

Accomplishments of Large-Scale Dune Plant Community Restoration Project Funded by a grant from the Savannah, Santee, Pee Dee Resource Protection Fund

The Carolinas Beach Vitex Task Force hit the ground running following the awarding of the grant funds.

On August 3 a news conference was held on the beach at Pawleys Island in front of a lot that had the vitex killed and removed in a pilot project. Dave Gordon of the Fish and Wildlife Service briefly described the SSPD grant program, Chuck Gresham of Clemson described the proposal that the Task Force had submitted, Betsy Brabson of the Carolinas Beach Vitex Task Force announced that the proposal had been funded, and Bill Otis, Mayor of the Town of Pawleys Island commented on the importance of the project to the Town. Representatives of several local newspapers and television stations attended and reported the event. Shortly following the news conference, the Town of Pawleys Island sent certified letters to beachfront property owners advising them that vitex was on their property and they were in violation of a Town Ordinance. The letter also suggested they contact the Baruch Institute about being included in the removal project. Similar letters were sent to beachfront property owners at Inlet Point on Litchfield Beach, and the newsletter for the Debordieu Colony Community Association carried an article about vitex and the SSPD grant.

On September 6, a full-time field technician was hired to oversee the field work of the project. Mr. Hal Drotor brought years of experience in the landscaping business and experience dealing with the public at large to the project. His first task was to visit about 130 properties from Myrtle Beach to Sullivans Island and fill out an evaluation form for each property noting size, location, and composition of the vitex population if present. From these forms, a spreadsheet was compiled and contact information added.

During September and October, approximately 75 letters were sent to owners of properties on the 'A' list of lots with a high ranking for vitex eradication. Two signed copies of a letter detailing the eradication and restoration procedure and timeline were sent and the owner was requested to sign and return one copy. Signed letters were quickly returned from all but two property owners, and these two repeatedly gave their verbal consent.

Ten Forest Management students and one Horticulture student at Horry-Georgetown Technical College were hired on a per-hour basis to inject the vitex. The students work in the afternoons when their class schedule allows and on any given day there will be from one to seven students injecting the vitex under the supervision of Mr. Drotor. Soon after being hired, all involved with the project received pesticide application safety training at Horry-Georgetown Tech provided by Clemson Extension Agent Carlin Munnerlyn.

Based on a pilot project installed in the fall of 2005 and evaluated in the spring and summer of 2006, the vitex is being killed by a 'hack and squirt' technique commonly used to kill trees. Half of the crew uses a small machete to wound the vitex stems close to the ground at the root crown, and at subsequent locations where that stem may touch the ground and root. Immediately after wounding, a second crew member will daub the wound with a foam rubber paint brush with a long handle that is loaded with an herbicide

solution. The herbicide is held in the slit wound and quickly take into the stem where it enters the phloem and xylem. The herbicide is translocated to the growing stem and root tips where it prevents growth. This technique was chosen because the herbicide is being carefully transferred from the bucket to the stem with very little if any hitting nontarget vegetation. On a few sites, there is sea of small vitex stems where this technique would be very time consuming to use. For these sites we have attached a cone-shaped wind shield to the tip of a spray wand then place the cone over the vitex and spray the vitex leaves inside the cone. This effectively prevents drift of the herbicide to non-target vegetation.

Once the crew has injected the vitex on a property, a post card is sent to the property owner advising them of what was done, when, and want the owner my expect to see in the next few weeks. The post cards serve to notify the owner of what was accomplished, and to assure the owner that they are 'in the loop' of this project.

In November both Mr. Drotor and Chuck Gresham passed the examinations to be a Non-commercial Certified Pesticide Applicator. This certification not only satisfies state and federal law, but more importantly, ensures the safety of the workers and non-target vegetation of the lots selected for vitex eradication.

During the course of accomplishing the vitex eradication, one property owner was so pleased with the work that he sent a \$200 contribution to the Baruch Institute to purchase supplies. Also the BASF Corporation provided a gallon of the expensive herbicide used in the 'hack and squirt' and foliar applications and the Task Force paid the field crew while the paperwork was being completed to get them on the Clemson-administered grant payroll. During the past three months, a list of all known locations of vitex has been compiled, and most of these sites evaluated. The knowledge of vitex locations and the efficient accomplishments of the field crew has prompted work on a continuation grant to eradicate vitex throughout coastal South Carolina. The Town of Pawleys Island has favorably considered a request for \$15,000 'seed money' to be leveraged when approaching conservation-oriented local foundations. Currently we are putting together a budget to locate and eradicate vitex in all coastal counties of South Carolina.

Finally there has been intense media interest in the project. The Moultrie News covered the eradication work on Sullivans Island and the Coastal Observer, Georgetown Times and WPDE Television has reported the eradication work in Georgetown County. The South Carolina Sea Grant agency will publish an article about the project and the BASF Corporation and Southern Living each sent a reporter and photographer this summer to do articles about vitex and its removal for their magazines.

On November 2nd and 3rd, Chuck Gresham attended the 33rd Annual Conference on Ecosystems Restoration and Creation hosted by the Hillsborough Community College in Plant City Florida and presented a paper on the ecology and management of vitex. Although most of the projects presented focused on aquatic and marine ecosystems, the audience was very interested in our work on vitex. At the conference, Chuck talked with representatives of the Brooksville Plant Materials Center, a part of the Natural Resources Conservation Service, about providing field trials of two accessions of sweetgrass. They agreed to grow sweetgrass plants for inclusion in our dune restoration if we would maintain records planting and success records.

Field work injecting the vitex will stop in mid-December because the plants will not effectively translocate the herbicide during cold weather. During the winter we will offer a workshop to all local landscaping companies and explain and demonstrate our techniques. If these companies are asked to eliminate vitex from a property, they can benefit from our research and do a thorough safe job the first time.

In the spring, the dead vitex will be removed from the treated lots, and chipped on site. The chips will be blown into the bed of a pickup and taken to the landfill for composting. Once cleared, the lots will be planted with a 70%/30% mixture of sea oats and bitter panicum and the owners given a report of what was done and what they can do for the next three years to ensure the success of the restoration.