This file is: Noteson\_SERCChronosequencestems20210506.docx

Woody stems in the Smithsonian Environmental Research Center (SERC) chronosequence plots given in datafile **SERCchronostems1989-2020\_20210506.csv**

Background on the sampling

Stems were measured over several years in plots of the SERC chronosequence of tulip poplar forests in the vicinity of the Smithsonian Environmental Research Center (SERC) from 1989 through 2020. All standing woody stems in a plot (tree, shrub or vine) having a DBH of at least 2.0 cm were measured, whether alive or dead. Plots were censused after termination of annual diameter growth – the year of the plot census (cenyr) includes the growth through that year. Brown and Parker (1994) and McMahon et al. 2010 describe the chronosequence project and provide details on how time since initiation (and ages) were estimated for the stands. We estimated the stem biomass using species-specific allometric equations from the database of Jenkins et al. (2004).

Meaning of the columns in file **SERCchronostems1989-2020\_20210506.csv**

plotid standard 6-character code

cenyr year of census, includes growth through this year

age years since stand initiation

species SERC numerical code (see file **SERCChronstems\_specieslist.xlsx** for the equivalent full species name)

condc character code for stem condition (LI = living; SD = standing dead)

dbh diameter at breast height, cm

ba basal area per tree, in m-2

biomass kg per tree

area plot area in ha

**SERCChronstems\_specieslist.xlsx**

Gives the SERC numerical species code (first column) and the corresponding common binomial name (second column). Note the binomial names may not reflect the most current taxonomic revision.

Some references

Brown MJ, Parker GG. 2004. Canopy light transmittance in a chronosequence of mixed-species forests. Canadian Journal of Forest Research 24:1694-1703

Jenkins JC, Chojnacky DC, Heath LS, Birdsey RA. 2004. Comprehensive database of diameter-based biomass regressions for North American tree species. USDA For. Serv. Gen. Tech. Rep. NE-319.

McMahon SM, Parker GG, Miller DR. 2010. Evidence for a recent increase in forest growth. Proceedings of the National Academy of Sciences of the United States of America. 107:3611–3615. DOI: <https://doi.org/10.1073/pnas.0912376107>