

Interdisciplinary Research

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This article discussed outlines of fiscal 2014 interdisciplinary research. It is overviewed mainly under six items: paleoenvironment (paleotopography, paleogeology, paleoclimate, paleovegetation, and animal/plant remains), dating, material/production site/manufacturing techniques, anthropology/isotope analysis, computer science/survey/measures, and public archaeology/cognitive science.

On paleoenvironment, a symposium ‘Jomon Bunka no Hanei to Suitai: “Jomon Jidai Kobanki Teitaisetsu” no Mujun to Tenkai (Prosperity and Decline of Jomon Culture: Discrepancy and Development of “Late/Final Jomon Stagnation Theory”)’ was held November 2014 [held by Meiji Daigaku Nihon Senshi Bunka Kenkyujo (Institute of Japanese Prehistoric Culture, Meiji University)]. At the symposium, global cooling from Middle Jomon to Final Jomon was discussed from the viewpoints of plant and animal resources, cultivars, paleopathology, diet analysis, and climate and sea level. Also, analysis is still continuing for a varved sediment core (SG06) collected from Lake Suigetsu, Fukushima Prefecture by an international joint research team in 2006.

For paleobotany, discussions were held on KUDO Yuichiro ed., “Collaborative Research: History of Relationship between Human Activities and Plant Utilization in the Jomon Period” Bulletin of the National Museum of Japanese History Vol. 187. Major themes were utilization of hemp and *Cannabis sativa*, plant utilization and paleoenvironment at Shimo-yakabe site in Tokyo, impression analysis, analysis on starch residues of plant remains, and so on. On zooarchaeology, Sectional Research Presentation I “Kaizuka Kenkyu no Shinshiten: Jomon ~Kindai no Kaizuka to Shuraku (New Viewpoint of Shell Midden Study: Shell Midden and Settlement from Jomon to Modern Period)” was held at the Date convention of the Japanese Archaeological Association. Discussions were held on the location of shell middens in the Jomon and Ainu cultural periods mainly in Hokkaido, and the transition of environment and subsistence.

For dating, active studies were dendrochronology, oxygen isotope ratio analysis of tree rings, and wiggle matching. These high precision dating measurements are not only valuable for accurate dating of measured objects, but also for the fundamental studies

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for drawing a Japanese calibration curve for calendar years. Fiscal 2014 saw installation of compact AMS at the University Museum, the University of Tokyo and 6MV AMS at Tsukuba University, making the environment for C-14 dating more adequate for the future. On material and manufacturing methods, reports were made on chemical analysis of glass objects; analysis of metal products such as armor, mirrors and bells, as well as organic substances adhering to such objects; material analysis on pottery and amber; manufacturing techniques of pottery, lacquered ware, and plant material products; and morphological observation of fibrous artifacts.

As for anthropology, a public symposium “Kyusekki Jidaijin kara Jomon Jidaijin he; Hamakitajinn, Mikkabijin, Shijimizuka Kaizukajin, Soshite Ieyasu he (From Paleolithic People to Jomon Period People; Prehistoric Humans of Kitahama, Mikkabi, and Shijimizuka Shell Midden and to Ieyasu)” was held, and the latest knowledge on dating, morphology, archaeology, and genetics were presented regarding the origin and formation of the Japanese people, studies of which are showing much progress in recent years. A session “Nihonkai Engan no Jomon Jidaijin; Toyama-ken Odake Kaizuka wo Chushinni (Jomon People along the Sea of Japan; Mainly on Odake Shell Mound in Toyama Prefecture)” was held at the 80th general meeting of the Japanese Archaeological Association. There is a lot of interest in research results of human bone and animal remains at Odake shell mound in Toyama Prefecture. Other than these, important was study of the utilization of marine shellfish during the Late Pleistocene at Sakitari-do cave site in Okinawa Prefecture. On isotope analysis, achievements were made on analysis of bone collagen, carbide on pottery, carbon from carbonized grain, and nitrogen isotopes. Also, progress is being made on fatty acid analysis of remaining organic substances in carbide on pottery. In recent years, the fields of public archaeology and cognitive archaeology are showing rapid spread. The forthcoming challenges are recognition of the relationship between archaeology and modern society, and utilization of archaeology and cultural properties in education.