The late summer drought of August/September 2010 wreaked havoc on the viability of most, if not all, southeastern native groundcover grass species per the US Forest Service’s National Seed Lab (NSL). Unfortunately for the District, the damage was not apparent until after fall seed collection activities were completed and seed tests were conducted, especially long-term (up to 49 day) germination tests. The evidence shows that summer droughts lasting more than three to four weeks or more significantly impact seed development and maturation, so land managers and restorationists may need to forgo or restrict seed collection activities after these events or monitor rainfall records at specific sites before conducting extensive and expensive seed collection efforts.

For example, although we collected 479 bulk pounds of upland (xeric) wiregrass seed, our viability was so low (< 2 %) after testing that we opted to forgo any seed cleaning or contract sowing efforts. We will direct seed this material, hoping for some success.

Summarizing our mitigation groundcover habitat restoration activities, in late October, November and December of 2010, the District conducted wet prairie wiregrass (WPWG) and toothache grass (TAG) seed collection activities on our Garcon Point Water Management Area/DEP lands. Our contractor, Swett, LLC, collected 385.7 bulk pounds of WPWG seed for $20,601 and 289.2 bulk pounds of TAG seed for $10,355 (Total = $30,956). Both species were sent to the NSL for testing. Wet prairie wiregrass seed germination results from the NSL averaged two (2) percent and TAG seed germination results came in at six (6) percent after 49 days.

In addition, the WPWG and TAG seed was cleaned at Roundstone Native Seed (Roundstone) in Kentucky at a cost of $45/bulk lb. and $12.50/bulk lb., respectively. After cleaning, the District netted 10.65 pounds of WPWG seed and 55.2 pounds of TAG. After factoring in all costs (excluding staff time), the District determined that our WPWG seed cost a little under $3,600 per pound and our toothache grass seed cost around $267 per pound.

Normally, the District would not have expended seed cleaning funds with this level of low seed viability, especially for the wiregrass, but WPWG and TAG are critical plant components of our groundcover habitat restoration efforts on our wetland mitigation properties. Restoration of these species is necessary to meet our mitigation permit requirements and allows for timely and consistent credit release. Even factoring in the cost of collection, cleaning and DOF tubeling production ($210/M), these plants will cost around 45 cents/tubeling, compared to 50 to 75 cents commercially if they can even be obtained.

Notwithstanding the above, in the 2011/2012 planting season, the District plans on planting 500,000 mixed WPWG/TAG tubelings and contract with ATS Partners, LLC (ATS) for 217,800 upland (xeric) WG tubelings, utilizing their seed @ $129.90/M. Also, in an effort to enhance groundcover habitat species diversity (as it adds restoration value, especially at our mitigation sites), the District plans to contract grow/purchase 50,000 tubelings each of the following: 1) Rayless Sunflower (Helianthus radula; 2) Swamp Sunflower (Helianthus angustifolius); and 3) Sneezeweed (Helenium autumnale).

Last, the District plans to plant 12,000 endangered groundcover plant species, which are being grown at DEP’s nursery. These include purple silky scale, white topped sedge, chaffhead, and two state threatened species, Curtis Sand Grass and Panhandle Meadow Beauty.

Finally, I will leave you with a comment by Steve Gilly (DOF-Andrews Nursery). Upon delivering seed recently, Steve looked at me and said, “I never believed when I was in high school that I would go into forestry and once in forestry, I would have never believed that I would be growing wiregrass and toothache grass for a living, my how our times have changed!”
Short-Term Impacts of Laurel Wilt on Redbay (Persea borbonia [L.] Spreng.) in a Mixed Evergreen-Deciduous Forest in Northern Florida


We examined the immediate effects of laurel wilt on redbay (Persea borbonia [L.] Spreng.) and stand-level characteristics in a mixed evergreen-deciduous forest at Etoniah Creek State Forest in Florida. Percent mortality of redbay in the overstory, sapling, and seedling layers were 100%, 30.2%, and 1.8%, respectively, in the year after the first signs of infection were observed. The diameter distribution of redbay shifted from a reverse "J" pattern to a distribution where the only remaining living stems were < 4-in. dbh. Mortality of redbay also resulted in significant reductions in overstory redbay importance values and stand-level density and basal area. Our results suggest that (1) laurel wilt has a more pronounced effect on overstory redbays than smaller stems and (2) redbay mortality caused by laurel wilt can result in modest but significant changes in stand structure. Copyright © 2011 American Chemical Society.

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Upcoming Events

- Call for papers and posters!- Natural Areas Conference. Abstracts must be received by May 27th, 2011. We invite papers and posters that focus on planning and management associated with the uncertainty of climate change and other modern challenges in natural area management. Students can compete for presentation awards. Visit www.naturalarea.org for conference information and updates related to accepted abstracts.


- Natural Areas Training Workshop– Plant Communities of Florida, May 3-5, 2011 at the Disney Wilderness Preserve, Kissimmee and Crystal River Preserve Park. To learn more go to http://nata.snre.ufl.edu/registration.htm

- Forest Stewardship Workshop / Hike: Tree / Plant Identification May 4, 2011 from 9 am - 3 pm ET, Morningside Nature Center, Gainesville, FL. This program will give landowners an opportunity to learn to identify some of the tree, shrub and herbaceous species on their forest properties. $10 fee includes lunch and materials. Details and registration online at: http://fsp-workshop050411.eventbrite.com/

- 2011 Wildlife Expo, July 31, 2011 at UF-IFAS West Florida Research and Education Center, Milton, FL. For more information please contact Ms. Robin Vickers at (850) 983-5216 x 113 or rvickers@ufl.edu
Upcoming Events

- **2011 National Bobwhite Technical Committee Meeting, August 9-12, 2011** in Tallahassee, Fl. The meeting will be held at the Doubletree Hotel in Tallahassee with a field trip into plantation community of the Red Hills. For more information please contact Charles McKelvy at Chuck.Mckelvy@MyFWC.com

- **Mark your calendars!– Natural Areas Conference on November 1-4, 2011.** An exceptional conference experience! Located in the Florida Panhandle, the unique landscapes will provide an exciting conference setting and diverse field trip opportunities. The Florida State University Conference Center offers a state-of-the-art venue to share research through numerous technical symposia as well as thought-provoking invited and contributed plenary and paper sessions on stewardship, management and research. The extensive program also features special sessions including an all-day Cogengrass workshop and State and Federal Natural Area Roundtables; our co-host NAEPPC will feature dedicated tracks for sharpening the-saw in invasive species management. View the call for papers at [http://www.naturalarea.org/NaturalAreasConferenceAnnouncement.asp](http://www.naturalarea.org/NaturalAreasConferenceAnnouncement.asp)