

## **Introduction: Cultural Diversity among Asian Hunter-gatherers from Prehistory to the Present**

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### **BACKGROUND, OBJECTIVES, AND METHODOLOGY**

The ‘age of hunter-gatherers’ has purportedly accounted for more than 97% of the approximately 300,000-year history of our species (*Homo sapiens*). We have developed agriculture, livestock farming, and civilisations on a global scale. Nevertheless, the prehistoric culture of hunter-gatherers has not completely disappeared. The current hunter-gatherers mostly survive as small groups of indigenous people in their own nations while maintaining relationships with livestock farmers and city dwellers (Ikeya et al. eds. 2009; Ikeya and Hitchcock eds. 2016; Ikeya ed. 2017b).

Among past anthropological studies of hunter-gatherers, academic theoretical contributions related to Asia have been rare compared to those related to hunter-gatherers in Africa and North America (e.g., Lee and DeVore eds. 1968; Binford 2001). This lack of emphasis, notwithstanding, there is no indication that data from Asia are useless in these attempts. As a matter of fact, research on hunter-gatherers in Asia can make a unique contribution due to their adaptations to greatly varied environments unseen in other continents, from the far north to tropical zones, and from terrestrial ecosystems including tundra and forests to water ecosystems including seas and lakes, and rivers (Northeast Asia by Irimoto ed. 1994 and tropical Asia by Roberts 2019 and Wedage et al. 2020).

Historical perspectives also point to the unique nature of Asian evidence. Palaeolithic modern human hunter-gatherers coexisted—and even interacted with—Neanderthals and Denisovans (Reich 2018). After farming was invented and ancient civilisations were developed, small groups of hunter-gatherer communities maintained various relationships with farmers and/or city dwellers during the historical periods of West, South, and East Asia, which have continued to date (Ikeya et al. eds. 2009; Ikeya and Hitchcock eds. 2016; Ono, Chapter 6 of the present volume). Good examples can be seen in Southeast and South Asia, which are, the only regions where nomadic and semi-nomadic hunter-gatherers exist

today.

In this volume, hunter-gatherers are defined not only as being engaged in hunting, gathering, and fishing, but also as having maintained a system in which they share natural resources. Cultural continuity and social change among hunter-gatherers in Asia, from the Upper Palaeolithic up to the present, will be considered using the latest evidence from Northern, Central, Eastern, Southeast, and South Asia. Moreover, to bridge gaps in ethnographic and archaeological records, we highlight the relationship between subsistence technologies and symbolic behaviours including burials and ornaments visible in both records as material evidence. Through this attempt to compare the various characteristics and distinct features of the techniques, economies, and societies among hunter-gatherers in Asia, we aim to provide a more balanced view of their adaptations to diverse natural and social environments.

At this point, we shall review the methodology of reconstructing the history of hunter-gatherers in Asia. Building a human history requires taking into account the achievements of prehistory, archaeology, literature, history, and ethnography, while considering temporal and regional variability. It is noteworthy that the geographic regions studied in the fields of ethnography and the realm of prehistory and archaeology often differ. Ethnographic research mainly focuses on hunter-gatherers in torrid or frigid zones; very few studies have specifically examined cases in temperate climates. Even among the studies of the torrid zone inhabitants, most involve inland regions, with a few notable exceptions like those of the Andaman and Nicobar Islands. This geographic bias in research emphasis is likely attributable to the fact that in human history, agriculture, livestock farming, and cities were developed in the middle latitudes, pushing hunter-gatherers out to marginal areas. The wave of industrial growth that spread from coastlines in the age of imperialism also contributed to the distribution of hunter-gatherers' communities today. This means that when using ethnographic data to build a global image of hunter-gatherers, attention must always be paid to the biases resulting from these historical factors.

Studies conducted in the domains of prehistory and archaeology, by contrast, cover much wider regions. However, investigations on the wet tropics of Southeast and South Asia may have been less intensive, likely due to the poor preservation of archaeological sites. Nevertheless, research into the exploitation of animals and other practices during the Palaeolithic period has been increasing in recent years, particularly in Java and Sri Lanka (Amano et al. 2016; Roberts 2019; Wedage et al. 2019). Among studies carried out on historical periods, written documents on hunter-gatherers are available. However, they were drawn up by the civilized, thereby requiring caution in their interpretation (Irimoto 1987; Ikeya and Hasegawa eds. 2005). Approaches in ecological anthropology, sufficiently considering the contextual evidence, would also make a great contribution to the understanding of the past subsistence technologies and economies of hunter-gatherers in Asia. One example is a hypothesis of the Upper Palaeolithic hunting being assisted by dogs

(Shipman 2015). Notwithstanding, this hypothesis has not contributed much to our understanding of hunting behaviour in the Upper Palaeolithic, as it projects hunting behaviours developed after the emergence of domesticated dogs onto communities not known to have this technology.

## **DIACHRONIC VARIABILITY OF HUNTER-GATHERERS IN ASIA (RESEARCH FRAMEWORK 1)**

For the sake of convenience, we divide the history of hunter-gatherers into three periods: 1) the age of hunter-gatherers only, 2) the age of their coexistence with farmers, and 3) the age of their coexistence with farmers and city-dwellers (within a state and market system).

### **1) The Age of Hunter-gatherers**

[Question 1] How did prehistoric hunter-gatherers in Asia adapt to diverse natural environments? How did hunter-gatherers settle down and begin farming in Asia?

Modern humans first departed Africa approximately 200,000 years ago or earlier, and expanded their range substantially across Asia starting 60,000 or 50,000 years ago. Genetic as well as archaeological studies indicate that they took two major routes: the northern route extended over the Himalayas from the Levant to Siberia in a northeastern direction, while the southern route was from Arabia to East Asia mainly along the Indian and Pacific coasts (Bellwood 2017) (Figure 1).

The dispersals of Palaeolithic modern humans were accomplished through complicated processes, including interaction with and replacement of earlier populations (Nishiaki 2020). Field evidence indicates that Asia was populated by several groups of archaic hominins during that period (Takahata 2020). Genetic studies have revealed that in some regions, our ancestors interbred with Neanderthals and/or Denisovans (Pääbo 2015), while in other regions, earlier hominins might have been driven to extinction, as in the case of *Homo floresiensis*, *Homo luzonensis*, and others (Sutikna et al. 2016; Détroit et al. 2019). In either case, modern humans eventually became the single hominin population in the world.

The primary subsistence strategies of the incoming modern humans must have depended on resources more or less comparable to those exploited by indigenous populations. A theoretical consideration suggests that the Palaeolithic (and likely present) modern humans expanded their range in at least two ways (Wakano et al. 2018). The simple way was their penetration into the niches that were not or were insufficiently exploited by the indigenous groups. In this case, expansion would have been successful as long as modern humans possessed subsistence strategies adequate for their target niches. The second way was to enter the ecological zones populated by indigenous populations. Because their niches overlapped, the newcomers needed to develop more adaptive technologies to win the competition. In short, these two patterns represent ecological and cultural dispersals,



occurred. The Ohalo II site on the Galilee Lake, dated from approximately 23,000 years ago, is one of the best-known examples (Ramsey et al. 2017). Sedentism became common among the hunter-gatherers of the Levant during the terminal Pleistocene, especially from 15,000 years ago, when post-glacial climatic amelioration began to provide a larger biomass (Bar-Yosef and Valla 2013). The sedentary hunter-gatherers subsequently began farming and livestock breeding, presumably for the first time in the world. The processes of the advent and development of food production and socio-economy, termed Neolithization, are regarded as major epoch-making events in human history.

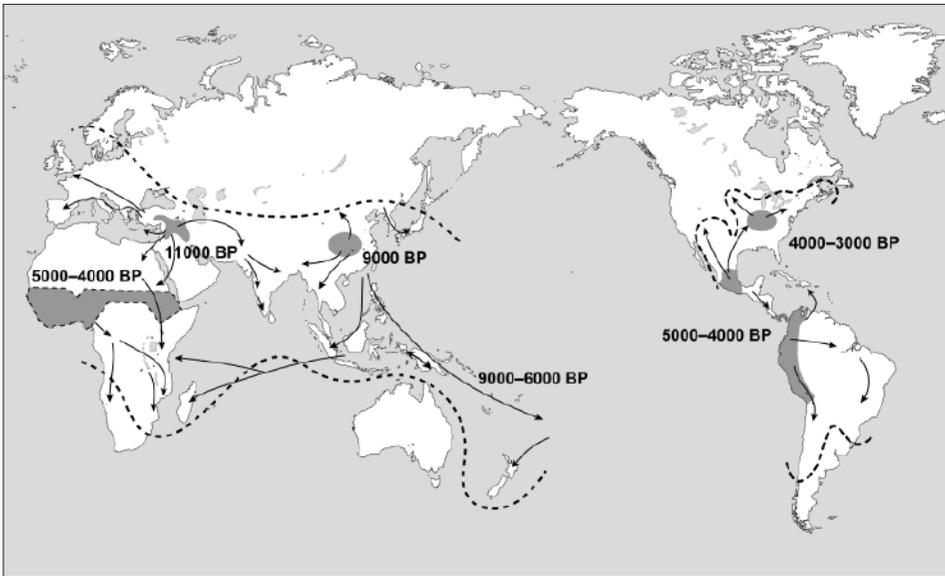
## **2) The Age of Hunter-gatherers' Coexistence with Farmers**

[Question 2] Under what conditions did hunter-gatherers coexist with plant and livestock farmers? Which conditions led them to assimilate with farmers?

When the food production economy was established, prehistoric farmers of not only Southwestern Asia but also other regions that experienced indigenous farming, subsequently dispersed to neighbouring regions. The dispersal of farming eventually reached almost all the arable lands of the continents and islands worldwide, excluding environmentally harsh regions like arctic and dry lands (Bellwood 2004; Figure 2). The expansion of farmers' territories produced new socio-economic relationships with the neighbouring hunter-gatherer societies. Two consequences can be postulated: one is the disappearance of hunter-gatherers who adopted farming economy and/or assimilated into farming societies; the other is the coexistence of hunter-gatherers with incoming farmers.

The relationships of hunter-gatherers with their neighbours in specific times in the past have been studied from many perspectives (e.g., Headland and Reid 1989; Mitchell 2009). However, studies in history, historical anthropology, and ethnography tend to have focused on people living in the tropics and sub-tropics. For example, in ethnographic approaches, many arguments have been developed in Southeast Asia, including the northeastern part of Luzon in Southeast Asia (Headland and Reid 1989), and the regions dealt with in this volume (Nakai and Ikeya, Chapter 8), which involve Pygmy peoples in the Congo Basin in Africa and the San people in the Kalahari Desert. These studies require integration of data from other regions, even if in sporadic form, to develop more integrated views regarding the variety of patterns that actually occurred during the contact periods of hunter-gatherers and farmers (Ikeya et al. eds. 2009; Ikeya and Hitchcock eds. 2016).

On the other hand, archaeological studies can deal with data from many more regions worldwide. The most intensively studied has been the dispersals of the Neolithic farmers from the Fertile Crescent of Western Asia to the neighboring regions and their consequences (Nishiaki, Chapter 5). Notably, integrated research can be conducted for regions with both detailed archaeological and historical records in the regions (Ono, Chapter 6; Yu, Chapter 7). It may be useful in this regard to mention the case studies in the Japanese Archipelago, familiar to the



**Figure 2** The expansion of agriculture in the Holocene era. (Modified from Bellwood 2004)

editors of the present volume. The establishment of rice farming occurred through various long-term processes in the islands previously occupied by hunter-gatherers. Recent archaeological studies indicate its first introduction to the northern Kyushu Island in the early first millennium BC and subsequent dispersals into other parts of the main islands. The farming economy reached the northeast along the Japan Sea coast rather rapidly, by the middle first millennium BC, but it reached the Pacific coast and the neighbouring regions much slower (Akazawa 1979; Ikeya et al. eds. 2009). In the period of ‘transitions,’ archaeological records provide intriguing data on the coexistence of hunter-gatherers and incoming farmers, and they elucidate how the former eventually employed the new economy as well as the accompanying social systems (Fujio 2021; Takamiya 2001). In this regard, it is notable that the communities of northern Kyushu, who adopted farming swiftly, maintained explicit cultural relationships with those of the Korean Peninsula during the Jomon times of hunter-gatherer economy.

Hokkaido is the last main island of Japan where farming replaced hunter-gatherer economy. This island, the most northern one of Japan, is separated from Honshu Island by the Blakiston Line delineating the biodiversities. The replacement occurred during as late as the Edo period (AD 1603–1868), when the Matsumae domain of the Shogunate polity was engaged in governing the indigenous Ainu societies of Hokkaido (Kikuchi 1984; 1994). The processes with which the latter eventually assimilated into the Japanese civilization provide a rare case study on how this kind of assimilation occurred in developed countries. The processes involved far more complicated elements than those in prehistory,

including contacts with farmers, merchants, craftspeople, and others (Ōnishi, Chapter 9). The Ainu hunter-gatherers traded meat and fur obtained from hunting and forest products obtained from gathering with their neighbours, and provided sufficient labour resources to acquire agricultural, livestock, and iron products, accessories, and other goods. Consequently, the Ainu hunter-gatherers developed new social relationships through intermarriage, which eventually led to their assimilation into the Japanese civilization.

### **3) The Age of Hunter-gatherers' Coexistence with Farmers and City-dwellers**

[Question 3] How did hunter-gatherers adapt to natural and social environments during the formation of premodern states (the Mughal Empire and forest products, etc.) and colonisation in many regions of the world? How did the hunter-gatherer society adapt to the formation of a market economy, such as the growth of the Chinese economy, which demanded agarwood and other forest products and ivory, and how did it adapt to settlement policies and other measures implemented by nation-states?

(1) Relationships with states and regions in the premodern era: Providers of the world system and natural products

After initiating plant and livestock farming in Western Asia for the first time, humans began building cities there. This urban settlement marked the initial stages of civilisation. Following the development of the six major ancient civilisations (Egypt, Mesopotamia, the Indus, the Yellow River, Mesoamerica, and the Andes), kingdoms and empires increased around the world and later declined. On the map of world history, this period represents the age of urban civilisation in which new hunter-gatherer societies rarely appeared, and hunter-gatherers in general seemingly faded from the world. Some of them, however, formed isolated societies, while others are known to have become indispensable as providers of natural products to civilised societies in regional systems (Ikeya and Hitchcock eds. 2016).

The following reviews account world expeditions in which the explorers Ferdinand Magellan, Charles Darwin, David Livingstone, and Takeshiro Matsuura mention their encounters with hunter-gatherers. Further, the ongoing global activities of Christian missionaries from the 16<sup>th</sup> century to the present cannot be ignored. Similarly, the Orang Asli of Malaysia and the Orang Rimba people (Suku Kubu) of Indonesia have faced social changes as a result of the spread of Islam, although Islamic missionary work has not been as active as that of Christianity.

Such relationships between hunter-gatherers and kingdoms are widely observed in tropical Asia. The Penan people, living in Sarawak on the island of Borneo, claim that they have collected birds' nests (consumed in China) and agarwood (used in the Middle East) for centuries. Forest products such as rattan and honey also became traded goods (Bernatzik 2005). Sarawak was a British territory at the time and the proceeds from such merchandise came to represent a vital element of the territory's income. In India's Mughal Empire, hunters living in the highland

forests of southern India provided forest products, closely resembling the case of Southeast Asia.

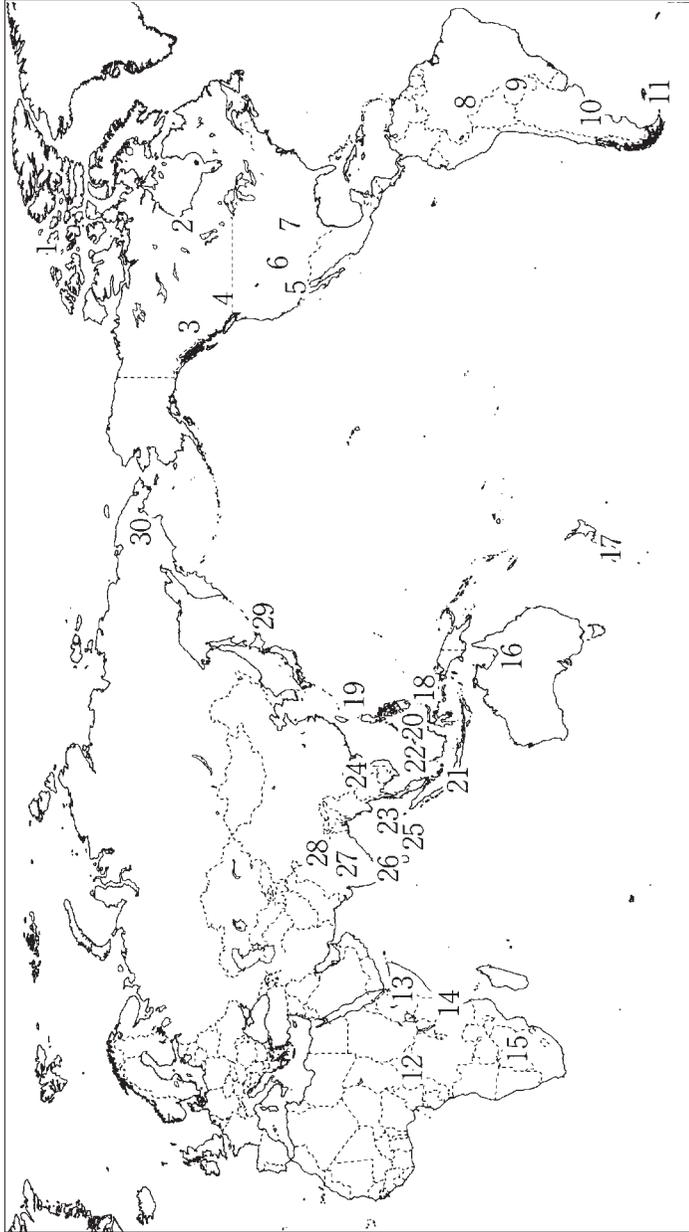
This pattern of development also partially coincides with the changing life of the Ainu people during the Edo period. Hokkaido, then called Ezo, was *Ainu Mosir* (i.e., the land of the Ainu) (Tezuka 2011). When the Matsumae Domain was established in the southwestern part of Hokkaido, however, the Ainu were gradually integrated into Edo's shogunate and domain system (Kikuchi 1984; 1994). Initially, a feudal tenure system was implemented by dividing the domain into sections. The system gradually became one of placing, at specific sites, traders who delivered marine products to the domain government. In the former system, the Ainu maintained trade relationships with the Japanese. In the latter system, however, they began to be exploited as compulsory workers at Japanese fisheries. Although some Ainu are known to have engaged in fishing for themselves, the domain government undoubtedly increased its control over their daily way of life.

The activities of hunter-gatherers in Northeast Asia in the 19<sup>th</sup> century are also interesting (Ikeya 2005; Kishigami 2002). They differed markedly between the northeast part of Russia and the Amur River basin. In the former, hunter-gatherers had close ties with people in Alaska, Europe, and North America, and primarily traded Arctic fox fur. Hunter-gatherers in the latter region, however, paid tribute to the court of the Qing dynasty as part of their relationship. This was purportedly tied to the involvement of the Nanai and Udege peoples living in the Amur River basin (Sasaki 1996).

As these cases suggest, hunter-gatherers were often integrated into the systems of premodern states and colonies in and after the 16<sup>th</sup> century. Colonisation in North America and Australia reflects the history of placing hunter-gatherers under the control of those regions' respective governments (Fujikawa 2004). The Ainu policy of the Matsumae Domain and the shogunate during the Edo period was the same (Ōnishi, Chapter 9). Hunter-gatherers either began to move to regions outside of government control or established relationships with a wide range of people who included rulers, colony administrators, ivory and fur traders, and operators of businesses (such as timber and mineral companies).

## (2) People living in modern society: Nation-states, the market economy, and indigenous peoples' movements

Some hunter-gatherers today continue to live in nation-states created in modern times (Sarwer et al., Chapter 10); they have adapted in diverse ways in different regions (Figure 3). They include hunter-gatherers known since before the 20<sup>th</sup> century and those revealed just recently. Examples of hunter-gatherers with little outside involvement are those living in the Andaman and Nicobar islands of India. At present, the Indian government designates their living areas as sanctuaries and prohibits the free entry of outsiders, which helps them to maintain a self-sufficient lifestyle. The government only provides them with food and commodities at certain places of contact.



**Figure 3** Peoples known as hunter-gatherers in 19<sup>th</sup> and 20<sup>th</sup> centuries.  
 21: Oran Rimba (Chapter 11), 24: Mlabri (Chapters 8, 10), 29: Ainu (Chapter 9), (Modified from Ikeya ed. 2017b)

Modernity—which in this case refers to the development of school education and medical services, and people's settlement in such systems—has affected most hunter-gatherers (Prasetijo 2015). Modernisation of this type developed in former socialist countries (such as Russia) in the 1930s. The settlement of hunter-gatherers increased in former French colonies in Africa in the 1960s and in former British colonies in the 1980s. In all cases, people who had previously been nomadic were gathered around certain locales and settled while establishing new permanent residences. This policy, however, was not always successful. Some hunter-gatherers returned to their original dwellings to avoid difficulties in their new settlements and resumed their semi-sedentary lifestyles (Ikeya 2016).

In addition, many hunter-gatherers have been affected by government national park policies (Prasetijo, Chapter 11). Although they lived in quiet places surrounded by rich natural resources, the governments of many countries began to designate these sites as conservation areas (such as national parks) and sought to expel the local residents (e.g., Ikeya 2001). The residents would receive compensation and look for new places to live, but this was not always successfully achieved.

The final group consists of hunter-gatherers who have been impacted by commercial economic growth (Figure 3) due to the commercialisation of resources in the areas where they live. Rattan from the forests of Southeast Asia is widely used in neighbouring regions as a commodity, while forest products (such as agarwood) are supplied around zones of consumption (such as China and the Middle East). In many instances, this economic system is known to have been restructured after the colonial period. In both developed and developing states, this has led to hunter-gatherers living in cities and towns. Peoples such as the Inuit, Aboriginal Australians, and Ainu living in economically developed nations now live conventionally in urban locales. In recent years, some peoples (such as the Pygmies in Gabon and the Sihan in Borneo) have also begun living in cities (Kato 2016).

Many indigenous peoples' movements arose in the 1990s and have become increasingly active in many parts of the world (Nobuta 2010), drawing increasing attention (Hitchcock, Chapter 12). Among them, some hunter-gatherers began to assert claims as indigenous peoples, demanding their rights to land through negotiation with governments. As a result, some have criticised government eviction policies. The San people, living in the central region of Botswana, received financial (and other) assistance from international non-governmental organisations (NGOs), and in 2006 won legal action against the government over land rights. In the Ecuadorian Amazon, the organisation of indigenous people is already in progress; they have received significant amounts of compensation from Shell Oil Company.

As implied by these cases, the lives of modern hunter-gatherers have become ever more diversified. Whereas some maintain a nomadic lifestyle in forests, others in economically developed nations coordinate campaigns and become politicians in charge of indigenous peoples' movements. They are affected, in some situations, by

governments' promotion of settlement and development policies, whereas some small groups oppose such policies. Funds are invariably required for subsistence in the modern capitalist economy. They have the option of living as commercial hunter-gatherers if commercial resources are available. However, if the independent systems on which they depended in the past have collapsed, they are usually totally reliant on government assistance.

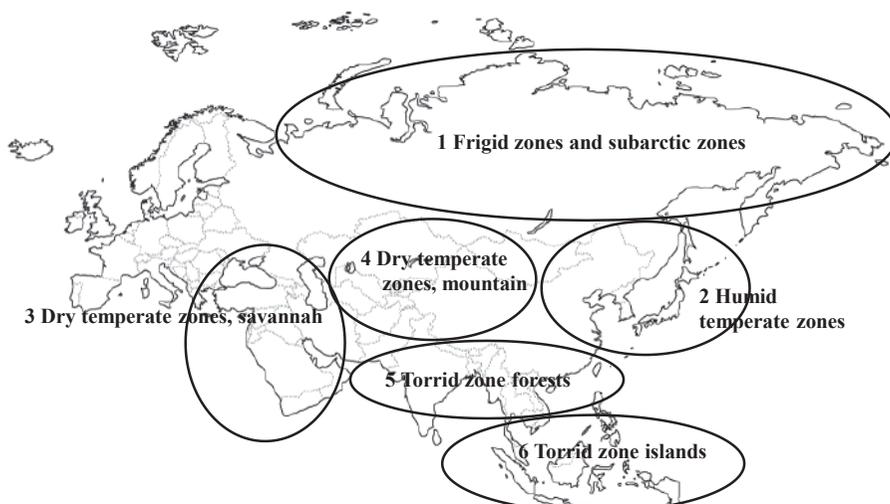
### **THE DIVERSITY OF HUNTER-GATHERERS IN ASIA: SIX ENVIRONMENTAL CATEGORIES AND THREE REGIONAL ECOSYSTEMS (RESEARCH FRAMEWORK 2)**

Hunter-gatherers, who once lived in every corner of Asia, represent two phenomena: the maintenance of culture from a historical angle and the subsequent social changes that have taken place. At the same time, they have adapted to different natural environments from north to south. Notwithstanding, their survival is under threat in many regions due to the expansion of farming societies, the spread of civilisation, and modernisation and development. They now live in contact with governments, except in some places such as North Sentinel Island in the Andaman Islands. Moreover, the direction of change is not merely one-way, such as hunter-gatherers becoming farmers or becoming civilised: the phenomenon of farmers becoming hunters has also been observed. In other words, the variety of responses seen in different historical periods makes any generalisation difficult.

The authors nonetheless hold that the diversity of hunting and gathering cultures in Asia, in the past and at present, can be explained by comprehensively investigating numerous regions and regional ecosystems, and observing their dynamics through fieldwork involving hunter-gatherers in various parts of the continent. Based on the authors' fieldwork and an extensive reading of related literature, we hypothesise six environmental and human ecosystems (Figure 4), as well as three regional ones. The six environmental and human categories are (1) frigid and subarctic zones, (2) humid temperate zones, (3) dry temperate zones (including savannahs), (4) dry temperate zones (including mountainous areas), (5) torrid zones (forests), and (6) torrid zones (islands). The three regional ecosystems are (1) coexistence between hunter-gatherers and livestock farmers, (2) coexistence between hunter-gatherers and civilised society, and (3) coexistence between hunter-gatherers and plant farmers.

#### **1) Frigid and Subarctic Zones and Humans: The Coexistence of Hunter-gatherers and Livestock Farmers or Independent Hunter-livestock Farmers**

In the frigid zone of Asia, Russian Inuit and Chukchi people lived in the tundra in the northeast (Bogoras 1909; Krupnik 1993). Although the Inuit lived there first, the Chukchi people allegedly expanded their living area, learned marine mammal hunting from the Inuit, and adapted to life on the coast. Whereas most Chukchi people still live inland and engage in reindeer herding, some rely on hunting



**Figure 4** Environmental and human ecosystems: Six hunter-gatherer zones in Asia (1) Frigid and subarctic zones, (2) humid temperate zones, (3) dry temperate zones (including savannahs), (4) dry temperate zones (including mountainous areas), (5) torrid zones (forests), and (6) torrid zones (islands). (Created by K. Ikeya)

walruses and other marine mammals along the coast. Interestingly, intergroup relationships link coastal and inland peoples. For example, when inland life becomes difficult because of climate change (or other reasons), the inhabitants reportedly move to the coast and hunt marine mammals. Moreover, a trade relationship exists between the coastal and inland peoples. Products such as seal oil are brought further inland from the coast. Another remarkable aspect is that an industry that combines marine mammal hunting and reindeer breeding operates in the eastern part of the Chukot Peninsula. The Yukaghir people (who were hunters), the Evenks (hunter-livestock farmers who combined hunting and livestock farming), the peoples of Tuva and Tsaatan, and others live in this region.

## 2) Humid Temperate Zones and Humans: The Coexistence of Hunter-gatherers and Civilised Society

At present, not many hunters are found in Asia's humid temperate zones. The Ainu lived from Hokkaido to Sakhalin and on the Kuril Islands (Watanabe 1972; Irimoto 2010). Hunting, gathering, fishing, and trade were important activities for them during and before the Edo period. In particular, the Santan trade in Hokkaido, Sakhalin, and the Amur River basin was widely known. In many cases, fur was taken from the Ainu side. Santan clothing, glass beads, and other items produced in China were also brought from the side of the Amur River (Kikuchi 1984). Subsequently, the Ainu in Hokkaido were gradually absorbed into Japan's shogunate system through the feudal system of commercial and land tenure. As a result, they maintained relationships with traders who had moved from Honshu.

The Ainu's consumption of purchased rice in the Edo period clearly reflects the outcome of their trade relationships.

Peoples such as the Udege, Nanai, and Nivkh living in downstream areas of the Amur River also combined hunting, gathering, and fishing with trade activities, and all maintained close ties with China (Sasaki 1996). The Oroqen people lived in the Greater Khingan Range in the northeast part of China. They were divided into those who bred reindeer and horses, and those who engaged in hunting and gathering. They also retained their culture while preserving relationships with the Chinese central authorities.

### **3) Dry Temperate Zones (including Savannahs) and Humans: The Coexistence of Hunter-gatherers and Plant Farmers**

Dry temperate zones in Asia are located especially along the coastal areas of the Mediterranean in Western Asia. Many archaeological sites of the Pleistocene to the Holocene are located in this region (Henry 1995), representing the part of the world from which most of the basic data on prehistoric hunter-gatherers have been accumulated (Price and Gebauer eds. 1995). No ethnography of hunter-gatherers in this region from the premodern and modern eras has been conducted as of yet. Although not in Western Asia, ethnographies on the San people in Africa and Aboriginal Australians are useful as references when examining how people in savannahs have adapted to change.

### **4) Dry Temperate Zones (including Mountainous Areas) and Humans: The Coexistence of Hunter-gatherers and Plant Farmers**

Dry temperate zone hunter-gatherers have lived according to three environmental categories. First, many temperate mountainous areas are in peripheral regions beyond the reach of central governments. Hunter-gatherers have also lived in inland parts of tropical Asia (Pookajorn 1988; Pookajorn and Staff 1992). The Raute people from the middle section of Nepal's mountains, and the Mlabri from the mountains of Laos and Thailand, are well-known. The former moved to the mountains (Fortier 2009) because of hunting restrictions, began to produce items made of wood (particularly wooden boxes in which farmers can store goods), and sold them to farmers, receiving rice and other products in exchange. The Mlabri people in Thailand are characterised by their now-settled lifestyle (Nakai and Ikeya, Chapter 8). Some of them help farmers in their work, while others have established their own trade relationships with farmers.

### **5) Torrid Zones (Forests) and Humans: The Coexistence of Hunters and Plant Farmers**

Numerous hunter groups such as the Orang Asli and Maniq of the Malay Peninsula (Tuck-Po ed. 2001; Tuck-Po 2005; Endicott ed. 2016), the Penan of Borneo (Sercombe and Sellato eds. 2007), the Orang Rimba (Suku Kubu) of Sumatra (Elkholy 2016), the Batak of Palawan, the Vedda of Sri Lanka, the Nayaka of India and the Mlabri of Thailand have lived in the forests of Asia (Rischel 1995; Na Nan 2012; Bird-David 2017; Roberts 2019). They rarely live independently, most of them maintaining a coexistence relationship with farmers. It is commonly known that the Aeta people (living in the northern part of Luzon) have preserved their coexistence relationship with farmers for thousands of years (Headland and Reid 1989; Minter 2010), through which they received iron and tobacco, and gave iron and forest products in return. Such relationships are maintained even now for the collection and sale of agarwood from the forests, as observed in the case of the Penan people of Borneo (Hoffman 1984; Morrison and Junker eds. 2002).

### **6) Torrid Zones (Islands) and Humans: Independent Hunter-gatherers or Coexistence with Hunters and Plant Farmers**

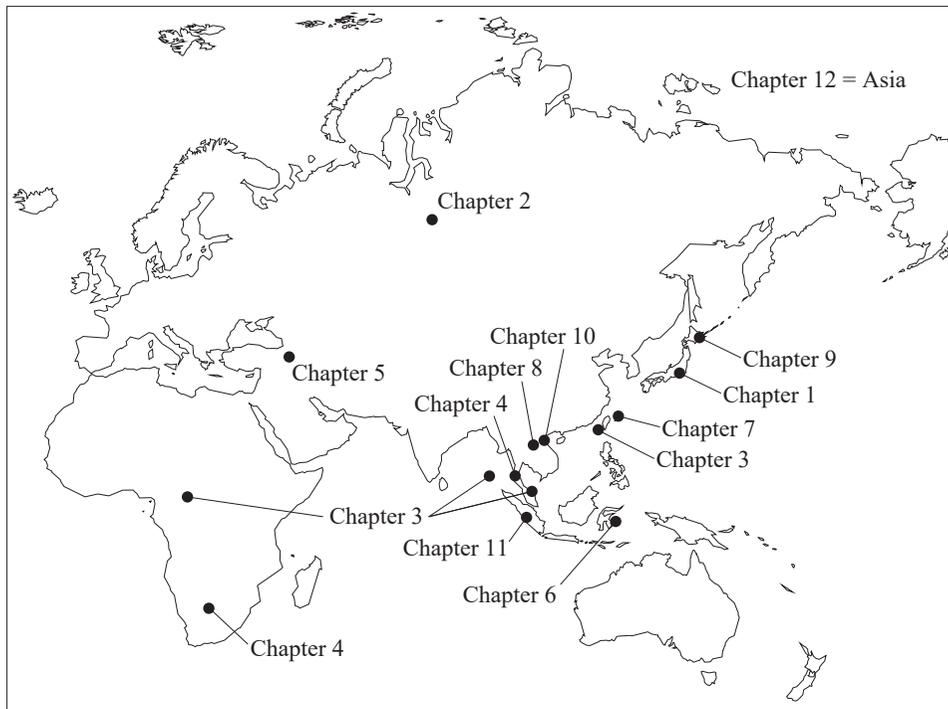
Contemporary hunter-gatherers rarely use coastal regions. In 17<sup>th</sup>-century tropical Asia, coastal zones were often developed through the migration of Europeans and colonisation. This might be why hunters were unable to preserve their lifestyles there. The Andaman and Nicobar Islands of India, however, represent an exception (Radcliffe-Brown 1932; Pandya 2009).

In the Andaman Islands, an American missionary was killed in November 2018. As with some of the Chukchi people, a group in the Andaman and Nicobar Islands has moved alternately between inland and coastal areas (Pandya 2009). They hunt wild boar inland and fish using bows and arrows along the coast. In the Nicobar Islands, Malay farmers live on the coast, while Shompen hunters live inland; the two groups maintain a mutual coexistence relationship.

As demonstrated, identification of the six environmental and human ecosystems, as well as the three regional ecosystems, clearly illustrates the diversity and historical transition of hunter-gatherers in Asia from the prehistoric age to the present.

## **THE STRUCTURE OF THIS BOOK**

This volume comprises three parts (Figure 5). Part 1 focuses on technology, mobility, and interactions among Palaeolithic hunter-gatherers. Takuya Yamaoka (Chapter 1) explains changes in lithic assemblages during the Early Upper Palaeolithic (EUP) on the Musashino Upland of Japan through quantitative comparisons of the selection of lithic raw materials, core reduction, and formal tool production over many phases. The results suggest that changes in aspects of lithic assemblage variability could be explained by shifts in raw materials usage (versus



**Figure 5** Positions of survey locations for each chapter. Archaeological, ethno-historical, and ethnographic study areas for hunter-gatherers in Asia.

developments in blade technology and methods of formal tool production). The findings also imply the possibility that changes in lithic raw materials usage would have been affected by transformations in organic raw materials use in entire technological systems, as well as shifts in the territorial scale of foraging and the residential mobility of EUP hunter-gatherers in relation to variations in environmental settings during the EUP. These transitions in lithic assemblages, associated with developments in human behaviour regarding technological adaptations, are thought to reflect early modern humans' flexibility, as well as their dispersal across Eurasia.

Oleg Kardash and Ekaterina Girchenko (Chapter 2) examine collective hunting techniques for large ungulates among northern Asian tribes, with evidence from archaeology and ethnography. In the far north of Asia in ancient times, herds of wild reindeer made annual meridional seasonal migrations. According to archaeozoology, large ungulates (reindeer and elk) were the main food species for the indigenous peoples of Northern Siberia. Plentiful food resources and a lack of raw materials for hunting tools led to the formation of a new system of collective hunting based on seasonal migrations, landscapes, and biocenosis. Their paper presents several methods of collective hunting known from archaeology and

ethnography, collected by the authors during investigations in the Khanty-Mansi Autonomous Okrug-Yugra and the Yamal-Nenets Autonomous Okrug in the north of the West Siberian Plain. Pit trap systems, which are being found nowadays in large numbers, were the result of collective work, which might have led to ancient social structures becoming more complex. Collective work, even in the appropriating forms of the economy, was more effective than the outcomes of individual hunting. An indirect confirmation of the development of the social structure of hunters and gatherers in the north of Western Siberia is the number of settlements and dwellings functioning there, which reached their peak in the Middle Ages, following which they began to decline with the emergence of individual hunting.

Yujie Peng and Atsushi Nobayashi (Chapter 3) conducted cross-cultural research into hunting tools and techniques comparing hunter-gatherers and hunter-gardeners. Modern humans (*Homo sapiens*) have succeeded in dispersing themselves around the world. One reason they could do so is that they were able to develop the technology and methods necessary for subsistence in a variety of natural environments. Their paper delves into Asian and African human populations that have traditionally depended on hunting activities, including hunting-gathering and hunting-gardening societies. The authors aimed to identify the factors correlated with the technology and techniques of hunting, and to present a cross-cultural perspective on the cultural evolution of modern humans' subsistence activities. Their comparative study is based on descriptions in ethnographies and the authors' own fieldwork. They discuss the relationship between socio-ecological environments, material culture, and human behaviour to highlight similarities and differences in hunting activities across distinct social structures. In the process of dispersion, human populations developed cultural strategies (such as hunting behaviour with tools) to adapt to nature. In different ecological environments, the types of animals that can be caught, the materials available for tools, and the instruments used to produce hunting tools have determined hunting methods and tool kits.

Using an ethno-archaeological approach, Kazunobu Ikeya and Pothisarn Chumpol (Chapter 4) explore the dispersal of prehistoric hunter-gatherers and the materials used for making beads and the role they played. This study specifically scrutinises interactions between beads and hunter-gatherer societies during the prehistoric period, addressing issues of human dispersal and how they relate to beads. From the angles of ethno-archaeology and ethno-history, the authors carried out fieldwork to investigate two modern hunter-gatherer societies located east and west of the Movius Line, respectively. Two examples of bead usage among modern hunter-gatherers are introduced to elucidate the materials used and the role beads played. One example is that of the San society of the Kalahari Desert, where people have historically lived in arid areas. There, various materials are used as beads, including ostrich eggshells; people also not only make necklaces but bracelets and head-dresses as well. The other example is the Maniq society of the

wetland mountain forests of the Malay Peninsula. In Maniq society, fruits, roots, animal bones (from civets), and animal teeth (from hog badgers) are used for necklaces. Individual necklaces are crafted using several materials. The Maniq people wear beads not only for decoration, but also to express their personality or to enjoy the scent of the materials. The findings show that the bead materials of prehistoric hunter-gatherers did not differ between regions east and west of the Movius Line. Rather, they differed between dryland savannahs and wetland forests due to ecological adaptation.

Next, Part 2 centres on technology, mobility, and interactions among Neolithic hunter-gatherers (Chapter 5). Yoshihiro Nishiaki explores mobility and sedentism in the Mesolithic-Neolithic contact period of the Southern Caucasus. This paper presents the current understanding of how farming economies were introduced into the Middle Kura Valley in the Southern Caucasus, based on ongoing field investigations in Azerbaijan since 2008. The main conclusions are as follows: (1) Neolithisation in the Southern Caucasus occurred rapidly at the beginning of the sixth millennium BC. (2) The cultural transformations over this period probably resulted from interactions between local and immigrating societies. (3) Local Mesolithic hunter-gatherers played a main role in this important economic shift. (4) The rapid changes in local communities came about because of sparse (but continued) interactions with Neolithic communities in the Fertile Crescent during the pre-dispersal period. (5) A particular type of Neolithic economic adaptation in the Southern Caucasus involving the exploitation of resources from diversified environmental settings did not allow for segregation from the local Mesolithic economy. This interpretation should be evaluated in the light of relevant data on the spread of farming into hunting and gathering communities in both modern and historical contexts.

Rintaro Ono investigated the technological and social interactions between hunter-gatherers and new migrants in the prehistoric (Neolithic) islands of Southeast Asia and Oceania (Chapter 6). This paper hypothesises about the probable technological and social interactions among aboriginal human groups—mainly fishing/hunter-gatherers, as well as newer Neolithic migrants who had farming, animal husbandry, and fishing/hunter-gathering skills—in islands in Southeast Asia and Near Oceania during Neolithic times. Based on current major hypotheses and archaeological/anthropological data, the newer Neolithic migrants or linguistically Austronesian groups originated somewhere along the southern Chinese coast (as far south as Taiwan) and migrated to the islands of Southeast Asia and Oceania after 2000 BC. During this process, they may have encountered aboriginal human groups who had originally migrated to those islands during the late Pleistocene and middle Holocene periods by subsisting on hunting, fishing and gathering. Their social and technological interactions are not yet very clear from contemporary archaeological findings. However, the material culture of the Lapita migrants, who first migrated from Taiwan to Near and Remote Oceania islands in Southeast Asia, indicates possible technological interactions with the aboriginal

Melanesian people during the initial waves of migration. Their material culture has been identified as the ‘Lapita Cultural Complex’ in Oceania archaeology. Here, the potential prehistoric social and technological interactions between newer migrants (farmers/Neolithic peoples) and aboriginal hunter-gathers in the islands of Southeast Asia and Oceania are discussed.

Pei-Lin Yu focuses on the ethno-archaeology of Neolithic crop resiliency and its adoption by ancient foragers in Taiwan (Chapter 7). Archaeological evidence from the Early Taiwan Neolithic era facilitated the development and assessment of predictive statements about habitat-related variance in the initial adoption of agriculture. This paper summarises archaeological investigations about Taiwan’s terminal Palaeolithic and early Neolithic periods, and derives working expectations from human behavioural ecology models of diet breadth, opportunity costs, and future discounting, as well as ethno-archaeological research. The expectations were evaluated using Lewis Binford’s hunter-gatherer database. The results suggest that selective forces during Taiwan’s Neolithic transition favoured mixed economies that varied according to the properties of the local habitat, the social and subsistence organisation of hunter-gatherer groups, and the degree and timing of exposure to immigrating farmers. First, the coastal plains of the west and the lacustrine basins of the north were ideal zones for initial colonisation by Neolithic southeastern Chinese farmers. Land pressure and resource competition from immigrants would decrease the costs of crop adoption from hunter-gatherers’ perspective. Further, personal encounters and the transfer of cultivation knowledge were direct and continuous. Second, wild resources maintained higher values on the east coast, where hunter-gatherer populations were supported by aquatic resources, and in the mountainous interior, where mobile hunting predominated. Flatlands suitable for farming are scarce in these areas. Future discounting, opportunity costs, and marginal value models imply that hunter-gatherers on the east coast and in the mountains delayed the full adoption of cultivation practices. This outcome could be tested using archaeological data, and is relevant for other instances of sub-tropical island agricultural adoption.

Shinsuke Nakai and Kazunobu Ikeya (Chapter 8) examine sedentarism and relationship continuity between hunter-gatherers and farmers in Thailand. This study looks at the sedentary livelihood of the Mlabri hunter-gatherer people, who practised a continuous nomadic life in the mountainous forests from the 19<sup>th</sup> century until the end of the 1990s. Fieldwork was carried out starting in 2003 at Mlabri settlements in northern Thailand, specifically at the Huai Yuak settlement in Nan Province. The study revealed that the relationship between Mlabri hunter-gatherers and Hmong farmers has been maintained for the past 100 years. When the Hmong moved to the mountains of northern Thailand in 1880, a new relationship was established between Mlabri nomadic hunter-gatherers and Hmong farmers. Then, Mlabri settled down at the end of the 20<sup>th</sup> century, but its relationship with Hmong was maintained.

Lastly, Part 3 delves into the relationship between hunter-gatherers and

civilisation, specifically the state, mobility, and interactions among contemporary hunter-gatherers. Hideyuki Ōnishi (Chapter 9) describes how the Ainu's lifestyle was based on hunting, gathering, and fishing, even though they sometimes carried out extensive farming activities. Further, they did not establish a relatively large-scale complex society like a chiefdom or kingdom. However, this was not necessarily due to their own choices, but was enforced upon them under the strong influence of the market economy and the political power of mainland Japan. This paper considers how the mechanisms and processes brought about by the Ainu's relationship with the Japanese economy and politics prevented their society from developing and limited their subsistence activities to hunting, gathering and fishing.

Ishmar Sarwar, Norachat Wongwandee, and Jakkrit Sriwan (Chapter 10) discuss the socio-economic changes experienced by the Mlabri in Thailand as they transitioned from a nomadic to a sedentary lifestyle. The Mlabri have traditionally been a nomadic ethnic group that lived in the forest, hunting and gathering without settling. Nowadays they are settled in Phrae and Nan provinces in northern Thailand. These transformations include the role of money, the persistence of habitual activities, part-time employment, marriage patterns, and schooling. Patterns of debt accumulation reflect their consumption habits. (The roles of government and private organisations were also examined.) As a result, their social relationships, both inside and outside the community, changed. This study describes the status and everyday life of the Mlabri in their adaptation to modern Thailand, and evaluates how the Mlabri comprehend life today.

Adi Prasetijo (Chapter 11) looks at the displacement experienced by the Orang Rimba hunter-gatherers. As one of several hunter-gatherer societies in Sumatra, Indonesia, the Orang Rimba have been subjected to various pressures. Inhabiting the Sumatran lowlands, modifications in their landscape have caused lasting changes. Their religion and knowledge of the landscape are based on what they have learned over generations of experiencing life in the lowland forests, their native habitat. However, even as the forests have substantially been transformed to serve other functions (such as oil palm plantations, settlements, logging plantations, and other developments), not much has shifted in the Orang Rimba's attitude towards their land. Now living on oil palm plantations or in government-appointed resettlement areas, the Orang Rimba still view their space using the same frame of reference that they did while living in the forests. This condition has led them to go through what is known as displacement, caused by the incongruity between their current environment and the ancestral knowledge that has always served as their behavioural reference point.

Robert K. Hitchcock (Chapter 12) examines the features of contemporary hunter-gatherers in Asia, who are highly diverse, ranging from small groups of foragers to settled populations that have incorporated agricultural products into their diets. They occupy numerous habitats, from equatorial and subequatorial forests to temperate islands and mountain ecosystems. They have been engaged in

symbiotic relationships with non-hunter-gatherer groups for centuries, exchanging forest products for ceramics, metal tools, and agricultural goods. Their characteristics include residential mobility, sharing, living in bands (social units linked by kinship, marriage, exchanges, and friendship), extensive knowledge of their habitats, the communal use of land, and, in some cases, providing specialised services to other groups. Asian hunter-gatherers fall into the category of indigenous peoples, though some Asian governments do not recognise this concept. Challenges facing Asian hunter-gatherers include the impacts of globalisation, land privatisation, and government efforts to modernise, assimilate, and alter their cultural systems. Sedentarisation and resettlement programs, large-scale development projects (such as dams and monoculture agriculture), the use of land for wildlife conservation that excludes people, deforestation, and environmental degradation are also major concerns. Hunter-gatherers in Asia today have become increasingly involved in human rights and social justice efforts, which has led to some improvements in their status and well-being.

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