

NOTES ON THE HISTORY OF THE HERBARIUM OF THE ILLINOIS STATE MUSEUM

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INTRODUCTION

by
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It is now 15 years since Dr. George D. Fuller took over the task of building a representative Herbarium of Illinois plants in the Illinois State Museum. When he became Curator of Botany at the Museum, he had recently retired from the Department of Botany at the University of Chicago. Most men would have been satisfied to consider their life work done rather than to launch out on an-

other great task. During those 15 years he gave at least one week of every month, and often more, to the task of creating a proper Herbarium. Now at the age of eighty-five he is again considering retirement and it is fitting to point out the fruits of his efforts, which can best be done by presenting Dr. Fuller's own history of the Herbarium.

HERBARIUM OF THE ILLINOIS STATE MUSEUM

The first thousand plants.—When they were discovered in the storeroom of the Museum in 1938, the plants seemed to be well preserved and free from damage by insects. The newly appointed botanist, Dr. George D. Fuller, inspected them, and the 1010 specimens regarded as worth preserving were remounted on standard herbarium paper, retaining the original labels. They formed the nucleus of the Herbarium of the Illinois State Museum.

This collection of some 1029 plant specimens was probably put together in 1872, about the time Dr. George Vasey resigned as Curator of the Natural History Museum in the Illinois State Normal University at

Bloomington, Ill., and became Botanist of the U. S. Department of Agriculture and Curator of the U. S. National Herbarium at Washington, D. C. The specimens, carefully pressed, were collected from various parts of the State of Illinois; more than 500 were collected by Dr. Vasey; 300 specimens were collected by Elihu Hall; and 200 were collected by John Wolf.

George Vasey, M.D.¹ (1822-1893), came to Illinois as a young physician in 1848. He had a well-established interest in botany even then. Twenty

¹ A sketch of George Vasey's life by W. M. Canby and J. N. Rose with portrait and bibliography appeared in *Botanical Gazette* 18: 170-183, 1893. See also "A Brief Biography of George Vasey" in *A Field With Plant Lovers and Collectors*, by Alice L. Kibbe, pp. 207-208, portrait, 1953.

years later he went on the Major Powell Expedition to Colorado and also was appointed Curator of the Natural History Museum in the Illinois State Normal University. In 1872 he resigned to become Botanist of the U. S. Department of Agriculture and Curator of the U. S. National Herbarium. He seems to have taken his private herbarium with him, but somehow approximately 500 plants of his collection were preserved in the Illinois State Museum, which was not organized until 1877.

Elihu Hall² (1822-1882) came to Athens, Ill., in 1829, where his father, a school teacher, settled on farm land. Elihu became a successful farmer with a tremendous interest in botany. His herbarium of 10,000 plants is now in the Chicago Natural History Museum. Somehow, 300 sheets joined the Vasey collection and came to the Illinois State Museum.

John Wolf³ (1820-1897) was brought by his family to Canton, Ill., in 1860. John taught school, became a government assayer, prospered, bought commercial property and lived on the income, indulging his hobbies of botany, geology, and entomology. He established a museum at Canton. He left his collections and property to the First Presbyterian Church of Canton. The church gave the collections to the high school, where they were largely dissipated. The remnants of his collections fin-

ally went to the herbarium at the University of Illinois.

Both Hall and Wolf were friends of George Vasey. The thousand plants which made up the beginning of the Illinois State Museum Herbarium were probably placed in the Natural History Museum at Normal when Vasey was its Curator. Between 1897 and 1906 a sizeable collection of zoological specimens was transferred from the Laboratory of Natural History at Normal to the Illinois State Museum, then under the direction of C. H. Crantz, and the plants probably were included in the transfer.

Collections by W. P. A. workers.—

During 1938 a state-wide museum project of the Work Projects Administration arranged to put collectors in the field. Mrs. Alice A. Flynn was appointed Assistant in Botany at the State Museum and several collectors under her direction, during the seasons of 1938 through 1941, added some 6000 sheets from Sangamon County to the Illinois State Herbarium.

Other collections by W. P. A. workers made during 1939-1941 included: Winnebago County, under the direction of Professor Evelyn Fernald, Botanist, Rockford College, 7660 sheets; Jackson and Williamson counties, under the direction of Dr. Walter B. Welch, Botanist, Southern Illinois University, Carbondale, 1540 sheets; Union County, under the direction of Mr. Ralph Fisher, Director of Tree Nursery, Jonesboro, 950 sheets; and McLean County, under the direction of Dr. Blanche McAvoy, Illinois State Normal University, Normal, 375 sheets.

² There is a sketch of his life by Mrs. J. M. Milligan in *Botanical Gazette* 9: 59-62, 1884. See also *Past and Present of Menard County, Illinois*, by Rev. R. D. Miller, pp. 419-420, 1905, and *Afield With Plant Lovers and Collectors*, by Alice L. Kibbe, pp. 142 (portrait), 301-320, 1953.

³ A sketch of John Wolf's life with portrait by Margaret Middleton appeared in the *Transactions of the Illinois State Academy of Science* 33:12-14, 1940.

When the work under W. P. A. ended in 1942, some 1200 specimens had been collected in Illinois.

Collections by Naturalists of State Parks.—Naturalists at three State parks, Father George M. Link, of Pere Marquette State Park, Dr. Donald T. Ries, of Starved Rock State Park, and Mrs. Alice L. Hills, of White Pines State Park, made collections of plants and sent them to the Museum, where the plants have been identified by Dr. Fuller. The Museum has retained the duplicates, and the original specimens, correctly named, have been returned to the naturalists. By this arrangement the Museum has obtained over a thousand specimens, and the parks have benefited also.

Collections contributed by members of other institutions.

Prof. G. Neville Jones, University of Illinois, Urbana, Ill., 2704 specimens, from 1942 to 1953.

Dr. L. R. Tehon, Natural History Survey, Urbana, Ill., 363 mounted specimens, from 1942-1944.

Rev. R. R. Brinker, Quincy College, Quincy, Ill., 1100 specimens, from 1943-47.

Dr. Robert Evers, Natural History Survey, Urbana, Ill., 170 specimens, from 1947-1953.

Mr. H. E. Ahles, University of Illinois, Urbana, Ill., 80 specimens, from 1950-1953.

Prof. R. Maurice Myers, Western Illinois State College, Macomb, Ill., 587 specimens, from 1947-1953.

Dr. John W. Voigt, Southern Illinois University, Carbondale, Ill., 260 specimens, from 1951-1953.

Mr. Gordon Pearsall, Cook County Forest Preserve, Chicago, Ill., 426 plant specimens, from 1942-1945.

Dr. Philip B. Whitford, University of Wisconsin of Milwaukee, Milwaukee, Wis., collected some 500 specimens from DeKalb County.

Dr. Virginius H. Chase, Herbarium of Peoria Academy of Science, Bradley University, Peoria, Ill., 600 specimens.

Individual collectors.

Egbert W. Fell, M.D., Rockford, Ill., Honorary Curator of Botany, Illinois State Museum. In 1945, when Dr. Fell's health required that he spend more time out of doors, he took up as a hobby the study of botany. Dr. Fell is an active collector and in the past eight years he has contributed to the Museum 3666 plant specimens, several of which represent hitherto unknown species in Illinois.

Mrs. Vera Scherer Shaw, Olney, Ill., has collected 700 specimens between 1948 and 1953.

Julian Neil, East St. Louis, Ill., a high school teacher, has contributed 1000 specimens from St. Clair County, including several species new to the State.

Dr. Verne O. Graham, Chicago, Ill., a principal in the Chicago schools, collected some 276 specimens from 1942 to 1946.

R. E. Blount was a teacher in Chicago high schools for many years until his retirement in 1948. He collected 400 specimens from 1870 to 1872.

Enos Keithley, Dixon, Ill., Head Gardener of the State Hospital, Dixon, collected 472 plant specimens from 1943 to 1947.

Norman Reeder, formerly a publisher and editor in Springfield, collected 100 specimens of grasses from 1940 to 1945.

Mrs. Lola Carter, Springfield, Ill., a careful collector of plants from Sangamon, Wayne, and Morgan counties, collected 200 plant specimens, most of them new to the county.

Leo Marty, Ramsey, Ill., a carpenter, has collected 200 plant specimens, from 1947 to 1954.

R. T. Rexroat, a merchant in Virginia, Ill., collected 763 very fine pressed specimens in 1952 and 1953.

Collections of the Museum staff.—

Dr. Glen S. Winterringer, Assistant Curator of the Herbarium since July 1949, has collected extensively in all parts of Illinois. His collections have been particularly good in the southern part of the State and he has added some 9000 specimens from areas where additional data was needed. He has reported that there are 44,099 mounted plant specimens in the Herbarium, May 1, 1954.

THE CHANGING EMPHASIS IN PLANT SCIENCES, 1890-1930

Some of the changes in the plant sciences during the closing years of the nineteenth century and in the early decades of the twentieth century are well illustrated in the life of John M. Coulter. When Dr. Coulter was Professor of Botany at Indiana University (1890-93), he was a plant taxonomist. He came to Chicago in 1896 to be Head of the Department of Botany of the University of Chicago and brought with him his herbarium. He did not give any courses

in plant taxonomy in his new department, but gave courses in plant morphology and plant ecology.

Under Dr. Coulter the Department of Botany of the University of Chicago soon attained national reputation (1910-1925) in three branches of plant science, namely: plant morphology, under Drs. Chamberlain and Land; plant ecology, under Drs. Cowless and Fuller; and plant physiology, under Drs. Crocker and Shull. During these years plant taxonomy received little attention, as indicated by the fact that of 175 students granted the Ph.D. degree while Professor Coulter was the Head of the Department of Botany, only two were in plant taxonomy.

In 1907 the Coulter Herbarium, consisting of 42,826 specimens, was loaned to the Field Museum, and upon the death of Professor Coulter in 1928, it was given to that institution. In 1932 the Museum, in reporting the acquisition of this gift, said that the Herbarium contained 51,603 specimens valued at \$40,000.

During these years the Field Museum also enriched its store of Illinois plants by acquiring by purchase, gifts, or bequests, the herbaria of such early collectors as M. S. Bebb, H. N. Patterson, and Elihu Hall. Similarly the Herbarium of the University of Illinois acquired the herbaria of such collectors as E. J. Hall, W. S. Moffett, H. A. Gleason, and J. Schneck. Thus there was a desirable preservation of portions of the flora of the State in these two central herbaria while at the same time collectors were building up private herbaria and there was comparatively little local collecting done for the two big herbaria. Thus from 1900

to 1930 there was very little added to our knowledge of the flora of Illinois.

REVIVAL OF PLANT COLLECTIONS, 1930—1950

Events that may be cited as evidence of a revival of interest in plant collecting are: the appointment of Prof. G. Neville Jones to be Plant Taxonomist in the Department of Botany, University of Illinois, and publication of his *Flora of Illinois* in 1945, followed by a second edition in 1950; important additions to the Herbarium of the University of Illinois made by Mr. H. E. Ahles, Assistant in the Herbarium, University of Illinois; the founding of the Herbarium of the Illinois State Museum by Dr. George D. Fuller in 1938; the large increase in the size of the herbarium of the Illinois Natural History Survey due to the activities of Dr. H. S. Pepon and Dr. Robert Evers; the founding of herbaria at Quincy College and at Western Illinois State College, at Macomb; the collections by W.P.A. workers; and the activities of collectors listed in the earlier pages of this report. The revival resulted in the collection of more than 120,000 plant specimens, which were mounted and preserved in recognized herbaria in the State during these two decades.

VASCULAR PLANTS OF ILLINOIS

As far back as 1938 it was planned to publish a book on the plants of Illinois, using as a basis the specimens collected for the Museum Herbarium. Later this plan was extended to include specimens found in other herbaria in the Middle West that pertained to this State.

In 1945 a tentative agreement was made with the Botany Department, University of Illinois, where Dr. G. Neville Jones had been working on such a publication since early in 1940. Accordingly, the University Press of the University of Illinois undertook the publication of *Vascular Plants of Illinois*, to be financed jointly by the Illinois State Museum and the Department of Botany of the University of Illinois. Professor G. Neville Jones and Dr. George D. Fuller and their assistants undertook the authorship of the book. While both assume full responsibility for the contents of the volume, the former concerned himself particularly with classification data and the latter with distribution data of the species of the State. The book is now in press.

As early as 1950 Dr. Fuller had begun to visit different herbaria to accumulate data on the distribution of various species in the State. All available collections were examined and innumerable data were recorded on cards which were filed at the Illinois State Museum. Later Dr. Fuller was ably assisted by Dr. Winteringer in accumulating the data of distribution of species. The data on the record cards were transferred to sheets, one for each of the 2300 species occurring in the various counties of the State. Then the information contained on the data sheets was plotted on base maps. In this difficult and tedious task Mrs. Alice Flynn proved herself a skillful and untiring worker. She produced more than 2000 excellent maps, some having two species on one map. Dr. Winteringer assisted in producing the maps and was particularly effi-

cient in fitting the maps into the text of *Vascular Plants of Illinois*, which was being produced at Urbana by Dr. Jones and his assistants. By the end of June 1953, the botanists of the State Museum had collected the data on distribution of plant species of the State and had finished plotting the data on the maps.

As far back as 1943 Professor Jones produced a rough first draft

of a manuscript of a flora of the State and every year since then the Graduate College of the University of Illinois has generously supported the work. About the first of September, 1953, at Urbana, the final writing of the text was begun, and early in November the manuscript was placed in the hands of the editors of the University Press at Urbana.