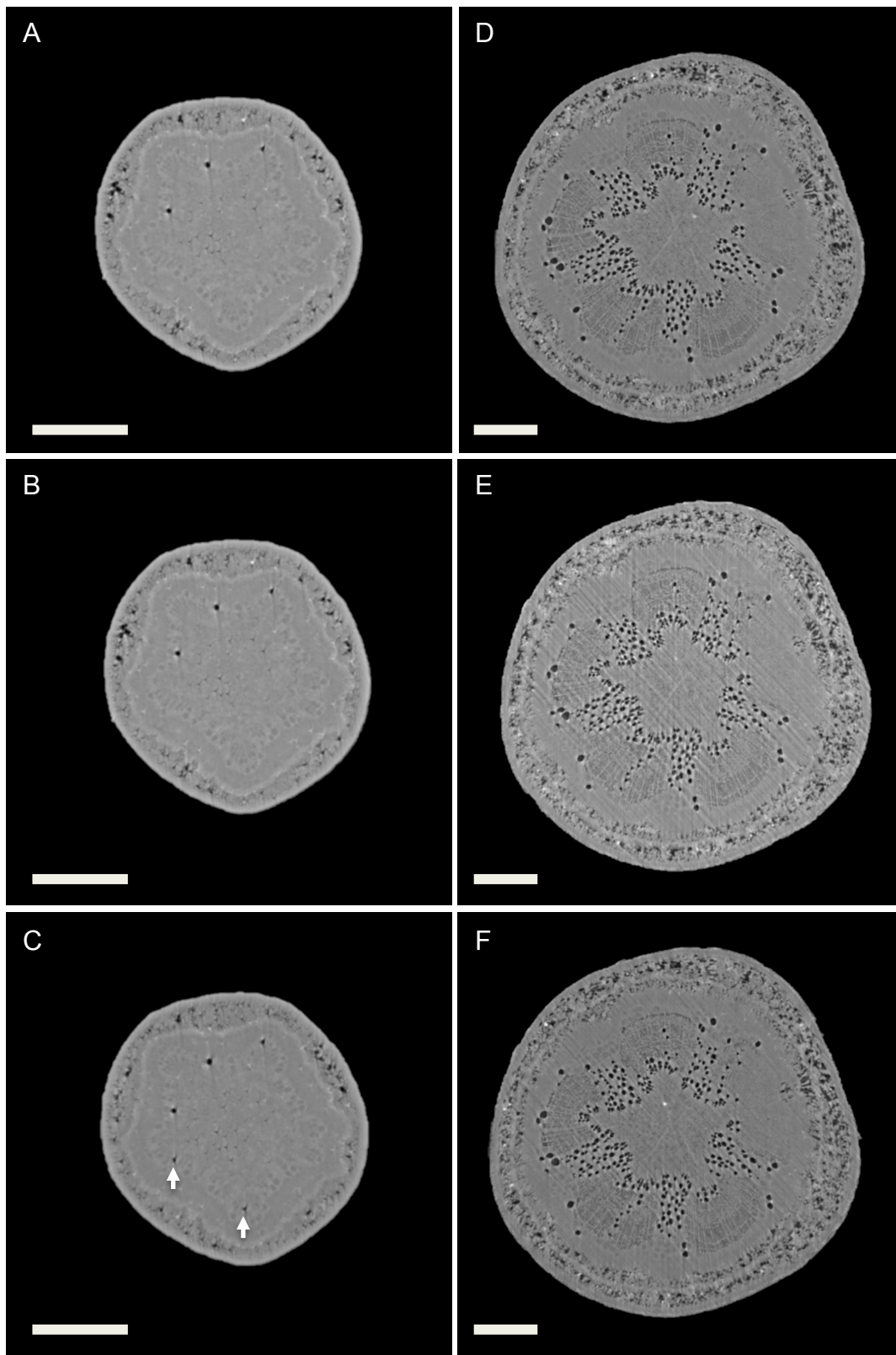
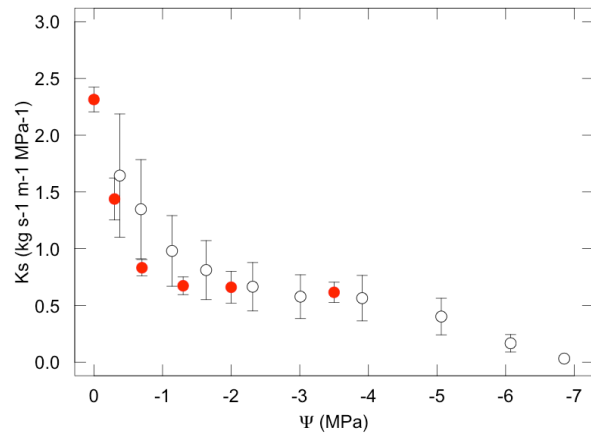


Supplemental Figure S1. Transverse slices from microCT scans show embolised and functional xylem conduits in well hydrated samples of (A) *Quercus robur*, (B) *Populus tremula x alba*, and (C) *Pinus pinaster*. Embolised conduits appear as black space while water filled conduits appear grey. In these initial scans the majority of primary xylem conduits were embolised (white arrows). A small number of secondary xylem conduits were also embolised (black arrows). The pith contained large air filled spaces in *P. pinaster* but not in *Quercus robur* or *Populus tremula x alba*.



Supplemental Figure S2.

Supplemental Figure S2. Sequential images from microCT scans showing the effects of repeated scans and removal of leaf material for water potential measurements. Transverse slices are shown for two different positions on stems of *Quercus robur* (A-C) current year section of shoot, (D-F) two-year old section of shoot. The topmost image in each column (A, D) shows the initial scan prior to treatments. The middle row (B, E) shows stems after a repeat scan that was recorded at the same location. The bottom row (C, F) shows stems after a leaf was removed for water potential measurements. New embolism that resulted from leaf removal in current year growth (C) is indicated by white arrows. Repeat scanning and removal of a leaf did not result in new embolism in two-year sections of the stem. The bagged leaf water potential at the time scans were made was -0.5 MPa. Xylem from the previous years growth of 2-year old shoots (D-F) was embolised prior to the experiment and was ignored for these analyses. Scale bars are equal to 500 μm .



Supplemental Figure S3. Vulnerability to drought induced embolism in *Quercus robur* saplings using two centrifuge techniques. Sapwood specific hydraulic conductivity (K_s) is plotted against stem water potential (Ψ) for each species. Data were generated with Cavitrion (white symbols) and static centrifuge (red symbols) techniques. Error bars show standard error for each pressure (n = 3-5).