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Establishment of Long-term Forest Vegetation Monitoring Plots within Mammoth Cave National Park

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Abstract

Beginning in 2011, the Cumberland Piedmont Network (CUPN) of the National Park Service (NPS) in cooperation with NatureServe, began monitoring forested vegetation communities within all 14 network parks, including Mammoth Cave National Park (MACA). The primary objectives of this effort are to: detect meaningful changes in species composition and vegetation structure within each park's forested habitat and determine whether these changes are correlated with trends in "key stressors." Thus far, 16 permanent long-term monitoring plots have been established within MACA. An additional 16 plots will be established in 2013-2014. Within the permanent plots, data are collected on forest structure; tree health, growth, regeneration and mortality; herbaceous diversity and cover; coarse woody debris; invasive species; and eventually soil. Currently, some preliminary observations on forest condition can be made including key stressors such as invasive exotic species.