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Panel: Starting Over Again: the Early Palaeolithic Research in Japan Today (Fumiko IKAWA-SMITH and SATŌ Hiroyuki)

RECENT RESEARCH ON THE EARLY AND MIDDLE PALAEOOLITHIC IN JAPAN: AN OVERVIEW

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RECENT RESEARCH AFTER THE “FUJIMURA SCANDAL”

The “Fujimura Scandal” in 2000 led to nullification of over 100 Lower and Middle Palaeolithic assemblages so far in Japanese archaeology (The Japanese Archaeological Association 2004). Presently, however, some 30 pre-Upper Palaeolithic sites exist in the Japanese archipelago, in which Fujimura was not involved or which were identified after the Fujimura scandal came to light. Some of these sites are known from surface collection only, but there are others, for which we have some ideas as to the contents either because of the results of scientific excavation, or because the specimens have been collected from the geological cross section.

GEOGRAPHIC SETTING AND DISTRIBUTION OF THE EARLY AND MIDDLE PALAEOOLITHIC SITES IN THE JAPANESE ARCHIPELAGO

The geographical setting of the Japanese archipelago during the Late Pleistocene was much different from the present (Fig. 1). The dark coloured area around the archipelago indicates a sea depth of less than 100 m. In the Last Glacial Maximum, the Japanese archipelago expanded to this area at least because of sea level regression. Although the entire picture is not shown on this map, the Japanese archipelago in the Late Pleistocene was composed of three geographic units. First, present Hokkaidō 北海道 was part of the Palaeo-Hokkaidō peninsula, connected to the continent through Sakhalin, along with the

southern Kurill Islands. Second, present Honshū 本州, Shikoku 四国 and Kyūshū 九州 formed a single island named Palaeo-Honshū Island which was not connected to the Korean peninsula (IWASE 2012). Third, Okinawa 沖縄 Islands were islands as they are today, even though the land area would have been larger than at present.

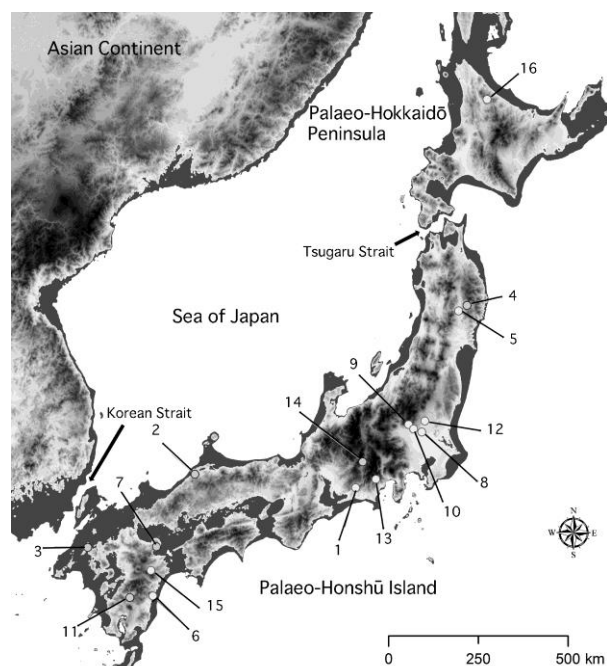


Fig. 1: Geographic setting and distribution of Early and Middle Palaeolithic sites in the Japanese archipelago, 1: Kaseizawa, 2: Sunabara, 3: Iriguchi, 4: Kanedori, 5: Kashiymatate, 6: Ushiromuta, 7: Sozudai, 8: Fujiyama, 9: Kiribara, 10: Gongenyama 1/2, 11: Ono, 12: Hoshino Tankenkan, 13: Nutabura, 14: Takesa-Nakahara, 15: Kamishitada, 16: Rubenosawa (*number for the sites on this map coincide with the site numbers shown on the table 1).

Palaeo-Honshū Island, however, was last connected to the Korean peninsula for a short period at the beginning of the Late Pleistocene about 120~130 ka, when the *Palaeoloxodon-Sinomegaceroides* complex is thought to have arrived from the Korean peninsula. This complex is one of the two main faunal groups of the Late Pleistocene Japan, the other one being the mammoth fauna, derived from the northern cold zone and spread across the Paleo-Hokkaidō peninsula (SATŌ 2015). These geographic situations set the main factors that determined the original characteristics of the Japanese Middle Palaeolithic. In the following pages, some representative examples of those sites that have been reported as Early and Middle Palaeolithic will be discussed.

TENTATIVE CHRONOLOGY OF THE JAPANESE PRE-UPPER PALAEOLITHIC

Table 1 is a tentative chronology of Japanese Lower and Middle Palaeolithic. The numbers for the sites here coincide with the site numbers shown on the map in Fig. 1. It should be noted that the boundary between the Lower and Middle Palaeolithic in Japan is set tentatively at the beginning of the Late Pleistocene dated 120 ka. For each site, the cultural stage, name of the site, region, research method, estimated age, and basis of age estimation are shown. At present, the Kaseizawa 加生沢 site in Aichi Prefecture 愛知[県], is the only site that has been claimed to belong to the

Japanese Lower Palaeolithic (KŌMURA 1968). But, its exact chronological position is unclear due to the fact that the specimens were collected while the site was being destroyed by construction activities. Kaseizawa assemblage revealed some pointed pebble tools (Fig. 2: 1-2), various flake tools (Fig. 2: 3-10) and a discoidal core (Fig. 2: 11), showing a combination of large and small tools. Since the pointed pebble tool is made from a flat pebble, it cannot be called a pick.

Other sites are assigned to the Middle Palaeolithic as they are estimated to be younger than 120 ka. The Middle Palaeolithic stage is sub-divided into three sub-stages; the early Middle Palaeolithic dated from 120 ka to 60 ka, the late Middle Palaeolithic dated from 60 ka to 50 ka, and the transition from Middle to Upper Palaeolithic dated from 50 ka to 40 ka.

Age estimation is based, in most cases, on the thermo-luminescence dating method and the tephrochronology. As many volcanic eruptions occurred throughout the Pleistocene in Japan, dates and stratigraphic contexts of tephra are very useful for dating archaeological sites. Wide-spread tephtras, such as K-Tz (95 ka), DKP (55 ka), Aso-4 (85-90 ka) and AT (30 ka), with their origins of eruption in Kyūshū or Chūgoku 中国 mountains, are particularly useful for chronological study of the Middle Palaeolithic. The recent advances in the analysis of boring core samples from sea bottom sediments and high resolution dating of the tephtras contained in these cores has contributed to the progress. Occurrence of reddish brown palaeo-soil, which is supposed to have been formed in the warm period, and indication of periglacial involution, which formed in the cold period, are also used for chronological study. Phytolith and pollen analyses are also used for the estimation of climatic conditions. And, in the transition from the Middle to Upper Palaeolithic, AMS dating and techno-typological comparison with the Upper Palaeolithic assemblages are useful. As the Japanese Upper Palaeolithic assemblages are based in the blade technique and blade points appear from the beginning, it is relatively easy to determine when the transition took place.

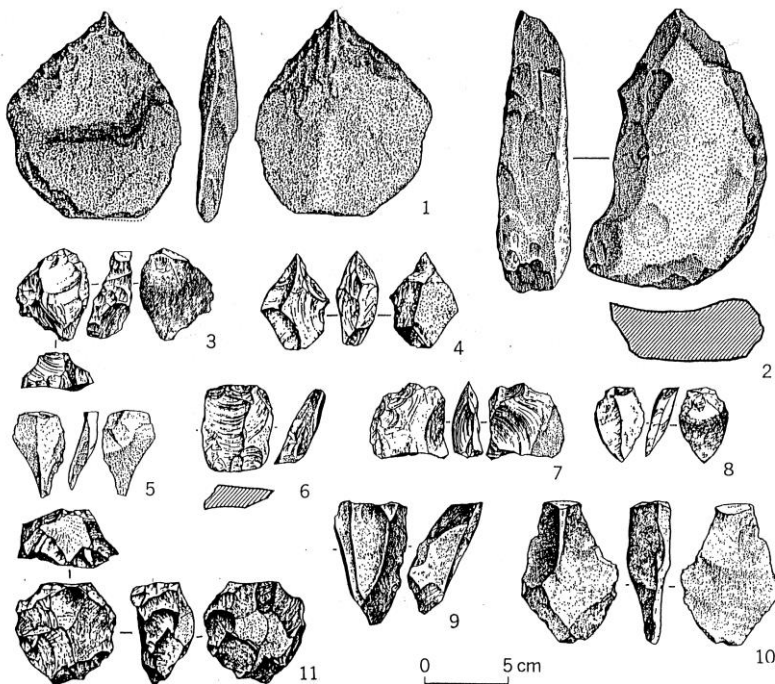


Fig. 2: Lithic assemblage of the Kaseizawa site.
1-2: Pointed pebble tool, 3-10: small flake tool, 11: discoidal core.

Tab. 1: Tentative chronology of Japanese Early and Middle Palaeolithic

<i>Age and Stage</i>	<i>no.</i>	<i>Site name</i>	<i>Region</i>	<i>Research Method</i>	<i>Estimated Age (ka)</i>	<i>Basis of Age Estimation</i>
Lower Palaeolithic	1*	Kaseizawa	Central Honshū	surface collection	200?	topography
Early Middle Palaeolithic	2	Sunabara CL.2**		excavation	120	palaeo-soil (MIS5e)
		Sunabara CL.2	Western Honshū	excavation	110	SK*** (110 ka); (MIS5d)
	3	Iriguchi L4 **	Northern Kyūshū	excavation	100	103±23 ka (IRSL)
		Iriguchi L.3b	Northern Kyūshū	excavation	100-85	90±11 ka (IRSL); L.3: Aso-4*** (85-90 ka)
	4	Kanedori CL.4	Northern Honshū	excavation	90-50	Aso-4; 56±21 ka (TL)
	5	Kashiyamatate L.4a	Northern Honshū	excavation	90-40	Aso-4
	6	Ushiromuta CL.5	Southern Kyūshū	excavation	90-60	Aso-4; A-IW (60 ka); 35.5±4 (TL)
Late Middle Palaeolithic	7	Sōzudai	Northern Kyūshū	excavation	110-80(50)	Kj-P1 (50 ka); K-Tz (95 ka); Kj-Sm (110 ka)
	8	Fujiyama	Central Honshū	surface collection	55->50	just before Ag-UP (unknown), but after DKP (55 ka)
	9	Kiribara	Central Honshū	surface collection	55-50	between Ag-UP/Hr-HP (50 ka)
	10	Gongenyama 1	Central Honshū	surface collection	55-50	between Ag-UP/Hr-HP
	4	Kanedori CL.3	Northern Honshū	excavation	50-(40)	46,480±710 Cyr BP (AMS); 31±6ka, 50±10 ka (TL)
	5	Kashiyamatate L.2c.Lw	Northern Honshū	excavation	50-33	involution
	11	Ōno lowest CL.	Southern Kyūshū	excavation	70-55	69.3±13.9 (OSL)
Transition from Middle to Upper Palaeolithic	12	Hoshino Tankenkan	Central Honshū	surface collection	>45	before Ag-KP (45 ka)
	10	Gongenyama 2	Central Honshū	surface collection	50-45	between Hr-HP/Ag-KP
	6	Ushiromuta CL.4	Southern Kyūshū	excavation	45-40	just before Kr-Iw (40 ka)
	13	Nutabura CL.1	Central Honshū	excavation	50-40	techno-typology; before AT (30 ka)
	14	Takesa-Nakahara A-C	Central Honshū	excavation	50-40	techno-typology; before AT (30 ka)
	15	Kamishitada CL.2	Central Kyūshū	excavation	50-40	techno-typology
MP	16	Rubenosawa	Hokkaidō	excavation	?	techno-typology

* the number for the site coincides with the site number shown on the Fig 1; SK, Aso-4 etc. are the name of tephra; L: Layer, CL: cultural Layer n on Fig. 1

** L: Layer, CL: Cultural layer

***SK, Aso-4, etc. are the names of tephra

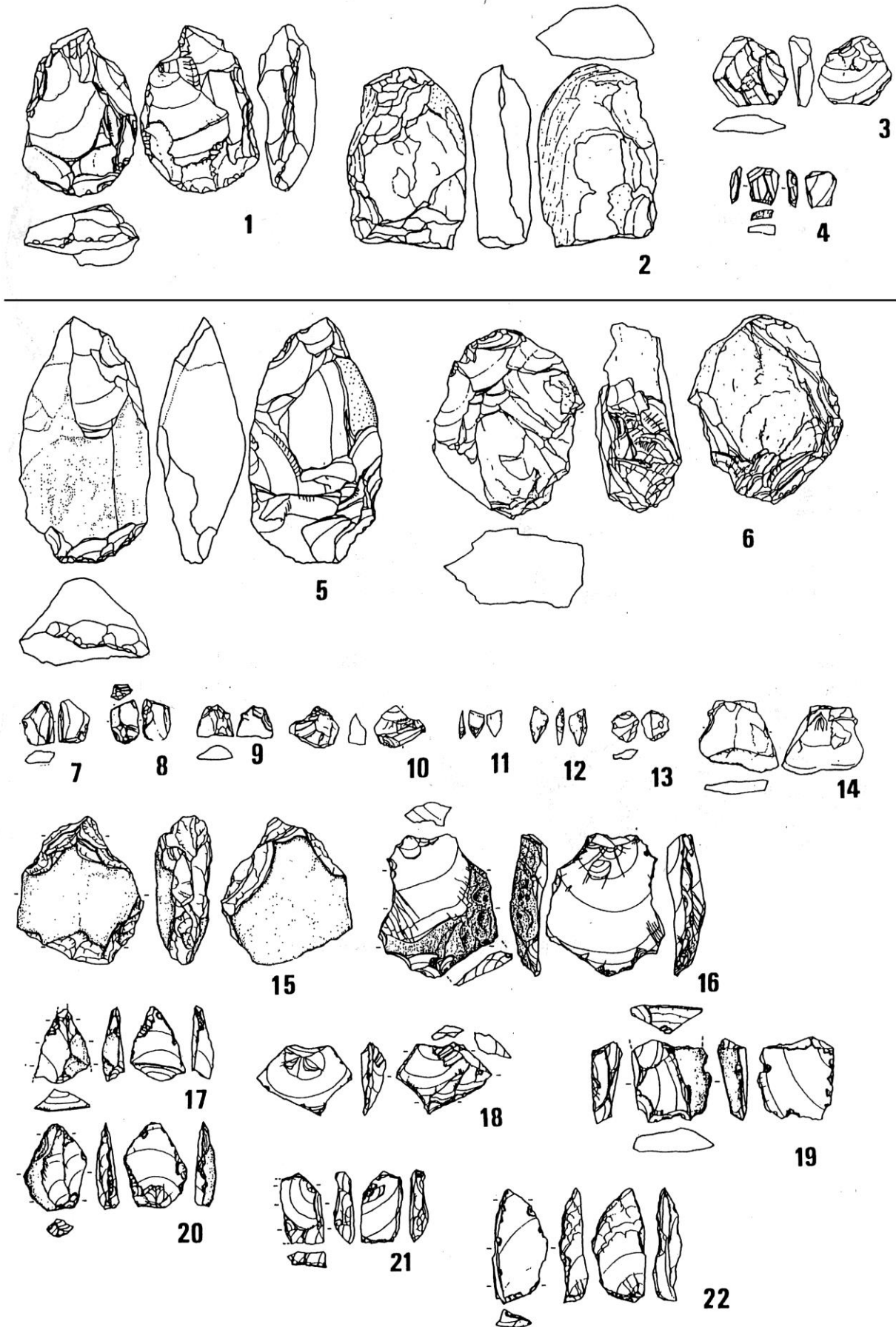


Fig. 3: Early and late Middle Palaeolithic assemblages of the Kanedori and Kashiymatate sites,
 Early MP, 1-3: Kanedori CL.4, 4: Kashiymatate L.4a;
 late MP, 5-14: Kanedori CL.3, 15-22: Kashiymatate L.2c, Lower.

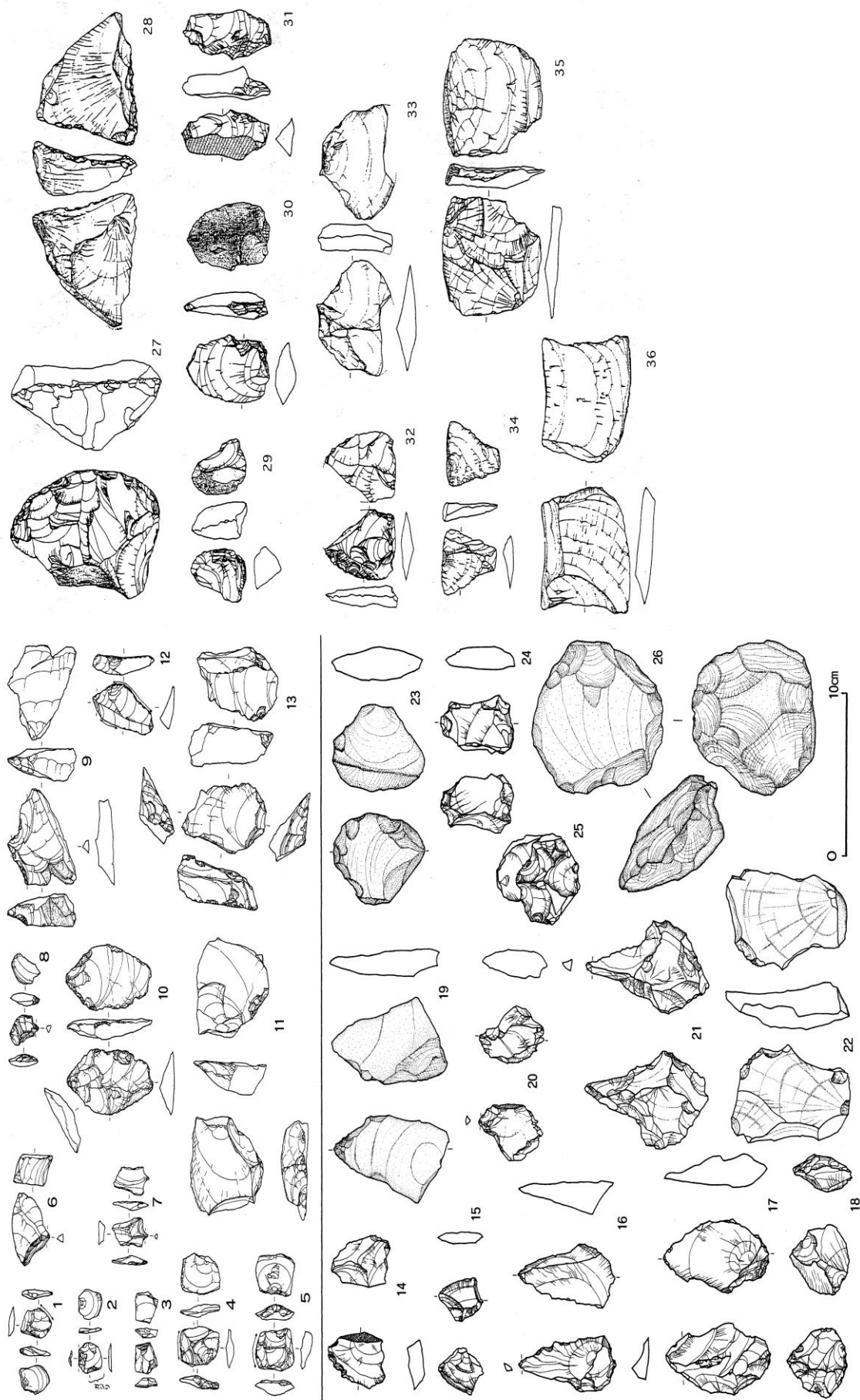


Fig. 4: Transition from Middle to Upper Palaeolithic assemblages, 1-13: Nutabura site, 14-26: Ishikohara site, 27-36: Gongenyama 2.

KANEDORI AND KASHIYAMATATE SITES

The Kanedori 金取 (KIKUCHI 1986, KURODA 2005) and Kashiymatate 柏山館 sites (KIKUCHI 1996), located in Iwate Prefecture 岩手[県], are examples where the assemblages of two different stages have been recovered in stratigraphic sequences. Assemblages of cultural layer (CL) 4 of Kanedori (Fig. 3: 1-3) and CL 4a (Fig. 3: 4) of Kashiymatate are in early Middle Palaeolithic stage (120-60 ka), and CL 3 of Kanedori (Fig. 3: 5-14) and CL 2c Lower of Kashiymatate (Fig. 3: 15-22) are in late Middle Palaeolithic (60-50 ka). Large tools are not pointed pebble tools nor choppers, but show the transitional form to the characteristic axes (Fig. 3: 1, 5) that appear in the beginning of early Upper Palaeolithic of the Japanese archipelago. Small flake tools include trapezoids (Fig. 3: 4, 7, 11-13, 20), scrapers (Fig. 3: 3, 8, 19, 21), slanted points (Fig. 3: 18) and awls (Fig. 3: 10, 17).

TRANSITION FROM MIDDLE TO UPPER PALAEOLITHIC

Assemblages of the transition from the Middle to Upper Palaeolithic (50-40 ka) are shown in Fig. 4 (ANZAI and SATŌ 1990). Large tools become less numerous, and among the small flake tools, some of the elongated flake tools have retouched bases (Fig. 4: 10, 16, 17, 30, 31). This is considered to indicate technological connection to the blade point of the early Upper Palaeolithic.

DISCUSSION AND CONCLUSION

The characteristics of Middle Palaeolithic assemblages in the Japanese archipelago may be summarized as being composed of large tools, such as pointed pebble tools and choppers, and small flake tools, such as slanted points, trapezoids, scrapers and awls. It should be noted, however, that the large tools do not include any hand axe, and flake tools do not include flakes made by the Levallois technique.

The Late Acheulian technology that spread during late Lower Palaeolithic times from western Eurasia did not reach east of the India-Tibet-Mongolia border. In the area the east of the border, the Early Acheulian technology of producing hand axes with the pebble cortex left around the base continued to be practiced. This boundary, called the 'Movius Line', that divides the Eurasian continent, is thought to have been formed sometime between 450 and 350 ka (SATŌ 2005; DEREVIANKO 2011). In the continental part of East Asia, the Lower and Middle Palaeolithic assemblages are characterized mostly by choppers, with a smaller

number of picks. In China, large pebble tools and hand axes are present during the Lower Palaeolithic, but they appear, curiously, during the Middle Palaeolithic in the Korean peninsula that formed, at that time, the eastern coastal region of the Asian continent. The reason why these tools do not occur in Japan may be because the archipelago was not connected to the Korean peninsula for the last 120,000 years.

Because of the Movius Line, the Mousterian technology did not reach eastern Asia during Middle Palaeolithic times. Instead, scrapers, perforators and other small flake tools were made from flakes which were detached from discoidal or rectangular prepared cores. The small flake tools of the Middle Palaeolithic assemblages of the Japanese archipelago share these characteristics (SATŌ 2004).

In the Japanese archipelago, the earliest reliably dated assemblages are in the Middle Palaeolithic stage, mainly composed of small flake tools detached from prepared cores by non-Levallois methods, and a few large tools such as pointed pebble tools and choppers. Although the number of Upper Palaeolithic assemblages is over 14,500 (Nihon kyūsekki gakkai 2010), there are only about 30 Middle Palaeolithic assemblages, a very small number in comparison to situations in China and Korea. The reason is likely to be the Late Pleistocene geographical setting.

The approach taken by many Japanese researchers of Palaeolithic studies regarding these Middle Palaeolithic materials strikes me as problematic. Aftermath and shock of Fujimura's scandal has been so serious that many Japanese scholars hold negative views about any sites and data purported to be of pre-Upper Palaeolithic age. While the problem is being actively debated, the discussion often starts with the premise that the Middle Palaeolithic did not exist in the archipelago. Many Japanese scholars insist that they cannot accept the evidence unless the following two conditions are met: First, all the unearthened lithics are fully recognizable artefacts, and were recovered from a concentrated area where flaking would have taken place; and second, these lithics are recovered from one of the layers of continuous sediments such as aeolian loam. However, it seems that the argument is tautological, because such conditions can be ensured fully only after the Upper Palaeolithic. The Japanese Middle Palaeolithic, which I discussed here, is certainly different in the site structure from the Upper Palaeolithic. But, on the other hand, the site structure of the Japanese Middle Palaeolithic is quite similar to those of the Middle Palaeolithic in the rest of the world.

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