

INFORMATION CIRCULAR NO. 21

GEOLOGICAL INVESTIGATIONS IN OHIO

1956

By

Carolyn Farnsworth



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INTRODUCTION

In September 1956, letters of inquiry and questionnaires were sent to all Ohio geologists on the mailing list of the Ohio Geological Survey, and to other persons who might be working on geological problems in Ohio. This publication has been compiled from the information contained on the returned forms.

In most cases it is assumed that the projects listed herein will culminate in reports which will be available to the profession through scientific journals, government publications, or graduate school theses.

All geologists are listed alphabetically, followed by address, date of probable completion of the investigation, title of research, and in many instances a brief description of the research project. The sponsoring agency is noted in parenthesis where different from author's address.

Research projects are indexed alphabetically by title under the subject headings of: economic geology, geomorphology, geophysics, glacial geology, mineralogy and petrology, paleontology, stratigraphy and sedimentation, structural geology; and, geographic distribution: statewide, areal, and county or local problems. An attempt was made to place each project under both of these categories, as interpreted by the title and description of the research.

In listing the investigations into the major fields of geology, the following statistics are evident:

Number of Projects	Fields of Geology
56	Stratigraphy and sedimentation
41	Economic geology
41	Paleontology
27	Mineralogy and petrology
17	Glacial geology
6	Structural geology
4	Geomorphology
4	Geophysics
6	Miscellaneous

On the basis of geographic distribution, twenty-three projects were classified as statewide in scope, sixty-four as areal studies, eighty-four as county or local problems, and five as miscellaneous.

Annual supplements of Geological Investigations in Ohio are planned. Each supplement will utilize the current geologists' mailing list of the Ohio Geological Survey in obtaining research problem data.

The response from the questionnaires for the present edition was most gratifying. One hundred and forty-five questionnaires were returned, indicating that one hundred and six geologists were engaged in one hundred and forty-eight Ohio research projects. Thirty-nine geologists were either not doing Ohio research, were unable to disclose their projects because of company security, or their projects were not considered geological in nature. No doubt there are other geological investigations in progress not included in this compilation.

It is hoped that in future years this survey will be received with the same enthusiasm and participation.

PROJECT LISTING BY AUTHOR

ABBOTT, Maxine Langford, University of Cincinnati, Cincinnati 21, Ohio.

- 1957 - The American Species of Asterophyllites, Annularia, and Sphenophyllum

To re-evaluate North American species of the three genera; to present means of their identification; to determine the geological range and geographical distribution; to present some new morphological data which have been obtained by using transfer methods.

AUKLAND, Merrill F., Ohio University, Athens, Ohio.

- 1956 - Clay Mineralogy Techniques — A Review

(A project of the Ohio Division of Geological Survey, Information Circular No. 20.)

- 1958 - The Clay Mineralogy of the No. 5 Clay in Ohio

A study by X-ray and differential thermal analyses techniques. (In partial fulfillment of a Ph. D. degree at Rutgers University and a project of the Ohio Division of Geological Survey.)

BACON, Charles S., Jr., Case Institute of Technology, Cleveland 6, Ohio.

- 1957 - Differential Thermal Analyses of the Chagrin Shale, Ohio, and Magnesite Layers in It

Differential thermal analysis has indicated that the resistant laminae of the Chagrin shale in the Euclid Creek area are largely magnesite, not dolomite as formerly supposed.

- 1957 - Malacostraca From the Chagrin Shale, Cuyahoga County, Ohio

Descriptions of several new species of Malacostraca which were collected from the Chagrin shale.

- 1957 - Sponge Bed From the Chagrin Shale, Euclid Creek, Euclid, Ohio

Photographs will be included along with the descriptions in this study of the sponges found near the base of the exposed Chagrin shale in Euclid Creek.

BAKER, Jack, University of Illinois, Urbana, Illinois.

- 1957 - Ground Water Resources of Geauga County

(In partial fulfillment of a Ph. D. degree and a project of the U. S. Geological Survey, Ground Water Branch.)

BATTELLE MEMORIAL INSTITUTE, 505 King Avenue, Columbus, Ohio.

1956 - Area Development Studies of Tuscarawas County, Ohio

This study appraises mineral resources as part of the entire resource picture as factors in future economic development of the County.

BERNHAGEN, Ralph J., Ohio Division of Geological Survey, Ohio State University, Columbus, Ohio.

1960 - Revised Geologic Map of Ohio

BERRYHILL, Henry L., Jr., U. S. Geological Survey, Box 272, New Philadelphia, Ohio.

1957 - The Geology and Mineral Resources of Belmont County

(In cooperation with the Ohio Division of Geological Survey; to be published by the U. S. G. S.)

BLAKE, Oliver, P. O. Box 405, Billings, Montana.

1958 - The Geology of Gallia County, Ohio

(In fulfillment of a Ph. D. degree, 1952, and a project of the Ohio Division of Geological Survey.)

BLICKLE, Arthur H., Ohio University, Athens, Ohio.

1956 - Studies in the Biochemical and Biological Degradation of Coal and Coal-Clay Mineral Wastes

A clarification of the true mechanisms of the break-down of coal minerals and the parts which both macro- and microorganisms play. (A project of the Ohio Division of Wildlife.)

1957 - Oxidation-Reduction Reactions of Bacteria and Blue-Green Algae in Acid Coal-Mine Drainage.

Photosynthetic blue-green algae and bacteria which are essentially chemo-synthetic are responsible for the reduction of acid mine wastes (in part). This part has never been clearly elucidated. (A project of the Ohio Division of Wildlife.)

BOND, Ralph H., Capital University, Columbus 9, Ohio.

1957 - Conodonts of the Ohio Shale

The fossils were collected from the Chillicothe Test Core and channel samples.

BRANT, Russell A., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - The Coal Resources of the Upper Part of the Allegheny Formation, Ohio

A study of the extent, thickness, characteristics, and reserves. (Ohio Division of Geological Survey Report of Investigations No. 29.)

1959 - The Geology of Stark County.

BROOKS, Harold K., University of Florida, Gainesville, Florida.

1957 - Trilobite Fauna From the Meadville Formation at Lodi, Ohio

Study of a collection of trilobites consisting of several hundred specimens.

1957 - Gastropod Burrows From the Chagrin Shale

A large collection of burrows from the vicinity of Cleveland are to be figured and described.

_____ ; Single, Erwin.

1957 - Restudy of Contorted Bedding in the Bedford-Berea Formation, Ross and Pike Counties, Ohio

A detailed analysis of the patterns of development of the disturbed strata to determine their mode of development.

BURNS, George W., Ohio Wesleyan University, Delaware, Ohio.

1957 - Late Wisconsin Forests of Ohio

The collection, identification, and radiocarbon dating of buried Pleistocene (mainly Wisconsin) woods, cones, needles, seeds, etc., throughout glaciated Ohio in order to arrive at a more accurate picture of boundaries of various advances and retreats of the ice and a better understanding of the climatic and vegetational fluctuations of Wisconsin time. For southern Ohio, utilization of trace ring width measurements to determine probable speed of ice advance and correlation of this method with that of comparative radio-carbon dating is also being made. (A project of the Ohio Division of Water.)

CADY, Gilbert H., 504 W. Oregon Street, Urbana, Illinois.

Continuing - Petrographic Studies of Ohio Coals

(A project of the Ohio Division of Geological Survey.)

CARMAN, J. Ernest, Ohio State University, Columbus 10, Ohio.

Indefinite - The Geology and Mineral Resources of Lucas County

CASTER, Kenneth E., University of Cincinnati, Cincinnati 21, Ohio.

Continuing - Problematica (Tracks, Trails, Spoor) of the Cincinnati with Emphasis on Paleoeologic Consideration

Continuing - Rafinesquinae of the Upper Ordovician

(In collaboration with graduate students.)

CHRISTOPHER, James E., Ohio State University, Columbus 10, Ohio.

1958? - Investigation of Shore Erosion on Lake Erie Between Fairport and Ashtabula, Ohio

CHRISTOPHER, James E. , (Continued)

Includes investigation of glacial geology, present sedimentary processes, and geomorphology, especially the mechanics of bluff slump, development of natural beaches, and sediment movement. (In partial fulfillment of a Ph. D. degree and a project of the Ohio Division of Shore Erosion.)

CLEVELAND MUSEUM OF NATURAL HISTORY, 2717 Euclid Avenue, Cleveland 5, Ohio.

1957 - Plastic Relief Map of Ohio

(In cooperation with the Ohio Division of Geological Survey.)

CLIFTON, H. Edward, 106 N. Market Street, Jefferson, Ohio.

1957 - The Carbonate Concretions of the Ohio Shale

(To be published by the Ohio Journal of Science.)

COASH, John R. , Bowling Green State University, Bowling Green, Ohio.

1957 - Glacial Geology of Seneca County

Mapping of glacial deposits, correlation of stratigraphy, and outlining of lake borders. The area covered will eventually include most of northwestern Ohio. (A project of the Ohio Division of Water and grant from the Geological Society of America.)

CONKLIN, James E. , University of Cincinnati, Cincinnati 21, Ohio.

1958 - Smaller Foraminifera of the Mississippian of Ohio

Investigation of occurrences of smaller foraminifers in the Mississippian stratigraphic section of Ohio, with stratigraphy based on Hyde's work as given by Mildred Fisher Marple in 1953 (Bulletin 51, Ohio Division of Geological Survey); description of any new species found. This work will be incorporated with a similar work being conducted by the writer in Missouri, Kentucky, and southern Indiana. It is hoped that some correlations can be made.

COSSABOOM, Robert T. , Baldwin-Wallace College, Berea, Ohio.

Continuing - Study of Some of the Physical Characteristics of Rocky River

To accumulate data concerning rate of run off, rate of erosion, rainfall, amount and kinds of material carried in suspension and solution, rate of deposition, etc.

CYGAN, Norbert, E. , Ohio Wesleyan University, Delaware, Ohio.

1957 - Microfauna of the Freshwater Limestones of the Washington and Green Formations, Permian, of Eastern Ohio

Investigation of the microfauna as indicators of fresh water depositional environments.

DeBROSSE,, Theodore A., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - Coal Beds of the Conemaugh Formation in Ohio

The occurrence, thickness, and areal extent of the various coal beds will be treated in detail on a county by county basis. Analyses of the more important beds will be given for specific areas. Maps will be included which show the extent and location for the more important deposits.

DeLONG, Richard M., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio

1957 - Coal Resources of the Lower Allegheny Formation in Ohio

Estimated original reserves of the Brookville No. 4 and Clarion No. 4a coal beds and description of extent and value of minor coal beds.

DENTON, George H., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - Coal Resources of the Upper Monongahela Formation and the Washington and Green Formations in Ohio

A study of the extent, thickness, characteristics, and reserves.

1959 - Geology and Mineral Resources of Washington County, Ohio

1964 - The Correlation of Ohio Coal Beds by Use of Plant Microfossil Assemblages

Coal samples will be collected from drill cores, oil and gas well cuttings, and outcrop sections. Initial results will aid in solving particular problems in correlation of coal beds in local or problem areas. It is hoped that a regional correlation can be made for each series of the Pennsylvanian system in Ohio using this method as a supplement to establish geologic methods of correlation.

de WITT, Wallace, Jr., U. S. Geological Survey, Fuels Branch, New Philadelphia, Ohio.

1962 - The Geology of the Clinton Sands of Early Silurian Age in Ohio

A subsurface study of the oil and gas producing sands in the eastern half of Ohio. The first part of the problem consists of establishing the local and regional correlation of the several sand bodies that comprise the so-called "Clinton" sands. After the correlations have been made the areal extent of each sand body will be determined and isopach and production maps plotted. One of the main aims of the problem is to work out, if possible, the relationship of the occurrence of oil or gas in the Clinton sands to the sedimentation and the paleogeography.

DOVE, George D., U. S. Geological Survey, Ground Water Branch, 85 Marconi, Columbus, Ohio.

1960-61 - Study of Infiltration Conditions Along the Miami Valley Near Venice

The Southwestern Ohio Water Company withdraws daily approximately 17 million gallons of water from two ground water collectors in the Miami Valley near

DOVE, George D., (Continued)

Venice. Water is pumped from glacial outwash gravels and piped to eleven manufacturing plants in the heavily industrialized Mill Creek Valley area north of Cincinnati. This large concentration of pumpage in an area unaffected by surface water diversions or uncontrolled pumping affords a unique opportunity to study the effects of recharge by induced stream infiltration and the hydraulic properties of the glacial outwash deposits. This program is designed to evaluate the Venice area as a field research center in which to study stream stage, stream bed conditions, and other factors in relation to infiltration rates.

DURRELL, Richard H., University of Cincinnati, Cincinnati 21, Ohio.

1957 - Pleistocene Geology of Southwestern Ohio and Northern Kentucky

Study of Pleistocene deposits, redrawing of Illinoian boundary, explanation of numerous drainage anomalies, and determination of age of pre-Illinoian deposits.

EDWARDS, William R., Ohio State University, Columbus 10, Ohio.

1957 - Petrography of the Cynthiana Limestone and the Economy Shale

Detailed petrography of the shales and limestones of Cynthiana (Upper Trenton) and Economy member (Eden, Lower Cincinnati) in regard to environment of deposition and post-depositional alterations. (M. S. thesis).

EHLERS, Ernest G., Ohio State University, Columbus 10, Ohio.

1957 - Formation of Light-Weight Aggregates From Ohio Shales and Clays

This is a study to determine which Ohio shales and clays would make desirable light-weight aggregates from the industrial standpoint. The effect of additives to non-bloaters will be examined. The process of bloating will be studied with respect to both mineralogy and chemistry. (A project of the Ohio State University Engineering Experiment Station.)

1957 - Origin of the Put-in-Bay Dolomite

A field and petrographic examination of the Put-in-Bay dolomite as seen on the Bass Islands. Stress will be laid upon the rock fabric and its relationship to penecontemporaneous deformation. (A project of the Ohio Division of Geological Survey.)

FARNSWORTH, Carolyn J., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio

1957 - Rocks and Minerals of Ohio

A guide for the hobbyist. This publication will contain listings of minerals found in Ohio and the localities of occurrences. A brief description of rocks and minerals present in Ohio, a compilation of references on Ohio rocks and minerals, and other helps of value to amateur collectors will be included.

FEULNER, Alvin J., U. S. Geological Survey, Ground Water Branch, 85 Marconi, Columbus, Ohio.

1960 - Ground Water Resources of Champaign County

Comprehensive study of the source and occurrence of ground water, its quality and availability, and factors related to its use and conservation.

FLOTO, Bernard A., Ohio Fuel Gas Co., 99 N. Front Street, Columbus, Ohio.

1957 - Relationship of Ground Surface Radioactivity to Sub-surface Oil and Gas Accumulations

Measurements of gamma radiation over known producing oil and gas fields.

FOREMAN, Fred, Oberlin College, Oberlin, Ohio.

1957 - The Origin and Mineralogy of the Concretions of the Huron Shale

Samples of concretions from Kettle Point, Ontario to Berea, Kentucky have been collected. A preliminary paper will appear within the year.

FOREMAN, Helen P., 131 S. Professor Street, Oberlin, Ohio.

1957 - The Fauna of the Concretions of the Huron Shale

Samples of concretions from Kettle Point, Ontario to Berea, Kentucky have been collected. A preliminary paper will appear within the year.

FORSYTH, Jane L., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1958 - A Study of the Abandoned Beach Ridges of the Glacial and Post-Glacial Lakes of the Lake Erie Region, Ohio

To be a completion of a beach ridge study begun and almost concluded by Frank Carney now deceased.

Continuing - Glacial Geology of Logan and Shelby Counties, Ohio

In partial fulfillment of a Ph. D. degree at Ohio State University, August 1956. Research is to be published as a number of papers: December 1956, Bulletin of Geological Society of America; January 1957, Ohio Journal of Science; December 1957, Bulletin of Geological Society of America; and others.

Continuing - Pleistocene Geology of Ohio

Continuing - Pleistocene Quadrangle File

This project involves compilation of Pleistocene geologic information onto topographic quadrangle maps. Sixty-five maps are already on file at the Ohio Division of Geological Survey.

FRANK, Glen W., Kent State University, Kent, Ohio.

Continuing - Salt in the Painesville Area, Ohio

A 3,104-foot core has been logged and salt intrusion is abundant in the section.

FRANKLIN, George J., Ohio State University, Columbus 10, Ohio

1957 - The Bedrock Geology of Licking County

(In partial fulfillment of a Ph. D. degree; the paper will be published by the Ohio Division of Geological Survey.)

1957 - Annotated Bibliography and Index of Theses and Dissertations Relating to Ohio Geology

(A project of the Ohio Division of Geological Survey.)

FULLER, J. Osborn, Ohio State University, Columbus 10, Ohio.

1957 - Geology of the Garrettsville Quadrangle

(A project of the Ohio Division of Geological Survey.)

Continuing - The Geology and Mineral Resources of Geauga County

(A project of the Ohio Division of Geological Survey.)

_____ ; Winslow, John D.

1956 - Faulted Pennsylvanian in the Shalersville Region of Northeastern Ohio

(Manuscript to be presented to the Ohio Journal of Science in 1957.)

GOLDTHWAIT, Richard P., Ohio State University, Columbus 10, Ohio.

Continuing - The Glacial Geology and Pleistocene History of Western Ohio

Surface deposits are mapped and analyzed in the field each summer season (some by students under my guidance). Soils are further studied and significant geological types are mapped in cooperation with soils agencies. The sub-surface stratigraphy is studied in cuts and in well logs or by test drilling in cooperation with the Ohio Division of Water and the Ground Water Branch of the U. S. Geological Survey. Mechanical mineral and chemical analyses are run at the Ohio State University and radiocarbon dates are obtained from laboratories in Washington and at Yale University. (A project of the Ohio Division of Water.)

_____ ; Forsyth, Jane L., and White, George W.

1958 - Pleistocene Map of Ohio

To be published by the U. S. G. S. (A project of the U. S. Geological Survey, Ground Water Branch and the Ohio Division of Geological Survey.)

GRANCHI, Joseph A., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - Coal Beds of the Pottsville Formation in Ohio

Descriptions and evaluations of the Pottsville coal beds will be given. Known areas of outcrops and mines will be listed and described by beds and counties.

GRAY, Henry H., Indiana Geological Survey, Bloomington, Indiana.

Continuing - Sedimentation and Stratigraphy of Pottsville Rocks
in Vicinity of Beach City, Ohio

Field study and analysis of surface exposures; preparation of structure contour, isopach, and lithofacies maps of several units within the Pottsville; statistical analysis of the interrelations between the several rock types present and of the relations of the rock types to structure and thickness; development of a hypothesis to explain distribution of the rock types, particularly the coal. (This study was submitted as a partial fulfillment of a Ph. D. degree at the Ohio State University in 1954. Parts of it have been presented orally but as yet none of it has appeared in print and it is not yet certain whether it should appear essentially entire or in pieces.)

GREGORY, James F., 227 East Lincoln Street, Findlay, Ohio

Uncertain - The Glacial Geology of Fayette County, Ohio

(To be in partial fulfillment of a Ph. D. degree at the Ohio State University.)

HALL, John F., Western Reserve University, Cleveland 6, Ohio

1957 - Fauna of Washingtonville (Allegheny) Shale

_____ ; Merrill, William.

1958 - The Geology of Hocking County, Ohio

General geology and description of formations (Pennsylvanian-Mississippian), physiography, and economic geology. (A project of the Ohio Div. of Geol. Survey.)

HEALY, James S., Miami University, Oxford, Ohio.

1956 - The Petrography and Depositional Environment of the
Lower Marietta (Dunkard Series) Sandstone of the
Sherman, West Virginia Area

Most of the information was gathered from the Ohio side of the Ohio River in the vicinity of Sherman, West Virginia. The purpose of this study is: (1) to determine the extent and the depositional environment of the sandstone which is thought to be the Lower Marietta sandstone in the Sherman, West Virginia area; (2) to determine whether or not this sandstone should be correlated with the type Lower Marietta sandstone of the Marietta, Ohio area; and, (3) to search for additional vertebrate fossils. (M. S. thesis.)

HICKMAN, Paul R., Ohio State University, Columbus 10, Ohio.

1958 - Paleontology of the Brassfield Limestone

A detailed study of the stratigraphy and paleontology of the Brassfield formation of Ohio. (In partial fulfillment of a Ph. D. degree and a project of the Ohio Division of Geological Survey.)

HOOVER, Karl V., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - Devonian-Mississippian Shale Sequence in Ohio

HOOVER, Karl V., (Continued)

The research constitutes a summation and evaluation of published data on the 100-year-old "Ohio Shale Problem." It includes a compilation of fauna and flora components; physical and chemical analyses; possible economic uses; annotated bibliography; and possible future problems to be investigated in addition to the academic summation.

1959 - The Geology and Mineral Resources of Adams County

A continuation and completion of a study by Lewis G. Westgate (deceased).

HUBBARD, George D., 279 Oak Street, Oberlin, Ohio.

Continuing - Physiography of Ohio

(A project of the Ohio Division of Geological Survey.)

_____; Lessig, Heber L.

Continuing - Outwash Terraces in Southeastern Ohio

JENKS, William F., University of Cincinnati, Cincinnati 21, Ohio

1960? - Structural History of the Cincinnati Arch in Ohio and Kentucky

Detailed analysis of joint patterns in various formations of different ages and physical characters, and compilation of structure contour maps of selected areas. The work will be dependent on past and current stratigraphic work at Cincinnati and elsewhere, and will make use of such directional features as may be present in the Cincinnati and younger rocks.

KELLER, Daniel James, University of Cincinnati, Cincinnati 21, Ohio.

1957 - A Preliminary Investigation of the Joint Pattern in the Cincinnati Area

Study is confined to the Fairview formation. Between 80 and 120 joints will be measured and plotted at each of 30 to 40 outcrops. Study will cover 30 to 40 square miles along the crest of the Cincinnati Arch and if time is available, a similar study will be made on the east flank. (M. S. thesis.)

KEMPTON, John, Illinois Geological Survey, Urbana, Illinois.

1956 - Study of Outwash Terraces in the Scioto River Valley

Mapping of outwash terraces in the Scioto Valley and major tributaries in Ross, Pike, and Scioto Counties and plotting of elevations on each terrace remnant on profiles, and soils study to determine relative age and source area. Attempts will be made to tie this study into work done in glaciated areas, and to relate the age of terraces in the Scioto Valley with those previously studied in the Hocking Valley. (A project of the Ohio Division of Water.)

LAMBORN, Raymond E., 224 Piedmont Road, Columbus 14, Ohio

1957 - The Geology of Tuscarawas County, Ohio

Includes the physiography, stratigraphy, economic geology, and oil and gas. (Bulletin 55, Ohio Division of Geological Survey.)

La ROCQUE, Aurele, Ohio State University, Columbus 10, Ohio

1958 - Pleistocene Mollusca of Ohio

A detailed account of the non-marine Mollusca of Ohio, giving correct names, synonymy, descriptions, occurrence, and stratigraphic value, together with figures for each genus and species. The account will be preceded by chapters on methods of collection, geologic situation of the deposits, a summary of work previously done, and paleoecologic data. (This paper will probably be published as a bulletin by the Ohio Division of Geological Survey.)

1959 - Stratigraphic Paleontology of Ohio

A review of the fossil faunas of Ohio with special attention to their stratigraphic significance. Work on Silurian and Mississippian formations is being carried out by graduate students under the writer's direction; the writer is working on Paleozoic pelecypods and Pleistocene Mollusca. The Paleozoic units will appear as three separate projects, to be completed in 1957, 1958, and 1959. (The project has received support from the Graduate School of the Ohio State University and the Ohio Division of Geological Survey.)

_____ ; Conley, James F.

1956 - Two Pleistocene Molluscan Faunules From Hunter's Run, Fairfield County, Ohio

This paper will be published in the November, 1956 issue of the Ohio Journal of Science.

_____ ; Forsyth, Jane L.

1957 - Pleistocene Molluscan Faunules of the Sidney Cut, Shelby County, Ohio

This paper will be published in the Ohio Journal of Science.

LESSIG, Heber, D., U. S. Department of Agriculture, Soil Conservation Service, R. D. 5, Lisbon, Ohio.

1957 - New Evidence of the Extent of Nebraskan Glaciation As Shown in the Terrace of Little Beaver Creek

Terraces at various elevations in the valley of Little Beaver Creek have different degrees of weathering which are consistent with various geologic events. The highest and most deeply weathered of these terraces has a degree of weathering and composition similar to those described as Nebraskan outwash in the Ohio Valley. Other lower lying terraces have degrees of less weathering and are of outwash of other glaciation.

LIEFTINCK, John E., Jr., U. S. Geological Survey, Ground Water Branch, 85 Marconi, Columbus, Ohio

1960 - General Characteristics of Limestone and Dolomite Aquifers in Western Ohio

The principal objective of the investigation is to appraise these rocks quantitatively as aquifers, as it is felt that within the next few years many Ohio cities and manufacturing plants will grow to the point where they will need to pump close to an amount which we presently believe may be the limit of practical

LIEFTINCK, John E., Jr., (Continued)

development of water supplies from these sources. The investigation may also be of importance in the appraisal of resources other than water, in that the hydrologic properties of the limestone and dolomite rocks may hold the key to more accurate methods of geologic mapping than those commonly in use.

LIMPER, Karl E., Miami University, Oxford, Ohio

Uncertain - Chitinozoa From the Richmond Group of Southwestern Ohio

LOCKETT, J. R., 337 West 9th Avenue, Columbus, Ohio

Uncertain - An Introduction to the Petroleum Geology of Ohio

A discussion of the geologic structure of Ohio followed by sections describing each formation present with a discussion of individual reservoirs from basal Permian to Cambro-Ordovician.

LOUGHEED, M. S., Bowling Green State University, Bowling Green, Ohio

Continuing - The Habit of Zircon Relative to Stage in an Intrusive Cycle

To study several petrographic provinces from the point of view of the title. It is hoped this may shed light on the genesis of igneous rocks. Some zircons may be derived from pre-existent sediments, while others are primary. The second cycle zircons may develop cubedralism, etc., to resemble primary zircons during the period of differentiation. This is basic research of general interest. A preliminary paper will probably appear sometime in 1957.

LUCAS, J. Richard, Mining Engineering Section, Ohio State University, Columbus 10, Ohio.

Uncertain - Bulk Solid Flow

A fundamental study in the characteristics of bulk flow. Flow patterns along with mathematical relationships that describe such flow will be investigated.

MARPLE, Mildred F., Ohio State University, Columbus 10, Ohio.

Continuing - Pennsylvanian Micropaleontology of Ohio

Emphasis is principally on ostracods.

MARTIN, Wayne D., Miami University, Oxford, Ohio.

Continuing - The Hockingport Sandstone (Late Carboniferous) of Southeastern Ohio

The Hockingport sandstone is a fluvial deposit, approximately 225 miles in areal extent, occurring principally in Washington, Athens, and Meigs Counties, Ohio. This sandstone has been correlated with the Waynesburg sandstone of southwestern Pennsylvania and adjacent parts of West Virginia. In the opinion of the author these sandstones are not correlates. The existence of a regional unconformity is not indicated by either the structure, lithology, or fossil fauna of the rocks of the Dunkard series, nor by the strata of the underlying Monongahela series. Therefore, these sandstones are not necessarily basal sandstones separating Permian from Pennsylvanian. (Completed as partial fulfillment for a Ph. D. degree at the University of Cincinnati. It is now being prepared for publication.)

McCONNELL, Duncan, Ohio State University, Columbus 10, Ohio.

Continuing - Investigations on the Mineralogy of Clays and Shales

A unit of this project the "Study of Some Chemically Analyzed Ohio Clays by X-ray Diffraction and Differential Thermal Analysis," appeared in the September 1956 issue of the Ohio Journal of Science.

MULTER, H. Gray, College of Wooster, Wooster, Ohio.

1958 - The Geology and Mineral Resources of Wayne County, Ohio

(A project of the Ohio Division of Geological Survey.)

Continuing - The Mississippian-Pennsylvanian Unconformable Contact in Ohio

Continuing - Stratigraphy, Sedimentology, Petrology of Pottsville and Allegheny Age Rocks in Ohio

MUSHAKE, William L., Jr., 1215 N. Dinwiddie Street, Arlington 5, Virginia.

1956 - The Antiquity Sandstone (Permo-Carboniferous) of Southeastern Meigs County, Ohio

The purpose of this study is to determine if the sandstone which is termed the Antiquity sandstone should be correlated with the Waynesburg sandstone, the type area of which is Green County, Pennsylvania; to describe the nature of its depositional environment; and to determine its relationship, if any, to the laterally adjacent Hockingport sandstone. (M. S. thesis, Miami University.)

OHIO DIVISION OF SHORE EROSION, 1101 Ohio Departments Building, Columbus, Ohio.

Continuing - Lake Erie Bottom Reconnaissance

General reconnaissance of bottom sediments.

Continuing - Lake Erie Sand Dredging Areas

Quantity, quality, and origin of sand deposits.

Continuing - The Ohio Shoreline: Michigan to Marblehead

Study of shoreline, erosion, shore processes and plan of improvement. (In cooperation with the U. S. Corps of Army Engineers.)

PETTIT, Lincoln C., Michigan State University, East Lansing, Michigan.

19?? - Erosional Changes of Exposed Sharon Conglomerate at Nelson Ledges State Park, Ohio

Blocks of Sharon conglomerate and Sharon sandstone were photographed with stereocamera many years ago at Nelson Ledges, Portage County. Locating by trial and error led to the discovery of changes in the configuration of the faces of some of the blocks but not of others. This problem is open to investigation, for the writer will be unable to do further work, having left Ohio.

PHELPS, Willard B., Ohio University, Athens, Ohio.

Continuing - Petrology of Some Pennsylvanian Sandstones in Ohio

Study of size and composition of Pennsylvanian sandstones in southeastern Ohio.

PINCUS, Howard J., Ohio State University, Columbus, Ohio.

Continuing - Contemporary Processes Along the Ohio Shoreline of Lake Erie, with Particular Emphasis on Erosion

(A project of the Ohio Division of Shore Erosion.)

Continuing - Sand and Gravel Deposits in Lake Erie

(A project of the Ohio Division of Shore Erosion.)

Continuing - Water Movements in Lake Erie

(A project of the Ohio Division of Shore Erosion.)

_____ ; Mirsky, Arthur.

1957 - Geologic Interpretation of Gravity Anomaly Maps of Ohio

(Through a grant from the Ohio State University Development Fund.)

REINHART, Roy H., Miami University, Oxford, Ohio.

1957 - A Review of Ohio Macropetalichtids

Description and figure of Devonian macropetalichtid (fossil fish) from the Silica shale and limestone near Toledo, Ohio. A review of Ohio macropetalichtids and other macropetalichtids with an attempt to clarify the taxonomic problem of the group as it exists in present literature.

RICHARDS, Gene E., Ohio State University, Columbus 10, Ohio.

1956 - An Investigation of the Sedimentary Processes Between Scott Point and Marblehead Light, Catawba and Danbury Townships, Ottawa County, Ohio

This shore erosion problem includes investigation of grain size and composition of beach sand, storm effect of winds, relation of eroding shore to depth, effect of winds, relation of eroding shore to nearby shores, and the recent geologic history as depicted by well log data. Sand samples were analyzed mechanically and petrographically and the results interpreted relative to modes and paths of transportation. (M. S. thesis; a project of the Ohio Division of Shore Erosion.)

RODRIGUEZ, Joaquin, Ohio State University, Columbus 10, Ohio.

1957 - The Paleontology of the Mississippian Formations of Knox County, Ohio

Collection and identification of fossils from measured sections in area of Knox County for purposes of stratigraphic correlation and reconstruction of past environment. (M. S. thesis.)

ROOT, Samuel, Ohio State University, Columbus 10, Ohio.

1957 - The Geology of Knox County, Ohio

A petrological and petrographic study and analysis of facies relations of the Mississippian rocks in Knox County. The economic geology of the county will be covered. (In partial fulfillment of a Ph. D. degree to be published in 1958 by the Ohio Division of Geological Survey.)

SAVAGE, C. N., Kent State University, Kent, Ohio.

1957 - Geological History and General Geology of Northeastern Ohio

A study designed for general consumption as well as for beginning geologists. Concerns the origin of the rock sections, geomorphic and general geologic history of northeastern Ohio, and the Cuyahoga drainage area.

SCHEUFLER, Lowell W., Miami University, Oxford, Ohio.

1956 - Bibliography of PreCambrian and Cenozoic Geology in Ohio, 1819 - 1955

1956 - Geology of the Darrrtown-McGonigle Area, Butler County, Ohio

(M. S. thesis)

SCHLEIN, Frederick C., 6990 Dawning Drive, Brooklyn 9, Ohio.

1957 - Studies on Cladoselache

A statistical analysis of the fossil genus Cladoselache. (A project of Kent State University and the Cleveland Museum of Natural History.)

SCHMIDT, James J., Ohio Division of Water, 1562 West First Avenue, Columbus, Ohio

1957 - Ground Water Resources of Franklin County, Ohio

A complete text on the geography, ground water hydrology, geology in relation to ground water conditions in the unconsolidated and consolidated rocks in Franklin County, and the ground water conditions in specific areas. This report will include maps illustrating the potential ground water resources and contoured bedrock surface of Franklin County; the consolidated rock formations; the alluvial and glacial deposits; and the pre-glacial topography and drainage in Franklin County.

SCHOPF, James M., U. S. Geological Survey, Fuels Branch, Orton Hall, Ohio State University, Columbus 10, Ohio.

Continuing - Plant Microfossils, Coal Petrology and Related Coal Measures Paleobotany

To assist Fuels Branch and other U. S. G. S. projects in the above fields and conduct other specially assigned studies.

SHAFER, George, U. S. Department of Agriculture, Soil Conservation Service, Old Federal Building, Columbus 15, Ohio.

Continuing - Studies of Glacial Drift in Relation to Soil Classification

SHARP, Everett R., Ohio State University, Columbus 10, Ohio.

1957 - Sedimentary Petrography of Southgate Formation of the Upper Ordovician of Ohio

The problem involves the sedimentary petrography methods of examination for the purpose of determining the environment of deposition, also obtaining a method for correlation of the Southgate formation. (M. S. thesis.)

SHEARROW, George G., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio

1957 - Geological Cross Section of the Paleozoic Rock From Northwestern to Southeastern Ohio

SHIDELER, W. H., Miami University, Oxford, Ohio

1957 - New Species of Ordovician Fossils

A description of probably 160 new species of Ordovician fossils.

Continuing - Paleontology and Stratigraphy of the Richmond Formation

Continuing - Paleontology and Stratigraphy of the Eden and Maysville Formations, Ohio

SMITH, Philip M., 316 W. Parkwood Avenue, Springfield, Ohio.

1957? - Caves of Ohio

The nature, extent, and geology of Ohio caves. (A project of the Ohio Division of Geological Survey in cooperation with the local grottos of the National Speleological Society.)

SMITH, Robert W., Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

1957 - Aggregates and Ceramic Industry of Athens County, Ohio

The economic geology of the limestones, sands and gravels, and clays of Athens County. (To be included in a bulletin on the geology of Athens County.)

1957 - 1956 Mineral Industry Map of Ohio

Scale 1:500,000. The map will indicate limestone quarries, gravel pits, shale and clay pits, salt and gypsum mines, and cement plants.

SMYTH, Pauline, Ohio Division of Geological Survey, Ohio State University, Columbus 10, Ohio.

Continuing - Fusulinids of the Pennsylvanian of Ohio

(A preliminary paper will be submitted to the Ohio Journal of Science in the Spring of 1957 and will be reprinted by the Ohio Division of Geological Survey.)

SPIEKER, Andrew M., U. S. Geological Survey, Ground Water Branch, 85 Marconi,
Columbus, Ohio.

_____ ; Norris, Stanley E.

Indefinite - Ground Water Resources of the Dayton Area

An investigation to determine the hydraulic properties of the outwash deposits in the Dayton area and conditions of stream infiltration. The study will include determination of the areal extent, thickness, and geologic character of the outwash deposits, their permeability and storage properties, gains and losses in underground storage, and other factors related to a quantitative appraisal of ground water.

STEARNS, Donald L., Miami University, Oxford, Ohio.

1957 - General Geology of Western Washington County, Ohio

The exposed strata are being studied in an attempt to determine the continuity of the units, to prepare, if possible, a geologic map, and to formulate opinions as to environment of deposition of the upper Monongahela and lower Dunkard series in this area. (M. S. thesis.)

STOUT, Wilber, Route 3, Rock Mill, Lancaster, Ohio.

1957 - The Early Iron Furnaces of Ohio

Historical treatment of the beginnings of Ohio's great iron and steel industry. (A project of the Ohio Division of Geological Survey.)

STURGEON, Myron, Ohio University, Athens, Ohio.

1957 - The Geology and Mineral Resources of Athens County, Ohio

(Will be published as a Bulletin by the Ohio Division of Geological Survey.)

SUMMERSON, Charles, Ohio State University, Columbus 10, Ohio.

1956 - Arenaceous Foraminifera of the Columbus Limestone in Ohio

(A project of the Ohio Division of Geological Survey; will be submitted to the Ohio Journal of Science.)

1956 - Insoluble Residues of the Columbus and Delaware Limestones in Ohio

(A project of the Ohio Division of Geological Survey; will be submitted to the Ohio Journal of Science.)

SWEET, Walter C., Ohio State University, Columbus 10, Ohio.

1958 - Cephalopods From the Mississippian of Ohio

Description and stratigraphic significance of Cephalopoda from "Waverly" of Ohio.

SWEET, Walter C., (Continued)

1962 - Micropaleontology of the Cincinnati Series, Ohio

Description and stratigraphic distribution of the various groups of microfossils (conodonts, scolecodonts, ostracods, etc.) in the Cincinnati series of Ohio.

_____ ; Miller, A. K.

Continuing - Devonian Nautiloids of Ohio and Adjacent Regions

Description, analysis, and stratigraphic range of nautiloid cephalopods in North American Devonian based primarily upon collections from Ohio Devonian.

SZMUC, Eugene J., Ohio State University, Columbus 10, Ohio.

1957 - Stratigraphy and Paleontology of the Cuyahoga Formation (Mississippian) of Northern Ohio

The problem consists of mapping the subdivisions of the Cuyahoga formation of northern Ohio and attempting to establish the relationship of these rocks and those of central Ohio and northwestern Pennsylvania. The fauna is being studied for purposes of local zonation and a more exact correlation of the Cuyahoga formation with the type section of the Mississippi Valley. (In partial fulfillment of a Ph. D. degree; will be published by the Ohio Division of Geological Survey.)

THOMS, John Alroy, University of Michigan, Ann Arbor, Michigan.

1956 - The Type Upper Marietta Sandstone (Dunkard Series) of Southeastern Ohio

The purpose of this study is to determine the depositional environment of the Upper Marietta sandstone in the type area and to determine whether or not the Upper Marietta sandstone of the type area and the sandstone near New Martinsville, West Virginia should be correlated. (M. S. thesis, Miami University.)

TURCO, Caroline Ann, Ohio State University, Columbus 10, Ohio.

1957 - The Conodont Fauna of the Upper Ordovician Southgate Formation, Southwestern Ohio

To study measured and sampled sections of the Southgate formation taken at closely spaced intervals along the outcrop belt. Residues taken from washed samples will be studied for their conodonts. These conodonts will be examined systematically and stratigraphically with the purpose of determining their horizontal and vertical distribution in the formation and correlating these beds with similar units from which conodonts have been reported. (M. S. thesis.)

UNITED STATES GEOLOGICAL SURVEY, Washington 25, D. C.

Continuing - Topographic Mapping

Mapping at the scale of 1:24,000.

WALKER, Alfred C., Ohio Division of Water, 1562 West First Avenue, Columbus, Ohio.

Continuing - Ground Water Resources Maps for Ohio Basin Studies

WALKER, Alfred C. , (Continued)

Maps showing ground water potential are being prepared to be included as a part of the water inventory of the State. These maps are designed to serve as a guide for future ground water developments. Similar maps are to be prepared for each of the 108 drainage basins.

WALP, Lee, Marietta College, Marietta, Ohio

Continuing - Fossil Plants of Washington County

WALTER, Edward J. , John Carroll University, Cleveland, Ohio.

Continuing - Earthquake Wave Velocities and Crustal Structure

Determination of earthquake wave velocities by studying local earthquakes centered in and around Ohio and analysis of these data with a view to determine the layered structure of the earth's crust.

WARNER, Earl, Jr. , Ohio State University, Columbus 10, Ohio.

1956 - Conodonts From the Economy Formation, Southwestern Ohio

Conodonts were gathered from closely spaced intervals from the Economy formation along the Ohio River. They will be studied systematically and stratigraphically with the purpose of determining the horizontal and vertical distribution. (M. S. thesis.)

WEISS, Malcom P. , Ohio State University, Columbus 10, Ohio.

Continuing - Sedimentary Petrography and Petrology of Cincinnati Rocks

WHITE, George W. , University of Illinois, Urbana, Illinois.

1957 - Areal Study of Glacial Geology of Northeastern Ohio

Detailed mapping and description of glacial deposits, both areal and stratigraphic. (A project of the U. S. Geological Survey, Ground Water Branch.)

1958 - Character of Glacial Till in the Allegheny Plateau

Study of composition, mineralogy, petrography, fabric, etc. of till. (Grant from the National Science Foundation.)

WILKIE, Lorna C. , Ohio State University, Columbus 10, Ohio.

1957 - Description of Conodonts From the McMicken Formation of the Eden Group (Upper Ordovician)

Besides a description of conodonts, a study of the stratigraphic use in age determination and correlation for a small unit as the McMicken formation will be investigated. (M. S. thesis.)

WINSLOW, John D. , University of Illinois, Urbana, Illinois.

1956 - Hydrogeology of the Middlebranch Valley, Near Canton, Ohio

WINSLOW, John D. , (Continued)

Study of geology (glacial and bedrock) and water resources. (A project of the U. S. Geological Survey, Ground Water Branch.)

1957 - Water Resources of Portage County

Study of geology (glacial and bedrock) and water resources. (A cooperative project between the U. S. Geological Survey, Ground Water Branch, and the Ohio Division of Water. Publication will probably be by the Ohio Division of Water.)

1958 - Pro-Tazewell Laminated Silts and Clays Near Cleveland, Ohio

Study of chronology and stratigraphy of some early Wisconsin Lake sediments. (A project of the U. S. Geological Survey, Ground Water Branch.)

WRIGHT, Alfred J. , Ohio State University, Columbus 10, Ohio.

1957 - Economic Geography of Ohio

A completely revised publication of the 1953 edition, using latest data available and including new illustrations. (A project of the Ohio Division of Geological Survey and published as Bulletin 50, 2nd edition.)

PROJECT LISTING BY SUBJECT

ECONOMIC GEOLOGY

AGGREGATES

Athens County, aggregates and ceramic industry Smith, R. W.
Ohio shales and clays, light-weight aggregates Ehlers

COAL

Acid coal-mine drainage, oxidation-reduction
reactions of bacteria and blue-green algae in Blickle
Allegheny formation, coal resources of lower DeLong
Allegheny formation, coal resources of upper Brant
Coal and coal-clay mineral wastes, biochemical
and biological degradation of Blickle
Conemaugh formation, coal beds of DeBrosse
Green formation, coal resources of Denton
Monongahela formation, coal resources of Denton
Pottsville formation, coal beds of Granchi
Washington formation, coal resources of Denton

GROUND WATER

Champaign County ground water resources Feulner
Dayton area ground water resources Spieker
Franklin County ground water resources Schmidt
Geauga County ground water resources Baker
Hydrogeology of Middlebranch Valley near Canton Winslow
Infiltration conditions along Miami Valley near Venice Dove
Limestone and dolomite aquifers in western Ohio Lieftinck
Ohio basin studies, ground water resources maps for Walker
Portage County, water resources Winslow

IRON

Iron furnaces Stout

OIL AND GAS

Clinton sands de Witt
Ground surface radioactivity and relationship to
subsurface oil and gas accumulations. Floto
Petroleum geology of Ohio Lockett

SALT

Painesville area Frank

SAND AND GRAVEL

Lake Erie sand dredging area	Ohio Division of Shore Erosion
Lake Erie sand and gravel deposits	Pincus

GENERAL

Adams County, geology of	Hoover
Athens County, geology of	Sturgeon
Belmont County, geology of	Berryhill
Geauga County, geology of	Fuller
Hocking County, geology of	Hall
Knox County, geology of	Root
Lucas County, geology of	Carman
Mineral industry map of Ohio, 1956	Smith, R. W.
Ohio shoreline, Michigan to Marblehead	Ohio Division of Shore Erosion
Stark County, geology of	Brant
Tuscarawas County, area development studies of	Battelle
Tuscarawas County, geology of	Lamborn
Washington County, geology of	Denton
Wayne County, geology of	Multer

GEOMORPHOLOGY

Caves of Ohio	Smith, Philip
Geological history and general geology of northeastern Ohio	Savage
Physiography of Ohio	Hubbard
Relief map of Ohio	Cleveland Museum of Nat. History

GEOPHYSICS

Bulk solid flow.	Lucas
Earthquake wave velocities and crustal structure	Walter
Geologic interpretation of gravity anomaly maps.	Pincus
Ground surface radioactivity and relationship to subsurface oil and gas accumulations	Floto

GLACIAL GEOLOGY

Beach ridges of glacial and post-glacial lakes of Lake Erie region	Forsyth
Fayette County glacial geology.	Gregory
Glacial drift in relation to soil classification	Shafer
Logan County glacial geology	Forsyth
Nebraskan glaciation in terrace of Little Beaver Creek.	Lessig

Northeastern Ohio glacial geology	White
Pleistocene geology of Ohio	Forsyth
Pleistocene map of Ohio	Goldthwait
Pleistocene quadrangle file	Forsyth
Pro-Tazewell laminated silts and clays near Cleveland.	Winslow
Seneca County glacial geology	Coash
Scioto River Valley outwash terraces.	Kempton
Shelby County glacial geology	Forsyth
Southeastern Ohio outwash terraces	Hubbard
Southwestern Ohio and northern Kentucky Pleistocene geology	Durrell
Western Ohio glacial geology and Pleistocene history.	Goldthwait
Wisconsin forests of Ohio.	Burns

MINERALOGY AND PETROLOGY

CLAY

Light weight aggregates	Ehlers
Mineralogy	McConnell
Mineralogical techniques	Aukland
Number 5 clay mineralogy	Aukland

COAL

Petrographic studies	Cady
Petrology	Schopf

DOLOMITE

Aquifers in western Ohio	Lieftinck
Put-in-Bay dolomite origin	Ehlers

LIMESTONE

Aquifers in western Ohio	Lieftinck
Columbus limestone residues	Summerson
Cynthiana limestone petrography.	Edwards
Delaware limestone residues	Summerson

SANDSTONE

Lower Marietta petrography	Healy
Pennsylvanian sandstone petrology.	Phelps

SHALE

Chagrin shale differential thermal analyses	Bacon
Economy shale petrography	Edwards
Huron shale concretions mineralogy	Foreman, Fred
Light weight aggregates	Ehlers

Mineralogy McConnell
Ohio shale concretions Clifton

TILL

Glacial till in Allegheny Plateau White

OTHERS

Allegheny rock petrology Multer
Cincinnatian rock petrography and petrology Weiss
Mississippian rocks in Knox County Root
Pottsville rock petrology Multer
Southgate formation petrography Sharp
Zircon relative to stage in intrusive cycle Lougheed

PALEONTOLOGY

Annularia Abbott
Asterophyllites Abbott
Brassfield limestone paleontology Hickman
Cephalopods from Mississippian Sweet
Chitinozoa from Richmond group Limper
Cincinnatian problematica Caster
Cincinnatian micropaleontology Sweet
Cladoselache studies Schlein
Coal microfossil assemblages Denton
Coal microfossils and paleobotany Schopf
Conodont fauna of Southgate formation Turco
Conodonts from Economy formation Warner
Conodonts from McMicken formation Wilkie
Conodonts of Ohio shale Bond
Cuyahoga formation paleontology of northern Ohio Szmuc
Eden formation paleontology Shideler
Foraminifera of Columbus limestone Summerson
Foraminifera of Mississippian Conklin
Fusulinids of Pennsylvanian Smyth
Gastropod burrows from Chagrin shale Brooks
Green formation microfauna Cygan
Huron shale fauna Foreman, Helen
Macropetalichtids Reinhart
Malacostraca from Chagrin shale Bacon
Maysville formation paleontology Shideler
Mississippian paleontology of Knox County Rodriguiz
Mollusca, Pleistocene La Rocque
Mollusca, Pleistocene, from Hunter's Run, Fairfield
County La Rocque
Molluscan Pleistocene faunules of Sidney Cut, Shelby
County La Rocque
Nautiloids, Devonian Sweet
Ordovician fossils Shideler
Pennsylvanian micropaleontology Marple
Rafinesquinae of upper Ordovician Caster

Richmond formation paleontology	Shideler
<u>Sphenophyllum</u>	Abbott
Sponge bed from Chagrin shale, Euclid Creek.	Bacon
Stratigraphic paleontology of Ohio	La Rocque
Trilobite fauna from Meadville formation at Lodi	Brooks
Washington County fossil plants	Walp
Washington formation microfauna	Cygan
Washingtonville shale fauna	Hall

STRATIGRAPHY AND SEDIMENTATION

Adams County geology	Hoover
Lower Allegheny coal formations	De Long
Upper Allegheny coal formations	Brant
Antiquity sandstone.	Mushake
Athens County geology	Sturgeon
Bedford-Berea formation in Ross and Pike Counties	Brooks
Belmont County geology.	Berryhill
Cincinnatian rocks	Weiss
Clinton sands	de Witt
Coal beds correlation using plant microfossils	Denton
Conemaugh coal formations	De Brosse
Cuyahoga formation of northern Ohio.	Szmuc
Darrtown-McGonigle area, Butler County.	Scheufler
Devonian-Mississippian shale sequence.	Hoover
Eden and Maysville formations	Shideler
Fairport to Ashtabula on Lake Erie	Christopher
Gallia County geology	Blake
Garrettsville quadrangle	Fuller
Geauga County geology	Fuller
Geologic map of Ohio	Bernhagen
Green coal formations	Denton
Green formation stratigraphy	Cygan
Hocking County geology.	Hall
Hockingport sandstone	Martin
Huron shale concretions	Foreman, Fred
Knox County geology	Root
Lake Erie bottom reconnaissance	Ohio Division of Shore Erosion
Lake Erie sand dredging area	Ohio Division of Shore Erosion
Licking County geology	Franklin
Lucas County geology.	Carman
Lower Marietta sandstone.	Healy
Upper Marietta sandstone.	Thoms
Mississippian-Pennsylvanian contact.	Multer
Upper Monongahela coal formations	Denton
Northeastern Ohio geology.	Savage
Ohio shale concretions.	Clifton
Ohio shoreline of Lake Erie, contemporary processes	Pincus
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Pennsylvanian in Shalersville region	Fuller
Pottsville coal formations	Granchi
Pottsville and Allegheny rocks.	Multer

Pottsville rocks in vicinity of Beach City	Gray
Put-in-Bay dolomite origin	Ehlers
Richmond formation	Shideler
Rocky River physical characteristics.	Cossaboom
Scott Point to Marblehead Light	Richards
Sharon conglomerate at Nelson Ledges	Pettit
Southgate formation	Sharp
Stark County geology	Brant
Tuscarawas County geology	Lamborn
Washington County geology	Denton
Western Washington County geology	Stearns
Washington coal formations	Denton
Washington formation stratigraphy.	Cygan
Wayne County geology	Multer

STRUCTURAL GEOLOGY

Cincinnati arch	Jenks
Clinton sands	de Witt
Joint pattern in Cincinnati area	Keller
Licking County	Franklin
Pennsylvanian in Shalersville region.	Fuller
Petroleum geology of Ohio	Lockett

MISCELLANEOUS

Bibliography and index of theses and dissertations.	Franklin
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Rocks and minerals of Ohio	Farnsworth
Topographic mapping	U. S. Geological Survey
Water movements in Lake Erie	Pincus

GEOGRAPHIC DISTRIBUTION

STATEWIDE

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Caves of Ohio	Smith, Philip
Earthquake wave velocities and crustal structure	Walter
Economic geography of Ohio.	Wright
Geologic interpretation of gravity anomaly maps of Ohio	Pincus
Geologic map of Ohio	Bernhagen
Ground water resources maps for Ohio basin studies.	Walker
Light-weight aggregates from Ohio shales and clays	Ehlers

Mineral industry map, 1956	Smith, R. W.
Mineralogy of clays and shales	McConnell
Petroleum geology of Ohio	Lockett
Physiography of Ohio	Hubbard
Pleistocene geology of Ohio	Forsyth
Pleistocene map of Ohio	Goldthwait
Pleistocene quadrangle file	Forsyth
Pleistocene Mollusca of Ohio	La Rocque
Relief map of Ohio	Cleveland Museum of Nat. History
Rocks and minerals of Ohio	Farnsworth
Stratigraphic paleontology of Ohio	La Rocque
Topographic mapping	U. S. Geological Survey
Wisconsin forests of Ohio	Burns

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Allegheny rocks, stratigraphy, sedimentology, petrology . . .	Multer
Lower Allegheny formation, coal resources	De Long
Upper Allegheny formation, coal resources	Brant
Allegheny Plateau, glacial till	White
Brassfield limestone paleontology	Hickman
Cincinnati arch, structural history	Jenks
Cincinnati micropaleontology	Sweet
Cincinnati problematica	Caster
Cincinnati sedimentary petrography and petrology	Weiss
Clinton sands, geology	de Witt
Coal petrographic studies	Cady
Coal petrology, plant microfossils and related coal measures paleobotany	Schopf
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Columbus limestone Foraminifera	Summerson
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Lake Erie sand dredging areas	Ohio Division of Shore Erosion
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Lake Erie water movements	Pincus
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Richmond <u>Chitinozoa</u>	Limper
Richmond formation, paleontology and stratigraphy	Shideler
Southeastern Ohio, outwash terraces	Hubbard
Southwestern Ohio Pleistocene geology	Durrell
Subsurface oil and gas accumulations, ground surface radioactivity	Floto
Washington formation, coal resources	Denton
Washington formation, microfauna.	Cygan
Washingtonville shale fauna	Hall
Western Ohio glacial geology and Pleistocene history	Goldthwait
Western Ohio limestone and dolomite aquifers.	Lieftinck

COUNTY

ADAMS

Geology of Adams County	Hoover
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ASHTABULA

Shore erosion on Lake Erie between Fairport and Ashtabula	Christopher
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ATHENS

Geology of Athens County	Sturgeon
Aggregates and ceramic industry of Athens County.	Smith, R. W.
Hockingport sandstone	Martin

BELMONT

Geology of Belmont County	Berryhill
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BROWN

Conodont fauna of Southgate formation	Turco
Conodonts from Economy formation	Warner
Conodonts from McMicken formation.	Wilkie
Petrography of Cynthiana limestone and Economy shale	Edwards
Sedimentary petrography of Southgate formation.	Sharp

BUTLER

Geology of Darrrtown-McGonigle area.	Scheufler
Infiltration conditions along Miami Valley near Venice	Dove

CLERMONT

Conodont fauna of Southgate formation	Turco
Conodonts from the Economy formation.	Warner
Conodonts from Mc Micken formation.	Wilkie
Joint pattern in Cincinnati area	Keller
Petrography of Cynthiana limestone and Economy shale	Edwards
Sedimentary petrography of Southgate formation.	Sharp

CHAMPAIGN

Ground water resources of Champaign County.	Feulner
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COLUMBIANA

Nebraskan glaciation in terrace of Little Beaver Creek.	Lessig
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CUYAHOGA

Differential thermal analyses of Chagrin shale	Bacon
Gastropod burrows from Chagrin shale	Brooks
Malacostraca from Chagrin shale	Bacon
Physical characteristics of Rocky River	Cossaboom
Pro-Tazewell laminated silts and clays near Cleveland.	Winslow
Sponge bed from the Chagrin shale, Euclid Creek	Bacon

FAIRFIELD

Pleistocene Mollusca from Hunter's Run	La Rocque
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