

PLANTS OF WHITE COUNTY—V.

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In this paper 117 additional species and varieties of the White County, Indiana, flora are reported. This makes the total number of wild plants of the county reported by the author 387.

The author has spared no pains to make the following list as correct as possible. Practically all specimens were checked by C. C. Deam, Bluffton, Indiana. The *Rosa* species were identified by P. A. Rydberg, New York Botanical Garden. The *Salix* species were identified by C. R. Ball; the *Malus* and *Crataegus* species by W. W. Eggleston, both of the U. S. Department of Agriculture. The determination of numbers 661, 673, 677, 681, 682, 685, 686, 699, 700, 701, 703, 707, 710, 712, 739, 742, 745, 746, 747, 748, 753, 755, 763, 775, 776, 777, 780, 781, 782, 783, and 788 is authorized by the Gray Herbarium, Harvard University.

All species reported in this paper were collected in the central and northeastern part of the county. Species numbers 649 to 688 and numbers 827 and 828 were collected on April 21 and 23, 1922; numbers 690 to 735 were collected on May 27 and 28, 1922; numbers 739 to 825 were collected on August 30 and 31, and September 2 and 3, 1922. These numbers follow the species names and indicate the specimen numbers in the author's collection.

It is believed that the following species and varieties included in the list are new to the state or merit special reference.

Ranunculus hispidus Michx. var. *falsus* Fernald.

Rubus pergratus Blanchard.

Lespedeza capitata Michx. var. *stenophylla* Fernald & Bissell.

Solidago caesia L. var. *axillaris* (Pursh) Gray.

Xanthium pennsylvanicum Wallr.

Brief notes are attached to these and certain other interesting species in the general list below.

EQUISETACEAE.

Equisetum arvense L. Field horsetail. Nos. 651, 688. See fig. 1.

Equisetum kansanum Schaffn. (*E. laevigatum* A. Br.) No. 703. Smooth scouring rush.

TYPHACEAE.

Typha latifolia L. Broad-leaved cat-tail. No. 754

GRAMINEAE.

Digitaria sanguinalis (L.) Scop. (*Syntherisma sanguinale* (L) Dulac) No. 777. Large crab grass.

Panicum scribnerianum Nash. Scribner's panic grass. No. 699.

Setaria lutescens (Weigel) Hubbard. (*S. glauca* (L.) Beauv. of Gray's Manual, or the *Chaetochloa glauca* (L.) Scribn. of Britton and Brown). Common or yellow foxtail. No. 781. For revised nomenclature see *Rhodora* Vol. 18:232:1916.

Cenchrus tribuloides L. Sand-bur or bur-grass. No. 768.

Stipa spurtea Trin. Porcupine-grass. No. 708. Grows on dry, sandy hill-sides.

Muhlenbergia sylvatica Torr. (*M.-M. umbrosa* Scribn. of B. & B.) Woodland dropseed. No. 780.

Phleum pratense L. Timothy. No. 784. Escaped and established plant of waste places and roadsides.

Eleusine indica Gaertn. Wire-grass or crab-grass. No. 783.

Eragrostis purshii Schrad. Pursh's love-grass. No. 775.

Eragrostis ciliunensis (All.) Link. This is *E. megastachya* (Koeler) Link. Syn. *E. Major* Host. of Gray's Manual. Strong-scented love-grass. No. 776.



Fig. 1. Field Horsetail *Equisetum arvense* L. A group of fertile stems growing in a moist sandy soil in south part of Reynolds, April 23, 1922.

Poa annua L. Annual or dwarf meadow-grass, or low spear-grass. No. 788.

Festuca octoflora Walt. Slender fescue-grass. No. 701.

Hordeum jubatum L. Squirrel-tail grass. No. 786.

CYPERACEAE.

Cyperus aristatus Rottb. (*C. inflexus* Muhl. of B. & B. ?) Awned cyperus. No. 746.

Eleocharis obtusa (Willd.) Schultes. Blunt spike-rush. No. 742.

Eleocharis capitata (L.) R. Br. Capitata spike-rush. No. 710. According to the Gray Herbarium this is the *E. tenuis* (Wild) Schultes of the present manual.

Fimbristylis autumnalis (L.) R. & S. Slender fimbristylis. No. 745.

Scripus validus Vahl. American great bulrush. No. 749.

Hemicarpha micrantha (Vahl.) Pax. Common hemicarpha. No. 747.

ARACEAE.

Symplocarpus foetidus Nutt. Skunk cabbage. No. 669.

JUNCACEAE.

Juncus tenuis Willd. Slender or yard rush. No. 782.

Juncus acuminatus Michx. Sharp-fruited rush. No. 748.

Luzula campestris (L.) D.C. var. *bulbosa* Wood. Bulbous common wood-rush. (*Juncoides bulbosum* (Wood) Small of B. & B.) According to Deam this is the common form of *Luzula* in Indiana. He says it probably occurs in every county.



Fig. 2. White adder's tongue or white dog's-tooth violet. *Erythronium albidum* Nutt. Very plentiful in thickets and wooded areas on the western protected bluff near the mouth of Pike creek. April 21, 1922.

LILIACEAE.

Allium canadense L. Meadow garlic. No. 720.

Erythronium albidum Nutt. White adder's-tongue. No. 657. See figure 2.

Trillium sessile L. Sessile-flowered wake-robin. No. 656.

Smilax lasioneuron Hook. Carrion-flower. This species has usually been reported under the name *S. herbacea* L. var. *pulverulenta* Michx. See Bull. Torrey Club Vol. 43:417:1916. No. 732.

DIOSCOREACEAE.

Dioscorea villosa L. Wild yam-root or colic-root. No. 803.

IRIDACEAE.

Iris versicolor L. Larger blue flag. No. 702.

Sisyrinchium atlanticum Bicknell. Eastern blue-eyed grass. Reported last year by Deam as new to Indiana. Proc. Ind. Acad. Sci. 1921:102. Seems to be the common species near Reynolds. Nos. 690, 709.

ORCHIDACEAE.

Habenaria bracteata (Willd.) R. Br. Long-bracted orchid. Collected in low flat woods near mouth of Big Monon Creek. Rare. No. 717.

SALICACEAE.

Salix alba L. White or common or European willow. No. 828.

Salix cordata Muhl. Heart-leaved willow. Nos. 653♂, 827♀. In the Proc. Ind. Acad. Sci. 1918:447-450 I reported *S. missouriensis* Bebb. as occurring in Indiana—a new record, basing my report on the identification of a specimen by an authority. *S. cordata* Muhl., here reported is based on determinations by Mr. C. R. Ball. Considering *S. missouriensis* Bebb. as a distinct species, the author plans further investigations seeking to verify or disqualify its presence in White County.

Salix tristis Ait. Dwarf gray willow. No. 679♀.

URTICACEAE.

Urticastrum divaricatum (L.) Kuntze. (*Laportea canadensis* Gaud.) Canada nettle. No. 799.

SANTALACEAE.

Comandra umbellata (L.) Nutt. Bastard toad flax. Nos. 693, 195.

POLYGONACEAE.

Rumex obtusifolius L. Broad-leaved or bitter dock. No. 785.

AMARANTHACEAE.

Amaranthus blitoides S. Wats. Prostrate amaranth. No. 773.

CARYOPHYLLACEAE.

Arenaria lateriflora L. Blunt-leaved sandwort. No. 735.

Agrostemma githago L. Corn cockle or corn campion. No. 728.

PORTULACACEAE.

Portulaca oleracea L. Purslane. No. 774.

RANUNCULACEAE.

Ranunculus hispidus Michx. var. *fulsus* Fernald. No. 661. This variety of the hispid buttercup is new to the state. The specimen was checked at the Gray Herbarium. Literature covering this group in Rhodora Vol. 22:30-31:1920 was not available. Specimen from near mouth of Pike creek.

Anemonella thalictroides (L.) Spach. Rue anemone or wind-flower. No. 655.

Anemone canadensis L. Canada anemone. No. 727.

Isopyrum biternatum (Raf.) T. & G. False rue anemone. No. 658.

MENISPERMACEAE.

Menispermum canadense L. Canada moonseed. No. 733.

BERBERIDACEAE.

Caulophyllum thalictroides (L.) Michx. Blue cohosh. No. 663.

LAURACEAE.

Benzoin aestivale (L.) Nees. Spicebush. Nos. 671, 824.

FUMARIACEAE.

Dicentra cucullaria (L.) Torr. Dutchman's breeches. No. 654. See figure 3. Minor Farm, near mouth of Pike creek, in a thicket at the edge of a pool.

CRUCIFERAE.

Cardamine douglassii (Torr.) Britton. Purple cress. No. 665.

Cardamine parviflora L. Small-flowered bitter-cress. No. 677.



Fig. 3. Dutchman's breeches. *Dicentra cucullaria* (L.) Torr. Common over bluffs north of mouth of Pike creek. Photograph shows a plant growing in sandy soil on the steep border of pool surrounded by a thicket. April 21, 1922.

CRASSULACEAE.

Penthorum sedoides L. Ditch or virginia stonecrop. No. 750.

SAXIFRAGACEAE.

Mitella diphylla L. Bishop's cap. No. 672.

Ribes cynosbati L. Prickly wild gooseberry. No. 670.

ROSACEAE.

Malus lancifolia Rehder. (*M. coronaria*, of manuals, in part.) Narrow-leaved crab apple. No. 815. Near mouth of Pike creek, a tree about 8½ inches in diameter, b.h., and from 25-30 feet high. Specimen collected Sept. 3, 1922. Tree at this time bearing an abundant crop of apples, 1¼ inches in diameter and ⅞ inch high, long peduncled.

Associated with *Malus ioensis* (Wood) Britton, No. 814, tree 2½ inches in diameter, 12 feet high, apples 1½ inches in diameter, 1¾ inches high, short peduncled. Also associated with the next.

Crataegus mollis (T. & G.) Scheele. Red-fruited or downy thorn. No. 813. Fruit abundant, ⅞ inch in diameter.

Rubus pergratus Blanchard. Square blackberry. No. 712. This species has not been reported for Indiana. Rydberg in Flora of North America gives its distribution as Maine to Ontario to Iowa. Specimen taken from a sandy ridge at edge of a woods about one mile northeast of Reynolds. In flower May 27.

Rosa blanda Ait. Smooth or meadow rose. No. 730. This rose forms several hybrids. My No. 722, according to Rydberg, seems to be *R. blanda* Ait. X *R. carolina* L. *R. carolina* L. is the *R. humilis*, Marsh. of Gray's Manual. It is also the same as *R. perviflora* Ehrh., *R. pennsylvanica* Wang., *R. caroliniana* Michx., *R. pratensis* Raf.? It is not the *R. carolina* L. as described in either Gray's Manual or Britton and Brown's Illustrated Flora. These should both be *R. palustris* Marsh. For explanation see Rydberg: Contributions from the New York Botanical Garden, No. 220, Notes on Rosaceae, 1920, or the same in Bulletin of the Torrey Botanical Club 47:45-66, Mar. 10, 1920. My report of *R. humilis* Marsh. (Proc. Ind. Acad. Sci. 1920:224) in accordance with the above should in name be changed to *Rosa carolina* L.

Rosa rubiginosa L. Sweetbrier or eglantine. No. 731.

Prunus virginiana L. Choke cherry. No. 724. This is the species described in Gray's Manual. This species and *P. serotina* Ehrh., which are merged in Britton and Brown's Illustrated Flora, are considered distinct species by the writer.

LEGUMINOSAE.

Cassia marilandica L. Wild or american senna. No. 806. This species was reported for Indiana long ago (Coulter's Catalog, 1899, with references from many counties). Neither Britton and Brown, 2nd edi. 1913, nor Gray 7th edi. 1908, credit it to Indiana.

Baptisia leucantha T. & G. Large white wild indigo. No. 825. In flower Sept. 3, 1922.

Trifolium arvense L. Rabbit-foot, old-field or stone clover. No. 816. On steep, hard, dry bluff of Tippecanoe river just below bridge at Norway. Associated with *Campanula rotundifolia* L.

Cracca virginiana L. (*Tephrosia virginiana* (L.) Pers.) Catgut, wild sweet-pea or goat's rue. No. 763.

Lespedeza hirta (L.) Hornem. Hairy bush-clover. No. 763.

Lespedeza capitata Michx. var. *stenophylla* Fern. & Biss. This variety is new to the state. The variety is described by Fernald and Bissell in Rhodora Vol. 14:92:1912. The specimen here reported was checked at the Gray Herbarium. Specimen taken from along the Pennsylvania railroad, east of Reynolds, growing in dry, sandy soil. No. 739.

Vicia americana Muhl. American or purple vetch. No. 721.

Strophostyles helvola (L.) Britton. Trailing wild bean. No. 789.

Falcata comosa (L.) Kuntze. (*Amphicarpa monoica* Ell.) Hog peanut. No. 798.

LINACEAE.

Linum virginianum L. Wild or slender yellow flax. No. 753.

POLYGALACEAE.

Polygala verticillata L. Whorled milkwort. No. 770.

BALSAMINACEAE.

Impatiens biflora Walt. Wild touch-me-not. No. 800.

VITACEAE.

Vitis aestivalis Michx. Summer or pigeon grape. No. 821. In a low, moist woods near mouth of Big Monon creek. The vines reached the high tree-tops. The main stem measured 19 inches in circumference.

Vitis vulpina L. Riverside or sweet-scented grape. No. 808.

CISTACEAE.

Helianthemum bicknellii Fernald. (*H. majus* B.S.P. of Gray's Man. *Crocantthemum majus* (L.) Brit. of B. & B.) Hoary frostweed. No. 707.

VIOLACEAE.

Viola sororia Willd. Woolly blue violet. Nos. 652, 660.

Viola scabriuscula Schwein. Smoothish yellow violet. No. 662.

Viola primulifolia L. var. *villosa* A. Eaton. No. 163. The following is an extract of a letter received from Ezra Brainard in answer to his receipt of my leaflet "The Primrose-leaved Violet in White County, Proc. Ind. Acad. Sci. 1914:213-217." "The drawing of your specimens seems to make them Eaton's var. *villosa*, a form commonly found in the South as far West as Calcasien County, La. (lat. 30½°). Its occurrence in Ind. Lat. 40° 35', about 700 miles further north, is surprising. This pubescence in your plant may, however, be an instance of the general law that low temperature and high humidity, as in your small mucky bog, favor pubescence, while high temperature and low humidity tend to do the opposite." See Brainard, Violets of North America, Vt. Agr. Exp., Sta. Bul. 224: Dec., 1921, p. 87, also pp. 64 and 65. Pitt. 3:315 May, 1898.

ONAGRACEAE.

Ludwigia palustris L. Marsh purslane or false loose strife. No. 741.

HALORAGIDACEAE.

Proserpinaca palustris L. Mermaid-weed. No. 678.

UMBELLIFERAE.

Zizia aurea (L.) Koch. Early or golden meadow parsnip. No. 696.

Daucus carota L. Wild carrot. No. 790.

ERICACEAE.

Vaccinium vacillans Kalm. Low blueberry. No. 685.

GENTIANACEAE.

Gentiana saponaria L. Soapwort gentian. No. 771.

CONVOLVULACEAE.

Cuscuta gronovii Willd. Gronovius' dodder. No. 755. On willows.

POLEMONIACEAE.

Phlox pilosa L. Downy or prairie phlox. No. 698.

Phlox bifida Beck. Cleft phlox. No. 684.

HYDROPHYLLACEAE.

Hydrophyllum virginianum L. Virginia waterleaf. No. 729.

BORAGINACEAE.

Lappula virginiana (L.) Greene. Virginia stickseed. No. 807.

Mertensia virginica (L.) DC. Virginia cowslip. No. 659.

Lithospermum arvense L. Corn gromwell. No. 681.

Lithospermum canescens (Michx.) Lehm. Hoary puccoon. No. 682.

LABIATAE.

Scutellaria lateriflora L. Mad-dog or blue skullcap. Nos. 751, 792, 801.

Nepeta hederacea (L.) Trevisan. Ground ivy. No. 650.

Mentha spicata L. Spearmint. Nos. 760, 796.

SCROPHULARIACEAE.

Mimulus ringens L. Square-stemmed monkey-flower. Nos. 743, 795.

Gratiola virginiana L. Clammy hedge-hyssop. No. 711.

Veronica scutellata L. Marsh or skullcap speedwell. No. 713.

Veronica peregrina L. Purslane speedwell. No. 705.

Azelia macrophylla (Nutt.) Kuntze. Mullen foxglove. No. 812.

BIGNONIACEAE.

Bignonia radicans L. (Tecoma) Trumpet-vine. No. 819. Growing in low, moist ground near mouth of Big Monon creek.

CAPIFOLIACEAE.

Triosteum aurantiacum Bicknell. Scarlet-fruited horse-gentian. No. 726.

CAMPANULACEAE.

Campanula rotundifolia L. Harebell or blue bells of Scotland. No. 817. Many-flowered form. On steep, dry bluff of the Tippecanoe river just below the bridge at Norway. Associated with *Trifolium arvense* L.

COMPOSITAE.

Eupatorium purpureum L. Joe-pye or trumpet-weed, tall or purple boneset. See *Rhodora* Vol. 22:64.

Eupatorium urticacifolium Reichard. White snake-root. No. 791.

Solidago caesia L. Blue-stemmed or wreath golden-rod. No. 802.

Solidago caesia L. var. *axillaris* (Pursh) Gray. No. 822.

This variety has not been reported for Indiana. It seems to be an extremely doubtful variety, being perhaps only a simple stemmed form of the species. Britton and Brown do not recognize the variety, nor do they even make mention of the variety *paniculata* of Gray. According to Deam most of the Indiana specimens do not agree with the description of the species as given in Gray, but more nearly with the variety *paniculata*. The variety is here reported for the information of other collectors.

Solidago rigida L. Stiff or hard-leaved golden-rod. No. 740.

Antennaria fallax Greene. Nos. 673, 686. See figure 4. Reported by Deam for Indiana, Proc. Ind. Acad. Sci. 1914. Both of my specimens were checked by the Gray Herbarium. *S. ambigens* Fernald is a synonym. Neither name is listed in Britton and Brown, Illustrated Flora, 2nd. edi.



Fig. 4. Cat's-foot or everlasting. *Antennaria fallax* Greene. A part of a large colony of these plants growing on the southeastern edge of a sand hill about one-fourth mile east of Reynolds. April 23, 1922.

Xanthium pennsylvanicum Wallr. Pennsylvania clotbur. No. 793. This is a new name in the list of plants for Indiana. Perhaps most of the reports for *X. canadense* Mill. should be referred to this species. The genus has long been in an uncertain condition. For the new treatment of the genus see North American Flora Vol. 33:37-44: 1922.

Heliopsis helianthoides (L.) Sweet. Ox-eye or false sunflower. No. 810.

Rudbeckia laciniata L. Tall or green-headed cone-flower. No. 823.

Ridain alternifolius (L.) Britton. Wing-stem or yellow iron weed. No. 809.

Helianthemum autumnale L. False or swamp sunflower. No. 757.

Tanacetum vulgare L. Tansy. No. 761. This plant is growing wild in several places in the county according to recent observations. (See Proc. Ind. Acad. Sci. 1920:223.)

