

NATIVE PLANT NEWSLETTER # (

January 1979

Last October 7th, about 50 botanists gathered at the Department of Conservation headquarters in Jefferson City to discuss the status of rare plants in the state. It was the first time many of us had met, and subsequent correspondence indicated the meeting was of value.

Several people have suggested the need for better communication between all of us who are concerned with plant life in Missouri, pointing out the lack of opportunity for naturalists, academicians, and resource managers to share information. The concensus of those present was to form some sort of organization of people with botanical interests.

John Wylie and Jim Henry Wilson of the Natural History Section of the Department of Conservation offered to assemble an ad hoc steering committee to plan an organizational meeting for Spring, 1979. Several individuals have been asked to serve on that committee. The committee was selected with a view toward balance in background (including all levels of botanical training) and geographical representation.

The names and addresses of those individuals are listed below in case you want to provide comment to one or more of them.

- Dr. John Baumgardt, Eagle Rock Star Route, Cassville, Missouri 65625  
Mr. Lou Bottenberg, 8021 Pennsylvania, Kansas City, Missouri 64114  
Dr. Melvin Conrad, Biology Department, Northeast Missouri State University, Kirksville, Missouri 63501  
Mr. Rick Daley, Missouri Botanical Garden, 2345 Tower Grove Avenue, St. Louis, Missouri 63110  
Mr. Edgar Denison, 544 East Adams, St. Louis, Missouri 63122  
Dr. Erna Eisendrath, Department of Biology, Washington University, St. Louis, Missouri 63130  
Dr. Leo Galloway, Biology Department, Missouri Western State College, St. Joseph, Missouri 64507  
Dr. Noland Henderson, Biology Department, University of Missouri, 51st Street and Rockhill, Kansas City, Missouri 64110  
Mr. Paul Nelson, Division of Parks and Recreation, 1101 Rear Southwest Boulevard, Jefferson City, Missouri 65101  
Mr. Jim Shaw, Hannibal-LaGrange College, Hannibal, Missouri 63401  
Reverend James M. Sullivan, 10235 Ashbrook Drive, St. Louis, Missouri 63137  
Dr. Wallace Weber, Southwest Missouri State University, Springfield, Missouri 65802  
Dr. Keith R. Evans, U.S. Forest Service, 1-26 Agriculture Building, Columbia, Missouri 65201

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Rick Daley of the Missouri Botanical Garden presents the results of the herbarium study of rare Missouri plants.



Leo Galloway (left), Dr. Alice Nightengale, and Paul Lucas participated in the meeting.

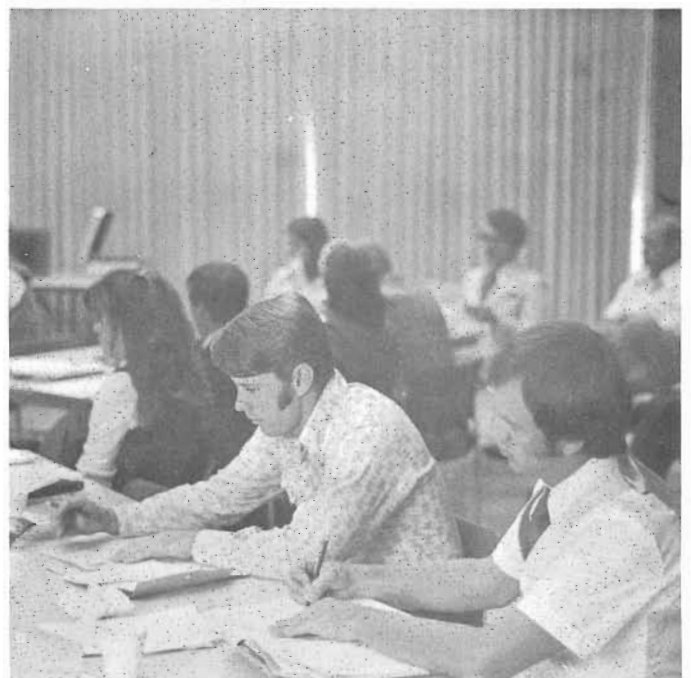


Photos by Tom R. Johnson

Art Christ (see "Ladies' Tresses Orchids," this newsletter) contemplates the situation.



Becky Haefner (left), Jerry Cliburn, and Paul Nelson were among the younger botanists present.



## LADIES' TRESSES ORCHIDS (SPIRANTHES)

Art Christ

Six species of Ladies' Tresses Orchids (*Spiranthes*) can be found in Missouri. Three species are common and three are rare. The small white, yellowish, or greenish-white flowers are inconspicuous, and are on spikes from 6 to 18 inches in height. The spikes are in a single twisted longitudinal row or in three longitudinal rows. The generic name *Spiranthes* is from the Greek "speira" meaning "a coil" and "anthos" meaning "flower".

*Spiranthes lucida*, or Wide-leaved Ladies' Tresses, flowers from late May to mid-June. It is rare, and is found in alkaline soils in swampy, calcareous, spring-fed meadows. The flowers are fragrant, and have orange or orange-yellow lips, while the leaves are short and wide.

The other five species of *Spiranthes* flower late in summer and in autumn. *Spiranthes vernalis*, *Spiranthes tuberosa*, and *Spiranthes lacera* (formerly known as *Spiranthes gracilis*) have their flowers in a single twisted longitudinal row.

*Spiranthes vernalis*, Spring or Early Ladies' Tresses, grows taller than any of the Missouri species, and occurs in upland prairies and swampy meadows. It has leaves present at flowering time, with the leaves occurring at the base of the plants and on the lower parts of the stems. The white flowers are from 6 to 11 millimeters long and have yellow lips. The species name "vernalis" means "of spring" because the original plant specimen was obtained from near the southern limit of its range in the springtime, but in our area it flowers from July 11 to early September. This species is infrequent and scattered in southern and central Missouri.

*Spiranthes tuberosa*, Little Ladies' Tresses, has white flowers with white lips, while *Spiranthes lacera*, Slender Ladies' Tresses, has white flowers with green centers in the lips. These two species are common. The leaves of *Spiranthes tuberosa* are always absent at flowering time which is from August 21 to October, while the leaves of *Spiranthes lacera* are rarely, but sometimes, present at flowering time which is from August 20 to October. These two species can often be found growing near one another.

*Spiranthes cernua*, Common Ladies' Tresses, or Nodding Ladies' Tresses, and *Spiranthes ovalis*, Small-flowered Ladies' Tresses, have their flowers in three longitudinal rows. *Spiranthes cernua* has white fragrant flowers and is common. It flowers from August 1 to November 23. The flowers are from 7 to 10 millimeters long, and none of the stem-leaves are conspicuous at flowering time, while the basal leaves are often absent at flowering time. *Spiranthes ovalis* has white flowers that are only 4 to 5 millimeters long, and the lower stem-leaves are conspicuous and well-developed at flowering time. Father James Sullivan found this species at Graham Cave State Park in Montgomery County several years ago, while Karen Haller found it at Shaw's Garden Arboretum at Gray's Summit in Franklin County in October of this year. This species is very rare, and has been found in only five counties in Missouri.

From: Webster Groves  
Nature Study Society Newsletter  
with permission of the Author

Greg Iffrig has studied potential natural areas in Northwest Missouri. He offers the following suggestions for your comment. Please tell us what you think should be done with these species in the next reprinting of the state list.

### Suggested Corrections in Missouri's Rare Species List

Several species of plants listed in Rare and Endangered Species of Missouri (Nordstrom et al. 1977) and listed as occurring in the study area were noted as being introduced in several references. These non-native species might be more appropriately listed under the appendix Rare and Endangered Species of Missouri--Naturalized and Introduced Plants (Nordstrom et al. 1977). These are:

- a. Artemisia frigida (Prairie Sagewort). This species occurs in waste ground and along railroads in Missouri but in prairies and dry open places where it is native. It was introduced in Missouri and eastward. References: Gleason and Cronquist 1963:698; Steyermark 1963:1611.
- b. Croton texensis (Skunk Weed). This species is found on alluvial soils along the Missouri River and along streets, railroads and waste ground in Jackson County. It is adventive in Missouri. References: Gleason and Cronquist 1963:439; Steyermark 1963:977-978.
- c. Erysimum inconspicuum. Occurs along roadsides and waste ground. This species has been recorded from two counties in Missouri, Jackson and Livingston, where it is an introduced non-native plant species. References: Gleason and Cronquist 1963:347; Steyermark 1963:764.
- d. Flavaria campestris. Introduced in Missouri, this species occurs in thickets along streams, waste ground, and along railroads in Marion and Jackson Counties. References: Gleason and Cronquist 1963:688; Steyermark 1963:1594.
- e. Spirodela oligohriza (Big Duckweed). Early collections (1930 and 1934) of this species were from southwestern Missouri and in Swope Park--portions of which are evaluated in the Catalog. While this species occurs in other countries such as Australia, India, Java and Japan, it has been introduced in Missouri. It is interesting to note the comments of the earliest collector of this species in Missouri:

It is not likely that this species has been overlooked in the past by botanists in this country. It may have been introduced recently. It was again collected by Dr. F.H. Woods in September, 1932, in southwest Missouri, from a pond containing goldfish. Inquiry revealed that the plants in this pond had been obtained from a supply house in Ohio...(Saeger 1934:234).

No recent collections of this plant from Missouri have been recorded (Dr. Norlan Henderson, pers. comm., herbarium Missouri Botanical Garden, herbarium Univ. Mo.-Columbia, and searches in Swope Park during this study).

Send comments to: Native Plant Newsletter  
Natural History Section  
Department of Conservation  
Jefferson City, Missouri 65101

## A NEW HALOPHYTE FOR MISSOURI

My immediate impression in first seeing this plant took me back several years to the Texas coastal bend. It was there my field records indicated I collected Heliotropium curassavicum L. on a salt flat near Corpus Christi. Here before me it was, seaside heliotrope, as it is commonly called, hundreds of miles inland in Missouri and growing around a salt spring in Cooper County.

Salt springs or "licks" are well known floristically in Missouri, especially in Saline County where the occurrence of other halophytes are documented by Steyermark. For example, the only known interior station in the United States for seashore salt grass (Distichlis spicata (L) Greene) is a salt spring in Saline County.

Heliotropium curassavicum L. is easily distinguished from other species of that genus by its completely glabrous, glaucous, and succulent or fleshy prostrate stems. Along coastal places, its habitat is sandy seashores, salt marshes, salt flats, beaches, and other saline places. Inland, it occasionally occurs as a waif on railroad ballast. It ranges from coastal Delaware southward to Florida, along the Gulf, and Mexico.

Just whether this halophyte is native or naturalized is questionable. At the salt spring where found, hundreds of plants carpet and circumscribe the spring in a zone apparently so highly impregnated with salt that few other species survive. It is immediately associated with other salt tolerant species including: Eleocharis parvula, Echinochloa pungens, Euphorbia supina, Polygonum aviculare, and Scirpus americanus. (It is interesting that my field collection records indicate Scirpus americanus was an associate at the Corpus Christi locality.)

Whether a coastal inland relict, or introduced and naturalized, warrants further search of other nearby springs. This spring is located 100 yards from a railroad lending to the possibility seeds were dispersed by that means.

A voucher specimen has been placed in the Missouri Botanical Garden, St. Louis, Missouri, and a separate paper submitted to Castanea for publication. PAUL W. NELSON, ROUTE 1, LOOSE CREEK, MISSOURI 65054