
Japanese Archaeology Today: New Developments, Structural Undermining, and Prospects for Disaster Archaeology

2

Junko Habu and Katsuyuki Okamura

For the past several decades, rapidly increasing amounts of excavation data and new interpretations have characterized archaeological studies in Japan. Numerous rescue (salvage) excavations during and after the 1970s have produced a large body of archaeological data, based on which scholars can test new hypotheses and assert the importance of studying the past (see Habu 1989; Habu and Fawcett 1999, 2008). Interest in archaeology among the general public of Japan is strong, and new archaeological discoveries have frequently made the front pages of newspapers. Today, almost 6000 full-time archaeologists engage in rescue excavation work. However, the flip side of this abundance of archaeological data is the rapid destruction of numerous archaeological sites. Furthermore, with the slowing of the Japanese economy over the past two decades, it is clear that there will be fewer rescue excavations in the future.

The history of Japanese archaeology up to the 1990s has been reviewed by many scholars (e.g., Barnes and Okita 1999; Bleed 1989; Fawcett 1990, 1995; Habu 1989; Habu and Fawcett 1990, 1999; Ikawa-Smith 1980; Imamura 1996; Pearson 1992; Sasaki 1999). Rather than providing a general summary of the history of Japanese archaeology, this chapter offers an overview of the socio-political contexts of Japanese archaeology over the past several decades, analyzes recent structural changes in rescue work in relation to changing political climates, and discusses the impacts on archaeology of the Great East Japan (or Tohoku) Earthquake of March 11, 2011. By presenting these issues, we hope not only to highlight the characteristics of contemporary Japanese archaeology but also address the questions of why we study archaeology and how archaeologists might engage themselves with contemporary social and environmental concerns through their research.

2.1 Japan's Economic Development and the Dominance of Rescue Excavations

Since the 1970s, Japanese archaeology has boasted findings of exceptionally rich archaeological data in terms of both their quality and quantity (e.g., Barnes 2015; Habu 1989, 2014a, b; Ikawa-Smith 2002; Mizoguchi 2013). Japan's rapid economic development during and after the 1960s resulted in numerous

J. Habu (✉)

Department of Anthropology, University of California, Berkeley, Berkeley, CA, USA
e-mail: habu@berkeley.edu

K. Okamura

Higashi-Yodogawa Research Center, Osaka City Cultural Properties Association, Osaka, Japan
e-mail: okamurak@occpa.or.jp

construction projects of freeways, bullet train lines, dams, industrial factory complexes (*kogyo danchi*), and so-called New Towns (mass-housing developments in the suburbs of large cities such as the Tama New Town in Tokyo). During and after the 1970s, nuclear power plants were added to the list. In many cases, the locations of these construction projects overlapped with archaeological sites. The Law for the Protection and Conservation of Cultural Property (*Bunkazai Hogo Ho*) of Japan requires that all the known archaeological sites on both public and private land be excavated before a construction project takes place. This law also states that rescue excavations must be conducted for the entire planned construction area. Although no penalties for the offenders are set by this law, conducting a rescue excavation prior to a construction project became a commonly accepted practice by both public and private developers during and after the 1970s. As a result, hundreds of thousands of rescue excavations have been conducted, and tens of thousands of detailed excavation reports have been published.

Underlying these practices is the fact that archaeology in Japan is defined as a sub-discipline not of anthropology but, rather, of history, in which every single archaeological site is treated as a reflection of historically unique incidents, not of generalized human behaviors. This perspective takes the position that every single square meter of an archaeological site is different from the rest, thus not allowing any systematic sampling of the planned construction area: the practice is either to excavate everything or to stop the construction. Soil sampling for water-screening is the exception, but the sampling method is often arbitrary. The perspective also takes the position that the results of archaeological excavations in each area should contribute to the residents' understanding of the unique history of their home town.

By the 1970s, many prefectural and municipal governments began to hire specialists in archaeology to systematically conduct these rescue excavations. Subsequently, many of these administrative units restructured their rescue excavation systems and affiliated foundations (*zaidan hojin*), the main function of which is to conduct rescue excavations, were established separately for individual prefectures and major cities. Archaeologists who work for prefectural and municipal governments or their affiliated foundations are called "archaeological heritage management (AHM) archaeologists" (*maizo bunkazai senmon shokuin*).

A positive outcome of this rapid increase in the number of rescue excavations is the accumulation of vast quantities of archaeological data. These data have not only shed new light on our understanding of prehistoric and historic periods in Japan, but they have also allowed scholars to test cutting-edge archaeological theories with a large body of data (e.g., Habu 2004; Hudson 1999; Mizoguchi 2002, 2013). Starting in the 1970s, major archaeological discoveries began to be reported on the front pages of newspapers. TV special programs on new archaeological findings received high ratings.

The downside of these rescue excavations, however, has also been noted. On paper, rescue excavations are called "record preservation" (*kiroku hozon*), and archaeologists have argued that it is a type of site preservation because the physical destruction of archaeological sites is inevitable. In reality, however, conducting rescue excavations means site destruction.

Is "record preservation" good enough for the goals and practices of archaeology, or is the site itself inherently important? Should the importance of archaeological sites not be discussed in the context of environmental and landscape preservation as a whole? Why do archaeologists end up working so closely with major "general contractors" every time a large-scale ecological devastation occurs in each locality as a result of a mega-construction project such as a dam or a nuclear power plant?

These are questions that all Japanese archaeologists of our generation have had to face. During the 1970s and 1980s, when the massive wave of land developments swept across the Japanese archipelago, archaeologists felt that conducting rescue excavations was better than nothing. As time passed, conducting rescue excavations became the job of the majority of Japanese archaeologists. In a few unusual cases, such as the Sannai Maruyama site in Aomori Prefecture (Habu and Fawcett 2008)

and the Yoshinogari site in Saga Prefecture, archaeologists were able to collaborate with local residents and other stakeholders to stop developmental construction plans, thus successfully preserving these sites. However, behind these notable exceptions were hundreds of thousands of other sites that were destroyed together with their surrounding landscapes.

Figure 2.1 represents changes through time in the number of rescue and academic excavations. The number of rescue excavations increased each year, from 1040 in 1973 to 11,738 in 1996. In 1997, the number suddenly decreased to 7572. Since then, the number has been fluctuating, but the general decline after the mid-1990s is apparent.

Changes through time in the annual spending on rescue excavations (Fig. 2.2) show an even clearer decline after the mid-1990s: from approximately 132 billion yen (circa USD 1.3 billion) for 1997 to 52 billion yen (circa USD 0.5 billion) for 2011 (Fig. 2.2). In other words, not only has the total number of rescue excavations decreased over the past 20 years but the average expenditure for each excavation today is much lower. This is primarily because the total number of extremely large-scale rescue excavations has declined since the 1990s.

Figure 2.3 shows changes in the number of “AHM archaeologists.” The total number reached its maximum, 7111, in 2000, slightly after in the patterns shown in Figs. 2.1 and 2.2. By 2015, the total number decreased to 5724 (see also Barnes 2015).

Apparently, Japan has passed the phase of rapid industrialization and urbanization with large-scale developments (see, e.g., Oguma 2012), and it is expected that the number of rescue excavations, the annual amount of funding for rescue excavations, and the number of “AHM archaeologists” will continue to decline through time. On the other hand, more and more AHM archaeologists have stopped openly discussing the benefits and limitations of rescue excavations: conducting rescue excavations is increasingly becoming their *raison d'être*. Given this, we believe that Japanese archaeologists need to have serious discussions about the goals and current practices of rescue archaeology (see, e.g., Habu 2016).

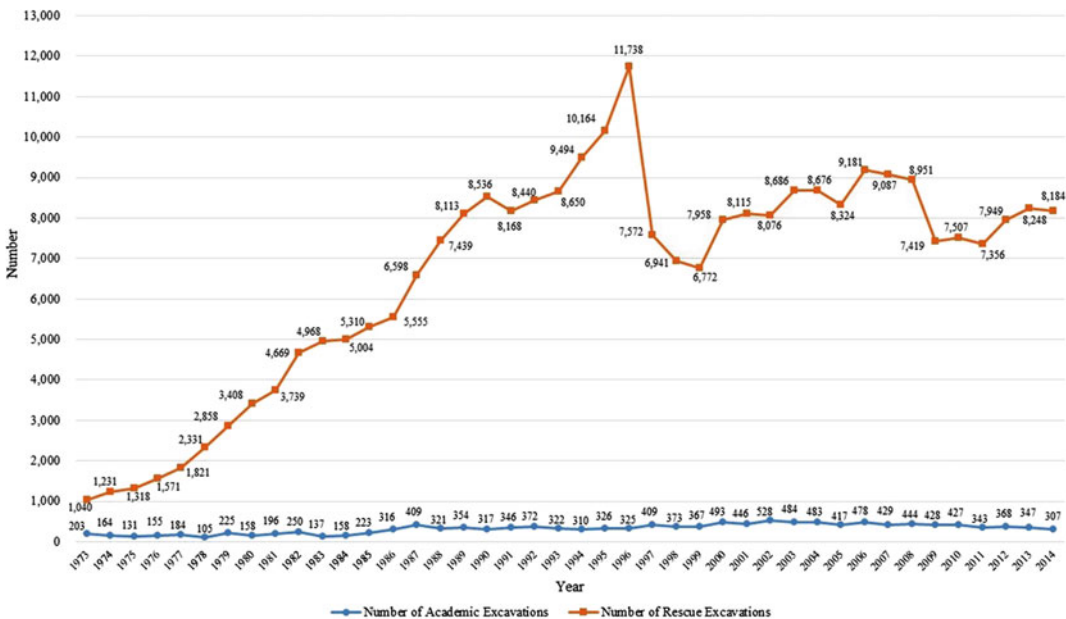


Fig. 2.1 Changes through time in the number of rescue and academic excavations in Japan (data from Bunkacho Bunkazai-bu Kinenbutsu-ka 2016; Habu 2004)

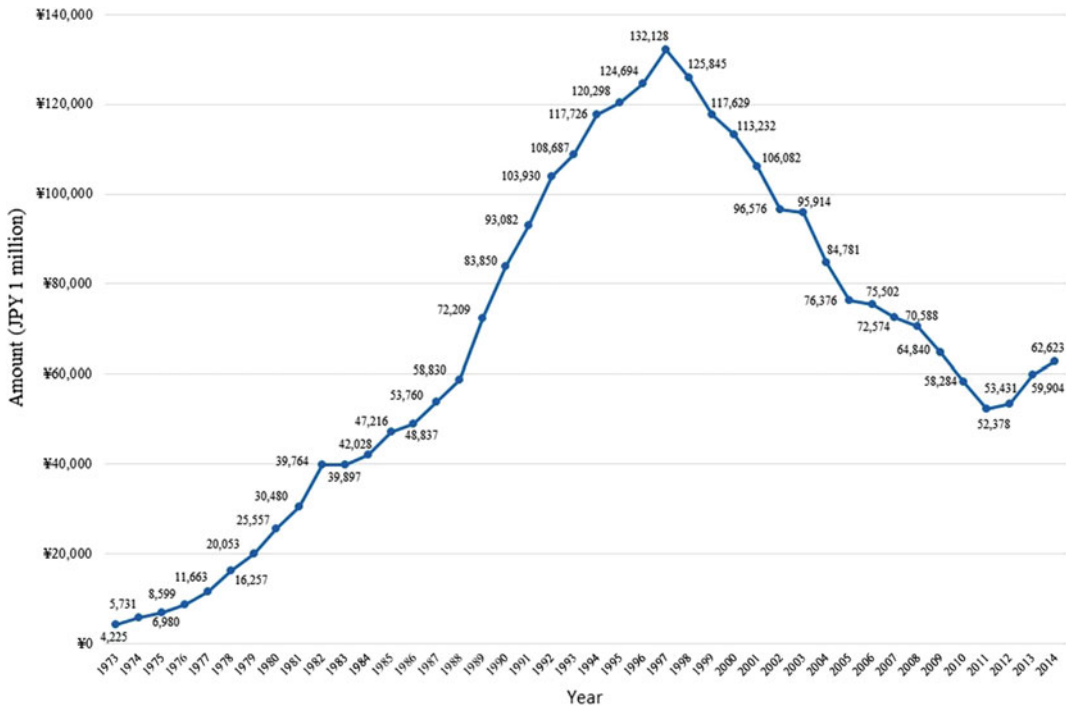


Fig. 2.2 Annual spending on rescue excavations in Japan (data from Bunkacho Bunkazai-bu Kinenbutsu-ka 2016)

The gradual decline in the number of rescue excavations and funding, however, does not necessarily imply that there are no major discoveries in archaeology these days. New archaeological discoveries as a result of large-scale rescue excavations continue to be reported. Some of the most up-to-date discoveries are put on display at the annual exhibition of *New Excavations on the Japanese Archipelago* organized by the Agency for Cultural Affairs (*Bunkacho*). For example, the most recent catalog of the Annual Exhibition (Bunkacho 2016) highlights the new discoveries at the following sites: (1) the Kita-Nakashima Nishihara site in Kumamoto Prefecture, Kyushu, from which a large number of Paleolithic flake tools dated to about 30,000 years ago have been excavated, (2) the Tatesaki site in Hokkaido (circa 3500–2500 BC), where the excavation of a large Early and Middle Jomon settlement associated with a large stone figurine and several dozens of slit-stone earrings took place, (3) the large, moated Yayoi period Ama site in Osaka Prefecture (circa 500 BC–100 AD), which is associated with rice paddy fields, cemeteries, and irrigation facilities, (4) the Nakayama roof-tile kiln site in Nara Prefecture (eighth century AD), where roof-tiles for the Heijo Palace of the Nara period were produced, and (5) a samurai mansion of the Hanabusa Family Residence site dated to the Edo period (seventeenth–nineteenth century AD) in Tokyo. All of these are the results of large-scale rescue excavations prior to the construction of freeways, bullet trains lines, and public buildings.

It is also noteworthy that applications of various new scientific techniques over the past decade have significantly advanced Japanese archaeology. For example, applications of AMS ^{14}C dating methods to a large number of archaeological samples have significantly helped refine absolute chronology of Japanese data (e.g., Kobayashi 2008). Paleobotanical studies of both macro and micro remains have made significant progress with systematic application of the flotation method (e.g., Crawford 2011; Ito 2011; Nasu and Momohara 2016; Nihon Kokogaku Kyokai 2007; Nendo Kumamoto Taikai Jikko Iinkai 2007; Tsuji 2011). Pollen, phytolith, and diatom analyses of soil

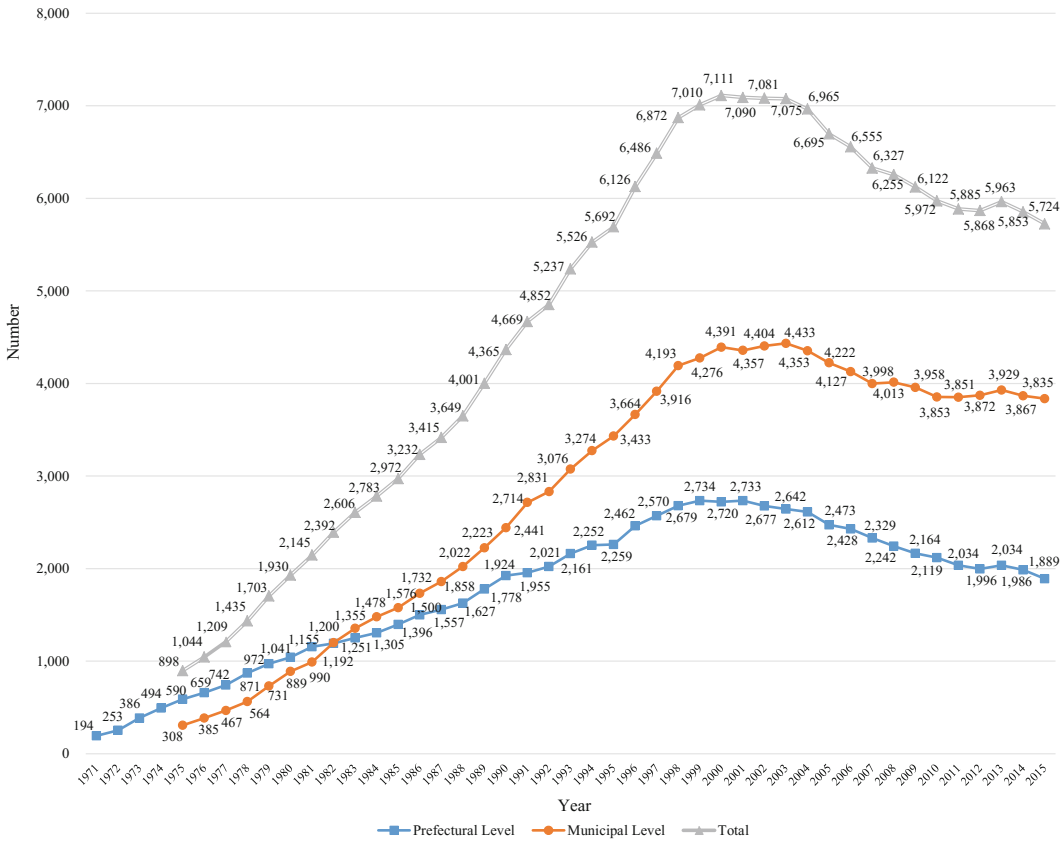


Fig. 2.3 Changes through time in the number of AHM archaeologists in Japan (data from Bunkacho Bunkazai-bu Kinenbutsu-ka 2016)

samples from archaeological sites have provided new lines of evidence for the study of vegetation and environmental changes at key sites. Pollen analysis (e.g., Yasuda et al. 2004; Yoshida 2015; Yoshikawa 2008) and alkenone sea surface temperature studies (e.g., Kawahata et al. 2009) provide valuable information for reconstructing past climatic changes. Recent studies of oxygen isotope ratios of tree-rings provide useful indicators to reconstruct past climate data with annual time resolution (e.g., Nakatsuka 2015).

In sum, Japanese archaeology continues to produce exciting results, including the accumulation of new scientific data, but the practice of rescue excavations and its sociopolitical contexts are rapidly changing. In the following, two recent trends in Japanese archaeology are discussed: the commercialization of archaeology and the development of disaster archaeology.

2.2 Commercialization of Archaeology and Neo-Liberalism

The current archaeological heritage management system in Japan faces challenges of growth and expansion in the midst of a neo-liberalistic privatization trend in archaeology (Okamura 2013). The principle that guides salvage excavation in Japan is that the developer (disrupter) pays the full cost of excavation. A developer can be a public organization related to the national, prefectural, or municipal government or a private company. This principle was first adopted in 1958, when a series of salvage

excavations conducted prior to the construction of the Meishin Expressway (the freeway between Nagoya and Kobe) was financed by the developer: the Japan Highway Public Corporation. Thereafter, this principle came to be conventionally applied not only to public construction projects but also to construction projects conducted by private development companies. As the Japanese economy grew during and after the 1960s, archaeological heritage management continued to develop rapidly and extensively throughout the Japanese archipelago. This trend continued through to the mid-1990s (Okamura and Matsuda 2010).

The “disrupter pays” principle is not clearly stipulated in the Law for the Protection and Conservation of Cultural Property, but rather it is based on the mutual, and sometimes implicit, agreement between heritage management authorities and developers. This practice became increasingly common during the 1970s and 1980s with tenacious efforts of many archaeologists, both academic and administrative. The steady economic growth of Japan and high profitability of construction work during this period made this practice possible.

Given this, the quality of archaeological heritage management can be influenced directly by the sociopolitical and economic conditions within Japan when land development plans are implemented. In fact, a major change in archaeological heritage management began to take place starting in the 2000s, when the Koizumi cabinet (2001–2006) pursued privatization or corporatization of, and budget cuts in, various aspects of public works under the slogans of “From public to private” and “What the private can do must be entrusted to the private.” Many of the government-owned industries, such as the postal service, became privatized during this period. The principles of competition and of getting the best “value for one’s money” began to permeate every aspect of Japan’s social life. This led to increased economic disparities between individuals within Japanese society. It also affected the practice of rescue archaeology. Developers began to rely heavily on private, commercial companies for excavation and archaeological heritage management, whose contract costs are less than those of public organizations.

By the time of the 2000s, private archaeological units had been in operation for a few decades, many of which were in the Kanto Region including the Tokyo metropolitan area. However, early commercial companies were typically small in size, and they were led by professional archaeologists, with record preservation as their primary goal. In contrast, many of the newly emergent private companies were established at the initiative of construction or engineering companies as part of their construction processes. Today, they are major enterprises. Construction companies first began their active engagements with rescue excavations by providing heavy machinery, workers, equipment, tools, and other resources to AHM archaeologists. They then progressed to conducting excavations themselves by directly hiring archaeologists to oversee the projects. Ironically, this transition was made possible due to a longstanding tradition within Japanese salvage archaeology, in which AHM archaeologists and large construction companies worked closely together.

Generally speaking, for private companies, profitability is their primary concern: the quicker the completion of the excavation, the more profitable these companies are. Despite their official mission of “rescuing” the archaeological records from complete destruction, it is not always their priority to do time-consuming soil sampling for faunal and botanical analyses and other scientific analyses or to cautiously excavate fragile remains, such as those from wetland sites. In theory, commercial archaeology need not create serious problems if the heritage managers of municipal or prefectural governments hold enough power to check and control the quality of these excavations. In reality, however, it is not easy to ensure such conditions.

Private companies waged lobbying campaigns for the privatization of rescue excavations, and, in 2005, established their own business association, *Nihon Bunkazai Hogo Kyokai* (Japanese Association for the Preservation of Cultural Properties). Approximately, 80 private archaeological heritage management companies belong to this association. It should be noted that major construction

companies such as Obayashi Corporation, Kajima Corporation, and Shimizu Corporation are “supporting members” of this association. This means that this association could be strongly affected by the political and economic interests of these general contractors.

As we can imagine, developers tend to be far less interested in the quality of excavation than in the effective management of time and money. Partnerships between developers and private archaeological companies might lead to the deterioration of the overall quality of rescue excavations and resulting excavation reports. These factors may also hamper archaeologists’ outreach efforts that are designed to connect archaeological findings with local communities.

Major archaeological heritage management companies are typically based in large cities in economically powerful prefectures. Many of these companies obtain contracts not only in large cities but also in rural parts of Japan. We notice that commercial contracts are increasingly being awarded to larger companies as opposed to smaller ones. In other words, privatization of rescue excavations is also leading to centralization of archaeological heritage management. In the near future, Japanese rescue archaeology might come to be dominated by a limited number of large private companies.

It is also our observation that large-scale private units tend to have only a limited amount of the local knowledge required to properly interpret and appreciate their findings. The scarcity of contextual information often results in inadequate sampling and extrapolations, which may lead to an inadequate presentation of the past to the general public. If this trend of corporatization continues, archaeological interpretations may become dominated by cookie-cutter approaches, in which local diversity of past cultures and societies may be grossly underrepresented.

In summary, we fear that recent trends toward large-company-based commercialization of rescue excavations will increasingly damage the core principles of post-Second World War archaeology in Japan. Our concerns are not only about the overall quality of excavation methods and final excavation reports. In order to pursue the original goals of post-Second World War archaeology in Japan with an emphasis on understanding local history and commoners’ everyday life from the past to the present, it is critical that excavated materials be actively used for the purpose of education and outreach, and for presenting archaeologists’ understanding of the past to the general public.

2.3 Disaster and Archaeology

In earthquake-prone Japan, dealing with the consequences of earthquakes and tsunamis (extremely high tidal waves) has been a major concern. Since 1995, Japan has experienced two severe earthquakes, the Great Hanshin Earthquake (or the Great Hanshin-Awaji Earthquake) in the Kansai area in 1995, the epicenter of which was near Kobe City; and the Great East Japan Earthquake on March 11, 2011, which affected a wide range of the Tohoku region (the northern part of Honshu Island). Since the latter earthquake, many scholars have published articles about the sociopolitical context of heritage management. Experiences following these two earthquakes have also made scholars realize the importance of developing a new field for the archaeology of disasters, including earthquakes (e.g., Matsui 2011; Kaner et al. 2011; Japan ICOMOS National Committee 2011; Okamura et al. 2013; Okamura 2015; and Tateishi 2014).

Publications by archaeologists after the Great East Japan Earthquake have focused on the following issues: (1) rescuing archaeological materials that were stored in damaged museums and storehouses, (2) operating intensive rescue excavations prior to the reconstruction and revitalization of the affected areas, (3) helping restore and revive communities that are associated with archaeological heritage, (4) investigating traces of past disasters through archaeological excavations, and (5) dealing with new “disaster heritage” artifacts that were produced as a result of the Great East Japan Earthquake, such as damaged buildings. While scholars have attempted to outline strategies for

counterbalancing the effects of the Great East Japan Earthquake, damage caused by the earthquake is enormous, and the role and importance of archaeological heritage in the affected areas need to be carefully evaluated in each case. In the following, we outline some of the key issues relevant to heritage management and to the emerging new field of disaster archaeology after the Great Tohoku Earthquake.

2.4 The 2011 Triple Disasters: The Earthquake, the Tsunami, and the Fukushima Daiichi Nuclear Power Plant Accident

The Great East Japan Earthquake impacted cultural heritage and archaeology tremendously. The earthquake affected a vast area, covering major parts of the Tohoku and Kanto regions, stretching for more than 500 km north to south. In Miyagi, Iwate, and Fukushima Prefectures, the damage was particularly severe. The subsequent tsunami reached more than 30 m in height in some places and inundated areas several kilometers inland, destroying virtually everybody and everything in its path (Fig. 2.4). Almost 20,000 people died or were lost. It also caused meltdowns at three nuclear reactors of the Fukushima Daiichi Nuclear Power Plant operated by the Tokyo Electric Power Company, forcing the evacuation of a large number of people living in the area heavily contaminated by radiation. Without a doubt, the social, environmental, and economic damage that the triple disasters caused was the most serious in Japan since the Second World War. Those impacts extended into the world of archaeology.



Fig. 2.4 The 2011 tsunami at 15:25 on March 11, taken from the 5th floor of Miyako City Hall, Iwate Prefecture. Photo by Shin'ya Kumagaya (Iwate Nippo [2011](#))

2.5 Rescuing Objects and Conducting Rescue Excavations After the 2011 Triple Disasters

The damage inflicted on cultural heritage was extremely serious and wide-ranging. More than 700 designated national cultural properties, including five national treasures, 160 important cultural properties, and 90 historic sites and buildings (*kuni shiseki*), were damaged (Bunkacho 2012). In total, 6800 people joined in these rescue efforts at ninety locations spanning 2 years. Among the scholarly societies involved, the Network for the Conservation of Historical Documents, a group of scholars originally formed in Kansai after the Great Hanshin Earthquake, spearheaded the rescue project (Fig. 2.5). For instance, as of 2013, the Miyagi Branch of this Network had rescued tens of thousands of items, such as artifacts and historical documents from 90 museums, libraries, and storage facilities.

Archaeologists also had to deal with protecting and/or recording endangered archaeological sites after the 2011 triple disasters. Following the request from the authorities of the devastated area in the Tohoku Region, in April 2012, 20 AHM archaeologists from all over Japan were solicited by the Agency of Cultural Affairs to engage in *fukko* (reconstruction or restoration) excavation work (Negita 2012). They participated in rescue excavations prior to the reconstruction, or new development, of residential areas, highways, and other infrastructure in the disaster-affected areas. By April 2013, the number of these archaeologists increased to over 60, all of whom were solicited from 20 prefectures of Japan.

Despite the many difficulties faced by archaeologists, such as time constraints and the shortage of supplies, these *fukko* excavations were quite successful. Numerous discoveries, many of which may not have occurred without the reconstruction efforts, provided new lines of evidence to deepen our understanding of local history (Fig. 2.6). The lessons and practical knowledge gained after the 1995



Fig. 2.5 Recovering historical documents from a warehouse on April 7, 2011 by the Miyagi Historical Documents Conservation Network in Ishinomaki City, Miyagi Prefecture. Photo by Shuichi Saito (Miyagi Shiryo Network 2013)



Fig. 2.6 Excavating the Niida-tate medieval fortified village site, Minami-Sanriku town, Miyagi Prefecture. The 2011 tsunami washed away the entire village at the foot of the hill (Minami-Sanriku-cho Kyoiku Iinkai 2013)

Great Hanshin Earthquake were extremely helpful when conducting these rescue operations after the Great East Japan Earthquake. Nevertheless, many difficult tasks still lie ahead, such as the need to publish final excavation reports and to actively include the archaeological findings in museum exhibitions and outreach efforts.

It is clear that the robust nature of Japan's archaeological heritage management systems, supported by a large number of engaged AHM archaeologists, helped conduct these rescue operations in an extremely efficient manner. This has provided archaeologists with an opportunity to re-appreciate the positive aspects of the traditional archaeological heritage management model under the initiative of the government (cf. Demoule 2002; “the ‘socialist’ model” in Kristiansen 2009), and to reconsider the validity of on-going privatization of archaeology within Japan.

2.6 Fukushima Archaeology and Heritage Today

Archaeological heritage management in Fukushima Prefecture and its vicinity after the 2011 triple disasters differs from that of other areas due to radiation contamination from the Fukushima Daiichi Nuclear Power Plant accident. In addition to the effects of the earthquake and tsunami, 110,000 people (6% of the total population of Fukushima Prefecture) were displaced from the heavily contaminated areas. The majority of the “significant cultural properties” located within these areas have been rescued from the restricted area, thanks to committed archaeologists and heritage managers within Fukushima Prefecture. These objects are currently being stored safely away from the heavily contaminated area, mostly in the air-conditioned special storehouse in Shirakawa City, but where and how to exhibit them has not yet been decided and is under serious discussion (Kikuchi 2015; Schlanger et al. 2016).

Honma (2012), a Fukushima archaeologist who has been working on salvage projects in the area, points out that the residents in Fukushima cannot foresee the future of their land unless there is a reduction of radiation contamination and that the proper disposal of disaster waste needs to be secured. He suggests that the regeneration of the local culture should coincide with the preservation of cultural heritage. He states that we finally realize the importance and meaning of local communities, culture, and heritage, including intangibles, only after we have lost them, and that the aftermath of the Fukushima accident offers us an opportunity to reconnect with the true values of local heritage. The real value of cultural heritage is not only the “healing effect” of the objects themselves, but it is what links us to the past and gives us our identity (Honma 2012).

2.7 Tackling Past Disasters

After the 2011 Earthquake, archaeologists in the Tohoku Region started working hard to examine old and new data, looking for traces of deposits from past earthquakes and tsunamis for public disaster prevention. Saino (2012), together with other archaeologists in Tohoku, have furthered the study along the Sanriku coast (the Pacific Ocean side of southern Tohoku) in order to identify the effects of the 869 Jogan and 1611 Keicho earthquakes and tsunamis. In addition, they have begun clarifying the movements and changes of the population before and after the earthquakes by means of settlement pattern studies.

A new field of “disaster archaeology,” which would include the identification of the traces of past earthquakes, landslides, flooding, volcanic activities, as well as the discussion of their short- and long-term consequences and implications, is in the process of becoming established. This new trend started originally one year after the 1995 Great Hanshin Earthquake, when a record of “unearthed earthquake traces” was compiled through the collaboration of approximately 150 archaeologists from all over Japan. The volume covered traces of past earthquakes excavated at 378 sites within Japan (Maibun Kyuen Renraku Kaigi 1996). At that time, however, establishing a reliable system for regular collection and analysis of data was a challenge. In April 2014, the Nara National Research Institute for Cultural Properties decided to create a database for all the traces of natural disasters across the country from excavation reports and to set up a network of experts while developing methods and techniques for research over the next 5 years.

2.8 Discussion and Conclusion

As discussed above, contemporary Japanese archaeology is an exciting research field with extremely rich data and well-established heritage management systems, but the systems have inextricably been linked to rapid economic growth and large-scale land developments since the 1960s. These systems have provided solid databases for archaeologists to conduct cutting-edge research and establish public archaeology with an emphasis on local history. However, the history of the close collaboration between archaeologists and developers, combined with the decline of funding and changes in the overall sociopolitical climate, has also led to unwelcome structural changes that can threaten the original goals of public archaeology and a nuanced discussion of local history. This is a paradox of contemporary Japanese archaeology, and active discussions among scholarly communities, as well as with various stakeholders, are necessary.

A major factor in the context of these discussions is the 2011 Great East Japan Earthquake, which caused serious damage to the natural and cultural landscapes of Japan including archaeological heritage. Archaeologists have responded to the urgent need for rescue operations, i.e., rescuing

artifacts and conducting salvage excavations, in a constructive and creative manner. Results of rescue excavations in the disaster-stricken areas have produced significant outcomes, providing archaeologists with an opportunity to reconsider the role of archaeology in rapidly changing sociopolitical contexts.

Needless to say, the consequences of the 2011 triple disasters were extremely tragic, and people in the affected areas are still struggling to recover from the damage. In particular, residents of Fukushima Prefecture are seriously suffering from radiation contamination of the area's agricultural and residential land, forests, and the ocean. Because a major radioactive contaminant that derived from the Fukushima accident is cesium 137, the half-life period of which is 30.1 years, the radiation contamination problem will not dissipate in the near future. This has led many people to protest against the Japanese government and the Tokyo Electric Power Company for their lack of proper compensation (e.g., Fukushima Genpatsu Kokuso-dan 2016; Nariwai Sosho Genkoku-dan, Bengo-dan 2016).

We suggest that the preservation of archaeological sites should be part of the preservation of cultural landscapes as a whole, and that archaeologists, in their discussion of archaeological heritage management, need to collaborate more closely with scholars and other stakeholders who are heavily involved in the discussion of contemporary environmental issues. The triple disasters, despite their horribly tragic nature, seem to be providing archaeologists with a unique opportunity to reconsider the goals and implications of archaeological heritage management in the broader context of a rapidly changing Japanese society. This can be an effective way to tackle the paradox of contemporary Japanese archaeology discussed above.

Interdisciplinary and international approaches can promote this new direction of archaeological discourse. Scholars in multidisciplinary fields, such as cultural anthropologists, sociologists, and ecologists, are also examining the sociocultural and environmental consequences of the triple disasters. Their results will be helpful when considering the roles and relevance of archaeological heritage management in the post Great East Japan Earthquake era in Japan. Given its setting as an earthquake-prone country with well-established archaeological heritage management systems and active outreach programs, Japan is in a good position to promote the field of disaster studies, including disaster archaeology, as an example of publically oriented social scientific studies for disaster prevention and risk management. In this context, the discipline of disaster archaeology would be a new research field that is open to the interdisciplinary and international academic community. With recent attempts to further internationalize Japanese archaeology, such as holding the Eighth World Archaeological Congress in Kyoto in August and September 2016, we hope that the new developments of Japanese archaeology discussed in this chapter can be integrated into the discussion of world archaeology.

References

- Barnes, G. L. (2015). *Archaeology of East Asia: The rise of civilization in China, Korea and Japan*. Havertown: Oxbow Books.
- Barnes, G. L., & Okita, M. (1999). Japanese archaeology in the 1990s. *Journal of Archaeological Research*, 7(4), 349–395.
- Bleed, P. (1989). Foreign archaeologists in Japan: Strategies for exploitation. *Archaeological Review from Cambridge*, 8(1), 19–27.
- Bunkacho [Agency for Cultural Affairs]. (2012) *The aftermath of the Great East Japan Earthquake in the field of culture and the arts*. http://www.bunka.go.jp/english/earthquake/message_20120311_art.html
- Bunkacho [Agency for Cultural Affairs]. (2016). Hakkutsu sareta Nihon retto: Shinhakken koko sokuho [Exhibition of Excavations in the Japanese Archipelago 2016]. Tokyo: Kyodo News (in Japanese).
- Bunkacho Bunkazai-bu Kinenbutsu-ka [Monuments and Site Division, Agency for Cultural Affairs]. (2016). *Maizo bunkazai kankei tokei shiryō [Statistics related to cultural resource management in Japan]*. Tokyo: Bunkacho Bunkazai-bu Kinenbutsu-ka (in Japanese).

- Crawford, G. W. (2011). Advances in understanding early agriculture in Japan. *Current Anthropology*, 52(S4), 331–345.
- Demoule, J. P. (2002). Rescue archaeology: The French way. *Public Archaeology*, 2, 170–177.
- Fawcett, C. (1990). *A study of the socio-political context of Japanese archaeology*. Ph.D. Dissertation, McGill University, Montreal.
- Fawcett, C. (1995). Nationalism and postwar Japanese archaeology. In P. L. Kohl, & C. Fawcett (Eds.), *Nationalism, politics, and the practice of archaeology* (pp. 232–246). Cambridge: Cambridge University Press.
- Fukushima Genpatsu Kokuso-dan [The Complainants for the Criminal Prosecution of the Fukushima Nuclear Disaster]. (2016). Home page. http://kokuso-fukusimagenpatu.blogspot.jp/p/blog-page_5112.html. Accessed July 27, 2016 (in Japanese).
- Habu, J. (1989). Contemporary Japanese archaeology and society. *Archaeological Review from Cambridge*, 8(1), 36–45.
- Habu, J. (2004). *Ancient Jomon of Japan*. Cambridge: Cambridge University Press.
- Habu, J. (2014a). Post-pleistocene transformations of hunter-gatherers in East Asia. In V. Cummings, P. Jordan, & M. Zvelebil (Eds.), *Oxford handbook of the archaeology and anthropology of hunter-gatherers* (pp. 507–520). Oxford: Oxford University Press.
- Habu, J. (2014b). Early sedentism in East Asia: From late palaeolithic to early agricultural societies in insular East Asia. In C. Renfrew, & P. Bahn, (Eds.), *The Cambridge world prehistory: East Asia and the Americas* (vol. 2, pp. 724–741). Cambridge: Cambridge University Press.
- Habu, J. (2016). Shoku no tayosei to kiko hendo: Jomon jidai zenki, chuki no jirei kara [Food diversity and climate change: A case study from the Early to Middle Jomon Periods]. *Kokogaku Kenkyu [Quarterly of Archaeological Studies]*, 63(2), 38–50 (in Japanese with English title and summary).
- Habu, J., & Fawcett, C. (1990). Education and archaeology in Japan. In P. Stone, & R. MacKenzie (Eds.), *Excluded past: Archaeology in education* (pp. 217–230). London: Uwin Hyman.
- Habu, J., & Fawcett, C. (1999). Jomon archaeology and the representation of Japanese origins. *Antiquity*, 73, 587–593.
- Habu, J., & Fawcett, C. (2008). Science or narratives? Multiple interpretations of the Sannai Maruyama site, Japan. In J. Habu, C. Fawcett, & J. M. Matsunaga (Eds.), *Evaluating multiple narratives: Beyond nationalist, colonialist, imperialist archaeologies* (pp. 91–117). Springer: New York.
- Honma, H. (2012) Fukushima-ken no hisai: Bunkazai no kyushutsu to hoshano mondai [Fukushima disaster: Rescue of cultural properties and radioactive contamination issues]. Paper presented at a session ‘Higashi-nihon dai-shinsai kara ichi-nen: Bunkazai no hisai to fukko ni mukete [One year after the Great East Japan Earthquake: Discussion on damaged cultural property and the revitalization of local communities], May 27, 2012 at the 78th Annual Meeting of the Japanese Archaeological Association, Tokyo (in Japanese).
- Hudson, M. (1999). *Ruins of identity: Ethnogenesis in the Japanese islands*. Honolulu: University of Hawai’i Press.
- Ikawa-Smith, F. (1980). Current issues in Japanese archaeology. *American Scientist*, 68, 134–145.
- Ikawa-Smith, F. (2002). Gender in Japanese prehistory. In S. M. Nelson (Ed.), *Pursuit of gender: Worldwide archaeological approaches* (pp. 332–354). Walnut Creek: Altamira Press.
- Imamura, K. (1996). *Prehistoric Japan: New perspectives on insular East Asia*. Honolulu: University of Hawai’i Press.
- Ito, Y. (2011). Aomori-ken Aomori-shi Sannai Maruyama (9) iseki ni okeru tochinoki riyo ni tsuite [The utilization of *Aesculus turbinata* at the Sannai-Maruyama (9) site, Aomori City, Aomori Prefecture]. *Aomori-kenritsu Kyodo-kan Kenkyu Kiyo [Bulletin of Aomori Prefectural Museum]*, 35, 43–50 (in Japanese).
- Iwate Nippo. (Ed.) (2011). *Heisei no Sanriku oh-tsunami: Higashi Nihon Dai-shinsai Iwate no kiroku [A record of the Great Sanriku Tsunami in Iwate]*. June 20, 2011. Morioka: Iwate Nippo (in Japanese).
- Japan ICOMOS National Committee. (2011). The Great East Japan Earthquake. Report on the damage to the cultural heritage, Tokyo. http://www.japan-icomos.org/pdf/earthquake_report_20111120.pdf. Accessed September 1, 2015.
- Kaner, S., Habu, J., & Matsui, A. (2011). Rescuing archaeology affected by the Japanese earthquake and tsunami. *Antiquity*, 85. Available at: <http://www.antiquity.ac.uk/projgall/kaner329/>. Accessed September 1, 2015.
- Kawahata, H., Hisashi, Y., & Ohkushi, K., Yusuke Y., Katsunori, K., Hideki, O., et al. (2009). Changes of environments and human activity at the Sannai-Maruyama ruins in Japan during the Mid-Holocene hypsithermal climatic interval. *Quaternary Science Reviews* 28, 964–74.
- Kikuchi, Y. (2015). Archaeology and cultural heritage in Fukushima today: Four years since the Great East Japan Earthquake. *Japanese Journal of Archaeology* 3, 28–41. Also available at: <http://www.jjarchaeology.jp/>. Accessed September 1, 2015.
- Kobayashi, K. (2008). Jomon jidai no rekinendai [Calendar years for the Jomon Period]. In Y. Kosugi, Y. Taniguchi, Y. Nishida, K. Mizunoe & K. Yano (Eds.), *Jomon jidai no kokogaku 2: Rekishi no monosashi: Jomon jidai kenkyu no Hennen taikai [Archaeology of the Jomon Period, Vol. 2: Time scale: Chronological studies of the Jomon Period]* (pp. 257–269). Tokyo: Doseisha (in Japanese).
- Kristiansen, K. (2009). Contract archaeology in Europe: An experiment in diversity. *Debates in World Archaeology, World Archaeology*, 41(4), 641–648.

- Maibun Kanren Kyuen Renraku Kaigi, Maizo Bunkazai Kenkyu-kai [Association for Rescue Archaeology], (Eds). 1996 Hakkutsu-sareta jishin-konseki [Unearthed Earthquake Traces]. Osaka: Maibun Kanren Kyuen Renraku Kaigi, Maizo Bunkazai Kenkyu-kai (in Japanese).
- Matsui, A. (2011). Heritage rescue in the wake of the Great Eastern Japan Earthquake. *The SAA Archaeological Record*, 11(4), 11–15.
- Minami-Sanriku-cho Kyoiku Iinkai [Board of Education of Minami-Sanriku Town] (2013). A handout for an open day of the Niida-tate medieval fortified village site, Miyagi Prefecture. November 23, 2013 (in Japanese).
- Miyagi Shiryō Network (2013). Historical record rescue activities of the Miyagi Shiryō Network, pre-disaster activities and response to the Great East Japan Earthquake. In *Recovery status report: The Great East Japan Earthquake 2011 case studies. International Recovery Platform, March 2013* (pp. 88–98). Kobe. http://www.recoveryplatform.org/assets/irp_case_studies/ENGLISH_RECOVERY%20STATUS%20REPORT%20JAPAN_revised%202014.3.27.pdf#search=%27The+Great+East+Japan+Earthquake+2011+case+studies+International+Recovery+Platform+March+2013%27
- Mizoguchi, K. (2002). *Archaeological history of Japan: 30000 B.C.–A.D. 700*. Philadelphia: University of Pennsylvania Press.
- Mizoguchi, K. (2013). *The archaeology of Japan: From the earliest rice farming villages to the rise of the state*. New York: Cambridge University Press.
- Nakatsuka, T. (2015). Sanso doitai-hi nenrin nendai-ho ga motarasu atarashii kokogaku kenkyu no kanosei [New possibilities in archaeological research enabled by oxygen isotope dendrochronology]. *Kokogaku Kenkyu [Quarterly of Archaeological Studies]*, 62(2), 17–30 (in Japanese with English title and summary).
- Nariwai Soshō Genkoku-dan, Bengo-dan [The Complainants and Legal Team for the Prosecution of the Fukushima Nuclear Disaster regarding the Loss of Subsistence Means]. (2016). Home page: Nariwai soshō. <http://www.nariwaisoshou.jp/> (in Japanese).
- Nasu, H., & Momohara, A. (2016). The beginnings of rice and millet agriculture in prehistoric Japan. *Quaternary International*, 397(2016), 504–512.
- Negita, Y. (2012). *Archaeological excavation for reconstruction on the building of new communities*. Available at: <http://archaeology.jp/sites/2012/rebuilding.htm>. Accessed September 1, 2015.
- Nihon Kokogaku Kyokai 2007 nendo Kumamoto Taikai Jikkō Iinkai [The 2007 Kumamoto Meeting Committee of the Japanese Archaeological Association] (2007). Nihon Kokogaku Kyokai 2007 nendo Kumamoto Taikai Kenkyu Happyō Shiryō-shū [Abstracts of the 2007 Kumamoto Meeting of the Japanese Archaeological Association] (in Japanese).
- Oguma, E. (2012). *Japan's nuclear power and anti-nuclear movement from a socio-historical perspective*. Paper presented at the symposium, “Towards long-term sustainability: In response to the 3/11 Earthquake and the Fukushima Nuclear Disaster.” Center for Japanese Studies, Institute of East Asian Studies and the Department of Anthropology, UC Berkeley.
- Okamura, K. (2013). Ethics of commercial archaeology: Japan. In C. Smith (Ed.), *Encyclopedia of global archaeology* (pp. 2482–2485). New York: Springer.
- Okamura, K. (2015). Tsunami and heritage after the 2011 Great East Japan Earthquake. In W. J. H. Willems, & H. P. J. van Schaik (Eds.), *Water and heritage: Material, conceptual and spiritual connections* (pp. 245–256). Leiden: Sidestone Press. Also available at <http://www.sidestone.com/library/water-heritage>. Accessed September 1, 2015.
- Okamura, K., Fujisawa, A., Kondo, Y., Fujimoto, Y., Uozu, T., Ogawa, Y., et al. (2013). The Great East Japan Earthquake and cultural heritage: Towards an archaeology of disaster. *Antiquity* 87, 258–269.
- Okamura, K., & Matsuda, A. (2010). Archaeological heritage management in Japan. In P. Mauch Messenger, & G. S. Smith (Eds.), *Cultural heritage management: A global perspective* (pp. 99–110). Florida: University Press of Florida.
- Pearson, R. J. (1992). The nature of Japanese archaeology. *Asian Perspectives*, 31(2), 115–127.
- Saino, H. (2012). Hakkutsu-chosa de kenshutsu sareta Sendai Heiya no tsunami konseki [Excavated evidence of tsunami on the Sendai Plain]. *Quarterly of Archaeological Studies*, 232, 6–11 (in Japanese).
- Sasaki, K. (1999). A history of settlement archeology in Japan. *Journal of East Asian Archaeology* 1(1–4), 325–352.
- Schlanger, N., Nespoulous, L., & Demoule, J. P. (2016). Year 5 at Fukushima: A ‘disaster-led’ archaeology of the contemporary future. *Antiquity*, 90(350), 409–424.
- Tateishi, T. (2014). Overview of cultural properties affected by disaster in the Great East Japan Earthquake of March 2011, microbial biodeterioration of cultural property. In *Proceedings of the international symposium on the conservation and restoration of cultural property 2012* (pp. 29–33). National Research Institute for Cultural Properties, Tokyo. Also available at http://www.tobunken.go.jp/~ccr/pub/symp2012/symp2012_03.pdf#search=Cultural+properties+rescue+program%5D. Accessed September 1, 2015.
- Tsuji, S. (2011). Jomon jidai zen-chuki no Sannai Maruyama shuraku seitaikei-shi [Ecological history of the Sannai Maruyama settlement during the Early and Middle Jomon Periods]. *Tohoku Geijutsu Koka Daigaku Tohoku Bunka Kenkyu Center Kenkyu Kiyo [Bulletin of the Center for Tohoku Culture Studies, Tohoku University of Art and Design]*, 10, 37–51 (in Japanese).

- Yasuda, Y., Yamaguchi, K., Nakagawa, T., Fukusawa, H., Kitagawa, J., & Okamura, M. (2004). Environmental variability and human adaptation during the Lateglacial/Holocene transition in Japan with reference to pollen analysis of the SG4 core from lake Suigetsu. *Quaternary International*, 123–125, 11–19.
- Yoshida, A. (2015). Nihon retto ni okeru saishu hyoki no kokankyo kenkyu–Kafun bunseki o chushin ni shita kinnen no kenkyu doko to mondai-ten [Paleoenvironmental study on the last glacial period in the Japanese archipelago-recent research trend and challenges with a focus on pollen analysis]. *Paleolithic Research*, 11, 1–12 (in Japanese).
- Yoshikawa, M. (2008). Tohoku chiho hokubu ni okeru tochinoki riyo no hensei [Vegetation history and formation of *Aesculus turbinata* forest from the Middle to the Late Jomon Periods in the Tohoku district, Northern Japan]. *Kankyo Bunkashi Kenkyu [Research for Environment and Culture History]*, 1, 27–35 (in Japanese).

Handbook of East and Southeast Asian Archaeology

Habu, J.; Lape, P.V.; Olsen, J.W. (Eds.)

2017, XXI, 771 p. 135 illus., 76 illus. in color., Hardcover

ISBN: 978-1-4939-6519-9