

SURVEY OF THE HERBARIUM RESOURCES OF OHIO¹

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ABSTRACT. More than one million specimens of vascular and nonvascular plants are housed in Ohio herbaria. These collections are an invaluable scientific resource. Only 13 Ohio herbaria are listed in the *Index Herbariorum*. This survey identifies 37 Ohio herbaria and summarizes their holdings. Details given for these herbaria include: names and addresses of curators, hours of access, strengths of the collections, and research activities of the staff.

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INTRODUCTION

Herbaria are invaluable scientific resources for study of the more than one-quarter million plant species in the world. In essence, herbaria are reference libraries. The specimens housed in these collections help answer questions on the disappearance of species, changing distributions, and evolutionary patterns of divergence and reticulation. Herbarium records lead researchers down new pathways toward development and utilization of food and medicinal plants, economically significant plant materials, and aesthetic horticultural innovations.

The herbaria of Ohio are numerous and contain a diversity of holdings. These collections constitute a significant scientific resource documenting the flora of Ohio and the world and embracing all elements of the plant kingdom. Collectively they contain more than one million specimens with a conservative value of over \$7,500,000.

The present survey of these collections stems from the absence of any single listing for all of them and from the need for communication among these institutions.

Only 13 Ohio herbaria are listed in the *Index Herbariorum* (Holmgren et al. 1981). Thirty-seven Ohio herbaria are represented in our survey. Our listing also attempts to provide the researcher with enough details on the holdings of the herbarium so that his or her time and energies may be used to the best advantage. It is hoped that these descriptions will allow a student of a particular area or taxonomic group to identify holdings which deserve critical examination.

The specific stimulus for the survey was the organization of a symposium on Ohio's herbarium resources sponsored by The Ohio Academy of Science. This symposium was held at The Ohio State University in conjunction with the annual meeting of the Academy, 24 April 1982. Our survey at that time appeared in a separate publication which was distributed to attendees at the symposium (Cusick and Snider 1982). The present version is slightly revised from the previous publication.

METHODS AND MATERIALS

In January and February 1982 the authors sent questionnaires to 52 Ohio institutions. The list of institutions was assembled from four sources: Holmgren et al. (1981), Ohio Natural Heritage Report (1977), Peterjohn and Walker (1978), and the personal knowledge of the authors. Positive responses were received from 37 different herbaria. A summary of these replies constitutes the bulk of this paper.

¹Revised and updated from a presentation at a symposium, "The Herbarium Resources of Ohio: Present Status and Future Directions," organized for the meetings of The Ohio Academy of Science, Columbus, Ohio, 24 April 1982. Manuscript received 26 April 1984 and in revised form 6 August 1984 (#84-20).

We are aware that this survey is not complete. A few institutions with herbaria are not represented, either because they failed to respond to the authors' questionnaires and follow-up efforts, or because the existence of the collection was not known to the authors. Large private collections also may not be included for similar reasons. Some important collections of fossil plants probably have been overlooked since these may be housed in departments of geology rather than botany.

Thirty-one of the herbaria included in our survey are academic collections and six are housed at non-academic institutions. This proportion is representative of the disposition of herbaria nationally. Of the approximately 230 public herbaria in the United States about 75% are academic collections (Beaman 1965). Beaman arbitrarily classified herbaria into three broad groups: small, with fewer than 100,000 specimens; medium, with between 100,000 and 500,000 specimens; and large, with more than 500,000 specimens. Using these criteria, Ohio has but a single large herbarium, The Ohio State University, one medium-sized herbarium, Miami University, and 35 small collections.

RESULTS

The listings which follow are arranged alphabetically by institution. The code is the accepted acronym from 7th ed. *Index Herbariorum*. Information given in any category is that supplied by the respondents. The headings largely are self-explanatory. Absence of a heading indicates that no information on that subject was provided. The heading "Equipment" lists what the visitor may expect to find available for his or her use. An affirmative response to "Mail Loans" means that the usual herbarium procedures for such loans are followed by that institution. At the end of each listing is a sentence or two summarizing the general use and activities of that herbarium and any special research interests mentioned by the respondent. All replies to the questionnaires have been edited for conciseness.

UNIVERSITY OF AKRON

Department of Biology
Akron, OH 44325

STAFF: W. P. Stoutamire, Curator
(216) 375-7162

VASCULAR HOLDINGS:

Ohio — 2,328
North America — 1,170
Eastern Hemisphere — 97
Total — 3,595

Strengths: Late 19th century collections by Edward Claypole from the Akron area; local flora.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

Teaching and reference collection.

ANTIOCH COLLEGE

Department of Biology
Yellow Springs, OH 45387

STAFF: Walter Tulecke, Professor of Biology
(513) 767-7331

VASCULAR HOLDINGS:

Ohio — 500

Strengths: Local flora; flora of Clifton Gorge and Glen Helen, Greene County, Ohio.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

EQUIPMENT: Dissecting microscopes.

Teaching and reference collection.

BALDWIN-WALLACE COLLEGE

Department of Biological Sciences
Berea, OH 44017

STAFF: Donald S. Dean, Department
Chairman
(216) 826-2262

VASCULAR HOLDINGS:

Ohio — 3,900

North America — 300

Total — 4,200

Strengths: Flora of northern Ohio.

NONVASCULAR HOLDINGS:

Algae: None reported.

Fungi: Approximately 300 specimens of myxomycetes forming the foundation for E. L. Fullmer's study of the slime molds of Ohio. Maintained in boxes.

Lichen: None reported.

Bryophytes: Approximately 130 specimens from Ohio; in packets. Unknown number of specimens from outside Ohio; mounted on cards.

ACCESS: By appointment.

EXCHANGES: Yes.

Teaching and reference collection.

BOWLING GREEN STATE UNIVERSITY

Edwin Lincoln Moseley Herbarium
Department of Biological Sciences
Bowling Green, OH 43403

CODE: BGSU

STAFF: N. William Easterly, Curator and
Professor of Botany
(419) 372-2434

VASCULAR HOLDINGS:

Ohio — 19,000
North America — 1,000
Eastern Hemisphere — 500
Total — 20,500

Strengths: Flora of the Oak Openings region of northwest Ohio; collections of N. William Easterly and E. L. Moseley.
NONVASCULAR HOLDINGS: None reported.
ACCESS: 8 AM to 5 PM, year-round, or by appointment.

EQUIPMENT: Dissecting microscope, manuals.

MAIL LOANS: Yes.

EXCHANGES: Yes, with other Ohio herbaria.

RESEARCH INTERESTS: Flora of the Oak Openings of northwest Ohio.

UNIVERSITY OF CINCINNATI

Department of Biological Sciences
Cincinnati, OH 45221

CODE: CINC

STAFF: Jerry A. Snider, Curator
(513) 475-3741
Victor Soukup, Assistant Curator
(513) 475-3741

VASCULAR HOLDINGS:

Ohio — 5,000
North America — 25,000
Western Hemisphere — 1,800
Eastern Hemisphere — 20,000
Total — 51,800

Strengths: Flora of southwest Ohio and adjacent Kentucky; Kentucky collection of E. Lucy Braun; herbarium of Lloyd Library of Cincinnati.

NONVASCULAR HOLDINGS:

Algae: Approximately 1,000 specimens. Mostly miscellaneous North American collections. Maintained on sheets, packets, slides.

Fungi: Approximately 5,000 specimens, about 4,300 of these from Ohio. Holdings include approximately 2,000 pre-1937 Ohio collections of William Bridge Cooke.

Lichens: Approximately 7,000 specimens. Southeastern and southwestern Ohio are especially well represented; also Kentucky, Michigan. Other U.S. holdings are represented by several hundred specimens. Important collection of the genus *Cladonia* studied by Alexander Evans. Maintained in packets.

Bryophytes: Approximately 22,000 specimens. Unknown number yet to be accessioned. Worldwide representation, strong in U.S. and Canada collections. Particularly strong in southeastern and southwestern Ohio collections, Michigan and Kentucky. Especially strong in North American *Sphagnum* collections. Numerous Exsiccati represented. The personal herbarium of Dr. Margaret Fulford (ca. 8,000 specimens) is housed and maintained separately by Dr. Fulford (address as above). This collection very strong in Caribbean and South American hepatics. Many type specimens. Specimens maintained in packets.

INCIDENTAL HOLDINGS: Assorted seed and wood collections.

ACCESS: Monday–Friday, 8 AM to 5 PM, September–June, or by appointment.

EQUIPMENT: Dissecting microscope, library.

MAIL LOANS: Yes.

EXCHANGES: By arrangement.

RESEARCH ACTIVITIES: Flora of southwest Ohio and adjacent Kentucky; systematics of Orchidaceae and *Trillium*; bryophyte studies; lichen studies.

NOTE: The herbarium of the Lloyd Library of Cincinnati, about 25,000 sheets, is on permanent loan to this herbarium and is housed therein. The international moss exchange for members of the American Bryological and Lichenological Society, Inc., is currently located here.

CLEVELAND MUSEUM OF NATURAL HISTORY

Wade Oval, University Circle
Cleveland, OH 44106

CODE: CLM

STAFF: James K. Bissell, Curator of Botany
(216) 231-4600

VASCULAR HOLDINGS:

Ohio — 22,000
 North America — 5,000
 Western Hemisphere — 500
 Eastern Hemisphere — 1,500
 Total — 29,000

Strengths: Flora of northeast Ohio; collections of Leslie D. Stair and James K. Bissell.

NONVASCULAR HOLDINGS:

Algae: None reported.
 Fungi: 250 specimens. Local collections and European specimens included. Maintained on sheets, packets and boxes.

Lichens: 200 specimens. Mostly local collections, some European specimens included. Maintained in boxes.

Bryophytes: None reported.

INCIDENTAL HOLDINGS: Worldwide collection of 2,000 wood samples.

ACCESS: Tuesday–Friday, 10 AM to 5 PM, year–round.

EQUIPMENT: Binocular microscopes.

MAIL LOANS: Yes.

EXCHANGES: Yes.

RESEARCH INTERESTS: Vascular flora of northeast Ohio.

NOTE: Most nonvascular holdings in storage and difficult of access.

COX ARBORETUM

6733 Springboro Pike
 Dayton, OH 45449

STAFF: Marvin Olinsky, Director
 (513) 434-9005
 Amy J. Munich, Education
 Supervisor
 Sabina Sulgrove, Director of
 American Ivy Society and
 Research Center
 Pat Trapp, Herbarium Specialist

VASCULAR HOLDINGS: No number provided.

Strengths: The genus *Hedera*; American Ivy Society Collection; vouchers of new cultivars.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

EQUIPMENT: Dissecting microscope.

MAIL LOANS: Yes.

EXCHANGES: Limited.

Reference and research collection of American Ivy Society.

CUYAHOGA COMMUNITY COLLEGE

Eastern Campus
 4250 Richmond Rd.
 Warrensville Twp., OH 44122

STAFF: Barbara K. Andreas, Professor of
 Biology
 (216) 292-2389

VASCULAR HOLDINGS:

Ohio — 1,000

Strengths: Spring flora of northeast Ohio.

NONVASCULAR HOLDINGS: None reported.

EQUIPMENT: Dissecting microscopes, manuals.

Teaching and reference collection.

THE DAWES ARBORETUM

7770 Jacksontown Rd. SE
 Newark, OH 43055

STAFF: Charles T. Greaves, Botanist
 (614) 323-2355; (614) 323-2990

VASCULAR HOLDINGS: Total estimated holdings — 700.

Strengths: Cultivated woody ornamentals, ferns and prairie species, all from the Arboretum's living collection.

NONVASCULAR HOLDINGS: None reported.

ACCESS: Monday–Friday, 7:30 AM to 4:30 PM, year–round, or by appointment.

EQUIPMENT: Dissecting microscope.

MAIL LOANS: Yes.

EXCHANGES: Yes, if related to Arboretum living collection.

Reference collection of species growing on grounds of Arboretum.

UNIVERSITY OF DAYTON

Department of Biology
 Dayton, OH 45469

STAFF: Joseph D. Laufersweiler, Associate
 Professor of Biology
 (513) 229-2521

VASCULAR HOLDINGS:

Ohio — 600

North America — 100

Western Hemisphere — 50

Total — 750

Strengths: Flora of the Dayton area; Swiss alpine flora.

NONVASCULAR HOLDINGS:

Algae: Approximately 100 specimens. Coastal Florida collection containing primarily red and brown algae. Mounted on sheets.

Fungi: None reported.

Lichens: None reported.

Bryophytes: None reported.

ACCESS: By appointment.

EQUIPMENT: Microscopes.

MAIL LOANS: Yes.

EXCHANGES: No.

Teaching and reference collection.

DAYTON MUSEUM OF NATURAL HISTORY

2629 Ridge Ave.

Dayton, OH 45414

CODE: DMNH

STAFF: Gary A. Covert, Curator of Biology
(513) 275-7432

VASCULAR HOLDINGS:

Ohio — 4,116

North America — 2,449

Western Hemisphere — 6,565

Eastern Hemisphere — 105

Total — 13,235

Strengths: Flora of Montgomery County, Ohio and adjacent areas; collections of John W. VanCleve and William B. Werthner.

NONVASCULAR HOLDINGS:

Algae: 35 specimens. Mostly algae from Florida. Maintained in jars.

Fungi: 736 specimens. Collection consists primarily of fleshy fungi collected during the past 10–15 years in southwestern and southcentral Ohio. Complete collection data, many specimens accompanied by spore prints. Maintained in boxes, jars.

Lichens: 69 specimens. Mostly unidentified collections with complete collection data primarily representing southwestern and southcentral Ohio. Maintained in packets.

Bryophytes: 176 specimens. Collections largely unidentified but with complete collection data. Specimens

mostly from southwestern and southcentral Ohio. Maintained in packets.

INCIDENTAL HOLDINGS: Miscellaneous collections of plant galls, seeds, and winter twigs.

ACCESS: Monday–Friday, 9 AM to 6 PM, year–round, except holidays.

EQUIPMENT: Binocular microscope; library of over 10,000 volumes.

MAIL LOANS: Yes.

EXCHANGES: Yes; Ohio material for that from eastern North America.

RESEARCH INTERESTS: Flora of Montgomery County, Ohio.

DENISON UNIVERSITY

Department of Biology

Granville, OH 43023

CODE: DEN

STAFF: Juliana C. Mulroy, Assistant Professor of Biology
(614) 587-6327;
(614) 587-0810, ext. 261

VASCULAR HOLDINGS:

Ohio — 5,000

North America — 2,500

Western Hemisphere — 500

Eastern Hemisphere — 100

Total — 8,100

Strengths: Worldwide fern collection of Wallace Cathcart; flora of Licking County, Ohio.

NONVASCULAR HOLDINGS:

Algae: Approximately 200 specimens. Poorly documented, used primarily as a teaching collection. Mounted on sheets.

Fungi: Approximately 50 specimens. Local collections representing student projects. Maintained in boxes.

Lichens: 92 specimens. All Ohio collections. Maintained in packets.

Bryophytes: 43 specimens. All Ohio collections. Maintained in packets.

ACCESS: By appointment.

EQUIPMENT: Laboratory space, microscopes.

MAIL LOANS: Yes.

EXCHANGES: Yes.

Teaching and reference collection; research on the Licking County flora.

**FRANZ THEODORE
STONE LABORATORY**

The Ohio State University
Put-in-Bay, OH 43456

CODE: FTSL

STAFF: Ronald L. Stuckey, Associate Director for Instruction

Franz Theodore Stone Laboratory
Professor of Botany,
The Ohio State University,
Department of Botany
1735 Neil Ave.
Columbus, OH 43210
(614) 422-6095

VASCULAR HOLDINGS:

Ohio—2,500 to 3,000

Strengths: Local flora of the Lake Erie Islands and adjacent Erie and Ottawa Counties, Ohio.

NONVASCULAR HOLDINGS: None reported.

ACCESS: 20 June to 30 August.

MAIL LOANS: No formal procedure.

EXCHANGES: No.

Teaching collection; research on flora of the Lake Erie Islands.

HEIDELBERG COLLEGE

Biology Department
Tiffin, OH 44883

STAFF: Percy L. Lilly, Professor of Biology
(419) 448-2693

VASCULAR HOLDINGS:

Ohio—1,000

North America—200

Total—1,200

Strengths: Flora of Crawford and Seneca Counties, Ohio; collections of Ronald L. Stuckey.

NONVASCULAR HOLDINGS: None reported.

INCIDENTAL HOLDINGS: Special collection of 125 representative woody species by R. E. Eshmeyer.

ACCESS: By appointment.

Teaching and reference collection.

HIRAM COLLEGE

Biology Department
Hiram, OH 44234

VASCULAR HOLDINGS:

Ohio—1,200

North America—400

Western Hemisphere—10

Total—1610

Strengths: Flora of northeast Ohio; spring flora.

NONVASCULAR HOLDINGS: None reported.

INCIDENTAL HOLDINGS: About 100 fossil specimens, mostly from Ohio and Pennsylvania.

ACCESS: Monday–Friday, 9 AM to 5 PM, September–May; summer hours by appointment.

EQUIPMENT: Microscopes.

MAIL LOANS: Yes.

EXCHANGES: No.

Teaching and reference collection.

THE HOLDEN ARBORETUM

9500 Sperry Road
Mentor, OH 44060

The former herbarium of Case Western Reserve University of Cleveland, Ohio, was donated to this institution. The collection is uncurated and at present is inaccessible to researchers.

For information contact: Peter W. Bristol, Horticulturist (216) 946-4400.

KENT STATE UNIVERSITY

Department of Biological Sciences
Kent, OH 44242

CODE: KE

STAFF: Tom S. Cooperrider, Curator of Vascular Plants

(216) 672-3613

Samuel J. Mazzer, Curator of Nonvascular Plants

(216) 672-3613

Miwako K. Cooperrider, Herbarium Assistant

(216) 672-3613

VASCULAR HOLDINGS:

Ohio—43,000

North America—6,000

Rest of world—1,000

Total—50,000

Strengths: Flora of Ohio; collections of Barbara Andreas, Tom S. Cooperrider, Allison W. Cusick, Almon N. Rood, and Gene M. Silberhorn; flora of Cuyahoga Valley National Recreation Area; flora of the following Ohio counties—Ashland, Geauga, Holmes, Jefferson, Knox, Me-

dina, Perry, Portage, Stark, Summit, Trumbull and Wayne.

NONVASCULAR HOLDINGS:

Algae: None reported.

Fungi: Approximately 6,000 specimens. Collections consist primarily of fleshy fungi representing Great Lakes region and eastern U.S. Especially good representation of fleshy fungi of Arcto-Tertiary geoflora. Primary interest is in ectomycorrhizal taxa. Maintained in boxes.

Lichens: Approximately 2,000 specimens. Collections mostly from North America with a small number from Mexico, Central America, Japan and Europe. Maintained in packets.

Bryophytes: Approximately 2,000 specimens. Collections mostly representative of Great Lakes Forest region and eastern U.S. Some western U.S. collections also present. Maintained in packets.

ACCESS: Monday–Thursday, 8:30 AM to 11:30 AM, September–May, or by appointment.

EQUIPMENT: Standard.

MAIL LOANS: Yes.

EXCHANGES: To a limited extent, chiefly of Ohio specimens; also interested in exchanges for Central American and East Asian fungi.

RESEARCH INTERESTS: Flora of Ohio; mycological studies.

**LAKELAND
COMMUNITY COLLEGE**

Department of Biological Sciences
Rt. 306 and I-90
Mentor, OH 44060

STAFF: Edward J. P. Hauser, Department
Chairperson
(216) 953-7151

VASCULAR HOLDINGS:
Ohio — 500

Strengths: Flora of northeast Ohio.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

EXCHANGES: No.

Teaching and reference collection.

MALONE COLLEGE

Department of Science and Mathematics
Canton, OH 44709

STAFF: Stephen Diakoff, Curator
(216) 489-0800, ext. 499

VASCULAR HOLDINGS: Total estimated
holdings — 300 to 400.

Strengths: Unknown.

NONVASCULAR HOLDINGS: None reported.

INCIDENTAL HOLDINGS: Miscellaneous
specimens of fossil plants.

ACCESS: During school hours.

EXCHANGES: No.

Teaching and reference collection.

MARIETTA COLLEGE

Biology Department
Marietta, OH 45750

STAFF: David Young, Professor of Biology
(614) 373-4643

Marilyn Ortt, Volunteer
701 Colegate, Marietta, OH 45750
(614) 373-3372

VASCULAR HOLDINGS:

Ohio — 3,000

North America — 200

Total — 3,200

Strengths: Local herbarium by John L. Riddell (1830s); fern collection of George Proctor; flora of southeast Ohio and adjacent West Virginia.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

EQUIPMENT: Worktable, microscopes.

MAIL LOANS: Yes.

EXCHANGES: No.

Teaching and reference collection; research on the flora of southeast Ohio.

MIAMI UNIVERSITY

Willard Sherman Turrell Herbarium
Department of Botany
Oxford, OH 45056

CODE: MU

STAFF: W. Hardy Eshbaugh, Curator and
Professor of Botany

(513) 529-4934

Gene P. Williamson, Technician
(513) 529-2755

VASCULAR HOLDINGS: Total estimated
holdings — 131,000

Strengths: Non-Ohio material formerly in herbarium of Oberlin College; collection of western U.S. plants of Percy Train; flora of Butler County, Ohio; New Zealand

ferns; collections from Brazil, South Africa, and Tierra del Fuego.

NONVASCULAR HOLDINGS:

Algae: Approximately 2,000 specimens. U.S. mostly represented, some international collections also present. Several exsiccati specimens represented.

Fungi: 34,500 specimens, excluding exsiccati. Additional collections yet to be accessioned. Worldwide representation, including approximately 1,000 specimens from Ohio collected by Bruce Fink and 6,000+ specimens from the collection of William Bridge Cooke. Maintained in packets, boxes.

Lichens: 8,416 specimens. Additional collections yet to be accessioned. Worldwide representation. A portion of Bruce Fink's lichen collection is housed here. Maintained in packets, boxes.

Bryophytes: 25,654 specimens. Additional collections yet to be accessioned. Worldwide representation. Good representation of specimens from Japan, Micronesia. Harvey A. Miller collection (1956-1967) deposited here. Numerous exsiccati specimens also present. Maintained in packets.

INCIDENTAL HOLDINGS: Reference slide collection of anatomical materials; ca. 2,500 specimens of plant fossils.

ACCESS: Monday-Friday, 8 AM to 4:30 PM, year-round, or by appointment.

EQUIPMENT: Laboratory space, microscopes, camera attachments, library.

MAIL LOANS: Yes.

EXCHANGES: Yes; specimens also purchased.

RESEARCH INTERESTS: Butler County, Ohio flora; plant anatomy; systematics of *Cap-sicum*, Empetraceae and Myristicaceae.

MUSKINGUM COLLEGE

Biology Department
New Concord, OH 43762

STAFF: Clement E. Dasch, Professor of Biology
(614) 826-8224

VASCULAR HOLDINGS:

Ohio — 21,000

North America — 2,500

Total — 23,500

Strengths: Ferns and fern allies collected by Mr. and Mrs. William Adams, Jr.; flora of Muskingum County, Ohio.

NONVASCULAR HOLDINGS: None reported.

ACCESS: Monday-Friday, 8 AM to 5 PM, September-May, and by appointment.

EQUIPMENT: Stereomicroscopes.

MAIL LOANS: Yes.

EXCHANGES: Yes; one-for-one basis.

Teaching and reference collection.

OBERLIN COLLEGE

Department of Biology
Kettering Hall of Science
Oberlin, OH 44074

CODE: OC

STAFF: George T. Jones, Curator and Professor Emeritus
(216) 775-8316

VASCULAR HOLDINGS:

Ohio — 26,066

North America — 37

Total — 26,103

Strengths: Flora of Lorain County, Ohio and adjacent areas; collections of F. O. Grover, George T. Jones and E. Wilkinson.

NONVASCULAR HOLDINGS:

Algae: 172 specimens, primarily from Ohio. Maintained in packets, on sheets.

Fungi: 5,347 specimens, 4,500 from Ohio; 2,228 specimens of the family Polyporaceae. 300 specimens of myxomycetes. Maintained in packets, on sheets.

Lichens: 346 specimens. Collections from Lorain, Erie and Huron Counties. In packets.

Bryophytes: 1,047 specimens. Mostly representative of Lorain, Erie and Huron Counties. In packets.

INCIDENTAL HOLDINGS: Special ecological collection of dominants and subdominants of western U.S., about 600 in number; miscellaneous seed and wood collections of E. Wilkinson.

ACCESS: By appointment.

MAIL LOANS: Yes.

Teaching and reference collection; research on flora of northern Ohio.

OHIO HISTORICAL SOCIETY

Natural History Department
1982 Velma Ave.
Columbus, OH 43211

STAFF: David L. Dyer, Collections Manager
(614) 466-1500, ext. 299

VASCULAR HOLDINGS:

Ohio — 1,000
North America — 200
Total — 1,200

Strengths: Flora of Leo Petroglyph, Jackson County, and Fort Hill, Highland County, Ohio.

NONVASCULAR HOLDINGS: None reported.

INCIDENTAL HOLDINGS: Wood collection, 300 specimens; seed collection, 700 specimens.

ACCESS: Monday–Friday, 9 AM to 6 PM, year-round.

EQUIPMENT: Laboratory space, microscopes.

MAIL LOANS: No.

EXCHANGES: No.

Reference collection used for exhibits and educational programs.

OHIO NORTHERN UNIVERSITY

Department of Biology
Ada, OH 45810

STAFF: Charles C. Laing, Curator
(419) 634-9921, ext. 2331

VASCULAR HOLDINGS: Total estimated holdings — 250.

Strengths: Unknown.

NONVASCULAR HOLDINGS:

Algae: None reported.

Fungi: None reported.

Lichens: None reported.

Bryophytes: Approximately 50 specimens from Hardin County, Ohio and vicinity.

INCIDENTAL HOLDINGS: Oliver Perry Medsger cone collection.

ACCESS: By appointment.

EQUIPMENT: Dissecting microscopes.

MAIL LOANS: No.

Teaching and reference collection.

THE OHIO STATE UNIVERSITY

Department of Botany
1735 Neil Ave.
Columbus, OH 43210

CODE: OS

STAFF: Tod F. Stuessy, Director
(614) 422-5200

John J. Furlow, Supervisor
(614) 422-3296

Daniel J. Crawford, Curator
(614) 422-2725

Emanuel D. Rudolph, Curator
(614) 422-8952

Ronald L. Stuckey, Curator
(614) 422-6095

VASCULAR HOLDINGS:

Ohio — 150,000

North America (excluding Ohio and Mexico) — 145,000

Mexico and Central America — 10,000

South America — 3,500

Eastern Hemisphere — 2,500

Total — 311,000

Strengths: The OS Type Collection presently contains over 200 sheets of vascular plants. Some particularly important collections preserved here include many holotypes and isotypes of Thomas H. Kearney from the years between 1890 and 1901, holotypes and isotypes of William A. Kellerman's Guatemalan collections of 1905-1908, and isotypes and paratypes of Underwood and Selby for taxa collected in Colorado in 1901 and published by P. A. Rydberg. Also included are William A. Kellerman specimens from Guatemala (1905-1908); the original specimens of Thomas H. Kearney of 1890-1901; Asa Gray's Exsiccatae of North American Gramineae and Cyperaceae (1834-1835); John H. Schaffner collection of *Equisetum* (1900-1935); the pteridophyte herbarium of Lewis S. Hopkins; the herbarium of the Ohio Agricultural Experiment Station at Wooster, Ohio; the North American Appalachian Experimental Watershed Herbarium prepared by Harold N. Moldenke in the 1940s; the James A. Duke et al. collection of Panamanian vascular plants made during feasibility studies for an Atlantic-Pacific Interoceanic Sea-level Canal in Central America (1966-1968); and the Tod F. Stuessy et al. collection of Latin

American Compositae (1969-). Ohio collections include those of William S. Sullivan (1840), Floyd Bartley, Erwin M. Herrick, Allison W. Cusick, Clara G. Weishaupt and Ronald L. Stuckey.

NONVASCULAR HOLDINGS:

Algae: Approximately 16,500 specimens. Maintained on slides, some mounted specimens. Approximately 4,000 slides of fresh water algae of North America; approximately 12,000 slides of international diatoms, primarily from the diatom collection of Fletcher and Edward Hodges.

Fungi: Approximately 10,000 collections housed separately. Gilbert slime mold collection; W. G. Stover and W. A. Kellerman fungi collections, numbering about 5,000 Ohio specimens, of which about 3,000 are plant pathogens; Kellerman collection of Guatemalan fungi; Contact Roland Seymour, Aquatic Mycology, and C. Wayne Ellett, Parasitic Fungi.

Lichens: Approximately 14,300 specimens. Collections primarily from Ohio; several from the polar regions. Collections forming part of *Lichens of Ohio* by Fr. Conan Taylor housed here. Maintained in packets.

Bryophytes: Approximately 10,500 specimens. Approximately 75% is Ohio material, remainder from North America. Several exsiccata represented.

INCIDENTAL COLLECTIONS: Miscellaneous wood of Compositae of Latin America; large, but unorganized, seed collection of North American species.

ACCESS: Monday-Friday, 9 AM to 5 PM, year-round, or by appointment.

EQUIPMENT: Work tables, dissecting microscopes, annotation labels, library.

MAIL LOANS: Yes.

EXCHANGES: Yes, especially for Latin American Compositae; about 35 active exchanges at present.

RESEARCH ACTIVITIES: Taxonomic and revisionary studies in the Compositae, Chenopodiaceae, and Betulaceae; chemosystematics; numerical phenetics; cladistics; the history of botany; aquatic vascular

plants of the Great Lakes region; flora of Ohio; Lichenological studies.

**THE OHIO STATE
UNIVERSITY — LIMA CAMPUS**

4240 Campus Drive
Lima, OH 45804

STAFF: Roy E. Snyder, Curator
(419) 228-2641, ext. 367

VASCULAR HOLDINGS:

Ohio — 1,000

North America — 2,000

Total — 3,000

NONVASCULAR HOLDINGS:

Algae: 150 specimens of brown, green and red algae, primarily from Oregon, mounted on sheets and in liquid.

Fungi: 175 specimens from Washington, West Virginia and Canada, maintained in packets.

Lichens: None reported.

Bryophytes: 150 specimens.

ACCESS: By appointment.

MAIL LOANS: No.

EXCHANGES: No.

Teaching and reference collection.

OHIO UNIVERSITY

Bartley Herbarium
Department of Botany
Athens, OH 45701

CODE: BHO

STAFF: Philip D. Cantino, Curator of Vascular Plants

(614) 594-6344

Warren A. Wistendahl, Curator of Nonvascular Plants

(614) 594-5860

VASCULAR HOLDINGS:

Ohio — 25,800

North America — 8,000

Rest of world — 700

Total — 34,500

Strengths: Flora of southeast Ohio; collections of Floyd Bartley and Charles R. Goslin.

NONVASCULAR HOLDINGS:

Algae: None reported.

Fungi: Acrasiomycetes of Ohio, collections and cultures. Contact James C. Cavender.

Lichens: None reported.

Bryophytes: Approximately 2,800 specimens. Collections mostly of local and regional areas; other U.S. also represented. Collection includes approximately 200 hepatics. Floyd Bartley collection is deposited here and includes approximately 400 accessioned specimens and nine cartons yet to be sorted and counted.

ACCESS: By appointment.

EQUIPMENT: Dissecting microscopes, library.

MAIL LOANS: Yes.

EXCHANGES: Not at present time.

RESEARCH INTERESTS: Systematics of Labiatae; flora of southeast Ohio; systematics of *Ilex*; ecological reference collection.

NOTE: There is a separate Ohio University Palaeobotanical Herbarium; for information contact Gar W. Rothwell, address as above.

OHIO WESLEYAN UNIVERSITY

Department of Botany and Bacteriology
40 S. Henry St.
Delaware, OH 43015

STAFF: Jane M. Decker, Professor of Botany
(614) 369-4431

VASCULAR HOLDINGS:

Ohio—4,000

North America—7,000

Total—11,000

Strengths: Flora of Delaware County, Ohio; collections of Rufus Crane and Robert W. Long; North American Compositae.

NONVASCULAR HOLDINGS:

Algae: Approximately 25 specimens. East coast of U.S. represented. Maintained on sheets.

Fungi: Approximately 700 specimens. Worldwide representation including international *Streptomyces* collection of 600 taxa. Maintained as cultures.

Lichens: None reported.

Bryophytes: Approximately 300 specimens. Miscellaneous U.S. representation. Maintained on sheets, in boxes.

ACCESS: Monday–Friday, 8 AM to 5 PM, September–June, or by appointment.

EQUIPMENT: Microscopes, photocopying.

MAIL LOANS: No.

EXCHANGES: No.

Teaching and reference collection; research in cytotaxonomy.

URBANA COLLEGE

Department of Biology
College Way
Urbana, OH 43078

STAFF: Clara May Frederick, Professor of Biology

(513) 652-1301

Carolyn Circle, Administrative Assistant

VASCULAR HOLDINGS:

Ohio—5,700

North America—190

Total—5,890

Strengths: Nineteenth century collections of Milo G. Williams, John Samples, and C. W. Short; flora of Cedar Bog, Champaign County, Ohio.

NONVASCULAR HOLDINGS:

Algae: Approximately 300 specimens. Collections mostly represent Champaign County, Ohio and the western end of Lake Erie; a few specimens from the Caribbean and the Virgin Islands. Preserved in jars.

Fungi: Approximately 100 specimens, mostly from Champaign County, Ohio. Virginia and West Virginia specimens also. Maintained in packets, boxes, jars.

Lichens: Approximately 75 specimens. Collections from Champaign and Hocking Counties, Ohio. Maintained in packets.

Bryophytes: Approximately 75 specimens. Champaign County, Ohio represented. Maintained in packets.

ACCESS: Monday–Friday, 8 AM to 4:30 PM, September–May, and by appointment.

EQUIPMENT: Dissecting microscopes.

MAIL LOANS: No.

EXCHANGES: No.

Teaching and reference collections; research on the flora of the bogs of west-central Ohio.

WALSH COLLEGE

Department of Biology
2020 Eastern Ave.
Canton, OH 44720

STAFF: Conrad Gutermuth, Associate Professor of Biology and Department Chairman
(216) 499-7090, ext. 22

VASCULAR HOLDINGS:

Ohio — 429
North America — 6
Eastern Hemisphere — 3
Total — 438

Strengths: Aquatic species, woody species, especially *Acer* and *Quercus*.

NONVASCULAR HOLDINGS: None reported.

ACCESS: By appointment.

EQUIPMENT: Dissecting scopes.

MAIL LOANS: No formal procedures.

EXCHANGES: No formal policy.

NOTE: Specimens mounted on sheets covered with clear self-adhere plastic.

Teaching and reference collection.

THE WILDERNESS CENTER, INC.

Box 202
Wilmot, OH 44689

STAFF: Robert W. Hawes, Naturalist
(216) 359-5235

VASCULAR HOLDINGS:

Ohio — 800

Strengths: Flora of The Wilderness Center properties and the Stark-Case prairie, Holmes and Stark Counties, Ohio.

NONVASCULAR HOLDINGS: None reported.

INCIDENTAL HOLDINGS: Small teaching collections of seeds of prairie plants, leaves of woody species, and herbaceous inflorescences.

ACCESS: Tuesday-Saturday, 9 AM to 5 PM, Sunday, 1 to 5 PM, except holidays.

EQUIPMENT: Dissecting scopes.

MAIL LOANS: No.

EXCHANGES: No.

Teaching and reference collection.

WILMINGTON COLLEGE

Wilmington College Herbarium and
Herbarium of Sture F. Anliot
Department of Biology
Wilmington, OH 45177

CODE: WSFA

STAFF: Sture F. Anliot, Assistant Professor of Biology
(513) 382-6661, ext. 237

VASCULAR HOLDINGS:

Ohio — 1,500
North America — 100
Western Hemisphere — 200
Total — 1,800

Strengths: Flora of southwestern Ohio and Clifton Gorge, Greene County, Ohio; uncurated collection of Patagonian species.

NONVASCULAR HOLDINGS:

Algae: Limited collection of marine algae from the North Carolina coast. Mounted on sheets.

Fungi: Limited collection of local higher fungi. Maintained in boxes.

Lichens: Approximately 300 specimens. Collections mostly of a local nature; some southeastern Alaska specimens also present. An unknown number of unmounted specimens from Patagonia are also available. Maintained in packets.

Bryophytes: Approximately 1,200 specimens. Largely representative of southwestern Ohio; some southeastern Alaska and eastern U.S. collections also maintained. An unknown number of collections from Patagonia are available. Maintained in packets.

ACCESS: By appointment.

EQUIPMENT: Microscopes, manuals, and space.

MAIL LOANS: Yes.

EXCHANGES: Yes, of bryophytes only.

Teaching and reference collection; research on vascular and nonvascular Floras of southwest Ohio.

WITTENBERG UNIVERSITY

Jacobs Herbarium
Department of Biology
Springfield, OH 45501

CODE: JHWU

STAFF: Ronald A. deLanglade, Professor of Biology
(513) 327-7719

VASCULAR HOLDINGS:

Ohio — 3,000
North America — 1,000
Western Hemisphere — 8,700

Total — 12,700

Strengths: Flora of Iceland.

NONVASCULAR HOLDINGS: Approximately 500 sheets, chiefly European algae, in Stuckenberg collection (see below).

INCIDENTAL HOLDINGS: J. H. W. Stuckenberg collection from the late 19th century; this is a group of portfolios containing about 2,000 sheets of European species.

ACCESS: By appointment.

EQUIPMENT: Workspace and microscopes.

MAIL LOANS: Yes.

EXCHANGES: May be interested.

Teaching and reference collection.

COLLEGE OF WOOSTER

Department of Biology
Wooster, OH 44691

STAFF: Gordon G. Whitney, Assistant Professor of Biology
(216) 264-1234, ext. 379

VASCULAR HOLDINGS:

Ohio — 2,200

North America — 2,800

Total — 5,000

Strengths: Personal collections from the late 19th century of Gertrude Holden, George D. Hulst, R. H. Ingraham (north-east Ohio) and A. D. Selby (Franklin County); flora of Wayne County, Ohio.

NONVASCULAR HOLDINGS: None reported.

ACCESS: Monday–Friday, 10 AM to 5 PM, September–May.

MAIL LOANS: No.

EXCHANGES: No.

Teaching and reference collection.

WRIGHT STATE UNIVERSITY

Department of Biological Sciences
Dayton, OH 45435

STAFF: James Runkel, Curator of Vascular Plants, Assistant Professor of Biological Sciences

(513) 873-3199

Wayne C. Carmichael, Curator of Nonvascular Plants, Associate Professor of Biological Sciences

(513) 873-3173

VASCULAR HOLDINGS:

Ohio — 100

North America — 300

Total — 400

Strengths: Unknown

NONVASCULAR HOLDINGS:

Algae: Approximately 100 specimens of living cultures (liquid medium and agar slants) representing U.S., western Canada and Great Britain. Complete collection of known genera, species and strains of toxic freshwater blue-green algae (cyanobacteria).

Fungi: Approximately 2,000 specimens of myxomycetes, including collection of Harold W. Keller. Adams, Greene and Scioto Counties, Ohio are especially represented in the collections.

Lichens: None reported.

Bryophytes: None reported.

ACCESS: By appointment.

EQUIPMENT: Dissecting microscopes.

MAIL LOANS: Yes.

Teaching and reference collection; research into ecology of local plant communities.

YOUNGSTOWN STATE UNIVERSITY

Department of Biological Sciences
410 Wick Ave.
Youngstown, OH 44555

CODE: YUO

STAFF: Carl F. Chuey, Associate Professor of Biological Sciences

(216) 742-3601

Nicholas Sturm, Assistant Professor of Biological Sciences

VASCULAR HOLDINGS:

North America — 20,300+

Western Hemisphere — 226

Eastern Hemisphere — 1,221

Total — 21,747+

Strengths: Worldwide ferns and fern allies with emphasis on North America (one-fourth of total vascular holdings); flora of Ohio, Pennsylvania, flora of Mahoning County, Ohio; 19th century collection from Siam by G. Culbertson; collections of John Laitsch, Almon Rood and E. W. Vickers.

NONVASCULAR HOLDINGS:

Algae: 65 specimens. Collections mostly marine, from New England, Oregon and Washington. Mounted on sheets.

Fungi: 758 specimens. 625 basidiomycetes, 133 ascomycetes and others.

Approximately 500 specimens are from Ohio, balance from Pennsylvania and West Virginia. Maintained in zip-lock bags, jars.

Lichens: 19 specimens. An additional 3000+ specimens from herbarium of N. Sturm are yet to be accessioned. Mahoning and Trumbull Counties, Ohio, are represented, as well as Pennsylvania and West Virginia. Maintained in packets.

Bryophytes: 477 specimens. An additional 400 specimens are yet to be accessioned. Ohio, Pennsylvania and West Virginia are represented.

INCIDENTAL HOLDINGS: 116 plant fossils.

ACCESS: Monday–Friday, 8 AM to 3 PM, September–May, or by appointment.

MAIL LOANS: Yes; loans of nonvascular materials restricted to bryophytes.

EQUIPMENT: Microscopes.

EXCHANGES: Yes; also interested in donations from individuals or institutions.

RESEARCH INTERESTS: Distributional studies of ferns and fern allies; flora of West Virginia.

NOTE: Collections of the Ohio Mushroom Society are maintained here.

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