

## ABSTRACT

Williams, Ajay, *Finding Structure & Composition of Southeastern Peri-Urban Forests*, October 2021, Kennesaw State University, Kennesaw, Georgia.

Having accurate and up-to-date urban and peri-urban forest inventory data are crucial to understanding and/or predicting the impacts of environmental change. Threats to forest health, including pest infestations, fungal diseases, insects, and invasive species, can be detected, managed and even prevented with consistent inventory and analysis of forests. This is particularly true for urban and peri-urban forests, where human-created disturbances (or lack thereof) influence the composition and structure of the trees. For this study, an inventory of trees within an established forest inventory research plot (50mX50m) at the KSU Field Station was taken from August-October 2021. For each stem, the species, diameter at breast height (DBH) and location were recorded, in addition to any notable abnormalities (e.g., dead wood, cankers, root problems etc.). The most notable finding while working in the established plots was the occurrence of *Castanea dentata* (American chestnut), a species considered functionally extinct. The analysis of the surveyed trees (stem frequency, basal area, and diversity) help answers questions about the composition and structure of peri-urban deciduous forest fragments in the southeastern US.

KEY WORDS: Forestry, Forest inventory, Urban forest, Silviculture, Tree identification, Southern forest region, American Chestnut, *Castanea dentata*