

METHODS FOR RESTORING LONG-UNBURNED FLORIDA OAK-SAW PALMETTO SCRUB USING MECHANICAL CUTTING AND PRESCRIBED BURNING

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ABSTRACT

Oak-saw palmetto scrub, a shrub ecosystem of ridge systems in Florida, is habitat for species of conservation concern including the threatened Florida scrub jay (*Aphelocoma coerulescens*). This shrubland vegetation was maintained historically by relatively frequent fires. Most scrub habitat in Florida has been developed, and much of what remains, even within conservation areas, is degraded by fire exclusion. Kennedy Space Center (KSC)/Merritt Island National Wildlife Refuge is an important remaining area for scrub and its endemic species. Fires were suppressed on KSC between 1962 and 1981, and some scrub became fire resistant. Prescribed burning has been conducted since 1981.

Prescribed burning alone was ineffective in restoring scrub that had become fire resistant. Mechanical cutting and burning have been used since 1992 to restore long-unburned scrub. Mechanical techniques used have included Brown tree cutter, V-blade, Kendall tree cutter, and K-G blade. All sites were burned in prescribed fires after cutting. Vegetation of restoration sites was sampled using 15-meter transects before treatment and at 6-month intervals postburn. Previous studies have followed vegetation recovery after burning. Scrub oaks (*Quercus* spp.) and saw palmetto (*Serenoa repens*) sprouted after all treatments. Oak recovery was similar after all mechanical treatments with fire versus prescribed burning only. Saw palmetto recovery was less with all mechanical treatments than when only burned. Bare ground decreased after burning but remained higher with mechanical treatments. However, persistent openings were produced only where brush was piled for burning, and prolonged fire killed roots and rhizomes of oaks and saw palmetto.

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