

Notes on Vascular Plants of the Cabin Creek Raised Bog

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Fifteen years have passed since the publication of *The Cabin Creek Raised Bog*, by R. C. Friesner and J. E. Potzger (1). During that period of time the bog seemed to become drier and to grow over with vegetation, as observed by Fay K. Daily, Butler University (personal communication). To check the present vascular flora, the bog was visited repeatedly in 1961, and plants were collected. I am greatly indebted to the Robert Holliday family for their hospitality during my field trips. My thanks are due to Dr. Marion T. Hall, Butler University, and to Mr. Floyd A. Swink, Morton Arboretum, Lisle, for confirming and identifying my collections. Specimens are deposited at the herbaria of Butler University, Indiana University and Chicago Natural History Museum. Nomenclature is in accord with Gray's *Manual of Botany*, 8th ed.

As stated by Friesner and Potzger (1), Cabin Creek Bog is located in the floodplain of Cabin Creek, 6 miles north of Modoc, Randolph County, Indiana, along Highway 1. It is a raised bog due to artesian spring water, high in calcium, with mosses (*Drepanocladus*), sedges and wood as chief peat formers. The weakly expressed hydrostatic pressure gives rise to wet areas favorable to a luxuriant growth of plants, and the accumulating remains build up a mound to ten feet above the floodplain. Moisture is derived from springs which give rise to several small streams which flow from the peat mass. Marl is abundant. There are lime tufa concretions around the springs and rivulets.

The mound is divided by a central north-south depression and a drainage ditch into two main parts: the western and the eastern. The western part has several springy areas, divided by channels of the rivulets. On the eastern knoll the water seepage is slower, accumulating in small pools. The tussocks of sedges are predominant, accompanied by grasses and showy herbs, many of them prairie species and those of northern distribution (1). Several colonies of *Lilium michiganense* were found on the western springy area, toward the central wooded depression. The eastern knoll has a large area dominated by *Eleocharis rostellata*, with *Cacalia tuberosa* abundant, and *Calopogon pulchellus* and *Pogonia ophioglossoides* infrequent. Here William and Fay K. Daily found *Drosera rotundifolia* in 1960. It is a northern disjunct in this area, two counties south of its general distribution in Indiana. *Drosera* grows on moss cushions around the pools and seepages. There was no *Sphagnum* found in the raised bog. *Scirpus validus* goes along the rivulets. The springs, stream beds and the shallow pools have a sod of *Rhynchospora capillacea*, with other calciphiles: *Triglochin palustris*, *Scleria verticillata*, *Juncus brachycephalus*, *Eleocharis elliptica*, *Parnassia glauca*, *Lobelia Kalmii*.

The shrubby cinquefoil (*Potentilla fruticosa*) is dispersed all over the mound, especially around the margins. Other shrubs and young trees also appear invading the open spaces: *Salices*, *Carpinus caroliniana*, *Rhus vernix*. Previously the trees and shrubs had been kept back by a yearly burning over. It has not been burned for several years, according to Robert Holliday (personal communication).

The southeastern side of the mound is covered by a tall sedge meadow (*Carex lacustris*, *C. stricta*). West of the raised area there is an open shrubby marsh toward Highway 1, with tall Carices, *Eleocharis calva*, Typha, Sagittaria. On the south, along the highway, it is joined by a compact reed marsh (*Phragmites communis*). The northwestern border of the raised bog proper is marked by an open shrub zone, beyond which the pasture of the Holliday Farm begins. The central wooded area has several tall hardwood trees, groups of young trees and an abundance of shrubs and vines.

New Species for the Cabin Creek Raised Bog

On the raised springy areas:

Cyperus rivularis
Scirpus validus var. *creber*
Eleocharis elliptica
Carex Buxbaumii
C. granularis
C. interior
C. lanuginosa
C. leptalea
C. prairea
C. sterilis
C. stricta
C. tetanica
Juncus Dudleyi
Lilium michiganense
Pogonia ophioglossoides
Calopogon pulchellus
Carpinus caroliniana var.
virginiana

Drosera rotundifolia
Epilobium leptophyllum

Southeastern sedge meadow:

Typha latifolia
Eleocharis calva
Carex lacustris
C. lanuginosa
C. prairea
C. stipata
C. stricta

Marsh at the highway:

Typha latifolia
Sagittaria latifolia
Leersia oryzoides
Cyperus rivularis
Eleocharis calva
Carex conjuncta
C. cristatella
C. lacustris
C. stipata
C. stricta

Juncus Dudleyi
Epilobium coloratum
C. molesta
C. Shortiana
C. stipata
C. tribuloides
C. trichocarpa
Juncus Dudleyi
Carpinus caroliniana v.
virginiana
Anemone canadensis
Iodanthus pinnatifidus
Epilobium coloratum
Colvolvulus sepium
Sambucus canadensis
Verbesina helianthoides
Heliopsis helianthoides

Central wooded area:

Panicum clandestinum
Carex blanda
C. amphibola var. *turgida*
C. granularis
C. rosea
Arisaema atrorubens
A. Dracontium
Trillium sessile
Smilax lasioneura
S. tannoides var. *hispida*
Dioscorea villosa
Juglans nigra
Carpinus caroliniana var.
virginiana
Ostrya virginiana
Celtis occidentalis var. *canina*
Morus rubra
Urtica procera
Polygonum cristatum
Anemone virginiana
Iodanthus pinnatifidus
Platanus occidentalis

Central wooded area (continued) :	Northwestern shrub zone :
<i>Xanthoxylum americanum</i>	<i>Cyperus strigosus</i>
<i>Ptelea trifoliata</i>	<i>Carex conjuncta</i>
<i>Vitis riparia</i>	<i>C. granularis</i>
<i>Parthenocissus quinquefolia</i>	<i>Blephilia hirsuta</i>
<i>Colvolvulus sepium</i>	<i>Scrophularia marilandica</i>
<i>Cuscuta Gronovi</i>	<i>Sambucus canadensis</i>
	<i>Verbesina helianthoides</i>

Altogether 63 new plant species for the Cabin Creek Raised Bog were found. Among those are 32 new Randolph County records. This "raised bog" might be called a fen as understood by Curtis (2) : "A fen is a grassland on a wet and springy site, with an internal flow of water rich in calcium and magnesium bicarbonates. It is to be considered a hybrid community where the unusual combination of environmental factors has sorted out and retained suitably adapted species from each of the major formations as they passed by in postglacial times."

Literature Cited

1. FRIESNER, RAY C. and J. E. POTZGER. 1946. The Cabin Creek Raised Bog, Randolph County, Indiana. Butler Un. Botan. Studies 8 : 24-43.
2. CURTIS, JOHN T. 1959. The Vegetation of Wisconsin. An Ordination of Plant Communities. The Univ. of Wisconsin Press, Madison.