



Missouri Botanical Garden Bulletin

Volume LXVIII Number 2
March/April 1980

Where Have All The Prairies Gone?



Space, sky, open land, midwest. Those words paint the landscape when you think of a prairie. Webster defines a prairie as "a large area of level or rolling land in the Mississippi valley that in its natural uncultivated state usually has deep fertile soil, a cover of tall grasses, and a few trees."

Americans living in the mid-section of this country should be more familiar with prairies than their counterparts in the East or far West. And yet, there are almost no prairies left in Illinois the prairie state, or in Missouri. What few exist are those that have been carefully preserved or restored.

At one time prairies stretched from Ohio to Kansas and the Dakotas and from Texas to Canada. Big bluestem grasses waved in the breezes, wildflowers bloomed in profusion, colors of gold and wine shifted in the breezes, animals roamed, prairie chickens boomed. The prairie was the sea of the midwest, but it fell to the plow — the midwest became the corn belt. Its fertile plains became farms which yield the grains for the country.

Preservationists are working with determination and some success to save small prairies for study and interpretation. Currently the largest site

under consideration is in the Flint Hills of eastern Kansas. Here the soil is thin and stoney and therefore difficult to plow. The land is used mostly for grazing cattle. Environmentalists are pressing for a Tallgrass Prairie National Park — 320,000 acres. Ranchers differ in their views of the project.

Prairies seem to arouse high emotions on both sides.

Missouri Botanical Garden is playing a role in prairie restoration. With a grant of \$5,150.00 from the Missouri Prairie Foundation, steps are being taken at Shaw Arboretum to establish a tallgrass prairie of native grassland.

Shaw Arboretum consists of 2400 acres on the eastern edge of Franklin County where forest and prairie were in competition in presettlement times. The site includes upland forest, floodplain, forest, glades, three miles of the Meramec River, managed meadows, a collection of conifers and ponds. The prairie site is located approximately three-quarters of a mile from the parking lot, accessible by trail and service road. It is bounded by three service roads which serve as excellent firebreaks. The site falls away to woodland on the southern border. The hilltop is 643 feet in height, falling to 80

feet and a one acre pond. The highpoint provides a lovely view of the Gray Summit Hills.

The history of this site has been documented. It was part of a worn-out farm purchased by Missouri Botanical Garden in 1925. Conservation efforts were instituted at that time to reclaim the eroded slopes. Japanese cherry trees were planted in 1928 but they failed to survive. Hay was harvested from the field and often horses were pastured there until 1947. Since that time the area has been kept mowed.

During the past five years the area

(Continued on Page 3)

Inside

Comment	2
Letter from Geneva	3
Volunteer Profile	5
Members' Invitation	5
Calendar	6
Lecture Series	8
News Notes	8
Gardening in St. Louis	11
Members' Trip	11

Letter from Geneva

(Continued from Page 1)

I have been here for over a week now and have a reasonable idea of the amount of work which needs to be done. I have come here to sort and begin to identify a collection of some 3,000 moss specimens which have been accumulating in the herbarium of the Jardin et Conservatoire Botaniques for many years. The collection of mosses here is one of the largest and most important in the world. It contains the personal herbarium of Johannes Hedwig, the first person to work out the exact nature of mosses. He was essentially the Linnaeus of the study of mosses.

Since the collections on which I am working have never been studied before, they have been stored separately from the main collection. I hope to be able to provide preliminary identifications for some two-thirds of the 3,000 or so specimens before I leave.

It is turning out that many of the collections which I am looking at are quite old and important for various reasons. For example, I have found what appears to be the second collection of mosses ever made in Louisiana. This collection was made in the early 19th century and previously only one species was thought to be contained in it. However, I have found four separate specimens each of which contains several species. By using the excellent library here I have been able to trace something of the history of the collector, a person named Tainturier, but little is known of him or of his activities. I will borrow the collections which he made and which have been stored here in Geneva for all these years. I will study them in some detail when I return to St. Louis.

Of course, it is not unusual to study moss collections made during the 1700's, but before coming to Geneva I had never seen any collected before 1700. I have discovered in the collections here several specimens which were apparently collected in the mid-1600's, but unfortunately there is no documentation with them and it will be



Dr. Marshall
R. Crosby

difficult, if not impossible, to determine where they came from or to determine what they are.

I was struck by several interesting parallels between the Jardin here in Geneva and the Garden in St. Louis. Both are located in the hearts of medium-size cities and both are well over 100 years old. The Jardin receives essentially all of its funding directly from the city. Their efforts are concentrated on public display and research. In the research area, Geneva has one of the best botanical libraries in the world, just as we do in St. Louis. The library and herbarium in Geneva are housed in new, modern buildings as are ours, and the parallel extends to the point of their collections being stored in space-saving compactor units for the most part, just as are ours. The climate in Geneva is much milder than that in St. Louis, and this must help explain the presence of thousands of flowering pansies throughout the beds of the Jardin. On some chilly mornings the pansies look a bit wilted due to the freezing temperatures, but usually by midday they have perked back up and lend a colorful note to the Jardin.

I should be able to look at most of the unknown mosses here before my stay ends. I have excluded from consideration material from Europe and most of that from North America, since I specialize in exotic mosses and since there are other people who can study collections from these areas more efficiently and better than I.

— Dr. Marshall R. Crosby
Director for Research



There are a number of excellent books and pamphlets dealing with prairies — locations, descriptions, proposed sites, floristic composition, pending legislation. For further information consult the Garden library or your local branch.

was untouched and woody plants began to invade the site. A survey in 1977 found big bluestem, Indian grass, blue grass and switch grass. Butterfly weed and ironweed were the only native forbs present in any numbers.

In 1979 under the guidance and direction of the Missouri Department of Conservation, the Arboretum staff burned four and one-half acres of the site to evaluate the effectiveness of fire as a management tool on this old-field complex.

The results have been spectacular. The rains of May and early August helped to produce small stands of Indian grass which coalesced to form a golden field. Big bluestem grew to eight and one-half feet, waving wine colored stalks majestically. Released from competition, switch grass, prairie dropseed and little bluestem were found in small areas.

The field will be seeded with big and little bluestem and some forbs after the meadow is burned this spring. This will increase the density. Seeds have been collected by members of the Webster Groves Nature Study Society.



The restoration is a long-term project. New seeds will be introduced over the years, but it may be centuries before the area can be called a prairie. This ecosystem is a delicate and fragile one requiring years of work and patience.

Our lives will be enriched by the opportunity to watch this prairie project. Wine-colored stalks of big bluestem, the rustle of head-high Indian grass, the bright colored butterfly weed, the aroma of crushed slender mountain mint — these are some of the pleasures of a visit to the prairie.

Patricia D. Duncan in "Tallgrass Prairie", said it all: "The prairie is a state of mind as much as it is a place, this heaving, wild, outlandishly beautiful landscape, coming down to us from millions of earth-seasons. . . . The wild tallgrass prairie must be allowed to seep into all of Americas' consciousness."

The MISSOURI BOTANICAL GARDEN BULLETIN is published six times each year, in January, March, May, July, September and November by the Missouri Botanical Garden, P.O. Box 299, St. Louis, Mo. 63166. Second class postage paid at St. Louis, Mo. \$5.00 per year. \$6.00 foreign.