

A COMPLETE INDEX TO THE *BUTLER UNIVERSITY BOTANICAL STUDIES*, A JOURNAL OF ORIGINAL RESEARCH PUBLISHED BY BUTLER UNIVERSITY 1929-1964

Rebecca W. Dolan
Friesner Herbarium
Department of Biological Sciences
Butler University
4600 Sunset Avenue
Indianapolis, Indiana 46208

ABSTRACT: For 35 years, the Botany Department of Butler University published a journal of research conducted by Butler faculty, students, and other Indiana botanists. Many of the papers contain valuable historical studies, especially floristic surveys that document Indiana's vegetation in past decades. This article presents a complete index for the journal, arranged both chronologically and alphabetically. Reprints of articles are still available.

INTRODUCTION

The *Butler University Botanical Studies* journal was published by the Botany Department of Butler University from 1929 to 1964. The journal featured original papers primarily on plant ecology, taxonomy, floristics, palynology, and microbiology by Butler faculty, current and former Master's and undergraduate students, and works by other Indiana botanists. The journal was started by Stanley Cain and edited through most of its years of production by Ray C. Friesner. The journal was distributed through exchange with many learned societies and libraries.

During the years of the journal's publication, the Botany Department at Butler University had an active program of research and student training (Dolan, 1991). Degrees conferred during this period numbered 201 Bachelor's degrees and 75 Master's degrees in Botany. Thirty-five of these graduates went on to earn doctorates at other institutions.

A chronological index to all volumes of the *Butler University Botanical Studies* is given first in this paper, followed by an alphabetical listing by major author. Volume 14 was published as Number 1 and Number 2, each beginning with page 1. Reprints of most papers are available free of charge from the author of this report.

CHRONOLOGICAL INDEX TO THE *BUTLER UNIVERSITY BOTANICAL STUDIES* JOURNAL (1929-1964)

- Cain, Stanley A. and Ray C. Friesner. 1929. Some ecological factors in secondary succession: Upland hardwood I. Evaporation studies in the Sycamore Creek region. 1: 1-16.
- Cain, Stanley A. and Ray C. Friesner. 1929. Some ecological factors in secondary succession: Upland hardwood II. Soil reaction and plant distribution in the Sycamore Creek region. 1: 17-28.
- Friesner, Ray C. 1929. The genus *Trillium* in Indiana. 1: 29-40.
- Phillips, Alice. 1929. Life forms and biological spectra of the flora of Bacon's swamp, Indiana. 1: 41-54.

- Friesner, Ray C. 1929. Key to genera of ferns and fern allies. 1: 55-60.
- Daubenmire, Rexford F. 1930. The relation of certain ecological factors to the inhibition of forest floor herbs under hemlock. 1: 61-76.
- Friesner, Ray C. 1930. Chromosome numbers in ten species of *Quercus* with some remarks on the contributions of cytology to taxonomy. 1: 77-104.
- Fischer, George W. 1930. A study of fruit diseases occurring in a mid-western market. 1: 105-128.
- Cain, Stanley A. 1930. Certain floristic affinities of the trees and shrubs of the Great Smoky Mountains and vicinity. 1: 129-156.
- Cain, Stanley A., Ray C. Friesner, and John E. Potzger. 1930. A comparison of strip and quadrat analyses of the woody plants on a central Indiana river bluff. 1: 157-171.
- Cain, Stanley A. and Ray C. Friesner. 1930. Certain aspects of the H-ion concentration of the soils of a central Indiana river bluff. 1: 172-175.
- Friesner, Ray C. 1930. A microtome knife cooler. 1: 176.
- Cain, Stanley A. 1930. An ecological study of the heath balds of the Great Smoky Mountains. 1: 177-208.
- Palmer, C. Mervin. 1931. Algae of Marion County, Indiana, a description of thirty-two forms. 2: 1-24.
- Daubenmire, Rexford F. 1931. The acid ranges of some spring-flowering herbs with reference to variations in floral color. 2: 25-28.
- Daubenmire, Rexford F. 1931. Factors favoring the persistence of a relic association of eastern hemlock in Indiana. 2: 29-32.
- Stanley, Oran B. 1931. Fat deposits in certain Ericaceae. 2: 33-44.
- Aufderheide, Hellen. 1931. Chromosome numbers in *Fagus grandifolia* and *Quercus virginica*. 2: 45-52.
- Geisler, Florence. 1931. Chromosome numbers in certain species of *Helianthus*. 2: 53-64.
- Parker, Dorothy. 1932. General distribution of the species of *Aster* found in Indiana. 2: 65-80.
- Artist, Russell. 1932. The value of *Rumex acetosella* as an acid indicator. 2: 81-92.
- Lindsey, Alva J. 1932. The trees of Indiana in their local and general distribution according to physiographic divisions. 2: 93-124.
- Palmer, C. Mervin. 1932. Plankton algae of White River in Marion County and Morgan County, Indiana. 2: 125-132.
- Friesner, Ray C. and John E. Potzger. 1932. Studies in forest ecology. I. Factors concerned in hemlock reproduction in Indiana. 2: 133-144.
- Friesner, Ray C. and John E. Potzger. 1932. Studies in forest ecology. II. The ecological significance of *Tsuga canadensis* in Indiana. 2: 145-150.
- Craw, Joe R. 1932. Hydrogen-ion reaction of native Indiana fern soils. 2: 151-162.
- Lindsey, Alva J. 1932. The Merrillville white pine (*Pinus strobus*) bog, Lake County, Indiana. 2: 167-178.
- Lindsey, Alva J. 1932. Preliminary fossil pollen analysis of the Merrillville white pine bog. 2: 179-182.
- Esten, Mabel M. 1932. A statistical study of a beech-maple association at Turkey Run State Park, Parke County, Indiana. 2: 183-201.
- Friesner, Ray C. 1933. The genus *Solidago* in northeastern North America. 3: 1-64.
- Friesner, Ray C. and J.E. Potzger. 1933. Climax conditions and the ecological status of *Pinus strobus*, *Taxus canadensis* and *Tsuga canadensis* in the Pine Hills region of In-

diana. 3: 65-83.

- Friesner, Ray C. and J.E. Potzger. 1934. Some comparisons between virgin forest and adjacent areas of secondary succession. 3: 85-98.
- Coffing, Charlene. 1934. Additions to the algal flora of Indiana. 3: 99-101.
- Palmer, C. Mervin. 1934. Algae of Steuben County, Indiana. 3: 102-103.
- Trefz, Lettie Page. 1935. The shrubs of Indiana in their local and general distribution according to physiographic divisions. 3: 105-128.
- Griffin, Agatha. 1935. The effect of interrupted translocation upon loss of chlorophyll in leaves during autumn coloration. 3: 129-137.
- Griffin, Agatha. 1935. Some notes on anthocyanin formation in leaves with cut veins. 3: 139-140.
- Geisler, Florence. 1935. A new method for separation of fossil pollen from peat. 3: 141-146.
- Wilson, Betty L. 1936. A bryocenological study of some epiphytic mosses of a central Indiana woods. 3: 149-172.
- Higinbotham, Noe L. 1936. The chromosome relations of *Solidago rigida* and a giant mutation. 3: 173-176.
- Kenoyer, E. Fay. 1936. Modification of vascular tissue in midvein of *Quercus alba* leaves induced by gall development of *Cynips pezomachoides erinacei*. 3: 177-190.
- Artist, Russell C. 1936. Stratigraphy and preliminary pollen analysis of a Lake County, Illinois, bog. 3: 191-198.
- Friesner, Ray C., Arnold Kleine, and John E. Potzger. 1936. The effect of precipitation and temperature on annular-ring growth in four species of *Quercus*. 3: 199-206.
- Friesner, Ray C. and John E. Potzger. 1936. Soil moisture and the nature of the *Tsuga* and *Tsuga-Pinus* forest associations in Indiana. 3: 206-209.
- Friesner, Ray C. and J.E. Potzger. 1937. Contrasts in certain physical factors in *Fagus-Acer* and *Quercus-Carya* communities in Brown and Bartholomew Counties, Indiana. 4: 1-12.
- Coffing, Charlene. 1937. A quantitative study of the phytoplankton of the White River Canal, Indianapolis, Indiana. 4: 13-31.
- Prettyman, Robert L. 1937. Fossil pollen analysis of Fox Prairie Bog, Hamilton County, Indiana. 4: 33-42.
- Smith, William M. 1937. Pollen spectrum of Lake Cicott Bog, Cass County, Indiana. 4: 43-54.
- Barnett, Jean. 1937. Pollen study of Cranberry Pond, near Emporia, Madison County, Indiana. 4: 55-64.
- Daily, William Allen. 1938. A quantitative study of the phytoplankton of Lake Michigan collected in the vicinity of Evanston, Illinois. 4: 65-83.
- Stanley, Ina. 1938. A comparison of market milk from ten Indianapolis companies by use of the direct microscopic method of analysis. 4: 85-92.
- Otto, James H. 1938. Forest succession in the southern limits of Early Wisconsin glaciation as indicated by a pollen spectrum from Bacon's Swamp, Marion County, Indiana. 4: 93-116.
- Howell, John W. 1938. A fossil pollen study of Kokomo bog, Howard County, Indiana. 4: 117-127.
- Richards, Ruth Rebekah. 1938. A pollen profile of Otterbein Bog, Warren County, Indiana. 4: 128-140.
- Friesner, Ray C. 1940. Key to species and varieties of ferns and fern allies of northeast-

- ern North American. 4: 141-162.
- Friesner, Ray C. and J.E. Potzger. 1940. A phytosociological study of the herbaceous plants in two types of forests in central Indiana. 4: 163-180.
- Friesner, Ray C. and J.E. Potzger. 1940. What is climax in central Indiana? A five-mile quadrat study. 4: 181-195.
- Friesner, Ray C. 1940. Some necessary nomenclatorial changes in the genus *Solidago*. 4: 196.
- Friesner, Ray C. 1940. A study of asymmetrical growth from stump sections of *Quercus velutina*. 4: 197-206.
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- Friesner, Ray C. 1940. An observation on the effectiveness of root pressure in the ascent of sap. 4: 226.
- Palmer, C. Mervin. 1941. A study of *Lemanea* in Indiana with notes on its distribution in North America. 5: 1-26.
- Damann, Kenneth E. 1941. Quantitative study of the phytoplankton of Lake Michigan at Evanston, Illinois. 5: 27-44.
- Wade, George W. 1941. The direct microscopic analysis of milk over a period of one year from three creameries serving Indianapolis. 5: 45-57.
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- Friesner, Ray C. 1941. A preliminary study of growth in beech, *Fagus grandifolia*, by the dendrographic method. 5: 85-94.
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- Guss, Joanna C. 1942. The origin of the flora of the Chestnut Oak Upland region of Indiana. 5: 117-133.
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- Friesner, Ray C. 1942. Vertical growth in four species of pines in Indiana. 5: 145-159.
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- Brunson, Margaret Esther. 1942. Distribution of Indiana Orchidaceae. 5: 173-178.
- Potzger, J.E. and Ruth Rebekah Richards. 1942. Forest succession in the Trout Lake, Vilas County, Wisconsin area: A pollen study. 5: 179-189.
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- Palmer, C. Mervin. 1942. Additional records for algae, including some of the less common forms. 5: 224-234.
- Friesner, Ray C. 1943. Correlation of elongation in primary, secondary and tertiary axes of *Pinus strobus* and *P. resinosa*. 6: 1-9.
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- nant of forest primeval in Kosciusko County, Indiana. 6: 10-16.
- Smolelis, Albin N. 1943. A study of the effect of plant operations upon the bacterial count of milk. 6: 17-29.
- Hupp, Eugene R. 1943. Plankton and its relation to chemical factors and environment in White River canal, Indianapolis, Indiana. 6: 30-53.
- Potzger, J.E. 1943. Pollen study of five bogs in Price and Sawyer Counties, Wisconsin. 6: 54-64.
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- Daily, William A. 1943. First reports for the algae *Borzia*, *Aulosira* and *Asterocytis* in Indiana. 6: 84-86.
- Ek, Charles M. and Ray C. Friesner. 1944. Correlation of microclimatic factors with species distribution in Shenk's Woods, Howard County, Indiana. 6: 87-101.
- Friesner, Ray C. and J.E. Potzger. 1944. Survival of hemlock seedlings in a relict colony under forest conditions. 6: 102-115.
- Potzger, John E. 1944. The vegetation of Round Island (Straits of Mackinac), Michigan. 6: 116-122.
- Potzger, John E. 1944. Pollen frequency of *Abies* and *Picea* in peat: A correction on some published records from Indiana bogs and lakes. 6: 123-130.
- Kiener, Walter. 1944. Notes on distribution and bio-ecology of Characeae in Nebraska. 6: 131-148.
- Daily, Fay Kenoyer. 1944. The Characeae of Nebraska. 6: 149-171.
- Potzger, John E. 1945. A quarter century of botany at Butler University. 7: 1-10.
- Cain, Stanley A. 1945. A biological spectrum of the flora of the Great Smoky Mountains National Park. 7: 11-24.
- Fischer, George W. 1945. The stem smuts of *Stipa* and *Oryzopsis* in North America. 7: 25-39.
- Withrow, Alice Phillips. 1945. Interrelationship of nitrogen and photoperiod on the flowering, growth, and stem anatomy of certain long day and short day plants. 7: 40-64.
- Geisler, Florence. 1945. A pollen study of thirty-two species of grasses. 7: 65-73.
- Parker, Dorothy. 1945. Plant succession at Long Pond, Long Island, New York. 7: 74-88.
- Billings, W. Dwight. 1945. The plant associations of the Carson Desert Region, western Nevada. 7: 89-123.
- Daily, Fay Kenoyer. 1945. The Characeae of Indiana: A preliminary report. 7: 124-132.
- Daily, William A. 1945. Additions to the filamentous Myxophyceae of Indiana, Kentucky and Ohio. 7: 132-139.
- Keller, Carl O. 1945. A quadrat study of Meltzer Woods, Shelby County, Indiana. 7: 140-154.
- Lee, Mordie B. 1945. An ecological study of the floodplain forest along the White River system in Indiana. 7: 155-175.
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- Friesner, Ray C. and Gershom Walden. 1946. A five-year dendrometer record in two trees of *Pinus strobus*. 8: 1-23.
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- Cook, Howard L. 1946. A study of the distribution of the grasses of Indiana. 8: 44-63.
- Keller, Carl O. 1946. An ecological study of the Klein Woods, Jennings County, Indiana. 8: 64-81.
- Morris, Mabel Grace. 1946. A study of bacteria found in the distribution system of a water plant. 8: 82-100.
- Parker, Leander C. 1946. A comparative study of the bacterial count of vanilla and chocolate ice cream from two Indianapolis producers. 8: 101-112.
- Daily, Fay Kenoyer. 1946. Species of *Tolypella* in Nebraska. 8: 113-117.
- Daily, William A. 1946. Notes on the algae, I, II. 8: 118-120.
- Daily, William A. 1946. Notes on algae, III. 8: 121-122.
- Daily, Fay Kenoyer. 1948. *Nitella capillata* A. Br. in North Carolina. 8: 123-125.
- Weaver, Jack R. 1948. Fossil diatoms from Lakeville Bog, Indiana. 8: 126-138.
- Hill, Charles F. 1948. A direct microscopic study of the effect of temperature on bacterial count in milk. 8: 139-152.
- Potzger, Esther W. and John E. Potzger. 1948. Progress in succession in the Pennington grove of *Pinus virginiana*. 8: 153-160.
- Potzger, John E. 1948. A pollen study in the tension zone of Lower Michigan. 8: 161-177.
- Friesner, Ray C. and John E. Potzger. 1948. Forests of the past along the coast of southern Maine. 8: 178-203.
- Kent, Robert L. 1948. Antibiotic behavior patterns of living cultures of *Pseudomonas*. 8: 204-218.
- Griffin, Charles D. 1948. A study of abundance of stems per acre in relation to age of stand. 8: 219-232.
- Motley, Jerry Anne. 1949. Correlation of elongation in White and Red Pine. 9: 1-8.
- Colligan, Doris. 1949. A study of organisms in soil samples from southern Indiana which inhibit the growth of *Escherichia coli* and *Staphylococcus aureus*. 9: 9-20.
- Mindach, Fred C. 1949. Antibiotic producing organisms isolated from the White River Canal, Indianapolis, Indiana. 9: 21-42.
- Reimer, Charles W. 1949. Growth correlations in five species of deciduous trees. 9: 43-59.
- Secor, Jack B. 1949. A comparative ecological study of two forest stands in the Illinoian Drift Plain area of southern Indiana. 9: 60-79.
- Secor, Jack B. 1949. An ecological survey of the Crawford Woods, Clark County, Indiana. 9: 80-87.
- Miller, Walter A. 1949. Molds on vegetables in Indianapolis retail markets. 9: 88-92.
- Malott, Jeanne A. 1949. Soil reactions of the Pteridophytes of the Megunticook Lake region near Camden, Maine. 9: 93-107.
- Cundiff, Mary Fritsche. 1949. A study in soil moisture, acidity and evaporation in an upland woods at Turkey Run State Park. 9: 108-123.
- Friesner, Ray C. 1949. Two new entities in the genus *Solidago*. 9: 124-126.
- Daily, Fay Kenoyer. 1949. *Chara kieneri*, a new species from Nebraska. 9: 127-130.
- Griffin, Charles D. 1950. A pollen profile from Reed Bog, Randolph County, Indiana. 9: 131-139.
- Guennel, G.K. 1950. History of forests in the glacial Lake Chicago area. 9: 140-158.
- Friesner, Ray C. 1950. Growth-rainfall trend co-efficients shown by six species of hardwoods in Brown County, Indiana. 9: 159-166.
- Miller, Chester W. 1950. The effect of precipitation on annular-ring growth in three spe-

- cies of trees from Brown County, Indiana. 9: 167-175.
- Scott, Frances I. 1950. Polyploidy among plant species extraneous in Indiana. 9: 176-187.
- Lamerson, Virginia. 1950. Coastal plains flora in Indiana botanical areas. 9: 188-196.
- Holmes, Donald H. 1950. A comparison of the total bacterial counts of raw and pasteurized milk. 9: 197-202.
- Manning, Howard E. 1950. The effect of anthocyanin filters on plant behavior and development. 9: 203-211.
- Esten, Mabel M. and Albert G. Dannin. 1950. Chlorophyll therapy and its relation to pathogenic bacteria. 9: 212-217.
- Keller, Carl O. 1950. The genus *Liatris* in Indiana. 9: 218-226.
- Wallace, John H. and Ruth Patrick. 1950. A consideration of *Gomphonema parvulum* Kutz. 9: 227-234.
- Palmer, C. Mervin. 1950. Phycologists of India. 9: 235-238.
- McQueeney, Carl R. 1950. An ecological study of the relationship between direction of slope, elevation and forest cover in Brown County, Indiana. 9: 239-269.
- Daily, Fay Kenoyer. 1950. *Nitella spanioclema* Groves & Bullock-Webster var. *nidifica* var. nov., from Alabama. 9: 270-272.
- Daily, Fay Kenoyer. 1950. *Tolypella rolifera* Leonh. in Indiana. 9: 273-276.
- Clevenger, Sarah. 1951. The distribution of the ferns and fern allies found in Indiana. 10: 1-11.
- Miller, Chester W. 1951. Growth data from sections of *Acer saccharum*. 10: 12-19.
- Oliver, John L. 1951. Forest succession in the Valparaiso and Packerton Moraines in Indiana. 10: 20-28.
- Gillum, Alice Jeanne. 1951. The effects of large amounts of certain vitamins of the B group on the growth rate and morphology of certain bacteria. 10: 29-39.
- Blewett, Marilyn B. and John E. Potzger. 1951. The forest primeval of Marion and Johnson Counties, Indiana in 1819. 10: 40-52.
- Cook, Grover W. 1951. The phytoplankton of two artificial lakes in Hendricks County, Indiana. 10: 53-60.
- Rohr, Fred W. and John E. Potzger. 1951. Forest and prairie in three northwestern Indiana counties. 10: 61-70.
- Reynolds, William and John E. Potzger. 1951. Distribution of *Quercus muhlenbergii* in Indiana. 10: 71-79.
- Ross, Mildred I. 1951. *Pinus virginiana* in the forest primeval of five southern Indiana counties. 10: 80-89.
- Griffin, Charles Donald. 1951. Pollen analysis of a peat deposit in Livingston County, Illinois. 10: 90-100.
- LeFave, Gene M. and Bruce Skiles. 1952. The efficacy of certain substituted phenols and their salts as fungicidal agents. 10: 101-107.
- Potzger, John E. and Carl O. Keller. 1952. The beech line in northwestern Indiana. 10: 108-113.
- Finley, Dean and John E. Potzger. 1952. Characteristics of the original vegetation in some prairie counties of Indiana. 10: 114-118.
- Friesner, Ray C. and J. Johanna Jones. 1952. Correlation of elongation in primary and secondary branches of *Pinus resinosa*. 10: 119-128.
- Callender, Maurice E. 1952. The cultivation of *Endamoeba histolytica* and the *in-vitro* chemotherapeutic testing of amoebacides. 10: 129-140.

- Daily, Fay Kenoyer. 1952. *Cladophora* balls collected in Steuben County, Indiana. 10: 141-143.
- Friesner, Ray C. 1952. The pioneer period in the study of Indiana vascular flora. 10: 144-152.
- Lawlis, John F., Jr. 1952. The effect of certain bacteria on the growth of *Trichomonas vaginalis* in vitro. 10: 153-170.
- McCormick, Jack. 1952. The flora of Shades State Park (Indiana) and the geographical distribution of the species. 10: 171-181.
- Jones, J. Johanna. 1952. A survey of fifteen forest stands in the early Wisconsin drift plain of Indiana. 10: 182-204.
- Trotter, Charles L. 1952. A five-acre forest survey at Shades State Park (Indiana). A study of sampling methods. 10: 205-217.
- Daily, William A. and Jack McCormick. 1952. The phytoplankton of the J.W. Frisz Memorial Lagoon, Shades State Park (Indiana). 10: 218-219.
- Drouet, Francis and William A. Daily. 1952. A synopsis of the coccoid Myxophyceae. 10: 220-223.
- Friesner, Ray C. 1953. Rafinesque and the taxonomy of Indiana vascular plants. 11: 1-4.
- Daily, Fay Kenoyer. 1953. The Characeae of Indiana. 11: 5-49.
- Potzger, John E. and A.N. Liming. 1953. Secondary succession in stands of red maple-sweet gum-beech forests in Ripley County, Indiana. 11: 50-59.
- Pelton, John F. 1953. Relationship of certain vegetative characteristics of *Stipa spartea* to survival from defoliation. 11: 60-70.
- Harris, William E. 1953. Effect of five antibiotics in varying concentrations on growth of young corn plants. 11: 71-86.
- Palmer, C. Mervin and Thomas E. Maloney. 1953. The use of algal cultures in experiments concerned with water supply problems. 11: 87-90.
- Daily, William A. and Everett E. Miner. 1953. The phytoplankton of Lake Wawasee, Kosciusko County, Indiana. 11: 91-99.
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- Billings, W.D. 1954. Temperature inversions in the *Pinyon-Juniper* zone of a Nevada mountain range. 11: 112-118.
- Daubenmire, R. 1954. Alpine timberlines in the Americas and their interpretation. 11: 119-136.
- Parker, Dorothy. 1954. Hepaticae from the Federal District, Mexico. I. 11: 137-138.
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- Reimer, Charles W. 1954. Re-evaluation of the diatom species *Nitzschia frustulum* (Kutz.) Grun. 11: 178-191.
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- Potzger, John E. 1956. Bibliography of scientific papers. 13: 6-11.
- Potzger, John E. and Albert Courtemanche. 1956. Pollen study in the Gatineau Valley, Quebec. 13: 12-23.
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- Daily, Fay Kenoyer and Walter Kiener. 1956. The Characeae of Nebraska—additions and changes. 13: 36-46.
- Daily, William A. 1956. Notes on the algae—IV. 13: 47-48.
- Holmes, Donald H. 1956. The effects of various physical and chemical agents on a *Staphylococcus* bacteriophage. 13: 49-65.
- Pelton, Jeanette S. 1956. Expression of the gene *d* in the first three leaves of *Zea mays* L. 13: 66-73.
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- Anderson, Robert G. and Robert C. Lommasson. 1958. Some effects of temperature on the growth of *Chara zeylanica* Willd. 13: 113-120.
- Nickell, Walter P. 1958. Variations in engineering features of the nests of several species of birds in relation to nest sites and nesting materials. 13: 121-140.
- Webster, Rex Nathaniel. 1958. The life history of the freshwater red alga *Tuomeya fluviatilis* Harv. 13: 141-160.
- O'Neill, Thomas W. 1958. A simplified medium for use in tissue cultivation of *Poliomyelitis* virus. 13: 161-178.
- Streightoff, Frank. 1958. Erythromycin, studies of its mode of action. 13: 179-214.
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- Daily, Fay Kenoyer. 1961. Glacial and post-glacial Charophytes from New York and Indiana. 14 (1): 39-71.
- Hall, Marion T. 1961. Notes on cultivated junipers. 14 (1): 73-90.
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