DEAR Sir—I have the pleasure of herewith presenting a catalogue of the plants of Central-Eastern Indiana, embracing the counties of Delaware, Randolph, Jay and Wayne. Delaware county having been most thoroughly worked up, furnished by far the greatest number of species. Great care has been taken in the identification of species which are not contained in Coulter & Barnes' catalogue of the whole State. The list here given is, in great part, the result of three seasons' work, the species from Delaware county numbering 720. The grasses and sedges have all been identified by myself, and although the list is not large, the labor has been great, as they are by far the most difficult genera of our flora.

I take this opportunity to express my thanks to those who have kindly aided me in this work, and without whose assistance this catalogue would have been far from complete. President Moore, of Earlham College, Richmond, Indiana, furnished a list of 178 species, from the vicinity of Richmond, Wayne county, and Mrs. Mary P. Haines, of Richmond, kindly revised her list of ferns, many of which are not found in Delaware.
county. Rev. D. S. McCaslin, has rendered efficient aid, both in Delaware and Jay counties, much of the accuracy claimed for this catalogue being due to his skill.

Respectfully,

A. J. PHINNEY.

Muncie, Ind., Sept. 15, 1882.

REMARKS.

The following catalogue embraces all plants except the non-vascular cryptogams. Many here named are without medicinal or economic value, and are looked upon as "weeds" by the farmer, and are of interest only to the scientist, yet they have a lesson to impart and a place to fill in the economy of nature.

This region is not characterized by any great variety of soils or physical conditions, which mark so many counties of the State. When this territory was first settled there were many small lakes, principally in the valleys of the ancient rivers, which have all been drained, destroying the greater part of the aquatic plants. Those which remain are confined to the swamps and borders of streams, and to-day we find none of the clear lakes, sandy barrens and extensive prairies of the northern part of the State; nor the extensive river bottoms, hills, prairies, barrens, rocky bluffs, lagoons and ponds, so characteristic of the lower Wabash; none of those ravines, where in the cool shade, and under dripping water, still linger the natives of a colder clime; none of those warm valleys which invite plants from their home in the south; no streams to bring us plants from other regions. In place of all these, this section of the State has a soil of clay, with a limited number of sandy and gravel ridges and many small prairies, nearly all under cultivation; so that the primitive vegetation is confined to the fence rows and swamps, or woody tracts which are protected from the cattle and swine.

The altitude of this region is the highest in the State, constituting, as Prof. Collett remarked, "the alpine region of Indiana." The streams flow in every direction from its summit, and serve to distribute its flora over nearly every part of the State south of the Wabash river. Although a great portion of the plants mentioned in the catalogue are common to every
county, yet, as a whole, there is a marked contrast with other portions of the State. Its altitude, ranging from 900 to 1,285 feet above the ocean, has given this region none of that tincturing of southern types so common in the valleys of our larger rivers, and its soil is not adapted to the growth of many species which are abundant in portions of Ohio, having the same altitude. One noticeable feature, is the absence of entire families which are well represented in other portions of the State. Of the Ericaceae, or Heath Family, including the Huckleberry, Blueberry, Trailing Arbutus, Wintergreen, Laurel, Pipsissewa, etc., there are only two representatives, the Indian Pipe (Monotropa uniflora) which is very rare, having been found but once, and the Swamp Huckleberry (Vaccinium macrocarpon). As nearly all this family are natives of rocky woods, peat bogs or swamps, their absence is easily explained by what has been said of the physical conditions present here. The Naiadaceae (Pondweed Family), immersed aquatics, have all been exterminated by the draining of the shallow lakes and swamps. The Orchidaceae (Orchid Family), have yielded so far only two species, Orchis spectabilis and the Fringed Orchis. The other genera of this family have apparently all disappeared. Species of Cypripedium are said to have been plenty when the country was first settled. Of the Coniferae (Pine Family), there is not a single representative. The Compositae, the largest family represented, has furnished over 100 species, or nearly one-seventh of the whole flora. The Cyperaceae, although a very large family, gave only four genera, Cyperus, Eleocharis, Scirpus and Carex. The last named are usually known as the "wild grasses," though very distinct from that family. They have very little value, as they are eaten by cattle only when everything else fails. They may be known by their triangular stems (culms), rough leaves and spikes of fruit at the end of the stems. Some of them flower early in the spring and summer, much earlier than the true grasses, and all grow principally in swamps and wet meadows. Of Ferns, Wayne furnishes many that are not found in other counties. The Sensitive Fern, Maidenhair, Spleenworts, Wood-Ferns and Moonworts are the most common. The Equisetaceae (Horse-Tail Family), are represented by two species, E. hyemale and E. arvense, the former being the tall "scouring rush" with which most are familiar. The Grasses are the most interesting and
one of the most valuable families found here. "This class of plants probably contribute more to the sustenance of man and beasts than all others combined." No poisonous or suspicious herb is found among them (with the exception of the poisonous darnel), in this respect being very unlike the Parsley Family (Umbelliferae) and Night-Shade Family (Solanaceae), every one of which are suspicious when growing wild. Many of the last named family, when cultivated, form valuable articles of food, e.g., the Potato and Tomato. Through Prof. Brayton I learn that the time of flowering for the same species is two weeks later here than in Marion county, this being due to the greater elevation of this region, 200 to 500 feet. I have given the common names of most of the plants as they will be more intelligible to those who are not botanists.

THANKS.

I desire to express my obligations to Prof. John M. Coulter, of Crawfordsville, for reviewing and correcting the mistakes in nomenclature and the identification of new species in my catalogue of plants, thus greatly enhancing the value of the catalogue.

DR. A. J. PHINNEY.
CATALOGUE.

RANUNCULACEÆ.


Virginiana, L. Virgin's Bower. Rare. July, August.

verticillaris, DC.? Found but once, in an immature state.


purpurascens, var. ceriferum, Austin. Rare. June.


multifidus, Ph. Yellow Water Crowfoot. Rare. Swamps. June.

abortivus, var. micranthus, Gr. Buttercups. Rare. May.

MAGNOLIAEAE.
Magnolia acuminata, L. Cucumber Tree. Randolph county. Rare.

ANONACEAE.
Asimina triloba, Dunal. Papaw. Rare.

MENISPERMACAEAE.
BERBERIDACEÆ.

Berberis vulgaris, L. Common Barberry. Wayne county.


NYMPHÆACEÆ.


PAPAVERACEÆ.

Stylophorum diphyllum, Nutt. Yellow Poppy. Wayne county.


FUMARIACEÆ.


Canadensis, DC. Squirrel Corn. Common. April, May.

Fumaria officinalis, L. Common Fumitory. Wayne county.

CRUCIFERÆ.


Violaceæ.  


  *Viola sagittata*, Ait. Rare. Sandy hillsides. May.  
  *Viola pedata*, L. (Bird-foot V.) Wayne county.  

Hypericaceæ.  

Hypericum perforatum, L. Common St. John's-Wort. Rare.  
CARYOPHYLLACEÆ.


*nivea*, DC. Starry Campion. Rare.


* noctiflora*, L. Night Flowering Catchfly. Rare. Escaped.


*Cerastium vulgatum*, L. Mouse-ear Chickweed. Common. April, May.


*nutans*, Raf. Mouse-ear Chickweed. Rare. May.


PORTULACACEÆ.


MALVACEÆ.


*Moschata*, L. Musk Mallow. Rare. Roadsides.

SIDA spinosa, L. Sida. Rare. Moist grounds. September.

ABUTILON Avicennae, Gærtn. Indian Mallow.

HIBISCUS Trionum, L. Bladder Ketmia. Rare. Roadsides. August.

TILIACEÆ.


LINACEÆ.

Linum usitatissimum L. Common Flax. Escaped.

GERANIACEÆ.


Carolinianum, L. Carolina Cranesbill. Rare. Meadows.


violacea, L. Violet sorrel. Rare. Dry woods. May.


RUTACEÆ.


Woods.


SIMARUBACEÆ.

Ailanthus glandulosus, Desf. Rare. Jay county.
ANACARDIACEÆ.

*Rhus typhina*, L. Staghorn Sumach. Wayne.
*Toxicodendron*, L. Poison Ivy. Three-leaved Ivy. Rare.

VITACEÆ.

*Vitis Labrusca*, L. Fox Grape.
*indivisa*, Willd.


RHAMNACEÆ.


CELASTRACEÆ.


SAPINDACEÆ.

*Staphylea trifolia*, L. Bladder-nut. Wayne.
*dasycarpum*, Ehr. Silver Maple. Common as shade trees.
*Negundo aceroides*, Mœnch. Box Elder. Rare. River bottoms.
POLYGALACEÆ.


LEGUMINOSÆ.

procumbens, L. Low Hop Clover. Rare. Roadsides.


Psoralea Onobrychis, Nutt. Rare. Dry grounds.


Wistaria frutescens, DC. Rare. Jay county. August.
Astragalus Canadensis, L. Milk Vetch. Rare. Woods.


Chamaæerista, L. Wild Senna. Rare. July.

nictitans, L. Wild Sensitive Plant. Rare. July.


ROSACEÆ.


Pennsylvanica, L. Wild Red Cherry. Rare. Woods.


*nitida*, Willd. Wayne county.


*arbutifolia*, L. Choke-berry.


SAXIFRAGACEÆ.

*floridum*, L’Her. Wild Black Currant. Rare. May.

Hydrangea *arborescens*, L. Wild Hydrangea. Wayne county.


**CRASSULACEÆ.**


**HAMAMELACEÆ.**


**HALORAGACEÆ.**


**ONAGRACEÆ.**


Gaura biennis, L.  Gaura.  Rare.  Fields and woods.


fruticosa, L.  Sundrops.  Rarer than the last.  August.


polycarpa, Short & Peter.  Loosestrife.  Rare.  Swamps.  August.

LYTHRACEÆ.


CUCURBITACEÆ.


UMBELLIFERÆ.


**Pimpinella integerrima**, DC. Rare. Dry hillsides. May, June.


Araliaceæ.


Cornaceæ.


Swamps. June.

Swamps. June.


Thickets. June.

alternifolia, L. Alternate-leaved Cornel. Wayne county.

Woods.
CAPRIFOLIACEÆ.

Lonicera †sempervirens, Ait. Trumpet Honeysuckle. Wayne county.


Sambucus Canadensis, L. Common Elder.


RUBIACEÆ.


**VALERIANACEÆ.**


**DIPSACEÆ.**


**COMPOSITÆ.**


    altissimum, L. Fall Boneset. Rare. Dry grounds. August.

Aster patens, Ait. Rare. Dry woods. August, September.


Heliopsis levis, Pers.


Lepachys pinnata, T. & G. Rare. August.


**Dysodia chrysanthemoides**, Lag. Fetid Marigold.


**Leptopoda brachypoda**, T. & G. Rare. August.


TANACETUM vulgare, L. Tansy. Common around dwellings.

ARTEMISIA biennis, Willd. Wormwood. Rare. September.

GNAPHALIUM purpureum, L. Purple Cudweed. Rare. September.

ANAPHALIS (Antennaria) margaritacea, B. & H. Resembles the next only larger. July.


altissimus, Willd. Fall Thistle. Rarer than the first.


arvensis, Scop. Canada Thistle. Rare.


**LOBELIACEÆ.**


**CAMPANULACEÆ.**


**ERICACEÆ.**


*Monotropa uniflora*, L. Indian Pipe. Rare. Damp woods.

**ILICINEÆ (AQUIFOLIACEÆ).**


**PRIMULACEÆ.**

*Dodecatheon Meadia*, L. American Cowslip. Rare. Wet grounds.


OLEACEÆ.

Fraxinus Americana, L. White Ash. A valuable tree.


APOCYNACEÆ.

Apocynum androsæmifolium, L. Spreading Dogbane. Dry soil.

cannabinum, L. Indian Hemp. Common. Dry soil.

ASCLEPIADACEÆ.


phytolaccoides, Pursh. Poke Milkweed. Rare.

GENTIANACEÆ.


Andrewsii, Griseb. Closed Blue Gentian. Rare. Wet places.


POLEMONIACEÆ.


HYDROPHYLLACEÆ.


BORRAGINACEÆ.


Virginicum, L. Wild Comfrey. Rare. Dry soils.

Echinospermum Virginicum, Lehm. (Cynoglossum Morisoni, DC.) Dry soils.


CONVOLVULACEÆ.


*Convolvulus arvensis*, L. Bindweed.

*Cuscuta Gronovii*, Willd. Dodder. Parasite on other plants.

*Solanaceœ.


*dulcamara*, L. Bittersweet. Rare. Moist grounds. May be known by its red berries.


*Datœra Stramonium*, L. Common “Jimson-weed.” Rare.


SCROPHULARIACEÆ.


GRATIOLA Virginiana, L. Hedge Hyssop. Rare.

ILYSANTHES gratioides, Benth. False Pimpernel. Wet grounds.


OROBANCHACEÆ.


BIGNONIACEÆ.

Catalpa speciosa, Warder. Door yards. Shade tree.

ACANTHACEÆ.

Ruellia strepens, L. Rich soils.

VERBENACEÆ.


LABIATÆ.

Teucrium Canadense, L. American Germander. Moist grounds.
Flora of Central-Eastern Indiana.


Bradburiana, Beck. Rare. Moist grounds.


Nepeta Cataria, L. Catnip. Common around dwellings.


Synandra grandiflora, Nutt. Wayne county.


15-Genl.

Stachys palustris, L. Hedge-nettle.  
cordata, Riddell. (S. palustris, var. cordata, Gr.)

PLANTAGINACEÆ.


ARISTOLOCHIACEÆ.

Asarum Canadense, L. Wild Ginger. Rare. Damp, cool ravines.  
Aristolochia Serpentaria, L. Virginia Snake-root. Rare. Dry soils.

PHYTOLACCACEÆ.


CHENOPODIACEÆ.

hybridum, L. Maple-leaved Goosefoot. Around dwellings.

AMARANTACEÆ.

Amaranthus hypochondriacus, L. Rare. Probably escaped.  
paniculatus, L. Prince’s Feather-of-the-Garden. Rare.  
retroflexus, L. Amaranth. Common around dwellings.  
albus, L. Amaranth. Common around dwellings.
POLYGONACEÆ.

Polygonum orientale, L. Prince’s Feather. Escaped. 
incarnatum, Ell. Water-pepper. Common. Along 
streams and ponds. 
Persicaria, L. Lady’s Thumb. Common. Moist 
ground. August. 
Hydropiper, L. Smart Weed. Common. Moist 
grounds. August. 
August. 
Wet soils. 
August. 
Around dwellings and walks. 
erec tum, L. (P. aviculare, var. erectum, Roth.) Larger 
than the last. Not so common. 
sagittatum, L. Tear Thumb. Rare. Very rough. 
Convolvulus, L. Black Bindweed. 
Rumex altissimus, Wood.? Peach-leaved Dock. Rare. 
crispus, L. Curled dock. Common everywhere. 

LAURACEÆ.


THYMELEACEÆ.


SANTALACEÆ.

Comandra umbellata, Nutt. Bastard Frog-flax. Rare.

SAURURACEÆ.

Saururus cernuus, L. Lizard’s-tail. Common. Borders of 
streams and ponds. July.
EUPHORBIACEÆ.


Virginica, var. gracilens, Gray. Three-seeded Mercury.


URTICACEÆ.


Celtis occidentalis, L. Hackberry. Rare. River bottoms.

Morus rubra, L. Mulberry. Rare.

alba, L. White Mulberry. Rare.


dioica, L. Bristly Nettle.


Cannabis sativa, L. Hemp. Escaped from cultiuation.

Humulus Lupulus, L. Wild Hop. Rare. July.

PLATANACEÆ.


JUGLANDACEÆ.

Juglans cinerea, L. Butternut. Not as common as next, but where large is a valuable tree.


Carya olivæformis, Nutt. Pecan-nut. River bottoms.


sulcata, Nutt. Western Shell-bark Hickory. Common.


amara, Nutt. Bitter-nut. Swamp Hickory.
FLORA OF CENTRAL-EASTERN INDIANA.

CUPULIFERÆ.


**Quercus rubra**, L. Red Oak. Rare.


**Quercus palustris**, Du Roi. Spanish or Pin Oak. Common.


**Carpinus Americana**, Mich. Blue or Water Beech.

SALICACEÆ.


**Salix lucida**, Muhl. Shining Willow. Rare.


ARACEÆ.


Acorus Calamus, L. Sweet Flag. Rare. Swamps and wet places.

**TYPHACEÆ.**


**ALISMACEÆ.**


**HYDROCHARIDACEÆ.**


**ORCHIDACEÆ.**


**AMARYLLIDACEÆ.**


**IRIDACEÆ.**


DIOSCOREACEÆ.


SMILACEÆ.


LILIACEÆ.

  recurvatum, Beck. Not so common as last. May.
  erectum, L. Wakerobin. Rare.
  cernuum, L. Nodding Trillium. Rare.


Melanthium Virginicum, L. Bunch-flower. Wet meadows.


Asparagus officinale, L. Extensively cultivated.

  superbum, L. Turk’s Cap Lily. Randolph.

  albidum, Nutt. White Dog-toothed Violet. Rare.

CAMASSIA Fraseri, Torr. (Scilla Fraseri, Gr.) Wild Hyacinth.


JUNCACEÆ.

May.

acuminatus, Mich. var. legitimus (J. Pondii). Rare.
July.

COMMELINACEÆ.

Dry soils. May.

CYPERACEÆ.


acicicularis, R. Br. Spike Rush. Rare. Swamps.
August.

CAREX Steudelii, Kunth. Sedge. Rare. May.
Nuttallii, Schw. Sedge. Rare. May.
cephalophora, Muhl. Sedge. Rare. May.
stellulata, L. Sedge. Rare. June.
crinita, Lam. Sedge. Rare. May.
digitalis, Willd. Sedge. Rare. May.
var. styloflexa, Boot. Sedge. May.
var. blanda, Carey. Sedge. May.
var. latifolia, Boot. Sedge. May.
riparia, Curtis. Sedge. Rare. May, June.
tentaculata, Muhl. Sedge. Rare. June.
grayii, Carey. Sedge. Rare. June.
lupuliformis, Sart. Sedge. Rare. July.
utrículata, Boot. Sedge. Rare.
tuckermanii; Boot. Sedge. Common. May.

GRAMINEÆ.

September.
oryzoides, Swartz. Rice Cut Grass. Common. Sep-
tember.
Zizania aquatica, L. Indian Rice. Shallow water.


Agrostis perennans, Tuck. Thin grass. Shaded grounds.


Cinna arundinacea, L. Wood Reed grass. Shaded swamps. August.

Muhlenbergia diffusa, Schreber. Drop-seed grass. Common.


fluitans, R. Br. Rare. Swamps.

Poa annua, L. Low Spear-grass.


alsodes, Gray. Rare. Woods and hillsides.

Eragrostis pilosa, Beauv. Rare. Dry soils. August.


capillaris, Nees. Rare. Sandy soils. August.


Bromus secalinus, L. Cheat or Chess. Nuisance in wheat fields.
Ciliatus, L. Common. Moist woods.


Triticum repens, L. Quick grass. Randolph county.


Phalaris Canariensis, L. Canary grass. Escaped.

Panicum capillare, L. Old Witch grass. Dry soils.


Equisetaceae.

Equisetum arvense, L. Common Horse-tail. Moist, gravelly soils.
FILICES.

Pteris aquilina, L. Common Brake Fern. Wayne county.


Camptosorus rhizophyllus, Link. Walking Leaf. Wayne county.


Goldianum, Hood. Wayne county.

Spinulosum, Swartz. var. intermediurn, Willd. Moist woods.

acrostichoides var. incisum. Wood Fern. Wayne county.


Osmunda regalis, L. Flower Fern. Jay county.
Claytoniana, L. Randolph county: June.
cinnamomea, L. Cinnamon Fern. Wayne county.

These three species are among the largest of the ferns; the second, in Ohio, frequently attaining a height of six or eight feet. It there grows in tufts in swamps.

OPHIOGLOSSACEÆ.


Orders, 91; genera, 370; species, 789.
Delaware county, 720; Wayne, 43; Randolph, 11; Jay, 15.