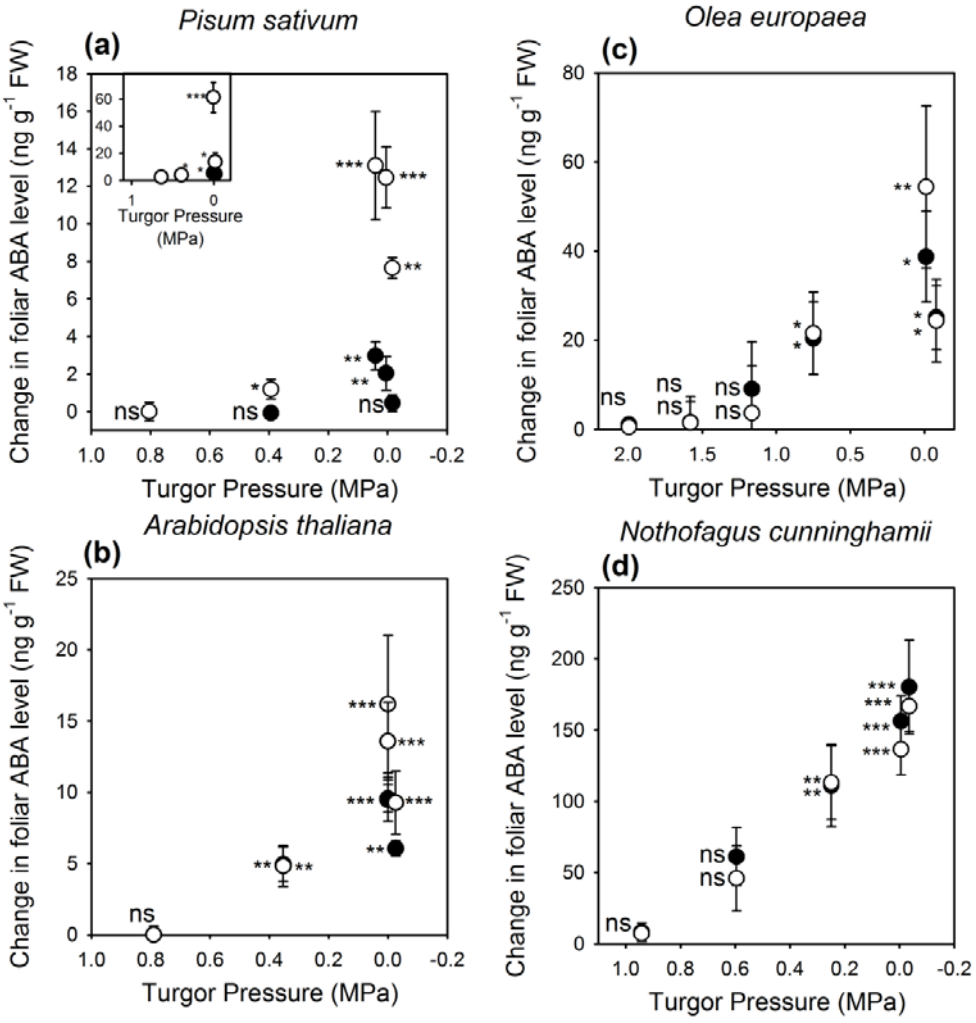
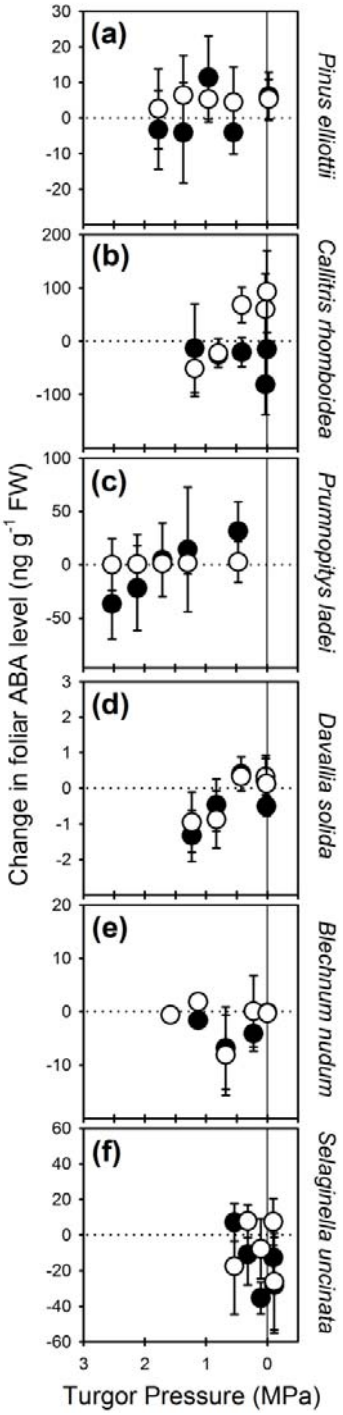
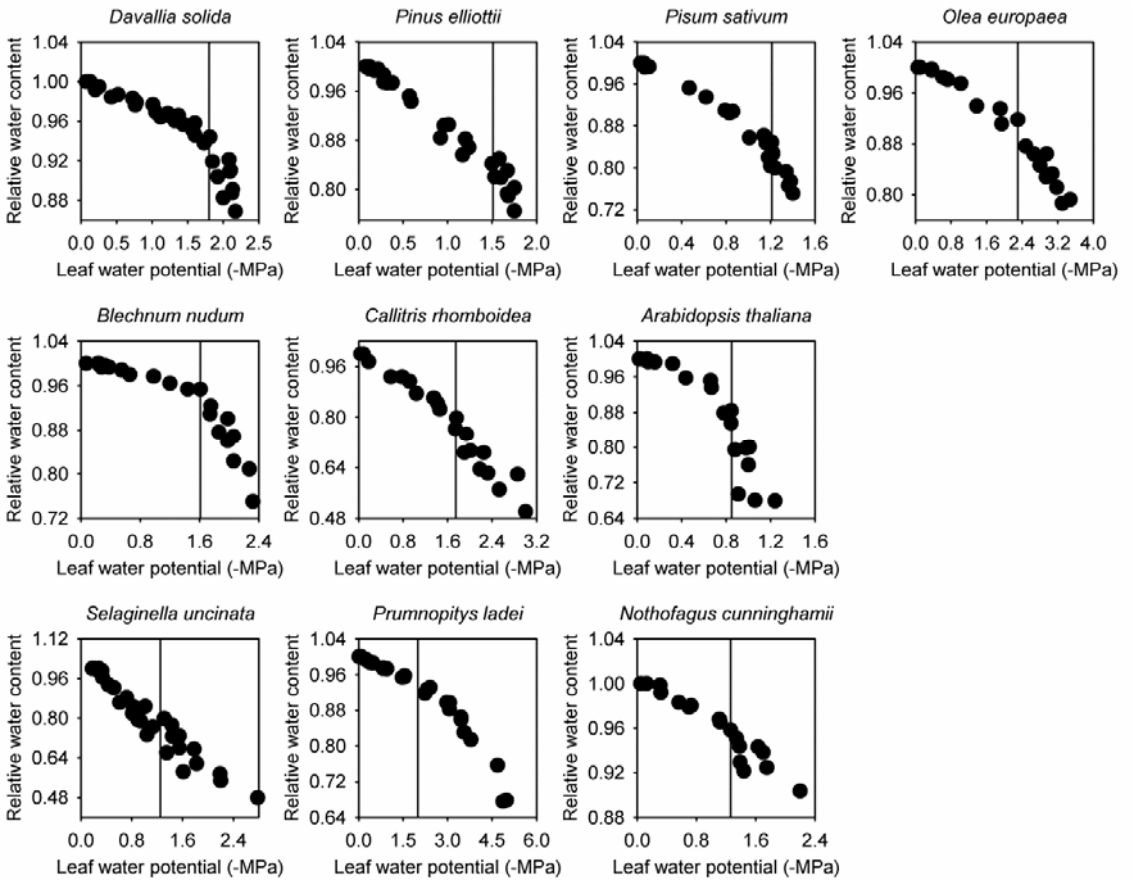
Supplementary Data



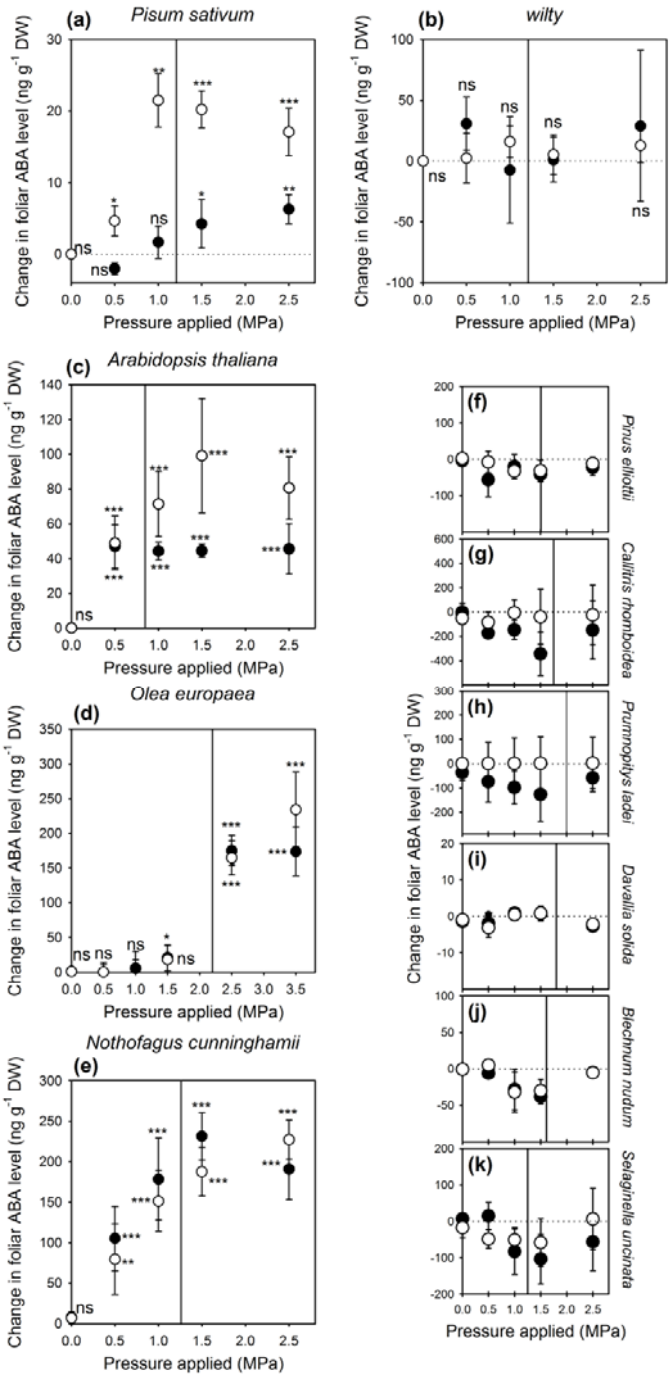
Supplementary Figure S1. The mean change in foliar ABA level (n =3, ± 95% confidence interval) plotted against leaf turgor pressure in two herbaceous (*Pisum sativum* and *Arabidopsis thaliana*) and two woody (*Olea europaea* and *Nothofagus cunninghamii*) angiosperms after leaf tissue was exposed to external pressures for 20 min (black circles) or 60 min (white circles). The insert in (a) depicts the mean change in foliar ABA level (n=4, ± 95% confidence interval) in leaves across turgor pressures of *P. sativum* with the abaxial epidermis removed after floating on aqueous solutions of polyethylene glycol 4000 mixed to particular water potentials for 20 min (black circles) or 60 min (white circles). Stars denote a significant change in foliar ABA level (n.s. not significant, * P<0.05, ** P<0.01, *** P<0.001). Turgor pressures were calculated by subtracting the pressure applied to the leaf (or the water potential of the osmotic solution) from the leaf osmotic pressure derived from the pressure volume curves in Supplementary Figure S1 according to Tyree and Hammel (1972).



Supplementary Figure S2. The mean change in foliar ABA level (n=3, ± 95% confidence interval) plotted against leaf turgor in three conifer species (a-c) two fern species (d and e) and a lycophyte (f) after leaf tissue was exposed to external pressures for 20 min (black circles) or 60 min (white circles). In all species, changes in foliar ABA level were not significant.



Supplementary Figure S3. The combined pressure-volume relationships from three leaves of the ten species examined in this study, vertical lines represent turgor loss point.



Supplementary Figure S4. The mean change in foliar ABA level (n =3, ± 95% confidence interval) in terms of dry weight determined from PV curve analysis (see Supplementary Figure S3) in all species (and genotypes) examined after leaf tissue was exposed to external pressures for 20 min (black circles) or 60 min (white circles). The vertical line indicates Ψ_{tlp} (see Supplementary Figure S3). Stars denote a significant change in foliar ABA level (n.s. not significant, * P<0.05, ** P<0.01, *** P<0.001). In all non-angiosperm species (f-k), changes in foliar ABA level were not significant.