

Oral presentation

Palynological richness affected by intensive production of nuts during Jomon Period in Japan

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Introduction. Chestnuts (*Castanea crenata*) and horse chestnuts (*Aesculus turbinata*) were consumed as an important food during Jomon Period (12000 BP - 2300BP) in Japan (Watanabe, 1975; Yasuda, 1995; and others). It is said that these nuts were produced intensively; however, the extensive stands developed without anyone ever purposely planting a seed (Nakao, 1966; Harlan, 1992). Due to the intensive production, the surrounding vegetation had been changed by human activity.

Objectives. To evaluate the impacts of intensive production of food during Jomon Period observing the change of palynological richness.

Methods. The equation of Birk and Line (1992) was used to calculate the palynological richness in a pollen count of 100 grains using the data of Sannai-Maruyama site and Kamegaoka site (Kitagawa and Yasuda, 2004). It is also calculated for the pollen data from Karikomi Lake (Kitagawa et al., 2004) as an example of recent similar activity.

Results. The palynological richness became less when the protection of *Castanea* and *Aesculus* trees was detected by pollen diagram. Protection of *Castanea* trees affected the surrounding vegetation more than *Aesculus*.

Conclusion. Intensive production of a food plant affects more or less the surrounding vegetation even if it is not purposely planted. The degree of influence seems to be different among the protected species. It might be caused by the nature of the plant.

Keywords: *Castanea*, *Aesculus*, protection, Sannai-Maruyama site, Kamegaoka site

Selected References

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