

Column definitions for `table_s1.csv`: Posterior means and percentiles for height-allometry and shade-tolerance (*ST*) parameters for U.S. tree species.

spcd: Species codes used by the FIA (USDA 2006), with some additional codes added to accommodate incompatibilities between codes in current and old FIA datasets, and to allow for the separation of morphologically distinct varieties (Flora of North America Editorial Committee 1993+) not recognized by the FIA: We split *Pseudotsuga menziesii* into coastal (var. *menziesii*) and Rocky Mountain (var. *glauca*) varieties. We split *Pinus contorta* into coastal (var. *contorta*), Cascades-Sierra Nevada (var. *murrayana*), and Rocky Mountain (var. *latifolia*) varieties. We split *Pinus ponderosa* into Cascades-Sierra Nevada (var. *ponderosa*) and Rocky Mountain (var. *scopulorum*) varieties. The preceding varieties were assigned by comparing the latitude-longitude of FIA plots to range maps of the varieties (Flora of North America Editorial Committee 1993+).

gen, sp: Genus and species names in FIA documentation, with additional varieties as explained above.

family, order: Taxonomy follows the Angiosperm Phylogeny Website:

<http://www.mobot.org/MOBOT/Research/APweb/welcome.html>.

H0, H1: Height allometry parameters (referred to as *a* and *b*, respectively, in Appendix E, equation E1). The expected height of an individual tree is $e^{H_0 \text{ dbh}^{H_1}} e^{\sigma^2/2}$, where σ is the standard deviation of ε in equation E1. The posterior mean, 2.5, 50, and 97.5 percentiles for σ are 0.2765, 0.2749, 0.2765, and 0.2782, respectively. These four statistics are reported for H0 and H1 for each species in `table_s1.csv`.

ST: Shade-tolerance index. The posterior mean, 2.5, 50, and 97.5 percentiles are reported for each species.

Silvics.STC: Shade-tolerance classification in *Silvics of North America* (Burns and Honkala 1990). ‘NA’ appears for species not included in *Silvics*.

Literature cited

- Burns, R. M. and B. H. Honkala. 1990. *Silvics of North America*: 1. Conifers; 2. Hardwoods. vol. 2. Agriculture Handbook 654. U.S. Department of Agriculture, Forest Service, Washington, DC.
- Flora of North America Editorial Committee, e. 1993+. *Flora of North America North of Mexico*. 12+ vols, New York and Oxford.
- USDA. 2006. Users guide to the Forest Inventory Snapshot Database Version 2.1. Forest Inventory and Analysis Program, USDA, Forest Service.