

Appendix S3 Results of variance-weighted meta-analysis.

To parallel the bootstrapped study-level analysis, we carried out a parametric, variance-weighted meta-analysis at the species level using the difference-to-mean ratio effect size ES for the subset of studies that provided appropriate standard deviation and sample size information.

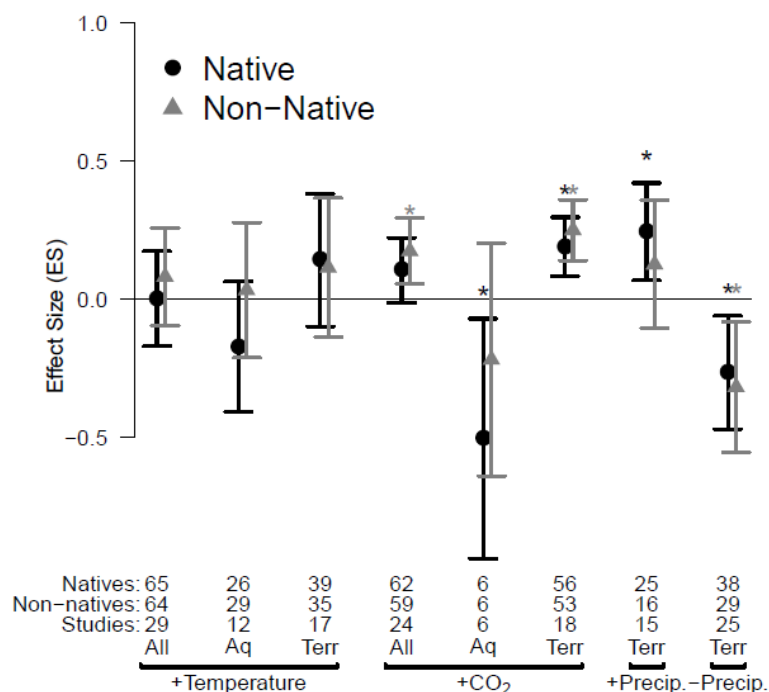


Figure S3.1 Results of variance-weighted analysis including the subset of studies for which variance data were available. Values shown are for the mildest treatment level from the 16 studies that included multiple treatment levels (note: results did not differ – visibly or statistically – when using the most extreme climate treatment for the studies that included 3+ levels). Error bars represent 95% confidence limits, and asterisks denote groups where ES was significantly different from zero. Individual species and separate studies within the same paper were treated as independent samples (Gurevitch & Hedges 2001). Comparisons to the control treatment for each study were determined using a mixed effects model with origin (native vs. non-native) treated as a fixed effect, using the metafor package (Viechtbauer 2010) in R 2.14 (R Development Core Team 2011). The number of species and studies used for each comparison is noted along the bottom of the figure.

References:

- Gurevitch, J. & Hedges, L.V. (2001). Meta-analysis - Combining the results of independent experiments. Pp. 347-369 In: *Design and Analysis of Ecological Experiments*. Eds: Scheiner, S.M. & Gurevitch, J. Oxford: Oxford University Press.
- R Development Core Team (2011). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. Available at: <http://www.R-project.org/>.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *J. Stat. Software*, 36, 1-48.