

Tree Ring Dating of Two Georgian Halls near Doncaster.

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In October 1976 thin cross-sections were sawn from protruding oak roof beams at Cusworth Hall and Hickleton Hall. The centre block of Cusworth Hall, from which the samples were taken, was designed by George Platt of Rotherham and constructed in about 1740-41. The architect and exact date of Hickleton Hall are unknown, but Pevsner (Pevsner & Radcliffe, 1967^{p.263-4}) gives a building date of c.1730, presumably based upon architectural features rather than any documentary source. The growth pattern to be found in the annual rings of the timbers was thus expected to span the seventeenth century, a period which has proved difficult for the establishment of a reference tree-ring curve linking medieval with modern. This was a period when conifers came into general use, and living trees rarely reach back before 1700. So the aims were both to contribute to reference data and to determine accurate felling dates for the timbers used in the roofs, particularly of Hickleton Hall.

Three beams from the Cusworth Hall roof had 60-63 growth rings, including some or all of their sapwood. They had been hewn from young trees perhaps 20cm in diameter, presumably growing on the estate. Two sections from Hickleton Hall included one from the roof, a quartered trunk with 79 rings including all its sapwood, and one collected in May 1977 from the servants' quarters, a much more massive beam of 34 x 29cm with 72 rings including 14 of sapwood.

The plotted ring-width curves for each timber were compared with each other, and with dated reference curves based

patterns correspond so well with those for southern England; they have also contributed greatly to our knowledge of the tree growth pattern between 1665 and 1744 in the area which may lead to further dating. It is hoped that further examples of Georgian architecture in this region can be examined and perhaps dated in this way in the future.

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References:

- Barefoot, A.C. 1975 A Winchester dendrochronology for 1635 to 1972 A.D. ; its validity and possible extension. Journal of the Institute of Wood Science 7 25-32.
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reference curve for the Winchester area, and a profile from Cusworth Hall. The curves start in 1690 in the diagram; the Hickleton curve extends to its final and only partly formed ring indicating felling in the summer of 1744, while the Cusworth curve extends to its final ring dating to 1740. The scale is logarithmic, the horizontal line being equivalent to 1.5mm.

