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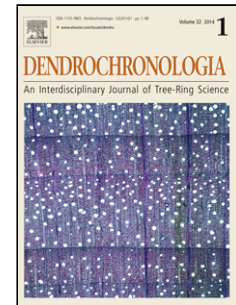
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Dendrochronological assessment of British veteran sweet chestnut (*Castanea sativa*) trees: successful cross-matching, and cross-dating with British and French oak (*Quercus*) chronologies

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Across Britain and continental Europe there are many ancient *Castanea sativa* trees of great significance for natural and cultural heritage, yet scant assessment has been made of them for dendrochronological information. This paper describes the dendrochronological analysis of 28 *Castanea sativa* trees (veteran historic trees, forest trees and coppice stems) sampled from 15 sites in southern Britain: 56 growth-ring sequences were collected for analysis, by boring living trees and by cutting transverse sections from dead fallen trees and previously cut stumps. Twenty-three single-tree sequences from 14 sites were cross-matched ($t \geq 3.5$) and then cross-dated with 17 oak *Quercus* reference chronologies from England and northern France: a *Castanea sativa* master chronology spanning AD 1660–2014 has been created. The results demonstrate the viability of dendrochronological analysis of *Castanea sativa* wood; and confirm that *Castanea sativa* can be cross-dated with oak *Quercus* reference chronologies, inter-regionally and inter-nationally. The findings provide the potential means for dating *Castanea sativa* timbers sampled from palaeoenvironmental and historical contexts. The extraction of sawn sections from long-dead (up to 60 years in this study) trees and stumps is proven to be a reliable method for dating veteran trees in cultural landscapes and ancient woodlands; and for revealing the growth history of historic/iconic trees. The germination dates calculated for the *Castanea sativa* trees in this study span the period AD

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