Shell Mound Research of Jomon Era in the Northeastern Region

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This paper gives an outline of the currents in shell mound research in the northeastern area and an introduction to the results of research into shell mound from the later and final stages of the Jomon era in the Kitakami river basin as well as a discussion of the problems of shell mound investigation. Initial investigations into the Nakazawame shell mound were begun at the Tohoku University archaeology department in 1972. Following this, investigative excavations were conducted on four occasions in 1973, 1979, 1984 and 1986. The Nakazawame shell mound is an inland shell mound deriving from the lakes and marsh lands of the Kitakami river basin and the Hazama river basin. The shell mound has a diameter of 18 meters which is a relatively small one. Nonetheless, the thickness of the deposit exceeds 1.5m. It is primarily composed of giant pond snail and several fresh water shellfishes but also includes other food source animals, starting with fish, carp and fresh water catfish also birds, pheasant and types of duck, wild geese and swan and mammals, deer, wild boar, raccoon dog, fox and rabbit. Chestnut, walnut, horse-chestnut and acorn were also found, indicating a relatively stable use of resources.

In the examination of this shell mound, the method of excavating the deposit layers, due to an awareness of the final objective, featured great care in response to each successive layer. Following the layer, cylindrical samples were first collected from a 30cm square deposit section and quantitative analysis of the remains was enacted. As three samples were taken from each point on the grid, multiple data for the various layers made impossible the confirmation of the method's validity. In order to overcome this problem, in a second investigation, a fixed quantity, (5,000 cc) of earth was taken from all the layers and the contents thereof were analysed. As a result it was possible to grasp the formation transitions of the remains contained in all the deposits. However, as no small amount of data was lost concerning the sedimentary layers, some question remained as to the validity of this method. At this point the conclusion was reached to the effect that in terms of analysis of the shell mound data, as much as possible or all of the material would have to be collected and the contents thereof examined. A variety of hindrances presented themselves, making bringing all of the earth back to the laboratory for analysis a very difficult proposal. For this reason, all of the earth was gathered
and flushed in 1mm and 5mm sieves at the site and the abstracted materials were brought back to the laboratory, where selection, classification, pairing and quantifying were undertaken. In the third investigation, this method was attempted and it was confirmed that its execution was possible. This method continued to be used in the forth investigation. Even with this method of investigation, various items were left to be examined. The biggest problem faced was that of how to determine the sedimentary layers. Although an effort was made to secure each unit of disposal each time, the sedimentary layers were determined by the judgement of the researcher. In order to determine the layer's surface area and thickness, it is important to follow a precise and objective standard in determining a layer. This researcher established standard must be as precise and objective as possible.

A great volume of earthenware from the beginning to the middle period of the final stage of the Jomon era was excavated at the Nakazawame shell mound. As a result of this data, changes in the contents of Kamegaoaka type pottery were understood better than they had been to date. A great number of stone, bone and horn products were also excavated. Further, in terms of animal remains classification, detail division was conducted for 21 of the approximately 300 layers. Using the growth-line of Japanese littleneck, seasonal estimation of the sediments was achieved. As a result, spring, summer and winter to spring layers were determined. A great inconsistency was not found between the seasonal estimation and the other animal remains found.

Next, as a comparison with the Nakazawame shell mound, an investigation of the Saragai shell mound located in the area of the Kitakami river mouth of roughly the same period but differing in natural environment was undertaken. 157 deposit layers were abstracted in this investigation. The shells constituting the primary formation of this deposit were sea shells including Japanese littleneck, Hard shelled mussel, Japanese oyster, Common soft shell clam, and Hepatic moon shell. There was almost no sign of pond snails and fresh water shellfish. Compared with the Nakazawame shell mound, extremely few fish were found. There was, however, a comparatively large amount of sea bass and rock trout.

This shell mound investigation is in the beginning stages and, in the future, a more detailed examination must be performed. Nonetheless, there was a remarkable difference in the content of the animal remains as compared with the Nakazawame shell mound. By comparing both, with the differences in the conditions of their locations, it should be
possible to gain a better understanding of the activities of the people of the last stage of the Jomon era in the Kitakami river basin. In order to secure this useful information, effort must be given to establish a method of examining shell mound and a method of analysis.