Louisiana Native Plant Society

News

Summer 1999

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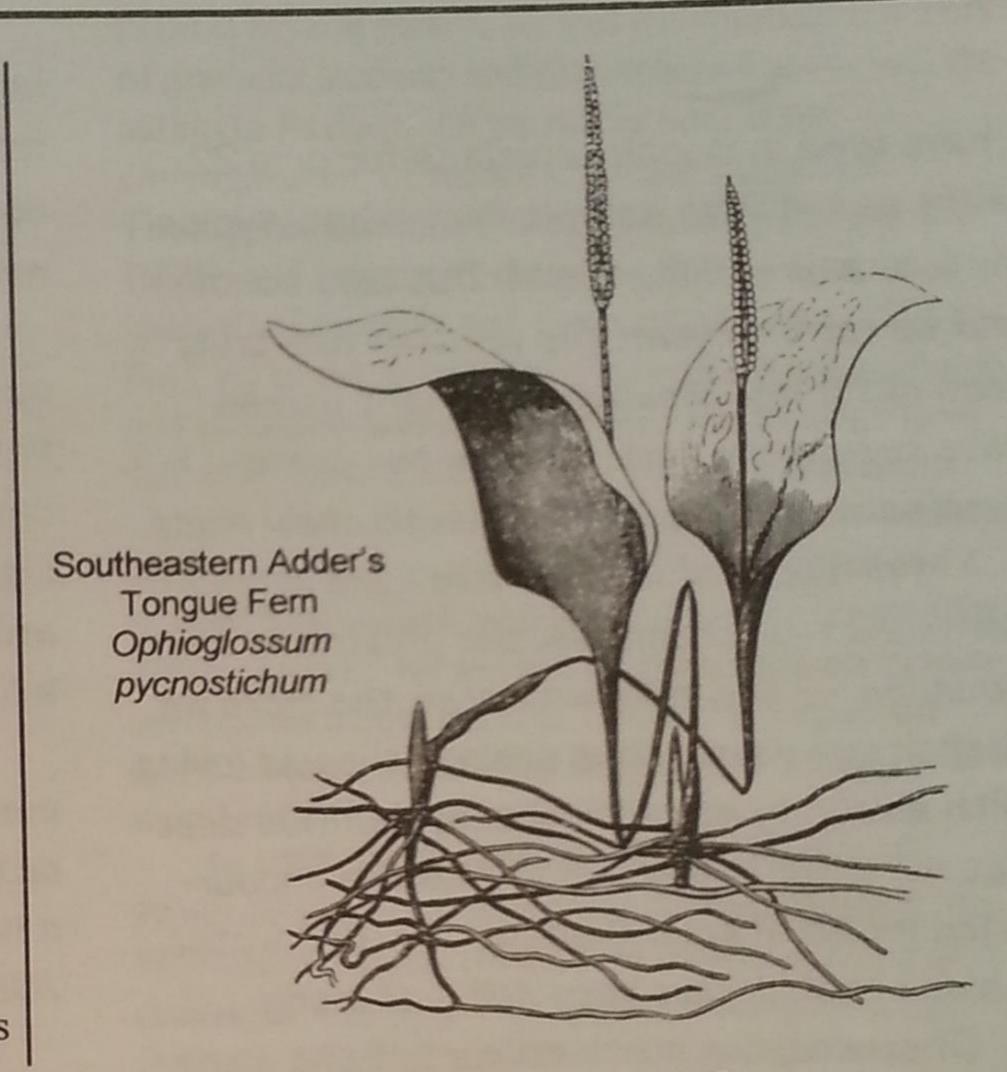
Exotic Fern Threatens State Waterways

Ed. note: This article is a condensed version of one written by Colette Jacono of the US Geological Service, Gainesville, Fla. The full article, pictures, and further information can be found at http://nas.er.usgs.gov/ferns

The latest fast-growing exotic plant poses a significant threat to Louisiana waterways and wetland habitats. Giant salvinia, Salvinia molesta, is a floating fern that reproduces vegetatively at a very rapid rate. It is a native of Southern Brazil and is expected to cause problems throughout USDA hardiness zones 8, 9, and 10. The most serious threats to date are populations within the Toledo Bend Reservoir. Giant salvinia, which is also known as Kariba weed, aquarium watermoss, or African pyle, was

found outside of cultivation in the United States in 1995 at a pond in southeastern South Carolina. The 11/2 acre infestation was eradicated within a year, before plants had spread locally. A handful of giant salvinia was collected during July 1998 in Louisiana at Bayou Teche directly within the town of Breaux Bridge. Plants are believed to have been carried in on a

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Ophioglossologist Honored

Dr. R. Dale Thomas, curator of the NLU Herbarium was honored in the Fall/Winter 1998 issue of *Res Scholaris*, the academic journal of the faculty of NLU. He is featured on the cover of the magazine. The accompanying article covers his personal background and his truly remarkable professional achievements.

When Dr. Thomas arrived in Monroe in 1966, the herbarium at the college contained 250 specimens. Even though he had been collecting plants in the years prior to that, he began his collecting at Northeast at number one. Today, the NLU Herbarium has over 400,000 specimens and is ranked 30th among the top 100 herbariums in the US. Dr. Thomas' collection number is nearing 160,000. He has collected more specimens than anyone in the history of botany. He has exchanged plant specimens with over 200 different herbaria throughout the world. This includes all fifty states, Argentina, Mexico, Chile, Brazil, Canada, Japan, Malaysia, Australia, Norway, Finland, Denmark, Germany, Wales, England, The Netherlands, Belgium, and the Philippines. Of the top herbaria in the US, he has deposited and exchanged plants with 86 of them.

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Prose from the president's pen... Marion Drummond

I have lived in South Louisiana for only 22 years so I still do not yet know what 'typical' winters and summers are! But last summer, and so far this year, the weather has truly been different. Heat and drought stress have been more noticeable on the exotics, but even some natives have begun to show signs.

For those of us who have hard city water laced with chemicals, the problem is compounded --- the more we water, the more we drench our plants that are mostly acid loving with alkalinity and with chemicals. This does not make for happy plants and has encouraged me to start collecting rain (ha!) water, which I should have been doing all along.

Of course, the northern part of the state has been blessed with abundant moisture, so I hope you folks are enjoying it. We are envious of you.

The past winter was so mild it gave our plants a jump start on the season and as a result so many species have bloomed and fruited way ahead of schedule. The ones most noticeable to me, either at Hilltop or in my own garden are the Hop Hornbeam (Ostrya virginiana), Oak-Leaf Hydrangea (Hydrangea quercifolia), Mamou (Erythrina herbacea), Mayhaw (Crataegus opaca), the Lynn Lowrey Yaupon (Ilex vomitoria `Lynn Lowrey'), and Indian Pink (Spigelia mari-

landica). I would be interested in hearing from any of you who have noticed any unusual such patterns due to the different weather this past year.

I have not heard from anyone with requests for field trips, speakers, or subjects but would very much like some input so we can address your interests. I am considering an October field trip to the Tunica Hills area. We have not done visited that area in a long time. Comments?

I would be happy to hear from you via e-mail --- m.drummond@worldnet.att.net --- or telephone --- 225-274-9674 --- or even a note at 1891 Erlanger, Baton Rouge 70816.

I hope the summer is kind to your gardens.

Marion Drummond

You can e-mail Marion Drummond at m.drummond@worldnet.att.net and Terry Erwin, the editor, and Beth, the LNPS Secretary at kalorama@centuryinter.net



Tulip poplar, Liriodendron tulipifera

Are Your Dues Due?

Check your mailing label. If the number above your name is highlighted, your dues are due with this issue. Please send your dues to the treasurer, Jessie Johnson, 216 CAROLINE DORMON ROAD, SALINE, LA. 71010. Remember to send us your change of address. The newsletter is sent bulk mail and will not be forwarded to you by the postal service.

DO NOT SEND DUES TO THE NEWSLETTER ADDRESS!!!

Student or Sr. Citizen	\$5
Individual	\$10
Family	\$15
Organization	\$25
Sustaining	\$50
Corporate	\$100

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The extensive documentation of plants that the NLU Herbarium represents has brought the world experts in several genera, as well as countless numbers of graduate students and researchers from across the nation to its door. Of particular note is the *Ophioglossum*, or Adder's Tongue Ferns. Dr. Thomas became interested in these tiny ferns in the 1970's and began an extensive effort to document species in Louisiana and surrounding states. His efforts led to the discoveries of numerous state records and variations within the species. His findings have been published in numerous academic publications.

Dr. Thomas has had numerous graduate students work under him over the years. He has never had a student who studied with him fail to get accepted for doctoral work. He has had doctoral students in many universities across the US. One of his former students is on the profesional staff at Harvard and is a world authority on nomenclature.

In 1988, Dr. Thomas published 100 Woody

Plants of Louisiana with Dixie Scogin. In 1998, the
final volume of The Atlas of the Vascular Flora of

Louisiana was published by the Louisiana Natural

Heritage Program, co-authored with Dr. Charles

Allen.

Dr. Thomas was elected to the vice-presidency of the Louisiana Native Plant Society this past January. He is a charter member of that organization, has often served on its board. He is a popular field trip leader for both the LNPS and the Arkansas Native Plant Society.

The Louisiana Native Plant Society News is published four times per year. It is the official publication of the Louisiana Native Plant Society. The editor welcomes articles, notices of upcoming events, and book reviews of interest to native plant folks, as well as illustrations, poems, and prose. Deadlines for submissions are June 1st, September 1st, December 1st, and March 1st. Send any address changes to LNPS News, P.O. Box 126, Collinston, La., 71229.—Terry Erwin, editor.

Columbia/Copenhagen Field Trip Report by Joan Moncrief

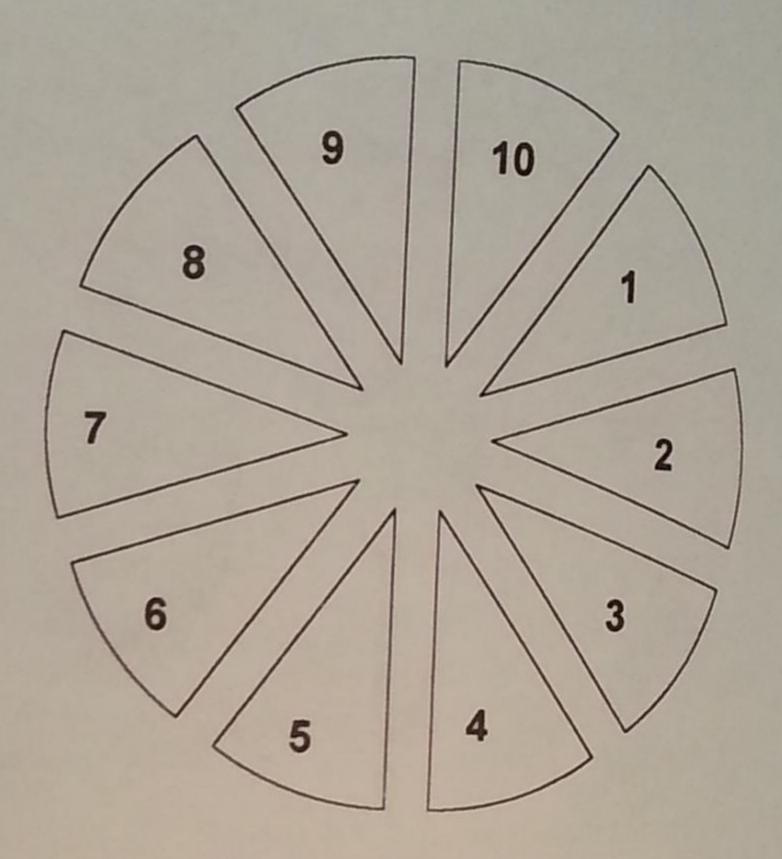
The weekend began for the hardy on Friday evening, April 9, with camping on a beautiful bluff overlooking the Ouachita River at Dr. Harry Winters' Nature Preserve in Columbia. Since we were there in June, 1998, trails have been developed to the flood plain area and more plants have been labeled.

Saturday morning we wandered along the Dr. Charles Allen Nature Trails. Armadillos had been busy rooting up the paths in their search for food; fireants were dutifully building their nests. Along one path, a mother opossum had been killed by an unknown assailant. The two remaining young (about two months old) were adopted by participants. Forester and surrogate mother, Jackie Duncan of Boyce, will keep us informed about the care and raising of an infant opossum. Hidden in dense foliage, a Hooded Warbler sang to proclaim his territory.

A pleasant breeze rustled through the tender, new leaves of the trees. Only a few were in flower.. The conspicuous dangling white flowers of Bigleaf Snowbell, Styrax grandifolius, contrasted with the tiny white flowers of Deciduous Holly, Ilex decidua. Most striking of the flowering plants was Red Buckeye, Aesculus pavia, with its terminal cluster of deep red tubular flowers.

In the woods were scattered patches of Trillium, Trillium ludovicianum, Mayapple, Podophyllum peltatum, and Solomon's Seal, Polygonatum biflorum. A lone specimen of Coralroot, Corallorhiza wisteriana, blended so well with the humus that we almost did not see it. Also, the single leaf of a Southeastern Adder's Tongue, Ophioglossum vulgatum, could easily have been missed.

A circular study plot of plant succession during a ten-year period has been developed in a cleared area. The entire site was disked earlier in the year and allowed to grow. The most abundant plant in April was Early Buttercup, *Ranunculus sardous*. Each year, one less wedge of the succession wheel will be disked. By standing in the hub and slowly turning,



Succession Wheel

the entire succession period can be viewed.

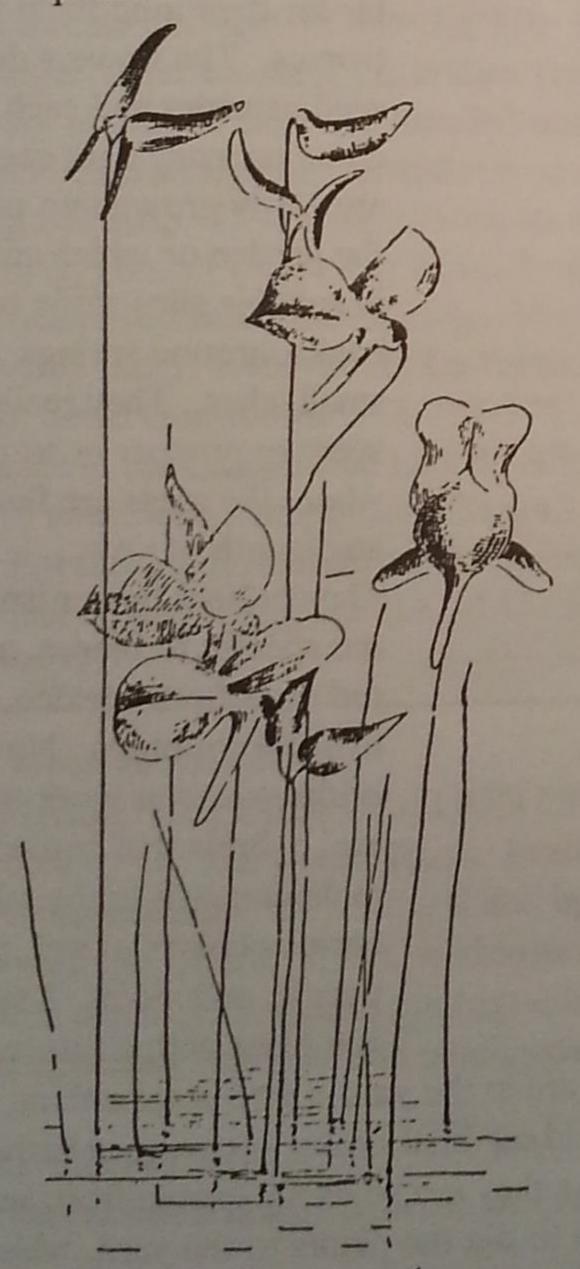
Whales in Northeast Louisiana? Sharks? Saturday afternoon we drove south of Columbia to Copenhagen. The community, known for its prairie and its rare plants, is also, one of the most famous fossil sites in Louisiana. We met Dr. Gary L. Stringer, Department of Geosciences, Northeast Louisiana University. Dr. Stringer, who has studied the site for 25 years, shared with us a brief ancient history of the area. During the Eocene, 38 million years ago, a warm sea covered the land. A widely diverse invertebrate and vertebrate fauna lived in these waters and left their remains in the sediment. Over 150 years ago, large vertebrae of the whale, Basilosaurus cetoides, were found and initiated the study of the locality. Our search for fossils along ravines eroding toward the Ouachita River found mainly broken oyster shells, but a few vertebrae fragments, a few shard's teeth, many small bivalve species, and several coral species.

A pleasant evening ended an interesting day.

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Dinner at the restored Schepis Museum in downtown Columbia was an abundant buffet prepared by local Friends of the Museum and generously provided by Dr. Harry Winters. We had two after dinner treats. First, Ms. Kay LaFrance presented a slide show of the reclamation of the riverside business district of Columbia. Before and after pictures illustrated what can be accomplished by the citizens of a small community who are determined to save their historical structures. Second, Ken Wilson treated to many of his beautiful wildflower slides with Dr. Allen commenting on each one. Mark your calendars for early next century, when the Allen/Wilson Louisiana wildflower book will be hot off the LSU press!



Utricularia cornuta Horned Bladderwort

A SENSE OF PLACE

Gulf Coast Regional Plant Conference
November 4-6, 1999
Beckwith Camp and Conference Center
10400 Beckwith Lane
Fairhope, Alabama

Format is mostly field trips, very casual. FEATURED HABITATS:

> Longleaf pine forest Bill Finch, leader

Bottomland hardwood forest Harry Larsen, leader

> Pitcherplant bog Fred Nation, leader

Maritime forest, Coastal dune Chan West, leader

Lodging is rustic, camp style with bunk beds and shared baths. Some motel type available. All meals from Thursday lunch-Saturday lunch provided. Dinner and music at the covered pavillion Thursday and Friday nights.

Details are still being worked out. Space limited. \$50 deposits are being accepted. Make checks payable to GCRNPC. Send checks and contact if you have questions to Thayer Dodd, PO Drawer 439, Semmes, AL 36575
334.645.2222

Other options: ROPES course(extra cost)
Boat tour of the Delta. State if interested

Some notes on Lobelia cardinalis.....by Carl Amason

When it comes to seeing red wildflowers, there are only a precious few of our wildflowers

that would qualify as near the red spectrum. What are some? The red buckeye, Aesculus pavia, scarlet salvia, Salvia coccinea, mamou, Erythrina herbacea, coral honeysuckle, Lonicera sempervirens, the rare red penstemon, Penstemon murrayanus, and the showy red cardinal flower, Lobelia cardinalis, to name a few and these are most of them. Perhaps this is the reason why there is only the single species of hummingbirds, the ruby-throated hummingbird, that has taken up summer residence in the eastern United States. While to the west of us, in the Rocky Mountains, and on into California and the Pacific Northwest, there are several summer red wildflowers that bloom and contain nectar for hummingbirds.

Cardinal flower is generally a short-lived perennial of moist and wet areas, beloved by pickers of wildflowers, the public in general and gardeners in particular. They are loved even better by white-tailed deer as a food or maybe even as a dessert item. They grow in moist areas with full sun or light shade.

Most of the year they are merely a basal rosette of dark green leaves. The leafy stem bolts upright in the spring and summer. In the fall, they produce their spectacular terminal raceme above, diminishing in size to almost lanceolate leaves. The color is vibrant, outstanding, and simply beautiful to behold

and for the wildflower pickers, to behold! All of this happens all during the year and the climax comes with

the autumn rains and usually before hard frosts of late November. In addition to being a bright red, the flowers are tubular with two upper lip petals and three lower lipped ones, all of a uniform red color.

As beautiful as they are to see in nature, they make good garden ornaments, just in time for the late hummingbirds to sip the nectar for their long flight back to the tropics. The flowers develop into seed capsules and each capsule contains many dark seeds which are easily grown into plants for the garden or which can be sown in suitable sites along moist creek banks, around springs, ponds or small lakes. They really do not seem to prosper in bottom lands where the areas are flooded for any length of time.

The cardinal flower isn't the only red species to bloom, as there are red ones from Mexico, and other tropical countries. Now the hybridizers are at work making several hybrids that begin blooming in midsummer into the fall and in various colors of red, pink, blue, purple, and violet. I suspect this is a plant with a future. As lovely

as they are in the yard, there is something to see a truly wild cardinal flower growing in its native wet area. As they are so easily grown from seed, there is no need to dig the plants to the yard, which is easily done, also. Carl Amason is a superior plantsman who lives and gardens near Callion, Arkansas.



Cardinal flower Lobelia cardinalis

Calendar of Events

CAJUN PRAIRIE FALL FLOWER TOUR Mark your calendars for Saturday August 28, 1999. The Cajun Prairie Habitat Preservation Society will host a Fall Flower Tour of prairies. Meet at the Eunice Restored Site anytime between 7 and 10 AM. Blazing stars should be blazing. The Restoration site is located at the corners of Martin Luther King and East Magnolia in northeast Eunice. After you have seen enough flowers, you can journey a short distance to Marc Savoys. Live Cajun music is played from 9 AM to 12 Noon. There is dancing and little or no smoke; this is not a bar. Plus it is only a short distance from the Eunice restored site. Marc's is on U.S. 190 east of Eunice. Lunch is on your own, but you might try Matilda's BBQ on the East Side of Eunice. We will assemble at LSU at Eunice at 2:00 PM. Charles Allen will do his talk on edibles, teas, and spices from plants. A meeting of the Cajun Prairie Habitat Preservation Society will be held at 3:30 PM. At about 4 PM, we will depart for a remnant strip of prairie called the Frey Prairie. Take La 13 south out of Eunice, and after crossing a bridge, turn right at the next double intersection onto La 370. La 370 will make several sharp curves and you will cross a bridge. After crossing the bridge, turn right at the next intersection onto La 368. Follow La 368 for about 0.5 mile and turn left onto Parish Road 7-37. Parish Road 7-37 will take a sharp left and then straighten out and run parallel to an old railroad bed. The Frey Prairie is located along this strip. If you are coming from out of town and want to see more plants on Sunday morning, contact Charles or Malcolm for possible tours to more prairies or other habitats.

Make you reservations early. Motels in Eunice include: Best Western 318-457-2800; Howards Inn 318-457-2066; La Parisienne 318-457-4274; Potier's Prairie Cajun Inn 318-457-0440; Seale Guesthouse 318-457-3753; and Stone Country Lodge 318-457-5211. Campgrounds in the Eunice area include Allen's Lakeview Park 318-546-0502 (not related to Charles Allen) and Cajun Campground 318-457-5753.

For more information on the tours, contact Charles Allen 318-342-1814 or 318-345-5280 or email BIALLEN@ALPHA.NLU.EDU or Malcolm Vidrine 318-457-7311 Ext 245 or 318-457-4497.

HAYNESVILLE CELEBRATION OF BUTTERFLIES—SEPTEMBER 11-12, 1999 Directed by Dr. Gary Noel Ross. Featuring: Parade with entries adorned in butterfly costumes and ornamentation, horticultural and butterfly seminars and field trips led by Dr. Ross, birding trips with Dr. Charles Lyon, wildflower walks with Carl Amason, program by Richard Johnson, children's activities, nature photography contest and display, folklore presentations, food, nature, plant, and craft vendors, and much more.

GULF COAST REGIONAL NATIVE PLANT CONFERENCE—November 4-6, Mobile, Alabama area. "A Sense of Place." See page 5.

Cajun Prairie Trip Report, May 1999

From Fred's to the Forest, four folks were found at all events. Saturday morning, May 22, the crowd at Fred's in Mamou included some of our own native plant enthusiasts. Live Cajun Music brought many to the dance floor. Cale Pastorek was the star as he had six dance partners at one time. About 11:30, the native plant people departed for Eunice. A group of seven met for lunch at Matilda's and all enjoyed more barbecue than each could eat.

A group of about 30 folks assembled at the Cajun Prairie Restoration site in Eunice at 1 p.m. Many plants were in flower. The group enjoyed the yellow of rosin weed, black-eyed susan, and coreopsis; the white of false indigo and two species of mountain mint, the pink of rose gentian, pale cone flowers, bee balm, snout pea, and sensitive briar; and the red of wine cups. Many dead chicken trees(Chinese Tallow) were also seen. Yea!!!!!

A refreshment break was taken and the group invaded the local Dairy Queen. Many cones with soft white flowers were noted in for a very short time. The group then caravanned to the Duralde Prairie and looked at on-going prairie restoration. There was lots of eastern gamma grasses, plus many painted coreopsis (Coreopsis tinctoria). Some interesting birds and insects were observed also. A single pine tree provided the shade for the meeting of the Cajun Prairie Habitat Preservation Society. Bruno Brosari reported on plans to mulch the tallow trees on the "Society" Prairie in Eunice. New officers were elected. They are Larry Allain as President; Marc Pastorek as Vice President; Dr. Bruno Brosari as Secretary, and Dr. Malcolm Vidrine as Treasurer. Charles Allen will continue as Newsletter Editor. The group voted to hold a Fall Tour in late August or early September.

A group of six drove to Ville Platte and feasted at a seafood buffet including wonderful boiled crawfish. The four hardy, young native plant people then visited the Purple Peacock and

displayed their dancing skills.

On Sunday morning, a small but determined group assembled and motorcaded to the LSU restored prairie. Two species of black-eyed susan (Rudbeckia hirta and nitida) were in flower plus bee balm, and wine cups. Malcolm demonstrated the red sap of ragweed and talked about its use as fake blood. The next stop was the Frey remnant strip. Many plants that will flower later this summer or fall were observed including compass plant, Agave, sweet golden rod, Maryland golden aster, blazing stars, Indiangrass, switchgrass, and big blue stem. Plants in flower included prairie parsley, bee balm, Spiranthes, snout pea, rosin weed, pencilflower, and meadow beauty.

At 1 p.m. a group of about ten met at the front of the Arboretum. Jim Robinson led this group through a brand new trail that was opened the day before. Several large beech trees were observed as well as many large-leaf snowbells.

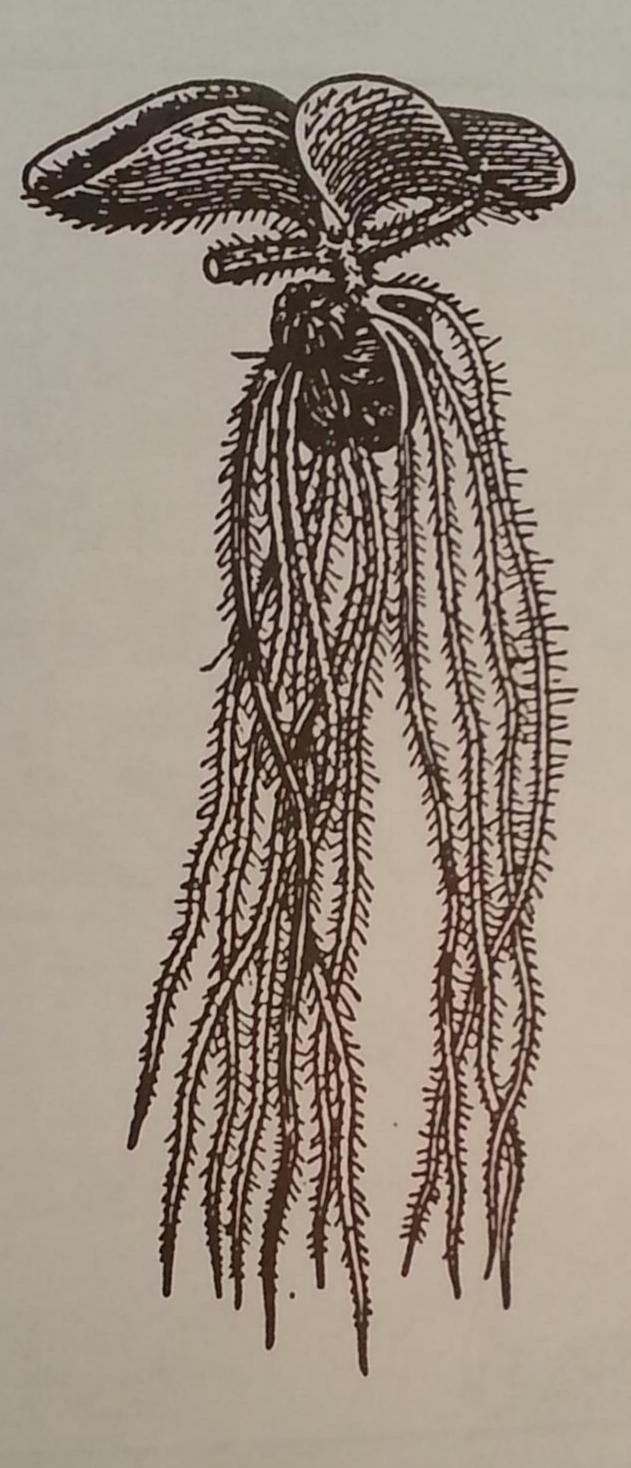
Native plant people that showed up for one or more these events came from Mississippi and in Louisiana from New Iberia, Elizabeth, Lafayette, Ville Platte, Crowley, Turkey Creek, and of course, Eunice. The four that get the award for all events are two NLU students; J.J. Woodley from Toronto and Paige Peters from Dallas; and Charles and Susan Allen of Monroe.



Helenium autumnale, Sneezeweed

(Continued from page 1) boat trailer (M. Griffis pers. comm.). Repeated visits and a survey this fall did not reveal additional plants or establishment in the bayou (C. Dugas, pers. comm.) The infestation posing the most serious threat to interstate spread occurs on the Texas/Louisiana border at Toledo Bend Reservoir, a 186,000-acre impoundment of the Sabine River and a very popular bass fishing spot. Floating plants, first detected in September 1998, quickly became common throughout the main channel, from Logansport, south to the dam (J. Hyde pers. comm.). Populations increased until the onset of winter, especially at coves and shallows along the Louisiana shoreline, including an oxbow cutoff at Salter Creek. A Christmas freeze dropped air temperatures into the mid-20s followed by freezing temperatures that were maintained for 10-12 consecu-

tive hours, however, water temperature did not drop below 50 degrees and floating plants were not harmed (R. Helton, pers. comm.). By early January air temperatures were down to the upper teens and water temperatures had dropped to 43 degrees, yet plants still maintained good color and vigor (Helton and Hartmann, pers. comm.). January surveys on the Texas side detected an extensive range that encompassed several hundred miles of shoreline. Populations were mainly reported along the mid-lake region, from Six Mile Creek north to the Best Park area (R. Helton pers. comm.). The Toledo Bend drainage (watershed draining Toledo Bend) experi-



Salvinia

enced heavy rain in late January 1999 which resulted in a lake rise of 3 feet in 2 days, necessitating rapid spillage of water through the flood gates. Winter winds had pushed most of the giant salvinia along the shoreline and as the water level receded large amounts of the weed were stranded on dry ground (J. Hyde pers. comm.). The effect of the water release is still evident during May 1999, as few plants are evident on the main lake. However, densities are building up in coves and behind thickets of buttonbush (Cephalanthus occidentalis) along the shore line, which are difficult to reach by the spray crews that have initiated herbicide treatment.

Plants escaped with water through the spillway gates of Toledo Bend Dam to enter the Lower Sabine River (H. Temple pers. comm.). Diversion canals along the Lower Sabine use pumping stations and gates to carry water eastward to supply rice fields and crawfish farms.

These industries will be highly affected by the invasion of giant salvinia.

Giant salvinia is a member of the family Salviniaceae; Division-Polypodiophyta (Pteridophyta), true ferns. It is an aquatic fern with floating oblong leaves, ½ to 1½ inches in length. During early stages, plants are smaller and leaves (fronds) lie flat on the water surface. As plants mature and gather into mats, leaves are folded and compressed into upright chains. Leaf surfaces have rows of papilla (cylindrical stalks) branching into four hairs that rejoin at the tips to form an eggbeater or cage-(Continued on page 10)

Distribution map of Salvinia molesta Louisiana & Texas. Map from US Geological Survey Website.

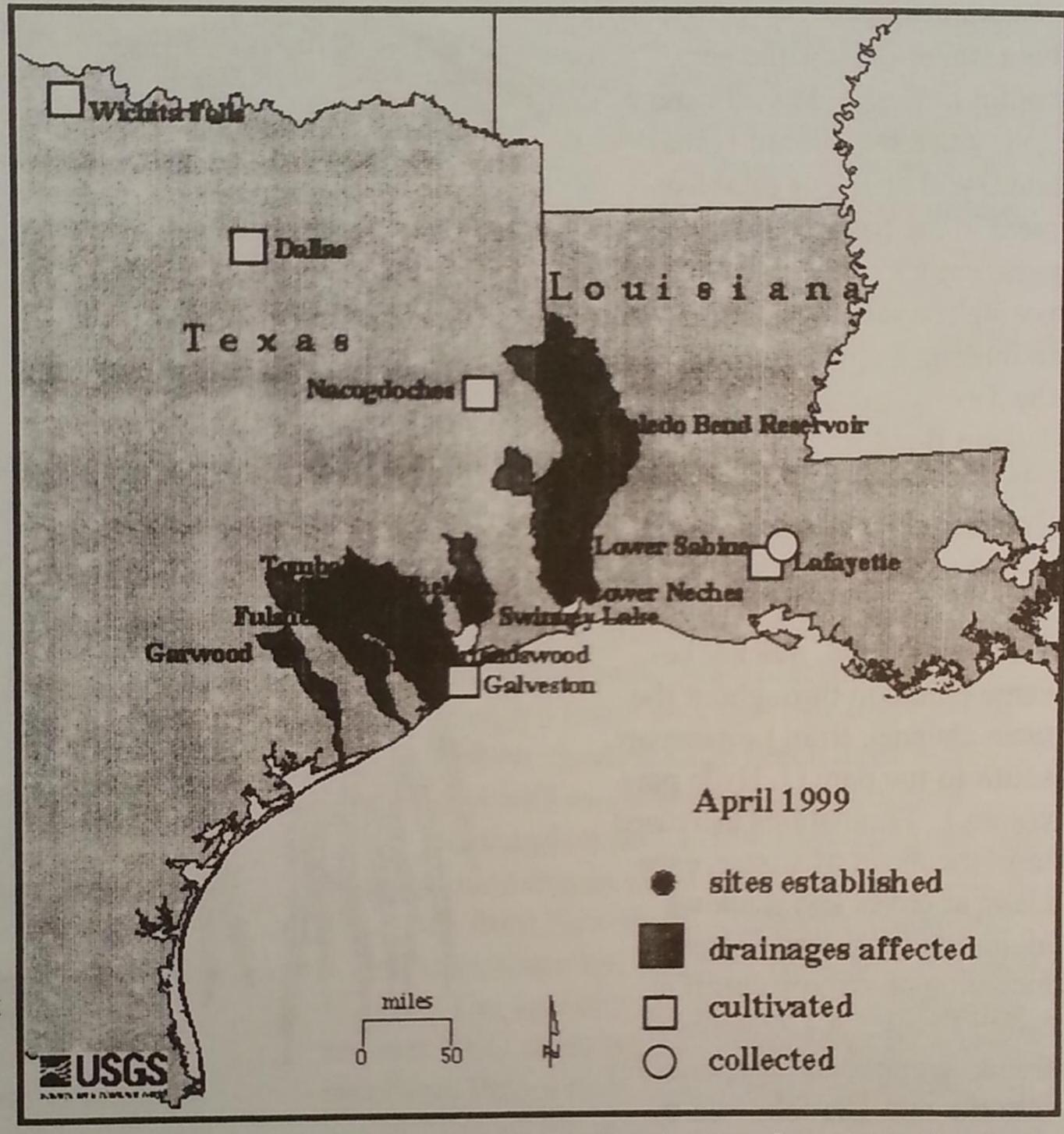
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like structure. All members in the S. auriculata complex (S. auriculata, S. biloba, S. herzogii, S. molesta) have hairs joined at the tips (Mitchell and Thomas 1972). This feature distinguishes S. molesta from common salvinia, S. minima, which has branched hairs that are spreading and free at the tips. Submersed fronds are filamentous, appearing like underwater roots and concealing chains of eggshaped sporocarps. Plants may demonstrate variability in the arrangement of the sporocarp chains, a function of developmental stage or a response to environmental conditions. Mature plants can produce large quantities of sporocarps, many containing sporangia. However, sporangia are usually empty and a rarely found producing spores. Any spores that have been observed are deformed and not fertile (Mitchell and Thomas 1972). Giant salvinia re-

produces very effectively through vegetative means. Stems fragment as plants mature and new plants develop from lateral buds which are prevalent along the stem. Each node harbors up to five serial lateral buds (Lemon and Posluszny 1997), adding to the species' high potential for growth and dormancy.

Infestations in Texas ponds have been linked to local water garden nurseries. How plants were introduced to Toledo Bend Reservoir, the major rivers and other natural waters is still unknown. Introduction and establishment in other countries has commonly been through the water garden or aquarium plant trade. Often it has been as a contaminant in shipments of other aquatic plants.

Giant salvinia fragments easily to produce nu-



merous new plants that develop from lateral buds.
Upright well-buoyed leaves are effective in dispersal across water bodies by wind and water currents. At Toledo Bend Reservoir, plants are constantly blown by the wind to infest new coves. In the main channel they catch and collect on beds of hydrilla. Giant salvinia can be expected to adhere to and be carried overland on anything entering infested waters, including boats, trailers, vehicular wheels, intakes and gear. Plants have been found above high water level along boat ramps and carried out to roads around Toledo Bend Reservoir. This is a favorite fishing spot that hosts thousands of boats commonly trailered back and forth among local lakes. Local fishing lakes, in-

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Giant salvinia is included as a Federal Noxious Weed. Importation into the United States and transport across state lines is prohibited by Federal law. Plants must be listed by individual states as a State Noxious Weed in order to be prohibited for sale or cultivation within that state. Salvinia molesta is prohibited in most states in the southern US and in California. The sale or culture of Salvinia molesta is not prohibited in Hawaii.

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Verbascum thapsus Common Mullein

LNPS News Summer 1999

The Louisiana Native Plant Society was founded in 1983 as a state-wide, non-profit organization. Its purposes are:

- cos to preserve and study native plants and their habitats.
- to educate people on the value of native plants and the need to preserve and protect rare and endangered species.
- to promote the propagation and use of native plants in the landscape
- os to educate people on the relationship between our native flora and wildlife.

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