agency of the Shogunate after 1799 AD, based on a historical account (Bekkai Town Board of Education 2007). Number 12, the Koetoigawa-ugan site, belongs to the 18<sup>th</sup> and 19<sup>th</sup> centuries and Number 15, namely the Kiusu 5 site, to a dozen or so years before 1739 AD (Hokkaido Archaeological Operations Center



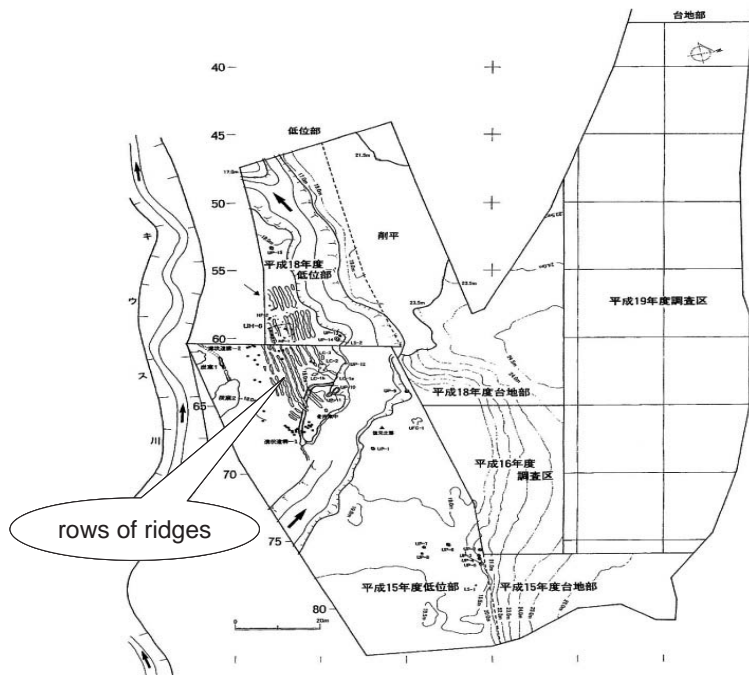
**Figure 9** Distribution of field sites in the early Modern Era (modified from Yokoyama 2009)

2008). The Kiusu 5 site is located on a former river bed and has yielded several rows of field ridges (Figure 10).

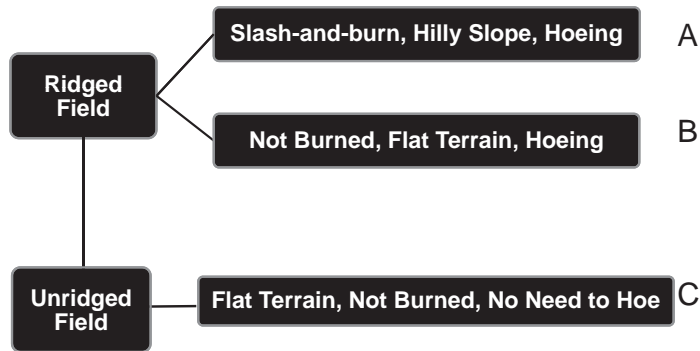
Although it is easy for archaeologists to detect ridges in a field that indicate the presence of field, it is extremely difficult to find a non-ridged field. Therefore, it is unclear whether the ridged field type was more numerous than the non-ridged type. It is likely that the non-ridged type was the most common form of a field. Although several Ainu sites in central Hokkaido, such as the Chitose and Nibutani sites, yielded a few iron tools apparently used for felling, hoeing, and reaping, it would be better to say that agriculture without ridged fields was predominant, as ethnography of the Ainu often describes in most places of Hokkaido.

In the light of recent archaeological results and modern ethnography, agricultural fields should be classified into three types (Figures 9, 11) in terms of ridge, burning, location, and farming tools.

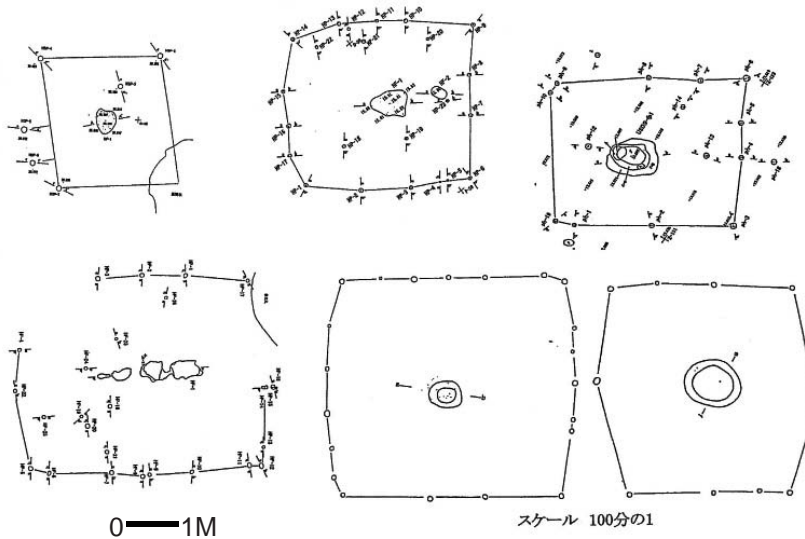
Type A is slash-and-burn carried out by migrant Japanese: the same methods as used in Tohoku (northern Honshu) are employed. Type A was not done by the Ainu, but by the Japanese alone. Type B was carried out by both Japanese and the Ainu where they had frequent contact with settlers. Type B also shows that cultural exchange between the Ainu and settlers developed a common farming skill. Type C is the simplest method and is adaptive to local situations, as



**Figure 10** Ridged Field at the Kiusu 5 Site  
(modified from Hokkaido Maizo Bunkazai Senta 2008)



**Figure 11** Type of Fields  
(Presence or absence of ridge and the burning, site, farming method)



**Figure 12** Ground plans of excavated Ainu dwellings dated to the 15-17<sup>th</sup> centuries in the Chitose Region (Miura 2012)

exemplified by the limited supply of iron farming implements. In terms of Ainu farming, type C is likely to be commoner than type B.

Owing to the progress made in recent archaeological surveys, many Ainu houses have been located in the central lowlands of Hokkaido. Figures 12 and 13 show a marked contrast in ground plans; the difference is the presence or not of an annexed barn. A diagnostic Ainu dwelling is composed of a main room and an annexed barn (Figure 14). The latter is a place for putting rush mats and firewood, and for storing processing implements like mortars and pestles (Kayano 1978:

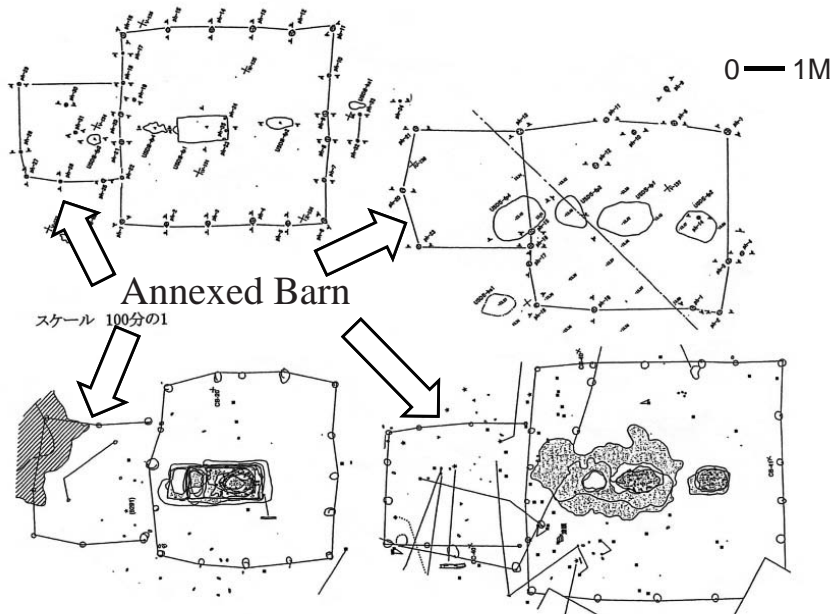


Figure 13 A Ground Plan of Excavated Ainu Dwellings Dated to the 17-18 Centuries in Chitose Region (modified from Miura 2012)

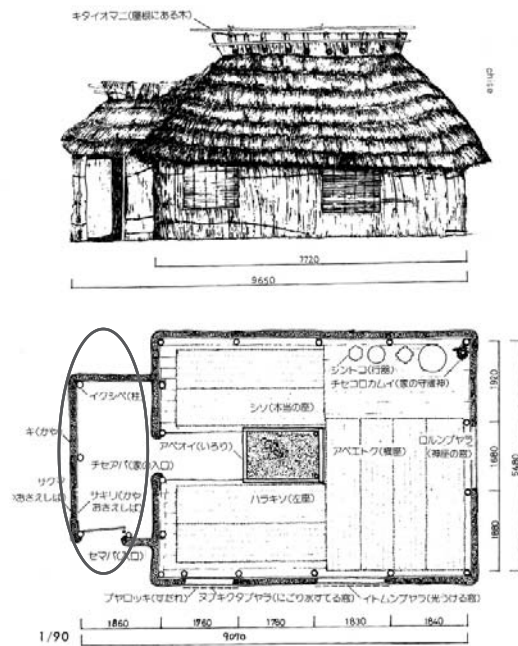


Figure 14 Ainu dwelling and annexed barn (modified from Kayano 1978)





**Figure 15** Pounding Grain with a mortar and pestle inside the Barn (Hata 1990)



**Figure 16** Winnowing Grain inside the Barn (Hata 1990)

109). On windy or rainy days, threshing, pounding and winnowing of grains were often done inside the annexed barn (Hayashi 1961: 63) (Figures 15, 16). Accordingly, it has been noted by ethnographers that the modern era expansion of Ainu dwellings with annexed barns is associated with the adoption of agriculture (Takaheya and Takakura 1970: 197). Archaeological studies show that annexed barns were added to Ainu dwellings during the 17<sup>th</sup> and 18<sup>th</sup> centuries, although they are missing during the 15<sup>th</sup> and 16<sup>th</sup> centuries (Miura 2012: 22–25). Had Ainu cultivation declined since the *Shakushine* War, an annexed barn would not have made progress.

### A CASE OF AINU SETTLEMENT AT *TONNIKA*

Figure 17 shows Ainu settlements along the Atsuma River in southwestern Hokkaido, as described in 1858. This is one core area of Ainu farming. Visiting a settlement named Tonnika in the summer of 1858, Matsuura interviewed inhabitants and recorded all members of 4 households in the settlement (Figure 18) (Matsuura 1980: 468–470). Roughly half the residents were absent. Figures in the diagrams give the age of each person. Figure 18 shows clearly two different lifestyles among members of the same households. One depicts those who left the village and worked as laborers for much the year at a coastal fishing ground under the *basho-ukeoi* labor system: 12 of 25 members (48%) are people in the prime of life, with an average age of 30.9 years. Their living is tied closely to the fishing ground, where their work and food were provided by the Japanese managers.

The other depicts those who remained in the settlement: 13 persons, consisting of females, infants, the elderly and the sick, who had to earn a living. However, the composition of the groups is not suited for hunting. It should be stressed that seasonal labor yielded a remarkable imbalance in both age and sex composition of the settlement as a whole, which imbalance in the original

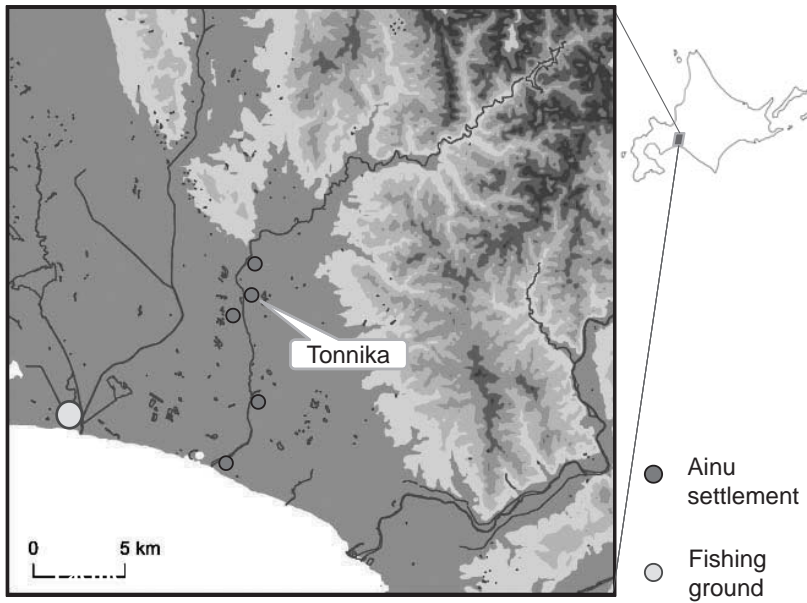


Figure 17 Ainu Settlements in the Atsuma area described in 1858

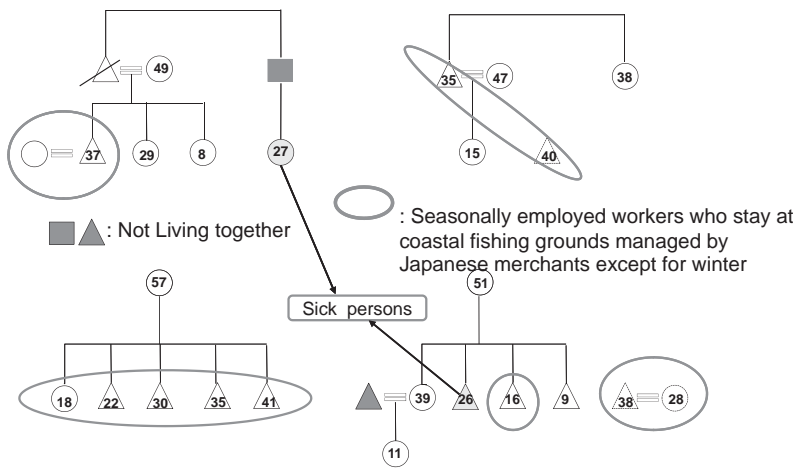


Figure 18 Members of 4 Households of Settlement Tonnika in 1858

settlement made it impossible to maintain the former communal large game hunting and salmon fishing life. Reliance on the fishing ground (i.e., the drawing out of the productive population) created major cultural changes, particularly in the political and economic realms. Such changes included, for example, those in

annual cycles, subsistence activities, resource use, settlement patterns, or division of labor by gender. However, this Ainu settlement is only one typical instance out of many. The ratio of the Ainu who made an employment contract with Japanese merchants and lived away from their original settlement is estimated to be as much as 46% in 1856 at Monbetsu, in northeastern Hokkaido (Tanimoto 2003: 220). Although there are few other areas where such a quantitative investigation has been done, a ratio of around 50% in the mid-19<sup>th</sup> century could be applied elsewhere in Hokkaido.

## CONCLUSION

Research on Ainu subsistence has emphasized Japanese policy toward them. Indeed, previous studies have focused on enslavement of Ainu at fishing grounds. This is one-sided. Although enslavement resulted in an even greater control over their lives by the Japanese and greater erosion of their traditional lifestyle, it does not mean that all Ainu were employed at the fishing grounds. In contrast, little research has dealt with original inland riverine settlements.

Reliance on fishing grounds weakened social organization. One of its most evident impacts was the disappearance of many autonomous political groups, resulting in the emergence of a highly fluid society.

The hypothesis that farming using furrowed field made by iron implements declined after the War of *Shakushine* is not proved by recent archaeological research and text critiques of historical documents. The preceding has argued, that, far from declining, farming gradually increased heading into the 18<sup>th</sup> century, when there was a mixture of farming with and without furrows. It cannot be assumed that farming managed chiefly by women with simple tools in the 19<sup>th</sup> century derived entirely from the policy of the Matsumae Domain and the oppression of the Ainu by the Japanese entrusted merchants.

One explanation for the appearance of this new style of farming is that the Ainu re-adapted to the changed form of employment and labor practice under the *basho-ukeoi* labor system. Increase in social fluidity accelerated cultural readjustment. The reason why the Ainu did not make furrows in fields is not because the supply of iron farming implements was cut off; rather they wanted to adopt labor and time-saving farming in original settlements to cultivate crops to feed themselves.

The author has expressed the opinion that the interpretation by government officials and people in related fields regarding Ainu farming was excessively biased and negative, owing to Confucian ideas and competitive feelings toward the Matsumae Domain during the 18<sup>th</sup> and 19<sup>th</sup> centuries. The peculiarities of historic sources should be properly comprehended in terms of the historical background. Unfortunately, this biased interpretation is not limited to the early year of the Modern Era, but still has an impact on some archaeologists who place more value on farming with ridges compared to “meager farming” without ridges

and metal tools. Primitive or “meager farming” is not just the result of exploitation and oppression. An entirely different conclusion would be reached if it is regarded as independent response of the Ainu to a changing social situation. Instead, it is adaptive to social fluctuations. This aspect affords some new perspectives on an understanding of the “resilience” of hunter-gatherers.

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