

THE RESEARCH FUND OF THE OHIO ACADEMY OF SCIENCE

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The special research fund of the Academy was inaugurated by an initial donation from Mr. Emerson McMillin at the Academy meeting of 1898 and his contributions were continued until his death in 1922, at which time there had been accumulated under the careful management of Dr. Mendenhall a balance of over \$1,300.00 which was invested and the income from which has in part been used in grants during the later years.

A record of the grants made during the passing years, now nearly a half century, would seem to be a worth-while effort and since the writer has had some connection with the use of the fund during many of these years, it seems appropriate to undertake the task, especially as it was his privilege to collect some data in this connection at the time of the celebration of the half century of Academy history.

That a small grant such as was possible with the initial \$250.00 can be made to secure large results is, I think, demonstrated by the record and it may be said that these grants have had the effect of not only furnishing the needed assistance in the provisions for travel expenses or the apparatus for various investigations, but have been a very effective stimulus toward the undertaking of research problems which might otherwise have been neglected. Certainly in many cases the grants have been the means of providing opportunity to teachers or students who could afford the time but lacked certain facilities to pursue investigations for which they were well qualified but lacked the means to finance them from their individual resources. That the fund has had the effect of encouraging research work on the part of some who would not have been attracted to it is, I think, also evident.

In this summary review of the projects assisted by the fund it may be of interest to note that the very first grant, which was to Prof. W. G. Tight, of Denison University; J. A. Bownocker, of Ohio State University, and Dr. J. H. Todd, of Wooster, was for a distinctly Ohio problem, the Preglacial Drainage of Ohio, and quite naturally the great majority of the projects assisted have been of a state character relating largely to the geology and biology, utilizing local talent for the study of local problems which often have world-wide significance.

For the Fifty Year Celebration the writer brought together a preliminary list of the grants, the persons receiving them and subjects of the investigations which were submitted to the committee on history, but naturally with the large amount of material accumulated for that event there could be little place for this record and no extended publication of the data has been given aside from the list of "Grants from the Research Fund," appearing in an article by historian W. H. Alexander, *Ohio Journal of Science*, Vol. 41, p. 304. That list is lacking in some details and might be misunderstood since grants listed as allotted were in some cases not used and in others the project delayed and the actual payment made in a subsequent year. Also no record is made of the subjects of the various projects which might be of interest to those who care to look into the distribution of the fund. The amounts noted in that list give substantially the distributions made from the McMillin donations and need not be repeated. They amounted to over \$6,000.00 in all and may be treated separately from the grants allotted by the A. A. A. S. in recent years and considered in a separate paragraph. Also as noted in a quotation from the by-laws, certain items such as life membership, donations

and sale of publications are to be placed in the research fund and income only used for grants in aid of research. (See paragraphs from by-laws below.) See also Report of Trustees, April 30, 1932, in Proc. Ohio Acad. Sci., *Ohio J. Sci.*, 32: 280-1. A. A. A. S., 1930

The first Board, 1898, consisted of F. M. Webster, W. R. Lazenby, E. L. Moseley, *vide*, p. 13, 7th Annual Report.

Grants as made by years were as follows:

1899. The first grants made from this fund in 1899 went to W. G. Tight, Preglacial Drainage of Muskingum Valley; J. A. Bownocker, Preglacial Drainage of Miami Valley; J. H. Todd, Preglacial Drainage in Wayne County; R. C. Osburn, Fishes of Northern and Southern Ohio, with later allotment for printing the Preglacial papers.

1900. To Gerard Fowke, Preglacial Drainage, Cincinnati; R. C. Osburn, for continuance of Fishes of Ohio; T. A. Bonser, Flora of Big Spring Prairie; Prof. J. S. Hine, Insects of Certain Parts of Ohio.

1902. J. S. Hine, Tabanidae of Ohio, two grants, published in Special Papers No. 5. Lynds Jones, "Birds of Ohio," two grants, published as Special Paper No. 6. F. L. Landacre was given two grants for studies on Protozoa, later published as Special Paper No. 13. Max Morse, grant for study of Batrachians and Reptiles of Ohio, and expense of publication, Special Paper No. 9. J. H. Schaffner, Ecological Study of Brush Lake, Special Paper No. 10.

1903. T. A. Bonser, Flora of Big Spring Prairie, published as Special Paper No. 7, "Ecological Study of Big Spring Prairie."

1904. F. L. Landacre, Studies on Protozoa, two grants. Max Morse, Reptiles of Ohio, Special Paper No. 9. J. G. Sanders, Coccidae of Ohio, published as Special Paper No. 8. Several small grants for Ecological Study of Brush Lake by J. H. Schaffner.

1905. R. F. Griggs, "Willows of Ohio, Special Papers No. 11. Herbert Osborn, two grants for "Study of Insects of Ohio," published in articles appearing in 8th Annual Report, *Ohio Naturalist* and Bulletins of Ohio Biological Survey.

1906. W. B. Herms, Relations of Insects to Organic Debris on Lake Beaches. J. E. Hyde, Upper Waverly Formation in Central Ohio. F. Carney, Local Glacial Geology Near Granville. Chas. Brookover, Fiber Tracts and Neurones of *Amia calva*. Victor Sterki, Land and Fresh Water Mollusca, Special Paper No. 12.

1907. W. C. Morse, for "Studies on Maxville Limestone," published as Special Paper No. 17, Fauna of the Maxville Limestone.

1908. A. Dachnowski, Peat Bogs in Ohio. H. S. Hammond, Mosses and Liverworts in Ohio. S. Morgulis, "Regeneration in Plants." L. B. Walton, "Naididae of Ohio." Freda M. Bachman, Special Papers No. 14, "Discomycetes in the Vicinity of Oxford," "published by the McMillin Fund." G. E. Goghill, "Breeding Opossum in Pens under Controls to Secure Embryos," published in *Ohio Journal of Science*, Vol. 39, pp. 239-249.

1909. J. H. Schaffner, "Trees of Ohio and Surrounding Territory," published as Special Papers No. 15. Walton, "Fresh Water Oligochaetes of Ohio," and Freda Detmers, "On the Genus *Carex*." A. Dachnowski, "Peat Bogs of Ohio." G. E. Coghill, "Opossum," and R. J. Sim, "Nesting of Birds in Northeastern Ohio."

1910. J. H. Schaffner, "Pteridophytes of Ohio," for publication, Special Papers No. 16.

1911. W. C. Morse, "Fauna of Maxville Limestone," Special Paper No. 17. W. M. Barrows; A. Dachnowski, "Peat Bogs of Ohio," published in Bulletin 16, Ohio Geological Survey as "Peat Deposits of Ohio," also in *Bot. Gazette*.

1912. W. G. Stover, "The Agaricaceae of Ohio," Special Paper No. 18. "Ecological Study of Buckeye Lake," by Freda Detmers, Special Papers No. 19. L. B. Walton, "Fresh Water Oligochaetes." J. S. Hine, "Mammals." A. Dachnowski, "Peat Bogs of Ohio" (see above). W. J. Kostir, "Orthoptera of Ohio."

1915. R. F. Griggs, Plant Ecology in Ohio. L. B. Walton, Fresh Water Organisms. W. H. Bucher, Related Localities of Wavy Sedimentary Strata. J. S. Hine, Collecting Insects in Northeastern Ohio. S. R. Williams, Richmond Deposit in Butler County.

1916. Williams and Shideler, "Richmond Division of Ordovician." L. S. Hopkins; B. W. Wells, Zooecidia on *Celtis occidentalis*. F. L. Landacre, for set of eggs of Marine lamprey *Petromyzon* to study origin of cerebral ganglion.

1917. Forrest B. H. Brown, Determining main forest types in Ohio. S. R. Williams, Geology in Southwestern Ohio. W. M. Barrows, Effect of radium on germ plasm.

1918. G. D. Hubbard, Geography of Columbus region. E. L. Rice, Chondrocranium of Eumeces. L. B. Walton, aquatic organisms. E. N. Transeau; H. W. Lutz, "Root Rots of Apples."

1919. J. S. Hine, Ohio Mammals; see Proc. Ohio Acad. Sci., Vol. 8, Part 6, 1929. W. H. Bucher, Geology of Adams County. L. C. Hopkins, Collection of Pteridophytes.

1920. F. C. Blake, two grants for purchase of apparatus. Paul B. Sears, Ohio Vegetation. W. H. Bucher; E. B. Walton, Fresh Water Organisms. Elsie Jordan, continued in '21.

1921. Elsie Jordan, "Relabeling Harper Collection of Naiades" under Dr. Bucher. L. B. Walton, study of "Fresh Water Organisms," published as Ohio Biological Survey Bulletin No. 24, "Fresh Water Organisms in Water Supplies."

1922. Paul B. Sears, "Vegetation of Ohio." J. S. Hine, "Mammals of Ohio."

1923. L. B. Walton, Aquatic Organisms. F. H. Herrick, Eagle Nests at Vermillion, Ohio. L. H. Tiffany, collecting algae in Ohio. J. E. Kindred, aquatic studies in Puget Sound. E. L. Stover, underground parts of grasses. R. A. Dobbins, mosaic diseases of tomatoes. S. S. Humphrey, root and stem rots of clover.

1926. W. M. Barrows, for "publication of paper on structures of spiders."

1928. Bernard S. Meyer, "Study of Seasonal Variation in Leaves."

1934. W. L. Evans for Chemistry Dept., O. S. U., for apparatus.

1935. R. B. Frost, Lorain Urban Survey.

1936. J. P. Porter, Studies on Behavior of Spiders.

1937. D. C. Rife, Genetic Studies of Monozygotic Twins and other Multiple Births. Wayne M. Felts, On Acid Intrusive in Cascade Mountains of S. W. Washington. R. A. Dobbins, Vegetation of the Northern Virginia Military Lands of Ohio.

1938. G. D. Hubbard, "Abandoned Glacial Lakes in N. Ohio." F. H. Verhoek, Apparatus for Studies of Solvents.

1939. Grant to Dr. E. Lucy Braun, University of Cincinnati, for her research upon the Deciduous Forest Formation of Eastern United States. Largely spent in travel expenses. Grant to Bertil G. Anderson, Western Reserve University, Cleveland, Ohio, for construction of constant temperature chamber for various experiments, as for instance, duration of the embryonic period, duration of the instars, etc. Grant to Dr. C. A. Lawson, Wittenberg College, Springfield, Ohio, for research defined as "An attempt to determine mechanism of gene action in embryonic development, using the Aphid *Macrosiphum solanifolii*."

1940. Dr. John W. Frink, 424 Riddle Road, Cincinnati, Ohio, for research on the "Terraces of the Ohio River." Grant to Prof. Archie N. Solberg, Biological Laboratory, University of Toledo, Toledo, Ohio, of \$50.00 for the making of slides for special work in his research, embryology of *Fundulus heteroclitus*.

1941. J. N. Wolfe, R. T. Wareham and H. T. Scofield, in 1941, with an additional grant later in 1941, for research defined as "Investigation of plant communities and measurement of microclimatic and edaphic conditions in a single valley in Hocking County, Ohio." The money was used for traveling expenses, photographic supplies and materials and tools for the construction of minor equipment. Drs. Wolfe, Wareham and Scofield are instructors in the Department of Botany, O. S. U. Continued in 1942 and 1943.

1942. Continued grant to Drs. Wolfe, Wareham and Scofield from A. A. A. S.

1943. B. S. Meyer, Mineral Nutrition of Russian Dandelion. Carl Venard, Mosquitoes of Ohio. Continuation of grant to Drs. Wolfe, Wareham and Scofield.

1944. Continuation of grants to B. S. Meyer and Carl Venard from A. A. A. S. Miss Alta Schrock, Oberlin, Pollen Content of Peat Bogs. Mr. Albert E. Hyder, Ecology of Bird Population in Hocking County. Dr. H. T. Gier, Athens, Reproductive cycles in foxes in southeastern Ohio.

The fund was designated as the Emerson McMillin Research Fund in earlier reports, and may have had an official designation later, but I have not located the record.

No payments on grants were made for the year 1914, 1924, 1925, 1927, 1929, 1930, 1931, and 1933. In some cases at least grants were made but the projects were not completed and the grants lapsed or were continued and paid in later years.

An allowance from the A. A. A. S. based on the members of the Academy who are also members of the A. A. A. S. has been received since 1930, and since 1937 this allowance has been allotted for research projects approved by the Trustees of the Research Fund, the A. A. A. S. specifying that such projects be approved also by their permanent secretary and the amounts expended within the year.

Projects which have been assisted from this source have been as follows. The subjects are listed above.

- 1937. Dr. D. C. Rife, Wayne M. Felts, R. A. Dobbins.
- 1938. Dr. G. D. Hubbard, Frank Verhoek.
- 1939. Dr. E. Lucy Braun.
- 1940. John W. Frink, Archie A. Solberg.
- 1941. Drs. J. N. Wolfe, H. T. Scofield, R. T. Wareham.
- 1942. Drs. Wolfe, Scofield and Wareham.
- 1943. Drs. Wolfe, Scofield and Wareham. Dr. B. S. Meyer. Dr. Carl Venard.

REGULATIONS FOR THE USE OF THE McMILLIN RESEARCH FUND

The McMillin Research Fund of the Ohio Academy of Science has been maintained through the generosity of Emerson McMillin and grants from this fund are made upon application to the Trustees of the Fund.

Applications for grants should include a statement of the subject to be investigated, the nature of the expenses to be covered, and in so far as practicable a list of the proposed items of expense in such a manner that the Trustees may determine the expenses and the allowance needed.

In rendering accounts it is desirable that an itemized statement be submitted showing the cost of apparatus or supplies used or, in case of traveling expenses, the localities visited, amounts of railroad fare, hotel and other expenses as incurred. Payments granted from this fund will, as a rule, be made only after the expenses have been incurred and upon receipt of detailed statement.

Apparatus, books, maps or material supplies not consumed during these investigations which may be secured with grants from this fund are to be the property of the Academy and after the investigation is completed should be accounted for to the Trustees or deposited with such officer of the Academy as the Trustees may direct.

It is expected that the results of such investigations will be published and if other means of publication are not available, the Trustees will try to assist in securing suitable publication.

....., *Chairman.*

The above is a statement of form for application, not followed rigidly. It was prepared I think by Dr. Mendenhall and was formally adopted by the Academy at the 28th Annual Meeting, May 30, 1918.

From Dr. Mendenhall's paper on McMillin read at the Ohio Academy meeting at Oberlin, March 31, 1923, he quotes McMillin:

"The research fund seems to have been pretty lively and doing work out of proportion to its size. The workers rather than the cash, probably are entitled to the credit."

Again: "The Academy needs to live centuries. I cannot, at most, live but a few years, much as I would like to be permanently established at Darlington."

From "Report of the Trustees of the Research Fund," Columbus, Ohio, April 1, 1925:

"We recommend that the income from \$1,000.00 of the Research Fund be available each year for a grant to be known as the McMillin grant and which may be used either for the

assistance in some research problem or given as an award in recognition of some especially noteworthy contribution of some member of the Academy. That the balance of the Fund and income derived from it, shall be used or allowed to accumulate as the trustees may deem best in any particular year, it being understood that the Fund or any interest income shall in all cases be used for the encouragement of research either by grants for individual problems or for the publication of papers resulting from research."

From the By-Laws adopted at the Thirty-fifth Annual Meeting:

"CHAPTER VII—RESEARCH FUND

"1. *Sources of Fund.*—The Research Fund shall consist of moneys paid by the general public for publications of the Academy, of donations made in the aid of research, and of sums paid in commutation of dues according to By-Laws, Chapter I, Paragraph 1.

"2. *Donors.*—Donors to this fund, to the sum of twenty-five dollars or more, shall be entitled without charge, to publications subsequently appearing.

"3. *Endowment.*—The aim of the Academy shall be to accumulate a fund of which the income alone shall be used for the encouragement of research and for the publication of papers bearing upon the development of science in the state."

TRUSTEES OF RESEARCH FUND AND DATES OF SERVICE

E. L. Moseley.....	1899-1900	T. C. Mendenhall.....	1916-1924
F. M. Webster.....	1899-1904	(Chairman 1916-1924)	
(Chairman 1900-1901)		Herbert Osborn.....	1917-date
H. C. Beardslee.....	1900-1902	(Chairman 1925-)	
C. J. Herrick.....	1904-1906	M. E. Stickney.....	1917-1919
J. H. Schaffner.....	1900-1905	G. D. Hubbard.....	1919-1931, and 1934-1937
W. R. Lazenby.....	1899 and 1901-1916	E. L. Rice.....	1924-1930
(Chairman 1901-1915)		L. B. Walton.....	1930-1933
G. B. Halsted.....	1905-1908	Alpheus Smith.....	1934-1936
Chas. Dury.....	1907-1908	W. L. Evans.....	1937-1939
E. L. Rice.....	1908-1914	J. P. Porter.....	1937-1940
Frank Carney.....	1910-1913	C. G. Shatzer.....	1939-1942
M. M. Metcalf.....	1913-1917	Paul B. Sears.....	1941-1944
N. M. Fenneman.....	1914-1917	F. C. Blake.....	1942-1945

The Trustees named at the annual meeting, 1898, for the succeeding year were E. L. Moseley, F. M. Webster and W. R. Lazenby and were for *one year*. In 1899 members were named for one, two, and three years and F. M. Webster became chairman. He was chairman until 1901; W. R. Lazenby, 1901-1915; T. C. Mendenhall, 1916-1924; Herbert Osborn, 1925-

The following papers published as special papers received assistance from the Research Fund. Special papers from three to nineteen were assisted by grants from Research Fund.

The Preglacial Drainage of Ohio—W. G. Tight, J. A. Bownocker, J. H. Todd and Gerard Fowke.

The Fishes of Ohio—Raymond Osburn.

Tabanidae of Ohio—James S. Hine.

Birds of Ohio—Lynds Jones.

Ecological Study of Big Spring Prairie—Thomas A. Bonser.

The Coccidae of Ohio—James G. Sanders.

Batrachians and Reptiles of Ohio—Max Morse.

Ecological Study of Brush Lake—J. H. Schaffner, Otto E. Jennings, Fred J. Tyler.

The Willows of Ohio—Robert F. Griggs.

Land and Fresh-Water Mollusca of Ohio—V. Sterki.

The Protozoa of Sandusky Bay and Vicinity—F. L. Landacre.

Discomycetes in the Vicinity of Oxford—Freda M. Bachman.

Trees of Ohio and Surrounding Territory—John H. Schaffner.

The Pteridophytes of Ohio—John H. Schaffner.

The Fauna of the Maxville Limestone—W. C. Morse.

The Agaricaceae of Ohio—W. G. Stover.

An Ecological Study of Buckeye Lake—Frederica Detmers.

The series of Special Papers was discontinued in 1929, but results of researches under these grants have appeared in the *Ohio Journal of Science*, The Ohio Biological Survey and in various other scientific journals.

I am indebted to Mrs. Ethel Melsheimer Miller for assistance in determining the subjects of researches for a number of the earlier projects.

If details were available an interesting story could be written about the grants that were made but for which no payments were made, due doubtless to the abandonment of the project or lack of reports.
