GENETIC CONSERVATION OF TABLE MOUNTAIN PINE (*PINUS PUNGENS*) IN THE SOUTHERN APPALACHIAN MOUNTAINS BY THE USDA FOREST SERVICE AND CAMCORE

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The USDA Forest Service National Forest System in the Southern Region (R-8) and the Camcore program in the Department of Forestry and Environmental Resources at N.C. State University are collaborating on a three-year project to conserve the genetic resources of Table Mountain pine (TMP, *Pinus pungens* Lamb.) in the southern Appalachian Mountains. Occurring from central Pennsylvania to northern Georgia, TMP typically occupies dry, thin, nutrient poor soils on south and west facing ridges from 300 to 1200 meters elevation. Over the past several decades, populations of this fire-adapted species have declined due to wildfire suppression programs and periodic outbreaks of the southern pine beetle (*Dendroctonus frontalis* Zimm.), resulting in reduced diversity and impairing ecosystem services provided by these ridge top environments. The objectives of this project are to: (1) make genetically representative seed collections from surviving TMP populations distributed across the southern Appalachian region, (2) establish TMP seedling seed orchards/conservation banks on the existing USFS seed orchards in the southern region, (3) place seeds in long term cold storage for use in region-wide reforestation efforts, and (4) use molecular markers to describe the population genetic structure and diversity of the species. The genetic material conserved through this collaborative effort will have a critical role, along with silvicultural methods for prescribed fire to promote stand regeneration, in the restoration and rehabilitation of TMP ecosystems in the southern Appalachian region. Our paper presentation will provide an update on progress made during the first year of the project and provide a timeline of activities to occur during years two and three.