



Joseph Pines Preserve Purchased!

The past two years have been an exciting period in the development of Meadowview's Joseph Pines Preserve. In mid-November, 2004 Meadowview settled with Brad and Marsha Whitehead on purchase of the Joseph Pines Preserve. The Whiteheads had been working with Meadowview in developing and supporting the preserve by allowing us to begin restoration and re-introduction work, installing a well and pump for drinking water, and providing a low cost lease (\$12.00/year!) while money was raised to purchase the property.

We put down \$42,000 on a purchase price of \$100,000 for the 100 acre tract with the balance taken out as a loan from our local Union Bank and Trust in Caroline County, Virginia. Almost all the money raised to date (over \$60,000) has come from the generosity of our members. This level of sponsorship reflects the dedication and commitment that our members have to preserving the longleaf pine/pitcher plant ecosystem in Virginia. All donations are important and help us reach our goal of paying off the preserve. Several members have made very generous donations (over \$5000) during the past two years. All donations since 2003 have been matched by our anonymous donor. Ongoing donations are necessary both to pay our monthly loan (\$427) and to cover maintenance and restoration expenses at the preserve.



Brad Whitehead and Phil Sheridan sign contract for purchase of Joseph Pines. Damian Dwyer, who provided settlement services pro-bono, looks on.

During the summer of 2004 we hired Central Virginia BMP Services and H&H Forest Management to help us restore 8 acres of the preserve to native Virginia longleaf pine. We could not perform a controlled burn until competing hardwoods and loblolly pine were mulched by a skid-steer mulcher. Then the Virginia Department of Forestry installed firebreaks as part of a training exercise. (cont. on pg. 4)



Skid-steer mulcher preparing site.



Virginia Department of Forestry installing firebreaks.

Overwintering Carnivorous Plants Outdoors in Northern Climates

By Jim Robinson

Overwintering temperate-climate carnivorous plants (CP's) outdoors in the south is generally nothing special. A little mulch, if any, is usually all that's needed to get them through the occasional freeze. But the harsh winter conditions in northern climates present quite a challenge to outdoor growers of temperate-climate CP's. People typically grow their CP's in pots standing in saucers of water. The pots cannot simply be brought indoors for the winter due to the winter chill requirements that even pitcher plants native to the Gulf Coast have. Most hobbyists have way too many pots to overwinter in the house, anyway. With the following procedures, pots of pitcher plants, Venus flytraps, sundews, etc. can be successfully overwintered outdoors in the northern U.S.

When the fall cool-down begins in late Oct.-early Nov. prepare an area in the garden as if preparing for seed sowing. Starting in the center of the prepared area dig one hole at a time and sink each pot of CP's up to the rim. Cluster the pots together, leaving about an inch between pots. During this procedure, be sure no garden soil gets into the pots accidentally. CP contact with garden soil over winter can be lethal, especially to Venus flytraps. Prior to the garden prep, pick up a large garbage bag or two full of straw or hay at your local feed supply store. Perhaps pick up a Halloween bale of straw. Avoid using autumn leaves as a winter mulch, due to their tendency to mat down. Take a small amount of straw and tamp it down between the pots. This helps prevent soil from washing in. Next use any combination of hardware cloth and chicken wire to build a fence around the area. Hardware cloth should keep troublesome mice out. Finally, use a sprinkling can to water in your "winter garden."

At this point your CP garden is good down to about 28 degrees F. As night time temperatures drop, begin feathering layers of your straw or hay over the area. A couple of inches of mulch should be good to about 20 degrees. Add two or three inches more for the teens. During the late fall period there are frequent warm-ups. It is best to remove the straw mulch whenever night time temps remain above 30 degrees. This is especially true for Venus flytraps and butterworts. They prefer open air when they can get it.

Eventually, deep winter will move in. When overnight lows are predicted below 10 degrees you need to have a full foot of mulch in place. Snowfall on top of this is good. You can even shovel some snow on. In some winters you may have this in place for two months or more. Often there may be a mid-winter warm-up. You should probably remove most of the mulch at this time, especially from the flytraps. I keep my flytrap pots at the edge of the area for easy servicing. If the winter is dry, water the area in again as needed, but only during warmer weather.

During the long winter you can still have some indoor fun with your CP's. While sinking the pots in the garden area hold out a few favorite pitcher plant pots for forcing indoors. Gulf Coast species like *Sarracenia alata* and *S. rosea* are especially good for this. Keep the pots in their saucers of water outdoors as fall temps descend. When night temps drop below about 30 degrees, drape old bed-sheets over the hardware cloth enclosures you probably have around them. This prevents the pots from freezing solid—something that must be avoided. When temps drop below about 25 degrees, you'll need to bring the pots in temporarily and place them on a designated window sill. The ideal treatment is that when morning arrives your pots for forcing have the peat surface just frozen while the pots are still standing in water. To break the plant's dormancy, there needs to be an uncertain number of hours spent right around the freezing mark. This must be done without freezing the pot solid which may be lethal to the plant.

Overwintering (cont.)

By mid-Jan., your group for forcing indoors should have accumulated enough cold hours to be brought in for the winter. Your Venus flytrap should also be brought in at this time or sooner since their winter chill requirement appears to be minimal and prolonged cold can be damaging. Choose a window sill where they can get the most possible hours of full winter sun. Clean the pots up and then position them in saucers of water. You can also place plastic produce bags over your pots for a greenhouse effect (especially helpful for Venus flytraps). As the Jan. sun strengthens, watch for your CP's to begin their growing season early. Often this begins with flower bud emergence. By late Feb. you may have pitcher plants in full bloom on your window sill. This is quite exciting when you see snow pack out the window.

Around April 1, it's time to retrieve your collection from the garden and return the pots to their summer set-up. The pots will need a good cleaning and the straw can be rebagged and reused after letting it dry out on the lawn. Pitcher plants can often be plagued by rot or stunted growth caused by fungus. A thorough soil soak with Bonomyl fungicide at this time will remove the problem for the year. The indoor group can come back out after danger of frost is past. After a long winter you may incur a loss or two, but overall the system works quite well.

Jim Robinson's Winter Pitchers in Bloom



Joseph Pines (cont.)



Photo of prescribed burn at Joseph Pines by Mike Anderson.

Once the mulched pine and hardwood was dry we were ready for a prescribed burn. The burn was needed to both remove the woody debris and prepare the site for planting of longleaf pine. Prescribed burning is an essential component of longleaf pine restoration since the fire controls competition and returns nutrients to the soil. Longleaf pine is fire resistant and has a competitive advantage over loblolly pine and hardwood species.

During March 2005 volunteers Mike Hammond, Dave Evans, Adam Crary, and Joie Patterson helped plant over 2000 native Virginia longleaf pine on the preserve. These seedlings came from seed collected and raised by Meadowview from native Virginia longleaf pine. Both Dave and Mike took vacation time to plant the trees along with Meadowview director Phil Sheridan. We battled everything from thunder-snow to high winds to get the seedlings planted but the results were well worth it. To date the plants are flourishing and we look forward to more planting in March 2006. Volunteers welcome!

Phil Sheridan, Joie Patterson, and Mike Hammond prepare longleaf pine plugs for planting.



Mike Hammond planting longleaf pine.



Longleaf pine seedling at Joseph Pines

Unique Plant Discovered on Joseph Pines Preserve

A population of several hundred dwarf sundew, *Drosera brevifolia* Pursch, was found in a fire break on the Joseph Pines Preserve in May 2005. Despite diligent search for this species on our preserve, Meadowview biologists were unable to find this plant until a fire plow apparently released a long dormant seed bank. We are excited by this find since dwarf sundew is part of the biodiversity we are trying to restore at the preserve and the plants appearance bodes well for the return of other rare flora. Formerly listed as a rare species in Virginia dwarf sundew is now known to be local with an ability to disappear below ground during the hot dry summer months.



Dwarf Sundew in Sussex County, VA
photo by Marc Milne

Meadowview Conferences in 2005



Mark Hains reviews longleaf pine restoration techniques at Joseph Pines Preserve. Photo by Mike Hammond.

Longleaf Pine Workshop at Joseph Pines Preserve

Held on Saturday, September 24th, 2005 in conjunction with Mark Hains and John McGuire from the Longleaf Alliance. Over 20 people attended this workshop, some coming from as far away as North Carolina. The workshop covered historical aspects, site preparation, herbaceous release, fire management, planting methods and seedling quality, and ecological and economic benefits of longleaf pine. Participants included landowners, state game officials, conservationists, and boy scouts. The conference was partially funded by both IFCO and Meeks Tree Farm of Kite, Georgia.

Identification, Restoration, and Synthesis of Seepage Wetlands In Maryland and Virginia

March 11, 2005

Over 50 people attended the symposium held at the spacious Caroline County Community Services Center Auditorium. Delegates included numerous state conservation officials from Maryland and Virginia as well as landowners, citizens, and professional biologists. Some key points brought to light at the symposium by Phil Sheridan (Meadowview) and Rod Simmons (Maryland Native Plant Society) were the large number of rare plant taxa found in seepage wetlands and the importance of pitch pine as a key indicator species of this wetland type on the inner coastal plain and piedmont of Maryland. Successful efforts have also been made in the State of Maryland by Keith Underwood creating seepage wetlands and restoring rare plant taxa and white cedar ecosystems. The involvement of students raising, experimenting with, and reintroducing rare plants in Maryland was discussed by Steve Barry, director of Arlington Echo Outdoor Education Center in Millersville, Maryland.



Keith Underwood giving talk on designed seepage wetlands. Photo by Al Gustin.

Events in 2006

- **March 25 - Native Plants: Cultivating a Sustainable Future. The 20th Annual Lahr Symposium and Native Plant Sale at the U.S. National Arboretum.**

10:00 A.M. - 4:00 P.M.. Come hear a variety of fascinating speakers and see the beautiful grounds on the National Arboretum while at the same time purchase native plants from a variety of vendors, including Meadowview! More details at www.usna.usda.gov/Education/events.html or call Program Registrar at (202) 245-4560.

- **May 20 - Spring Garden Day at Green Spring Gardens, Alexandria, VA.**

9:00 A.M. - 3:00 P.M. This beautiful mini-botanic garden is worth seeing and you can buy a variety of plants at the same time. One of the big fund raisers for Meadowview. See www.greenspring.org or call Nancy Olney at (703) 642-5173.

- **June 1 - 5, The 6th International Carnivorous Plant Society Conference**

Frostburg State University, Frostburg, Maryland

Formal presentations by noted scientists, horticulturists, undergraduate and graduate students on all aspects of carnivorous plants. Plant vendors, poster sessions, and a Science Art Workshop for pre-college students and an art contest on artwork with a theme of carnivorous plants. Two field trips are proposed. A local field trip is within the distance of 20~40 miles (or longer) to visit *Sarracenia purpurea* and some sundew species. Native pitcher plants were rescued prior to flooding for the creation of High Point Lake and transplanted to several sites about 60 years ago. Each transplanted population has had varying degrees of success. Another field trip will be to the Meadowview Biological Research Station on June 5.

See www.frostburg.edu/6thICPS/index.htm or call Doug Darnowski or Hongqi Li at (812) 941-9657 and (301) 687-4168 respectively.

- **June 5 - Meadowview Open House and Ten Year Anniversary**

10:00 A.M. - 4:00 P.M. 2006 marks the completion of ten successful years since the founding of Meadowview. We hosted the Eastern Carnivorous Plant Conference in June 1995 and used that event to give our group a name. The name Meadowview comes from the pond where our headquarters is based (Meadowcreek Pond) and the surrounding views of wet and dry meadows. Over this ten year period we incorporated, got our non-profit status, hosted numerous meetings, published many papers in peer-reviewed scientific journals, made significant progress on restoration objectives, and purchased our first preserve. Come celebrate our success and view the collection, grounds, and artwork. Plants will be available for sale. See our website for directions at www.pitcherplant.org or call (804) 633-4336.

Events in 2006



“Wow, look at those yellow pitchers plants on Joseph Pines Preserve!” Photo by Margie Sheridan

boots, loose clothing, and sun protection for an extensive hike. Bring a chair for your comfort and a water bottle. Visitors are required to sign a release prior to the tour and we ask you **RSVP two days before the tour date**. We will make accommodations for people with disabilities on the tour but ask that you let us know in advance to properly prepare for your visit.

- **June 6 - 8, The Ecology and Management of Atlantic White Cedar (*Chamaecyparis thyoides*) Ecosystems**

Holiday Inn - Boardwalk in Atlantic City, New Jersey

A symposium on the Atlantic white cedar ecosystem with field trips on June 8th.

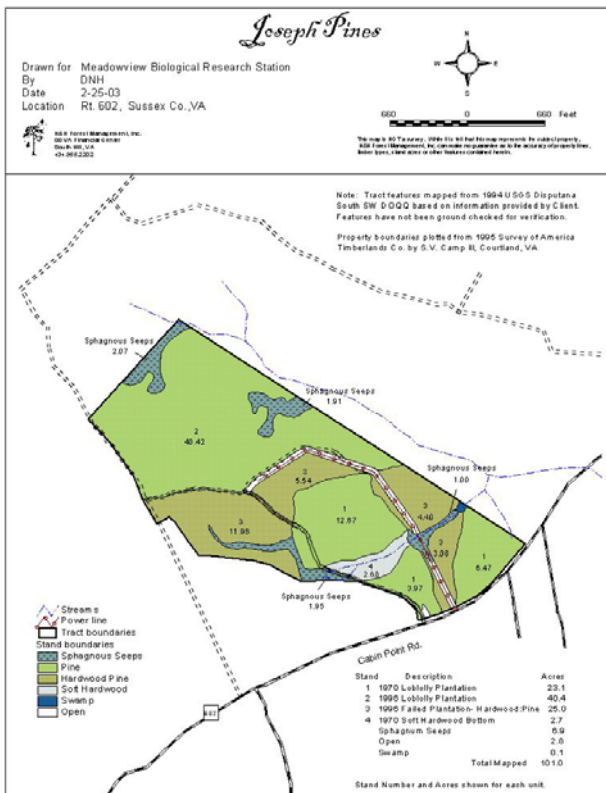
See <http://loki.stockton.edu/~wcedars/>

- **June 9 and 10 - Joseph Pines Preserve Tours**

10:00 A.M. - 2:00 P.M.

For 2006 we are offering two tours of the Joseph Pines Preserve, one on a weekday and one on the weekend.

We hope you can make one of the tours and see our reintroduction and restoration work to date. Bring a friend and a picnic too! We recommend you wear



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SNOW PITCHERS!!!



Kathy Pusey