A Speculation on Relationships between Freshwater Fishing and Rice Cultivation in Prehistoric Ages from a Viewpoint of Tooth Remains of Carps

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Based on the biological characteristics of the teeth of carp, fishing activities in the prehistoric ages can be understood by analyzing the excavated tooth remains. In Japan, rice cultivation was started in the Jomon period, and rice cultivation by irrigation was started in the Yayoi period. The places of freshwater fishing and rice cultivation overlapped each other. The information about tooth remains excavated from the ruins of the Jomon and Yayoi periods in western Japan has been accumulated to some extent, and we are now able to describe the relationship between freshwater fishing and rice cultivation. The development of fishing in the Jomon and Yayoi periods in western Japan can be classified as follows: Stage 0 where fishing in the waterside ecotone was not yet developed; Stage I where fishing in the waterside ecotone was developed (Stage Ia: primitive rice cultivation was not performed, and Stage Ib: primitive rice cultivation in the place of fishing was performed), and Stage II where fishing in the place of rice cultivation (paddy fields) was developed. In the Yangtze River basin, there was also gathering of rice seeds in the place of fishing (waterside ecotone) in Stage Ia. The relationship between fishing and rice cultivation in the Yangtze River basin cannot really be understood based on tooth remains alone. This is because there has been no detailed research on tooth remains in China except for the example of Tianluoshan site in the Hemudu culture period. If the research on tooth remains excavated from the archaeological sites in the Neolithic period is progressed in the future, the relationship between fishing and rice cultivation, and the history of rice cultivation will be clarified.

Key words: Paddy field, carp, tooth, waterside ecotone, rice cultivation