Management of Forest Resources during the Jomon Period in Japan
Deduced from Excavated Plant Remains

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Human interaction with plant resources in prehistoric periods has been clarified dramatically in Japan during the last thirty years. Here, we review the recent research results carried out in Japan on the use of various plant materials by Jomon people, including timber, fruits, seeds, tubers, fibers, and lacquer and touch upon the introduction of plants from adjacent areas. We have found that the people of the Jomon period were not plain hunter-gathers, but managed and used plant resources around their settlements cleverly. The management of forest resources started at ca. 7000 years ago at the beginning of the early Jomon period, when dominant use of chestnut (Castanea crenata) and lacquer (Toxicodendron vernicifluum) trees as food, timber, and paint resources began. The preference for the chestnut tree accorded with the technical requirement of this stone-age period, and the established use of the lacquer tree and its lacquer of this period indicated introduction of the tree and lacquer technique from China before this period. The management of plant resources became more multi-layered in later Jomon periods with the invention of a complex processing method of horse chestnut (Aesculus turbinata) seeds having both tannin and saponin and the construction of wooden structures for such processing around settlements. Seed and fruit remains indicate that this management of plant resources included selection for useful traits and cultivation of useful strains, resulting in the production of some forms of cultigens in chestnuts, azuki beans (Vigna angularis), and soybeans (Glycine max). Occasional finds of plant use before ca. 7000 years ago indicate that people already used plant materials selectively and introduced plants from the Asian continent. In Kyushu selection of basket materials was established at least ca. 8000 years ago, and this selection was maintained through the Jomon period.

Key words: cultivation, introduction, management of resources, multi-layered use, selection