Lacquerwork Techniques Found in the Shimo-yakebe Site

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Based on the diverse lacquerwork-related artefacts excavated from the Shimo-yakebe site, this paper reproduces the lacquerwork techniques of the Jomon period.

Concerning the stakes, which are the only excavated materials of the Jomon period showing traces of collecting Japanese lacquer tree sap, several issues remain unanswered regarding the style of the cuts. To solve these issues, an experiment to collect Japanese lacquer tree sap using stoneware was conducted. From the results and re-examination of the excavated materials, this paper proves that the Jomon people cut down the Japanese lacquer trees as a form of forestry to maintain the lacquer tree woods, and describes that the excavated stakes demonstrate the efficient use of the cut trees.

Large numbers of containers for lacquer tree sap were excavated, and it can be assumed that they were used for storage, adjusting and processing, coating, or repair. From the species and conditions of the remaining lacquer, containers were examined to first establish to which process of the lacquerwork they corresponded; further analysis of each container revealed the capacity and inferred use.

For lacquered pottery, two issues were raised regarding black-lacquered pottery. The first was to establish the temperature used for coating, by broadly dividing the artefacts into two types according to the coating condition. A hypothesis was then formulated that each artefact was either high temperature coated or normal temperature coated. The hypothesis was examined based on observation by stereoscopic microscope of the coating surface and section, and the results of a high-temperature coating experiment.

The second issue concerned the nature and practice of putting lacquered pottery onto a fire. Examinations were carried out with a focus on three types of pottery: lacquered pottery with a distinguished adhesion of carbides; pottery with carbonized lacquer; and pottery with a lacquer coating subjected to some degree of light heat.

Finally, in regard to the repair of pottery lacquer, examination was conducted to establish the specific repair techniques by clarifying the relation of the damage condition to the repair method and the type of lacquer used.

Key words: Collection of Japanese lacquer tree sap, management of lacquer tree woods, containers for lacquer tree sap, high-temperature hardening method, repair of lacquer