

# Cottonwood Restoration on the Humboldt-Toiyabe National Forest

## 2005 Accomplishments

Cottonwood restoration promotes genetic diversity among native cottonwoods and maintains healthy wetland systems. Cottonwoods on the Humboldt-Toiyabe National Forest tend to be isolated in canyons and, due to topography or prevailing winds, do not have access to breeding partners. Individual clones may persist for many years but without seed production they lack the ability to re-colonize a site after fire or other disturbance.

Personnel from the J. Herbert Stone Nursery in Oregon trained us to identify our native species and assisted with collecting flowering material from cottonwoods on the Bridgeport and Santa Rosa Ranger Districts. We mapped 1,200 acres of black, Fremont, narrowleaf, and hybrid cottonwoods on the two districts during FY 2005. Four to five individuals of each gender and species were collected to be bred at the Stone Nursery. Leaves from the collected branches were stored for future genetic analysis. Flowering and root establishment was successful on the female branches but the male flowers failed to produce pollen. This was a problem for specimens collected in other areas as well and has been attributed to warm, dry weather the previous fall when the trees were forming the flower buds.

With remaining funding, we plan to collect branches again this winter and attempt to cross enough individuals for 20 to 25 sets of offspring per species. These offspring would be available to plant in wetland and fire restoration projects.



Collecting branches in February 2005.

Year Awarded: 2004  
Projected Completion: 2006  
Report Number: 2 of 3

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Female flower buds of Fremont cottonwood.

### Interim Report

2005 Expenditures: Collection and training: \$15,200;  
Inventory: \$1,000.

Other Funding: The Forest will provide additional funding in FY 2006 for genetic testing of collected leaf samples.