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BENEDICT PRAIRIE

THE BENEDICT PRAIRIE Unit of The University of Wisconsin—Milwaukee Field Stations consists of about six acres, actually 100 feet wide and one half mile long, on what was once a railroad right of way on the old Kenosha-Silver Lake-Beloit branch line of the Chicago Northwestern Railroad. It lies one and one half miles west of I-94 and south of Highway 50 in Kenosha County. The railroad was built about 1860 and functioned until 1939; the rails were lifted for salvage in the early 1940's and the right of way later was sold to the adjacent farm owners, the Benedict family. The railroad ownership provided fencing to protect this strip from plow and cow so that a full variety of native species survived here when I discovered it in the course of field studies on prairie remnants in 1954 (Cf. A study of prairie remnants in Southeast Wisconsin, *Ecology* 39:727-733, 1958). It was among the best remnants found in this study of Racine and Kenosha counties, was inspected by Drs. J.T. Curtis and Hugh Iltis, and was purchased in 1963 as the third project of the recently organized Wisconsin Chapter of the Nature Conservancy with funds donated by the Green Tree Garden Club of Milwaukee County.



The original vegetation of this half mile strip was not entirely prairie but was typical of much of the rolling moraine land in that area where flat, poorly drained areas were listed as prairie and the better drained, coarser soiled

slopes supported open oak woods or savanna. The central half of this was wet prairie along a marshy branch of the Des Plaines River with both ends rising onto moraine slopes which bore some bur oaks and associated woodlands species as well as a mesic prairie flora. Thus, it has a wider variety than prairie alone. The east end now is shaded by a few old oaks and one large black cherry in the fence line, plus younger trees of the same species and poplar, choke cherry and box elder which have invaded the right of way more recently. The typical border shrubs of gray dogwood and hazel nut form dense thickets in places, especially along the cut and fill banks of the roadbed, and another prominent border species, the wild plum, spreads its white spring fragrance near the west end. Willows, both shrubby species and the large black willow, are prominent invaders along the dredged part of the stream which now runs along the roadbed for nearly 200 yards. Box elder had become established in some numbers along the cut banks of the roadbed although practically no trees had managed to invade the undisturbed prairie sod of the shoulders in the low prairie area. During the active period of the railroad maintenance, crews undoubtedly had cut and burned tree growth on the right of way to keep it clear, but in the 25 years before we acquired it the bur oak "grubs" at both high ends of the tract had sent up trees to 20 feet or more in height. Probably the roots of some of these antedated the railroad construction.

In 1954 when I first studied this area I found an unusually good variety of more than 100 native species, including some which are relatively rare in this part of the state such as Milk Vetch (*Astragalus canadensis*) and Rattlesnake Root (*Prenanthes racemosa*), and even a rare hybrid aster, a natural hybrid between *A. novae-angliae* and *A. ericoides*, previously collected only twice in Wisconsin. On repeated visits I was particularly impressed by the seasonal changes in species dominance which is a typical feature of the true prairies. Every week new species come into bloom, wave after wave of changing colors from the first yellow star grass and wild strawberries in early May, growing ever taller to the eight foot stalks of *Silphium* and six foot fingers of big blue-stem against the sky in August, then to shorter asters and goldenrods and finally the lovely fringed gentians, blooming even after frost has changed the leaves of native grasses and herbs to red, purple and gold hues.

After the area was acquired and turned over to The University of Wisconsin—Milwaukee, it was deemed necessary to reduce the invading woody growth, especially such "weed" species as box elder and the choke cherry and buck-thorn seeded by birds in the fence rows, in order to prevent shading out the light-demanding prairie species. A volunteer crew of the newly-formed UWM Aldo Leopold Conservation Club helped to cut a number of the larger trees and burn off the area in late April of 1963. As a collateral bit of research on the effects of fire, a grid was laid out and all woody species mapped, measured and tallied before the burn. It was resurveyed for survivors and re-sprouting a year later. The study is still continuing. Most of the trees and shrubs killed back to the ground in 1963 had resprouted vigorously so a new attempt was made in 1967, but wet weather prevented getting a good burn. (We really had to work at keeping a flame going, not controlling it, and ended drenched by a violent squall line storm!) On April 12, 1968, another burn proved very successful,

backed by a strong wind on a sunny day, and the volunteer crew of Conservation Club members and plant ecology students learned the basics of back-firing and fire safety under critical conditions. By early summer the flowering of prairie plants was unusually good and most of the woody growth was effectively controlled. A July spot treatment of sprouts with 2-4-D should make possible longer intervals between burning in the future with adequate control. The study of resprouting, however, indicates that fire alone doesn't kill the trees and shrubs in such sites and probably is not alone responsible for the treelessness of true prairies in the border region as some authors have suggested. Bur oaks over one and one half inches in diameter survive with little damage while practically all woody species resprout readily and the denser shrub thickets are damaged only at the edges.

This area has been visited regularly for several years by plant ecology classes from The University of Wisconsin—Milwaukee and The University of Wisconsin—Kenosha, as well as by Nature Conservancy groups and individuals. It has an important use as a study area and for potential research and is also valuable for its genetic reservoir of prairie species which are becoming rarer each year. Seed from this strip has been used in prairie establishment studies at the Cedar-Sauk station and at Whitnall Park in the Milwaukee County Park System (M.S. thesis by Arthur Ode, The University of Wisconsin—Milwaukee, 1968). It is also important for its natural beauty, an area which can be visited again and again with new discoveries each time, as long as the users refrain from picking or digging up plants. For all this we can thank The Nature Conservancy, the local donors, and especially Mrs. Marge Reisinger, who activated and inspired the local committee to preserve this site.

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GOLDENRODS

THE GOLDENRODS, with their abundance and diversity, produce one of the most brilliant natural wildflower displays in our area from mid-August to November. In North America there are about one hundred species of these plants occurring in such habitats as upland woods, marshes, bogs, abandoned fields, dry roadsides, prairies, railroad rights-of-way and even open cliffs and sandy beaches. Some species are wide ranging in North America, while others are restricted to smaller geographic or ecologically distinct areas. Approximately twenty-one species are found in Wisconsin. Along roadsides in many parts of northern Wisconsin, their bright yellow inflorescences contrast with the dark green of the conifer trees; in the remainder of the state their colors compete with the changing foliage of the deciduous trees and the whites and blues of the asters and some of the herbaceous weeds.

In the past these plants have been maligned by hay fever sufferers. However, investigations have shown that goldenrod pollen is transferred almost entirely by various types of insects and, unless mummified, is not transported