A CATALOGUE

OF THE

UNCULTIVATED

FERNS AND FERN ALLIES (PTERIDOPHYTA)

AND THE

FLOWERING PLANTS (SPERMATOPHYTA)

OF

VIGO COUNTY,

INDIANA.

BY W. S. BLATCHLEY.
How ineffably vast and how hopelessly infinite is the study of nature!
If a mere dilettante observer like myself—a saunterer who gathers posies and chronicles butterflies by the wayside for the pure love of them—were to tell even all that he has noticed in passing of the manners and habits of a single weed—of its friends and its enemies, its hidden guests and its dreaded foes, its attractions and its defenses, its little life history and the wider life history of its race—he would fill a whole book up with what he knows about that one little neglected flower; and yet he would have found out after all but a small fraction of all that could be known about it, if all were ever knowable.” —Grant Allen.
INTRODUCTION.

Many catalogues of the flowering plants of different localities in this and other States have appeared in recent years, each varying much in the nature of the information contained. Some were mere lists of scientific names. Others contained much valuable information regarding the variations, and habitat of the plants recorded. All added more or less to the known geographical distribution of plants.

My reasons for preparing and publishing the present list are several:

First. — The botany of any region is closely related to the geology thereof, and no better place could probably be found for the printing of a catalogue of the flora of Vigo County than immediately succeeding the foregoing report and map of the geology of that county prepared by Dr. Scovell.

Second. — During a seven years' residence of the county a large number of notes relating to the variation, distribution, and comparative abundance of the flowering plants were collected. As no flora of the county has ever been published, and as the State Normal School is located at Terre Haute, it was thought that a list, with such notes added, might be of aid to future students of botany in that institution.

Third. — Many indigenous plants once common in western Indiana are becoming rare or have already disappeared. They could not withstand our modern civilization. In the words of Thoreau: "The Indian stood much nearer to wild nature than we. The noblest quadrupeds, the largest fresh water fish, some of the wildest and noblest birds and the fairest flowers have receded as we advanced, and we have but the most distant knowledge of them."

From the primitive fauna of Vigo County have disappeared the buffalo, bear, wolf, panther, elk, deer, wild turkey, ivory-billed woodpecker, paroquet, wild pigeon, rattlesnake and copperhead, together with the noble red man, the one time contemporary and lord of them all. From its flora will soon be stricken the yellow lady's slipper and showy orchis, the wild orange red and turk's cap lilies, the yellow ruecoon and blue cohosh, the ginseng and squill, the nelumbo and white water lily, the black walnut and yellow poplar, all of which were once abundant; while already many flowers which once decked with their brilliant and
varied colors all the prairies on either side of the Wabash River, have wholly disappeared, and, in their stead, we find those coarse, unsightly weeds of civilization—aliens from a foreign shore—which have ever accompanied the white man on his westward march. The native plants, now rare, will soon have wholly disappeared from the flora of the county. That a permanent record of that flora, as it now exists, may be accessible to future generations, is the principle reason for the preparation of the present list.

TOPOGRAPHY AND SOILS OF VIGO COUNTY.

The number and variety of the flowering plants of any region are determined very largely by the nature of the topography and the character of the soils, as well as by the latitude, mean annual temperature, etc. The topography of Vigo County is a varied one. The Wabash River flows through its northwestern corner, and in many places its bottoms, which are usually overflowed each season, are two to four miles wide. Embraced within the area of these alluvial bottom lands are numerous sloughs and ponds, some of them covering an area of 40 to 80 acres, whose waters are replenished by each annual overflow. Within the waters or about the muddy or sandy margins of these ponds grow many plants rarely found in other portions of the State or not hitherto recorded from within its bounds. Some of the more notable of these are the Upright Bur-head, *Echinodorus cordifolius* (L.); Swamp Horsetail, *Equisetum fluviatile* L.; Water Milfoil, *Myriophyllum verticillatum* L.; Pondweed, *Potamogeton spirillus* Tuckerm.; Catchfly Grass, *Homalocenchrus lenticulatus* (Michx.); Columbia Wolffia, *Wolffia columbiana* Karst.; Sandwort, * Arenaria serpyllifolia* L., and Downy Poplar, *Populus heterophylla* L.

Bordering these lowland bottoms on the east side of the river are level river terraces, or prairies varying in width from three to eight miles. In some places, as near the Five-Mile Pond, north of Terre Haute, these terraces rise higher and more abruptly than elsewhere, and the soil both on the slope and on the level above is very sandy. In such localities certain plants are found which have been recorded elsewhere in the State only from the sand dunes along its northern border. Among such may be mentioned the Diffuse Panicum, *Panicum autumnale* Bosc.; Hair-like Stenophyllus, *Stenophyllum capillare* (L.); Carolina Whiltlow Grass, *Draba caroliniana* Walt.; Frostweed, *Helianthemum canadense* (L.); Whorled Milkweed, *Asclepias verticillata* L., and Houghton's Synthesis, *Wulfenia houghtoniana* (Benth.).

The surface of most of the level river terrace has long since been cultivated, but in the vicinity of Heckland, nine miles north of Terre
Haute, are several small tracts of virgin prairie as yet untouched by the plow. The soil of some of these is low and wet; of others, high, dry and sandy. This region, when carefully examined, proves to be a veritable botanist's paradise. Here has been found a large percentage of the plants worthy of especial mention in this report. Of these, the Canadian Burnet, *Sanguisorba canadensis* L.; the Goldenrods, *Solidago speciosa* Nutt., *S. rigida* ANDERSON (T. & G.), and *S. odora* Ait.; the Greenish Orchis, *Habenaria flavescens* L.; the Larger Yellow Lady's Slipper, *Cypripedium hirsutum* Mill.; the Rose Mallow, *Hibiscus lasiocarpus* Cav.; the Lance-leafed Violet, *Viola lanceolata* L., and the Soapwort Gentian, *Gentiana saponaria* L., are the most notable. This locality furnishes, also, the only stations in the county where representatives of that typical prairie flora, once so prominent in the western third of our State, can yet be found; and here, in their respective seasons, the Bluets, *Houstonia corymbosa* L.; Scarlet Painted Cups, *Castilleja coccinea* L.; Blazing Stars, *Laciniaria scariosa* Willd., and *L. pyenootachya* Michx.; False Indigo, *Baptisia leucamha*, T. & G., and Queen of the Prairie, *Spiraea lobata* Gronv., flourish in beauty and profusion.

On the east side of the river terraces are the uplands, usually more or less broken or hilly, which extend to the eastern confines of the county and are underlaid with coal. The ravines and hillsides in the vicinity of Grant—Ferrell's woods in section 6, Riley Township, and Hipple's Coal-mine woods in section 1, Linton Township—are localities of the eastern uplands of especial interest, each with a number of characteristic species not noted elsewhere in the county.

On the western side of the river the uplands approach the river bottoms closely, a narrow terrace only intervening. Here also coal underlies the surface, and in many places along the smaller streams high, dry, wooded hills are found. The most interesting of these, botanically, are along the south side of Coal Creek in sections 19 and 24, Fayette Township. Here is the home of such noteworthy species as the Five-flowered Gentian, *Gentiana quinquefolia* L.; the Virginia Obolaria, *Obolaria virginica* L.; the Bracted Orchis, *Habenaria bracteata* (Willd.); the Rattlesnake Plantain, *Platanthera pubescens* (Willd.), and the Canada Waterleaf, *Hydrophyllum canadense* L., besides many others noted in the list.

Along the sandy banks of the old Wabash and Erie canal, and the gravelly banks of the railways, especially the Vandalia, between Terre Haute and Glen,© many a rare species grows and blossoms, unnoticed save by the insects, which visit it for nectar, and the wandering naturalist, ever on the lookout for the interesting and the beautiful among the

©By a mistake the station of Glen was wrongly located on Dr. Scovell's map of Vigo County. It should be at the crossing of the Vandalia Railroad and National Road, near the center of Section 16, Lost Creek Township.
common and the dross. Many of the plants along the canal are without doubt the descendants of species introduced two score years and more ago when busy commerce reigned supreme up and down this artificial road of water.

Thus we note that the extensive river bottoms, the sandy ridges, the prairies damp and dry, the ponds and sloughs, and the uplands with their ravines and wooded hills furnish a variety of topography and soils suitable to the existence and growth of many kinds of plants. Indeed, it may be said that every character of topography occurring in Indiana is represented in Vigo County, with but one exception, namely, the rocky hills characteristic of Brown and eastern Monroe counties, and other portions of southern Indiana. On account of the absence of such hills a number of plants, whose general range includes the entire State, do not occur in the county. Among the more notable of these are many species of the family Ericaceae, as limited in Gray's Manual, which is represented only by two parasitic species belonging to the genus Monotropa. Others are the Indian Cucumber Root, Medeola virginiana L.; the Common Dittany, Cunila mariana L.; the Fragrant Sumach, Rhus aromatica Ait.; the Choke Cherry, Prunus virginiana L., and the Small Honeysuckle, Lonicera dioica L., besides a number of species of ferns.

PLANTS OF SOUTHERN RANGE.

One interesting characteristic of the flora of Vigo County is the presence of a large number of plants whose true range lies much farther south. Their occurrence as far north as central Indiana can only be accounted for by the broad and sheltering valley of the Wabash, within the confines of which they find a climate and a soil congenial to their wants. The following list comprises twenty-five of the most notable of these southern forms:

- Pitcher's Clematis, Clematis pitcheri T. & G.
- Pond Cress, Nasturtium sessiliflorum Nutt.
- Densely-flowered St. John's Wort, Hypericum densiflorum Pursh.
- Rose Mallow, Hibiscus lasiocarpus Cav.
- *Poa rhea* melilotoides Michx.
- Sedum, Sedum telephioides Michx.
- Sweet Gum, Liquidambar styraciflua L.
- Ammannia, Ammannia coccinea Rottb.
- Sinuate-leaved Primrose, Oenothera sinuata L.
- Northern Passion Flower, Passiflora tibea L.
- Purplish Cudweed, Gnaphalium purpureum L.
- *Hymenopappus sebaceus* L'Her.
- Butterweed, Senecio lobatus Pers.
- Persimmon, Diospyros virginiana L.
Climbing Milkweed, *Enslenia albida* Nutt.
Trumpet Creeper, *Tecoma radicans* Juss.
Blue Curls, *Trichostema dichotomum* L.
Large-flowered Mint, *Symandra grandiflora* Nutt.
--- *Phyllanthus carolinensis* Walt.
Pecan-nut, *Carya oviformis* Nutt.
Downy Poplar, *Populus heterophylla* L.

Many others might be mentioned whose range for the most part lies far to the southward, but the above are sufficient to show that in Vigo County is found a northern extension of true southern forms, a locality where a northern and a southern flora overlap and merge.

**DATE OF FLOWERING OF EARLY SPRING PLANTS.**

The following is a record of the dates of flowering of seventy species of plants in Vigo County during the months of February, March and April for the years 1889, 1890, and 1891. The dates given are those upon which the first flowers of each species were noted by the writer in the years mentioned. In a number of instances the plants had been in blossom for several days before the notes were taken. It will be seen that the dates for 1889 and '90 were nearly the same, while those for 1891 were in most instances from ten days to two weeks later. From this table may be gained a fair idea of the variability of the spring season in Vigo County.

<table>
<thead>
<tr>
<th>Species</th>
<th>1889</th>
<th>1890</th>
<th>1891</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acer rubrum</em> L., Red Maple</td>
<td>Mar. 10</td>
<td>Feb. 16</td>
<td>Feb. 21</td>
</tr>
<tr>
<td><em>Acer saccharinum</em> L., Soft or White Maple</td>
<td>Mar. 15</td>
<td>Feb. 16</td>
<td>?</td>
</tr>
<tr>
<td><em>Draba caroliniana</em> Walt., Whitlow Grass</td>
<td>Mar. 14</td>
<td>Mar. 21</td>
<td>Mar. 30</td>
</tr>
<tr>
<td><em>Cardamine douglasii</em> (Torr.), Purple Cardamine</td>
<td>Mar. 23</td>
<td>Feb. 9</td>
<td>Mar. 18</td>
</tr>
<tr>
<td><em>Bursa bursa-pastoris</em> (L.), Shepherd's Purse</td>
<td>Mar. 10</td>
<td>Apr. 5</td>
<td>Apr. 12</td>
</tr>
<tr>
<td><em>Brigienia bulbosa</em> (Michx.), Turkey Pea</td>
<td>Mar. 16</td>
<td>Mar. 22</td>
<td>Mar. 18</td>
</tr>
<tr>
<td><em>Coriopsis americana</em> (Walt.), Hazelnut</td>
<td>Mar. 16</td>
<td>?</td>
<td>Apr. 1</td>
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<tr>
<td><em>Hepatica acuta</em> (Persh.), Liverwort</td>
<td>Mar. 17</td>
<td>Mar. 21</td>
<td>Apr. 1</td>
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<tr>
<td><em>Sanguinaria canadensis</em> L., Bloodroot</td>
<td>Mar. 17</td>
<td>Mar. 26</td>
<td>Apr. 7</td>
</tr>
<tr>
<td><em>Viola tenella</em> Matl., Wild Pansy</td>
<td>Mar. 17</td>
<td>Apr. 27</td>
<td>Apr. 16</td>
</tr>
<tr>
<td><em>Dentaria cicutaria</em> Walt., Toothwort</td>
<td>Mar. 23</td>
<td>Mar. 22</td>
<td>Apr. 12</td>
</tr>
<tr>
<td><em>Claytonia virginica</em> L., Spring Beauty</td>
<td>Mar. 23</td>
<td>Mar. 22</td>
<td>Mar. 29</td>
</tr>
<tr>
<td><em>Viola obliqua</em> Hill, Common Blue Violet</td>
<td>Apr. 6</td>
<td>Apr. 5</td>
<td>Apr. 14</td>
</tr>
<tr>
<td>Plant Name</td>
<td>1889</td>
<td>1890</td>
<td>1891</td>
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<td>----------------------------------</td>
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</tr>
<tr>
<td><em>Phlox divaricata</em> L., Sweet William</td>
<td>Apr. 6</td>
<td>Apr. 5</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Erythronium americanum</em> Ker., Yellow Adder's Tongue</td>
<td>Apr. 6</td>
<td>Apr. 5</td>
<td>Apr. 12</td>
</tr>
<tr>
<td><em>Iasypyrus bidentatum</em> (Raf.), False Rue-anemone</td>
<td>Apr. 2</td>
<td>Apr. 5</td>
<td>Apr. 12</td>
</tr>
<tr>
<td><em>Phlox bifida</em> Beck, Dwarf Phlox</td>
<td>Apr. 7</td>
<td>Apr. 13</td>
<td>Apr. 17</td>
</tr>
<tr>
<td><em>Bisnella ocellata</em> L., Dutchman's Breeches</td>
<td>Apr. 10</td>
<td>Apr. 5</td>
<td>Apr. 12</td>
</tr>
<tr>
<td><em>Trillium sessile</em> L., Sessile Trillium</td>
<td>Apr. 10</td>
<td>Apr. 8</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Trillium recurvatum</em> Beck, Purple Trillium</td>
<td>Apr. 10</td>
<td>Apr. 10</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Alsine pubera</em> (Michx.), Great Chickweed</td>
<td>Apr. 13</td>
<td>Apr. 5</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Taraxacum tarracum</em> (L.), Dandelion</td>
<td>Apr. 13</td>
<td>Apr. 5</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Viola pubescens</em> Ait., Downy Yellow Violet</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Viola striata</em> Ait., Pale Violet</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 18</td>
</tr>
<tr>
<td><em>Cercis canadensis</em> L., Red Bud</td>
<td>Apr. 13</td>
<td>Apr. 20</td>
<td>Apr. 19</td>
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<tr>
<td><em>Bisnella gracilis</em> Michx., Missouri Gooseberry</td>
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<td>Apr. 8</td>
<td>Apr. 16</td>
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<td><em>Capsndes flavum</em> (Raf.), Yellow Corydalis</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 17</td>
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<tr>
<td><em>Delpheinum tricolor</em> Michx., Dwarf Blue Larkspur</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 21</td>
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<tr>
<td><em>Bisnella canadensis</em> (Goddie.), Squirrel Corn</td>
<td>Apr. 13</td>
<td>Apr. 5</td>
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<tr>
<td><em>Erythronium albidum</em> Nutt., White Adder's Tongue</td>
<td>Apr. 13</td>
<td>Apr. 8</td>
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<tr>
<td><em>Coffea arabica</em> Nutt., Innocence</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
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<tr>
<td><em>Senecio obovatus</em> MuH., Ragwort</td>
<td>Apr. 17</td>
<td>Apr. 13</td>
<td>Apr. 23</td>
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<tr>
<td><em>Syndesmon thalictroides</em> (L.), Rue-anemone</td>
<td>Apr. 17</td>
<td>Apr. 5</td>
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<tr>
<td><em>Benois bensoin</em> (L.), Spice-bush</td>
<td>Apr. 10</td>
<td>Apr. 5</td>
<td>Apr. 12</td>
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<tr>
<td><em>Ranunculus septemtrionalis</em> Poir., Creeping Buttercup</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 19</td>
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<tr>
<td><em>Dolomitum reptans</em> L., Greek Valerian</td>
<td>Apr. 13</td>
<td>Apr. 13</td>
<td>Apr. 19</td>
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<tr>
<td><em>Gleahoma heteroece</em> L., Ground Ivy</td>
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<td>Apr. 15</td>
<td>Apr. 17</td>
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<tr>
<td><em>Stylophorum diphyllum</em> (Michx.), Yellow Celandine Poppy</td>
<td>Apr. 17</td>
<td>Apr. 19</td>
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<tr>
<td><em>Sassafras songra</em> (L.), Sassafras</td>
<td>Apr. 20</td>
<td>Apr. 15</td>
<td>Apr. 25</td>
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<tr>
<td><em>Geranium maculatum</em> L., Wild Cranesblll</td>
<td>Apr. 20</td>
<td>Apr. 27</td>
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<tr>
<td><em>Senecio aureus</em> L., Golden Ragwort</td>
<td>Apr. 20</td>
<td>Apr. 27</td>
<td>?</td>
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<tr>
<td><em>Ribes cynosbati</em> L., Prickly Wild Gooseberry</td>
<td>Apr. 20</td>
<td>Apr. 13</td>
<td>Apr. 21</td>
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<td><em>Pyrus salis</em> L., Wild Apple</td>
<td>Apr. 20</td>
<td>Apr. 28</td>
<td>?</td>
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<tr>
<td><em>Erythronium glabrum</em> L., Common Bleabane</td>
<td>Apr. 20</td>
<td>Apr. 27</td>
<td>May 6</td>
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<tr>
<td><em>Acer negundo</em> L., Box Elder</td>
<td>Apr. 20</td>
<td>Apr. 20</td>
<td>Apr. 16</td>
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<tr>
<td><em>Descurainia pinnata</em> (Walt.), Tansy Mustard</td>
<td>Apr. 20</td>
<td>Apr. 29</td>
<td>Apr. 19</td>
</tr>
<tr>
<td><em>Genus sericeum</em> (Raf.), Spring Avens</td>
<td>Apr. 20</td>
<td>Apr. 17</td>
<td>Apr. 26</td>
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<tr>
<td><em>Mitella diphylla</em> L., Bishop's Cap</td>
<td>Apr. 21</td>
<td>Apr. 21</td>
<td>Apr. 25</td>
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<tr>
<td><em>Prunus americana</em> Marsh., Wild Plum</td>
<td>Apr. 21</td>
<td>?</td>
<td>?</td>
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<tr>
<td><em>Veronica arvensis</em> L., Corn Speedwell</td>
<td>Apr. 21</td>
<td>Apr. 13</td>
<td>Apr. 28</td>
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<tr>
<td><em>Cardamine hirsuta</em> L., Small Bitter Cress</td>
<td>Apr. 21</td>
<td>Apr. 13</td>
<td>Apr. 19</td>
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<tr>
<td><em>Cerasium longpedicellatum</em> MuH., Nodding Chickweed</td>
<td>Apr. 21</td>
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<tr>
<td><em>Asimina triloba</em> (L.), Papaw</td>
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<tr>
<td><em>Euphoria mollis</em> (T. &amp; G.), Red H.w</td>
<td>Apr. 23</td>
<td>Apr. 30</td>
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<tr>
<td><em>Eucalyptus globus</em> Wild., Buckeye</td>
<td>Apr. 29</td>
<td>Apr. 29</td>
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<tr>
<td><em>Phacelia purshii</em> Buckl., Phacelia</td>
<td>Apr. 28</td>
<td>May 3</td>
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<tr>
<td><em>Pedicularis canadensis</em> L., Loosewort</td>
<td>Apr. 28</td>
<td>?</td>
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<tr>
<td><em>Galium palustris</em> L., Blue Cohosh</td>
<td>Apr. 28</td>
<td>Apr. 19</td>
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<td><em>Symphytum hormutiana</em> L., Blue-eyed Grass</td>
<td>Apr. 27</td>
<td>May 3</td>
<td>Apr. 28</td>
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<tr>
<td><em>Heterome da</em> 'Mill.', Shellbark Hickory</td>
<td>Apr. 30</td>
<td>?</td>
<td>May 3</td>
</tr>
<tr>
<td><em>Cornus florida</em> L., Flowering Dogwood</td>
<td>Apr. 28</td>
<td>May 3</td>
<td>Apr. 28</td>
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<tr>
<td><em>Polemonium reptans</em> L., May Apple</td>
<td>Apr. 27</td>
<td>May 3</td>
<td>Apr. 28</td>
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<tr>
<td><em>Orchis spectabilis</em> L., Showy Orchis</td>
<td>Apr. 28</td>
<td>?</td>
<td>?</td>
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<tr>
<td><em>Prunus americana</em> L., Wild Strawberry</td>
<td>Apr. 27</td>
<td>Apr. 28</td>
<td>?</td>
</tr>
<tr>
<td><em>Banunculus recurvatus</em> Poir., Hooked Crowfoot</td>
<td>Apr. 28</td>
<td>Apr. 27</td>
<td>Apr. 28</td>
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<tr>
<td><em>Rumex acetosa</em> L., Field Sorrel</td>
<td>Apr. 29</td>
<td>May 3</td>
<td>May 3</td>
</tr>
<tr>
<td><em>Trifolium repens</em> L., White Clover</td>
<td>Apr. 30</td>
<td>May 3</td>
<td>May 17</td>
</tr>
</tbody>
</table>
PARASITIC PLANTS.

The list of flowering plants devoid of leaves and true roots, and deriving their nourishment from other vegetation, is a large one in proportion to the number of species in the county. Belonging to it we find the Corpse Plant, *Monotropa uniflora* L., and the Pine-sap, *Hypopitys hypopitys* (L.), pale, delicate forms, whichrear their slender stems from masses of decaying vegetation about the roots of other plants in high, dry woodlands; the Beech drops, *Epipogium virginianum* (L.), and the Squaw-root, *Conopholis americana* (L.), the former common on the roots of beech trees, the latter scarce among fallen leaves in rich, open woods; the Broomrape, *Orobanche ludoviciana* Nutt., and its near relative, the One-flowered Cancer-root, *Thalesia uniflora* (L.), both rare, the former parasitic on the roots of the great horse-weed, and the latter growing in damp, decaying vegetable mold, and finally the two Dodders, *Cuscuta gronovii* Willd., and *C. polygonorum* Engelm., both common in low, alluvial soil, where they twine their yellow stems about the stalks of asters, wild sunflowers and the greater ragweed, and derive therefrom the nourishment for their existence.

VIGO COUNTY PLANTS NEW TO THE STATE LIST.

Among the plants occurring in Vigo County are thirty-three species which have not before been recorded as growing in Indiana. Of a number of them the range, as given in Gray's Manual, is "Illinois and westward." Of the others the general range, for the most part, includes Indiana, though as yet no one has heretofore happened upon them within the State.

The list of them is as follows:
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17. Lespedeza angustifolia (Pursh.) Ell., Narrow-leaved Bush Clover.
20. Hypericum densiflorum Pursh., Dense-flowered St. John’s Wort.
23. Macrocalyx nyctelea (L.) Kuntze, Ellis’ Waterleaf.
24. Trichostema dichotomum L., Blue Curls.
25. Orobanche ludoviciana Nutt., Broom Rape.
27. Chrysopsis villosa (Pursh.) Nutt., Golden Aster.
29. Solidago speciosa Nutt., Handsome Goldenrod.
30. Aster drummondii Lindl., Drummond’s Aster.
32. Hymenopappus carolinensis (Lam.) Porter, Carolina Hymenopappus.
33. Senecio lobatus Pers., Butterweed.

WEEDS OF VIGO COUNTY.

What is a weed? How does it differ from a wild flower? These questions are often asked by persons who are beginning the study of botany, and pupils have been known to put aside a specimen with a look of disgust, saying that they “did not want to study that nasty weed.”

There is, of course, no difference, botanically speaking, between a weed and a wild flower, save that of comparative abundance. Some of our most common weeds are among the most handsome of our wild flowers, for example, the iron-weed, thistle and ox-eye daisy. They well illustrate the truth of that old saying, that “Familiarity breeds contempt,” for we have become so familiar with their appearance that we daily pass them by unnoticed. Were they as rare as the showy orchis and wild columbine they would no longer be called “weeds,” but “wild flowers,” and would, perhaps, be cultivated for ornament, just as among half the collections of house plants in Vigo County are found species of cacti, which are by no means rarities to the natives of Texas and New Mexico.

Defining a weed as a useless plant, growing wild in cultivated grounds, pastures and meadows, of sufficient size to be easily noticeable and of sufficient abundance to be injurious to the farmer, we find eighty-two species occurring in Vigo County.
A few years ago the writer published in the *Indiana Farmer* a list of what he then considered the twenty worst weeds growing in western Indiana, together with information concerning the many ways in which weeds are distributed from one section of country to another. That list, with the species named in the order of their injuriousness, together with the original home of each, was as follows:

1. *Ambrosia artemisiifolia* L., Ragweed, United States.
3. *Ambrosia trifida* L., Great Ragweed, United States.
5. *Amaranthus retroflexus* L., Pigweed, Tropical America.
7. *Convolvulus sepium* L., Bracted Bindweed, United States.
8. *Xanthium canadense* Mill., Cocklebur, United States.
14. *Bidens frondosa* L., Beggar’s Ticks, United States.
20. *Solidago canadensis* L., Goldenrod, United States.

Seven years’ additional study of the flora has changed but little the writer’s opinion concerning this list. It would be more correct, perhaps, to place the ironweed (No. 4) before the great ragweed (No. 3) and to drop the bracted bindweed (No. 7) from the list, replacing it with the prickly lettuce (*Lactuca scariola* L.), another European alien, which in recent years has spread throughout the county with great rapidity. The field sorrel (*Rumex acetosella* L.), also of European origin, is probably more troublesome than the burdock (No. 19), and the corn cockle (*Lycn尼斯 githago* L.), also from Europe, will, as a weed, probably outrank the goldenrod (No. 20).

These changes made, the list would contain eight plants native to our country and twelve introduced from foreign shores.

As Grant Allen has well said, “the American soil seems to suit exactly those weeds which are the offscourings and refuse of civilization in all countries. In civilized, cultivated and inhabited New England, and as far inland, at least, as the Mississippi, the prevailing vegetation is the
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vegetation of Central Europe, and that at its weediest. The daisy, the primrose, the cowslip and the daffodil have stayed at home; the weeds have gone to colonize the New World. For thistles and burdock, dog fennel and dead nettle, bound’s tongue and stick-seed, catnip and dandelion, ox-eye daisy and cocklebur, America easily licks all creation. All the dusty, noisome and malodorous pests of all the world seem there to revel in one grand, congenial, democratic orgy.”

“What is the best method of ridding ourselves of these foreign weeds?” is the question we hear asked by the practical farmer. In the writer’s opinion, there is no method. They are here, and here to stay. The farmers of the future must wage an eternal warfare against them, for they have secured a foothold which can not be overcome. There was a time when but one, two, or a dozen plants of each species existed in the State. Then was the time to have successfully quarantined that species by destroying those pioneers. The few persons on whose lands they appeared neglected them, and every gardener, every farmer, yea, every land-owner in the State, must henceforth, now and forever, pay the penalty of that neglect by continued hoeing, plowing and mowing to keep these weeds in subjugation. As long as the rudiments of botany are not taught in the common schools of this State the average farmer will be unable to tell whether a new plant that makes its appearance upon his land should be allowed to grow or not; indeed, in many instances, he will not know that a new plant is there until it becomes too abundant to be overcome. Put a high school into each township in the State; teach the elements of botany therein, and then, and not till then, may we hope that the farmers of the future will be on the lookout for all new plants; will be able at once to judge their relative injuriousness, and will destroy, before they have time to ripen their seeds, those species which, if allowed to spread, will become a curse to the State.

NOMENCLATURE.

The nomenclature and arrangement of the present list is that of the new “List of Pteridophyta and Spermatophyta growing without cultivation in Northeastern North America,” prepared by a Committee of the Botanical Club of the American Association for the Advancement of Science, and published in 1894 as the fifth volume of the Memoirs of the Torrey Botanical Club.

This check-list is based on the belief that “the order of nature is an order of evolution and development from the more simple to the more complex.” It, therefore, begins with the lowest forms of the plants included, the ferns, and ends with the highest, the members of the family Composite. Moreover, the law of priority has been strictly followed, and the first describer of a species is given the credit therefor.
instead of the person who first placed it in the genus now adopted, as has been the custom in Gray's Manual and other recent botanical works.

This list is now the recognized standard among botanists in the United States, and has been followed by Britton and Brown in their new "Illustrated Flora," now being issued. In the present catalogue of Vigo County plants the only deviation from the new check-list is that of beginning each specific name with a small letter, whatever its origin, that being the rule in zoological literature, and, in the writer's opinion, the proper one to pursue. Where the name adopted in the new check-list differs from that in Gray's Manual, sixth edition, the one used in the latter work is placed in parenthesis as a synonym in the first line following the common name of the plant. The number in parenthesis is the number of the plant in the check-list.

The present list is based upon the collections made by myself during my seven years' residence in Vigo County. All species included, except a few of the more common ones, like the dandelion and mullein, are represented by specimens, either in the herbarium of DePauw University, which, in 1893, came into possession of several hundred Vigo County plants collected by me, or by specimens in my private herbarium. Species represented in the DePauw herbarium are preceded by an asterisk (*). The date given is the earliest of those recorded in my notes, or those of Dr. Evermann, for the blooming of the plant in question. If the season is a forward one specimens of the plant will doubtless be found in flower at the date given; if backward, the blooming will be from a week to two weeks later.

I am under obligations to Dr. B. W. Evermann, formerly professor of botany in the State Normal School, for the use of notes pertaining to the locality and date of flowering of a number of the species; to Dr. L. M. Underwood, of Columbia University, New York, for suggestions regarding the nomenclature adopted, and to Dr. J. T. Scovell and O. F. Fidlar, of Terre Haute, for aid in collecting certain species in the fall of 1896. Messrs. J. M. and Stanley Coulter have also verified a number of species for me, and to them my thanks are due for the service rendered.
CATALOGUE

PTERIDOPHYTA.

"In the entire vegetable world there are probably no forms of growth that attract more general notice than the ferns. Delicate in foliage, they are sought for cultivation in conservatories and Wardian cases, and when dried and pressed add to the culture of many a domestic circle by serving as household decorations. They furnish to botanists a broad and inviting field for investigation, and he who examines their more minute structure with the microscope will find deeper and still more mysterious relations than those revealed to the unaided eye. Ferns thus appeal to the scientific element of man's nature as well as to the aesthetic, and while they highly gratify the taste, they furnish food for the intellect in a like degree." — Underwood.*

OPHIOGLOSSACEÆ. Adder's Tongue Family.

1. BOTRYCHIUM Sw. Schrad.

1. (6) B. TERNATUM (Thunb.) Sw. Schrad. Ternate Grape Fern. Upland shaded banks in rich soil; rare. Southwest of Ferrell's woods; September 20, 1889. The form taken was the one usually known as var. obliquum Mildew—a foot high, with the fruiting portion more compound, and the sterile segment with the divisions oblong and oblique at the base.


FILICES. Fern Family.

2. ADIANTUM L.


*Our Native Ferns and Their Allies. (Introduction.)
3. PTERIS L.
   Frequent at Reckland in sandy soil, along fence rows and borders

4. ASPLENIUM L.
5.* (26.) A. ANGUSTIFOLIUM Michx. Narrow-leaved Spleenwort.
   Sides of ravines; frequent. July 10.
6.* (34.) A. PLATYNEURON (L.) Oakes. Ebony Spleenwort.
   (A. ebenum Ait.)
   Sides of ravines and damp wooded slopes; scarce.
   Honey Creek. Coal Creek. June 30.

5. PHEGOPTERIS Fee.
7. (42.) P. HEXAGONOPTERA (Michx.) Fee. Beech Fern.
   Wooded hillsides, in moist, rich soil; scarce.
   Coal Creek hills. July 2.

6. DRYOPTERIS Adans.
   (Aspidium Sw. Schrad.)
   (A. acrostichoides Swartz.)
   Sides of ravines in rich soil; common.
   Specimens with fruit can be gathered any month in the year.
   (A. marginale Swartz.)
   Sides of ravines; scarce. Coal Creek. (Evermann.)
10.* (57.) D. SPINULOSA INTERMEDIA (Muhl.) Underw.
    (A. spinulosum intermedium* D. C. Eaton.)
11. (58.) D. THELYPTERIS (L.) A. Gray. Marsh Shield Fern.
    (A. thelypteris Swartz.)
   Low wet meadows and prairies; common. July 30.

7. CYSTOPTERIS Bernhardi.
   Rocky ravines; scarce. (Evermann.)
   A curious species; the long, tapering fronds with numerous small
   bulbs along the under side of rachis.

8. ONOCLEA L.
    Dense, moist woods; frequent. May 28.

9. OSMUNDA L.
15. (74.) O. CONNAMOMEA L. Cinnamon Fern.
    Low, wet prairie swamps; scarce. May 28.
    Heckland.

16. (75.) O. CLAYTONIANA L. Interrupted Fern.
    Swamps and shaded banks; scarce. May 20.
    Ferrell's. Old canal below Spring Hill.

17. (76.) O. REGALIS L. Flowering Fern.
    Low wet woods and marshes; scarce.

EQUISETACEÆ. Horse-tail Family.

10. EQUISETUM L.
18. (81.) E. ARVENSE L. Common Horse-tail.
    Moist, gravelly banks; frequent. April 14.

19. (82.) E. FLUVIATILE L. Swamp Horse-tail.
    (E. limosum L.)
    Margins of ponds in shallow water. Noted only at Goose Pond,
    where it is very common. May 3.

20. (83.) E. HYEMALE L. Scouring Rush. Shave Grass.
    Wet, sandy banks; frequent along the railways and canals. May 5.

SPERMATOPHYTA.

GYMNOSPERMÆ.

CONIFERÆ. Pine Family.

11. JUNIPERUS L.
    Dry or sandy hill-sides; scarce.
    Hipple's Coal-mine woods. Sand Hill. May 25.

22. (143.) J. VIRGINIANA L. Red Cedar.
    Old fields and roadsides; frequent.
    A shrub in Vigo County. April 20.
FLORA OF VIGO COUNTY.

MONOCOTYLEDONES.

TYPHACEÆ. Cat-tail Family.

12. TYPHA L.


SPARGANIACEÆ. Bur-reed Family.

13. SPARGANIUM L.


NAIADACEÆ. Pond-weed Family.

14. POTAMOGETON* L.

25 * (159.) P. DIVERSIFOLIUS Raf. Rafinesque's Pondweed. (P. hybridus Michx.) Pond south of fair ground; frequent locally. October 3, 1889. The first record for the State.


15. ZANNICHELLIA L.

29. (202.) Z. PALU8TRIS L. Horned Pondweed.

This species grew in abundance in the pond south of the blast furnace, at Terre Haute, in the years 1889-'93. The surface of this pond seldom froze in winter on account of the warm stream of water from the furnace flowing into it. Since the furnace shut down the pond has dried up, and the plant has disappeared.

The first record for the State.

*The members of this genus have not been thoroughly collected, and a number of additional forms will doubtless be found in the ponds and streams.

33—Geot.
ALISMACEÆ. Water-Plantain Family.

16. ALISMA L.

30. (212.) A. PLANTAGO-AQUATICA L. Water-Plantain.
   (A. plantago L.)
   Ditches and borders of ponds; common. July 3.

17. ECHINODORUS Engelm.

   (E. rostratus Engelm.)
   Noted only about the borders of Conover's Pond. In 1889 it grew
   very abundantly on the mud flats on south side of pond; less fre­
   quent since.
   The first record for the State.

18. SAGITTARIA L.

32. (223.) S. LATIFOLIA Wild. Broad-leaved Arrow-head.
   (S. variabilis Engelm.)
   Ponds, ditches and slow flowing streams; common.
   Exceedingly variable in size and shape of leaf. June 10.

33.* (227.) S. RIGIDA Pursh. Sessile-fruiting Arrow-head.
   (S. heterophylla Pursh.)
   Borders of ponds; frequent. May 22.
   "Specimens differ greatly in size and form of leaf, the difference de­
   pending largely on the habitat of the plant. When growing in deep
   pools or running streams the petioles become thick, rigid and elongated,
   with long, narrowly lanceolate, spongy blades, or the tapering attenuate
   phyllodia are leafless. This is the S. heterophylla rigida of Gray's Man­
   ual, 6th ed."* This form occurs sparingly in Vigo County, having been
   taken at the Goose Pond, June 22, 1890.

HYDROCHARITACEÆ. Frogs-bit Family.

19. UdORA Nutt.
   (Elodea Michx.)

   (Elodea canadensis Michx.)

20. VALLISNERIA L.

35. (232.) V. SPIRALIS L. Tape Grass. Eel Grass.
    Ponds; scarce.
    Pond north side of Van. railway near Beach's. South Sand Hill.

GRAMINEÆ. Grass Family.

21. ANDROPOGON L.
    (Includes Chrysoptagon Trin.)

36.* (246.) A. NUTANS AVENACEUS (Michx.) Hack. Indian Grass. Wood Grass.
    (C. nutans Benth.)
    Sandy waste places and hillsides; frequent.
    Varies in height from three to ten feet. Aug. 5.

    (A. furcatus Muhl.)
    Dry, sandy banks and hillsides; common. August 2.

    With the preceding; common. July 28.
    The culms of each of the last two, 10 to 25 in number, spring from dense clumps of root leaves.

39. (251.) A. VIRGINICUS L. Virginia Beard-grass.
    Sandy and gravelly banks; scarce.
    Gravel pit near Van. railway. September 6, 1887.

22. PASPALUM L.

40.* (261.) P. SETACEUM Michx. Slender Paspalum.
    Sandy waste places; common. August 17.

40a.* (261a.) P. CILIATIFOLIUM Michx. Ciliate-leaved Paspalum.
    With the above, but less common. August 10.

23. PANICUM L.

41. (266.) P. AUTUMNALE Bosc. Diffuse Panicum.
    Sandy hillsides and banks along railways; frequent. Common on
    the hillside at Five-mile Pond, where it grows in dense tufts. August 10.
    The flowers of this grass are, when in their prime, a grayish-purple in color, and, when wet with dew, reflect the morning sunlight in a peculiar and pleasing manner.
    Recorded before in Indiana only from Lake County.
42. (267.) P. CAPILLARE L. Old Witch Grass.
Sandy banks and borders of fields; common. August 12.
This species is a common tumbleweed, and oftentimes in late autumn
fence corners are filled to a depth of several feet with the broken stems
which have been driven long distances before the wind.

A specimen, so named for me by Mr. Geo. V. Nash, of Colum­
bia University, was taken from a dry hillside in Hipple's Coal­
mine woods, where it is frequent.
Not before recorded from Indiana.

43.* (271.) P. CLANDESTINUM L. Hispid Panicum.
Banks of railways and low rich woods; frequent. June 28.

44.* (274.) P. CRUS-GALLI L. Barn-yard Grass.
Rich, moist waste places; common. August 11.
In fruit sometimes when but two inches high.

45.* (277.) P. DICHOTOMUM L. Forked Panicum.
Dry, open woods and gravelly banks; common. May 25.

(P. latifolium L)
Moist thickets and open woods; frequent. June 20.

47. (289.) P. PROLIFERUM Lam. Spreading Panicum.
Low, wet, sandy or gravelly places; frequent. August 14.
The culms from the same root vary much in length and number of
branches, and are usually prostrate, and spreading irregularly.

A species so named for me by Mr. Nash. It grows commonly along
the railway at Heckland and in Beach's woods.
The first record for the State.

Waste and cultivated grounds; abundant.
Dry, sandy fields in which early crops are cultivated are overrun in
late autumn with this foreign grass. August 4.

50.* (295.) P. VIRGATUM L. Tall, Smooth Panicum.
Sandy banks; scarce, except at Heckland, where it is frequent
along the railway.
Our tallest species of the genus. August 20.
24. CHAMÆGRAPHEIS R. Br.  
(Setaria Beauv.)

(Setaria glauca Beauv.)
Cultivated grounds and stubble fields; abundant. June 25.

(Setaria italica Kunth.)
Waste places along the old canal; scarce. June 10.

(Setaria viridis Beauv.)
Waste or cultivated grounds; frequent. July 3.

Shallow water near margin of ponds; scarce.

In 1889, at the time the Five-Mile Pond contained so many specimens of Nelumbo lutea Pers., this grass grew in abundance near its northern border. The stems were many of them ten to twelve feet in height, and the leaves often a yard long. Like the Nelumbo, it has practically disappeared in recent years. Not noted elsewhere.

27. HOMALOCENCHRUS Mieg.  
(Leersia Swartz.)

(L. lenticularis Michx.)
Taken but once, October 6, 1893, from the margin of Five-Mile Pond.
The first record for the State.

(L. oryzoides Swartz)
Ditches and borders of swamps; common. July 27.

58.* (310.) H. VIRGINICUS (Willd.) Britton. White Grass.  
(L. virginica Willd.)
Damp woods and moist, shaded banks; frequent. August 10.
27a. ANTHOXANTHUM L.
58a. (314.) A. ODORATUM L. Sweet Vernal-grass.
Meadows and borders of cultivated fields; frequent July 1.

28. ARISTIDA L.
Borders of sandy fields and banks of railways; frequent August 17.

29. MUHLENBERGIA Schreb.
60. (343.) M. DIFFUSA Schreb. Drop-seed. Nimble Will.
Dry woods, fence rows, etc.; common August 14.
61. (345.) M. MEXICANA (L.) Trin. Drop-seed Grass.
Low, moist, sandy soil; common July 20.
Low, damp woods; frequent July 25.

30. PHLEUM L.
63. (355.) P. PRATENSE L. Timothy.
Roadsides, fence rows, etc., escaped from cultivation; common June 10.

31. SPOROBOLUS R. Br.
64. (363.) S. ASPER (Michx.) Kunth. Rough Rush-grass.
Sandy banks and hillsides; scarce August 30.
Along the Van. railway near the gravel pit.
The first record for the State.

35. CINNA L.
65. (379.) C. ARUNDINACEA L. Wood-reed Grass.
Moist shaded banks; frequent July 15.

33. AGROSTIS L.
Moist, rich soil along roadsides and in meadows; common.
67. (389.) A. HIEMALIS (Walt.) B. S. P. Hair Grass.
(A. scabra Willd.)
Borders of prairies; scarce June 25.
Heckland.

Hillside near Five-Mile Pond; scarce August 30.
The first record for the State; the species having been described from Tennessee in 1894.
FLORA OF VIGO COUNTY.


34. CALAMAGROSTIS Adams.


35. PHRAGMITES Trin.

70. (447.) P. PHRAGMITES (L.) Karst. Reed. (P. communis Trin.) Ditch near Heckland Station, where it grows 14 feet high. Not seen elsewhere. Sept. 5.

36. SIEGLINGIA Berth. (Triodia R. Br.)

71. (449.) S. SESLERIOIDES (Michx.) Scribn. Tall Red-top. (T. cuprea Jacq.) Sandy banks and borders of fields; scarce. Aug. 5. Heckland, along the railroad; canal near Conover's Pond. The purple spreading panicle is very handsome, as handsome goes, among grasses.

37. ERAGROSTIS Beauv.


73. (457.) E. HYPNODIES (Lam.) B. S. P. Creeping Eragrostis. (E. reptans Ness.) Gravel bars and sandy banks; frequent. August 3.


38. EATONIA Raf.

77. (467.) E. PENNSYLVANICA (DC.) A. Gray.  
Moist, open woods; frequent.  June 18.

39. DACTYLIS L.

78. (485.) D. GLOMERATA L.  Orchard Grass.  
Borders of fields, roadsides, yards, etc.; frequent.  June 11.

40. POA L.

79. (489.) P. ANNUA L.  Low Spear-grass.  
Yards and roadsides; common.  April 28.

(P. serotina Ehrh.)  
Moist meadows; frequent.  July 16.

Roadsides and pastures; abundant.  May 14.  
Probably the most valuable wild grass known to man.

41. PANICULARIA Fabr.  
(Glyceria R. Br.)

(G. nervata Trin.)  
Low moist grounds; frequent.  May 26.

42. FESTUCA L.

83. (530.) F. NUNNS Wildd.  Nodding Fescue-grass.  
Dry, wooded hillsides; scarce.  July 17.  
Coal Creek.  Beach's.

43. BROMUS L.

84. (541.) B. CILIATUS L.  Wood Chess.  
Moist, sandy banks; frequent.  July 3.  
Our tallest species, and the only native one thus far found in the county.

85. (548.) B. RACEMOSUS L.  Upright Chess.  
Banks of river and along canal; scarce.  June 28.

Borders of grain fields and fence rows; frequent.  May 25.

43a. LOLLUM L.

43b. **AGROPYRON J. Gertn.**

Old fields and cultivated grounds; common. July 20.
A vile weed which is yearly becoming more troublesome.

44. **ELYMUS L.**

Sandy banks of railways and canal; frequent. August 5.
88. *(580.) E. VIRGINICUS L. Wild Rye.
Banks of Wabash below Ft. Harrison, in sandy, shaded soil; scarce. August 14.

**CYPERACEAE. Sedge Family.**

45. **CYPERUS L.**

89. *(589.) C. DIANDRUS Torr. Galingale.
Low, wet or sandy grounds; common. August 5.
90. *(616.) C. SPECIOSUS Vahl. Michaux's Cyperus.
Low, sandy soil; scarce.
Varies much in size. A specimen taken at Reckland, October 14, 1896,
had six umbels, the stalk of each apparently springing from the surface of
the ground, and the whole plant but 2½ inches in height.
91. *(619.) C. STRigosUS L. Straw-colored Cyperus.
Borders of ditches and marshes; common. August 1.

46. **KYLLINGA Roth.**

Low, sandy waste or cultivated ground; frequent.
A handsome little sedge, the flowering heads with a pleasing fragrance.

47. **DULICHIUM L. C. Richard.**

93. *(624.) D ARUNDINACEUM (L.) Britton. Dulichium.

48. **ELEOCHARIS R. Br.**

Low muddy places about ponds; scarce.
Five Mile Pond. May 22, 1889.
95. *(838.) E. OVATA (Roth.) R. & S. Ovoid Spike-rush.
Margins of ponds and ditches in shallow water; common. May 22
96. *(845.) E. TENUS (Wild.) Schultes. Slender Spike-rush.
Moist banks, prairies and ditches; frequent. May 25.
49. *FIMBRISTYLIS* Vahl.

   Low sandy soil; frequent. Aug. 10.

50. *STENOPLYLLUS* Raf.

98. (659.) *S. CAPILLARIS* (L.) Britton. Hair-like Stenophyllus. 
   (*Fimbristylis capillaris* Gray.) 
   Sandy banks and borders of fields; scarce. 
   Heckland. T. H. & L railway above Otter Creek Junction. 
   Grows in dense circular tufts; the hair-like stems rarely a foot in height. July 18.

51. *SCHRUS* L.

   (*S. pungens* Vahl.) 
   Borders of ponds and large ditches; frequent. July 5.

100. (662.) *S. ATROVIRES* Muhl. Dark Green Bulrush. 
    Low, wet meadows and prairies; frequent. May 25.

    (*Eriophorum cyperinum* L.) 
    Bogs and margins of ponds; scarce. 
    Old canal bed below Spring Hill. Marsh north of Van. railway near Beach’s.

    Margins of Five-Mile Pond and Wabash River, near Durkey’s Ferry; frequent locally. 
    The culm sometimes seven feet high. July 10.

103. (674.) *S. LACUSTRIS* L. Great Bulrush. 
    Margins of ponds and streams; abundant at Five-Mile and Goose Ponds, and sparingly at Coal Creek. June 5.

52. *ERIOPHORUM* L.

104. (697.) *E. VIRGINICUM* L. Cotton Grass. 
    Scarce; marshy margin of Five-Mile Pond. September 21, 1887.

53. *CAREX* L.

105. (754.) *C. GRAYI* Bailey. Gray’s Sedge. 
    (*C. grayii* Carey.) 
    Borders of ditches in shaded places; scarce. May 5.

\* A careful search will probably reveal as many more species of this genus as I have listed. No special search was made for them, and such species only were taken as came conveniently to hand while collecting other plants for my classes in botany.
Fence rows and open woods; frequent. May 16.

Taken but once; from the swampy woods at Heckland. June 5.

108. (780.) C. CRINUM LAM. Fringed Sedge.
Marshes and sides of ditches; frequent. May 20.

Borders of moist prairies; scarce.
Heckland. May 17.

110 (851.) C. LAXIFLORA LAM. Loose-flowered Sedge.
Open woods and borders of fields; common. May 11.

111. (863.) C. LUPULINA Muhl. Hop Sedge.
Low, wet woods and bogs; frequent. May 25.

111a. (867.) C. LUPULINA GIGANTEA (Rudge) Britton.
(C. lupulina pedunculata Dewey.)
Ditches and borders of marshes; frequent. May 10.

112. (870.) C. LURIDA Wahl. Sallow Sedge.
Wet meadows; common. May 5.

113. (927.) C. ROSEA Schk. Stellate Sedge.
Rich, moist hillsides; frequent. May 1.

114. (938.) C. SCOPARIA Schk. Pointed Broom Sedge.
Low, wet places; frequent. June 3.

115. (940.) C. SHORTIANA Dewey. Short's Sedge.

Marshes and low, open woods; frequent. May 22.

117. (944.) C. SQUARROSA L. Rough Sedge.
Low, wet meadows and ditches; frequent. May 25.

118. (950.) C. STIPATA Muhl. Awl-fruited Sedge.
Low, wet ground; common. May 17.

119. (951.) C. STRAMINEA Willd. Straw Sedge.
Open woods, thickets and fence rows; common. May 19.

120. (979.) C. TRIBULOIDES Wahl. Blunt Broom Sedge.
Ditches along the railways; scarce. May 21.

121. (1003.) C. VULPINOIDEA Michx. Fox Sedge.
Low, grassy places; common. May 25.
ARACEÆ. Arum Family.

54. ACORUS L.

122. (1010.) A. CALAMUS L. Sweet Flag. Calamus.
Marshes and wet places along streams; scarce. May 28.
Glen. Grant. East of Sand Hill.

55. PELTANDRA Raf.

123.* (1015.) P. VIRGINICA (L.) Kunth. Arrow Arum.
(P. undulata Raf.)
Large ditches and margins of ponds; scarce. June 9.
Heckland. Goose Pond.

54. ARISÈMA Mart.

Open woods in moist, rich soil; scarce. May 12.
Sand Hill. S. E. of Hunt's. Ferrell's.

Open woods, ravines, etc.; common. April 14.

LEMNACEÆ. Duckweed Family.

57. SPIRODELA Schleid.

Ponds and slow-flowing ditches; common.

58. LEMNA L.

127. (1020.) L. MINOR L. Lesser Duckweed.
Ponds and ditches; frequent. May 31, 1890.
This species and S. polyrhiza L. often cover thickly the entire surface of the smaller ponds in the county.

128. (1022.) L. TRISULCA L. Star Duckweed.
Ponds; scarce. May 31, 1890.
Goose Pond.

59. WOLFFIA Horkel.

Abundant in Goose Pond in 1890–91. Not noted elsewhere.
COMMELINACEÆ. Spiderwort Family.

60. COMMELINA L.

130. (1044.) C. VIRGINICA L. Day Flower.
Sandy banks; scarce. June 17.
Old canal and hillside near Five-Mile Pond.

61. TRADESCANTIA L.

(T. virginica flexuosa Watson.)
Dry, gravelly banks, especially along railways; frequent. June 5.
The stems of this species are shorter and much more hairy than those of T. virginiana L. They are often branched, zigzag above, and bear a close cluster of small blue flowers in each of the upper axils.

132. (1047.) T. VIRGINIANA L. Common Spiderwort.
Rich, moist banks and hillsides; frequent. May 22.

PONTEDERIACEÆ. Pickerel weed Family.

62. PONTEDERIA L.

133.* (1048.) P. CORDATA L. Pickerel-weed.
Shallow water near margins of ponds; scarce. July 18.
Goose Pond. Five-Mile Pond.

63. HETERANTHERA R. and P. (Scholleræ Schreb.)

134 (1050.) H. DUBIA (Jacq.) Morong. Water Star-grass.
(H. graminea Vahl.)
Noted but once, Sept. 25, 1887, near the borders of an island in the Wabash River, where it was frequent.

JUNCACEÆ. Rush Family.

64. JUNCUS* L.

Low, wet grounds; frequent. May 22.

135a. (1054.) J. ACUMINATUS DEBILIS (A. Gray) Engelm.
Sandy margins of ponds; common. May 20.

136. (1070.) J. EFFUSUS L. Common or Soft Rush.
Low muddy places; common. May 25.

*The species of this genus have not been carefully collected and a number of additional forms doubtless occur in the county.
Ditches; scarce. May 28.  
Side of Van. railway, near Glen.


65. JUNCOIDES Adans.  
(Luzula DC.)

(L. campestris DC.)  
Open woods and fence rows; common April 20.

LILIACEÆ. Lily Family.

66. VERATEUM L.

140. (1120.) V. WOODII Robb. Wood's False Hellebore.  
High, dry hills; scarce. July 5.  
Coal Creek.  
Occurs in Indiana as far north as Tippecanoe County. The root  
leaves are in a single, compact bunch, and are large and prominent in  
May and June.

67. UVULARIA L.

141. (1121.) U. GRANDIFLORA J. E. Smith. Large-flowered Bell-  
wort.  
Sides of ravines and wooded slopes; scarce. April 14.  
Honey Creek. Grant. Coal Creek.

68. HEMEROCALLIS L.

142. (1126.) H. FULVA L. Common Day Lily.  
Roadsides and banks of railways, escaped; scarce. June 2.

69. ALLIUM L.

143. (1128.) A. CANADENSE L. Wild Garlic.  
(A canadense Kalm.)  
Moist meadows and open woods; scarce.  

144. (1129) A. CERNUUM Roth. Wild Onion.  
Sides of ravines and gravelly banks; rare.  
Glen. May 28, 1887. (Evermann.)

145. (1135.) A. TRICOCUM Ait. Wild Leek.  
Rich, moist hillsides; rare.  
Coal Creek. June 6, 1893.
70. NOTHOSCORDUM Kunth.

146.* (1137.) N. ORNITHOGALOIDES (Walt.) Kunth. Yellow False Garlic.

\(N. \textit{striatum} \text{Kunth.}\)

Sandy hillsides and gravelly banks; scarce.
Hillside east of Five-Mile Pond; Lost Creek near Seventh Street bridge.

71. LILIUM L.

147.* (1139.) L. CANADENSE L. Wild Yellow Lily.

Moist banks; rare.

148. (1143.) L. PHILADELPHICUM L. Wild Orange-red Lily.

Prairies and sandy banks; rare.

72. ERYTHRONIUM L.

149.* (1147.) E. ALBIDUM Nutt. White Dog's-tooth Violet.

Low open woods and clearings; frequent. April 13.


Open woods, in rich, rather moist soil; common. April 1.

73. CAMASSIA Lindl.


Banks and hillside thickets; scarce.
Lost Creek, near Seventh Street bridge. Hillside, near Ft. Harrison.
May 8.

74. ORNITHOGALUM L.

152. (1154.) O. UMBELLATUM L. Star-of-Bethlehem.

Escaped, sparingly.
Hillside west of Beach's. May 3.

75. ASPARAGUS L.


Sandy banks, roadsides and borders of fields, escaped; frequent, especially along the old canal. May 10.
76. VAGNERA Adans.
( *Smilacina* Desf.)

154. (1164.) *V. racemosa* (L.) Morong. False Solomon's Seal.
False Spikenard.

(*S. racemosa* Desf.)
Moist, shaded banks and woods; frequent. May 11.

77. POLYGONATUM Adans.

155. (1172.) *P. biflorum* (Walt.) Ell. Smaller Solomon's Seal.
Open woods and fence rows; frequent. May 11.


(*P. giganteum* Dietr.)
Shaded banks and damp hillside thickets; frequent. May 21.

78. TRILLIUM L.

156. (1176.) *T. cernuum* L. Nodding Trillium.
Moist hillside thickets; scarce. April 27.
Coal Creek. Grant.

Sides of ravines in rich, shaded soil; scarce.
Southeast of Hunt's. Honey Creek. April 27.
All specimens taken were the white flowered form with long declined peduncle, (*T. erectum declinatum* Gray's Man., 5th ed.). Specimens with leaves measuring 7x6½ inches, and peduncles 4½ inches in length have been noted.

158. (1180.) *T. recurvatum* Beck. Recurved Purple Trillium.
Moist, rich woods; common. April 10.

159. (1181.) *T. sessile* L. Sessile Trillium.
Open, rich woods; common. April 8.
The leaves rarely six, in two whorls.

79. ALETRIS L.

Unicorn.
Prairies, in dry or sandy soil; scarce. June 3.
Heckland.
SMILACEAE. Smilax Family.

80. SMILAX L.

Thickets in dry, sandy soil; scarce. May 22.
Canal bank north of Ft. Harrison.

162. (1186.) S. HERRACEA L. Carrion Flower.
Thickets and fence rows in moist soil; frequent. May 20.
The vile-smelling flowers in globular, umbel-like heads. Gray's Man-
ual states that these heads contain twenty to forty flowers, but a head of
fruit collected in October, 1896, was seven and one-half inches in cir-
cumference and contained 251 berries.

Rich, open woods in sandy soil, climbing twenty-five or more feet
over shrubs or low trees; frequent. May 21.
This species has larger leaves (the blade of a specimen at hand being
six and one-half inches long by five and three-quarters wide) and climbs
higher than any other in the county. It is but little, if any, branched.
The spines are of two sizes, the larger and fewer ones about two-thirds of
an inch long and scattered irregularly the full length of the stem, but more
common on its basal half. The small black ones are very numerous on
the lower five or six feet of a mature stem, but are seldom found
higher up.

164. (1190.) S. PSEUDOCHLAPA L. Long-stalked Green-brier.
Sandy, hillside thickets; scarce. May 21.
Thicket near Five-Mile Pond. (Evermann.)

Moist woods and borders of thickets; common. May 11.

165a. (——) S. ROTUNDIFOLIA QUADRANGULARIS Gray. Four-angled
Green-brier.
Dryer soil; frequent. June 3.

AMARYLLIDACEAE. Amaryllis Family.

81. HYPOXIS L.

166.* (1199.) H. HIRSUTA (L.) Coville. Star-grass.
(H. cresta L.)
Open, sandy woods; scarce. May 7.
Five-Mile Pond. Hookland.

39—GeoL
DIOSCOREACEÆ. Yam Family.

82. DIOSCOREA L.

167. (1200a.) D. villosa L. Wild Yam.
Borders of thickets and fence rows; scarce.
Beach's. Ferrell's.
The three-celled broadly winged pods are quite ornamental in autumn.

IRIDACEÆ. Iris Family.

83. IRIS L.

168. (1212.) I. versicolor L. Larger Blue Flag.
Low, wet places; frequent. May 10.

84. GEMMINGIA Fabr.

( Belamcanda Adans.)


(B. chinensis Adans.)
Roadsides, escaped; scarce.
Two miles south of Atherton. (Scovell.)

85. SISYRINCHIUM L.

170. (1215.) S. bermudiana L. Blue-eyed Grass.

(S. angustifolium Mill.)
Moist, grassy places; common.
The form known as S. anceps Cav. is frequent at Heckland along the borders of moist prairies.

ORCHIDACEÆ. Orchis Family.

86. CYPREPEDIUM L.

171. (1221.) C. hirsutum Mill. Larger Yellow Lady's Slipper.
Moccasin Flower.

(C. pubescens Willd.)
Rich, dry woods; scarce.
Heckland. Coal Creek. May 16.

87. ORCHIS L.

172. (1225.) O. spectabilis L. Showy Orchis.
Open, rich woods; frequent.
Opposite St. Mary's; Sand Hill, etc. April 23.
88. HABENARIA Willd.

Wooded hillsides; rare.
Coal Creek. May 18, 1893.
Three specimens found, no one of which was more than eight-flowered.

(H. virensensis Spreng.)
Damp, dense woods; rare.
Heckland. June 10, 1891.
Recorded before only from Noble County.

89. GYROSTACHYS Pers.

(S. cernua Richard.)
Margins of moist meadows and ponds; scarce.

90. PERAMIUM Salish.
(Goodgera R. Br.)

176. (1263.) P. PUBESCENS (Willd.) C. C. Curtiss. Rattlesnake Plantain.
(G. pubescens R. Br.)
High, dry hills; rare.
Coal Creek. September 18, 1892. In fruit.
Readily known by its handsome, white-reticulated root-leaves.

91. ACHROANTHES Raf.
(Microstyla Nutt.)

177. (1266.) A. UNIFOLIA (Michx.) Raf. Adder's Tongue Orchis.
(M. opioglossoides Nutt.)
High, dry hills; rare.
A single specimen was taken at Coal Creek, September 28, 1893. In Monroe County a number of specimens were secured from high hills, where they were found in company with Mecolea virginiana L., Pogonia verticillata Nutt., and in the midst of clumps of the moss Polytrichum commune L. Specimens taken by the writer in Arkansas were also found on high hills, though the habitat given in Gray's Manual is "low, moist ground." The Monroe County plants were recorded in Proc. Ind. Acad. Sci., 1895, 198.
92. **LEPTORCHIS** Du Petit Thouars.

(Liparis Richard)

178. (1267.) **L. LILIIFOLIA** (L.) Kuntze. Tway-blade.

(Liparis liliifolia Richard.)

Rich, open woods; rare.

Taken but once, southeast of Hunt's Rosary. June 11, 1888.

93. **APLECTRUM** Nutt.

179. (1278.) **A. SPICATUM** (Walt.) B. S. P. Putty-root. Adam and Eve.

(A. hiemale Nutt.)


This is by far the most common orchid found in the county, having been noted in a dozen or more localities—Sand Hill, Beach's, Coal Creek, etc. The corms are eaten raw by some people, and their mucilaginous center is said to be a good cement for porcelain-ware, etc.

**DICOTYLEDONES.**

**SAURURACEÆ.** Lizard's Tail Family.

94. **SAURURUS** L.

180.* (1279.) **S. OERNUS** L. Lizard's Tail.

Ditches and borders of ponds; frequent. June 12.

Conover's Pond. Van. railway near Beach's. Heckland.

**JUGLANDACEÆ.** Walnut Family.

95. **JUGLANS** L.


Sides of ravines and open upland or river terrace woods in rich soil; frequent. April 20.

The fruit sometimes double.

182. (1281.) **J. NIGRA** L. Black Walnut.

Rich, open woods; frequent. April 15.

All the larger trees have long since been sawed into lumber, and a specimen two feet in diameter is now seldom seen.
96. HICORIA Raf.
   (Carya Nutt.)

   C. tomentosa (Nutt.)

Wooded slopes and open upland woods; frequent.
Nut smaller than that of H. sulcata, which it most closely resembles; often attenuate above; shell very hard; kernel less sweet; husk thinner, not parted to the base.

   Black Hickory.
   (C. porcina Nutt.)

Dry Hills and uplands; frequent.
The wood excels for making axe-handles.

   (C. amara Nutt.)

Moist, open woods and borders of swamps; frequent.
Nut more rounded, shell thinner, and kernel much more bitter than in H. glabra.

186. (1286.) H. OVATA (Mill.) Britton. Shell or Shag-bark Hickory.
   (C. alba Nutt.)

Open woods and sloping hillsides in rich soil; common. April 18.

   (C. olivaeformis Nutt.)

Rich bottom lands; scarce.
Several trees grow in the river bottoms north of Ft. Harrison.

   (C. sulcata Nutt.)

Moist, rich, usually alluvial soil; scarce. April 23.

Back less shaggy than in H. ovata. Nut large, a little longer than broad; mucronate at both ends; kernel sweet; husk very thick, completely separating into four pieces.

SALICACEAE. Willow Family.

97. POPULUS L.

189.* (1299.) P. HETEROPHYLLA L. Downy Poplar.

Noted only around the borders of the Goose Pond, where it is common.
Probably its most northern record. May 10.
Borders of streams and low alluvial soil; common. April 5. 
Specimens along the Wabash reach a height of 130 feet. The wood is 
too light and soft to be of great commercial value, but is much used for 
paper pulp, packing cases, matched ceiling, etc.

Asp. 
Dry hillside woods and clearings; scarce. 
Heckland. Coal Creek. April 5. 
All trees noted were of small size.

98. Salix L.

192. (1304.) S. alba L. White Willow. 
Old fields near dwellings; scarce. 
South of the Seventh Street bridge across Honey Creek is an example 
measuring thirteen feet and eight inches in circumference.

Low, moist places; common. April 20. 
Shrubs three to fifteen feet high, the stipules reniform, toothed, con­spicuous.

Low, wet banks and borders of prairie swamps; frequent. April 5. 
Grows in dense clumps and is the first willow to bloom in spring.

Noted only in the raw prairie at Heckland, where it is common. 
April 20. 
A shrub, two to six feet high; usually two or three together.

196. (1331.) S. longifolia Muhl. Long-leaved Willow. Sand-bar 
Willow. 
Sandy, moist places along the Wabash river and the larger ponds; 
frequent. April 20.

Banks of streams and ponds; common. May 10. 
This is the largest native willow found in the county, in some instances 
reaching a diameter of nearly two feet. Along the low banks of the 
smaller streams it often grows in great masses. The roots often extend 
in search of moisture to a depth of ten feet or more into the alluvial soil 
in which the species usually grows.
With the type, but less frequent.

Low, moist, sandy banks; scarce. April 15.
Bottoms along Old Canal from Ft. Harrison to Five-Mile Pond.

**BETULACEÆ. Birch Family.**

99. CARPINUS L.

Borders of streams and swamps; frequent.
The wood of both this and the next species is very heavy, strong and
durable, and fitted for posts, levers, handles of tools, etc.

100. OSTRYA Scop.

Dry woods and sides of ravines; frequent.

101. CORYLUS L.

201. (1351.) *C. americana* Walt. Wild Hazle-nut.
Borders of woods and clearings in dry soil; frequent. March 16.

102. BETULA.

Banks of streams; common along Honey Creek and its tributaries.
April 25.

Noted also by the writer in Putnam County along the tributaries of
Eel River, and in Marion County, northwest of Indianapolis, along White
River.

**FAGACEÆ. Beech Family.**

103. FAGUS L.

(*F. ferruginea* Ait.)
Upland, usually flat, damp woods in clayey soil; common. April 16.
Many of the farmers and woodmen of Vigo County recognize two
species of beech—the one, "Red Beech," growing in dry soil, a rather
small, scraggy tree, which retains its leaves through most of the winter,
and the wood of which is almost uncleavable on account of its curly or
twisted fibres; the other, the "White Beech," the large, straight boled
tree, growing in moist soil, the leaves deciduous in autumn, the wood
easily split, and having a high value for fuel and the making of chairs, shoe-lasts and tool handles.

104. QUERCUS L.

204.* (1370.) Q. ALBA L. White Oak.

Open, upland woods; usually in dry, rather poor soil; common. One of the most valuable of the forest trees yet remaining in any numbers. The largest specimens have been removed, but many of medium size are still to be found in the eastern half of the county. Within the last two decades the lumber of this species has been put to many uses for which it was spurned when walnut, "yellow poplar" and other trees were abundant. As a consequence, the value of white oak trees has slowly but surely enhanced, and the farmer has often received more for them than the land on which they grew was worth.


Sandy hillsides and river terrace woods; frequent.

Spring Hill; near Five-Mile Pond, etc.

Known by its grayish, rather smooth bark; its shining, narrow-lobed leaves, which turn bright red in autumn, and its medium-sized, white-meated acorn, half covered with a top-shaped cup.

This species is seldom distinguished by the land-owner from the red oak (Q. rubra L.). Its wood is similar in structure, and the uses to which it is put are practically the same.


Wooded slopes in loose, sandy soil; common.

Distinguished by its shining, lanceolate entire leaves, resembling in general appearance those of the peach. They often remain on the tree throughout the winter, and when old have the lower surface thickly covered with yellowish down. The acorn is short and broad, with the cup covering its lower third. Among the farmers of Vigo County this species is most commonly known as the "Jack Oak," a name which more rightfully belongs to Quercus nigra L. The wood is coarse-grained, heavy and hard, but is seldom used except for fuel, for which it is highly esteemed; and for clapboards.

207. (1385.) Q. MACROCARPA Mich. Bur Oak. Over Cup or Mossy Cup Oak.

Open woods, especially those of the river terrace; common.

May 15.

Readily known by its thick, rough, shaggy bark; its many long branches, the lowermost ones on the larger trees usually within ten feet of the ground; its large obovate leaves and large acorn with the cup margined with a moss-like fringe. The lumber is close-grained, hard and durable and valuable for many purposes.

\( Q. stellata \) Wang.

Dry, sandy soil; scarce.

Hillside near Spring Hill. Roadside one mile north of Goose Pond.

May 20.

A small oak with close gray bark; the leaves thick, with broad rounded lobes, covered beneath with rusty down. Acorns very small.


Upland wooded slopes and river terrace woods in rich, loose soil; common.

In Vigo County two marked varieties of this tree occur. In the one the leaves closely resemble those of the common chestnut, being lanceolate, acuminate, 5½ inches long by 1½ inches wide (average), sharply serrate, the veins very prominent; in the other the leaves are broadly ovate or obvate, 7 inches long by 5 wide, the teeth rounded, the veins less prominent. The bark of each closely resembles that of the white oak, and the acorns of both are rather small, sweet and edible. No connecting forms are seen, and I would consider the two distinct, but Dr. T. M. Coulter, to whom specimens were sent, writes that they are considered varieties of one species by Dr. Engleman and other authorities who have made a special study of the oaks.


Borders of swamps and low, wet woods; frequent.

Known by its very smooth, dark-gray bark; its narrow-lobed, glossy leaves; its small acorn with very shallow, saucer-shaped cup. The lower limbs of this oak are also almost invariably decurved and at a little distance appear thorny on account of the many short shoots, or secondary branches which they bear. The tree is seldom large enough to be profitably worked, and is little used, except for clapboards and staves.

211. (1396.) Q. platanoideas (Lam.) Sudw. Swamp White Oak.

\( Q. bicolor \) Wild.

Swampy places in upland or river terrace woods; scarce.

Deming’s woods on Poplar Street road. Section 33, Honey Creek Township, etc. May 15.

The bark resembles that of the white oak (\( Q. alba \) L.), but the leaves are much larger, obvate, with a wedge-shaped base, and, when old, white-hoary beneath. The acorns are somewhat shorter, but of greater diameter, and more pointed than those of the white oak.

212. (1399.) Q. rubra L. Red Oak.

Dry hillside and flat upland woods; common.

Known by its smoothish, dark-gray bark; its large, thin leaves, the lobes of which are acuminate and broad at base, and the large acorn, one
inch long, with short, flat cup. The leaves turn a dull brownish red after frost. The wood is reddish, coarse-grained and inferior in value, being used mainly for clapboards, staves, and cheap grades of furniture.

213. (1401.) Q. velutina Lam. Black Oak. Quercitron. Yellow-barked Oak

(Q. coccinea var. tinctoria Bartram.)

Moist or dry upland soil; frequent.

Distinguished from the scarlet oak (Q. coccinea Wang.), which it most closely resembles, by its black or dark-brown, deeply furrowed outer bark, which is rich in tannin; its orange-colored, very bitter inner bark, which yields quercitron, a valuable yellow dye; its much broader-lobed, less shining leaves, which turn yellow or dark red in autumn, and by its somewhat shorter, less pointed, yellowish-meated acorn. The wood is reddish and coarse-grained, stronger and more durable than that of either the red or scarlet oak.

ULMACEÆ. Elm Family.

105. ULMUS L.


One or two specimens grow near the I. & St. L. trestle west of Wabash River. Frequent in Crawford and Harrison counties.


Low, open woods; common. April 12.

The American or White Elm is one of the most handsome native forest trees. It will grow in any soil, but reaches its greatest development in low, rich woods and along small streams. It branches widely, and in cities possessing broad streets it is well suited for shade purposes. Where properly set out and tended, streets planted with it become in time columned and arched like the aisles of a Gothic cathedral.

Its one great disadvantage, however, is its liability to injury from insects. In this country over 80 species prey upon it. The elm tree borer, numerous varieties of caterpillars, and a plant louse which disfigures the leaves by crumpling and distorting them, are its most abundant enemies in Indiana; while in the eastern States, and rapidly traveling westward, is the "Imported Elm Leaf Beetle," which literally strips the tree of its foliage.


(U. fulva Michx.)

Rich woods and sides of ravines; frequent. March 29.
106. CELTIS L.

Open woods, especially those of river terrace; frequent. April 14.

MORACEÆ. Mulberry Family.

107. MORUS L.

218. (1412.) M. RUBRA L. Red Mulberry.
Open, rich woods and borders of old fields; frequent. May 1.
Leaves have been measured which were eight inches broad and 10½ inches long. In Vigo County the fruit ripens about June 15.

108. TOXYLON Raf.
(Maclura Nutt.)

(M. aurantica Nutt.)
Escaped, sparingly.
Banks of Sugar Creek below National Road bridge. Roadside near St. Mary's.

109. HUMULUS L.

220. (1414.) H. LUPULUS L. Common Hop.
Noted along Lost Creek and banks of Van. Railway near Glen; scarce. May 25.

110. CANNABIS L.

221. (1415.) C. SATIVA L. Hemp.
Waste, sandy places; frequent. July 12.
Sometimes grows to a height of 12 feet.

URTICACEÆ. Nettle Family.

111. URTICA L.

222. (1418.) U. GRACILIS Ait. Tall Nettle.
Fence rows and borders of woods in moist, rich soil; frequent. June 13.

112. URTICA STRUM Fabric.
(Laportea Gaud.)

(L. canadensis Gaud.)
Low moist woods and sides of ravines; scarce. July 1.
Coal Creek. Woods south of Van. Railway, near Beach's.
ADICEA Raf.

(Pilea Lindl.)

(P. pumila Gray.)
Bottoms of ravines and moist, shaded places; frequent. June 10.

BOEHLERIA Jacq.

Low, moist woods and borders of swamps; frequent. June 16.

SANTALACEÆ. Sandal-wood Family.

COMANDRA Nutt.

Dry virgin prairies; scarce. May 7.
Heckland.

ARISTOLOCHIACEÆ. Birthwort Family.

ASARUM L.

227.* (1432.) A. CANADENSE L. Wild Ginger.
Sides of ravines and rich wooded slopes; frequent. April 17.
Honey Creek; southeast of Hunt's; Coal Creek, etc.

POLYGONACEÆ. Buckwheat Family.

RUMEX L.

228. (1454.) R. ACETOSELLA L. Field Sorrel. Sheep Sorrel.
Barren or poor soil, roadsides, old fields, etc.; abundant. May 11.

Borders of ponds, ditches, and moist banks; common. May 4.

230. (1458.) R. CRISPUS L. Curled Dock.

231. (1460.) R. OBTUSIFOLIUS. Bitter Dock.
Roadsides and waste places; common. June 11.

Swamps and borders of marshes; frequent. June 14.
Margins of Goose and Five-Mile ponds. Heckland.
233.* (1470.) **P. amphibium** L. Water Persicaria.
Shallow water near margins of ponds; common. July 7.
This species, and *P. pennsylvanica* L., cover acres of the margins of the larger ponds of Vigo County. The flowers of both are more showy than those of any other of our native species; the spikes of *P. amphibium* often paired.

234.* (1471.) **P. arifolium** L. Halberd-leaved Tear Thumb.
Ravines and borders of small streams; scarce.
Along Lost Creek, south side of Van. Railway, and one of its tributaries east of Highland Lawn. Found also near Michigan City, Lake County.

Yards, roadsides, etc.; abundant. June 1.

236. (1477.) **P. convolvulus** L. Black Bindweed.
Borders of cultivated fields and fence rows; frequent, June 10.

237. (1482.) **P. emersum** (Michx.) Britton.
(*P. muhlenbergii* Watson.)
Sandy margins of ponds and marshes; frequent. June 10.
Conover's and Five-Mile ponds. Marsh south of Fair Ground.

238. (1483.) **P. erectum** L. Erect Knot Grass.
Damp, waste soil; common. June 27.

239.* (1486.) **P. hydropiper** L. Common Smartweed. Water Pepper.
Ditches and borders of ponds; common. July 11.

240.* (1487.) **P. hydropiperoides** Michx. Mild Water Pepper.
Shallow water and muddy margins of ponds; common. July 18.

241.* (1489.) **P. pennsylvanicum** L. Pennsylvania Knotweed.
Glandular Knotweed.
Ditches and borders of ponds; common. July 12.

242.* (1499.) **P. persicaria** L. Lady's Thumb. Heartweed.
Low wet soil; common. June 8.

243.* (1500.) **P. punctatum** Ell. Water Smartweed.
(*P. acre* HBK.)
Swamps and low ground along the river; common. July 14.

244.* (1502.) **P. ramosissimum** Michx.
Low, sandy grounds; scarce. July 11.
Borders of woods near marsh, south of Fair Ground.
The first record for the State.
245.* (1504.) P. sagittatum L. Arrow-leaved Tear-thumb.
Low, wet places, especially about borders of upland thickets where
it often climbs six to eight feet high over shrubs and tall grass;
common. August 2.

246. (1505.) P. scandens L. Climbing False Buckwheat.
(P. dumetorum scandens Gray.)
Moist, open woods, fence rows, etc.; abundant. July 18.
Sometimes twines 20 or more feet high over the sides of a honey locust
or other much-branched tree.

247. (1507.) P. tenue Michx.
Rich, dry soil; scarce. August 1.
Borders of McKeen's woods. Beach's.

248.* (1508.) P. virginianum L. Virginia Smartweed.
Dense woods in moist, rich soil; common. July 20.

119. FAGOPYRUM Gaertn.

249. (1510.) F. fagopyrum (L.) Karst. Buckwheat.
(F. esculentum Moench.)
Borders of old fields and along railways; scarce. May 25.
Heckland.

CHENOPODIACEÆ. Goosefoot Family.

120. CHENOPODIUM L.

Waste or cultivated grounds; very common. July 6.

251. (1517.) C. ambrosioides L. Mexican Tea.
Streets and alleys of Terre Haute; common. July 2.

252. (1518.) C. anthelminticum L. Wormseed.
(C. ambrosioides anthelminticum Gray.)
With the preceding; less frequent. July 28.

253. (1521.) C. boscianum Moq.
Dry, sandy soil, in open places; scarce.
The flowers much smaller than in allied species; on slender recurved
branches; the black seeds easily separated from the enclosing pericarp.
The first record for the State.

254. (1522.) C. botrys L. Jerusalem Oak. Feather Geranium.
Waste places along the river front; scarce. June 28.
255. (1527.) C. HYBRIDUM L. Maple-leaved Goosefoot.
Borders of cultivated fields and banks of old canal; common.
June 18.

256. (1533.) C. URMICUM L.
Commons and waste places about the city; frequent. June 15.

AMARANTHACEÆ. Amaranth Family.

121. AMARANTHUS L.

(A. albus L.)
A specimen with the branches incurved to a globular form and measuring 5 feet, 7 inches in circumference, was taken from the old canal bed near Conover's Pond, in September, 1889.

(A. paniculatus L.)
Fence rows along cultivated fields; frequent. July 1.

Cultivated grounds; very common. July 3.

260. (1565.) A. SPINOSUS L. Thorny Amaranth.
Roadsides and commons of city; frequent. July 15.

122. ACNIDA L.

261.* (1569.) A. TAMARISCINA (Nutt.) Wood. Water Hemp.
(A. tuberculata Moq.)
Gravel and sand banks of Wabash River; common. August 20.

261a.* (1570.) A. TAMARISCINA SUBNUDA (S. Wats.) Coulter.
(A. tuberculata var. subnuda Wats.)
Borders of ponds in wet, sandy soil; frequent.
Usually prostrate with the reddish flowers in dense, globular axillary heads.

PHYTOLACCACEÆ. Poke-weed Family.

123. PHYTOLACCA L.

Roadsides and fence rows in rich, moist soil; frequent. June 16.
AIZOACEÆ. Carpet Weed Family.

124. MOLLUCO L.

263. (1583.) M. VERTICILATA L. Carpet Weed. Indian chickweed.
Open, bare, sandy places and cultivated fields; common. May 11 to November 15.

PORTULACACEÆ. Purslane Family.

125. CLAYTONIA L.

264. (1589) C. VIRGINICA L. Narrow-leaved Spring Beauty.
Moist, open woods; common. March 23.
Varies much in width and length of leaves, and in color of flowers from deep pink to almost white.

126. PORTULACA L.

Gardens and cultivated grounds; abundant. May 8.

CARYOPHYLLACEÆ. Pink Family.

127. AGROSTEMMA L.

266. (1596.) A. GITHAGO L. Corn Cockle.
(Lychnis githago L.)
Borders of railways and wheatfields; frequent. May 20.
A handsome, but vile weed.

128. SILENE L. Campions.

"To prevent ants, small beetles, and other honey-tasting intruders from creeping up the stalk, and so rifling the nectaries without doing any good to the plant in return, the stems of the campions are covered with hairs, and exude a sticky, viscid gum, both of which peculiarities aid them in baffling the unwelcome wingless visitors, while the inflated calyx and long tube effectually keep out all flying insects, except the few for whose visits the plants specially lay themselves out. Nay, as if so many precautions were not enough, the mouth of the tube, above the stamens, is furthermore obstructed by five little valves, or scales, one being attached to the claw of each petal; and these scales can easily be craned over, like tiny walls, by the large and long proboscis of the bees or moths, but not by the little thieving flies against whose incursions the flowers are so anxious to guard themselves."—Grant Allen.*

* Vignettes from Nature, II.
267. (1599.) S. ALBA Muhl. Snowy Campion.
(S. nivea Otth.)
Scarce. Taken on several occasions along the Vandalia and L. & St. L. Railways. June 4.

268. (1601.) S. ANTIRRHINA L. Sleepy Catchfly.
Waste places in dry, sandy soil; frequent. April 20.

269.* (1609a.) S. REGIA Sims. Royal Catchfly.

270. (1611.) S. STELLATA (L) Ait. f. Starry Campion.

Ravines and borders of damp woods; scarce. Coal Creek. Grant. April 25.

129. SAPONARIA L.

Waste places in sandy soil; frequent. June 15.
Very abundant along the old canal near Five-Mile Pond.

130. ALSINE L.
(Stellaria L.)

273.* (1637.) A. LONGIFOLIA (Muhl.) Britton. Long-leaved Stitchwort.
(Stellaria longifolia Muhl.)
Open woods in rather damp places; scarce. May 25.

274. (1638.) A. LONGIPES (Goldie) Coville. Long-stalked Stitchwort.
(Stellaria longipes Goldie.)
Moist prairies and borders of marshes; rare. May 12.

275. (1641.) A. MEDIA L. Common Chickweed.
(Stellaria media Smith.)

276. (1642.) A. PUBERA (Michx.) Britton. Great Chickweed.
(Stellaria pubera Michx.)
Open woods in rich soil; common. April 5.

40—Geol.
131. CERASTIUM L.

(Cerastium nutans Raf.)
Moist, grassy places; frequent. April 20.

278. (1652.) C. VISCOSUM L. Mouse-ear Chickweed.
Grassy banks and roadsides; frequent. April 20.
Sandy Hill, Coal Creek.
Paler green and not so spreading as the next.

279. (1653.) C. VULGATUM L. Larger Mouse-ear Chickweed.
Open woods, meadows and waste places; common. April 28.

132. ARENARIA L.

280. (1671.) A. SERPYLLIFOLIA L. Thyme-leaved Sandwort.
Low, moist, sandy places; scarce. May 31.
Borders of Conover's and Five-Mile ponds.
Not before recorded from Indiana south of the sand dunes bordering Lake Michigan.

NYMPHACEÆ. Water-Lily Family.

133. NELUMBO Adams.

Ponds; scarce. June 20.
Previous to 1890 this was a common plant in the Goose and Five Mile ponds, the surfaces of which in late summer were extensively covered with the large peltate, circular, floating leaves often two and one-half to three and one-quarter feet in diameter. Since the total draining of the former and partial draining of the latter pond the plant has become almost exterminated in the county.

134. CASTALIA Salisb.
(Nymphora Tourn.)

(Nymphora reniformis DC.)
Ponds; frequent. May 28.
Formerly very common at Goose Pond, Five-Mile Pond.
The flowers have a very distinct, agreeable odor, but the rootstocks are tuber-bearing.
283. (1695.) *Nuphar advena* Soland. Yellow Pond Lily. Spatter-Dock. (Nuphar advena Ait.)
Ponds, ditches and stagnant pools; common. April 28.

MAGNOLIACEÆ. Magnolia Family.

284. (1706.) *Liriodendron tulipifera* L. Tulip Tree. Yellow Poplar
Open woods in rich soil; frequent. April 25.

Once abundant and the giant of the Indiana forests, reaching at times
a height of 190 feet and a circumference of 25 feet.* All the larger ones
have long since disappeared before the axe of the lumberman, and in
Vigo County individuals more than 60 feet high are scarce.

ANONACEÆ. Custard-Apple Family.

Open woods, most common in rather low, rich soil. April 20.
The flowers expand a few days before the leaves appear. Those on the
tips of branches are often a bright green instead of purplish red, as are
those below. The fruit varies much in abundance, some years being very
plentiful and again scarce. It is very rarely double, being united at stem
end and by the skin at lower end. Two varieties of the fruit are readily
distinguished, the pulp of one, when ripe, being whitish-yellow, and in-
ferior in taste; of the other deep golden yellow and very palatable.

RANUNCULACEÆ. Crowfoot Family.

286. (1708.) *Hydrastis canadensis* L. Yellow Root. Orange Root. Golden
Seal.
Hillsides and rich, wooded slopes; scarce.
Woods east of St. Mary's. Coal Creek. Ferrell's. April 25.
A valued medicinal plant.

287. (1711.) *Caltha palustris* L. Marsh Marigold.
Swamps and marshes; common locally.
An early and showy spring flower.

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*J. Schneck, Ind. Geol. Surv., VII, 1875, 512.*
140. ISOPYRUM L.

288. (1715.) I. BITERNATUM (Raf.) T. & G. False Rue-anemone.
Moist, open woods and shady places; frequent. April 2.
Often mistaken for Syndesmon thalictrides (L.), but distinguished by
having only five sepals, and by the small tubers on the root fibres.

141. ACTEA L.

Thickets and dense woods; frequent.
Ferrell's. Coal Creek, etc. April 28.

142. AQUILEGIA L.

290. (1726.) A. CANADENSIS L. Wild Columbine.
Dry, gravelly soil and rocky hillsides; scarce. April 28.
Coal Creek. Sides of canal near Ft. Harrison, and Five-Mile Pond.

143. DELPHINIUM L.

291. (1730.) D. CONSOLIDA L. Field Larkspur.
Roadsides and old fields; scarce. May 25.
Found two or three different seasons along the Vandalia railway.

Open woods in rich soil; common. April 13.
Varies much in size of plant, and in color of flower from white to
deep blue.

144. ANEMONE L.

293. (1736.) A. CANADENSIS L. Pennsylvania Anemone.
(A. pennsylvanica L.)
Dry, gravelly soil; scarce. May 21.
Old canal near Conover's pond. I. & St. L. Railway on west side of
Wabash River.

Borders of prairies and dry, open hillside woods; rare. April 15,
1894.
Collected by Miss Nora Arnold.*
The first record for the State.

*In a private letter Miss Arnold states: “They grow abundantly on the hillside 5½
miles north of Terre Haute, along the Dorey's Ferry road, on the east side of the river. In
patches or spots the ground when they bloom is white with them. They have occurred there
within my memory for twelve or thirteen years.
295. *(1744.)* A. VIRGINIANA L. Virginia Anemone.
Loose, rich soil; rather common. May 14.
Banks of canal and along the railways.*

145. HEPATICA Scop.


*(H. acutiloba D. C.)*
Sides of ravines and dry open woods; common. March 10.
Five-lobed leaves are occasionally found, and the sepals vary exceedingly in color and number.

146. SYNDESMON Hoffmg.

*(Anemonella Spach.)*

297. *(1747.)* S. THALICTROIDES (L) Hoffmg. Rue-anemone.

*(Anemonella thalictroides Spach.)*
Open, upland woods; common. March 15.

147. CLEMATIS L.

298. *(1755.)* C. SIMSII Sweet.

*(C. pitcheri T. & G.)*
Banks of railways (Vandalia and E. & T. H.), and old canal near Five-mile Pond; scarce. June 1.
The plumose tails of the fruit very noticeable in early autumn.

299. *(1756.)* C. VIORNA L. Leather Flower.
Dry, gravelly banks; rare. May 25.
Alongside of Van. Railway, near Beach's woods.

300. *(1757.)* C. VIRGINIANA L. Virgin's Bower. White Clematis.
Borders of thickets, especially along streams and in low places; frequent. June 20.
Coal Creek. Honey Creek. Ferrell's.

148. RANUNCULUS L.

301. *(1761.)* R. ABORTIVUS L. Small-Flowered Crowfoot.
Open woods in damp soil; common. April 10.


*(R. multifidus Pursh.)*
Ponds; frequent. April 21.

*A. nemorosa L. is noted as "common" in several of the local lists of the State, and is given without comment in the State Catalogue, yet I have failed to find a specimen in either Monroe or Vigo counties. *Syndesmon thalictroides* (L.), to which it bears a close general resemblance, is doubtless often mistaken for it.*
Hillsides in sandy soil; frequent. April 7. 
East of Five-Mile Pond. Sand Hill.

304. (1772) R. MICRANTHUS Nutt. 
(R. abortivus micranthus Gray.) 
Pastures and roadsides in dry or sandy soil; frequent. April 10. 
Taken in fruit on April 17.

(R. ambiguus Watson.) 
Borders of ponds; rare. 
Noted only at Goose Pond. June 22, 1890. 
Taken before in Indiana only in Noble County.

306. (1783.) R. PURSHII Richards. 
(R. multifidus terrestries Gray.) 
Noted only along the margins of Five-Mile Pond. April 21. 
The first record for the State.

Open woods; common. April 20. 
The petals often six, and the root leaves larger than in other species 
of the genus; sometimes ternately divided.

308. (1790.) R. SCLEERATUS L. Cursed Crowfoot. 
Borders of ditches and marshes; scarce. June 1. 
South of Fair Ground. Heckland.

Low, wet meadows; river bottoms, margins of ponds, ditches, etc. 
Common and very variable. April 18.

149. BATRACHIUM S. F. Gray.

310.* (1794.) B. TRICHOPHYLLUM (Chaix) Bossch. White Water-
Crowfoot. 
(Ranunculus aquatilis var. trichophyllus Gray.) 
Ponds; frequent. April 20. 

150. THALICTRUM L.

311. (1801.) T. DICCUM L. Early Meadow-rue. 
Wooded hillsides and loose, rich soil in waste places; frequent. 
April 8. 
Honey Creek. Van. Railway.
312. (1802.) T. POLYGAMUM Muhl. Tall Meadow-rue. 
Borders of ditches and swampy places; scarce. 
Heckland. June 18.

313.* (1803.) T. PURPURASCENS L. Purplish Meadow-rue. 
Dry upland soil and margins of prairies; frequent. 

BERBERIDACEÆ. Barberry Family.

151. PODOPHYLLUM L.

Open woods in rich soil; abundant. April 27.

152. JEFFERSONIA Bart.

Rich, sloping hillsides; scarce. 
Coal Creek. Grant. April 16. 
The leaflets often five to seven-lobed.

153. CAULOPHYLLUM Michx.

Wooded hillsides, usually near the bottom, in rich, moist soil; scarce. 
Honey Creek. Coal Creek. April 11.

MENISPERMACEÆ. Moonseed Family.

154. MENISPERMUM L.

317. (1813.) M. CANADENSE L. Moonseed. 
Borders of low-ground thickets and fence rows; frequent. May 20. 
A handsome, slender, woody climber, with rounded peltate leaves, 
small panicles of white, inconspicuous flowers, and fruit in early autumn 
resembling wild grapes in compact, rounded bunches.

LAURACEÆ. Sassafras Family.

155. SASSAFRAS Nees and Eberm.

(S. officinale Nees.) 
Borders of rich woods and old fields; frequent. April 10.

PAPAVERACEAE. Poppy Family.


322. (1834.) B. CANADENSIS (Goldie) Millsp. Squirrel Corn. (Dicentra canadensis DC.) Wooded slopes and sides of ravines; not so common as the next species and blooming about 10 days later. Woods east of St. Mary’s. Coal Creek. Southeast of Hunt’s Rosary. April 14.


CRUCIFERÆ. Mustard Family.

161. LEPIDIUM L.

325. (1851.) L. INTERMEDIUM A. Gray. Wild Pepper-grass.
Waste places in dry or gravelly soil; common. May 10.
L. intermedium has fewer, narrower and more entire leaves, and the racemes are longer and more spreading than in L. virginicum L. In the latter the flowers have a tendency to agglomeration, and the leaves are narrowly spatulate, rather than linear, with the edges more incised.
The first record for the State, this species and the next not having been distinguished by previous cataloguers.

Roadsides and fields; common. May 1 to November 15.

162. SISYMBRIUM L.

327. (1863.) S. OFFICINALE (L.) Scop. Hedge Mustard.
Waste places, old fields, roadsides, etc.; common. May 24.

163. BRASSICA L.

Roadsides and waste places; frequent. July 1.

Old fields; not common.

164. IODANTBUS T. and G. 
(Thelepodium Endl.)

330. (1874.) I. PINNATIFIDUS (Michx.) Prantl. False Rocket. 
(Thelepodium pinnatifidum S. Wats.)
Moist hillside thickets; scarce.

165. RORIPA Scop. 
(Nasturtium R. Br.)

331.* (1875.) R. AMERICANA (A. Gray) Britton. Lake Cress. 
(Nasturtium lacustre Gray.)
Ponds; frequent.
332. (1876.) **R. Armoracia (L.) A. S. Hitchcock.** Horse-radish.  
(*Nasturtium armoracia* Fries.)  
Moist soil; escaped from cultivation; scarce.  

333. (1879.) **R. Nasturtium (L.) Rusby. True Water Cress.**  
(*Nasturtium officinale* R. Br.)  
Brooks and ditches; probably introduced; not common.  
Sand Hill. Ditch near Five-Mile Pond. April 23.

334. (1881.) **R. Palustris (L.) Bess. Marsh Cress.**  
(*Nasturtium palustre* DC.)  
Borders of ponds in shallow water; frequent. May 10.

335.* (1882.) **R. sessiliflora (Nutt.) A. S. Hitchcock.** Pond Cress.  
(*Nasturtium sessiliflorum* Nutt.)  
Mucky margins of ponds; frequent.  
Though mentioned in several of the lists of Indiana plants, the range is given in Gray's Manual as "W. Ill. to E. Kan. and southward."

106. **Cardamine L.**

336. (1888.) **C. Bulbosa (Schreb.) B. S. P.** Spring Cress.  
(*C. rhomboidea* DC.)  
Wet, shady soil; frequent.  

337. (1890.) **C. douglasii (Torr.) Britton.** Purple Spring Cress.  
(*C. rhomboidea purpurea* Torr.)  
Open woods in rather dry soil; common. February 9.  
The first Crucifer to bloom in spring.

338. (1892.) **C. Hirsuta L.** Small Bitter Cress.  
Low wet places; frequent.  
South of Fair Ground. Sand Hill, etc. April 2.

167. **Dentaria L.**

Moist open woods; common. March 22.  
The leaves variable in form and the flowers in color.

Waste places; abundant.
In flower March 10 and as late as November 25.

341.* D. CAROLINIANA Walt. Carolina Whitlow Grass.

Sandy soil in open fields and meadows; frequent.


Rising less than three inches above the ground, the little Draba blooms on the first warm days of March and its seeds are ripened by mid-April. Its work is, therefore, over before that of many plants is begun. It succeeds in the struggle for existence by being first upon the scene of action. Drinking long and deep of the bright spring sunshine, it soon gives way to its competitors, but not before its life's duty, the perpetuation of its kind, has been fulfilled.

342.* D. PINNATA (Walt.) Britton. Tansy Mustard. (Sisymbrium canescens Nutt.)

Gravelly soil; frequent.


343.* A. CANADENSIS L. Sickle-pod.

Sandy or gravelly soil; rare.

Side hill near the Seventh Street bridge across Lost Creek. June 4.


Taken but once, in McKeen's woods west of Sand Hill. May 3, 1891.


Rocky hillsides or dry, gravelly soil; rare.

Found but once, May 21, 1891, on sides of canal above Conover's pond. This is the first published record for the State, though the plant has been taken by the writer in Monroe and Montgomery Counties.
Sides of ravines in dry soil; frequent.
Gran. Honey Creek. Coal Creek. April 10.

172. **ERYSIMUM** L.

347. (1944.) *E. asperum* DC. Western Wallflower.
Gravelly banks; scarce.

**CAPPARIDACEÆ.** Caper Family.

173. **POLANISIA** Raf.

348. (1957.) *P. graveolens* Raf.
Dry, gravelly soil; scarce.
Banks of canal. I. & St. L. R. R. June 17.

**CRASSULACEÆ.** Orpine Family.

174. **SEDUM** L.

Rocky hill-sides; rare.
Noted only at Coal Creek, where it was collected by Dr. B. W. Evermann in 1889. April 30.

Sides of ravines in damp places; scarce.
Gran. Honey Creek. Coal Creek. May 12.

175. **PENTHRORUM** L.

Low, wet places; common. July 15.

**SAXIFRAGACEÆ.** Saxifrage Family.

176. **SAXIFRAGA** L.

Damp woods and prairies; scarce.
Heckland. May 25.
177. *Heuchera* L.

Ravines and rocky hillsides; scarce. April 15.
Coal Creek. Heckland.

Dense, damp woods; scarce. June 8.
Noted only at Heckland, and first recorded in the State from there.
(See Proc. Ind. Acad. Science, 1894, 105.) The only other known station in Indiana is Tollestown, Lake County. (Id., 1895, 187.)

178. *Mitella* L.

Wooded hillsides and ravines; scarce. April 20.
Coal Creek. Honey Creek.
A delicate and handsome spring flower; the slender racemes often 10 to 12 inches in length.

179. *Hydrangea* L.

Sides of ravines and rocky banks; frequent. June 17.
One specimen, having only sterile, radiant flowers, was taken July 8, 1894.

180. *Ribes* L.

357. (2032.) *R. cynosbati* L. Prickly Wild Gooseberry.
Wooded hillsides and banks of streams; frequent. April 20.

Dry, upland woods; frequent.
Sand Hill. Honey Creek Hills. The only known locality in the State.* April 18.

Damp, upland woods; scarce.

HAMAMELIDACEÆ. Witch-Hazel Family.

181. HAMAMELIS L.

360. (2044.) H. VIRGINIANA L. Witch-Hazel.

Damp, upland woods; scarce.

Noted only in woods in S. W. ½ Sec. 6, Pierson Tp. October 10.

"The witch-hazel is an extremely interesting plant, October and November child, and yet reminds me of the very earliest spring. Its blossoms smell like the spring, like the willow catkins. By their color, as well as fragrance, they belong to the saffron dawn of the year, suggesting among all these signs of autumn, falling leaves and frost, that the life of nature by which she eternally flourishes is untouched. It stands here in the shadow on the side of the hill, while the sunlight from over the top of the hill lights up its topmost sprays and yellow blossoms. Its spray, so jointed and angular, is not to be mistaken for any other. I lie on my back with joy under its boughs. While its leaves fall, its blossoms spring. The autumn, then, is indeed a spring."—Thoreau.

182. LIQUIDAMBAR L.


Low, damp soil; frequent along the Wabash River and borders of ponds and sloughs, especially in the southwestern part of the county. April 8.

PLATANACEÆ. Plane-tree Family.

183. PLATANUS L.


Low, moist, usually alluvial soil; common. April 18.

One of the largest of our native trees, sometimes reaching a height of 176 feet and a diameter† of 10½ feet. The leaves of young specimens, growing in favorable localities, are also very large, one having been measured which was 19x15½ inches. Many large sycamores are still to be found in the forests skirting the Wabash in the southwestern part of the county.

*Autumn, p. 87.
†Dr. J. Schneck, Ind. Geol. Surv., 1875, 542.
ROSACEÆ. Rose Family.

184. SPIREA L.

363. (2049.) S. SALICIFOLIA L. Common Meadow Sweet.
Margins of wet prairies; not common. June 15.
Heckland.
A form with pods included in calyx lobes is found sparingly.

185. PYRUS L.

364. (2057.) P. CORONARIA L. American Crab Apple.
Open, upland woods and fence rows; frequent. May 5.
Side of canal above Conover's Pond. Honey Creek hills, etc.
Noted for the beauty of its flowers and the sweetness of their perfume.

365. (2059.) P. MALUS L. Wild Apple.
Escaped and growing spontaneously in old fields; frequent.
"Here on this rugged and woody hillside has grown an apple tree, not planted by man, no relic of a former orchard, but a natural growth, like the pines and oaks. The owner knows nothing of it. The day was not observed when it first blossomed, nor when it first bore fruit, unless by the chickadee. There was no dancing on the green beneath it in its honor, and now there is no hand to pluck its fruit—which is only gnawed by squirrels, as I perceive. Who knows but this chance wild fruit, planted by a cow or bird on some remote and rocky hillside, where it is as yet unobserved by man, may be the choicest of all its kind, and foreign potentates shall hear of it, and royal societies seek to propagate it, though the virtues of the, perhaps, truly crabbed owner of the soil may never be heard of—at least, beyond the limits of his village? It was thus the Porter and the Baldwin grew.

"Every wild apple shrub excites our expectation thus, somewhat as every wild child. It is, perhaps, a prince in disguise. What a lesson to man! So are human beings, referred to the highest standard, the celestial fruit which they suggest and aspire to bear, browsed on by fate; and only the most persistent and strongest genius defends itself and prevails, sends a tender scion upward at last, and drops its perfect fruit on the ungrateful earth. Poets and philosophers and statesmen thus spring up in the country pastures, and outlast the hosts of unoriginal men."—Thoreau.

*The Succession of Forest Trees and Wild Apples, pp. 63, 69.
(Pyrus arbutifolia L.)
Damp upland woods; rare.
Noted only at Heckland. May 22.

367. (2066.) A. BOTRYAPIUM (L. f.) DC. Service Berry. Shad Bush.
(A. canadensis oblongifolia T. and G.)
Borders of damp woods; scarce.
Side of National Road near Sugar Creek. April 21.

368. (2072.) C. COCCINEA L. Scarlet-fruited Hawthorn.
Borders of dry, upland woods; frequent.
Sand Hill. Coal Creek. Honey Creek, etc. May 1.
The leaves of this species are thinner and more sharply toothed than any other; while the fruit is small and more bitter than any except that of C. tomentosa L.

369. (2075.) C. CRUS GALLI L. Cockspur Thorn.
Borders of upland thickets; frequent.
Readily known by its small, thick, shining, obovate leaves, and abundant globose red fruit.

(C. coccinea mollis T. and G.)
Open hillside woods in rich soil, and borders of streams; frequent.
April 20.
Leaves thicker and broader, and fruit rather larger, ripening earlier, and more agreeable to the taste, than that of the other species found in the county.
Open, wooded slopes; scarce. May 2.
On the hillside north of Highland Lawn Cemetery a single speci
men, bearing greenish-yellow fruit fully one inch broad, was noted
October 16, 1896.

Low, rich ground along streams; often forming thickets; common.
May 10.
Form of leaves very variable; flowers blooming later and more ill
scented, and the red globose fruit more bitter than that of any other of
our species.

189. RUBUS L.

373. (2090.) R. BAILEYANUS Britton. Trailing Blackberry.
(R. villosus humifusus T. & G.)
Borders of woods, especially in sandy soil; frequent. May 19.

Old upland fields and roadsides; frequent. May 13.
South of St. Mary's. Near Glen, etc.

375. (2096.) R. HISPIDUS L. Running Swamp Blackberry.
Damp, flat woods; scarce.
Heckland. Beach's woods, close to Van. railroad.

Borders of upland thickets and fence rows; common. May 27.

Open woods, fence rows, etc.; common. May 27.

190. FRAGARIA L.

378. (2112.) F. VESCA L. Wood Strawberry.
Dry or gravelly soil; common. April 21.
Along canal and railways.

379. (2113.) F. VIRGINIANA Duchesne. Wild Strawberry.
Moist wooded banks; scarce.
Southeast of Hunt's. Roadside near Glen.

191. POTENTILLA L.

Old fields and along roadsides in poor or "worn out" soil; common.
May 12.

41—Geol.
381. (2127.) *P. monspeliensis* L. Cinque-foil.
   (*P. norvegica* L.)
   Borders of open dry woods; scarce.

382. (2141.) *G. canadense* Jacq. White Avens.
   (*G. album* Gmel.)
   Borders of woods and thickets; frequent. May 2.

383 * (2144.) *G. macrophyllum* Willd.
   Borders of open, rich woods; rare.
   The first record for the State.

   Thickets and fence rows; common. April 21.

385. (2155.) *U. rubra* Hill. Queen of the Prairie.
   (*Spiraea lobata* Gronov.)
   Damp meadows and prairies; scarce.
   Rather common in the prairies north of Heckland. June 30, 1891.
   One of the most handsome of the prairie plants, now so rapidly dis­
   appearing.

386. (2160.) *A. parviflora* Soland. Small-flowered Agrimony.
   Along gravelly banks and borders of thickets; scarce. May 25.

   (*A eupatoria* L.)
   Borders of upland woods and fence rows; common. May 12.

388.* (2162.) *S. canadense* L. Canadian Burnet.
   (*Poterium canadense* Benth. & Hook.)
   Borders of ditches, and prairies in moist soil; scarce.
   Heckland and side of T. H. & L. Railway north of Otter Creek
   Junction. In flower from August 10 to October 20.
   The first record for the State.
389. (2168.) R. carolina L. Swamp Rose.
Borders of swamps and ditches; growing in dense clumps; common.
June 1.

Dry, usually gravelly or sandy soil; frequent.
Along railways, especially T. H. & L. near Heckland. June 1.

Waste places and roadsides; frequent.
Old canal. Roadsides near St. Mary’s, etc. May 26.
“The seed vessel of the sweet brier is a very beautiful, glossy, ellip­
tical fruit. This shrub, what with the fragrance of its leaves, its blos­soms, and its fruit, is thrice crowned.”—Thoreau.

392. (2174.) R. setigera Michx. Climbing or Prairie Rose.
Borders of prairies and thickets; scarce.
Our most handsome species; often cultivated.

393. (2177.) P. americana Marsh. Wild Yellow or Red Plum.
Banks of streams and borders of moist, upland thickets; frequent,
especially in southern half of county. April 21.

394. (2190.) P. serotina Ehrh. Wild Black Cherry.
Rich, upland woods, fence-rows, etc.; common. May 10.

LEGUMINOSÆ. Pulse Family.

Open woods and borders of thickets in dry, rich soil; common
April 14.

396. (2202.) C. chamæcrista L. Partridge Pea.
Sandy banks of old canal; common. April 30.

397. (2204.) C. Marylandica L. Wild Senna.
Sand or gravel bars and low, waste grounds; frequent. August 20.
398. (2209.) G. TRIACANTHOS L. Honey Locust. Thorn Tree.
Open woodlands and fence-rows; common. May 27.
Specimens twenty feet high and less are very thorny; tall, old trees
are often nearly destitute of thorns.

399. (2210.) G. DIOICUS (L.) Koch. Kentucky Coffee Tree.
(G. canadensis Lam.)
Rich open upland or river terrace woods; frequent. May 26.
Reaches a diameter of 18 to 20 inches. The large pods and beans are
often objects of special interest to persons who are unacquainted
with the tree.

400. (2219.) B. LEUCANTHA T. and G. White False Indigo.
Moist prairies; frequent.
Common at Heckland. Sides of railway above Otter Creek Junction.
S. W. ¼ of S. E. ¼, Sec. 6, Pierson Township. May 26.
The pods, when mature, are variable in length, and obliqueness of
base.

Waste places along railways; scarce.
Sides of Vandalia R. R. E. & T. H. Railway south of the blast
furnace. May 20.

402. (2238.) M. ALBA Lam. White Sweet Clover.
Dry gravelly soil in waste grounds; frequent.
Sides of canal. Crossing of I. & St. L. Railway and St. Mary's
Road. May 27.
Sometimes reaches a height of six feet and forms dense thickets, which,
when the plants are old, are difficult to penetrate.

403. (2239.) M. OFFICINALIS (L.) Lam. Yellow Sweet Clover.
Dry or alluvial soil; scarce.
Side of Vandalia Railway, one mile east of Terre Haute. June 22.

404. (2248.) T. PRATENSE L. Red Clover.
Roadsides and meadows; abundant. May 14.
A white-flowered form occurs sparingly.
405. (2250.) T. REFLEXUM L. Buffalo Clover.
   Dry, sandy hillsides or prairies; rare.
   Hillside east of Five-Mile Pond. May 28.

406. (2251.) T. REPENS L. White Clover.
   Fields and roadsides; common. May 10.

206. PSORALEA L.

407. (2265.) P. ONOBRYCHIS Nutt.
   Moist soil along railways; frequent.
   June 8.

408. (2266) P. PEDUNCULATA (Mill.) Vail.
   (P. melilotoides Michx.)
   Dry, sandy soil; frequent.
   Common along railway near Heckland. June 8.

207. AMORPHA L.

   Sandy hillsides and prairies; scarce.
   Its presence was formerly supposed to indicate deposits of lead ore,
   whence one of the common names.

   Sandy or gravelly banks; frequent.
   Along the old canal, both north and south of Terre Haute.

208. KUHNISTERA Lam.
   (Petalostemon Michx.)

   (Petalostemon candidus Michx.)
   Dry prairie soil; scarce.
   Hillside near Five-Mile Pond. Vandalia Railway near gravel pit,
   etc. June 27.

412. (2280.) K. PURPUREA (Vent.) MacM. Prairie-clover.
   (Petalostemon violaceus Michx.)
   With the above, but more common. June 27.
209. CRACCA L.  
(Tephrovia Pers.)

(Tephrovia virginiana Pers.)
Sandy hillsides; scarce.  
Near Five-Mile Pond. May 15.

210. ROBINIA L.

414. (2289.) R. PSEUDACACIA L. Black Locust. False Acacia.  
Naturalized; dry or sandy upland soil; frequent.  
Beach's woods. Sides of canal, etc. May 12.

211. MEIBOMIA Adans.  
(Desmodium Desv.)

415. (2336.) M. BRACIEOSA (Michx.) Kuntze. Tick Trefoil.  
(Desmodium euspidatum Torr. & Gray.)
Damp thickets and borders of prairies; scarce.  

416. (2337.) M. CANESCENS (L.) Kuntze. Seed Ticks.  
(Desmodium canescens DC.)
Borders of woods and thickets in rich soil; common.

417. (2338.) M. CANADENSIS (L.) Kuntze.  
(Desmodium canadense DC.)
Moist open woods and copses; frequent. July 1.

418. (2340.) M. DILLENII (Darl.) Kuntze.  
(Desmodium dillenii Darl.)
Dry, open woods; frequent.  
Coal Creek. Southeast of Hunt's. Honey Creek.

419. (2341.) M. GLABELLA (Michx.) Kuntze.  
(Desmodium hapifusum Beck.)
Sandy soil; frequent.  

420. (2342.) M. GRANIFLORA (Walt.) Kuntze.  
(Desmodium acuminatum DC.)
Rich, moist woods; frequent.  

421. (2346.) M. MARYLANDICA (L.) Kuntze.  
(Desmodium marilandicum Boott.)
Damp thickets and woodlands; scarce.  
Heckland.
422. (2347.) M. nudiflora (L.) Kuntze. Tick Trefoil.
   (Desmodium nudiflorum DC.)
   Dry, open woods; frequent.
   Coal Creek. Beach's. June 5.

423. (2356.) M. rotundifolia (Michx.) Kuntze. Round-leaved Tick Trefoil.
   (Desmodium rotundifolium DC.)
   Dry, upland, wooded hillsides; scarce.

424. (2357.) M. sessilifolia (Torr.) Kuntze.
   (Desmodium sessilifolium T. and G.)
   Frequent in dry, sandy soil.

212. LESPEDEZA Michx.

425. (2361.) L. angustifolia (Pursh.) Ell.
   Dry prairie; scarce.
   The first record for the State.

426. (2362.) L. capitata Michx.
   Prairies and sandy soil; frequent.
   Hillside near Five-mile Pond. Heckland. Borders of canal, both north and south of Terre Haute, etc. August 10.

427. (2365.) L. frutescens (L.) Britton.
   (L. reticulata Pers.)
   Sandy soil, margins of prairies, etc.; frequent.

   Dry sandy soil; not common.

429. (2375.) L. violacea (L.) Pers.
   Dry upland woods; frequent.

213. LATHYRUS L.

430. (2359.) L. myrtifolius Muhl.
   (L. palustris myrtifolius Gray.)
   Moist banks; scarce.
431.* (2392.) L. PALUSTRIS L. Marsh Vetchling.
Borders of ditches and ponds; scarce.

214. FALCATA Gmel.
(\textit{Amphicarpa} Ell.)

(\textit{Amphicarpa monoica} Nutt.)
Damp woodlands in rich soil; common. July 25.
Leaflets never more than two inches in length; pods, two to five, seven-eighths of an inch long, borne on a short rachis; seeds, three mm. in length.

(\textit{A. pitcheri} T. and G.)
Hillside thickets in damp rich soil; scarce.
Coal Creek.
Leaflets much larger than in \textit{F. comosa} (L.), the blade often more than three inches long; pods, ten or more, 1\frac{1}{2} inches long, borne on a long hairy rachis; seeds, 5 mm. in length.
The first record for the State.

215. APIOS Moench.

434.* (2399.) A. APIOS (L.) MacM. Ground Nut.
(\textit{A. tuberosa} Moench.)
Borders of moist woods and marshes; scarce.

216. PHASEOLUS L
(\textit{Strophostyles} Ell.)

435. (2402.) P. HELVOLUS L. Wild Bean.
(\textit{Strophostyles angulosa} Ell.)
Dry or sandy banks and hillsides; frequent.
Sides of canal and railways. July 27.

436.* (2406.) P. UMBELLATUS (Muhl.) Britton. Wild Bean.
(\textit{Strophostyles peduncularis} Ell.)
Sandy soil; scarce.
GERANIACEÆ. Geranium Family.

217. GERANIUM L.

437. (2411.) G. CAROLINIANUM L. Carolina Cranesbill.
   Dry, gravelly banks; frequent.
   Common along the railways and banks of canal. May 10.

   Open woods and thickets; frequent. April 20.

OXALIDACEÆ. Oxalis Family.

218. OXALIS L.

439. (2424.) O. STRICTA L. Yellow Wood-sorrel.
   (O. corniculata stricta Savigny.)
   Open woods and roadsides; common. May 3 to November 4.

440. (2425.) O.violacea L. Violet Wood-sorrel.
   Moist soil in woods and open places; scarce.

LINACEAE. Flax Family.

219. LINUM L.

441. (2433.) L. VIRGINIANUM L. Wild Flax.
   Dry, sandy soil; scarce.

RUTACEAE. Rue Family.

220. ZANTHOXYLUM L.

   Borders of open woods; scarce.
   Woods one half mile north of Hickory Grove schoolhouse. Grant.
   The flowers sometimes perfect and the pistils often six. April 15.

221. PTELEA L.

   Dry, gravelly or sandy banks; scarce.
   Hillside, near Conover's Pond. Banks of Lost Creek, near
   Seventh Street Bridge. Coal Creek. May 20.
SIMARUBACEAE. Ailanthus Family.

222. AILANTHUS Desf.

444. (2438.) A. GUNDULOSA Desf. Tree of Heaven.
Roadsides, escaped from cultivation; scarce.

POLYGALACEAE. Milkwort Family.

223. POLYGALA L.

445.* (2451.) P. POLYGAMA Walt. Pink Polygala.
Dry, sandy soil; rare.
Side of Vandalia railway, one mile east of Terre Haute. May 16.

446.* (2454.) P. SENEGA L. Seneca Snake-root.
Prairie borders in dry soil; scarce.
Quite common at Heckland. May 8.

447. (2456.) P. VERTICILLATA L. Whorled Milkwort.
Dry, upland woods; rare.
Taken but once, October 17, 1896, in Hipple's Coal-mine Woods.
In flower and fruit at that time.

448.* (2457.) P. VIRIDESCENS L. Pulple Milkwort.
(P. sanguinea L.)
Low, sandy soil; scarce.
June 25.

EUPHORBIACEÆ. Spurge Family.

224. PHYLANTHUS L.

449. (2460.) P. CAROLINENSIS Walt.
Sandy banks along roadsides; scarce.
North side of Fair Ground. September 30, 1889.

225. ACALYPHA L.

450. (2469.) A. VIRGINICA L. Three-seeded Mercury.
Low or sandy waste places; common. July 8 to November.

450a. (2470.) A. VIRGINICA GRACILENS (A. Gray) Muell.
Equally common and in similar localities. July 15.
FLORA OF VIGO COUNTY.

226. EUPHORBIA L.

451. (2478.) E. COMMUTATA Engelm.  
Damp shaded banks; scarce.  

452. (2479.) E. COROLLATA L. Flowering Spurge. White Spurge.  
Gravelly banks, especially along the railways and canals; common. May 25.

Roadsides and banks of railways; scarce.  
Taken on two different seasons along Vandalia Railway near Fair Ground. May 28.

454. (2483.) E. DENTATA Michx. Tooth-leaved Spurge.  
Shaded banks in rich sandy soil; scarce.  
Old canal, between Conover's Pond and Fort Harrison. September 6.

455. (2491.) E. HETEROPHYLLA L. Diverse-leaved Spurge.  
Banks of canal and hillsides near Five Mile Pond; scarce. September 1.  
The first record for the State.

456. (2493.) E. HUMISTRATA Engelm.  
Fields and banks in dry soil; frequent. July 10.  
Much more leafy than E. maculata L.

457. (2498.) E. NUTANS Lag.  
(E. preslii Guss.)  
Borders of woods, sandy banks and hillsides; common. July 5.  
Varies in height from one to four feet; in size of flower and in color of stems, the latter in older and larger specimens becoming red. The pods of this and allied species, when dry, burst open with a snapping or crackling noise and project the seeds to a distance of several feet.

458. (2494.) E. MACULATA L. Spotted Spurge.  
Open, dry or sandy banks and roadsides; common. July 2.

CALLITRICHACEÆ. Water Starwort Family.

227. CALLITRICHÆ L.

Ponds, ditches, etc.; frequent.  
Pond at Sand Hill. Five-Mile Pond, etc. April 30.
LIMNANTHACEÆ. False Mermaid Family.

228. FLEURKEA Willd.

46.* (2518.) F. PROSERPINACOIDES Willd. False Mermaid.
Damp, open woods; rare.
Taken but once, May 12, 1888, in woods northwest of Ferrell's.

ANACARDIACEÆ. Cashew Family.

229. RHUS L.

461.* (2522.) R. GLABRA L. Smooth Sumach.
Dry, sandy soil and upland thickets; common. June 10.

462. (2525.) R. RADICANS L. Poison Ivy.
(E. toxicodendron L.)
Fence-rows and borders of thickets; common. May 27.
The low, upright form is most frequent in open, sandy soil; the high,
climbing form in rich, open woods. The stems of the latter are found
two and one-half inches in diameter. See No. 480 below.

AQUIFOLIACEÆ. Holly Family.

230. ILEX L.

Low, wet woods and borders of swamps; scarce.
Dense woods northwest of Hickory Grove School-house. Banks of
Little Honey Creek. S. W. ¼ of S. E. ¼, Sec. 6, Pierson Twp.
Heckland. May 10.
The bright, red berries are especially conspicuous in early winter when
the ground is covered with snow.

CELASTRACEÆ. Staff-tree Family.

231. EUONYMUS L.

Burning Bush.
Rich, open woods; frequent.
Coal Creek. Ferrell's. Sand Hill, etc. May 27.
Among the wild fruits which cater to the sense of sight rather than of
taste, that of the wahoo seems to me most beautiful. Hanging on slen­
der pedicels, four or more in a cluster, from the same peduncle, its deep
scarlet color and odd shape render it a most striking object. Add to this
the orange aril of its seeds, peeping so daintily through the half open
suture of the pod after the latter has been touched by one or two keen frosts, and we have a combination and a contrast most pleasing to the eye.

*(E. americanus obovatus T. and G.)*  
Low, damp woods and thickets; frequent.  
Honey Creek. Ferrell’s. Coal Creek. April 21.

232. CELASTRUS L.

466.* (2546.) C. scandens L. Waxwork. Climbing Bitter-sweet.  
Borders of woods, thickets and fencerows; frequent.  
Sides of canal. Sand Hill, etc. May 12.  
After the first severe frost the orange-colored pods open and display the scarlet aril within. One of the most ornamental of our wild twining shrubs and easily transplanted and cultivated.

STAPHYLEACE.E. Bladder Nut Family.

233. STAPHYLEA L.

467. (2547.) S. trifolia L. American Bladder Nut.  
Hillside thickets; frequent.  

ACERACE.E. Maple Family.

234. ACER L.

468.* (2550.) A. negundo L. Box Elder. Ash-leaved Maple.  
*(Negundo aceroides Moench.)*  
Banks of streams and low grounds; frequent.  
Honey Creek. Banks of canal, etc. April 8.

469. (2551.) A. nigrum Michx. Black Sugar Maple.  
*(A. saccharinum nigrum T. and G.)*  
With A. saccharinum Marsh, but much less common. April 10.  
Distinguished by the darker bark of the trunk and the form of the base and lobes of the leaves.

Borders of swamps and wet woods; frequent. February 16.  
This is the earliest flowering woody plant found in the county, and its leaves in autumn are most beautifully colored by the first frosts. It is often palmed off as the soft maple, but is inferior to the latter for the purpose of transplanting for shade. It blooms a fortnight earlier, and the flowers are a deep pinkish-red and arranged on very short stems in little clusters near the end of the branches. Those of the soft maple are yellowish-green in color and are borne on longer stems.
Silver Maple. 

(A. dasycarpum Ehrh.) 
Low, damp woods and river bottoms; common. March 10. 
When properly planted and tended the soft maple is one of the most 
ornamen tal of shade trees. It is a rapid grower, easily transplanted. 
and, when given room, it develops into a noble and pleasing form. To 
allow it free access to the sun and air, with full room for expansion on 
every side, it should be planted not closer than thirty-five feet to one of 
its kind.


(A. saccharinum Wang.) 
Open, upland woods; common. April 15. 
The hard maple is one of the most beautiful of our native forest trees; 
indeed, few trees of any country can equal it in stateliness of form or 
gracefulness of habit. No other tree supports an equally massive head 
of foliage on so slender a stem. No other, of equal size, is more com­ 
pact in its growth; and, after reaching a height of thirty or forty feet, 
if the top be cut out, no other tree will assume a form more rounded or 
pleasing in outline, provided it be given plenty of room.

HIPPOCASTANACEÆ. Horse-chestnut Family.

235. ÁSCULUS L.

Open woods and along streams in rich soil; frequent. 
Sand Hill, Honey Creek. April 14.

BALSAMINACEÆ. Jewel-weed Family.

236. IMPATIENS L.


(I. pallida Nutt.) 
Bottoms of ravines and damp, shady places; frequent. 
Grant, Coal Creek, Ferrell's. June 10.

475. (2567.) I. BIFLORA Walt. Spotted Touch-me-not. 

(I. fucosa Nutt.) 
With the preceding but less frequent. June 20.
RHAMNACEÆ. Buckthorn Family.

Open, sandy woods and roadsides; frequent.
Sides of railway near Heckland. Hillside near Five-Mile Pond.
E. & T. H. R. R., etc. May 28.

VITACEÆ. Vine Family.

238. VITIS L.

477. (2577.) V. AESTIVALIS Michx. Summer Grape.
Dry, upland thickets and fencerows; frequent, especially in the
southern half of the county. May 10.
The fruit ripens about mid-September and may be readily known
from that of the following by its sweet, musky taste; slightly
larger size, and the compactness of the bunches.

Borders of streams and low ground thickets; common. April 25.

479. (2587.) V. VULPINA L. Riverside Grape.
(V. riparia Michx.)
Banks of streams and low ground; not common.
Honey Creek. Coal Creek. May 1.

239. PARTHENOCISSUS Planch.
(Ampelopsis Michx.)

480. (2588.) P. QUINQUEFOLIA (L.) Planch. Virginia Creeper.
(Ampelopsis quinquefolia Michx.)
Open woods and fencerows; common. May 25.
One of the most handsome of our wild vines; easily cultivated; often
confounded with poison ivy (Rhus radicans L.) from which it may
readily be distinguished by its five leaflets and black fruit; the leaflets
of the poison ivy being three in number and the fruit whitish-yellow.

TILIACEÆ. Linden Family.

240. TILIA L.

Open woods, sides of ravines, etc., in rich soil; frequent. May 24.
The fragrant flowers of the lin or basswood, abounding as they do in
honey, are very attractive to bees, butterflies and other nectar-loving
insects, and when the trees are in full blossom the buzz and hum of these
visitors can be heard some rods away. Rare species of butterflies can then often be found in their vicinity. For example, on June 4, 1896, the writer took 18 specimens of the uncommon *Libythea baehmani* Kirtland from the flowers of three basswood trees standing in front of his residence in a thickly settled portion of the city of Indianapolis.

MALVACEÆ. Mallow Family.

241. ABUTILON Gartn.


(A. aricennae Gartn.)

Cultivated fields and roadsides, especially in alluvial soil; common.
June 1.

242. MALVA L.

483. (2601.) M. rotundifolia L. Common Mallow.

Roadsides and waste places in city; common. April 22.

The petals vary from whitish to pale blue and pinkish.

243. SIDA L.

484. (2614.) S. spinosa L.

Roadsides and open woods in sandy soil; common. June 3 to November.

244. HIBISCUS L.

485. (2615.) H. lasiocarpus Cav. Rose Mallow.

Borders of prairie swamps; scarce. July 5.

Noted in the county only at Heckland, one-third of a mile west of the station.

486.* (2616.) H. militaris Cav. Halberd-leaved Rose Mallow.

Sandy overflowed bottoms of Wabash River; frequent south of Five-mile Pond and near Durkey’s Ferry. July 10.

HYPERICACEÆ. St. John’s-wort Family.

245. HYPERICUM L.


Edge of river bank in woods below Ft. Harrison. October 12, 1896.

The first record for the State.

488. (2640.) H. maculatum Walt. Spotted St. John’s-wort.

Low, moist ground; frequent.
Heckland. Beach’s woods. June 20.

The sepals as well as petals are marked with black lines.
489. (2642.) H. mutilum L. Dwarf St. John's-wort.  
Moist meadows and cultivated fields; common. July 1.

Old fields, meadows and roadsides; frequent. June 1.

Banks of streams and borders of moist, open woods; scarce.  
Coal Creek. Honey Creek north of Lockport. July 3.

CISTACEE. Rock-Rose Family.

246. HELIANTHEMUM Pers.

Dry, sandy hillsides; scarce.  
Hilside near Five-Mile Pond. May 28.

247. LECHEA L.

493. (2662.) L. minor L. Pinweed.  
Margins of prairies, etc., in dry soil; scarce.  

VIOLACEE. Violet Family.

248. VIOLA L.

494. (2667.) V. blanda Willd. Sweet White Violet.  
Damp wooded hillsides; rare.  
Woods east of St. Mary's. April 28.

495. (2676.) V. lanceolata L. Lance-leaved Violet.  
Margins of ponds and damp prairies; scarce.  

496. (2678.) V. obliqua Hill. Common Blue Violet.  
(V. palmata escallata Gray.)  
Moist, low grounds; abundant. April 5 to November.

497. (2680.) V. palmata L. Blue Violet.  
Dry open woods; scarce.  

498. (2684.) V. pedatafida Don.  
Dry, sandy places; rare.  
Collected by Mr. U. O. Cox, near Five-mile Pond. May 4, 1891.

499. (2686.) V. purpurea Ait. Downy Yellow Violet.  
Dry, open woods; common. April 13.

42—Geo.
500. (2689.) V. sagittata Ait. Arrow-leaved Violet. 
Borders of moist prairies; scarce. 
Heckland. April 28.

501. (2694.) V. striata Ait. Pale Violet. 
Open woods in sandy soil; common. April 13. 
The petals vary in color from deep cream to almost white.

(V. tricolor arvensis L.) 
Dry, sandy banks; frequent. March 17. 
Beach's woods. Southeast of Hunt's Rosary.

290. SOLEA Spreng.

503. (2698.) S. concolor (Forst.) Gingins. Green Violet. 
Damp, wooded hillsides; scarce. April 21. 
Honey Creek. Coal Creek.

PASSIFLORACEÆ. Passion Flower Family.

250. PASSIFLORA L.

504. (2701.) P. lutea L. Northern Passion Flower. 
Borders of open woods in rich soil; scarce. 
Taken but once, September 19, 1889, from McKeen's woods south of Fair Ground.

THYMELAEACEÆ. Mezereum Family.

251. DIRCA L.

Rich hillside thickets and banks of streams; scarce. 
Grant. Coal Creek. April 14.

LYTHRACEÆ. Loosestrife Family.

252. ROTALA L.

506.* (2718.) R. ramosior (L.) Kehne. 
Ditches and mucky borders of ponds; scarce. 

253. AMMANNIA L.

507.* (2720.) A. coccinea Rottb. Ammannia. 
Low, damp places; frequent. 
254. **LYTHRUM L.**

508. *(2723.)* **L. ALATUM** Pursh. Loosestrife.
Margins of wet prairies; scarce.
Heckland. June 12.

509. *(2729.)* **D. VERTICILLATUS** (L.) Ell. Swamp Loosestrife.
Borders of marshes; rare.
Near Heckland.

**ONAGRACEÆ.** Evening Primrose Family.

256. **LUDWIGIA L.**

510. *(2736.)* **L. ALTERNIFOLIA** L. Seed-box.
Ditches and margins of swamps; scarce.
Variable; the petals sometimes smaller than the sepals.

511. *(2742.)* **L. PALustris** (L.) Ell. Water Purslane.
Ditches and muddy brooks; frequent.
Side of Vandalia Railway, near Glen. Outlet of Five-mile Pond, etc. July 12.

512. *(2743.)* **L. POLYCARPA** Short and Peter. False Loosestrife.
Swamps and margins of ponds; scarce.
Marsh near Vandalia Railway, west of Beach's woods, and farther east near Glen. September 6, 1889.

257. **EPILOBium L.**

513. *(2747.)* **E. COLORATUM** Muhl. Willow Herb.
Low damp soil; common. July 5.

514. *(2752.)* **E. STRICTUM** Muhl. Downy Willow Herb.
Borders of swamps; rare.
Taken but once, October 6, 1889, from marsh near Vandalia Railway, west of Beach's woods.

258. **ONAGRA Adans.**
 *(Enothera L. in part.)*

515. *(2756.)* **O. BIENNIS** (L.) Scop. Evening Primrose.
 *(E. biennis L.)*
Borders of fields and waste places, especially in sandy soil; common. June 25 to October 16.
259. (E)NOThERA L.

516. (2761.) O. SINUATA L. Sinuate-leaved Primrose.
Sandy cultivated fields; scarce.
Probably a railroad migrant from the South. May 14.
The first record for the State.

260. KNEIFFIA Spach.

517.* (2765.) K. FRUITICOSA (L.) Raimana. Sun-drops.
(Enthera fruticosa L.)
Dry prairies; frequent.
June 8.

261. GAURA L.

518.* (2762.) G. BIENNIS L.
Sandy soil in waste places; frequent.
Canal, near Five-mile Pond. Along railways. June 27.

262. CIRCEA L.

519. (2763.) C. LUTETIANA L. Enchanter’s Nightshade.
Open woods in rich soil; common. June 23.

HALORRHAGIDACEAE. Water Milfoil Family.

263. MYRIOPHYLLUM L.

520. (2804.) M. VERTICILLATUM L. Water Milfoil.
Ponds; scarce.
The first record for the State.

ARALIACEAE. Ginseng Family.

264. ARALIA L.

521. (2808.) A. RACEMOSA L. Spikenard.
Sides of deep, damp ravines; scarce.
Coal Creek. Grant. June 28.

265. PANAX L.

522. (2810.) P. QUINQUEFOLIIUM L. Ginseng.
(Aralia quinquefolia Dec. and Planch.)
Rich wooded hillsides and ravines; scarce.
Honey Creek. Grant. Coal Creek. May 5.
Once a noted article of commerce, the spicy roots being gathered in
large quantities for shipment to China.
UMBELLIFERÆ. Parsley Family.

266. DAUCUS L.

523. (2812.) D. CAROTA L. Wild Carrot.
Old fields and roadsides; frequent. June 20.
Spreading rapidly and fast becoming a nuisance.

267. OXYPOLIS Raf. (Tiedemannia DC.)

524. (2820.) O. RIGIDUS (L.) Britton. Cowbane. (Tiedemannia rigida DC.)
Borders of swamps; scarce.

268. HERACLEUM L.

525. (2822.) H. LINATUM Michx. Cow Parsnip.
Low, damp places; scarce.
Marsh near Glen. June 1.

269. PASTINACA L.

526. (2823.) P. SATIVA L. Wild Parsnip.
Waste places, especially in moist soil; frequent.
May 28.

270. THASPIM NUTT.

527. (2831.) T. BARBINODE (Michx.) Nutt. Meadow Parsnip.
Rich or sandy soil; scarce.
Old canal south of Conover's Pond. June 16.

528.* (2834.) T. TRIFOLIATUM (L.) Britton.
Open woods in rich, dry soil; frequent.
McKeen's Woods. Banks of canal near Ft. Harrison, etc.

528a. (2835.) T. TRIFOLIATUM AUREUM (Nutt.) Britton. Meadow Parsnip. (T. aureum Nutt.)
Sides of ditches and upland swamps; frequent.
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271. ERYNGIUM L.


(E. yuccfolium Michx.)

Borders of prairies.
Common at Heckland and along the T. H. & L. Railway above Otter Creek Junction. July 16.

272. SANICULA L.

530. (2846.) S. CANADENSIS L. Black Snake-root.

(S. marylandica canadensis Torr.)
Thickets and open woods; frequent. May 12.

Rich, rather damp woods; scarce.
Beach's. Woods east of St. Mary's. May 16.

273. EULOPHUS Nutt.

532. (2855.) E. AMERICANUS Nutt.
Borders of prairies, rare.
Heckland. October 5, 1889.
Recorded hitherto only from Gibson County.

274. CHEBOPHYLLUM L.

533.* (2858.) C. PROCUMBENS (L.) Crantz. Chervil.
Open woods in rich, sandy soil; scarce.
Sand Hill. May 2.

275. OSMORRHIZA Raf.

534. (2860.) O. CLAYTONI (Michx.) B. S. P. Hairy Sweet Cicely.

(O. brevistyliis DC.)
Damp, rich woods; frequent. May 11.

535. (2861.) O. LONGISTYLIS (Torr.) DC. Smooth Sweet Cicely.
Thickets and fence-rows; less frequent than the above. May 6.

276. SIUM L.

Ditches and borders of ponds; frequent. July 10.

277. CICUTA L.

537.* (2874.) C. MACULATA L. Spotted Cowbane. Musquash Root.
Beaver Poison.
Marshes and ditches; common. July 11.
278. DERINGA Adans.
(Cryptotenia DC.)

538. (2875.) D. CANADENSIS (L.) Kuntze. Honewort.
(Cryptotenia canadensis DC.)
Borders of thickets and rich woods; frequent.

279. ERIGENIA Nutt.

Open woods, especially in damp, rich soil; common. February 23.

CORNACÉÆ. Dogwood Family.

280. CORNUS L.

Sides of ravines and upland fencerows; frequent. May 12.

541. (2893.) C. CANDIDISSIMA Marsh. Panicled Cornel or Dogwood.
(C. paniculata L'Her.)
Dry, open hillsides and borders of thickets; frequent.
This species has the leaves smaller and more crowded than those of any other in our bounds.

542.* (2894.) C. CIRCINATA L'Her. Round-leaved Dogwood.
Borders of open, rich woods and thickets; rare.
Recorded before only from Lake County.

543. (2895.) C. FLORIDA L. Flowering Dogwood.
Borders of open woods in dry soil; common. April 20.

Borders of thickets and gravelly banks; frequent. May 11.
Contrary to the habitat usually given this species, in Vigo County, occurs as frequently in dry, gravelly soil as in damp places. It often produces a second set of blossoms the same year; a clump growing in the bed of the old canal near Conover's Pond being in bloom on October 14, 1896.

281. NYSSA L.

545. (2899.) N. AQUATICA L. Black Gum. Sour Gum.
(N. sylvatica Marsh.)
Open, rather damp, upland woods; frequent. May 17.
Reaches a large size in the southern part of the county, but is put to no use on account of the difficulty of working the wood. The foliage is very handsome after the first frosts of autumn.
MONOTROPACEÆ. Indian-Pipe Family.

282. MONOTROPA L.

546. (2918.) M. UNIFLORA L. Indian Pipe. Corpse Plant.
Dry wooded hillsides, in rich soil; scarce.
Coal Creek hills. Hipple’s Coal-mine woods. July 1 to October 24.

283. HYPOPITYS Adans.

(Monotropa hypopitys L.)
Found but once, October 24, 1896, in dry woods at Coal Creek.
Flowers about the last of June.

PRIMULACEÆ. Primrose Family.

284. SAMOLUS L.

(S valerandi americanus Gray.)
Damp, shaded places; scarce.
Sand Hill, near spring. Vandalia Railway, near Beach’s. June 14.

285. STEIRONEMA Raf.

549.* (3001.) S. CILIATUM (L.) Baudo. Loosestrife.
Borders of low, damp prairies and streams; scarce.

550. (3003.) S. LANCEOLATUM (Walt.) A. Gray.
Borders of damp thickets and ditches; frequent.

551. (3004.) S. QUADRIFLORUM (Sims) A. S. Hitchc.
(S. longifolium Gray.)
Banks of streams, fence rows, etc.; frequent.
Coal Creek. Grant. July 1.

EBENACEÆ. Ebony Family.

286. DIOSPYROS L.

552. (3018.) D. VIRGINIANA L. Persimmon. Date Plum.
Old fields and fence rows; frequent, especially in southern half of
the county, where it is indigenous. June 1.
The fruit varies much in size, date of ripening and quality.
OLEACEÆ. Olive Family.

287. FRAXINUS L.

553. (3025.) F. AMERICANA L. White Ash.
Open woods; common. April 20.

554. (3028.) F. LANCEOLATA Borck. Green Ash.
(F. viridis Michx. f.)
Low rich bottoms along streams; frequent.
Honey Creek, Sugar Creek, near Ft. Harrison. May 1.

(F. sambucifolia Lam.)
Borders of swamps and marshes; scarce.
Marsh northeast of Sand Hill, Goose Pond. April 15.

556. (3031.) F. QUADRANGULATA Michx. Blue Ash.
Bottoms of Wabash River and low ground generally; frequent.
April 20.
In its greatest development it reaches a height of 120 feet, and measures fifteen feet in circumference two feet above the ground.

GENTIANACEÆ. Gentian Family.

288. GENTIANA L.

Low grassy banks along streams; frequent.
Honey Creek, Coal Creek, etc. September 18.

557a.* (3058.) G. ANDREWII ALBIFLORA Britton. White Gentian.
(G. alba Muhl.)
Dry sandy hillside southeast of Five-mile Pond; rare. September 23, 1888.

558.* (3066.) G. QUINQUEFOLIA L. Five-flowered Gentian.
(G. quinqueflora Lam.)
Moist hillside thickets. Noted only at Coal Creek, where it is locally common. September 5.

559.* (3070.) G. SAPONARIA L. Soapwort Gentian.
Borders of prairies; scarce.

289. FRASERA Walt.

560. (3076.) F. CAROLINENSIS Walt. American Celumbo.
Dry woods in rich soil; scarce.
Beach's woods, Woods east side of Goose Pond, Heckland. May 27.
561. (3078.) O. VIRGINICA L.
Rare. Noted only at Coal Creek in dry woods. April 1, 1890.
Prof. Evermann found three plants at same place on January 26, 1890. He brought them home and they bloomed on February 11.
Recorded in Indiana only from Jefferson County, but has also been taken by the writer in Monroe.

APOCYNACEÆ. Dogbane Family.

562. (3087.) A. ANDROS.EMIFOLIUM L. Spreading Dogbane.
Borders of thickets, banks, etc., in dry soil; scarce.
Honey Creek. Grant. June 20.

563. (3088.) A. CANNABINUM L. Indian Hemp.
Borders of streams and moist prairies; frequent. June 1.

ASCLEPIADACEÆ. Milkweed Family.

564. (3097.) A. INCARNATA L. Swamp Milkweed.

565.* (3102.) A. OBTUSIFOLIA Michx. Obese-leaved Milkweed.
Gravelly banks; frequent.

566. (——). A. PHYTOLACCOIDES Pursh. Poke Milkweed.
Borders of moist thickets and sides of ravines; rare.
Thicket west of Macksville near Broadhurst Mine. May 31.

567.* (3106.) A. PURPURASCENS L. Purple Milkweed.
Borders of dry, sandy fields; scarce.
One mile southeast of Prairieton. Van. Railway west of Glen.
June 14.

568. (3107.) A. QUADRIFOLIA Jacq. Four-leaved Milkweed.
Wooded hillsides and thickets; scarce.
Coal Creek. Hippie's Coal-mine woods. June 1.

(A. cornuti Dec.)
Waste places in rich soil; common. June 2.

570.* (3112.) A. TUBEROsA L. Butterfly Weed. Pleurisy Root. Indian Posey.
Sandy soil and gravelly banks; frequent. June 15.
Along railways and old canal.
571. (3133.) A. VARIEGATA L. Variegated Milkweed.
Dry woods; scarce. June 14.

572 (3114.) A. VERTICILLATA L. Whorled Milkweed.
Sandy hillside near Five-Mile Pond; frequent in the one place.
July 6.
Not before recorded in Indiana south of Tippecanoe County.

293. AMPELANUS Raf.
(Enslenia Nutt.)

573. (3124.) A. ALBIDUS (Nutt.) Britton. Climbing Milkweed.
(Enslenia albida Nutt.)
One specimen taken north of Fort Harrison, near bank of Wabash
River. September 21, 1896.
Its most northern record for the State.

CONVOLVULACEAE. Convolvulus Family.

294. IPOMOEA L.

574. (3135.) I. HEDERACEA Jacq.
Alluvial bottom lands; scarce.
Wabash bottoms below Ft. Harrison. Canal, near Five-mile Pond.
September 10.

575. (3136.) I. LACUNOSA L. Wild Morning Glory.
Alluvial soil and sand bars along the Wabash River; frequent.
August 20.

576 (3138.) I. PANDURATA (L.) Meyer. Wild Sweet Potato. Man-
of-the-Earth.
Sandy cultivated fields; frequent or common. June 20.

Gravelly banks and road sides; frequent, especially along the rail-
ways. September 1.

295. CONVOLVULUS L.

578. (3145.) C. AERVENSIS L. Bindweed.
Old fields and roadsides; scarce. June 11.

579. (3148.) C. SEPIMUM L. Bracted Bindweed. Hedge Bindweed,
Gravelly banks and borders of wet fields; frequent. June 6.
CUSCUTACEÆ. Dodder Family.

580. (3161.) C. gronovii Willd. Dodder.
Borders of marshes and damp thickets; common. July 15.

(C. chlorocarpa Engelm.)
Low, damp soil, on Solidago rugosa Mill. and Ambrosia trifida L.; frequent. July 25.

The dodder is among the most interesting of our parasitic plants. It is a parasite by suicide. That is, it springs from a seed which furnishes it nourishment until it finds some suitable host around which it coils itself. In coiling it contracts, and so pulls itself up by the roots. If not uprooted a portion of the stem a few inches above the soil withers, dies and breaks apart, while the upper, twining portion continues to flourish throughout the season.

If one could trace its history from the beginning he would doubtless find that it once possessed a weak stem, and desiring to reach the light, and twining to accomplish this, it tasted juices by chance, was nourished by them, and thus began a downfall which has continued until it presents the degraded spectacle of a plant "without a root, without a twig, without a leaf, and having a stem so useless as to be inadequate to bear its own weight. Other plants, with smaller beginnings, have gone on to higher forms, while the dodder, from a breach of the laws of evolution, pays one of nature's heaviest fines—loses the organs which it once possessed."

POLEMONIACEÆ. Polemonium Family.

297. PHLOX L.

582.* (3166) P. bifida Beck. Dwarf Phlox.
Sandy hill-sides and dry, open woods.
Common at Five-mile Pond and Coal Creek. April 7.

583. (3168) P. divaricata L.
Open woods and ravines; common. April 5.

Variable. Leaves sometimes alternate and very hairy; in form from ovate to lanceolate. Petals notched at apex or entire; in color from purplish to white.

584.* (3172) P. glaberrima L. Smooth-stemmed Phlox.
Moist banks and prairies; scarce.
Its most northern record for Indiana.
585. (3173.) *P. maculata* L. Wild Sweet William.
Borders of prairies and damp woods; scarce.
Heckland. Ferrell's. June 1.

586.* (3175.) *P. Paniculata* L. Panicked Sweet William.
Rich, shaded grounds, usually near streams; frequent.
Honey Creek. Vandalia Railway, near Beach's, etc. June 5.

587.* (3176.) *P. pilosa* L. Hairy Phlox.
Damp prairies and borders of woods; scarce.
Heckland. Ferrell's. May 12.

288. POLEMONIUM L.

588. (3192.) *P. reptans* L. Greek Valerian.
Rich wooded slopes and ravines; common. April 13.
All specimens noted were more or less hairy.

HYDROPHYLLACEAE. Waterleaf Family.

299. HYDROPHYLLUM L.

589. (3196.) *H. appendiculatum* Michx.
Open woods and ravines; common. April 20.
Often but one ovule is formed in the ovary. The lobes in the sinuses
of the calyx vary much in size.

590. (3197.) *H. canadense* L. Canada Waterleaf.
Sides of deep, damp ravines; scarce.

Rich, damp woods, ravines, etc.; scarce.

592.* (3199.) *H. virginicum* L. Virginia Waterleaf.
Ravines and open woods in damp soil; frequent. May 8.

300. MACROCALYX Trew.

(Ellisia L.)

593.* (3201.) *M. nyctelea* (L.) Kuntze. Ellisia.
(Ellisia nyctelea L.)
Noted only in a damp spot on hillside at North Sand Hill. May 25
Identified as *E. ambiguа* Nutt., now included with the above.
The first record for the State.
301. PHACELIA Juss.

   Wooded slopes in rich soil; scarce. April 28.
   Coal Creek. Honey Creek.
   The scarcity of this species suggests that Vigo County is near the northern limit of its range in Indiana. In Monroe County it is very common.

595.* (3210.) P. PURSHII Buckl. Pursh's Phacelia.
   Sandy open woods; frequent. April 28.
   Sand Hill. Coal Creek. Heckland, etc.

BORAGINACEE. Borage Family.

302. HELIOTROPUM L.

596. (3217.) H. INDICUM L Indian Heliotrope.

303. CYNOGLOSSUM L.

597. (3219.) C. OFFICINALE L Common Hound's Tongue.
   Old fields and roadsides; common. May 20.

598. (3220.) C. VIRGINICUM L Wild Comfrey.
   Dry wooded hillsides; scarce.

304. LAPPULA Moench.
   (Echinospermum Lehm.)

599. (3223.) L. LAPPULA (L.) Karst. Stickseed.
   (Echinospermum lappula Lehm.)
   Open waste places; scarce.

   Sticktight. (Echinospermum virginicum Lehm.)
   Open woods, borders of thickets and fence-rows; common. July 3.

305. MERTENSIA Roth.

   Damp, open woods and banks of streams; frequent.
   Near Lost Creek Bridge on Seventh Street road. McKeen's woods, etc. April 5.
306. MYOSOTIS L.

602. (3241.) M. PALUSTRIS (L.) Relh. Forget-me-not.
Damp, low places; scarce.
Spring branch south side of National road near Highland Lawn;
escaped. May 20.

307. LITHOSPERMUM L.

603. (3244.) L. ARVENSE L. Corn Gromwell.
Waste sandy places along railways and canal; scarce. April 25.

604.* (3245.) L. ANGUSTIFOLIUM Michx. Narrow-leaved Puccoon.
Sandy, waste places; scarce.
Side of canal and hillside near Five-mile Pond.

Sandy soil along the old canal; frequent. May 5.

606.* (3247.) L. GMELINII (Michx.) A. S. Hitchc. Hairy Puccoon.
(L. hirtum Lehm.)
With the preceding; common. May 10.

Dry, wooded hillsides; scarce.
Coal Creek. May 5.

308. ONOSMODIUM Michx.

608.* (3251.) O. CAROLINIANUM (Lam.) A. DC. False Gromwell.
Gravelly banks along the old canal; frequent. May 22.

VERBENACEÆ. Vervain Family.

309. VERBENA L.

609. (3260.) V. BRACTEOSA Michx. Prostrate Vervain.
Gravelly banks and waste, sandy places; common. May 27.

610. (3261.) V. CANADENSIS (L.) Britton. Canada Vervain.
(V. aubletia L.)
Prairies and borders of railways; scarce.
Heckland. May 20.

611. (3262.) V. HASTATA L. Blue Vervain.
Dry banks, roadsides, etc.; frequent. June 10.

612. (3265.) V. STRICTA Vent. Hoary Vervain.
Waste places in dry, sandy soil; common. June 15.
613. (3266.) **V. URTICIIFOLIA** L. White Vervain. Nettle-leaved Vervain.
Borders of fields and roadsides in dry soil; common. June 16.

310. **LIPPIA** L.

614. (3269.) **L. LANCEOLATA** Michx. Fog-fruit.
Low, wet meadows and borders of ponds; frequent. July 20.

311. **PHYRMA** L.

615. (3271.) **P. LEPTOSTACHYA** L. Lopseed.
Moist, dense woods; common. June 19.

LABIATÆ. Mint Family.

312. **COLLINSIONIA** L.

Rich soil, along wooded hillsides or ravines; frequent. July 2.
The leaves are oftentimes one foot in length; the odor strong, but rather agreeable.

313. **MENTHA** L.

617. (3279.) **M. CANADENSIS** L. Wild Mint.
Moist grounds about springs and brooks; frequent. June 18.

618. (3284.) **M. PIPERITA** L. Peppermint.

619. (3287.) **M. SPICATA** L. Spearmint.
(M. viridis L.)
Low, wet places; frequent. July 8.

314. **LYCOPUS** L.

620. (3292.) **L. SINUATUS** Ell. Water Horehound.
Along ditches and margins of ponds; common. June 18.

621. (3293.) **L. VIRGINICUS** L. Bugle-weed.
Borders of swamps and wet banks; frequent. May 22.

315. **KÆLLIA** Moench.

(Pycnanthemum Michx.)

622.* (3298.) **K. FLEXUOSA** (Walt.) McM. Narrow-leaved Mountain Mint.
(Pycnanthemum linifolium Pursh.)
Dry, sandy soil; scarce.
Heckland. August 5.
(Pycnanthemum muticum pilosum Gray.)
Sandy hillsides and prairies; frequent.

624.* (3306) K. virginiana (L.) McM. Mountain Mint.
(Pycnanthemum lanceolatum Pursh.)
Prairies and dry, sandy woods; frequent.

316. HEDEOMA Pers.

Fence-rows, open woods and roadsides in dry soil; common. June 7.

317. MONARD A L.

626.8 (3333) M. fistulosa L. Wild Bergamot. Horse Mint.
Dry, sandy hillsides; frequent. June 18.

627. (3336) M. scabrum Beck.
(M. fistulosa mollis Benth.)
Found in one locality along Vandalia Railway near Beach's woods.
July 1, 1891.

319. BLEPHILIA Raf.

628. (3337) B. ciliata (L.) Raf.
Open woods; frequent. June 16.

629. (3338) B. hissuta (Pursh.) Torr.
Dense, moist woods; common. June 20.

319. VLECKIA Raf.
(Lophanthus Benth.)

630. (3340) V. nepetoides (L.) Raf. Giant Hyssop.
(Lophanthus nepetoides Benth.)
Borders of thickets and fence-rows; frequent. September 5.

631. (3341) V. scrophulariaefolia (Willd.) Raf.
(Lophanthus scrophulariaefolius Benth.)
Fence rows in rich, dry upland soil; scarce.
East side of South Sand Hill woods. September 30.

320. NEPETA L.

632. (3342) N. cataria L. Catnip.
Roadsides and fence-rows; common. June 11.

43—Geol.
321. GLECO MA L.

633. (3343.) G. HEDERACEA L. Ground Ivy. Gill.
(Nepeta glechoma Benth.)
Moist, open, grassy banks; common. April 14.

322. SCUTELLARIA L.

(S. versicolor Nutt.)
Wooded banks along streams; frequent. June 4.

635. (3352.) S. INCANA Muhl. Hoary Skullcap.
(S. canescens Nutt.)
Damp, open woods; frequent. June 8.

636. (3354.) S. LATERIFLORA L. Mad dog Skullcap.
Borders of moist thickets; common. June 11.

637. (3355.) S. NERVOSA Pursh.
Low, moist places in dense woods; scarce.

323. BRUNELLA L.

Dry banks and fence-rows; common. June 5.

324. PHYSOSTEGIA Benth.

639. (3367.) P. VIRGINIANA (L.) Benth. False Dragonhead.
Low, damp places along the old canal; frequent. August 30.

325. SYNANDRA Nutt.

640. (3368.) S. HISPIDULA (Michx.) Britton. Large flowered Mint.
(S. grandiflora Nutt.)
Open, rich woods; scarce.
McKeen's woods, south of Fair Ground. May 25.
Our most handsome member of the Labiate.
Found as far north as Wabash County, though its range is given in
the Barnes & Coulter Flora as "Banks of the Ohio and its tributaries."

326. STACHYS L.

Moist places along the banks of canal; frequent. July 2.

641a. (3372a.) S. ASPER A GLABRA Gray.
Wet waste places; scarce.
Five-mile Pond. July 11.
642 * (3373.) S. CORDATA Riddell. Heart-leaved Wedge Nettle.
Borders of damp upland thickets; scarce.

326a. LEONURUS L.

643. (3380.) L. CARDIACA L. Motherwort.
Waste places and fence rows; frequent. May 24.

327. TRICHOSTEMA L.

Sandy soil on river banks; scarce. Discovered by Prof. Evermann,
September 1, 1889. The first record for the State.

328. TEUCRIUM L.

Banks of streams and moist ground in rich soil; frequent. June 24.

SOLANACEÆ. Nightshade Family.

329. LYCIUM L.

646. (3396.) L. VULGARE (Ait. f.) Dunal. Matrimony Vine.
Waste grounds in Terre Haute; scarce. (Evermann.) June 10.

330. PHYSALIS L.

647.* (3405.) P. LANCEOLATA Michx. Lance-leaved Ground Cherry.
Frequent along the canal and river banks. May 21.

Borders of cultivated fields in loose, rich soil; scarce.

649.* (3411.) P. PUBESCENS L. Hairy Ground Cherry.
Low, waste grounds; common. May 31.

650.* (3412.) P. VIRGINIANA Mill. Virginia Ground Cherry.
Loose, sandy soil; frequent. May 25.

331. SOLANUM L.

Roadsides and waste places in dry, sandy soil; common. June 15.
Increasing in numbers each year and bids fair to become one among
the worst of weeds.
652. (3418.) S. 

REPORT OF STATE GEOLOGIST.

S. niguelum L. Common Nightshade.
Shady, waste grounds; common. July 10.

653. (3419.) S. rostratum Dunal. Texas Nettle.
Several flowering plants of this species were discovered in full bloom in a low, sandy field south of Conover's Pond, on October 22, 1888. Undoubtedly a railroad migrant. According to Prof. B. D. Halstead (Bot. Gaz., April, 1889), this is one of the thirty-four worst weeds in the United States, and is rapidly spreading eastward from its original home on the plains of Nebraska and Texas.

Recorded before in Indiana only from Tolleston, Lake County.

332. DATURA L.


655. (3425.) D. tatula L. Purple Jimson.

Like the burdock (Arctium lappa L.), these two plants delight in the waste grounds about unused barnyards and deserted dwellings, oftentimes growing so thickly in such places that one can scarcely force his way between them.

323. SCROPHULARIAE. Figwort Family.

333. VERBASCUM L.

656. (3430.) V. blattaria L. Moth Mullein.
Roadsides and waste places; scarce.
National road west of Macksville. Durkey's Ferry road, north of Five-mile Pond. May 25.

657. (3432.) V. thapsus L. Common Mullein.
Old, dry fields, banks and roadsides; common. June 11.

Many plants there are which man in his ignorance calls "homely weeds," ne'er seeing their smaller points of usefulness or beauty. The mullein, with its long spikes of yellow flowers and thick, velvety leaves, is one of these. Its basal leaves which, when it blooms, are withered and dry, the winter before formed a beautiful rosette close to the ground and gave shelter and protection to many an insect, both beneficial and injurious. On one occasion, in January, the writer found snugly ensconced beneath and between the leaves of a single mullein plant, four cutworms, seven chinch bugs and three tarnished plant bugs, besides a number of others less injurious—enough to have produced ten thousand of their kind the next season.
334. LINARIA Juss.


(L. vulgaris Mill.)
Borders of fields and roadsides; frequent. June 1.

335. COLLINSIA Nutt.


336. SCROPHULARIA L.

660. (3444.) S. MARYLANDICA L. Figwort. (S. nodosa marylandica Gray.)
Borders of damp thickets, fencerows, etc.; common. June 1 to October 15.
Varies much in height and date of flowering.

337. CHELONE L.

661. (3445.) C. GLABRA L. Turtle-head. Snake-head Low, wet woods; scarce.
Northeast of Sand Hill. Conover's Pond. July 16

338. PENSTEMON Soland.

662. * (3453.) P. DIGITALIS (Sweet) Nutt. (P. lanigatus digitalis Gray.)
Moist, rich soil; frequent.

663. (3458.) P. HIRSUTUS (L.) Willd. (P. pubescens Soland.)
Gravelly banks and borders of prairies; frequent.
Van. Railway opposite Beach's. Heckland, etc. May 16.

339. MIMULUS L.

664. (3462.) M. ALATUS Soland. Winged Monkey-flower.
Borders of ditches and swamps; scarce.
Five-mile Pond. August 10.

In similar locations; frequent. July 5.
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340. GRATIOLA L.

666. (3469.) G. SPHÉROCARPA Ell. Hedge Hyssop.
Low, wet places; scarce.

667. (3470.) G. VIRGINIANA L. Hedge Hyssop.
Borders of ponds and ditches; frequent. May 16.

341. CONOBEA Aubl.

668.* (3472.) C. MULTIFIDA (Michx.) Benth.
Sandy places along streams and borders of ponds; scarce.
Conover's Pond. Low ground near river, southwest of Terre Haute.
July 20.
The leaves often whorled.

342. ILYSANTHES Raf.

669.* (3480.) I. GRATIOLOIDES (L.) Benth. False Pimpernel.
(I. riparia Raf.)
Mucky margins of ponds and streams; frequent. June 25.

343. VERONICA L.

670. (3485.) V. ARVENSI S L. Corn Speedwell.
Cultivated grounds; frequent. April 13.

Waste and cultivated grounds; common. April 13.

672.* (3491.) V. SERPYLLIFOLIA L. Thyme-leaved Speedwell.
Roadsides and fencerows; common. April 25.

344. LEPTANDRA Nutt.

(Veronica virginica L.)

345. WULFENIA Jacq.
(Synthyris Benth.)

674.* (3495.) W. HOUGHTONIANA (Benth.) Greene.
(Synthyris houghtoniana Benth.)
Dry, sandy hillsides; rare.
One-half mile southeast of Five-mile Pond.
Not reported south of Tippecanoe County.
346. AFZELIA J. G. Gmel.
   (Seymeria Pursh.)

   (Seymeria macrophylla Nutt.)
   Banks of streams and open hillsides; scarce.
   Beach's woods. Coal Creek. July 12.

347. DASYSTOMA Raf.
   (Gerardia L. in part.)

   (Gerardia flava L.)
   Dry, wooded hillsides; scarce.
   Coal Creek. Hippie's Coal-mine woods.

   (Gerardia queretifolia Pursh.)
   Noted only in the thick woods southwest of the station at Heckland. September 10.

348. GERARDIA L.

   Dry hillsides and sandy banks; frequent. September 5.

349. CASTILLEJA Mutis.

679. (3519.) C. COCCINEA (L.) Spreng. Scarlet Painted Cup.
   Indian Pink.
   Virgin prairie soil.
   Noted only at Heckland, where it is common. April 28.

350. PEDICULARIS L.

   Dry, wooded hillsides or sandy woods; scarce.
   Heckland. Coal Creek. April 25.

681. (3535.) P. LANCOLOATA Michx. Lousewort.
   Ditches and low, waste places; scarce.
   Van. Railway near Beach's. Heckland.
OROBANCHACEÆ Broom-rape Family.

351. THALESTIA Raf.

(\textit{Aphyllon} Mitch.)

682. (3557.) \textit{T. UNIFLORA} (L.) Britton. One-flowered Cancer-root.

(\textit{Aphyllon unijllYl'um} Gray.)

Rare. Taken by U. O. Cox, May 8, 1890, in woods near Seventh Street bridge across Fall Creek.

352. OROBANCHE L.

683. (3558.) \textit{O. LUDOVICIANA} Nutt. Broom-rape.

(\textit{Aphyllon ludoviciamtm} Gray.)

Banks of Wabash River, near brick yards above Terre Haute; frequent locally. Parasite on the roots of the Great Horse-weed, \textit{Ambrosia trifida} L. Discovered by Professor Evermann, October 2, 1889.

The first record for the State.

353. CONOPHOLIS Wallr.


Open oak woods; scarce. May 12.
Southeast of Hunt's Coal Creek. Cox's woods.

334. EPIPIHEGUS Nutt.

685. (3562.) \textit{E. VIRGINIANA} (L.) Bart. Beech-drops.

Dense beech woods; common. August 20.

BIGNONIACEÆ. Bignonia Family.

355. TECOMA Juss.


Moist, rich or sandy soil, along fence-rows and banks; common. June 10.

Queen of all our creeping or trailing shrubs is the trumpet-creeper with its large pinnate leaves and giant, trumpet-like flowers, the latter so attractive to humming-bird and bumble-bee. Midsummer is the time, and the banks of the old canal the place, to see this creeper in all its primitive beauty. There the soil is congenial, and bush and shrub furnish a ready support to which its aerial rootlets freely cling; thus forming many a snug retreat in which the nest of woodland songster is securely hidden.
356. CATALPA Scop.

687. (3566.) C. speciosa Warder.
Loose, rich, sandy soil along fence-rows; frequent.
This species grows indigenously in the southern half of the county,
and in the Wabash valley as far north as Atherton. May 22.

PEDALIACEAE. Pedalia Family.

357. MARTYNIA L.

688. (3567.) M. LOUISIANA Mill. Unicorn Plant.
(M. proboscidea Glox.)
Rich, loose, sandy soil; rare.
Roadsides northwest of Prairieton. (Scovell.)

ACANTHACEAE. Acanthus Family.

358. RUILLIA L.

689. * (3569.) R. ciliosa Pursh. Ruellia
Dry, sandy soil along banks and fence-rows; frequent. June 1.

690. (3572.) R. STREPENS L.
Shady places in moist, rich soil; frequent. May 25.

359. DIANTHERA L.

691. (3574.) D. AMERICANA L. Water Willow.
In shallow water near ripples and edges of pools; common. June 20.

PLANTAGINACEAE. Plantain Family.

360. PLANTAGO L.

692. (3577.) P. ARISTATA Michx.
P. patagonica aristata Gray.
E. & T. H. Railway and canal banks south of Terre Haute; scarce.
June 24, 1888.
The first record for the State.

Borders of old fields and waste, gravelly places; frequent, especially
along the railways. May 25.

Door yards and roadsides; common. May 20.
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695. (3587.) P. rugelii Dec.
Gravelly banks and roadsides; common. July 1.
Leaves larger and more shining than in P. major, and with the
petioles often purple-tinged. The spikes longer, but less densely
flowered.

696. (3589.) P. virginica L. Virginia Plantain. Ribgrass.
Roadsides and canal banks; common. May 8.

RUBIACEAE. Madder Family.

361. HOUSTONIA L.

697. (3593.) H. ciliolata Torr.
(H. purpurea ciliolata Gray.)
Dry sandy hillsides; scarce.
Spring Hill; woods north of station. June 2.

698.* (3594.) H. cerulea L. Bluets. Innocence.
Borders of moist prairies; noted only at Heckland, where it is
abundant. May 7.

362. CEPHALANTHUS L.

Borders of ponds and marshes; common. July 3.

363. MITCHELLA L.

700. (3602.) M. repens L. Partridge Berry.
High wooded hills, trailing over the ground mosses; frequent.
Grant. Coal Creek. May 7.

364. GALIUM L.

Sides of ravines and damp woods; common. April 28.

Rich open woods; common. May 2.
The old stems in late summer sometimes produce opposite, thickly-
leaved branches from the axils of the whorls of the earlier, more remote
leaves.

703.* (3612.) G. concinnum T. and G.
Dry open woods and thickets; frequent. June 4.

704. (3623.) G. tinctorium L.
(G. trifidum tinctorium Gray.)
Shaded fence-rows and dense woods; common. May 22.
705. (3625.) G. TRIFIDUM L. Small Bedstraw. 
Thickets and damp, dense woods; common. May 12.

706.* (3626.) G. TRIFLORUM Michx. Sweet-scented Bedstraw. 
Fence-rows and borders of open woods; common. May 12.

CAPRIFOLIACEAE Honeysuckle Family.

365. SAMBUCUS L.

707. (3630.) S. CANADENSIS L. Common Elder. 
Fence-rows and borders of cultivated fields; common. May 28.

366. VIBURNUM L.

High, wooded hills in dry soil; scarce. 
Coal Creek. Grant. May 12.

709. (3637.) V. DENTATUM L. Arrow-wood. 
Damp, dense woods and marshy thickets; scarce. 
Heckland. S. W. ¼ of S. E. ¼ Sec. 6, Pierson Township. June 19.

Open woods, borders of streams, etc.; scarce. 
Borders of marsh east of Beach’s woods. Banks of Little Honey Creek in N. E. ¼ Sec. 36, Honey Creek Township. May 25.

711. (3640.) V. MOLLÉ Michx. Smooth-leaved Viburnum. 
Fence-rows and margins of dry, upland prairies; scarce. 
Roadside south of Youngstown in S. E. ¼ Sec. 35, Honey Creek Township. Found only in fruit, October 17, 1896. 
The leaves, larger, more rounded, thicker and more soft downy, than those of V. dentatum L. Recorded before in Indiana only from Jefferson County.

712. (3645.) V. PRUNIFOLIUM L. Black Haw. 
Fence rows along dry upland fields; wooded slopes; scarce. 
Ferrell’s. Woods near Spring Hill. May 27.

367. TRIOSTEUM L.

713. (3648.) T. ANGUSTIFOLIUM L. Narrow-leaved Horse Gentian. 
Moist woods and thickets; scarce. 
Heckland. June 5.

Clearings and rich open woods; infrequent. 
Heckland. Coal Creek. April 27.
SYMPHORICARPOS Juss.

(Symphoricarpus vulgaris Michx.)
Gravelly or dry banks; scarce.
Sides of Van. Railway, one mile west of Glen. I. & St. L. railway near crossing of St Mary's road. June 30.

VALERIANACEAE. Valerian Family.

VALERIANA L.

Ravines and rich wooded slopes in damp soil; scarce.

DIPSACEAE. Teasel Family.

DIPSACUS L.

D. SYLVESTRIS Huds Wild Teasel.
Roadside in dry upland soil; scarce.

CUCURBITACEAE. Gourd Family.

MICRAMPELIS Raf.
(Echinocystis T. & G.)

M. LOBATA (Michx.) Greene. Wild Cucumber. Wild Balsam Apple.
(Echinocystis lobata T. & G.)
Rich, moist soil along streams and river bottom ponds; common.
July 14.

SICYOS L.

S. ANGULATUS L. One-seeded Star Cucumber.
Borders of marshes and low places in the river bottoms; frequent.
June 30.

CAMPANULACEAE. Campanula Family.

CAMPANULA L.

C. AMERICANA L. Tall Bellflower.
Moist, rich soil and shaded banks; common. June 5.
Varies much in height and the branching of the stem.
374. LEGOUZIA Durand.
(Specularia Heist.)

721. (3700.) L. _PERFOLIATA_ (L.) Britton. Venus' Looking glass
(_Specularia perfodiata_ A. DC.)
Dry, barren or sandy soil; frequent. May 21.

375. LOBELIA L.

Low, damp soil; frequent. July 20.

723. (3706.) L. _INFLATA_ L. Indian Tobacco.
Dry, open woods; common. July 12–November 4.

724. (3707.) L. _LEPTOSTACHYS_ A. DC.
Dry, sandy soil; scarce. July 1.

725. (3715.) L. _SYPHILITICA_ L. Great Blue Lobelia.
Low grounds; common. August 1.

Between this plant and the cardinal flower, members of the same genus,
what a contrast in the color of the blossoms; those of the one bluer than
the vault of heaven above, of the other redder than blood of the deepest
dye, yet both too often unnoticed and unknown by the owner of the soil
in which they grow.

COMPOSIT.E. Composite Family.

Especial attention was given to the collecting of the members of this,
the highest family of flowering plants, and as a result 128 species and
three varieties were found growing without cultivation in the parts of
the county visited. This is, as far as known, the largest number of plants
of this order found in any county in the State; the lists which have been
prepared from the various counties having recorded the number of Com­
positae as follows:

<table>
<thead>
<tr>
<th>County</th>
<th>Author</th>
<th>Species</th>
<th>Varieties</th>
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<tr>
<td>Jefferson</td>
<td>Coulter</td>
<td>94</td>
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<tr>
<td>Delaware, Randolph, Jay and Wayne</td>
<td>Phinney</td>
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<tr>
<td>Franklin</td>
<td>Meyncke</td>
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<td>Bradner</td>
<td>89</td>
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</tr>
<tr>
<td>Noble</td>
<td>Vag Gorder</td>
<td>79</td>
<td>2</td>
</tr>
<tr>
<td>The State</td>
<td>Barnes and Coulter</td>
<td>180</td>
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</tbody>
</table>

The Composite of Vigo County comprise more than one-seventh of the
flowering plants so far found within its bounds. Among the forms col­
lected no less than 51 are weeds,* while eight of them are included in

*See definition of "weed" in Introduction to this paper, p 386.
the list of the "Twenty Worst Weeds," which, in the writer's opinion, grow in western Indiana.*

Except from an aesthetic point of view, not one of the Composite noted below is of the least benefit to the inhabitants of the county, although a dose of dandelion tonic or boneset tea may occasionally be given by some grandmother or quack doctor for a fancied ailment. But the lover of nature, whose eye is ever on the search for the pleasing and the beautiful, blesses their existence; for the hues of the asters, goldenrods and sunflowers absent, our autumn scenery would lose much of the charm due to its variety of color.

Realizing the truth of the saying of a prominent American botanist: "That as for the Aster and Solidagoes, the older the botanist, the less high and mighty does he become concerning them," the specimens of those two genera were sent to Dr. J. M. Coulter for verification, and to him are due my especial thanks for the service thus rendered.

376. VERNONIA Schreb.


Open woods and pastures, especially in upland soil; very common.

August 8.

Specimens with the flowers white are occasionally found.

In the great contest for supremacy, forever going on among all plants as well as among all animals, the rag-weed, fox tail, white top, etc., go down before the creeping, smothering power of the Kentucky blue grass; but this rough, ungainly weed ne'er gives up the struggle, and in many places grows as rankly in the farmer's best lowland pastures as does its cousin, the greater rag-weed or horse-weed, along the margins of his cultivated bottom fields. It is seemingly becoming more abundant each year, and at present is undoubtedly the worst weed with which the stock farmers of Indiana have to contend.

It has been said that all things in nature have their use—that nothing exists but for a purpose. It is the work of science to discover and make known the use of nature's objects; and day by day her secrets are gradually being exposed, thereby advancing man in civilization, by enabling him to better control the ravages of those existing forms which are injurious to his interests. If, however, the iron-weed has a use, other than that shown in the beauty of its flowers, no one has yet discovered it. But there is time; for of the thousands of plant forms which exist we know the use of only a few, as corn and hemp, ginseng and blood root. Let us hope that some valuable medicinal or other property will soon be discovered in the iron-weed and a reason for its existence thereby pointed out to the doubting humanity of the present.

*See Introduction to this paper, p. 587.
Meanwhile the naturalist will go on admiring the beauty of its bloom, for however coarse and repulsive the stem and leaves may appear, yet each head, with its 25 or 30 dainty florets so prettily grouped within their protective cups, reveals a striking beauty to the true lover of nature; and when in the glamour of an August morn he stands upon a hillside and views acre upon acre of the broad, purple cymes waving in the valley beneath, all memories of the plant as a pernicious weed are blotted from his mind by the attractiveness of the scene before him.

727. (3725.) V. NOVEBORACENSIS (L.) Willd. Ironweed.
- Prairies and woodlands of river terrace; common, but less so than the preceding.
- Heckland. McKeen’s woods, etc. August 21.

728.* (3728.) E. CAROLINIANUS Willd. Elephant’s Foot.
- Open, usually low woods in sandy soil; scarce.
- McKeen’s woods south of Fair Ground. Woods south of Vandalia Railway, opposite Beach’s. September 10.

The smaller specimens from the last named locality came near to E. tomentosum L., the leaves being crowded at the base, the only truly stem leaf being a small one subtending the lowermost peduncle.

- Open woods, roadsides, etc.; common. July 21.

730.* (3738.) E. CELESTINUM L. Mist-flower.
- Rich, damp soil; scarce.
- Bottom lands northwest of Conover’s Pond. Coal Creek bottoms. September 8.

- Low, damp places; common. July 17.

- Low, damp, open woods and borders of marshes; common. July 20.

733.* (3752.) E. SEROTINUM Michx.
- Gravelly banks and borders of prairies; frequent.

734. (3758.) K. EUPATORIOIDES L.
- Sandy banks and prairies; frequent. August 11.
LACINARIA Hill

(Liatris Schreb.)

735.* (3765.) L. PYCNOSTACHYA (Michx.) Kuntze.
(Liatris pycnostachya Michx.)
Rare. Several specimens were taken at Heckland, September 5, 1889.

(Liatris scariosa Willd.)
Borders of prairies; scarce.
August 17.
The heads often one and one-half inches in diameter.

737. (3769.) L. SPICATA (L.) Kuntze.
(Liatris spicata Willd.)
Borders of damp prairies; scarce.
Heckland. August 17.

CHRYSOPSIS Nutt.

Sandy banks and borders of prairies; scarce.
Along the canal, between Ft. Harrison and Five-Mile Pond.
June 24.
The first record for the State; its range being given as "Wisconsin to Kentucky and westward"

SOLIDAGO L. The Golden-rods.

739.* (3808.) S. CESIA L.
Borders of damp woods and sides of ravines; common. September 5.

740.* (3810.) S. CANADENSIS L.
Fence-rows, roadsides, etc.; common. August 5 to November 15.

740a. (3813.) S. CANADENSIS SCABRIUSCULA Porter.
(S. canadensis scabra T. and G.)
With the preceding; scarce.
Heckland; Van. Railway.

741.* (3819.) S. FLEXICAULIS L.
(S. latifolia L.)
Damp, wooded slopes and ravines; frequent. September 1.

742. (3833.) S. NEMORALIS Ait.
Dry prairies; frequent. August 18.
743. (3834.) S. ODORA Ait. Sweet Golden-rod.
Borders of prairies; rare.
Heckland. September 15.
Recorded before in Indiana only from Gibson County.

744.* (3843.) S. RIGIDA L.
Margins of prairies; scarce.
A most handsome species; very variable in height and size of corymb of flowers.

(S. speciosa angustata T. & G.)
Clearings and borders of prairie at Heckland: not noted elsewhere.
September 5.
The first record for the State.

746. (3845.) S. RUGOSA Mill.
Borders of open fields and thickets; common. August 8.
Very variable; the leaves of shaded swamp forms being thin and much less rugose than those in open dry places. Well developed specimens of the latter are very handsome, having the flowering branches several and very long recurved spreading.

747.* (3848.) S. SEROTINA Ait.
Rich bottom woods; scarce.

748*. (3851.) S. SPECIOSA Nutt.
The first record for the State.

749. (3857.) S. ULMIFOLIA Muhl.
Damp wooded hillsides; frequent.
Coal Creek. Grant. September 5.

383. EUTHAMIA Nutt.
(Solidago L. in part.)

750. (3864.) E. CAROLINIANA (L.) Greene.
(S. tenuifolia Pursh.)
Shaded banks, usually in sandy soil; frequent. August 21.

751.* (3865.) E. GRAMINIFOLIA (L.) Nutt.
(S. lanceolata L.)
Damp, low soil; common. August 10.
44—Geol.
384. BOLTONIA L'Her.

385. SERICOCARPUS Nees.

386. ASTER L.

387. B. ASTEROIDES (L.) L'Her.
Low, open pastures and prairies; scarce.

388. S. LINIFOLIUS (L.) B. S. P. (S solidaginoides Nees.)
Borders of prairies; scarce.
Heckland. August 18.
Before recorded in Indiana only from Floyd County.

Borders of prairies; rare.

390. A. CORDIFOLIUS L. Heart-leaved Aster.
Dry, wooded hillsides; common. September 11.
In flower later than most others of the genus.

Low, open pastures and prairies; frequent.
Heckland. Sides of Van. Railway, etc.
The first record for the State, its range being given by Gray as "Illinois to Minnesota and Kansas."

392. A. DUMOSUS L.
Dry open woods and fence-rows; frequent. September 8.

393. A. ERICOIDES L. Heath-like Aster.
Fence-rows in open, dry soil; scarce.
Roadside near Spring Hill. Coal Creek.

394. A. ERICOIDES PILOSUS (Willd.) Porter.
(A. ericoideos villosus T. and G)
In similar localities, but more frequent.

Dry prairie soil; scarce.
A handsome but variable species.

(A. diffusus Ait)
Open waste places; common, especially in upland soil.
A much branched, small-flowered and variable species.
761. (3917.) A. LINARIIFOLIUS L. Double Bristled Aster.
Dry sandy hillsides; scarce.
Readily known by the shortness of the stems, which grow in clumps, and by the rigid, linear leaves. Heads large and showy.

762. (3926.) A. MULTIFLORUS Ait. Many-flowered Aster.
Sandy or barren soil; frequent.
Banks and bed of the old canal. September 15.

Moist open ground; common. September 10.
One of our most striking species; its large violet-purple heads rendering it easily recognized after a first acquaintance.

764.* (3937.) A. PANICULATUS Lam.
Open, damp places; common. September 10.

765.* (3938.) A. PATERNS Ait.
Dry prairies and sandy hillsides; frequent locally.

766.* (3945.) A. PUNICEUS L.
Moist, open woods and borders of marshes; common.
Our tallest and roughest-stemmed species. September 15.

767. (3951.) A. SAGITTIFOLIUS Wedem. Arrow leaved Aster.
Borders of fields and open woods; common.

768.* (3952.) A. SALICIFOLIUS Lam. Willow-like Aster.
Low, moist soil; common.
This and A. paniculatus Lam. cover large areas in the annually overflowed bottoms along the Wabash River.

769.* (3955.) A. SHORTII Lindl.
Moist, shaded banks; scarce.
Ravines east of Highland Lawn Cemetery. September 25.

770. (3962.) A. TRADESCANTI L.
Low, open grounds; frequent. September 5.

771. (3967.) A. UNDULATUS L. Wavy Aster.
Dry, open woods and thickets; frequent.
Coal Creek. Hipple's Woods, etc. September 8.

387. ERIGERON L.

Waste grounds and clover and timothy meadows; abundant. May 25.
REPORT OF STATE GEOLOGIST.


774. (3983.) E. philadelphicus L. Common Fleabane. Low, grassy places, banks, etc.; frequent. April 12, 1888. April 20, 1889.


This species and E. annuus Pers. are the most pernicious weeds with which the growers of timothy or clover have to contend. Both are commonly known as “white-top,” and are not separated by the average farmer. *Ramous* may be readily distinguished, however, by its smaller size, its narrower, nearly entire leaves, and smaller, longer rayed flowers.

388. *Antennaria* Gaertn.


The earliest flowering of the Composite; quickly followed, however, by *Erigeron philadelphicus* L. and *Senecio aureus* L.

389. *Gnaphalium* L.


In Gray’s Synoptical Flora the range of this species is given as: “Chiefly of sea coast or near it; coast of Massachusetts to Texas and interior of Arkansas.” In the Catalogue of Indiana Plants it is mentioned without comment, which signifies that it is found throughout the State.

390. *Inula* L.

781. (4016.) P. CANADENSIS L. Leaf cup.
Shaded ravines; frequent.
Coal Creek. Grant. June 16.
The rays are usually three-lobed, and whitish, and the plant very strongly and disagreeably scented.

782. (4023.) S. PERFOLIATUM L. Cup-plant.
Borders of streams and ditches; scarce.

Prairies and roadsides; scarce.

784. (4032.) P. INTEGRIFOLIUM L. Parthenium.
Dry prairie or sandy soil; scarce.
Grows in dense tufts.

785. (4039.) A. ARTEMISIIFOLIA L. Ragweed. Roman Wormwood.
Hogweed. Bittenweed.
Waste places, cultivated grounds, etc.; abundant.
Probably the worst weed with which the farmers of Vigo County have to deal. Excessively abundant in 1896, due, doubtless, to the many rains of the season.
A smaller form, fifteen inches high, very viscid, with all the leaves cut-cleft or only once pinnatifid, grows on the hillside near Five-Mile Pond. It is in flower until October 15, and is distinguished at a glance from the ordinary form.

786. (4040.) A. BIDENTATA Michx. Two-toothed Ragweed.
Roadsides and borders of cultivated fields between Glen and Staunton, Clay County; common locally. First noted August 23, 1895.
The first record for the State.
Alluvial soil along streams; abundant. August 5.
One of the tallest of our annual plants, often reaching thirteen, and occasionally fourteen, feet in height. Horses are very fond of it, and in August and September large quantities are gathered for their use by the poorer classes who can not afford to buy hay.

787 a. (4043.) A. TRIFIDA INTEGRIFOLIA (Muhl.) T. & G.
With the species, but scarce.

395. XANTHIUM L.

Alluvial or overflowed bottom lands; abundant. August 10.
The form known as var. echinatum Gray, with the prickles of the bur long, dense and very hirsut, occurs sparingly along the canal and at Heckland.

Roadsides, barnyards and upland cultivated grounds; frequent. August 10.

396. HEELOPSIS Pers.

790.* (4051.) H. HELIANTHOIDES (L.) B. S. P. Smooth Ox-eye.
False Sunflower.
(H. levis Pers)
Thickets and fence rows in dry soil; frequent. July 12.

791.* (4052.) H. SCABRA Dunal. Rough Ox-eye.
In similar localities with the preceding, but more common. July 15.

397. ECLIPTA L.

792. (4053.) E. ALBA (L.) Hassk.
Borders of ponds and low wet places; frequent. July 16.
The short peduncled form is, as yet, the only one found in the county.

398. RUDBECKIA L.

Meadow Cone-flower.
Dry meadows; frequent. June 10 to November.
Appears to be both an annual and a biennial; in the former case lower and more simple stemmed and blooming in late autumn; as a biennial, stouter, more branched and blossoming early.

794. (4058.) R. LACINIATA L.
Damp woods and banks of railways; frequent. July 25.
795. (4063.) **R. TRILoba L.** Small flowered Cone-flower. Darkeyhead.
Banks and borders of ditches and damp meadows; common. July 25.
One of the most showy of our common Composite.

399. LEPACHYS Raf.

796.* (4065.) **L. Pinnata (Vent.)** T. & G.
Dry banks and prairies; scarce. June 29.
Leaves very rough on both sides.

400. BRAUNERIA Neck.
*(Echinacea Moench.)*

797. (4068.) **B. Purpurea (L.)** Britton. Purple Coneflower.
*(Echinacea purpurea Moench.)*
Prairies and dry sandy hill-sides; scarce.

401. HELIANTHUS L.

798. (4072.) **H. Annuus L.** Common Sunflower.
Low waste grounds, escaped from cultivation; scarce.
A number grow each year along the borders of the old canal.

799. (4074.) **H. Decapetalus L.**
Low thickets and banks of streams; common. August 10.

800. (4075.) **H. Divaricatus L.** Divaricate-leaved Sunflower.
Prairies and borders of sandy cultivated fields; frequent.
Heckland. Banks of canal, etc. July 20.
A characteristic and easily known species; the leaves rarely in whorls of three.

801. (4077.) **H. Giganteus L.**
Borders of marshes and low wet places; frequent. August 20.

802. (4078.) **H. Grosseserratus Martens.**
Dry prairies and fence-rows; frequent. August 25.
A specimen with leaves nearly entire, and measuring 12 feet 1 inch in height, was taken in the border of damp woods, in S. E. 4, Sec. 6, Pierson Township.

803. (4079.) **H. Hirsutus Raf.**
Borders of upland woods; scarce.

804. (4080.) **H. Letiflorus Pers.**
Prairies and fence-rows; frequent. August 15.
805. (4083.) H. mollis Lam.
Dry, sandy or prairie soil; frequent.
Readily distinguished by the soft, whitish pubescence of the opposite, sessile, somewhat divaricate leaves.

806. (4085.) H. occidentalis Riddell.
Dry prairies; rare.
Heckland. August 4.

(H. parviflorus Bernh.)
Dry, upland woods; frequent.
Coal Creek. Hipple's Coal-mine woods, etc. August 20.

808. (4095.) H. tracheliformis Mill.
Fence-rows and along railways; frequent. July 25.

809. (4096.) H. tuberosus L. Jerusalem Artichoke.
Alluvial soil along streams; frequent. August 25.
A coarse, large-leaved species, blooming a week or two later than its allies.

402. VERBESINA L.
(Actinomeris Nutt. in part.)

810. (4099.) V. alternifolia (L.) Britton.
(Actinomeris squarrosa Nutt.)
Bottoms of ravines and low, rich soil; frequent. August 18.

811. (4101.) V. helianthoides Michx. Crownbeard.
Borders of damp prairies; scarce.
Near Goose Pond. Heckland, one-half mile west of station. June 22.
Heads often several, on long peduncles from the axils of the leaves.

403. COREOPSIS L.

812. (4109.) C. lanceolata L. Tickseed.
Dry, sandy knolls; scarce.

813. (4116.) C. tripteris L. Tall Coreopsis.
Borders of prairies and along railways in dry soil; scarce.
Heckland, T. H. & L. Railway above Otter Creek Junction.
A depauperate form less than three feet high occurs in the damp woods at Heckland.
814. (4124.) B. BIPINNATA L. Spanish Needles.
Thickets and waste places; frequent. July 25.

815. (4125) B. CERNA L. Smaller Bur-Marigold.
Ditches and muddy margins of ponds; common. August 1.

816.* (4126.) B. CONNATA Muhl. Swamp Beggar-ticks.
Border of swamps and marshes; common. July 25.

817. (4129.) B. FRONDOSA L. Common Beggar-ticks.
Low, waste places; abundant. July 5.

818.* (4130.) B. LEVIS (L.) B. S. P. Larger Bur-Marigold.
(B. chrysanthemoides Michx.)
Low, wet or alluvial soil; frequent. August 10.

305. HYMENOPAPPUS L’Her.

819.* (4139.) H. CROWNIENSIS (Lam.) Porter.
(H. seckersonii L’Her.)
Dry, sandy hillsides; rare.
Taken only on the hillside northeast of Seventh Street bridge
across Lost Creek. May 31, 1890.
The first record for the State; its range being given in the Manual
as “Illinois and southward.”

406. DYSODIA Cav.

820. (4149.) D. PAPPOSA (Vent.) A. S. Hitchc. Fetid Marigold.
False Dog-fennel.
(D. chrysanthemoide8 Lag.)
Roadsides and along railways; common. August 4.
A railroad migrant from the far West; seemingly displacing in many
localities the common dog-fennel, Anthemis cotula L. The odor of the
latter was bad enough, but that of the fetid marigold is infinitely more
disgusting.

407. HELENIUM L.

821. (4151.) H. AUTUMNALE L. Sneeze weed.
Low, moist places, especially along streams; common. July 27.

822. (4163.) H. MUDIFLORUM Nutt.
Low, damp soil; scarce.
McKeen’s woods. Vandalia Railway, near Glen. June 20.

408. ACHILLEA L.

823. (4163) A. MILLIFOLIUM L. Common Yarrow. Milfoil.
Old meadows and roadsides; frequent. May 27.
409. ANTHEMIS L.

Roadsides and waste upland grounds; common. June 20 to November.

410. CHRYSANTHEMUM L.

Old meadows and closely cropped upland pastures; scarce.
Pasture by roadside one-half mile west of Ferrell's. Fields west of Macksville. June 13.

411. TANACETUM L.

826. (4178.) T. vulgare L. Common Tansy.
Roadsides and along railways, escaped; scarce.
T. H. & E. Railway, one-half mile below blast furnace, north of St. Mary's.

412. ARTEMISIA L.

Sandy banks and waste places; common. July 17.
A homely, coarse weed with a rank, disagreeable odor.

413. ERECHTHTTES Raf.

Borders of rich, open woods and clearings where the soil has recently been burned over; common. July 15.

414. SENECIO L.

Ditches and borders of swamps; scarce.

Margins of ponds; scarce.
The first record for the State. Note range as given in Manual.

831. (4220.) S. obovatus Muhl.
(S. aureus obovatus T. & G.)
Dry hillsides and railway banks; frequent. April 17.

415. CACALIA L.

832. (4231.) C. atriplieolius L. Pale Indian Plantain.
Dry banks and wooded hillsides; frequent.
833. (4232.) C. reniformis Muhl. Great Indian Plantain.
Rich, damp soil; rare.
Along a small stream one-fourth of a mile south of the top of Coal
Creek Hill. June 25.

416. ARCTIUM L.

834. (4235.) A. lapap L. Common Burdock.
Dooryards of deserted dwellings and waste places; common.
July 10.

417. CARDUUS L.
(Onichus Tourg.)

835.* (4238.) C. altissimus L. Tall Thistle.
(Onichus altissimus Willd.)
Fence-rows and borders of woods; frequent. June 20.

836.* (4241.) C. discolor (Muhl.) Nutt.
(Onichus altissimus discolor Gray.)
With the preceding and more frequent; June 2.
The wool on under side of the pinnatifid leaves is much thicker and
the scales of involucre more glandular than in C. altissimus. Insects are
frequently entrapped by the exudation of the glands. (Vide Canadian
Entomologist, XXIV, 1892, 310.)

837. (4243.) C. lanceolatus L. Common Thistle.
(Onichus lanceolatus Willd.)
Pastures and roadsides; abundant. July 5.

838. (4244.) C. muticus (Michx.) Pers. Swamp Thistle.
(Onichus muticus Pursh.)
Borders of prairie marshes and ditches; scarce.
Heckland.

418. ADOPGON Neck.
(Krigia Schreb.)

(Krigia amplexicaulis Nutt.)
Borders of woodlands in rich, rather dry soil; frequent. May 28.

419. HIERACIUM L.

840. (4285) H. Gronovi L. Hairy Hawkweed.
Sandy hillsides and open woods; scarce.
Beach's. Five-Mile Pond. August 20.
841. (4286.) H. LONGIPILUM Torr. Long-bearded Hawkweed.
Open sandy woods and dry hills; scarce.
Coal Creek. Beach’s. August 20.

842* (4293.) H. SCABRUM Michx. Rough Hawkweed.
Dry wooded hillsides; frequent. August 10.

420. TARAXACUM Hall.

Priest’s Crown.
(T. officinale Weber.)
Pastures, yards and roadsides; abundant. March 28 to November.

421. LACTUCA L.

Borders of thickets and roadsides; frequent. July 18.

Borders of prairies and dry, sandy places; scarce.
Heckland. Banks of canal, etc. September 5.

(L. integrifolia Bigel.)
Fence-rows of cultivated fields and roadsides; common. August 4.

847* (4314.) L. SCARIOLA L. Prickly Lettuce.
Waste places along rail-ways, roadsides and streets; common.
June 20.
For general accounts of the plant, notes of its first appearance in
Indiana, etc., Vide “Purdue Agr. Exp. Stat. Bull.,” No. 62, 1894, and

848. (4315.) L. SPICATA (Lam.) A. S. Hitchc. Tall False Lettuce.
(L. leucophora Gray.)
Borders of upland thickets in moist, rich soil; frequent.
One specimen measuring 14 feet 4 inches in height was the tallest,
upright, herbaceous plant recorded from the county.

(L. acuminata Gray.)
Fence rows and borders of thickets; frequent. September 5.

422. PRENANTHES L.

Open woods and waste, sandy soil; frequent. August 5.

851. (4319.) P. ALTISSIMA L. Tall White Lettuce.
Borders of woods in rich moist soil; common. August 20.
The leaves more variable than those of any other flowering plant.
EXAMPLES OF VARIATION IN THE FORM OF THE LEAVES OF WHITE LETTUCE,

*Prenanthes obtusata* L.
423. **SONCHUS L.**

852. (4329.) **S. ASPER (L.)** All. Spiny-leaved Sow Thistle.
Low waste grounds in the city and along railways; frequent.
June 25.

853. (4330.) **S. OLERACEUS L.** Common Sow Thistle.
Roadsides and waste places in the city; scarce. May 10.
INDEX TO THE FAMILIES AND GENERA MENTIONED IN THE FLORA OF VIGO COUNTY.*

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*The names of families are in small capitals. The generic names in italics are synonyms, as used in Gray's Manual.
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