Increasing leaf hydraulic conductance with transpiration rate minimizes the water potential drawdown from stem to leaf.

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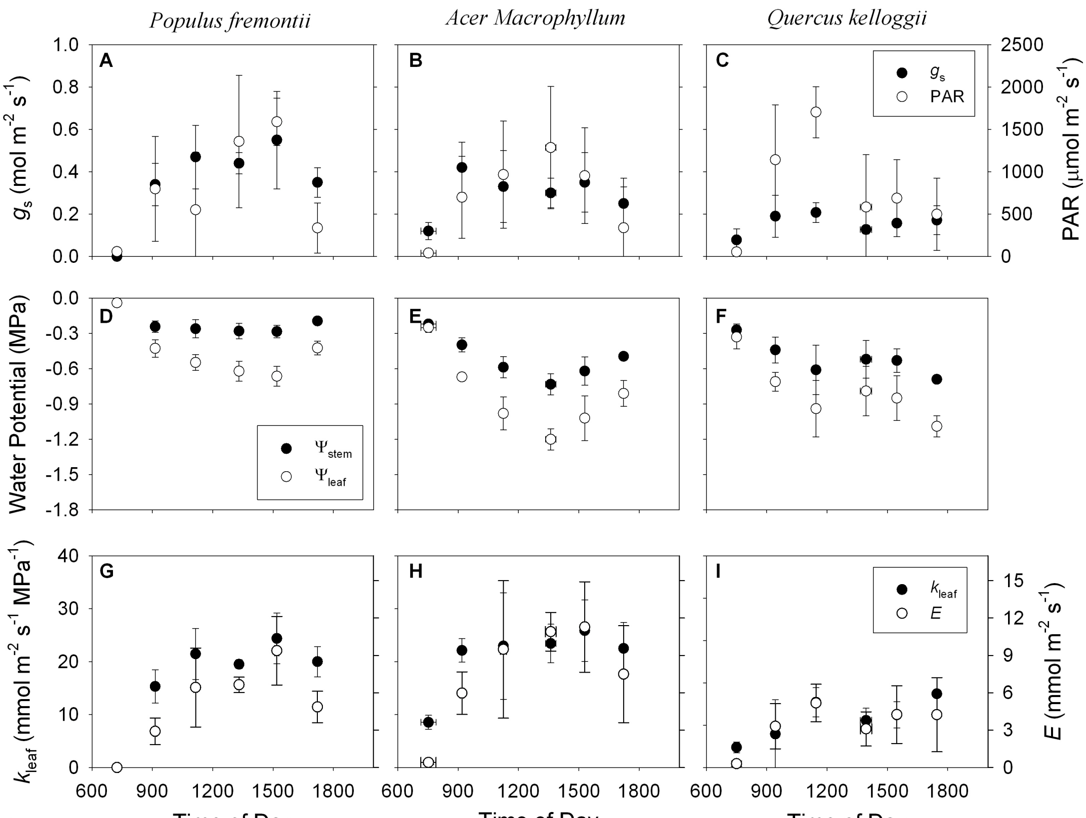
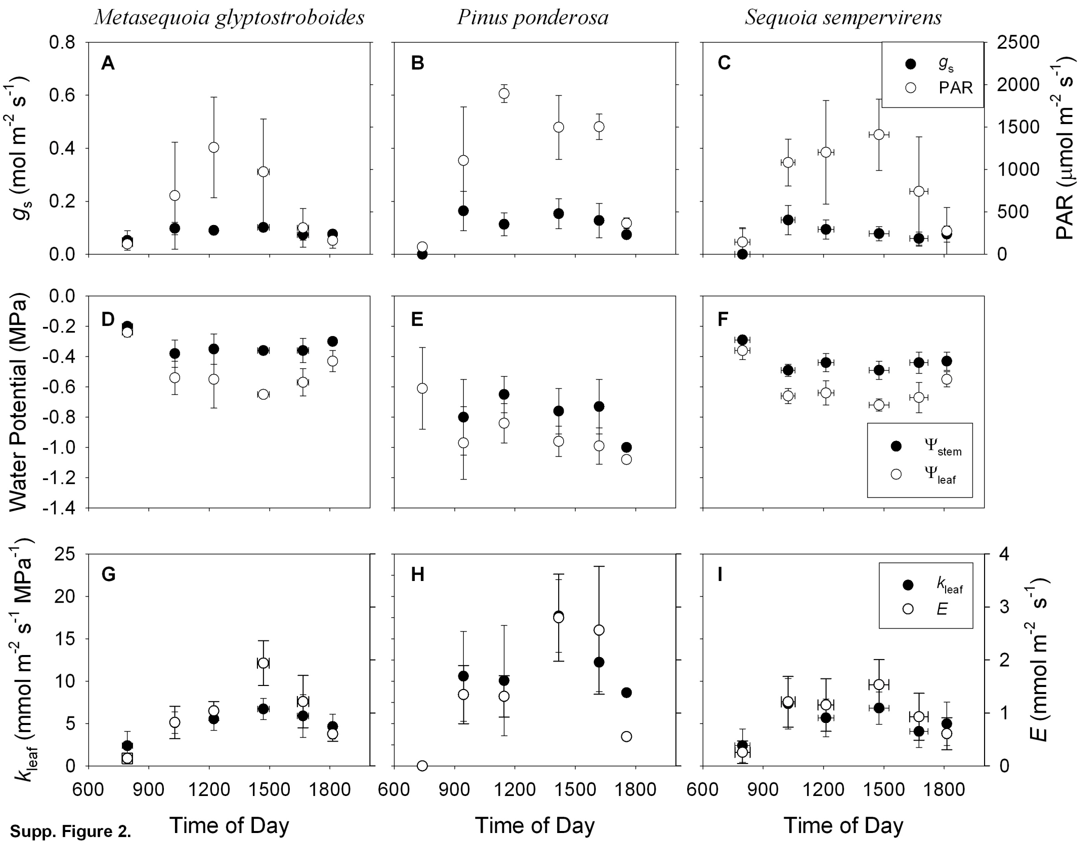


Supp. Figure 1.



Supp. Figure 2.

Supplemental Figure 1. Diurnal variation in photosynthetically active radiation (PAR, umol m^{-2} s^{-1}) stomatal conducatance (g_s, mol m^{-2} s^{-1}), stem and leaf water potential (Ψ_{stem} and Ψ_{leaf}, MPa), leaf hydraulic conductance (k_{leaf}, mmol m^{-2} s^{-1}) and transpiration rate (E, mmol m^{-2} s^{-1}) for three angiosperm species growing in a common garden. Species are sorted by increasing leaf life span: (a, d, g) *Populus fremontii*, (b, e, h) *Acer macrophyllum,* and *Quercus kelloggii* (c, f, i).

Supplemental Figure 2. Diurnal variation in photosynthetically active radiation (PAR, umol m^{-2} s^{-1}) stomatal conducatance (g_s, mol m^{-2} s^{-1}), stem and leaf water potential (Ψ_{stem} and Ψ_{leaf}, MPa), leaf hydraulic conductance (k_{leaf}, mmol m^{-2} s^{-1}) and transpiration rate (E, mmol m^{-2} s^{-1}) for three gymnosperm species growing in a common garden. Species are sorted by increasing leaf life span: (a, d, g) *Metasequoia glyptostroboides,* (b, e, h) *Pinus ponderosa,* and (c, f, i) *Sequoia sempervirens*.