

RESTORATION OF BAMBERG OXYPOLIS BAY PRESERVE

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As was noted briefly in the last edition of the SCNPS newsletter, we have received a small grant of around \$10,000 from US Fish and Wildlife Service's Partners for Fish and Wildlife Program for restoration of our Bamberg Bay property. This is the 52 acre site given to us by Nature Conservancy. The most critical feature is the wonderful diverse depression wetland (apparently it is a Carolina Bay) with the federally endangered *Oxypolis canbyi* (Canby's Dropwort). Surrounding uplands were pine plantations but with some residual understory diversity of longleaf pine and oak hickory type plants.

Restoration activities are now underway. Registered Forester Guy San Fratello arranged a logging operation on the uplands. As a consequence the plantation pines have been removed except for a small section on the southeast side of the property. This section had a nicely developing oak-hickory understory and was left to develop into an oak-hickory pine forest. The logging operation netted approximately \$18,000. These funds will be used to augment the restoration, including the 100% match required by our Partners contract. This means that total funds available for restoration are now approximately \$28,000, a rather substantial total.

Guy was so helpful with the logging operation that we have asked him to help us further with land management activities. This arrangement is not yet formalized though he is providing advice. One immediate issue is what to do with the rather substantial amount of logging debris including many small downed hardwood trees cut and left by the loggers. Options are to burn up all the debris or to chip and then burn. The advantage of the latter option is that it may reduce smoke, a potentially serious issue since the property is located adjacent to US Highway 301, a 4-lane road. By reducing smoke, chipping may increase the number of available burn days, potentially a critical factor for the restoration. On the other hand a chip operation may be expensive. Guy is checking costs and a decision on whether or not to chip will be forthcoming.

Whether we chip or not, the first burn will most likely take place sometime this winter when conditions are appropriate. Following the burn we will begin to augment the upland vegetation through seed and seedling introductions. We will start by out-planting tubelings of longleaf pine itself. Our initial target densities will be very low, probably not more than 20 plugs/acre. The goal is to begin the process of restoring a longleaf canopy, but one appropriate to open natural woodland rather than plantation. Also out-planted this winter will be certain legume species for which we have already collected seeds and can anticipate fall germination. A substantial seed collection operation aimed primarily at grasses and Asteraceae is planned for late fall and winter. Seed will be hand collected and machine harvested. Anyone wishing to participate should contact me with an e-mail address and I will send announcements when the dates are certain. Those who have already contacted me and offered help are assumed already to be on the list. Given the high price of gas we will reimburse gas and perhaps other expenses to those who ask. If there is enough interest we will arrange van rentals and provide transportation to the seed collection site.

Plug propagation will take place mostly at American Tree Seedling, a GA company that we have worked with previously. Several other GA firms have also recently demonstrated success in growing longleaf ground layer plants. SC growers may be considered on a trial basis. Most of the plugs grown from this winter's seed harvest will be outplanted next fall. Again, a large volunteer effort will be needed since we anticipate out-planting 10,000 or more plugs.

Another important restoration activity that will need to begin soon is to remove the numerous hardwood trees around the margin of the Bay. These stems are in or adjacent to the wetland and it was considered too risky to take them during the logging operation. Most likely we will need to hire a crew to hand cut and remove these stems, another potentially time consuming and expensive operation.

Lastly, there is the very delicate matter of removing hardwood and overly dense cypress regeneration from the Bay itself. This needs to happen if we are to maintain the federally endangered *Oxyptolis canbyi* population. On the other hand a crude approach involving much dragging and trampling may destroy what we are trying to save. The two of us plan personally to carry out this operation beginning with the woody plant encroachment in the immediate vicinity of a few of the *Oxyptolis* clusters. Extreme care will be used and results will be monitored carefully.

A final activity that deserves some mention is plant community level monitoring. Unfortunately there is no money budgeted for this activity. However, if there is enough volunteer interest we will attempt some monitoring of plug survival and plot based assessment of direct seeding effectiveness, as well as background community changes.

In sum, there is much to do and it will be a big job. It will not, however, be entirely new and experimental. Over the last couple of years similar activities have been carried out at several Partners sites in GA and AL and much valuable experience has already been gained. One of us (JG) has been intimately involved with these prior restoration attempts. The other (CE) is providing valuable input on soils and hydrology that will guide the restoration. Guy San Fratello is an excellent land manager. John Brubaker, Dr. Richard Porcher, and perhaps other SCNPS members are engaged in restorations on their own lands. We are reasonably confident of success in our Bamberg Bay Project.