Real-time measurement of metabolic rate during freezing and thawing of the wood frog,

Rana sylvatica: Implications for overwinter energy use

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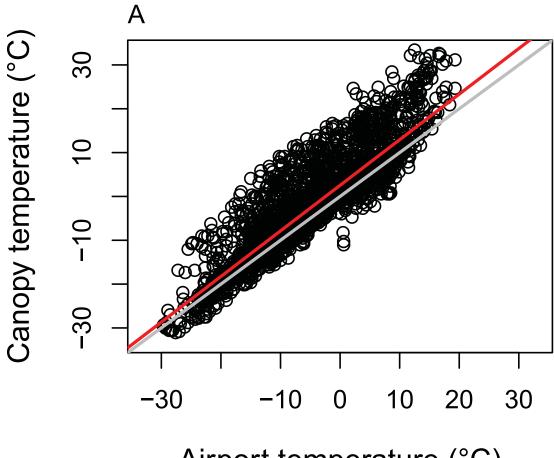
Marshall and Kenneth B. Storey

Figure S1

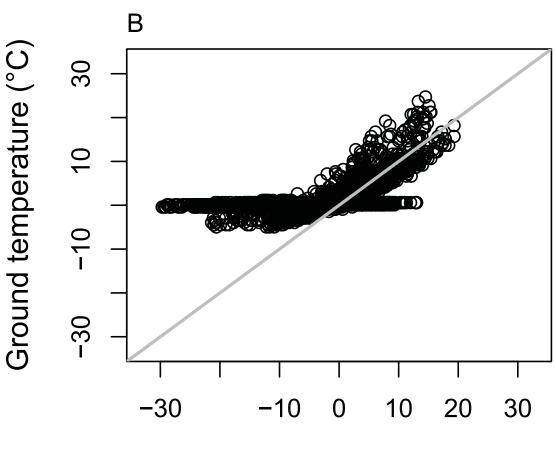
Relationship between Canopy Temperature (A) and Leaf litter microclimate temperature (B) and Stevenson Screen temperature measured at Ottawa airport. Grey lines indicate the line of unity, the red line indicates a significant relationship between airport and canopy temperature. Least-squares regression indicates a significantly positive intercept (canopy temperature is always slightly warmer than the Stevenson Screen temperature). The 95% confidence intervals include a slope of 1, which indicates that the relationship is consistent (note that this has not included correction for significant temporal autocorrelation).

Leaf litter temperature exhibits a more complex relationship with Stevenson Screen temperature: The horizontal band indicates periods of snow cover, when leaf litter and air temperatures are completely decoupled. The slight bifurcation at the upper right of the plot indicates the impact of insolation on leaf litter temperatures on sunny days: there are no leaves on the trees during the period of recording, and points above the line of unity were recorded mostly on sunny days, while point at the line of unity were recorded mostly on cloudy days.

Stevenson Screen data were recorded at Ottawa MacDonald Cartier airport, downloaded from National Climate Data and Information Archive, Environment Canada (www.climate.weatheroffice.gc.ca).



Airport temperature (°C)



Airport temperature (°C)