

FLORA OF DAYTON PRAIRIE, A REMNANT OF TERRE COUPEE PRAIRIE, IN MICHIGAN

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Terre Coupee Prairie, Portage Prairie, and Rolling Prairie were among the finest and largest prairies of northern Indiana, in LaPorte and St. Joseph Counties, and in Berrien County, Michigan. They contained 6000-8000 ha (15,000-20,000 acres). The Terre Coupee Prairie extended northward into Michigan, just south of the present town of Dayton (Fig. 1).

HISTORY OF TERRE COUPEE PRAIRIE

Prairies were important in the early history of the area (Chapman, 1880). The Indians, seeking out the easiest route of travel, established The Great Sauk Trail across these prairies (Hinsdale, 1931). In Michigan, the Trail followed a line of prairies, passing through Beardley, White Pigeon, Baldwin, Sturgis, Bronson, Coldwater, and Allen Prairies (Butler, 1947). When a Chicago to Detroit Road was surveyed, it was laid along the Sauk Trail. The Michigan Road, a common early route of travel in Indiana, extended north from Indianapolis to South Bend and then continued westward to Lake Michigan at Michigan City, crossing Portage, Terre Coupee, and Rolling Prairies. These prairies were favorite camping grounds for several tribes of Indians.

The prairies were among the first lands selected for homes by incoming settlers. The first settler on Terre Coupee Prairie was Charles Vail in 1830. Terre Coupee village, founded on The Sauk Trail in 1837 on the prairie, was a thriving trading post and stage coach stop, whose name was later changed to Hamilton. In Michigan, fur trader Joseph Bertrand in 1806 established a trading post on St. Joseph River at the site of Bertrand, "Parc-aux-vaches" (Burgh, 1939). Squire Isaac Thompson settled at Niles in 1823 and in 1828 Rev. Isaac McCoy established the Cary Mission at this locality (Coolidge, 1906).

At the present site of Dayton, Benjamin Redding built a log cabin and sawmill on the creek in 1831. When the Michigan Central Railroad was completed, this stop was known as Terre Coupee, but later the name was changed to Dayton as several families, who settled here, came from Dayton, Ohio. A road extending southwesterly from Buchanan towards Dayton retains the name Terre Coupee.

DAYTON PRAIRIE

Because of the rich prairie soil Terre Coupee Prairie, like many of its kind, was plowed early for agriculture. Today the prairie consists of large, rich farms. However, a small sector known as the Dayton Prairie, located along the northeastern edge of the farmlands, still retains some prairie plants. This area extends along both the north and south sides of Curran Road (Section 16 in Bertrand Township) where two branches of McCoy Creek cross the road. The tract is much lower and wetter than most of Terre Coupee Prairie which probably explains why it has escaped cultivation.

FLORISTIC COMPOSITION OF DAYTON PRAIRIE

Several visits were made to the Dayton Prairie at different seasons during 1974 to 1977 to obtain data on the flora. A list of the plants in the tract is in Table 1. This prairie, containing 176 species, compares favorably with other prairies of southern Michigan (Thompson, 1968, 1975) and is classed as a wet prairie.

Although only slight changes in elevation occur throughout the area, the composition of local plant communities show distinct differences in character and exhibit considerable variation. The species

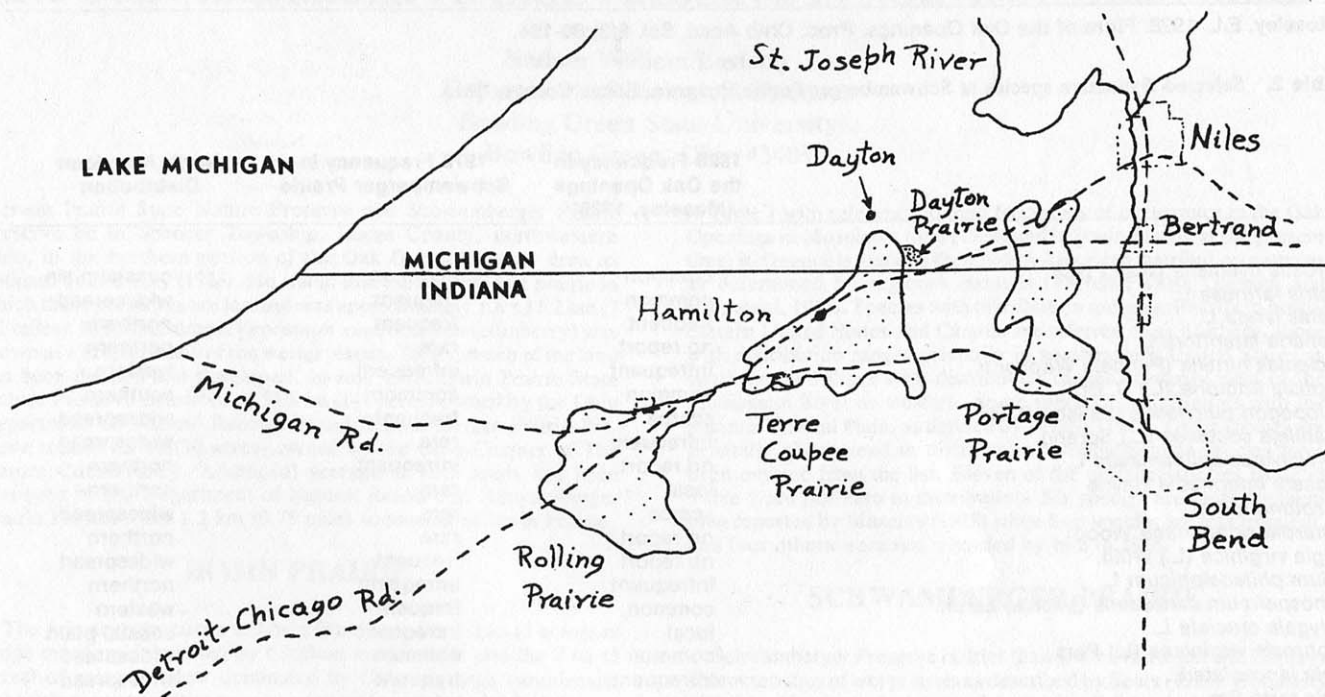


Figure 1. Location of Prairie Terre Coupee.

Table 1. Floristic composition of Dayton Prairie. Nomenclature follows Gleason (1952)¹.

Composites	<i>Phragmites communis</i>	Shrubs
<i>Achillea millefolium</i>	<i>Poa compressa</i>	<i>Salix bebbiana</i>
<i>Aster laevis</i>	<i>Sorghastrum nutans</i>	<i>S. candida</i>
<i>A. lateriflorus</i>	<i>Spartina pectinata</i>	<i>S. discolor</i>
<i>A. lucidulus</i>	Roses	<i>S. glaucophylloides</i>
<i>A. novae-angliae</i>	<i>Agrimonia gryposepala</i>	<i>Betula pumila</i>
<i>A. pilosus</i>	<i>Fragaria virginiana</i>	<i>Corylus americana</i>
<i>A. praealtus</i>	<i>Geum canadense</i>	<i>Rhus radicans</i>
<i>A. puniceus</i>	<i>Potentilla canadensis</i>	<i>R. vernix</i>
<i>A. umbellatus</i>	<i>P. recta</i>	<i>Ceanothus ovatus</i>
<i>Bidens cernua</i>	<i>Rosa blanda</i>	<i>Vitis riparia</i>
<i>B. coronata</i>	<i>R. palustris</i>	<i>Cornus purpusi</i>
<i>Chrysanthemum leucanthemum</i>	<i>Rubus allegheniensis</i>	<i>C. racemosa</i>
<i>Cirsium arvense</i>	<i>R. occidentalis</i>	<i>C. stolonifera</i>
<i>C. muticum</i>	<i>Spiraea alba</i>	<i>Sambucus canadensis</i>
<i>Coreopsis tripteris</i>	Legumes	<i>Viburnum lentago</i>
<i>Erigeron philadelphicus</i>	<i>Amphicarpa bracteata</i>	Other Species
<i>E. strigosus</i>	<i>Apios americana</i>	<i>Equisetum arvense</i>
<i>Eupatorium maculatum</i>	<i>Desmodium canadense</i>	<i>E. laevigatum</i>
<i>E. perfoliatum</i>	<i>Lathyrus palustris</i>	<i>Onoclea sensibilis</i>
<i>Helianthus giganteus</i>	<i>Lespedeza capitata</i>	<i>Osmunda regalis</i>
<i>H. grosseserratus</i>	<i>Melilotus alba</i>	<i>Thelypteris palustris</i>
<i>H. laetiflorus</i>	<i>M. officinalis</i>	<i>Typha angustifolia</i>
<i>Hieracium aurantiacum</i>	<i>Trifolium hybridum</i>	<i>T. latifolia</i>
<i>Lactuca canadensis</i>	<i>T. pratense</i>	<i>Tradescantia ohioensis</i>
<i>Rudbeckia hirta</i>	<i>Vicia villosa</i>	<i>Hypoxis hirsuta</i>
<i>Senecio pauperculus</i>	Violets	<i>Iris virginica</i>
<i>Silphium integrifolium</i>	<i>Viola cucullata</i>	<i>Sisyrinchium albidum</i>
<i>S. terebinthinaceum</i>	<i>V. papilionacea</i>	<i>Cypripedium candidum</i>
<i>Solidago altissima</i>	<i>V. septentrionalis</i>	<i>Urtica dioica</i>
<i>S. canadensis</i>	Crowfoots	<i>Rumex obtusifolius</i>
<i>S. gigantea</i>	<i>Anemone canadensis</i>	<i>Polygonum pensylvanicum</i>
<i>S. graminifolia</i>	<i>A. virginiana</i>	<i>Dianthus armeria</i>
<i>S. juncea</i>	<i>Caltha palustris</i>	<i>Barbarea vulgaris</i>
<i>S. nemoralis</i>	<i>Clematis virginiana</i>	<i>Cardamine bulbosa</i>
<i>S. ohioensis</i>	<i>Ranunculus abortivus</i>	<i>Lepidium campestre</i>
<i>S. patula</i>	<i>R. septentrionalis</i>	<i>Rorippa islandica</i>
<i>S. riddellii</i>	<i>Thalictrum dasycarpum</i>	<i>Parnassia glauca</i>
<i>S. rugosa</i>	Umbels	<i>Saxifraga pensylvanica</i>
<i>S. uliginosa</i>	<i>Angelica atropurpurea</i>	<i>Oxalis europaea</i>
<i>Sonchus uliginosus</i>	<i>Cicuta maculata</i>	<i>Geranium maculatum</i>
<i>Tragopogon pratensis</i>	<i>Daucus carota</i>	<i>Impatiens biflora</i>
<i>Vernonia missurica</i>	<i>Heracleum lanatum</i>	<i>Hypericum majus</i>
Figworts	<i>Oxypolis rigidior</i>	<i>H. perforatum</i>
<i>Chelone glabra</i>	<i>Zizia aurea</i>	<i>Epilobium angustifolium</i>
<i>Pedicularis lanceolata</i>	Mints	<i>Oenothera biennis</i>
<i>Penstemon digitalis</i>	<i>Lycopus americanus</i>	<i>Dodecatheon meadia</i>
<i>Veronicastrum virginicum</i>	<i>Mentha arvensis</i>	<i>Lysimachia terrestris</i>
Sedges, Grasses	<i>Monarda fistulosa</i>	<i>Steironema quadriflorum</i>
<i>Scirpus americanus</i>	<i>Prunella vulgaris</i>	<i>Gentiana andrewsii</i>
<i>S. atrovirens</i>	<i>Pycnanthemum virginianum</i>	<i>G. procera</i>
<i>S. cyperinus</i>	<i>Scutellaria galericulata</i>	<i>Convolvulus sepium</i>
<i>S. validus</i>	Lilies	<i>Phlox maculata</i>
<i>Agrostis stolonifera</i>	<i>Allium cernuum</i>	<i>Polemonium reptans</i>
<i>Andropogon gerardii</i>	<i>Asparagus officinalis</i>	<i>Verbena hastata</i>
<i>Bromus ciliatus</i>	<i>Lilium michiganense</i>	<i>Physalis heterophylla</i>
<i>B. inermis</i>	<i>Smilacina stellata</i>	<i>Solanum dulcamara</i>
<i>Calamagrostis canadensis</i>	Milkweeds	<i>Galium asprellum</i>
<i>Dactylis glomerata</i>	<i>Asclepias incarnata</i>	<i>G. boreale</i>
<i>Elymus canadensis</i>	<i>A. syriaca</i>	<i>Valeriana ciliata</i>
<i>Hierochloa odorata</i>	<i>Apocynum cannabinum</i>	<i>Campanula aparinoides</i>
<i>Leersia oryzoides</i>	<i>A. sibiricum</i>	<i>Lobelia kalmii</i>
<i>Muhlenbergia sp.</i>		<i>L. siphilitica</i>
<i>Phleum pratense</i>		

¹Gleason, H. A. 1952. The new Britton and Brown illustrated flora of the northeastern United States and adjacent Canada. 3 vols. N.Y. Bot. Gard., N.Y., N.Y.

which occur frequently are *Solidago ohioensis*, *S. gigantea*, *Aster lucidulus*, *Coreopsis triptera*, *Silphium integrifolium*, *Angelica atropurpurea*, *Zizia aurea*, *Pycnanthemum virginianum*, *Steironema quadriflorum*, *Polemonium reptans*, *Valeriana ciliata*, and *Thelypteris palustris*. Several species are on the Michigan list of rare and endangered species (Wagner et al., 1977). These species are shooting star (*Dodecatheon meadia*), sweet william phlox (*Phlox maculata*), white lady's slipper (*Cypripedium candidum*), Jacob's ladder (*Polemonium reptans*), valerian (*Valeriana ciliata*), and rosinweed (*Silphium integrifolium*). Listed in decreasing order the major groups are composites, grasses and sedges, roses and legumes, crowfoots and umbels, and mints with 42, 19, 10, 7, and 6 species, respectively.

ACKNOWLEDGEMENTS

I thank Cranbrook Institute of Science for research funds. I appreciate the assistance of James R. Wells (Cranbrook Institute of Science) and Margaret Kohring (Fernwood) for portions of the fieldwork.

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SAVING MICHIGAN'S RAILROAD STRIP PRAIRIES

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A management agreement with AMTRAK has safeguarded Michigan's railroad strip prairies. Some of southwestern Michigan's last prairie remnants lie along the AMTRAK route between Lawton, Michigan, and the Michigan-Indiana border. In November 1977, AMTRAK began bulldozing from fence to fence along the entire length of the railroad right-of-way as part of a program to upgrade the Michigan line. AMTRAK officials were receptive to the idea of preserving prairie relicts if they contained uncommon species and arrangements could be made to maintain them properly. Six representative prairie strips were identified with the help of the District Engineer for AMTRAK. It was agreed that these would be excluded from immediate clearing provided encroaching brush was removed from the parcels. A management agreement appeared to be the best vehicle to provide for continued maintenance of the prairie strips. The Nature Conservancy negotiated the management agreement with AMTRAK. Four miles (6.4 km) of prairie ecosystem, containing 15 species on the list of endangered, threatened, and rare plants of Michigan (Wagner, et al., 1977) have been preserved through this arrangement.

THE RAILROAD

Michigan Central Railroad constructed the line from Kalamazoo to Niles in the autumn of 1848 and completed the section from Niles to New Buffalo in the spring of 1849. The route was built in part through existing prairies. The original right-of-way was 30.3 m (100 ft) wide and provided a refuge for prairie species. In some places the sod remained unbroken, virgin prairie. Disturbed areas were quickly reseeded from surrounding prairie not yet cultivated. The railroad right-of-way was burned regularly until 1950 preserving an ideal habitat for prairie species.

In April 1976, AMTRAK acquired the line for passenger service. Projected improvements including bulldozing, brush removal, and use of herbicides threatened prairie remnants along the tracks. Since

some of southwestern Michigan's last prairie relicts were located along these railroad strips, it seemed desirable to preserve those which contained uncommon plants. In August 1977, negotiations were begun to prevent obliteration of these prairies in Michigan.

Little precedent has been established for negotiating with a railroad to set aside parcels for plant conservation. The problem was first presented to Ben Stark, the AMTRAK District Engineer. He indicated that AMTRAK might be willing to cooperate in such a project if these areas were unique and if permanent arrangements could be made for maintenance according to government specifications.

The area between New Buffalo and Kalamazoo was surveyed jointly with railroad representatives to determine where the major prairie relicts were located, how they could be protected, and how they were to be maintained. Six areas were selected for preservation in August 1977. Through an informal agreement these parcels were not to be bulldozed, and, in return, the encroaching brush was to be removed. A lease agreement between AMTRAK and a conservation agency appeared to be the best vehicle to provide for continued maintenance.

During 1978, protection of selected sites began. Signs were installed to prevent future bulldozing and brush was cut from the preserved areas. With cooperation from AMTRAK and the Department of Natural Resources, two strip prairies were burned in the spring of 1978. Negotiations with The Nature Conservancy as a private agency to lease and manage these strip prairies are underway.

DESCRIPTION OF PRAIRIE REMNANTS

The railroad prairie remnants consist of six individual parcels totaling about four miles (6.4 km) between the Michigan-Indiana boundary and Lawton, Michigan. These tracts represent some of the last prairie relicts in Michigan. Dry, mesic, and wet prairie sites along the tracks contain many of the endangered and threatened prairie species on the state list.

Grand Beach Tract in Berrien County is in New Buffalo Township, T8S, R21W, Section 17, Section 18, SE¼, and Section 19, NE¼, on

¹ Current address: The Nature Conservancy, 328 E. Hennepin Ave., Minneapolis, Minnesota 44514.