Radiocarbon Dating the Appearance of Kofun

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This article reports the results of a study on dating of the appearance of Kofun. In the study, radiocarbon dating was conducted by accelerator mass spectrometry of woods, seeds, and carbonaceous matter attached to pottery excavated in Hashihaka Kofun, Higaida-Otsuka Kofun, Yazu Kofun, Makimuku-Ishizu Kofun and Makimuku Sites, Daifuku Site, and Kamiaso Site in Sakurai City, Nara Prefecture. The absolute dates were obtained by calibrating the above dating results based on radiocarbon dates of trees indigenous to Japan with their dates determined by dendrochronology. The purpose of this study is to investigate the dates of the oldest Kofun, Yayoi tumulus and the village site based on the radiocarbon dating of excavated samples from those sites, and put them together to estimate the calendar ages from the last half of the Yayoi period to the Kofun period.

In this study, the date of each sample was estimated by comparing the dating results with the calibration curve based on radiocarbon dates of tree rings indigenous to Japan, and also examined by the anteroposterior relationship with the remains (during, just after, or after the construction of Makimuku-Ishizu Kofun, Higaida-Otsuka Kofun, and Hashihaka Kofun) judged from the excavation record. Then, the dates of the pottery styles and the construction process of Kofun were estimated.

In conclusion, the age just after the construction of Hashihaka Kofun in the beginning of Kofun Period was estimated to fall between AD 240 to 260.

Keywords: Kofun period, tumulus, formation series, radiocarbon dating, age calibration