

Dendroarchaeological study of the medieval dwelling site (Moriyoshiienomae A) in north-eastern Japan

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Dendrochronology provides valuable insight into the history of wooden remains by assigning accurate calendar dates, allowing the inference of past human activities in the context of environmental and societal conditions. In this study, we attempted to date wooden remains excavated from a dwelling site of the medieval age in northeastern Japan.

Samples of 53 wooden remains excavated from the medieval dwelling site (Moriyoshiienomae A) were provided from the Akita Prefectural Archeological Center. Most of the samples were from well frames. The species of the samples were identified as Japanese cedar (*Cryptomeria japonica*). Crossdating trials were performed between the individual samples. Eventually, tree-ring dates were confidently determined for 39 samples. A well replicated raw chronology spanning 439 years was newly constructed as an ensemble mean of the successfully crossdated series for the wooden remains. The raw chronology was cross-dated with a reference chronology in the medieval period. Each of the sample series was then examined using both the reference and the raw chronologies as an additional check. The dated samples included bark (waney edge) or sapwood, which enabled us to recognize several phases of the past human activities lasting around 100 years.

Keywords: dendroarchaeology, crossdating, chronology development