

Chapter 3

Jomon Collectors and Foragers

Regional Interactions and Long-term Changes in Settlement Systems among Prehistoric Hunter-Gatherers in Japan

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INTRODUCTION

The purpose of this chapter is to expand the utility of the forager/collector model (Binford 1980, 1982) by examining the dynamics of long-term system change on an interregional scale. Among numerous models of hunter-gatherer behavior, Binford's (1980, 1982) forager–collector continuum has been one of the most frequently cited models of subsistence and settlement organization during the past two decades. As with most formal models of subsistence and settlement (such as optimal foraging models), the forager/collector model assumes that economic rationality is the basic principle that determines hunter-gatherer subsistence strategies and residential mobility. However, unlike optimization models, which are deductive and formal in their structure, Binford's model was inspired by ethnographic examples. Because of its informal and inductive origins, the

forager/collector model is flexible enough to account for various anomalies. The concept of serial foragers (Binford 1980: 16–17), which refers to cold-environment hunter-gatherers who adopt “mapping-on” strategies to position themselves so that they can exploit seasonally fluctuating resources, is a good example of this. Similarly, various nonenvironmental factors that can influence hunter-gatherer subsistence-settlement practice, such as population pressure, trade/exchange, and group alliance, are not necessarily ignored by the model. We may need to modify the model to incorporate these factors as part of the system, but the core of the model that outlines the basic principles of labor investment versus return with regard to resource distribution, subsistence strategies, and residential mobility can still be operational. Thus, despite some scholars’ critical views (e.g., Wiessner 1982), the forager/collector model remains useful.

This does not imply, however, that the model does not need expansion or elaboration. Issues that have not been fully addressed since the original appearance of the model include the causes, mechanisms, and consequences of long-term system change in the context of regional interactions between groups. Though Binford (1983) was apparently interested in long-term hunter-gatherer behavior, what he was able to infer from Nunamiut ethnographic data and oral history was temporally and spatially limited. As a result, we have very little knowledge about the way changes in one system might affect neighboring systems, and what the long-term effects of these changes might be during the course of several hundred years.

In this regard, archaeological studies of prehistoric Jomon hunter-gatherers on the Japanese Archipelago provide us with an excellent opportunity to examine long-term settlement pattern change at the interregional level. In Japan, a large number of large-scale salvage excavations took place during and after the 1960s following the implementation of the national government’s land development policy (Habu 1989). Tens of thousands of Jomon sites have been excavated with systematic financial support from national, prefectural, and municipal governments, as well as private developers. In many cases, the results of these excavations are available as published reports. As a result, we have hundreds, and sometimes even thousands, of excavated sites from each of the Jomon subperiods, which can be used to examine the course of long-term change in subsistence and settlement practice.

This chapter examines long-term change in regional settlement patterns from the Early to the Middle Jomon periods (ca. 6100–4000 uncalibrated b.p.; for the rest of this paper, lower-case b.p. will be used for uncalibrated ¹⁴C dates) in the context of the forager/collector model (Binford 1980, 1982). Through this case study, possible factors that triggered changes between collecting and foraging systems are inferred, as are their mechanisms. The

implications of these changes are discussed in relation to the development of hunter-gatherer cultural complexity.

BACKGROUND TO THE STUDY

Jomon is the name of a prehistoric culture in the Japanese Archipelago that followed the Palaeolithic period and preceded the agricultural Yayoi period. Unlike many other prehistoric hunter-gatherer cultures, the Jomon culture is characterized by the production and use of pottery. The Jomon period is conventionally divided into six subperiods: Incipient, Initial, Early, Middle, Late, and Final. The appearance of pottery (ca. 13,000 b.p.) marks the beginning of the Jomon period (Nakamura and Tsuji 1999; Taniguchi 1999), but not all of the characteristics that researchers commonly associate with the Jomon culture were present during the Incipient and Initial Jomon periods. By the Early Jomon, however, a distinctive set of cultural traits that characterize the rest of the Jomon period began to emerge. These include the presence of large settlements, various kinds of ceremonial features and artifacts, food storage, and long-distance trade. In this regard, the Early to Final Jomon cultures share a number of characteristics with so-called "complex" hunter-gatherers in various parts of the world (Price and Brown 1985). For this reason, researchers in the broader field of hunter-gatherer archaeology have been interested in the study of the Jomon culture (Aikens 1981; Aikens and Dumond 1986; Aiken et al. 1986; Cohen 1981; Hayden 1990; Pearson 1977; Price 1981; Price and Brown 1985; Soffer 1989).

Recent developments in Jomon studies have revealed that regional and temporal variability within the Jomon culture was far greater than scholars once assumed (Ikawa-Smith 1998). For example, at the Initial Jomon Uenohara site in Kagoshima Prefecture in southern Kyushu, sophisticated pottery, such as jars with long necks, and ornaments, such as clay earrings, were recovered (Okamura 1995). Neither of these two types of artifacts had been reported from Initial Jomon sites in other parts of Japan. Other lines of evidence, such as feature types and lithic assemblage characteristics, also indicate that the Incipient and Initial Jomon cultures in this region were quite different from those in the rest of the Japanese Archipelago (Amemiya 1999; Shinto 1995, 1999). At the Early and Middle Jomon Sannai Maruyama site in Aomori Prefecture, northern Japan, an extraordinarily large settlement associated with more than 700 pit-dwellings has been recorded (Habu et al. 2001; Kidder 1998; Okada 1995a,b; Okada and Habu 1995). Radiocarbon dates indicate that the site was occupied from approximately 5050 to 3900 b.p., or 5900 to 4300 calibrated B.P. (Tsuji 1999; see also M. Imamura 1999). Because the site was occupied for more than 1500 years,

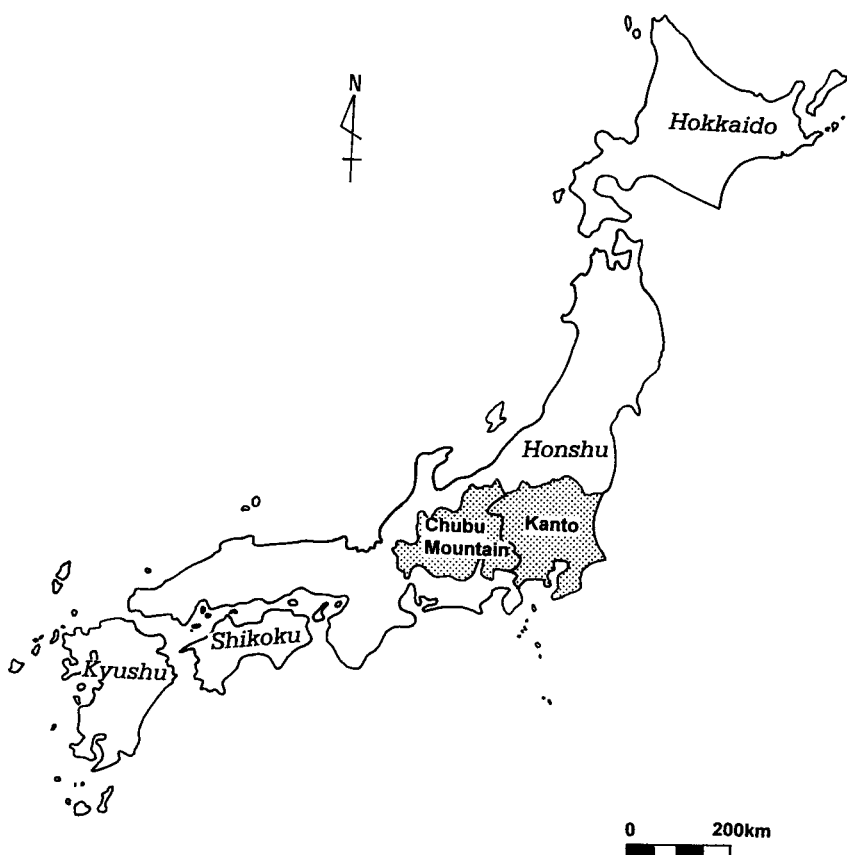


Figure 3.1. Map of Japan showing the location of the Kanto and Chubu Mountain regions.

it is unlikely that all of the 700 pit-dwellings were inhabited contemporaneously. Nevertheless, the number of pit-dwellings and other features from the site is unusually large compared to other Jomon sites.

Among these regional varieties, the Middle Jomon culture in the Kanto region (eastern side of central Honshu Island including Tokyo) and the adjacent Chubu Mountain region (inland part of central Honshu; Fig. 3.1) have attracted considerable attention because of the extremely high site density, large site size, and the complex pottery decoration in these sites. According to K. Imamura (1996: 93), 70% of all excavated Jomon pit-dwellings in the Kanto and Chubu Mountain regions belong to the Middle Jomon period, and 50% of all excavated pit-dwellings belong to the latter half of this period. Many researchers have also pointed out that the Middle

Jomon sites in these regions are characterized by an abundance of so-called "chipped stone axes." Although these stone tools are called "axes," most researchers believe that they were used as hoes for digging, either to collect wild plant roots (Watanabe 1976) or possibly for incipient plant cultivation (e.g., Fujimori 1950; Oyama 1927, 1934).

Archaeologists have long recognized the prosperity of the Middle Jomon culture in the Kanto and Chubu Mountain regions, but very few studies have systematically examined the processes of its development. Because of the presence of large settlements during and after the Middle Jomon period in these regions, scholars have assumed that the development of sedentary life in these regions began in the Early Jomon period and that the degree of Jomon cultural complexity increased gradually and smoothly from the Early to the Middle Jomon (e.g., Wajima 1948, 1958). However, detailed examination of changes in regional settlement patterns at the end of the Early Jomon period indicates that the long-term development from the Early to the Middle Jomon may have been more complex than previously assumed.

SETTLEMENT PATTERNS OF THE EARLY JOMON MOROISO PHASE

In a previous study, I examined regional settlement patterns of the Early Jomon Moroiso phase (ca. 5000 b.p.) of the Kanto and Chubu Mountain regions (Habu 1996, 2001) from the perspective of the forager/collector model (Binford 1980, 1982). The Moroiso phase is the second to the last phase of the Early Jomon period and is divided into three sub-phases: Moroiso-a, -b and -c from the earliest to the latest. The duration of the Moroiso phase is estimated to have been approximately 200–300 years (Habu 2001).

According to the forager/collector model, subsistence-settlement systems of hunter-gatherers can be classified into two basic systems: (1) forager systems that are characterized by high residential mobility and (2) collector systems that are characterized by low residential mobility. Foragers tend to acquire food on a day-to-day basis near their residential base, whereas collectors tend to organize their subsistence activities logistically (i.e., they send specialized task groups to acquire food resources located far away from their residential base, who then bring these resources back and store them). Forager systems are commonly found in environments in which the distribution of critical resources is seasonally and spatially homogeneous, whereas collector systems are adapted to environments in which the distribution of critical resources is seasonally or spatially uneven (for a description of the forager/collector model, see also Kelly 1995).

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