

Estimated season of the plant macrofossil sedimentation at Okinoshima Jomon Site, Chiba Prefecture, central Japan

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Plant macrofossil assemblages found in the Initial Jomon Okinoshima site in Chiba Prefecture include well-preserved plant macrofossils such as fragile flowers or fruits of *Persea thunbergii*. The assemblage was assumed to have deposited in a short time under high energy flow as flood (Okazaki et al, 2006). Season of deposition estimated based on the condition of plant macrofossils at this site will suggest process of the site formation and past climatic regime. The comparison between morphology of plant remains and seasonal change of the condition of extant subfossils deposited in forest presents a key to reconstruct season of the deposition. We monitored decay process of the flowers and fruits of *Persea thunbergii* in a evergreen broadleaved forest in Matsudo-shi Sennginjinja, Chiba Prefecture. Study area is a climax forest of *Persea thunbergii* with *Ilex leuococlada*, *Camellia japonica*, *Castanopsis cuspidata* var. *Sieboldii*, and *Cinnamomum insularimontanum*. The decay process of flowers and fruits in the forest litter layer was checked in 50cm square traps between April 2006 and June 2007.

From late April to early May 2006, fruits were not found in the trap. In middle May in 2006 fruits with ovary in 3mm width were found. Maximum fruits size was 5mm in late May in 2006, 6mm in middle June, and 10 mm late July was 10mm. Fruits bigger than 10mm were not found after the August and mature fruits is 10 mm size. After 27 July in 2006, some fruits were holed by insects and calyces in some fruits were broken or missing. In early December in 2006, all of fruits larger than 5mm were not intact with wormholes and broken calyces. In middle Jun in 2007, fruits was missing in a trap and only mature (9 mm) fruits were found in another trap. This suggests that immature fruits (smaller than 8mm) tend to decay earlier and fruits with wormholes and broken calyces increase in summer. Thus, occurrence of intact immature fruits of *Persea thunbergii* without wormhole or broken calyces indicates season of the plant macrofossil sedimentation.

Plant macrofossil assemblage D1-D from Okinoshima site includes immature intact fruits of *Persea thunbergii* in 5mm diameter and it suggests the deposition between late May and middle June.

Reference

Hiroko Okazaki, Arata Momohara, Makiko Kobayashi, Seiichi Yanagisawa, Tozo Okamoto(2006)An event deposit at the Okinoshima Jomon site, southern part of Boso Peninsula, central Japan. The earth monthly, 28(2):572-576.