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THE DISTRIBUTION OF THE GENUS *TRADESCANTIA*
IN IOWA

D. G. DEIHL

The *Tradescantias* in the Grinnell herbarium have been critically studied with a view to determining the species and their distribution. Subsequently the collections at the herbaria at the State College at Ames and the State University at Iowa City have been reviewed. Grateful acknowledgement is made to Mr. R. I. Cratty of the State College at Ames, and to Dr. B. Shimek and Dr. R. B. Wylie at Iowa City, for their aid in the use of the College and University collections. Further credit is due to Dr. H. S. Conard for guidance and suggestions.

In many of the published lists of the plants of Iowa the *Tradescantias* have all been referred to as *T. virginiana*¹ (*T. virginica* Schultes err. typ.²) Shimek³ (1906) found *Tradescantia bracteata* and *T. reflexa*, Greene⁴ (1907) found *T. virginiana*, *T. reflexa*, *T. brevicaulis*, Diehl⁵ (1915) found *T. reflexa*, *Somes*⁶ (1913) found

¹ Parry, C. C. in Report of a Geological Survey of Wisconsin, Iowa, and Minnesota, Article V. (A report on collections antedating 1848.)

Bessey, Chas. E. Contributions to the Flora of Iowa, 1870, in Fourth Biennial Report of the Agricultural College, 1871. *T. pilosa* is also listed as from Fayette.

Arthur, J. C. Contributions to the Flora of Iowa; a catalogue of the Phaeogamous Plants. P. 33, (1876).

Pammel, L. H. Notes on the Flora of Western Iowa in Proc. Iowa Acad. Sci. Vol. 3, p. 134, (1896).

Hitchcock, A. S. A Catalogue of the Anthophyta and the Pteridophyta of Ames, Iowa, in Trans. St. Louis Acad. Sci. Vol. 5, p. 521, (1891).

Fink, B. Spermaphyta of the Flora of Fayette, Iowa, in Proc. Iowa Acad. Sci. Vol. 4, p. 105, (1896).

Shimek, B. The Flora of the Sioux Quartzite in Iowa II, in Proc. Iowa Acad. Sci. Vol. 5, p. 28, (1898).

Fitzpatrick, T. J. Notes on the Flora of Northeastern Iowa, in Proc. Iowa Acad. Sci. Vol. 5, p. 130, (1898).

Fitzpatrick, T. J. and M. F. L. Flora of Southern Iowa, in Proc. Iowa Acad. Sci. Vol. 5, p. 134, (1898).

Fitzpatrick, T. J. and M. F. L. Flora of Southern Iowa II, in Proc. Iowa Acad. Sci. Vol. 6, p. 173, (1899).

Barnes, W. D., F. Reppert, and A. A. Miller. Flora of Scott and Muscatine Counties, Iowa, in Proc. Dav. Acad. Sci. Vol. 8, p. 262, (1901). The var. *villosa* Wats. is also cited.

Cratty, R. I. Flora of Emmet County, Iowa, in Proc. Iowa Acad. Sci. Vol. 11, p. 214, (1904).

Peck, M. E. The Flowering Plants of Hardin County, Iowa, in Proc. Iowa Acad. Sci. Vol. 12, p. 195, (1905).

² Schultes, Jos. Augusto et Jul. Herm. Linn. Syst. Veget. ed. 15, Vol. 7, p. 117, (1830).

³ Shimek, B. Flora of Winneshiek County, in Iowa Geological Survey. Vol. 16, p. 171, (1906).

⁴ Greene, Wesley. Plants of Iowa, p. 148, (1907).

⁵ Diehl, Wm. Flora of the Ledges in Proc. Iowa Acad. Sci. Vol. 22, p. 88, (1915).

⁶ *Somes*, M. P. Notes on Flora of Johnson County, Iowa, in Proc. Iowa Acad. Sci. Vol. 20, p. 43, (1913).

T. virginiana, *T. Reflexa*, Verink⁷ (1914) found *T. bracteata*, *T. occidentalis*, *T. virginiana*, Tuttle⁸ (1919) found *T. bracteata*, Oleson and Somes⁹ (1906) found *T. virginiana*, *T. reflexa*. The characteristics of *T. virginiana* are stems erect, smooth and from 2 to 6 dm. tall; leaves lance-linear, the upper more or less pubescent from 1.5 to 3 dm. tall; *pedicels and sepals villous*, the latter about 1.5 cm. long; petals rich purplish-blue, 1.6-2 cm. long. Not a single Iowa specimen has been found to show all these marks of identification.

For the species found wild in Iowa the following key is intended. All specimens found in the herbarium as from Iowa under whatever name can be referred to these species. With each species some recognition characters have been recorded for both field and herbarium use, intended only as additions to the descriptions given in the manuals.

- 1. Sepals and pedicels glabrous, or with a tuft of hairs at apex of the sepals-----*T. reflexa* Raf.¹⁰
- 1. Sepals and pedicels glandular pubescent-----2
- 2. Bracts of the involucre wider than the leaves.
T. bracteata Small.¹¹
- 2. Bracts as wide as the leaves, or narrower
T. occidentalis (Britton) Smyth.¹²

In the citation of specimens under the species the following abbreviations will be used: (A) Herbarium of the Iowa State College, Ames, Iowa; (I) Herbarium of the State University of Iowa, Iowa City, Iowa; and (G) Herbarium of Grinnell College, Grinnell, Iowa.

Tradescantia reflexa Raf. — In the fall there is a type of basal foliage that is sparingly villous. This persists through the winter and in the spring is augmented by other non-cauline leaves. Failure to recognize this has resulted in numerous specimens, gathered early in the spring, remaining unnamed in the herbaria. *Allamakee Co.*, L. H. Pammel, Ellison, Orr, D. O. Wilson, Postville, (A); *Winneshiek Co.*, H. Goddard, (A); *Fayette Co.*, B. Fink, Fayette, (A); O. M. Fellows, Fayette, (I); *Chickasaw Co.*, Howe, Fredericksburg, (I); W. D. Spiker, (A); *Buchanan Co.*, M. Sherman,

⁷ Verink, E. D. Preliminary Report on Flora of Linn County, in Proc. Iowa Acad. Sci. Vol. 21, p. 80, (1914).
⁸ Tuttle, F. M. Flora of Mitchell County in Proc. Acad. Sci. Vol. 26, p. 277, (1919).
⁹ Oleson, O. M. and Somes, M. P. Flora of Webster County, Iowa, in Proc. Iowa Acad. Sci. Vol. 15, p. 32, (1906).
¹⁰ Rafinesque, C. S. New Flora, pt. 2, p. 87, (1836).
¹¹ Small, J. K. in Br. and Br. Illus. Flora, ed. 1, vol. 3, p. 510, (1897).
¹² Smyth, B. B. Additions to the Flora of Kansas, in Trans. Kans. Acad. Sci. Vol. 16, p. 163, (1899).

Independence, (G); *Delaware Co.*, I. T. Bode, 1919, 1920, (A); L. H. Pammel, Dubuque, (A); *Johnson Co.*, L. H. Pammel, (A); T. H. McBride, Iowa City, (I); L. H. Pammel, (G); *Iowa Co.*, C. Clarke, Homestead, (G); *Muscatine Co.*, F. Reppert, (I); *Van Buren Co.*, L. H. Pammel, Keosauqua, (A); *Lee Co.*, B. Shimek, Keokuk, (I); *Decatur Co.*, J. P. Anderson, (A). We have seen specimens from Cedar, Louisa, and Washington Counties, but have no herbarium specimens that can be cited.

Tradescantia bracteata Small. — Through the larger part of the state this is the only species. It is green, not glaucous as *T. reflexa* of the eastern part of the state. The bracts are not perceptibly different from the leaves to an observer in the field. *Muscatine Co.*, F. Reppert, No. 655, (I); *Tama Co.*, H. S. Conard, (G); D. G. Deihl, (G); *Mahaska Co.*, C. V. Ryan, Oskaloosa, (I); *Poweshiek Co.*, C. Clarke, Grinnell, (G); D. G. Deihl, Grinnell, (G); *Marshall Co.*, C. C. Lonnsberry, Marshalltown, (A); *Jasper Co.*, H. M. Tripp, Skunk River, (G); W. T. Waterman, Sugar Creek, (G); C. Clarke, Kellogg, (G); *Cerro Gordo Co.*, B. Shimek, Mason City, (I); *Hamilton Co.*, F. C. Stewart, Jewell Junction, (A); *Story Co.*, A. Ellis, College Park, (A), E. D. Ball, Ames, (A); G. W. Garver, Ames, (A); F. A. Serrine, Ames, (A); C. R. Ball, Ames, (A); F. A. Serrine, Ames, (1890), (A); L. H. Pammel, Ames, (A); S. W. Bayer, (A); L. H. Pammel, Ames, (1907), (A); C. R. Ball, Ames, (1887), (A); B. Berks, Ames, (A); A. G. Hoopes, (A); P. Clayton, No. 12, Kelley, (A); *Polk Co.*, C. Bryan, Country Club Knolls, (G); H. Frankel, Des Moines, (A); *Warren Co.*, (?), L. H. Pammel, (A); *Boone Co.*, L. H. Pammel, Boone Ledges, (A); *Calhoun Co.*, G. B. Rigg, Twin Lake Township, (I); *Webster Co.*, W. Boehm, Ft. Dodge, (I); *Emmet Co.*, R. I. Cratty, Armstrong, (1887), (A, I), (1889), (A); B. O. Wolden, No. 354, (A); *Pocahontas Co.*, L. H. Pammel and L. C. Fick, (A); *Adair Co.*, J. E. Gow, (I); *Dickinson Co.*, H. S. Conard, Lakeside Lab., (G); *Shelby Co.*, T. J. Fitzpatrick, (I); *Lyon Co.*, B. Shimek, Granite, (I); *Pottawatomie Co.*, J. E. Cameron, (I).

Tradescantia occidentalis (Britton) Smyth. — This species was first published as a variety of *T. virginiana*. How this was done is hard to understand; the plants seem to vary only in minute details from *T. bracteata*, its nearest affinity. The bracts are appreciably narrower than the leaves in the typical specimen though not infrequently bracts of this species are found as wide as the leaves.

Story Co., J. C. Blumer, Ames, (A); Emmet Co., R. I. Cratty, Armstrong, (A); Dickinson Co., H. S. Conard, Okoboji, (G).

A glance at the accompanying figure shows that with the excep-

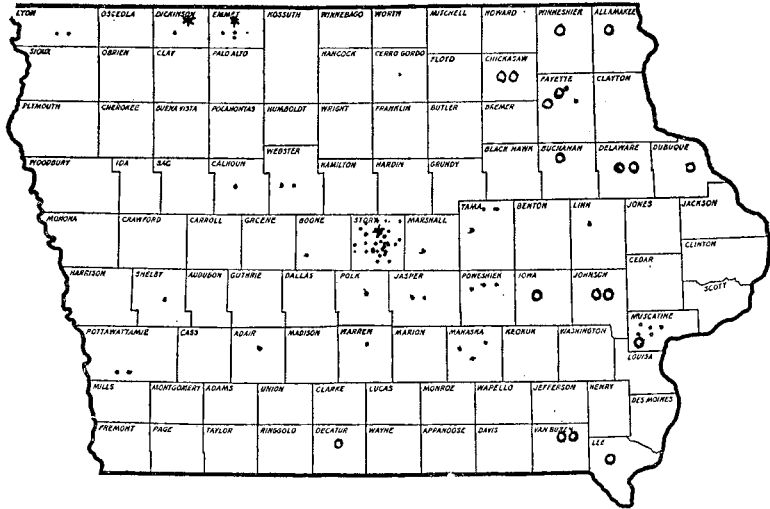


Plate I

- Tradescantia reflexa*.....○
- Tradescantia bracteata*.....●
- Tradescantia occidentalis*.....*

tion of the sandy soil around Muscatine the eastern part of the state is exclusively given over to *T. reflexa*. The species extends as far as the Amana colonies but does not seem to be native west of Iowa County. More specimens might extend the range of this species. The rest of the state is covered with *T. bracteata* except for a few isolated areas where *T. occidentalis* also grows. These species are reasonably adequately treated in Gray's Manual ed. 7, and Britton and Brown's Illus. Flora, ed. 2. Gray's Manuals, ed. 6, or earlier, would refer all the Iowa species to *T. virginiana*. This accounts for much of the misunderstanding concerning this genus. Too much importance is not to be placed on the chart included in this paper because of the scarcity of herbarium specimens with which to make the chart.

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