Tradescantia Research Project

by Carrie Carrel

"Imagine what a more tangled scheme nature and man have woven with our older cultivated plant. Small wonder that many botanists have given up the attempt to name them precisely, that many botanists have confined themselves to the simpler problems presented by wildlings from woodlands and mountains and seashores."

- Edgar Anderson, Plants, Man, and Life

Despite the complications Edgar Anderson associated with studying the tradescantias, the challenges of deciphering its evolution and its puzzling taxonomy have led me to plan a special study of the Tradescantia native to Florida.

These attractive, brightly colored, three-petaled flowers are commonly known as spiderwort, or widow's tears, in reference to the deliquescent nature of the blooms. They were originally introduced into English gardens by John Tradescant in the 17th century.

In the traditional narrow taxonomic interpretation of the genus, nineteen closely related species of Tradescantia are native to the United States. Three are found in Florida: T. ohiensis, T. hirsutiflora, and T. roseolens.

T. ohiensis — This is the weediest and most widespread of the spiderworts, growing from 50 to 80 cm tall. It is characterized by its glaucous and usually glabrous foliage. The flowers, like all tradescantias of the Virginianae group, are borne in clusters subtended by one to three bracts. The individual flowers, blue to rose-purple, rarely white, are enclosed by three green sepals, which may or may not have an apical tuft of eglandular hairs. It is most common in open roadsides and disturbed areas.

T. hirsutiflora — This species reaches 5 to 50 cm tall. The foliage is usually pilose, covered with long, soft, eglandular hairs. The flower also ranges from blue to rose, while the sepals are distinctly covered with eglandular hairs. It is found growing in sandy soils in fields, clearings, scrub, pine woods, and open pine-hardwood woods.

T. roseolens — This gem of Florida is allegedly rose-scented. It grows between 19 and 60 cm tall, and the foliage has an abundance of short, soft, glandular hairs. The flower is a deep blue to magenta, and the sepals have glandular hairs with occasional eglandular hairs mixed. These are found in sandy soils, oak and pine woods, oak and oak-palmetto scrub, sandhills, and open areas.

As part of my senior thesis at New College of University of South Florida, I will be studying the distribution of these three Florida representatives and their phylogenetic relationships. Key to this research will be new information on existing stands. Data on sightings (recent and past) will supplement the information taken from herbarium specimens.

My interest in the spiderwort was sparked this summer in Washington, D.C., where I was an intern in the Department of Botany at the Smithsonian Institution's National Museum of Natural History. Because I was familiar with Edgar Anderson's book, Plants, Man, and Life, and I respected his keen wisdom and insight, I chose a project concerned with a collection of Anderson's tradescantias that were believed to be herbarium voucher specimens for his cytological work done between 1931 and 1954. I spent my summer becoming familiar with this collection, and with the taxonomic problems plaguing this genus.

In the course of my research, I realized that the study of Florida's populations had been neglected. Since the subject interested me, and the final report might be of some value to the

**Glossary**

- **apical** - at the apex, or tip.
- **cytological** - dealing with the structure and function of cells.
- **deliquescent** - tending to melt or dissolve.
- **eglandular** - without glands (see glandular).
- **glabrous** - without hairs.
- **glandular** - having glands, which are depressions or appendages that secrete or contain fluids.
- **glaucous** - covered with a whitish covering that cannot be rubbed off.
- **phylogenetic** - based on natural evolutionary relationships.
- **pilose** - with long, soft, shaggy hairs.
- **sepal** - one of the separate parts of a calyx, or the outermost flower part.
- **subtend** - to be under and close to.
- **taxonomic** - pertaining to scientific classification.
Help Wanted

I am soliciting the help of the avid native plant enthusiasts of Florida in my search for spiderworts.

Fifty years ago, Anderson compared *Tradescantia* to “an oil painting originally rich in detail, which had been rubbed while the paint was wet.” Anyone who sees any natural stands of spiderworts, keep in mind the word “detail”. The more detail you provide for me, the more I will be able to reconstruct an accurate picture of the site and the plant’s history.

When you see some spiderworts, if you are on a back road or a highway, please tell me the name of the road, the direction you were headed, the town nearby, and the county. If you spot some in a park, please include a trail name or a landmark.

Also describe the stand (abundance, height, width), color of individual flowers, and date and time of day you saw them.

Please send inquiries and information to Carrie Carrel, Box 210, 5700 N. Tamiami Trail, Sarasota, FL 34243, or call 813/351-4514.

taxonomy of this genus, it became an ideal thesis project.

Consisting of three overlapping stages, my study will begin with updating and amending the documented distributions of *Tradescantia*, using herbarium sheets. This will involve several visits to the major herbaria in Florida, as well as the U.S. National Herbarium (Smithsonian).

Once this information is compiled, I will begin planning for study of the populations and site analyses in the spring. Information on recent sightings through word-of-mouth will be essential in determining whether the documented distribution is still current or has contracted or expanded.

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