

ADDITIONS TO THE REVISED CATALOG OF OHIO VASCULAR PLANTS. II*

JOHN H. SCHAFFNER.

There appears to be no abatement of the interest in the Ohio flora, aroused by the publication of the Revised Catalog in 1932, as is evident from the list of additions presented below. This list represents but a small percent of the records showing decided extensions of the geographic ranges of our Ohio species. In the first list of Additions to the Catalog, 41 species new to the state were published; in the present list, 34 new Ohio species are added, bringing the total number of species cataloged for Ohio up to 2,384. Among the many interesting discoveries are several species originally published by Bigelow, in 1841, as occurring in Fairfield County but not known to have been seen since that time. A report on the status of some of the Ohio species of Phlox by Edgar T. Wherry of Philadelphia, a specialist in this difficult group, is included in its proper place below, and it is hoped that collectors will make special efforts to send in specimens of the rarer species that we may soon have a more reliable list. During the year about 4,000 specimens have been mounted, labeled, and distributed in the State Herbarium. The Herbarium is still greatly hampered by a lack of suitable cases to hold this valuable collection properly, and it is hoped that this difficulty may be overcome in due time, when more favorable financial conditions return. Ohio is certainly rich enough to develop one good herbarium. There should be a number of such institutions in the state.

1. *Ophioglossum vulgatum* L. Adder-tongue. Indian Springs ravine, Columbus, Franklin Co. Mrs. M. S. Humphrey.
2. *Botrychium simplex* Hitch. Little Grape-fern. Farnham, Ashtabula Co. L. E. Hicks.
3. *Botrychium neglectum* Wood. Wood's Grape-fern. Indian Springs ravine, Columbus, Franklin Co. L. E. Hicks.
19. *Pellaea glabella* Mett. Northern Purple Cliff-brake. "On perpendicular face of slightly shaded low limestone cliffs." North-west of Locust Grove, Adams Co. Arthur N. Leeds.
41. *Dryopteris dilatata* (Hoffm.) Gr. Spreading Shield-fern. Near Beach City, Sugar Creek Twp., Stark Co. W. H. Camp.
53. *Equisetum laevigatum* A. Br. Smooth Scouring-rush. Mentor Marsh, Lake Co. L. E. Hicks.

*Papers from the Department of Botany, the Ohio State University, No. 338.

55. *Equisetum kansanum* Schaffn. Kansas Scouring-rush. Conneaut R. Ashtabula Co. L. E. Hicks.
- 66.1. *Lycopodium tristachyum* Pursh. Slender Trailing Club-moss. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius. Also old misnamed specimens from Licking (R. F. Griggs), Fairfield (E. V. Wilcox), and Hocking (R. F. Griggs) counties.
67. *Lycopodium complanatum* L. Trailing Clubmoss. The var. *flabelliforme* Fern. Near Beach City, Sugar Creek Twp., Stark Co. W. H. Camp.
69. *Selaginella apoda* (L.) Fern. Creeping Selaginella. Serpent Mound, Adams Co. Edw. S. Thomas.
78. *Juniperus communis* L. Common Juniper. Parkman Twp., Geauga Co. Charles Dambrach.
- 78a. *Juniperus communis depressa* Pursh. Parkman, Geauga Co. L. E. Hicks, C. Dambach, and F. B. Chapman.
90. *Scheuchzeria palustris* L. Scheuchzeria. Lake Twp., Ashland Co. Leslie L. Pontius and Floyd Bartley.
101. *Potamogeton perfoliatus* L. Clasping-leaf Pondweed. Tuscarawas River, Fayette Twp., Coshocton Co. Frank B. Selby; Ashtabula Beach, Ashtabula Co. L. E. Hicks.
108. *Potamogeton dimorphus* Raf. Spiral Pondweed. Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
- 111.1. *Najas marina* L. Large Naias. Lake Cardinal, Ashtabula Co. L. E. Hicks.
114. *Brasenia schreberi* Gmel. Water-shield. Mouth of Conneaut River, Ashtabula Co. L. E. Hicks.
- 114.1. *Cabomba caroliniana* Gr. Cabomba. Abundant in Mosquito Creek. Escaped. From the South. Howland Twp., Trumbull Co. Almon N. Rood.
115. *Nelumbo lutea* (Willd.) Pers. American Water-lotus. Jerusalem Twp., Lucas Co. Louis W. Campbell.
117. *Castalia odorata* (Dry.) W. & W. Sweet-scented Water-lily. Jerusalem Twp., Lucas Co. Louis W. Campbell.
118. *Castalia tuberosa* (Paine) Greene. Tuberosus Water-lily. Silver Lake, Logan Co. E. Jane Spence. Sent in by Wm. C. Werner. Mouth of Conneaut River, Ashtabula Co. L. E. Hicks.
150. *Scirpus planifolius* Muhl. Flat-leaf Clubrush. Toledo, Lucas Co. J. A. Sanford (1878). Presented by Wm. C. Werner.
155. *Hemicarpha micrantha* (Vahl.) Pax. Common Hemicarpha. Geneva, Ashtabula Co. L. E. Hicks.
157. *Eleocharis acuminata* (Muhl.) Nees. Flat-stemmed Spike-rush. Swamp near Chillicothe, Ross Co. F. B. Chapman.
- 160.1. *Eleocharis rostellata* Torr. Beaked Spike-rush. Cedar Swamp, Champaign Co. Edw. S. Thomas.
166. *Stenophyllus capillaris* (L.) Britt. Hair-like Stenophyllus. Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
169. *Cyperus retrofractus* (L.) Torr. Rough Cyperus. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
173. *Cyperus engelmanni* Steud. Engelmann's Cyperus. E. Conneaut Beach, Ashtabula Co. L. E. Hicks.
- 177.1. *Cyperus acuminatus* Torr. & Hook. Short-pointed Cyperus. Green Twp., Ross Co. Floyd Bartley and Leslie L. Pontius.
187. *Mariscus mariscoides* (Muhl.) Ktz. Twig-rush. Cedar Swamp, Champaign Co. E. S. Thomas.
189. *Scleria triglomerata* Mx. Tall Nut-rush. Northwest of Amboy, Ashtabula Co. L. E. Hicks.
199. *Carex muhlenbergii* Schk. Muhlenberg's Sedge. Painesville, Lake Co. Wm. C. Werner. Wood Co. Albert Neifer.
202. *Carex laevenworthii* Dew. Leavenworth's Sedge. Phelps Creek, Ashtabula Co. L. E. Hicks.
209. *Carex annectens* Bickn. Yellow Fox Sedge. Red Hills region, Franklin Co. Floyd B. Chapman.
212. *Carex prairea* Dew. Prairie Sedge. Painesville, Lake Co. Wm. C. Werner.

216. *Carex crus-corvi* Shuttlw. Raven-foot Sedge. Wood Co. Albert Neifer. Sent in by Wm. C. Werner.
231. *Carex muskingumensis* Schw. Muskingum Sedge. Lower Grand River and Rock Creek, Ashtabula Co. L. E. Hicks.
233. *Carex straminea* Willd. Straw Sedge. Conneaut, Ashtabula Co. L. E. Hicks.
261. *Carex etburnea* Boott. Bristle-leaf Sedge. Paint Twp., Highland Co. Katie M. Roads.
274. *Carex striatula* Mx. Striate Sedge. Scioto Co. Floyd Bartley and Leslie L. Pontius.
280. *Carex conoidea* Schk. Field Sedge. Crystal Lake near New Carlisle, Clark Co. E. N. Transeau.
292. *Carex caroliniana* Schw. Carolina Sedge. Phelps Creek, Ashtabula Co. L. E. Hicks.
304. *Carex irregularis* Schw. Green Sedge. Marl bog at Kennard, Champaign Co. Edw. S. Thomas.
305. *Carex cryptolepis* Mack. Small Yellow Sedge. Plymouth Marshes, Ashtabula Co. L. E. Hicks.
332. *Bromus inermis* Leyss. Hungarian Brome-grass. Saybrook, Ashtabula Co. L. E. Hicks. Near State Game Farm, Champaign Co. E. S. Thomas.
339. *Festuca shortii* Kunth. Short's Fescue-grass. Conneaut, Ashtabula Co. L. E. Hicks.
351. *Panicularia grandis* (Wats.) Nash. Tall Manna-grass. Conneaut, Ashtabula Co. L. E. Hicks.
357. *Poa de'ilis* Torr. Weak Spear-grass. Wayne Twp., Ashtabula Co. L. E. Hicks.
390. *Deschampsia caespitosa* (L.) Beauv. Tufted Hair-grass. Geneva-on-the-Lake marsh, Ashtabula Co. L. E. Hicks.
391. *Deschampsia flexuosa* (L.) Trin. Wavy Hair-grass. Mt. Pleasant, Lancaster, Fairfield Co. R. B. Gordon. Stows Corner, Summit Co. Floyd Bartley and Leslie L. Pontius.
- 409.1. *Cinna latifolia* (Trev.) Griseb. Broad-leaf Wood Reed-grass. Monroe Twp., Ashtabula Co. L. E. Hicks.
- 415.1. *Muhlenbergia capillaris* (Lam.) Trin. Long-awned Muhlenbergia. Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
430. *Aristida purpurascens* Poir. Purplish Tripple-awned-grass. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
- 433a. *Phalaris arundinacea picta* L. Garden Ribbon-grass. Along railway track near New Vienna, Clinton Co. Along the road, Picketon, Pike Co. Katie M. Roads.
438. *Lolium multiflorum* Lam. Awned Darnel. Near Buchtel, Athens Co.; Circleville, Pickaway Co. Leslie L. Pontius and Floyd Bartley.
445. *Elymus hirsutiglumis* Scribn. Strict Wild-rye. Beach near Geneva-on-the-Lake, Ashtabula Co. L. E. Hicks.
- 446.1. *Elymus brachystachys* Scribn. & Ball. Short-spiked Wild-rye. South-eastern Wayne Twp., Ashtabula Co. L. E. Hicks.
- 456.1. *Dactyloctenium aegyptium* (L.) Willd. Egyptian-grass. Ashtabula Harbor, Ashtabula Co. L. E. Hicks.
491. *Panicum villosissimum* Nash. Villous Panic-grass. Conneaut, Ashtabula Co. L. E. Hicks.
493. *Panicum meridionale* Ashe. Matting Panic-grass. Crystal Lake near New Carlisle, Clark Co. E. N. Transeau.
- 505.1. *Echinochloa colona* (L.) Link. Jungle-rice. Persistent and spontaneous after cultivation. From the South. Dorset, Ashtabula Co. L. E. Hicks.
508. *Paspalum setaceum* Mx. Slender Paspalum. Pickaway Twp., Pickaway Co.; Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
- 514.1. *Holcus sudanensis* Bailey. Sudan-grass. Escaped from cultivation. Native of Africa. Painesville, Lake Co. Wm. C. Werner.
517. *Miscanthus sinensis* Andress. Chinese Plume-grass. Sunfish Creek, Pike Co. M. B. Trautman.
543. *Scilla sibirica* Andr. Siberian Squill. Along the road in Liberty Twp., Highland Co. Katie M. Roads.

547. *Aletris farinosa* L. Colic-root. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
549. *Veratrum viride* Ait. American False-hellebore. Perry Twp., Tuscarawas Co. Irma Nelson.
575. *Clintonia umbellulata* (Mx.) Torr. White Clintonia. White's Gulch, Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
596. *Juncus dudleyi* Wieg. Dudley's Rush. Crystal Lake, near New Carlisle, Clark Co. E. N. Transeau.
611. *Juncoides carolinae* (Wats.) Ktz. Hairy Wood-rush. Phelps Creek, Ashtabula Co. L. E. Hicks, F. B. Chapman, and C. Dambach.
613. *Juncoides bulbosum* (Wood) Small. Bulb-bearing wood-rush. In a damp woods near Henley, Scioto Co. Katie M. Roads.
- 624.1. *Sisyrinchium strictum* Bickn. Strict Blue-eyed-grass. In wet field. Higby Prairie, Franklin Twp., Ross Co. F. B. Chapman and L. E. Hicks.
629. *Iris foliosa* Mack. & Bush. Leafy Blue-flag. Green Twp., Ross Co. Floyd Bartley and Leslie L. Pontius.
- 632.1. *Iris verna* L. Spring Dwarf Iris. Nile Twp., Scioto Co. Conrad Roth. Brush Creek Twp., Scioto Co. A. E. Waller, Geo. Schoedinger, and Robert McCormick.
636. *Cypripedium candidum* Willd. White Lady's-slipper. Reported as growing in a damp swamp in Portage Co. by Almon N. Rood.
657. *Ibidium praecox* (Walt.) House. Grass-leaf Lady's-tresses. Fredericktown, Columbiana Co. E. S. Thomas.
659. *Ibidium beckii* (Lindl.) House. Little Lady's-tresses. Mouth of Moxahala Creek, Muskingum Co. E. S. Thomas.
- 659.1. *Ophrys cordata* L. Heart-leaf Twayblade. E. Monroe Twp., Ashtabula Co. Lawrence E. Hicks, and Floyd B. Chapman.
662. *Arethusa bulbosa* L. Arethusa. Reported as occurring in a swamp in Portage Co. by Almon N. Rood.
669. *Tipularia unifolia* (Muhl.) B.S.P. Crane-fly Orchis. "Neotoma," Goodhope Twp., Hocking Co. Edw. S. Thomas. Benton Twp., Hocking Co. and Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
692. *Ranunculus arvensis* L. Corn Crowfoot. Painesville, Lake Co. Wm. C. Werner.
698. *Batrachium circinatum* (Sibth.) Rehb. Circinate White Water-crowfoot. Wayne Twp., Pickaway Co. Floyd Bartley and Leslie L. Pontius. Southern Madison Co. E. N. Transeau.
727. *Thalictrum revolutum* DC. Waxy Meadow-rue. Sugar Grove, Fairfield Co. Wm. C. Werner.
741. *Sarracenia purpurea* L. Pitcher-plant. Near Beach City, Sugar Creek Twp., Stark Co., W. H. Camp.
742. *Drosera intermedia* Hayne. Spatulate Sundew. Copley Swamp, near Akron, Summit Co. Specimen in Herbarium of Lake Erie College, Painesville, Ohio. Reported by Wm. C. Werner.
746. *Papaver dubium* L. Corn Poppy. Wakefield, Pike Co. "Abundantly escaped." Conrad Roth.
758. *Capnoides aureum* (Willd.) Ktz. Golden Corydalis. Little Mountain, Lake Co. Wm. C. Werner.
760. *Fumaria officinalis* L. Common Fumitory. Painesville, Lake Co. Wm. C. Werner.
762. *Berteroa incana* (L.) DC. Hoary Berteroa. Burton Twp., Geauga Co. Charles Dambach.
765. *Draba verna* L. Vernal Whitlow-grass. Painesville, Lake Co. Wm. C. Werner.
767. *Draba caroliniana* Walt. Carolina Whitlow-grass. Green Twp., Ross Co. Floyd Bartley and Leslie L. Pontius.
780. *Lepidium draba* L. Hoary Peppergrass. Sheffield, Ashtabula Co. L. E. Hicks.
781. *Lepidium perfoliatum* L. Perfoliate Peppergrass. Weed in cultivated field. Perry, Lake Co. Fred J. Tyler.
789. *Alliaria alliaria* (L.) Britt. Garlic-mustard. Sycamore Twp., Wyandot Co. C. W. Horton, Kingsville, Ashtabula Co. L. E. Hicks.

794. *Cheirinia repanda* (L.) Link. Repand Cheirinia. Geneva, Ashtabula Co. L. E. Hicks.
798. *Norta irio* (L.) Britt. Longleaf Hedge-Mustard. Perry, Lake Co. Fred J. Tyler. Buena Vista, Scioto Co. and Ashtabula Co. L. E. Hicks.
803. *Barbarea stricta* Andrz. Erect Winter-cress. Linton Twp., Coshocton Co. Frank B. Selby. Burton Twp. Bog, Geauga Co. L. E. Hicks, C. Dambach, and F. B. Chapman. Westerville, Franklin Co. L. E. Hicks.
814. *Arabis drummondii* Gr. Drummond's Rock-cress. Ohio State Univ. grounds (1893), Columbus, Franklin Co. Wm. C. Werner. Fayette and Tuscarawas Twp., Coshocton Co. Frank B. Selby.
837. *Brassica napus* L. Rape. Circleville Twp., Pickaway Co., Ross Co., Jackson Co., Floyd Bartley and Leslie L. Pontius.
839. *Diplolaxis tenuifolia* (L.) DC. Wall Rocket. Saybrook, Ashtabula Co. L. E. Hicks.
840. *Raphanus raphanistrum* L. Wild Radish. Richmond Center, Ashtabula Co. L. E. Hicks and F. B. Chapman.
851. *Geranium dissectum* L. Cut-leaf Crane's-bill. Painesville, Lake Co. Otto Hacker. Sent in by Wm. C. Werner.
855. *Erodium cicutarium* (L.) L'Her. Stork's-bill. West Union, Adams Co. Conrad Roth.
862. *Oxalis acetosella* L. White Wood-sorrel. Pymatuning Swamp, Ashtabula Co. Collected in 1892. Wm. C. Werner.
871. *Tribulus terrestris* L. Land Caltrop. Holland, Lucas Co. Laura Rasmussen.
880. *Polygala polygama* Walt. Racemed Milkwort. Painesville, Lake Co. Wm. C. Werner.
887. *Phyllanthus caroliniensis* Walt. Carolina Phyllanthus. Serpent Mound, Adams Co. and Springfield Twp., Ross Co. Leslie L. Pontius and Floyd Bartley.
890. *Acalypha ostryaefolia* Raf. Hornbeam Three-seeded Mercury. Trenton, Butler Co. O. D. Diller.
919. *Malva alcea* L. European Mallow. Painesville, Lake Co. Wm. C. Werner.
929. *Hibiscus oculiroseus* Britt. Crimson-eye Rose-mallow. Pedro, Lawrence Co. Leslie L. Pontius and Floyd Bartley.
951. *Ascyrum hypericoides* L. St. Andrew's-cross. In woods bordering Peach Mountain, Adams Co. Katie M. Roads.
953. *Crocantemum canadense* (L.) Britt. Canada Frostweed. Turkey Foot Lake, Summit Co. L. E. Hicks, and F. B. Chapman.
- 971.1. *Viola arvensis* Murr. Field Pansy. From Europe. "A bad weed." Burton Twp., Geauga Co. L. E. Hicks and C. Dambach.
982. *Viola hirsutula* Brain. Southern Wood Violet. Mouth of Moxahala Creek, Muskingum Co. E. S. Thomas.
989. *Viola pedata* L. Birdfoot Violet. Became established from plantings in a woodland before 1870, near Painesville, Lake Co. Specimen, collected by Alice Griswold in May 1884, sent in by Wm. C. Werner.
1002. *Alsine putera* (Mx.) Britt. Great Checkweed. Rocky wooded hillside. Franklin Twp., Coshocton Co. Frank B. Selby.
1011. *Spergula arvensis* L. Corn Spurry. Sylvania, Lucas Co. Leona Kalp Wood.
- 1011.1. *Spergula sativa* Boenn. Spurry. Liberty Twp., Jackson Co. Adventive from Europe. Leslie L. Pontius and Floyd Bartley.
1022. *Silene dichotoma* Ehrh. Forked Catchfly. Wayne Twp., Ashtabula Co., Burton Twp., Geauga Co. L. E. Hicks, F. B. Chapman, and C. Dambach.
1028. *Silene wherryi* Small. Wherry's Catchfly. Franklin Twp., Adams Co. Edw. S. Thomas.
1103. *Pleuropteris zuccarinii* Small. Japanese Knotweed. Scioto Twp., Ross Co. Leslie L. Pontius and Floyd Bartley.
1124. *Polygonum laxiforme* Small. Shore Knotweed. Tuscarawas Twp., Coshocton Co. Frank B. Selby. Colerain Twp., Ross Co. Floyd Bartley and Leslie L. Pontius.

1125. *Polygonum tenue* Mx. Slender Knotweed. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
1133. *Dasiphora fruticosa* (L.) Rydb. Shrubby Cinquefoil. Bern Twp., Fairfield Co. E. S. Thomas, C. F. Walker and Robt. Goslin.
1134. *Potentilla paradoxa* Nutt. Bushy Cinquefoil. Cedar Point, Erie Co. In Deam Herb., Bluffton, Ind. Chas. C. Deam.
1142. *Comarum palustre* L. Purple Marshlocks. In County Line Bog. West Liberty, Champaign Co. L. E. Hicks and E. S. Thomas.
1151. *Rubus strigosus* Mx. Wild Red Raspberry. Oak openings. Spencer Twp., Lucas Co. Louis W. Campbell.
1165. *Spiraea alba* Du R. Narrow-leaf Spiraea. Bern Twp., Fairfield Co. E. S. Thomas.
- 1202.1. *Chaenomeles lagenaria* Koidz. (*Cydonia japonica* Hort.) Japanese Quince. Spreading from cultivation. "A large patch in a pasture lot probably started from the fruit." Liberty Twp., Highland Co. Katie M. Roads.
1239. *Baptisia leucantha* T. & G. Large White Wild-Indigo. West Union, Tiffin Twp., Adams Co. D. R. Dodd.
- 1278.1. *Meibomia laevigata* (Nutt.) Ktz. Smooth Tick-trefoil. Liberty Twp., Jackson Co., Colerain Twp., Ross Co. Floyd Bartley and Leslie L. Pontius.
1291. *Lespedeza nuttallii* Darl. Nuttall's Bush-clover. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
1311. *Lathyrus myrtifolius* Muhl. Myrtle-leaf Marsh Pea. Buckeye Lake, Licking Co.; Columbus, Franklin Co. Wm. C. Werner.
1316. *Chloria mariana* L. Butterfly-pea. Kettle Hills, Fairfield Co. E. S. Thomas and Chas. Goslin.
1322. *Phaseolus polystachyus* (L.) B. S. P. Wild Bean. Cyuahoga River, Akron, Summit Co. Wm. C. Werner.
1334. *Sullivantia sullivantii* (T. & G.) Britt. Sullivantia. Fultonham, Muskingum Co. Wm. C. Werner.
1343. *Ammannia coccinea* Rottb. Longleaf Ammannia. Circleville Twp., Pickaway Co. Leslie L. Pontius and Floyd Bartley.
1344. *Rotala ramosior* (L.) Koehne. Rotala. Circleville Twp., Pickaway Co. Leslie L. Pontius and Floyd Bartley. Baumgardner's Pond, Jackson Twp., Franklin Co. Floyd B. Chapman.
1355. *Rhamnus lanceolata* Pursh. Lance-leaf Buckthorn. Hudson, Summit Co. Wm. C. Werner.
- 1365.1. *Ampelopsis heterophylla* (Thunb.) S. & Z. Variant-leaf Ampelopsis. From Eastern Asia. Escaped along a railway embankment, near a nursery. Painesville, Lake Co. Wm. C. Werner.
1373. *Nemopanthus mucronata* (L.) Trel. Mountain-holly. Lake Twp., Ashland Co. Leslie L. Pontius and Floyd Bartley.
1391. *Schmaltzia crenata* (Mill.) Greene. Fragrant Sumac. Kingsville, Ash-tabula Co. L. E. Hicks.
1392. *Toxicodendron vernix* (L.) Ktz. Poison Sumac. Washington Twp., Lucas Co. Also in Swanton Twp. Louis W. Campbell.
1427. *Quercus marilandica* Muench. Black-Jack (Oak). McArthur, Vinton Co. E. S. Thomas.
1482. *Salix humilis* Marsh. Prairie Willow. Cedar Swamp, Champaign Co. Robert B. Gordon.
1484. *Opuntia opuntia* (L.) Karst. Common Prickly-pear. Patton Twp., Ross Co. Floyd Bartley and Leslie L. Pontius. Rollersville, Sandusky Co. C. W. Horton.
- 1488.1. *Schizophragma hydrangeoides* S. & Z. Schizophragma. Escaped near Painesville, Lake Co. Wm. C. Werner.
1495. *Grossularia oxyacanthoides* (L.) Mill. Smooth Gooseberry. Painesville, Lake Co. and Cedar Swamp, Champaign Co. Wm. C. Werner.
1496. *Grossularia hirtella* (Mx.) Spach. Low Gooseberry. Near Hudson, Portage Co. Floyd Bartley and Leslie L. Pontius.
1497. *Grossularia reclinata* (L.) Mill. Garden Gooseberry. Painesville, Lake Co. Wm. C. Werner.
1503. *Epilobium strictum* Muhl. Downy Willow-herb. Painesville, Lake Co. Wm. C. Werner.

1505. *Epilolium adenocaulon* Haussk. Northern Willow-herb. White's Gulch, Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
1507. *Oenothera oakesiana* Robb. Oakes' Evening-primrose. Painesville, Lake Co. Wm. C. Werner.
1513. *Kneiffia longipedicellata* Small. Long-pedicelled Sundrops. Edge of a swamp. Marshal Twp., Highland Co. Katie M. Roads.
1523. *Myriophyllum heterophyllum* Mx. Variant-leaf Water-milfoil. In marsh at Geneva, Ashtabula Co. L. E. Hicks.
1529. *Citrullus citrullus* (L.) Karst. Watermelon. Commonly spontaneous along railroads and in yards. Hillsboro, Highland Co. Katie M. Roads. E. Conneaut Beach, Ashtabula Co. L. E. Hicks.
- 1534.1. *Aristolochia clematitis* L. Birthwort. Escaped. From Europe. Perry, Lake Co. Fred J. Tyler.
1538. *Ledum groenlandicum* Oeder. Labrador-tea. Thriving on Cranberry Island, Buckeye Lake, Licking Co. Clara Roush. Probably planted there by Dr. Freda Detmers.
- 1539.1. *Azalea canescens* Mx. Hoary Azalea. Burton Twp. bog, Geauga Co. L. E. Hicks, F. B. Chapman, and C. Dambach.
1547. *Chamaedaphne calyculata* (L.) Moench. Leather-leaf. Thriving on Cranberry Island, Buckeye Lake, Licking Co. L. E. Hicks. Probably planted there by Freda Detmers.
1553. *Chimaphila umbellata* (L.) Nutt. Pipsissewa. Two miles north of Brinkhaven, Jefferson Twp., Knox Co. E. M. Herrick.
- 1565.1. *Oxycoccus oxycoccus* (L.) MacM. Small Cranberry. Near Beach City, Sugar Creek Twp., Stark Co. W. H. Camp.
1566. *Gaylussacia frondosa* (L.) T. & G. Blue Huckleberry. Remove from the list. W. H. Camp who is making a special study of our Vacciniaceae considers its range as not extending into Ohio. "It does not occur outside the Atlantic drainage and the low costal plain of the Gulf Coast."
- 1572.1. *Gilia capitata* Dougl. Capitata Gilia. From the Pacific coast states. Escaped in a pasture lot where it is abundant. Hillsboro, Highland Co. Katie M. Roads.
- 1577.1. *Phlox carolina* L. Carolina Phlox. The variety is *P. carolina triflora* (Mx.) Wherry. "Edge of woods." Henley, Scioto Co. Katie M. Roads. Also Edgar T. Wherry. See below.

The following notes and records on species of Ohio Phlox have been received from Prof. Edgar T. Wherry of the Univ. of Pennsylvania, who is a special student of this group.

1574. *Phlox maculata* L. is now divided into two subspecies, *P. maculata odorata* (Sweet) Wherry, the northern, and *P. maculata pyramidalis* (Smith) Wherry, the southern one. In Ohio both occur, and although the boundary lies at approximately 40° latitude, there is much intermingling on both sides of this line. The most frequent and best known in the state is *P. maculata odorata*. The following records for *P. maculata pyramidalis* have been seen: Adams—E. Lucy Braun. Clark—both subspecies in O. S. U. Herb. Clermont—both subspecies in O. S. U. Herb. Fairfield—Lancaster, in U. S. National Herb. Franklin—Darby Creek west of Columbus, E. T. Wherry. Gallia—apparent intermediates between the two. Greene—O. S. U. Herb. Hamilton—apparent intermediates between the two. Hocking—O. S. U. Herb. Mahoning—Youngstown, Cornell U. Herb. Scioto—E. Lucy Braun. Stark—Canton, U. S. National Herb. The northern subspecies also represented in O. S. U. Herb.
1576. *Phlox glaberrima* L. The specimens represent the variety *Plox glaberrima interior* Wherry. Apparently all but two published records of *P. glaberrima* in Ohio really represent *P. carolina*. The two which stand are: Lucas—Swanton Twp., Mo., Bot. Garden Herb. Wood—Bowling Green, Moseley Herb.
1577. *Phlox ovata* L. The complete record for the species in Ohio is: Fulton and Highland, O. S. U. Herb. Lucas—Oak openings, U. S. National Herb., O. S. U. Herb.

- 1577a. *Phlox ovata carolina* (L.) Wherry. Change to No. 1577.1. *Phlox carolina* L. Carolina Phlox. Wherry has accepted the Linnean name and has established the variety *P. carolina triflora* (Mx.) Wherry. The county records are: Adams—Beaver Pond, Beech Fork, Cedar Fork, Turkey Creek, E. Lucy Braun. Butler—North of Oxford, O. S. U. Herb., Previously identified as *P. glaberrima* L. Highland—West of Fort Hill, Floyd Bartley and Leslie L. Pontius. Pike—Byington, Floyd Bartley and Leslie L. Pontius. Scioto—three-fourths mile S. E. of Pink. E. T. Wherry.
1579. *Phlox divaricata* L. Most of the Ohio material seen is the typical phase of the var. *P. divaricata canadensis* (Sweet) Wherry, with notched corolla-lobes, but Miss Braun reports a colony with entire lobes in Adams Co.
- 1582.a. *Phlox subulata australis* Wherry, *Bartonia* 11: 27. 1929. This is the basis of several reports of *Phlox brittonii* Small in Ohio. Apparently all collections from south of latitude 40 degrees ten minutes represent this plant. Herbarium material in other than the Ohio State Univ. collection is referred to here. Adams—Laurel Knob, Peach Mt., E. Lucy Braun. Delaware—two miles W. of Harlem, E. T. Wherry. Fairfield—Lancaster, in Gray Herb. Highland—Stultz Hill, three miles N. of Sinking Springs, E. T. Wherry, W. of Fort Hill, Brush Twp., Floyd Bartley and Leslie L. Pontius. Licking—two miles W. of Newark, E. T. Wherry. Ross—Liberty Twp., Floyd Bartley and Leslie L. Pontius.
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1624. *Gentiana crinita* Froel. Fringed Gentian. Bern Twp., Fairfield Co. E. S. Thomas, C. F. Walker, and Robt. Goslin.
1630. *Gentiana villosa* L. Striped Gentian. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
1655. *Gonolobus laevis* Mx. Sandvine. Van Wert Co. Said to be a bad weed on two farms. E. N. Transeau.
1672. *Physalis pubescens* L. Low Hairy Ground-cherry. In an orchard, Marshal Twp., Highland Co., Katie M. Roads.
1673. *Physalis pruinosa* L. Tall Hairy Ground-cherry. In a field near May Hill, Adams Co. Katie M. Roads.
1687. *Penstemon pallidus* Small. Downy White Beard-tongue. Brush Twp., Highland Co. Floyd Bartley and Leslie L. Pontius.
1693. *Chelone montana elatior* (Raf.) P. & W. Mountain Turtle-head. Eagle Mills, Vinton Co. Leslie L. Pontius and Floyd Bartley. Old Man's Cave, Hocking Co. John H. Schaffner.
- 1701.1. *Gratiola viscidula shortii* Penn. Viscid Hedge-hyssop. Rock Run and White's Gulch, Liberty Twp. Jackson Co. Floyd Bartley and Leslie L. Pontius. Also Rock Run. R. B. Gordon.
1735. *Castilleja coccinea* (L.) Spreng. Scarlet Painted-cup. Sphagnum Swamp. Mantua Twp., Portage Co. Almon N. Rood.
1747. *Catalpa catalpa* (L.) Karst. Common Catalpa. Mineral springs, Adams Co. Leslie L. Pontius, and Edw. S. Thomas.
1765. *Amsinckia intermedia* F. & M. Orange-flowered Amsinckia. "Introduced in a nursery." Painesville, Lake Co. Wm. C. Werner.
- 1792.1. *Verbena hybrida* Voss. Common Garden Verbena. Escaped near Saybrook, Ashtabula Co. Commonly cultivated. Lawrence E. Hicks.
1802. *Scutellaria serrata* Andr. Showy Skullcap. Conkle's Hollow, Hocking Co. E. M. Herrick. S. E. Corner of Jackson Co. L. E. Hicks.
1817. *Mentha alopecuroides* Hull. Woolly Mint. Conneaut, Ashtabula Co. L. E. Hicks.
- 1829.1. *Koellia verticillata* (Mx.) Ktz. Torrey's Mountain-mint. Liberty and Coal Twps. Jackson Co. Leslie L. Pontius and Floyd Bartley. Braceville Twp., Trumbull Co. Almon N. Rood, Barnesville, Belmont Co. Emma E. Laughlin.
1832. *Koellia mutica* (Mx.) Britt. Smooth-toothed Mountain-mint. Harpersfield Twp., Ashtabula Co. L. E. Hicks.
1844. *Meehania cordata* (Nutt.) Britt. Meehania. Perry Twp., Gallia Co. L. E. Hicks, E. S. Thomas, and C. F. Walker.

- 1854.1. *Stachys arenicola* Britt. Sand Hedge-nettle. On dry, sandy, clay bank; near Conneaut, Ashtabula Co. Lawrence E. Hicks.
1862. *Galeopsis tetrahit* L. Common Hemp-nettle. Plymouth, Ashtabula Co. L. E. Hicks.
1872. *Salvia pitcheri* Torr. Wild Blue Sage. Oak openings. Springfield Twp., Lucas Co. Emily and Bernard Campbell.
1878. *Plantago arenaria* W. & K. Sand Plantain. Growing in cinders along railroad. Perry, Lake Co. Fred J. Tyler.
1888. *Aralia hispida* Vent. Bristly Sarsaparilla. Phelps Creek, Ashtabula Co. L. E. Hicks, F. B. Chapman and C. Dambach.
1892. *Hydrocotyle umbellata* L. Umbellate Marsh-pennwort. Lake Punderson, Geauga Co. L. E. Hicks and F. B. Chapman.
1894. *Eryngium aquaticum* L. Rattlesnake-master. Kettle Hill, Bern Twp., Fairfield Co. Chas. and Robert Goslin.
1901. *Torilis anthriscus* (L.) Gmel. Erect Hedge-parsley. Painesville, Lake Co. Wm. C. Werner.
- 1935.1. *Cornus rugosa* Lam. Round-leaf Dogwood. Painesville, Lake Co. Wm. C. Werner.
1942. *Cynoxylon canadense* (L.). Dwarf Dogwood. Painesville, Lake Co. Wm. C. Werner.
1956. *Galium boreale* L. Northern Bedstraw. Bog at Kennard, Champaign Co. E. S. Thomas.
- 1963.1. *Galium labradoricum* Wieg. Labrador Marsh Bedstraw. Sphagnum bog; abundant. Mantua Twp., Portage Co. Almon N. Rood.
1980. *Viburnum cassinoides* L. Withe-rod. Near Beach City, Sugar Creek Twp., Stark Co. W. H. Camp.
1991. *Lonicera oblongifolia* (Goldie) Hook. Swamp Fly Honeysuckle. Penn Line Bog, Ashtabula Co. L. E. Hicks.
- 2031.1. *Zinnia elegans* Jacq. Zinna. Spontaneous along the road. Liberty Twp., Highland Co. Katie M. Roads.
- 2039.a. *Rudbeckia laciniata hortensis* Bail. Golden-glow. In a pasture lot, western part of Scioto Co. Katie M. Roads.
2057. *Helianthus strumosus* L. Paleleaf Wood Sunflower. In Prairie. Pitt Twp., Wyandot Co. Robert McCormick and Edw. S. Thomas.
2070. *Cosmos bipinnatus* Cav. Cosmos. Escaped to waste ground north of Columbus, Franklin Co. John H. Schaffner. In Scioto and Ross Counties. Katie M. Roads.
2082. *Coreopsis lanceolata* L. Lanceleaf Tickseed. Painesville, Lake Co. Wm. C. Werner.
2084. *Coreopsis major* Walt. Greater Tickseed. Introduced in a nursery. Perry, Lake Co. Wm. C. Werner.
2099. *Gaillardia pulchella* Foug. Gaillardia. Escaped at Jefferson, Ashtabula Co. L. E. Hicks.
2116. *Grindelia squarrosa* (Pursh) Dun. Broadleaf Gum-plant. Pickaway Twp., Pickaway Co. Leslie L. Pontius and Floyd Bartley.
- 2116a. *Grindelia squarrosa serrulata* (Rydb.) Steyermark. Our specimens of *Grindelia* from Huron and Muskingum counties belong to this variety, as determined by Julian A. Steyermark of the Missouri Bot. Garden.
2125. *Solidago odora* Ait. Sweet Goldenrod. White's gulch, Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
2128. *Solidago rigidiuscula* (T. & G.) Port. Slender Showy Goldenrod. Harrison Twp., Champaign Co. E. N. Transeau, M. B. Trautman, and Edw. S. Thomas.
- 2131.1. *Solidago altissima* L. Tall Goldenrod. Painesville, Lake Co. Wm. C. Werner.
2136. *Solidago neglecta* T. & G. Swamp Goldenrod. Northfield, Summit Co. Fred J. Tyler.
2139. *Solidago ohioensis* Ridd. Ohio Goldenrod. Bern Twp., Fairfield Co. E. S. Thomas.
2156. *Aster drummondii* Lindl. Drummond's Aster. South of O'Shaughnessy Dam, Washington Twp., Franklin Co. Edw. S. Thomas.
2157. *Aster undulatus* L. Wavy-leaf Aster. Green Twp., Monroe Co., Marietta, Washington Co., Elk Run Twp., Columbiana Co., Union Twp., Knox

- Co. E. S. Thomas. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
2172. *Aster salicifolius* Lam. Willow Aster. On prairie. Big Island, Marion Co. Robert McCormick and Edw. S. Thomas.
- 2189.1. *Eupatorium album* L. White Thoroughwort. Liberty Twp., Jackson Co. Floyd Bartley and Leslie L. Pontius.
2195. *Eupatorium aromaticum* L. Smaller Snake-root. Liberty Twp., Jackson Co. Leslie L. Pontius and Floyd Bartley.
- 2198.1. *Kuhnia glutinosa* Ell. Glutinous False Boneset. Liberty Twp., Ross Co. Floyd Bartley and Leslie L. Pontius. Kennard, Champaign County, E. S. Thomas.
2202. *Lacinaria spicata* (L.) Ktz. Dense Blazing-star. Tuscarawas Twp., Coschocton Co. Frank B. Selby.
2223. *Artemisia ludoviciana* Nutt. Western Mugwort. Paint Twp., Highland Co., Katie M. Roads. Jasper, Pike Co. L. E. Hicks.
2235. *Synosma suaveolens* (L.) Raf. Sweet-scented Indian-plantain. Bern Twp., Fairfield Co. E. S. Thomas, C. F. Walker and Robt. Goslin.
2255. *Centaurea jacea* L. Brown Star-Thistle. Thompson, Geauga Co. J. G. Binnig.
2259. *Centaurea maculosa* Lam. Spotted Star-thistle. Roadside weed. Painesville, Lake Co. Fred. J. Tyler and Harriet B. Tyler.
2278. *Hieracium marianum* Willd. Maryland Hawkweed. Stow corners, Summit Co. Floyd Bartley and Leslie L. Pontius.
2282. *Hieracium pratense* Tausch. Field Hawkweed. North Central Trumbull Co. L. E. Hicks and F. B. Chapman. Burton Twp., Geauga Co. Chas. Dambach.
2285. *Hieracium greenii* Port. & Britt. Green's Hawkweed. Conneaut, Ash-tabula Co. L. E. Hicks.
- 2285.1. *Crepis pulchra* L. Small-flowered Hawksbeard. Manchester, Adams Co. From Europe. Conrad Roth.
2300. *Lactuca villosa* Jacq. Hairy-veined Blue Lettuce. Clarksville, Clinton Co.; Fort Ancient, Warren Co.; Peach Mountain, Adams Co.; Ripley, Brown Co.; Cincinnati, Hamilton Co. Katie M. Roads. Buchtel, Athens Co. Len. Stephenson.

Physical Geology.

This book is not to be confused with the one with the same title by Longwell. This new book is based on Physical Geology by Longwell, Knopf & Flint. It follows the same order as the parent text and differs considerably from the other "Outlines." The Chapters are as follows: I, Geology, the Science of the Earth; II, Weathering as a Part of Erosion; III, Streams and Valleys; IV, Subsurface Water; Lakes and Swamps; V, Glaciation; VI, Wind as a Geologic Agent; VII, The Sea; VIII, Sedimentary Rocks; IX, Igneous Rocks and their Mode of Occurrence; X, Volcanoes and Volcanism; XI, Diastrophism and Its Effects; XII, Earthquakes; The Earth's Interior; XIII, Metamorphism; XIV, The Structure and History of Mountains; XV, Land Forms; XVI, Mineral Resources; Appendix A, Minerals; B, Topographic Maps.

The divorcing of Wind from Weathering is a great help because where the two are considered in one chapter the student often becomes confused and gets the impression that wind erosion is weathering. The inclusion of Lakes and Swamps in the same chapter as Subsurface Water may lead to the same confusion although the text is very clear. The Chapter on Mineral Resources is a wise inclusion as is the Appendix on Topographic Maps. The authors have made an excellent abridgement of their Physical Geology and we feel that where the shorter text is desirable that this new Outlines is very usable and well arranged.—Willard Berry.

Outlines of Physical Geology, by C. R. Longwell, A. Knopf and R. F. Flint. v + 356 pp. New York, John Wiley and Sons, 1934. \$3.00.