



Flowering dogwood, the state tree, is one of the first signs of spring at Mizzou.

Rob Hill photo

Plant trail showcases Missouri's
Roots

by Terry Jordan

Kids climb trees and adults seek shade under them on hot, sunny days. People buying a new home plant trees. Lumbermen harvest them.

Most people don't pay much attention to the trees around them during the course of a day, says Ron Taven, professor of horticulture at Mizzou. But trees have a warm, soothing effect on humans that is virtually unmatched in the environment.

"Ask people who just came back from the Ozarks how they liked their trip," says Taven, who has taught at the University 31 years. "You may not be able to put your finger on the reason why, but you feel more comfortable in a place that has an abundance of trees and plants, like the Ozarks, than a place that doesn't have many.

"People like to sit under trees. They like to eat their fruit. And in Missouri we're truly blessed, because our climate makes it possible to grow a wide variety of trees."

That variety is represented on the Mizzou campus, too. In celebration of the University's 150th anniversary in 1989, officials have designated a Sesquicentennial plant trail on campus that features 150 trees and plants. Most are native to the state, meaning their species were in place when the first settlers arrived. The trees range from mighty oaks to young willows, from pretty, flowering dogwoods to rough, thorny hawthorns.

Reprinted from

MIZZOU MAGIC

the magazine published by MU for students in Missouri's middle schools and junior highs to support science education.

At right, Dr. Ray Rothenberger has nurtured the plant trail from planning to reality. Below, the stately pin oaks on Francis Quadrangle provide cooling shade in summer. Rob Hill photos



"The plant trail is another way for Mizzou to fulfill its educational role to the campus visitor," says Dr. Ray Rothenberger, chairman of the University's horticulture department and coordinator of the effort to establish the trail. "There truly is a remarkable variety of trees here, and they can be found throughout the state as well. We want to point that out, along with some of their more interesting characteristics."

Visitors may obtain a brochure that includes a map outlining the trail. Each tree, shrub or plant on the trail is labeled with its common name, botanic name, plant family and variety. In addition, native plants have a small outline of Missouri on the label for identification.

The trees and plants are numbered from 1 to 150, and the visitor can follow the trail from its starting point near Tate Hall at Ninth Street and Conley Avenue, around Francis Quadrangle and Peace Park, across Lowry Mall and circling a number of buildings near Memorial Union. The two-mile trail winds up at the Woodland and Floral Gardens, which is located behind the Agriculture Building and features hundreds of species of exotic trees, plants and flowers.

The brochure notes some intriguing tidbits about the various trees along the trail. "The first settlers in Missouri came from Europe, and they were amazed by the number and variety of trees in this area," Rothenberger says. "They cherished them as resources and used them for many pur-



poses."

Take the honey locust tree, for example. Youngsters find their thorns a nuisance; it means they can't climb them. "But the early settlers found those thorns valuable," Rothenberger says. "They used them as fish hooks and sewing needles that could penetrate the animal hides that provided their clothing."

Settlers took the sap of the sweet gum tree and used it as medicine for a variety of illnesses. Similarly, the leaves of the red cedar were boiled into a tea to help protect people from scurvy. White oak was found to be ideal for baskets, and cypress became the preferred wood for canoes.

Some trees could be used for a multitude

of purposes, and still are. The sugar maple, for instance, is more than a noble shade tree. Its sap is tapped in the spring for the production of syrup, and the wood is highly valued in making the backs and sides of violins. The black walnut may be the most prized of all. Its wood is exceptional, one of the favorite choices for rifle stocks and furniture. The nut meat of the black walnut is an integral part of many food recipes, and the husk was used in earlier times to make natural brown dyes for clothes.

All these trees and dozens more are represented on the trail. It is because of Missouri's climate that such a wide variety are allowed to grow here, Rothenberger and Taven say. "We have abundant rainfall and a range of temperatures," Taven says. "We have two rivers. We go from forests to

prairies in Missouri. Even the states around us can't say that."

Adds Rothenberger: "About the only kinds of trees and plants that don't grow well here are the tropicals — palm trees and the like." Missouri is far enough south to accommodate warm-weather trees such as magnolias, and far enough north to handle cold-weather trees such as Scotch pines.

The number and variety of trees, in fact, contribute to the state's natural health. Trees absorb carbon dioxide in the air and release oxygen in its place. That helps counteract the "greenhouse effect," the gradual warming of the earth caused by carbon dioxide and other gases covering the atmosphere. "Research shows that the oxygen from 17 trees could keep a person alive," Taven says. "A lot of people could live on oxygen released every day in Missouri."

The University's effort in reaching out to the state does not end with the plant trail. As part of this year's April 7 Arbor Day celebration that marked the establishment of the trail, the Missouri Department of Conservation sent a red oak seedling to each county in the state. The seedlings represent Mizzou's ties to the counties through University Extension, which is celebrating its 75th anniversary in 1989.

People planning a visit to the campus and wanting to walk the trail can obtain a brochure from Visitor Relations, Conley House, Columbia, Mo. 65211, or can call (314) 882-6333.

"It's funny," Taven says. "People will move away from a place, then go back years later — not to see the house, but to see how their trees are doing. We get alumni who come back to Mizzou and want to see what happened to that tree their group planted on campus 20 or 30 years ago."

"Trees are living, growing things that hold special significance to people. They're more important than we realize." ☐



Rob Hill photo

Dr. Robin C. Kennedy is curator of Mizzou's herbarium, a collection of dried plants.

contain more than 300,000 mounted specimens of vascular plants, marine algae and mosses, classified by family and including information on where and when they were collected.

"I think of it as a library," says Dr. Robin C. Kennedy, curator of the herbarium and an instructor in biological sciences at Mizzou. "If you see a plant and want to know what it is, you can call us and describe it over the phone, or you can send it in. We'll pull our specimens off the shelf, check your plant against them, and identify your plant in that way."

The herbarium contains a number of noteworthy collections, including plants picked from the site of the world's first nuclear bomb detonation in New Mexico in 1945, and specimens from the central Missouri area on which the Callaway County nuclear power plant is built. Those samples help Mizzou researchers and students study such issues as the effects of radiation on plants.

"But the herbarium also serves as a historical record of plant life in Missouri," Kennedy says. "Before all the shopping malls and concrete, there were prairies and forests. The herbarium collection can tell us what was growing there. And we can compare that against what is growing in Missouri today."

Editor's note: Mizzou's herbarium is available for tours by individuals or groups. For more information, call (314) 882-6519.

Leafing through a plant 'library'

When a teacher from Nevada, Mo., wondered whether a plant spreading rapidly near her school was poisonous, she turned to Mizzou for help. And the herbarium in the Division of Biological Sciences provided the answer.

"The teacher was concerned about her students," says William W. Dierker, University Extension associate. "The plant carried a fruit that looked like a small cucumber, and she was afraid the children would eat it and get sick."

"She sent us a sample, and we checked it against the specimens in the herbarium. We discovered it was a may-pop plant, and no, its fruit was not poisonous. The teacher was relieved."

Mizzou's herbarium, a depository for dried plants, is the oldest "museum" of its type west of the Mississippi. Rows of large cabinets