

Chimaphila maculata Pursh. is reported from Putnam county (McD.), Franklin county (M.), Jefferson and Monroe counties. "Counties about Lake Michigan."

Pyrola chlorantha Swartz is reported from Lake county by E. J. Hill.

Pyrola rotundifolia L. Found in Noble county by Van G.; also reported from Lake county.

Monotropa uniflora L. is reported from the following counties: Franklin (M.), Clark (B. and T.), Jay, Delaware, Randolph and Wayne (P.), Putnam (McD.), Monroe (W. S. B.), Jefferson (J. M. C.), Cass (R. H.), Noble (Van G.), Gibson and Posey (S.), Tippecanoe (A. M. C.).

Monotropa hypopitys L. is reported from the following counties: Clark (B. and T.), Noble (Van G.), Vigo and Monroe (W. S. B.), Cass (R. H.), Franklin (M.), Jefferson and Monroe.

In the distribution of the Ericaceæ throughout the State we find the following species confined entirely to the northern part, *i. e.*: *Vaccinium corymbosum* L., *Vaccinium Orycoceus* L., *Arctostaphylos Uva-ursi*, Spreng., *Andromeda polifera* L., *Cuscutra calyculata* Don., and *Pyrola chlorantha* Swartz.

Gaylussacia frondosa Torr. and Gray is found only in Clark county (B. and T.).

The remaining species, with the exception of *Kalmia latifolia* L., are of general distribution.

INDIANA'S GENTIANACEÆ. BY ALIDA MABEL CUNNINGHAM.

Gray's Manual includes ten genera of Gentianaceæ, seven of which come within the range of Indiana; therefore, we might reasonably expect to find one or more species in nearly every county in the State. Unfortunately a comparatively small portion of the State has, as yet, been thoroughly botanized, and we find reports from only nineteen of the ninety-two counties. As reported the range by counties is from Lake on the north to Clark and Jefferson on the south, and from Jay on the east to Vigo on the west.

The reports show that six genera and fourteen species have been found in Indiana. Of these the genus *Gentiana* is represented by eight species, leaving the remaining six species to represent five genera.

Of the different species named in the list below but four have come under my own personal observation, and in the reports of some of the others I find wanting much that is required to make them of any great value. For instance, those reported from Marion, Harrison and Washington counties fail to show when or by whom collected. Other counties, however, report the same plants with

authority, except in the case of one, *i. e.*, *Gentiana puberula* Michx., which is not reported from any other locality in the State. Many do not show in what portion of their respective counties they were found, the character of the soil, the requirements as to moisture, or whether the plant is rare or abundant.

If we may be permitted to draw a conclusion based upon these reports, we would say the length of the list indicates that the Gentianaceæ are rare in the State; for, although a very small portion of the State has yet been systematically botanized, surely flowers of such exquisite loveliness as are the Gentians would scarcely escape the eye of the most casual observer, and even in those counties where the work has been most thoroughly and systematically done they are not represented by a large number of species. Doubtless the time is past for finding a great number of species of Gentianaceæ in Indiana, for the every appearance of this flower would indicate that it is too delicate a plant to withstand the encroachment of cultivation and would beat a hasty retreat before the march of improvement. Hence the cause for regret that the work done by the early collectors is of so little real value to science; for unquestionably there were then to be found here many forms of plant life that have now forever disappeared from the State. It is to be hoped that all future collectors of plants, of whatsoever description, will see that their collections are properly accredited to them, and further that they make their reports full and complete, that the future student may know something of the distribution of the plant, whether rare or abundant, and whether he may reasonably expect to find it growing in a swamp or a gravel bank, in the valley or on the hilltop.

The following is a list of all the Gentianaceæ of which I have been able to find even a trace in Indiana:

Sabbatia is represented by two species:

Sabbatia brachiata Ell. is reported only from Jefferson county by Dr. J. M. Coulter.

Sabbatia angularis Pursh. is reported from Gibson and Posey counties (S.), Cass county (R. H.), Franklin county (M.), Jefferson county (J. M. C.), Clark county (B. and T.), Lauramie Township, Tippecanoe county, August, 1897. Only a few specimens were found growing in rich, black soil in the edge of timber. (A. M. C.).

Gentiana crinita is reported from Cass county (R. H.), Noble county (W. B. Van G.), Wayne county (P.), Marion county.

Gentiana serrata Gunner is reported from only two counties—Noble (W. B. Van G.), west central portion of Lauramie Township, in the southeast corner of Tippecanoe county along the Little Wea Creek. It was found growing in a

marsh adjacent to the creek in 1896. The area over which it was found was, perhaps, an eighth of an acre in extent, and this entire area might be truthfully described as a mass of the bright, rich purple of this magnificent flower. The same place was visited in 1897 and not a single specimen could be discovered (A. M. C.).

Gentiana quinqueflora Lam. is reported from Franklin county (M.), Noble county (W. B. Van G.), Marion county, "Happy Hollow," one-half mile north of West Lafayette, Tippecanoe county. Common in rich, moist places along the foot of the bluffs. September, 1896 (A. M. C.).

Gentiana quinqueflora Lam., var. *occidentalis* Gray, is reported only from the "Knob" region by Dr. Clapp.

Gentiana puberula Michx. Reported from Harrison and Washington counties. No authority.

Gentiana Saponaria L. is reported from Vigo county (W. S. B.).

Gentiana Andrewsii Grieseb. is more generally distributed than any other species, being reported from twelve counties, *i. e.*: Jay, Delaware, Randolph and Wayne in the east; Jefferson, Gibson and Posey in the south; Vigo in the west; Monroe and Franklin in the central, and Noble and Cass in the north.

Gentiana alba Muhl. is reported from Cass county (R. H.), Vigo and Monroe counties (W. S. B.), Noble county (W. B. Van G.), Gibson and Posey counties (S.), "Happy Hollow," one-half mile north of West Lafayette, Tippecanoe county. But a single plant was found growing among a thick growth of timber on a gravelly clay soil on top of a bluff. August, 1896 (A. M. C.).

Frasera Carolinensis Walt. ranks next to *Gentiana Andrewsii* Grieseb. in distribution, being reported from nine counties: Cass county (R. H.), Noble county (W. B. Van G.), Jay, Delaware, Randolph and Wayne counties (P.), Gibson and Posey counties (S.), Franklin county (M.).

Bartonia tenella Muhl. is reported from Noble county only, by W. B. Van Gorder.

Obolaria Virginiaica L., as far as our knowledge goes, is confined to the southern and central portions of the State, being reported from Gibson and Posey counties (S.), Clark county (B. and T.), Vigo and Monroe counties (W. S. B.), Jefferson county (C. P. V.).

Menyanthes trifoliata L. seems to be an exclusively northern form, being reported from Lake county (E. J. H.), Noble county (W. S. Van G.), Cass county (R. H.), Kosciusko county (W. W. C.).