

Biographical Sketches
of Deceased North American Mycologists
including a few European Mycologists

L. R. Hesler

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For the first half of his long career, Lexemual Ray Hesler (1888-1977) was a plant pathologist. His interest in botany was sparked by his mentor at Wabash College (class of 1911), Mason Blanchard Thomas, professor of botany and horticulture. Thomas' time at Wabash was marked by his uncanny identification of promising young men and encouraging them to continue their studies at leading universities. But that is only one side of the equation. Once a student was discovered, graduate studies required funds to pay for tuition, books, board, and room. Often, a former student, now on the faculty of a more comprehensive university (Yale and Cornell come to mind), made arrangements for an earmarked fellowship. Hesler benefited by such. Herbet Hice Whetzel (Wabash class of 1902, by 1911 head of the Department of Plant Pathology at Cornell University) arranged a fellowship for Hesler assisting apple growers in upstate New York in the summer of Hesler's graduation from Wabash. In September, Hesler enrolled at Cornell in plant pathology. The next three summers were spent in the orchards. There followed the Cornell Ph. D. in 1914, and retention on the Cornell Plant Pathology Department faculty until his move to Tennessee in 1919.

At Tennessee, administrative duties (i.e. Head of the new Department of Botany and later Dean of the College of Liberal Arts until his retirement in 1958) reduced research time, but his plant pathological interests didn't flag.

Then, in December 1934, a disastrous fire destroyed the building in which the life sciences were housed, including botany. All was lost; for Hesler, seven thousand herbarium specimens, a small but costly library, notes and manuscripts. But if the fire was a total loss, it was also a life-changing punctuation as well. Pre-fire, Hesler had begun taking interest in the abundant fleshy fungi of the nearby Appalachian Mountains. Post-fire, he began expressing that interest, collecting, photographing, writing descriptions, preserving fresh material, and reaching out to whomever was the authority on each taxonomic group for help in identification.

The distinction between plant pathology and mycology dated a few decades previous. William Ashbrook Kellerman had started *The Journal of Mycology* with just such separation in his mind. The plant pathologists had their interests and their journals for research publication. His *Journal* was mycological. Two decades later, Cornell's Department of Plant Pathology, under Whetzel, had a separate faculty appointment for a mycologist, who, far-outnumbered by pathologists, was not expected to do pathological research. In short, mycology represented taxonomy; plant pathology was the application of "basic research" to growth, well-being, and marketing of cultivated products.

The present volume presents the second half of Hesler's career. His concern was that the names of mycologists (almost no plant pathologists) he came to know in the research community, often personally, would not easily be connected by upcoming generations of students to a persona, a life and a career. A concerted effort to amass such a collection of "thumb-nail biographies" was started about 1970 and was loose-leaf bound in 1975.

Hesler opined that the volume of 124 brief biographies ranging from a half-page to five pages, was not ready for publication because he had not exhausted available background material. To do so would have required many typed letters to government and university archivists and distant colleagues, days or weeks for replies and collation into the growing volume. It is salutary to remember that computers and their instant correcting ability in manuscripts, file-saving, and resurrection, much less "e-mail," were still 20 to 30 years ahead. Today, one can find more material on almost any name on-line in a couple hours than Hesler could in days or weeks. Using this thread as an excuse, each of Hesler's biographies is an invitation to further explore the person featured. For those with a historical bent, each of the people featured lived a life span in locations, at schools, on faculties, each of which is worthy of investigation. Search engines, charged with a full name, date of birth and some modifier, usually "botanist" or "mycologist," can furnish embellishments. Soon, some relationships emerge (i.e. the Morrill Act, creating Land-Grant Colleges, occurred shortly before the lives of many of the featured mycologists and in many cases provided their first—or second or third—job. The Second Morrill Act created agricultural experiment stations). If this invitation to further "peel the onion" were accepted, Hesler would smile.

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Who is Included?

This is a series of biographical sketches of some deceased North American mycologists. A few Europeans whose biographies were readily available to me are also included.

It is a compilation and is not a history. To compensate for brevity, I have included references to my sources, and have indicated whether or not a photograph and a list of publications accompany the biographical account.

Some Helpful Sources

Besides scientific journals, several book-size publications have been most helpful. The more important sources include:

- Stevenson, John A. An Account of Fungus Exsiccati Containing Material from the Americas. Beihefte zur Nova Hedwigia, Heft 36. 1971.
- Stafleu, Frans A. Taxonomic Literature. 1967.
- Lindau, G. et P. Sydow. Thesaurus. (Gives extensive lists of publications by author)
- Catalog of the National Agricultural Library. (Lists of publications by author)
- Dictionary of Scientific Biography.
- Who's Who in America.
- Who Was Who in America.
- Harshberger, John W. The Botanists of Philadelphia and Their Work. 1899.
- **Journals:** Journal of Mycology, Mycologia, Bulletin of the Torrey Botanical Club, Persoonia, Farlowia, Phytopathology, Botanical Gazette, Transactions of the British Mycological Society, Elisha Mitchell Scientific Society Journal, Lloyd's Mycological Notes and Letters (Cincinnati).

Foreign Mycologists

Brazil: Batista

Canada: Buller; Dearness; Groves; Jackson, H. S.

Czechoslovakia: Kavina; Velenovský

Denmark: Lange, J.; Rostrup

England: Berkeley; Broome; Cooke, M. C. Cotton; Crossland; Masee; Rea; Smith, Geo.; Smith, W. G.;
Wakefield

Finland: Karsten

France: Boudier; Patouillard

Germany: deBary

Italy: Bresadola; Ciferri; Saccardo; Vittadini

Japan: Miyabe

Netherlands: Donk; Persoon

Norway: Jørstad

Puerto Rico: Chardon

Russia: Bucholtz; Jaczewski

Sweden: Fries; Romell

Switzerland: Gaumann

Lawrence Marion Ames

1900 – 1966

Among Ames' several interests in mycology, his work on hermaphroditism in the ascomycete, *Pleurage anserina*, and a monograph of the Chaetomiaceae (1961) both stand out as superior researches.

Although born in the State of Washington, at Waverly, in 1900, the family later moved to Michigan and then to Indiana, where his father was a farmer. He earned the B. S. degree at Michigan State College (now University) in 1927, and the M. S., also at Michigan State, in 1929.

There, under E. A. Bessey (son of C. E. Bessey, Nebraska), he developed a life-time interest in the fungi. After one year at The Ohio Agriculture Experiment Station, Wooster, he married Willa Love Galyon, a Knoxvillean and a graduate of University of Tennessee, and whom Ames met while both were graduate students with Bessey. That same year (1930), he became Austin Teaching Fellow in Botany at Harvard, where he was awarded the Ph.D. in 1933. After some years with the U. S. Bureau of Entomology and Plant Quarantine, he was appointed in 1944 as Research Mycologist to the Army, at Fort Belvoir, to study causes and control of fabric disintegration; and finally, he became Dean of Graduate Studies there under the auspices of The Catholic University, Washington, D.C.

On retirement in 1961, he re-activated an old interest which he had in fungus diseases in man, and for a time he was adviser to Children's Hospital, District of Columbia, and later was Research Professor at American University stationed at Sibley Hospital there. He died suddenly of a heart attack in 1966.

Reference

- Diehl, Wm. W. Lawrence Marion Ames. *Mycologia* 59: 189-191. 1967. With photograph and publications list.

Joseph Charles Arthur

1850 – 1942

Born in Lowville, New York, on January 11, 1850, Arthur's family moved first to Illinois, then in about 1856 to a farm near Charles City, Iowa. He was one of the first students to enroll at the newly opened Iowa State College (now University) at Ames, in 1869. Arthur had been interested in plants and hoped to study them at Iowa. But when he entered Iowa, he found that no course in botany was being taught. One of the professors procured for him a book, "Eton's Manual", which Arthur read. Real help came the next year when Charles E. Bessey (later at Nebraska) came to Iowa as an Instructor in Botany. During his remaining days at Iowa he took courses with Bessey. Arthur graduated with the B. S. degree from Iowa State in 1872. At that time, however, there were no openings in botany in American colleges. During the next few years, he marked time until 1876 when he accepted an Instructorship at Iowa State which position he held for two years (1876-1878). During this time, he met Holway, Uredinologist, and their association continued until Holway's death in 1923.

In 1877, Arthur took the M. S. at Iowa State. Two years later, he studied for brief periods at both Harvard and Johns Hopkins University. In 1879-1881, he served as Instructor in Botany at The University

of Wisconsin, and the next year (1882) at The University of Minnesota. Next, he went to the New York Agriculture Experiment Station at Geneva, New York, as Botanist. While near Ithaca, he took the Doctor of Science at Cornell in 1886. That same year, he also studied for a short time at Bonn, Germany. Finally, he went to Purdue University in 1887 as Professor of Botany where he remained to retirement in 1915. He was then named Professor Emeritus of Botany by Purdue. Honorary degrees came to Arthur from The State University of Iowa (LL.D) in 1916, and from Purdue (D.Sc.) in 1931.

During his life, Arthur studied in the fields of mycology, and also plant pathology and physiology. But, in most of his years he confined his work largely, if not entirely, to the rusts. At Iowa, Bessey purchased for his study a collection of Curtis' rusts, and thus he made a good start on Uredinology. Among his many achievements, Arthur did an immense amount of work in culturing rusts. In those days, rusts were not grown in pure culture, the theory being that they were such highly specialized parasites that they could not be grown on sterile culture media. But what Arthur did was to sow rust spores on suspected alternate hosts, and thus he connected the spore forms of a large number of species of polymorphic, heteroecious rusts. In a summary of his culture work (*Mycologia* 13: 230-262. 1921), it is said that Arthur used 2390 collections involving 3750 sowings.

In 1883, Arthur published his first scientific paper, in the *American Naturalist*. In 1905, he brought out a new classification of the rusts; in 1907, he began work on his "Rusts" for North American Flora.

His scholarly career was crowned with the publication of his "Manual of the Rusts of the United States and Canada", in 1934. Previously, he had published his "The Plant Rusts", with the collaboration of six of his students: Bisby, Fromme, Jackson, Kern, Mains, and Orton. In all, Arthur was the author of more than 200 titles in botany (chiefly mycology).

He always welcomed specimens of rusts, and finally he had "collaborators" from every part of the United States who sent him material, some of which he named; the rest he checked for correct identity. It is said of his collections that Arthur had *Puccinia graminis*, for example, from as many states as possible and on as many varieties of wheat as possible. His herbarium finally reached some 60,000 collections mainly of rusts and is at Purdue University.

One of Dr. Arthur's contributions to mycology was his part in the publication, with E. W. D. Holway, of "Uredineae Exsiccati et Icones".

Arthur supplied the identifications, descriptions, and some drawings and photomicrographs, while Holway furnished the actual preparations of the specimens and underwrote the cost.

Arthur was a cultivated gentleman, distinguished looking, well grounded in the classics, and also with some interesting distinctive personal characteristics. He was a non-conformist. At college, manual labor on the college farm and military drill were both required of all students. He felt that he did not have time to work on the farm, and finally after some skirmishes, his professor arranged substitute work to satisfy the requirement. He also staged a battle with the authorities regarding the military drill. Again, a substitute was arranged. Finally, he confronted the administration on another matter: The AAAS was to meet in Dubuque, Iowa, during the winter term. Arthur wanted to go so that he might hear the great Asa Gray speak. But, for the reason that he would miss too many classes, permission was denied so Arthur did the expected: he went anyway. Again, his professor arbitrated the infraction. He had an interesting, and perhaps at times profitable practice: whenever any advanced student came to visit him, he would set them to work counting germ-pores and measuring urediniospores.

Perhaps, one of his characteristics also comes to surface in the following reported incident. After retirement, Arthur became upset when something happened to displease him. In revenge, he engaged a moving-van on a Sunday, and moved the entire rust herbarium to his home in Lafayette. The Purdue community, naturally disturbed, persuaded the President of the University to pay a personal call on Dr. Arthur at his home. After some diplomatic exchanges, Arthur engaged the van to haul it all back to its rightful place the next day.

Arthur was always enthusiastic when rusts were involved. When I first came here, I wrote him to inquire, whether he would consent to identify Tennessee rusts. He would, and gladly. Thus, most of the Tennessee records of rusts given in his Manual resulted. One of our graduate students, Alice Caton (now Mrs. Work), did a Master's thesis on Tennessee rusts (in 1932). This pleased Arthur to no end, and he took time to suggest in long letters to Miss Caton the problems she should study. Miss Caton was also pleased when he requested a copy of her thesis.

Arthur's contribution to Uredinology has yet to be matched in North America.

References

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- Seaver, F. J. A statement on Arthur's work. *Mycologia* 20: 115-116. 1928.
- Kern, Frank D. Joseph Charles Arthur. *Phytopath.* 32: 833-844. 1942. With photograph, and six pages of titles in small type.
- Lloyd, C. G. *Mycological Notes.* 62: 904-906. 1920. With photo-graph and a chronological list of notable events in Arthur's life showing the wide range of his experience and services to mycology.
- Photograph only. *Jour. Myc.* 8: 105. 1902.

George Francis Atkinson 1854 – 1918

In the latter part of his life, Atkinson became interested in agarics while Professor of Botany, at Cornell University. He was born January 26, 1854, at Raisinville, Michigan. He entered Olivet College in 1878, and later was admitted to Cornell where he graduated in 1885. That same year, he became Assistant Professor of Entomology and Zoology at the University of North Carolina. Shortly thereafter, he accepted a position as Professor of Botany and Zoology, and also Botanist to the Agriculture Experiment Station, at The University of South Carolina. In 1892, Atkinson was made Professor of Biology at The Alabama Polytechnic Institute (now Auburn University). But finally, in 1892, he went back to Cornell as Assistant Professor of Cryptogamic Botany; and there, in 1896, he succeeded Albert N. Prentiss as Head of the Department of Botany.

While in Alabama and the Carolinas, Atkinson gave attention to diseases of crops, especially cotton. At Cornell, he published Experiment Station Bulletins 73 and 74 - the first in 1894 on leaf curl and plum pockets (*Exoascus*), and the latter the next year on the damping-off disease (*Pythium*). Although most of his work in the South, and some at Cornell, was on plant diseases, his preference was for the fungi as such. But, like many other of the earlier mycologists, he began his work on organisms other than fungi.

We find, for example, that his first publication dealt with insects, and a later one on "A Catalogue of the Birds of North Carolina", 1887. In 1889, Atkinson published on the club-root of cabbage, caused by a Myxomycete, as Bulletin 9, at Alabama. Later there, he also published on diseases of apples, cotton and figs. One of his earliest mycological papers was on *Sphaerella gossypina* sp. nov., which Atkinson proved to be the perfect stage of *Cercospora gossypina* Cooke, and which has published in the Bulletin of the Torrey Botanical Club, 1891. His first agaric paper come in 1897 as Cornell Experiment Station Bulletin 138. One of his better known works, of course, is his book, "Studies of American Fungi, Mushrooms, Edible, Poisonous, etc.", in 1900. He also published several papers on the minute structural development (ontogeny) of certain agarics including, *Armillaria*, *Lepiota*, *Amanita*, *Agaricus*, *Coprinus*.

As Atkinson took up agarics at Cornell, he became acquainted with Peck, at Albany, and was thus put to great advantage in his work. In 1917, Atkinson was relieved of his teaching and administrative work so that he might concentrate on his proposed illustrated work on the "Fleshy Fungi of North America". But he never published this study.

In September 1918, when collecting in the Pacific Northwest, he contracted pneumonia and died in Tacoma, Washington, on November 14, 1918.

During the years following Atkinson's death in 1918, enrollments in Liberal Arts botany waned, the Department was abandoned in 1922, and all work in the plant sciences was transferred to Botany in Agriculture.

Among his students were Whetzel, Reddick, Fitzpatrick and others.

His herbarium is at Cornell University.

References

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- Murrill, W. A. Mycologia 11: 95-96. 1919.
- Lloyd, C. G. Mycological Notes 59: 846. 1919. With photograph.

Samuel McCutchen Bain 1869 – 1919

During the last half of his life, Professor Bain was at The University of Tennessee, Knoxville. A native Middle Tennessean, he was born at Eagleville, Rutherford County, on January 14, 1869. He died at Knoxville, January 30, 1919, at the age of fifty years. In school, he pursued the Classical course, but learned his science largely through independent study. He tutored in French and German with a Miss Evelyn Franklin, whom he married in 1891.

In his early days, he showed an interest in botany, and soon set about to study the flora of his neighborhood. Even before graduation, he taught a course in the sciences in his high school. In 1890, he accepted a position in Union University, Jackson, Tennessee, where he taught French and the sciences.

While there, he continued field work, collecting material for his "Plantae Tennesseae Occidentalis". I find no evidence that Bain ever issued this series as Exsiccata; Dr. A. J. Sharp somewhat vaguely recalls having seen some mounted plants so labelled in the University of Tennessee Herbarium, before the 1934 fire. In any event, in 1892, Bain took some specimens to The University of Tennessee Herbarium to make comparisons. There he met F. Lamson Scribner, Professor of Botany, who was so impressed with Bain's work that he appointed him as an assistant, beginning in 1893. Shortly thereafter, Scribner left the University, and Bain was made Instructor in Botany and Geology, and Botanist to the Agricultural Experiment Station. In 1901, he was promoted to Professor. Meantime, he continued his work on the State flora; and in his Experiment Station work at first he investigated fungicide including the action of copper on crop leaves.

In 1904, he was appointed as Special Agent and Collaborator in Cotton Breeding with the USDA. This work took him over West Tennessee, Arkansas, and Texas. As a result of these studies, Bain brought out "Trice cotton" which became a widely grown cotton variety in the South.

About this time, Bain had noticed the deterioration of clover by anthracnose in Tennessee, and he became active in the selection of individuals which promised to be resistant to the disease. Soon he found a strain of red clover resistant to anthracnose, a study which brought about a complete restoration of red clover growing in Tennessee. Failing health prevented his planned selection work with other crops.

Bain left many collections of flowering plants, and a few fungi. These were salvaged, but later (1934) were destroyed by fire.

Through some of his students, I have learned that Bain was a highly successful teacher; they were very loyal to him; he believed in pure botany, feeling that the application of it would take care of itself. He was, interestingly enough, a pioneer in America in the Lumiere process in color photography.

In 1919, when I came to Tennessee, Bain had died some 9 months earlier and I never met him. However, I met his four sons: Franklin, oldest (now deceased) was a plant pathologist in cranberry diseases with the USDA; Douglas, youngest, (died last year, 1973) took work with the Department of Botany here, and finally became plant pathologist at Mississippi State College (now University); Sherwood and Donald, I merely met, and never came to know well.

Although I found no specific statement that Professor Bain was graduated from any college, but evidently held the A.B. degree, for in The University of Tennessee Announcement (catalog) for 1895-1896, his name appears among the academic staff as an Instructor, with the A.B. degree. I found no record that he held other degrees. In any event, Bain must have been an unusual personality to achieve so much with very largely self-training.

References

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- Essary, S.H. Samuel McCutchen Bain, Fifth President, 1916. *Tennessee Acad. Sci. Jour.* 19: 277-280. 1944.
- Essary, S.H. Samuel McCutchen Bain. *Tennessee Agr. Exp. Sta. Ann. Rept.* 32: 17-20. 1920. With a photograph and a list of publications.

Howard James Banker

1866 – 1940

Born at Schaghticoke, New York, on April 19, 1866, of Dutch parentage, Banker died in Huntington, New York, on November 13, 1940.

After graduating from Syracuse University in 1892, he taught at Troy Conference Academy, and also prepared for the ministry. He served as pastor of only one church and that for three years at Proctor, Vermont, 1895-1898. Banker then entered Columbia University, where he was a student under L. M. Underwood. There he took the M. A. degree in 1901. At Columbia, he became interested in the Hydnaceae, and, after a few years of study, published his first mycological paper in 1901. At the end of one paper, (Torrey Bot. Club. Bull. 28: 199-222. 1901) he gave his address as Dickinson Seminary, Williamsport, Pennsylvania. After an interim of teaching biology in Southwestern State Normal, at California, Pennsylvania, he went to DePauw University, Greencastle, Indiana. He continued his research and study there, and in 1906, took the Ph.D. at Columbia University.

His chief work was on the hydnums, and in 1906, he published a monograph of the Hydnaceae in the Torrey Botanical Club Memoirs 12. He also published a series of papers on Hydnaceae in Mycologia vols. 4, 5, and 6.

Reference

- Barnhart, John H. Howard James Banker. Mycologia 33: 341-343. 1941. With a photograph and a list of publications.

Mary Elizabeth Banning

1832 – 1903

For several years, Miss Banning, as an amateur, studied the fungi of Maryland, and prepared colored drawings of them. About 1890, she presented to the New York State Museum a volume of her illustrations, consisting of some 175 plates, representing nearly as many species of Hymenomycetes and Gasteromycetes. These illustrations were accompanied by comments and descriptions, and the edible species were so indicated. Peck was high in his praise of her work.

She evidently had earlier sent collections of higher fungi to Peck for identification, and occasionally was a joint author with Peck.

Reference

- Peck, C. H. A munificent gift. Torrey Bot. Club Bull. 17: 103-104. 1890.

Elam Bartholomew

1852 – 1934

Although Bartholomew was born in Strasburg, Pennsylvania, on June 9, 1852, he spent most of his life in Kansas. At age 22 (in 1874), he migrated to Kansas, near Stockton, where he homesteaded, and where he remained until 1929. In that year, he became curator of the mycological herbarium at the Kansas State College at Fort Hayes.

In his early years, before going to Kansas, the family had moved to Ohio, then to Illinois. When he decided to teach school in Illinois, he found that to get a teacher's certificate he must have had instruction in botany. To meet this requirement, he acquired a Gray's "Lessons in Botany", and soon passed the examination in botany, and as well in other subjects. This experience led him to become interested in plants. As a result, by 1885, at age 33, he had collected every phanerogam he could find growing in that part of Kansas.

In that same year (1885), V. A. Kellerman, of Kansas State College, at Manhattan, visited Bartholomew at his farm home. Kellerman called his attention to an *Albugo* on *Amaranthus* leaves. This incident led to Bartholomew's turning to the study of fungi. At his death, Bartholomew's herbarium included 40,000 specimens, embracing many fungi (agarics 850, polypores 1300, rusts 14,000, smuts 1200, miscellany 7450, and other plants 13,000). Included in his herbarium were some exsiccati from Sydow (German), Petrak (Czechoslovakia), and others.

In 1901, Bartholomew became editor and publisher of Ellis and Everhart's "Fungi Columbiani" (exsiccati of all kinds of North American fungi). In 1911, in addition to this task, he initiated an exsiccati-set called "North American Uredinales" which continued through century XXXV. It is said that these undertakings entailed the identification, packeting, labeling, and indexing of 427,000 specimens. He collected in every state of the U. S., as well as in Canada and Mexico. He personally collected 290,672 specimens, including 470 new species. Like many who prepared such sets of exsiccati, he had the assistance of other collectors; in his instance, he had the help of Ellis, Peck, Holway, Arthur, Bethel, Dearness, and others.

Among his publications were "The Plant Rusts of Kansas", 1899 (published in the Kansas Acad. of Science); "The Fungus Flora of Kansas"; "Handbook of North American Uredinales", 1927 (revised in 1933). He left a diary covering 19,000 consecutive days (52 years).

Reference

- Bartholomew, E. T. Elam Bartholomew. Mycologia 27: 91-95. 1935. With a photograph.

Heinrich Anton de Bary 1831 - 1888

The book, "Comparative Morphology and Biology of the Fungi, Mycetoza, and Bacteria" by Anton de Bary is alone sufficient to justify placing him among the greats in mycology. One only has to read the book critically to appreciate the care with which he portrays his studies of the fungi and their relatives. Fortunately, for the American student, the volume was translated into English some years ago.

Anton de Bary was born at Frankfurt-am-Main, Germany, in 1831. While still attending the Gymnasium, he became interested in botany. Later (1853), however, he took a degree in medicine, and then practiced in his native city for two years before going into botanical work.

He was appointed Instructor at The University of Tubingen; two years later, he became Professor at Freiburg; in 1867, he went to Halle, and in 1872, was appointed to a position in botany at Strassburg where he remained until death in 1888. Whetzel (1918) says that no less than 68 notable men in science studied under de Bary while he was at Strassburg. He attracted men to his laboratory from all parts of the world.

In 1852, de Bary began to publish his researches in a series of monographs on the algae, fungi, myxomycetes, bacteria, and higher plants. With his research and publication, his heavy load of advanced students, he found time to edit "Botanische Zeitung", as well as carry correspondence, write reviews, do administrative work, and give lectures. Whether overwork had anything to do with his early death at 57 years is not known to me. As a graduate student, I was led to believe that de Bary was not only the father of modern plant pathology but also had no peer in mycology.

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- Whetzel, H. H. An Outline of the History of Phytopathology. pp. 45-47, and 119 (list of bio-sketches). 1918.

Augusto Chaves Batista 1916 - 1967

One of the most prolific writers of all mycologists, Batista's publications are reported to number in excess of 600 titles.

He was a native of Brazil, born in Santo Amaro, Bahia. After preliminary schooling at home, he was graduated in agronomy in an agricultural school, in Bahia. He later studied bacteriology and plant pathology at Texas A & M, and then spent some time at the Commonwealth Mycological Institute in England.

Much of his mycological work was in taxonomy and in the variability of fungi. In 1954, he went to the Mycological Institute at the Federal University of Pernambuco, where he was Director until his death at the age of 51.

Reference

- Carniero, L. S. Augusto Chaves Batista. *Mycologia* 60: 1137-1139. 1968. With photograph.

Dow V. Baxter 1898 - 1965

The field in which Baxter was best known is forest pathology. However, as his biographer states, mycologically he was recognized as an authority on wood-decay fungi, more especially polypores. It is said that his collection is one of the largest in the United States, and at death it was given to The University of Michigan Herbarium.

Baxter was born at Hillsboro, Illinois, on January 16, 1898. He served from 1926 to his death as Professor of Forest Pathology in The School of Natural Resources at Michigan.

Among his associates at Michigan, he was known for his frequent field expeditions. He collected not only in Michigan, but also rather extensively in Alaska. When collecting polypores, he always also gathered a liberal sample of the associated decaying wood.

He died December 31, 1965, in Tucson, Arizona.

Reference

- Smith, Alexander H. Dow V. Baxter. *Mycologia* 59: 565-567. 1967. With photograph.

Henry Curtis Beardslee 1865 – 1948

The teaching which Beardslee received from his father inspired in him an interest in natural history and botany, and finally in mycology.

Beardslee graduated from high school in Painesville, Ohio in 1883; attended Oberlin College for one year; and completed the A. B. degree at Adelbert College, in Western Reserve University, Cleveland, Ohio. In 1892 he also took the M. A. at Adelbert. Subsequently, he taught at Green Springs Academy, Ohio, then from 1893 to 1904 in the University High School, in Cleveland.

In 1901, along with two other persons, Beardslee established The Asheville School for Boys, where he became Senior Master in 1904, and where he remained until retirement in 1919. While in Asheville, he engaged in an intensive study of the mushrooms of the area, and in 1918, he published "The Russulas of North Carolina", in *The Journal of the Elisha Mitchell Scientific Society*. He also travelled briefly in Germany, and elsewhere in Europe, where he met several mycologists. In Sweden, he collected with Lars Romell, in an area so familiar to Fries (Femsjö).

Beardslee retired in 1919, and subsequently spent the winters in Florida. There he collected fleshy fungi (especially agarics), and in 1940 published jointly with Miss Burlingham seven new species of Florida *Lactarius*. At death, his herbarium went to Oberlin College.

Reference

- Burlington, Gertrude S. Henry Curtis Beardslee. *Mycologia* 40: 505-506. 1948. With a photograph.

Rhoda Williams Benham **1894 – 1957**

Without apology, it may be said that many mycologists are not very familiar with the medical aspects of their subject. But Dr. Benham is one who became well versed in that field, for she spent much of her adult life teaching, studying, and publishing in medical mycology.

She was a native of Cedarhurst, Long Island, New York, where she was born on December 5, 1894. She lived there throughout most of her life and died there January 17, 1957. Dr. Benham attended Barnard College at Columbia University, where she majored in botany, and there received the A. B. in 1917. In the following seven years (1918-1925) she remained at Barnard as a teacher of botany. While there, she had the good fortune of a stimulus from Drs. Richards, Harper, Dodge, and Hazen. In 1919, she « took the Master's and began work toward the doctor's degree. Her Master's thesis dealt with *Aspergillus niger* (nutritional studies), and the Ph.D. (1931) with the thesis entitled, "Certain Monilias Parasitic on Man, their Identification by Morphology and Agglutination", which was published in the "Journal of Infectious Diseases" vol. 49: 183-215, 1951.

This work is still regarded as a classic and is said to be the first in the application of immunologic principles as a taxonomic tool in the study of pathogenic fungi. She also became an authority on yeast-like fungi pathogenic to man. Dr. Dodge recommended her for this position of mycologist in Dermatology, in the College of Physicians and Surgeons, at Columbia University, and she apparently remained there during her professional life.

Dr. Benham was primarily a taxonomist, but she used not only morphologic characters but also biochemical, including nutrition and some others in her work.

Reference

- Silva, Margarita and Elizabeth L. Hazen. Rhoda Williams Benham. Mycologia 49: 596-603. 1957. With a photograph and a list of 43 publications.

Miles Joseph Berkeley **1803 – 1889**

Although by profession Berkeley was an English clergyman, he was and still is a notable figure in world mycology. He found time from his pastoral obligations to describe hundreds of new species of fungi. In this avocation he also carried on extensive correspondence with numerous fungus collectors, such as Curtis and Ravenel from the United States, Fries, from Sweden, Montagne from France, and others. In England, he also worked closely with C. E. Broome with whom he published numerous papers.

Berkeley was born at Biggin in 1803, and died at Sibbertoft, England, in 1889. He had formal education at Rugby, and in 1825 was graduated from Christ's College, Cambridge. Berkeley really preferred the natural sciences, but he entered the more lucrative profession of the ministry. Because of his writings, Berkeley has been said to be the virtual founder of British mycology. It is estimated that in his professional life he described some 6,000 species, including many new species (mentioned above).

Among Berkeley's better known works are his series, entitled "Notices of American Fungi," which appear in *Grevillea* vol. 1 (1872-1873), and in vol. 4 (1876); and his "Decades of Fungi", some 60 papers in number.

This series was published in Hooker's *Journal of Botany and Kew Garden Miscellany* and *London Journal of Botany*, in the middle 1800's. In the field of applied mycology (plant pathology), he published numerous short papers in the *Gardener's Chronicle*, from 1854 to 1857. Besides his papers, Berkeley also published a book entitled "Outlines of British Mycology," 442 pages, 1860.

References

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- Lloyd, C. G. Rev. M. J. Berkeley. In *Synopsis of the Stipitate Stereums*. Lloyd Library. p. 14. 1913. Portrait.
- Murray, George and Editors. The Rev. M. J. Berkeley M. A., F. R. S. *Jour. Bot.* 27: 305-308. 1889. Also *Ann. Bot.* 3: 451-456. 1890. (Chiefly a long list of publications).
- Whetzel, H. H. *An Outline of the History of Phytopathology*, pp. 55-57. 1918. (also gives a list of some 12 biographical treatises, pp. 119-120).

Charles Edwin Bessey 1845 – 1915

Born on a farm near Milton, Wayne County, Ohio, on May 31, 1845, Dr. Bessey remained there until eighteen years of age. After public school and Academy education, he taught district school. After that time, Bessey taught continuously, and became best known for his unusual teaching, for his enthusiasm in the promotion of Botany, and for inspiring young people. He died at Lincoln, Nebraska, on February 25, 1915.

Bessey entered Michigan State College, Lansing, in 1866, with the hope of becoming a civil engineer. It happened, however, that he took botany with Professors A. N. Prentiss, later at Cornell University, and W. J. Real, and Bessey then changed his plan; he became a botanist. Soon after graduation with the B.S. in 1869, he was appointed Professor of Natural History at The Iowa State College (at Ames), where he remained for fifteen years. He also lectured for a brief period in 1875, at the University of California.

While at Ames, the AAS held its 1872 meeting at Dubuque, Iowa, where Bessey met Asa Gray, who persuaded him to attend Harvard. That winter and in subsequent ones, when he had his vacations, Bessey attended Harvard, and studied under both Gray and Goodale. It was with Goodale that Bessey began to develop his ideas of laboratory work in botany, then practically unknown in America. In the summer of 1881, he offered a course in botany with laboratory at the University of Minnesota.

At Iowa State, Bessey was not only Professor, but also served as acting President for one year. In 1884, he left Iowa to take the Chair of Botany at The University of Nebraska, a position he held through the remainder of his professional career. The excellence of his work at Iowa and at Nebraska was recognized by Iowa State when the Ph.D. was conferred on him in 1879.

In 1898, he received the LL.D. from Iowa State. At Nebraska he was not only Professor of Botany, but also became Acting Chancellor, 1888-1891, 1899-1900, and in 1907; and was appointed Head Dean in 1909. He was President of the AAAS in 1910-11, when the meeting was held in Washington, D.C. At the General Session, President Taft was asked to welcome the group—which he did. When Mr. Taft sat down, the assembled crowd started to leave. Bessey, the chairman, a small man (perhaps 5-6, 140 lbs.) roared: “Shame on you, shame on your manners—the President of the United States always leaves first.” All sat down meekly while Taft and his entourage strode out, smiling.

In 1888, Bessey visited Europe, including The Kew Gardens (London), and some principal universities on the Continent. For years, he was botanical editor of the *American Naturalist*, in which he published something each month. He was President of the Iowa Academy of Sciences for some ten years and served as President of the Botanical Society of America and was one of its charter members.

Bessey was an all-around naturalist-botanist. He represented botany on a committee whose action resulted in President Harrison's move to set aside the first American reserve, Yellowstone Park. In his teaching, Bessey directed his students' attention toward such great natural resources as forests and grasslands (Clements was one of his students; see: *Fifty Years of Botany*, 1958, p. 360). He began his publishing on topics in zoology and entomology. At the age of 35, he published “*Botany for High Schools*”, 1880, which passed through several editions. In the field of mycology, Bessey was active in publishing; in Lindau and Sydow “*Thesaurus*”, some 43 titles, mostly mycological or plant pathological, are listed.

Bessey's leadership and influence at Iowa State and Nebraska, and in the world of botany generally, he was and is properly evaluated. Rodgers (1944) states that “No one man in America, other than Coulter, contributed more to the developing transitional period of North American botany than Bessey”. Shear (1896) also speaks of Bessey's greatness, his cordial manner, his way of encouraging students, his earnest and enthusiastic way in all branches of botany, his ability to inspire others, his persuasive manner—in all, a great teacher.

Among his students were J. C. Arthur, F. E. Clements, C. L. Shear, E. A. Bessey (his son), and Roscoe Pound who became Dean of the Harvard Law School.

References

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- Rodgers, Andrew Denny. In: *American Botany, 1873-1892.* 1944.
- Ewan, Joseph. *A Short History of Botany in the United States.* 1969.
- Ewan, Joseph. Charles Edwin Bessey. In: *Dictionary of Scientific Biography.*
- Pool, Raymond. A brief sketch of the life and work of Charles Edwin Bessey. *Amer. Jour. Bot.* 2: 505-518. 1915.
- *Who Was Who in America*, vol. II. 1970.

Ernst Athern Bessey
1877 - 1957

Dr. Ernst A. Bessey was born on February 20, 1877, in Ames, Iowa, the son of the famous botanist, Charles E. Bessey (1845-1915). In 1884, the family moved from Ames to Lincoln, Nebraska, where the father was for many years Professor of Botany at The University of Nebraska. Young Bessey received three degrees from Nebraska: the A.B. in 1896; the M.S. in 1897; and the Honorary LL.D. in 1946. He also studied with George Klebs, in Germany, where he was granted the Ph.D. in 1904.

In his professional career, Bessey held several positions: USDA, two years; Louisiana State University, Professor of Botany, 1908-1910; Michigan Agricultural College (now Michigan State University), East Lansing, 1910 to retirement in 1946. At Michigan State, he was Professor of Botany and Mycology 1927-1930; from 1930 to 1944, he served as Head of Botany and as Dean of the Graduate School. Among the many honors received was a Certificate of Merit awarded by the Botanical Society of America for his outstanding contributions to science.

In 1914, Bessey published with his father a book entitled, "Essentials of Botany". In 1935, he published the first American textbook on mycology; and in 1950, this volume was revised under the title "Morphology and Taxonomy of the Fungi". Bessey also was the author of numerous mycological papers on the Phycomycetes, problems in fungus phylogeny, and other subjects.

Ellsworth Bethel **1863 - 1925**

Bethel was born in Ohio, June 20, 1863, but later (1890) moved to Colorado, where he became a teacher of prominence and a naturalist. He was a graduate of Scio and Tennessee Wesleyan College. In 1915, he was awarded an honorary M. A. degree from the University of Denver. He died September 8, 1925.

Bethel was a field mycologist—a collector rather than a writer and publisher, and he devoted much of his time to the collection of rust fungi. In 1917, he was appointed to a position in The Office of Forest Pathology, Washington, D.C., which position he held until death.

Although his publications are few in number, he left a valuable herbarium with many rusts and slime molds to the National Fungus Collections, Washington.

Reference

- Seaver, Fred J. Ellsworth Bethel. *Mycologia* 18: 187-188. 1926. With a photograph.

Giacomo Bresadola **1847 - 1929**

A man of the church, The Reverend Bresadola found mycology a hobby to which he was devoted. He was born in Ortise, Italy, which apparently was also the home of another botanist, P. A. Mattioli, the latter one of the great botanists of the 16th century. Bresadola attended a technical school, where he distinguished himself as a draftsman. He had actually wished to become an engineer, but in college he studied the classics and catholic theology, became a priest, and his first position was that of minister of

Cavalese.

Bresadola became interested in nature, and noted how the Italian priests, at the monastery, ate fungus species. Soon, he purchased some books on his fungi at Innsbruck, and began mycology in earnest. He also became well acquainted with P. Henning's Engler-Prantl (a sort of mycological bible in my graduate student days).

Among his well-known works are two: "Fungi Tridentini Novi, Nondum Delineati", 2 vols. issued in several parts, 2 plates, 1881- 1890; and his "Iconographic Mycologia", 1927-1941, in 27 vols., the last by E. Gilbert (French) on Amanita. This Bresadola set deals exclusively with agarics (it is in our Library). Others of his works were done in collaboration with Patouillard (French) and Cavara (Italian).

Bresadola was visited at his home by W. A. Murrill (around 1905, or slightly later), who found Bresadola an excellent collector in that he prepared only superior specimens, well-selected and carefully dried. Lloyd says of Bresadola that he had the best critical knowledge of the Old World polypores of any mycologist he knew. He built up a very good herbarium, which was finally purchased by Romell, and is now deposited in The Naturhistoriska Riksmuseum, at Stockholm.

Bresadola was a busy priest, so he began his work on fungi at his own door-step, and there he was able to do critical research. He lacked funds for travel far from home, but other mycologists, respecting his labors, sent him type specimens on loan. His work was further facilitated by the fact that he was an unusual linguist, he was rather proficient in eight languages.

Bresadola is described as modest, hospitable, agreeable, and not an oddity. In a circle of friends he was bright, talkative, liked a glass of wine (thinned with a little water), but did not smoke. He retired on a modest pension, and would devote his mornings to fungi, and afternoons to walk in the surrounding countryside.

References

- Murrill, W. A. Bresadola. *Mycologia* 22: 49-50. 1930. With a photograph of Bresadola and Murrill.
- Lloyd, C. G. *Mycological Notes*. 35: 462-463. 1910.
- Lloyd, C. G. In *Synopsis of the Stipitate Polyporoids*. With a photograph, frontispiece. 1912.
- Killermann, S. Don Giacomo Bresadola. *Zetischr. f. Pilzk.* 10(5): 122-128. 1926. With photograph and list of publications. Translated by Alice Hansen, graduate student, Nov. 1974, University of Tennessee Botany, Knoxville.
- Photograph only. *Jour. Myc.* 12: 137. 1907.

Christopher Edmund Broome 1812 - 1886

Mycologists are familiar with "Berk. & Br.", abbreviations of the names, Berkeley and Broome, which follow binomials of certain fungi. They were contemporaries in England, and for many years co-authors in publications, in the *Journal of the Linnean Society*, and in the *Annals and Magazine of Natural History*. Broome began publishing with Berkeley in 1848.

Reference

- Anon. Obituary. Jour. of Myc. 3: 11. 1887. (Apparently taken from Grevillea.)

Jean Louis Emile Boudier **1828 - 1920**

It is asserted by Lloyd (1911) that Boudier was (then, 1911) “the acknowledged master of French mycology”. He adds that Boudier, at first a pharmacist, retired from his vocation to mycology after 25 years. Boudier is reputed to be the first to have been both a good mycologist and a good artist. This characterization is in some contrast to that made by many biographers of M. C. Cook (English mycologist). The plates in his “Icones Mycologicae, ou Iconographie des Champignons de France” have been judged “the acme of excellence” at the time of publication (about 1904-1911).

Reference

- Lloyd, C. G. Mycological Notes 37: 494-495. 1911. With two photographs, one at age 84, the other perhaps in his forties.

Fedor Bucholtz **1872 - 1924**

A Russian, Bucholtz studied under Ed Fischer in Bern, Switzerland.

Later, he was appointed Professor of Botany at The Polytechnic Institute, in Riga, Russia. In 1899, he was awarded a grant from an institution in Florence, Italy to study the hypogean fungi there under Mattiolo.

Bucholtz continued his studies of these subterranean fungi, and finally published a book (in Russian) on the Russian Hypogean Fungi, which was perhaps his major contribution to mycology. A German summary of this work is found in “Annales Mycologici” vol. 1, 1903, and supplements in vols. 6 (1908) and 8 (1910).

After losing his property, library, and his collections in World War I, he became Director of the Botanical Garden, in Dorpat, Estonia, in 1923.

Reference

- Lloyd, C. G. Mycological Notes 68: 1169. 1923. With a photograph.

Arthur Henry Reginald Buller **1874 - 1944**

British by birth, A. H. R. Buller, was born in Birmingham, August 19, 1874. He was brilliant, imaginative, and with an abundant good humor, often characteristic of his countrymen.

His academic training began at Mason College, in his native city, and he took the B. S. at the University of London in 1896, followed by study at Leipzig, where he took the Ph.D. under Pfeffer in 1899, also had work with Robert Hartig, noted forest mycologist- pathologist, at Munich (1899-1901). Later he studied at the Marine Biological Station, in Naples, Italy.

Buller began his professional career by teaching at his alma mater, and in 1904, he was appointed Professor of Botany, in the University of Manitoba, Winnipeg, Canada. At first, he taught not only botany, but also geology; but despite a heavy load, he found time at nights to study fungi. During the summer, Buller returned to Birmingham where he devoted himself to the field, laboratory, and library aspects of fungus research. Later, he also studied at Kew Gardens, London.

Dr. Buller is perhaps best known to the mycological world for his 6-volume brilliant and unorthodox studies on fungi (a set in the University of Tennessee Library, Knoxville). In these volumes he describes in his forceful style of writing how he developed an ingenious device for listening to spore-discharge from the ascus. At an Annual meeting of the Mycological Society of America, at Toronto, he delivered a delightful address on these and similar researches. At that time, the citizens of the United States were enjoying the Volstead Act. When Buller described the magnified sound of ascospore-explosion, he twitted his listeners from the United States by commenting that this sound strongly resembled that a cork being pulled from a champagne bottle; but, he said good-humoredly, "of course, you Americans wouldn't know about that".

Buller was a person of broad interests. Although the fungi were his first love, he also knew the flowering plants of England and Manitoba, and many birds; he quoted Milton and Shakespeare at length, wrote superb limericks, played the piano, liked billiards, and greatly enjoyed travel; he is credited with sixty-five transatlantic voyages in his half century of adult life.

References

- Seaver, Fred J. Arthur Henry Reginald Buller. *Mycologia* 37: 275-277. 1945. With a photograph.
- Lloyd, C. G. *Mycological Notes* 11: 1237. 1924. With photograph.
- Bisby, G. R. *Nature* 154: 173. 1944.
- Hanna, W. F. C. W. Lowe, and E. C. Stakman. A. H. R. Buller. *Phytopath.* 35: 577-584. With a photograph and a list of more than 50 titles.

Gertrude Simmons Burlingham **1872 – 1962**

A long time teacher of biology in a Brooklyn, New York, high school, Miss Burlingham became also a highly respected agaricologist. She gave most attention to the genera *Russula* and *Lactarius*, both of which she monographed for North American Flora. She also prepared and distributed two fascicles of "The Lactariae of North America", 1910. Sets, or partial sets at least, are found at National Fungus Collections, USDA, The University of Michigan, and elsewhere.

Miss Burlingham spent many summers at a second home in Vermont where she collected vigorously. Later, she also collected agarics in the Pacific Northwest, in Denmark with Jakob Lange, and in Sweden with Romell and Lundell. Although of slight build, she seemed to have boundless energy.

After retirement at Brooklyn, she took up residence in Florida where she continued to collect agarics, some of which were published, a few of them with H. C. Beardslee who also was at that time retired in Florida.

She was a native of the town of Mexico, New York, a graduate of Syracuse University, and took the Ph.D. at Columbia University, in 1908. While at Brooklyn she frequently studied material at The New York Botanical Garden Herbarium and when she died, she left her collections to that institution.

In the summer of 1930, Dr. Jakob Lange, his wife and son (Morten, now Professor of Mycology, at The University of Copenhagen) visited the Adirondack Mountains where, at Seventh Lake, Dr. H. M. Fitzpatrick and I were privileged to participate in an informal agaric foray. Dr. Burlingham was also in attendance, and her sharp eye and discrimination were quite evident.

Reference

- Seaver, Fred J. Gertrude Simmons Burlingham. *Mycologia* 45: 136-138. 1953. With a photograph and a list of about 20 titles.

Edward Angus Burt 1859 – 1939

Educated at Harvard, Burt took the A.B. in 1893; the A.M. in 1894; and the Ph.D. in 1895; and during these years both Farlow and Thaxter were on the mycology staff there. He held various positions both before and after his years at Harvard: he taught at Albany, New York, Academy, 1880-1885; at The New York State Normal School, also at Albany (where he knew Peck, and Shear was one of his students); as Professor of Natural Science, 1885-1891; at Middlebury, Vermont, Professor of Natural History, 1895-1913. Finally, he was Mycologist and Librarian, at The Missouri Botanical Garden, 1913-1925.

Dr. Burt was born on April 9, 1859, at Athens, Pennsylvania; he died April 27, 1939, at Saratoga Springs, New York, at the age of 80.

He is best known to mycologists for his extensive published work on the Thelephoraceae. Burt also published on “North American *Anthurus*: its structure and development”, in the Boston Society of Natural History Memoirs 3(No. 14), pp. 20. 1894; and on a “Key to the genera of Basidiomycetes of Vermont” in Vermont Dept. Bot. Contribution No. 6, pp. 18. 1899. Burt began collecting around 1880 while a student. He accumulated some 700 phanerogams from eastern New York, and many cryptogams (including lichens, algae, and mosses). He also acquired about 500 collections of rarer European species. A brief account of his private herbarium is given in Day (1901).

References

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- Lloyd, C. G. Mycological Notes 47: 654-655. 1917. With a photograph on the cover.
- American Men of Science, vols. 1-6.
- Who's Who in America, vols. 2-19.
- Dry, Mary A. The herbaria of New England. *Rhodora* 3: 207. 1901. (This article extends over pages: 67-71; 206-208; 219-222; 240-244; 255-262; 281-283; 285-288. 1901)

William Wirt Calkins **1842 – 1914**

An amateur botanist, Calkins never entered the mycology profession.

His vocation was that of a lawyer and a literary writer. But he had a genuine interest in natural history as evidenced by his publications on flowering plants, lichens, and fungi.

Calkins was born in Illinois on May 29, 1842 and died on July 9, 1914. He prepared for Yale, served in the Civil War, and finally entered business and law. As an avocation, he collected many rocks and fossils, only to lose them in the Chicago fire of 1871. Subsequent collections which he made of flowering plants went to Notre Dame, and many of his fungus collections were distributed by Ellis and Everhart in their "Fungi Columbiani" and "North American Fungi".

During the winter of 1886-1887, Calkins collected fungi in Florida, and about 1888 he distributed these specimens under the label "Florida Fungi", but, as Stevenson (1971) remarks, these distributed specimens do not qualify as fungus exsiccati.

Calkins also published a series of papers under the general title, "Notes on Florida Fungi" in the *Journal of Mycology*, beginning in volume 2 (1886) and ending in volume 3 (1887).

Reference

- Fink, Bruce. William Wirt Calkins, Amateur Mycologist. *Mycologia* 7: 57-60. 1915. With a photograph and a list of 38 publications.

Vera K. Charles **1877 – 1954**

Miss Charles is best remembered by her work on mushrooms, but she also became well acquainted with the Fungi Imperfecti, the Ascomycetes, fungus parasites of man, and with entomogenous fungi.

Born in Erie, Pennsylvania, June 24, 1877, she later lived near and in Washington, D.C. She took work at Mt. Holyoke College, then at Cornell University where she received the A. B. in 1903. While at Cornell, she pursued graduate work with Dr. G. F. Atkinson. Later in 1903, she was employed by the Bureau of Plant Industry where she worked on plant pathogenic and other fungi until retirement in 1942. Even after retirement Miss Charles was a Collaborator with the Division of Mycology and Disease Survey,

USDA. Although failing eyesight forced her to give up microscopic work, she continued mycological work until death in Washington on November 2, 1954.

Miss Charles was a keen collector of fungi. I saw many of her collections at The Mycological Society Foray, at Highlands, N.C. in 1933 where she found several which had rarely been found there before.

One of her useful publications is her "Some Common Mushrooms and How to Know Them", published as Circular 141, by the USDA, sixty pages, illustrated. It is now out of print, but a greatly enlarged and revised publication on the subject is expected to appear in the next few months, written by Dr. Joe Ammirati (who recently transferred to the University of Toronto).

Reference

- Cash, Edith K. Vera K. Charles. With a list of 35 mycological publications.

Carlos E. Chardon 1897 – 1965

Not unlike some other mycologists, Chardon was called on to discharge many duties clearly outside the field of fungi. A native of Puerto Rico, he spent his life on the Island. A list of his publications shows that he made valuable contributions to our knowledge of the fungi, especially the Pyrenomycetes, while at the same time carrying a heavy burden of administrative affairs.

While he was pursuing the bachelor's program at The University of Puerto Rico, Mayaguez, an earthquake and fire halted the functioning of the Institution; so, he transferred to the Cornell Department of Plant Pathology in 1918, and there (in 1919) he took the B. S. degree.

In 1921, he was awarded the Master's degree at Cornell. Later, he was given two honorary degrees: the D.Sc. by Dartmouth in 1935; and the LL.D. by the University of Puerto Rico in 1953.

In 1923, Chardon was made Commissioner of Agriculture in Puerto Rico, a position he held with distinction until 1930. From 1931 to 1936, he served as Chancellor of The University of Puerto Rico; from 1936 to 1943, as Administrator with the P. R. Land Authority; then Director of the Institute of Tropical Agriculture, 1943-1946.

During all his professional years, he promoted mycological expeditions in the Tropics participated in by Kern, Jackson, J. H. Miller, Overholds, Seaver, Weston, Whetzel, and others. These studies were published in sizeable papers and monographs.

Chardon was a student in my class in Plant Pathology at Cornell in 1918-1919. He was in every way a superior student, accurate in his observations and writings, and an excellent botanical artist.

Reference

- Kern, Frank K. Dr. Carlos E. Chardon (1897-1965). *Mycologia* 57: 839-844. 1965. With a photograph and a selected bibliography of some 23 titles.

Raffaele Ciferri

1897 – 1964

In his last years (1942-1964), Ciferri was Professor of Botany at The University of Pavia, Italy. He graduated in Agriculture in 1920. Subsequently Ciferri worked with the Ustilaginales (smuts), and, in collaboration with a contemporary, P. Redaelli, he did research on the yeasts.

From 1925 to 1932, he studied in tropical America (in Cuba, the Dominican Republic, and Haiti). Many collections were taken in Santo Domingo which were later studied in collaboration with F. Petrak (Czechoslovakia). Of these some 2000 collections, about 400 were described as new species. Later, a mycoflora of Santo Domingo covering 700 species was published by Ciferri.

Ciferri, returning from his tropical expedition to Italy in 1932, became Director of the Italian Cryptogamic Laboratory, at the Botanical Institute, in Pavia. Here, he studied plant diseases to some extent, but more especially fungus diseases of man. In 1936, Ciferri moved to Florence where for eight years (1936-1942), he held the position of Professor of Botany in the Forest and Agricultural College. While at Florence, he travelled in Venezuela, China, and Germany. At Florence, also, he (with Redaelli) founded Mycopathologia (now Mycologia Applicata). In 1943, his "Ustilaginales" came out as a part of "Flora Italica Cryptogamica".

Ciferri was made Professor of Botany at Pavia (1942) where he remained until death on February 12, 1964. He was born at Ferro, Italy, on May 30, 1897. For his studies in human mycology, he was awarded an Honorary Degree by The University of Recife, Brazil.

Reference

- Baldacci, Elio. Raffaele Ciferri. Mycologia 57: 198-201. 1965. With a photograph.

Frederic Edward Clements

1874 – 1945

Notably, a plant ecologist, Clements is known to mycologists for his book, "The Genera of Fungi", 1909, published by the H. H. Wilson Co. In 1931, Clements and Shear published the 2nd edition of it under the same title. He also published "Minnesota Mushrooms", In: Minnesota Plant Studies, 1910.

Clements is perhaps less well-known for Clements and Clements (his wife), a fungus exsiccati set issued under the title "Cryptogamae Formationum Coloradensium", 1906-1908. Six centuries were distributed to more than a dozen American herbaria. For these issues, most of the material was collected during summers in Colorado, especially in the region of Longs Peak, during the days when Clement was a professor at The University of Nebraska. The set included many new taxa (genera, species, and varieties), and in later papers he provided Latin diagnoses for a number of these new entities. In the Catalogue of the National Agriculture Library there is also listed a typewritten paper by Clements, "A key to the orders and genera of fungi" (Call No.: - 46.2 C69). This key apparently was prepared while he was a student under C. E. Bessey, at The University of Nebraska, in 1907. The remainder of his numerous publications were in the field of plant ecology.

Clements was a native of Lincoln, Nebraska, where he was born on September 16, 1874. He earned the B.Sc. degree at Nebraska in 1894, the M.A. in 1896, the Ph.D. in 1898, and later was also awarded the Honorary LL.D. in 1940 (at Nebraska). He died at Santa Barbara, California, on July 26, 1945.

During his professional career, Clements held positions at several institutions: at The University of Nebraska, he was Instructor (1897) and adjunct Professor of Botany (1899), and Professor of Plant Physiology (1906-1907); at The University of Minnesota, Professor and Head of the Department of Botany, 1907-1917, and State Botanist and Director of the Minnesota Botanical Survey; at The Carnegie Institution (Washington, D.C.), in Charge of Ecological Research, 1917-1941. After retirement in 1941, he was placed in charge of the Laboratory for Ecological Research (from 1941). He also served as Collaborator in U.S. Soil Conservation Service beginning in 1934. During his career, he was a member of a large number of professional societies, including some in Europe (in Great Britain, Sweden, Italy).

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George Perkins Clinton 1867 – 1937

In the 19th century, the Clinton and Perkins families migrated from New York State to Illinois. There, in Polo (Ogle County), George Clinton was born on May 7, 1867. He graduated from Polo High School in 1886. That autumn, Clinton was one of 300 students who registered at The University of Illinois, Urbana. There he selected botany as a major, and thus came under the influence and instruction of T. J. Burrill. At Illinois, he received the B. S. degree in 1890, and the M. S. in 1894. From 1890 to 1900, Clinton was Assistant Botanist to the Illinois Agricultural Experiment Station, Urbana, and also in the University Department of Botany (with Burrill). At the Station, he discovered a method for producing in culture the perithecial stage of *Venturia inaequalis*, the common apple scab fungus only to learn that it had been described a year earlier by Aderhold, a German mycologist-pathologist.

While at Illinois, Clinton collected higher plants, but finally found that he preferred the fungi. Further, he became interested in the control of cereal smut. Next, he saw the problems in the taxonomy of the Ustilaginaceae (smuts), a group of fungi which he was to pursue for the remainder of his years.

Clinton entered Harvard in 1900 to work under W. G. Farlow and Roland Thaxter. There, he was awarded the M.S. in 1901; and in 1902, the D. Sc., with his thesis entitled "North American Ustilagineae", which was published by Harvard University. In July 1902, he accepted a position as Botanist to the Connecticut Agricultural Experiment Station, at Storrs. During his tenure there, he published numerous papers on a variety of plant diseases but continued to retain a strong interest in the smuts. Yale University, being near Storrs, engaged Clinton to become a Lecturer in Forest Pathology at Yale from 1915 through 1926.

Having met and talked with Clinton, and corresponded with him in the 1915's, I found him to be personable, steady, able, and exceptionally kind to younger students who sought his help. He was finally regarded as a world authority on the smuts, and in North America, only one of his students, Zundel (also one of my students at Cornell), has done comparable work on this group of fungi.

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George W. Clinton 1807 – 1885

Although born in New York City on April 13, 1807, G. W. Clinton was a resident of Buffalo from 1836 to 1881. This Clinton, not to be confused with G. P. Clinton of Connecticut, did not publish much on the fungi, but was more than an average fungus collector. He was for years the moving spirit of the Buffalo Society of Natural Sciences and was also its President in 1861 when it was established, and for many years thereafter.

Clinton attended Hamilton College, and apparently graduated from there with the Bachelor's degree; later, Hamilton gave him an Honorary LL.D. He was a grand nephew of one George Clinton, the first Governor of New York State, and in 1881, he went to Albany to arrange for the publication of the Governor's papers. He may have been of the legal profession; at any rate, he was usually known as "Judge Clinton".

Clinton left his herbarium to the Buffalo Society, and in 1920 it was examined by C. G. Lloyd (Cincinnati). Lloyd found it to contain extensive collections of local fungi, as well as collections contributed by Bennett (New Jersey), Blake and Frost (Vermont), Michener (Pennsylvania), and Peck (New York State, Albany). Clinton's herbarium also contains a set of Wright's "Cuban Fungi", which were named by Berkeley, and many are "co-type" specimens.

Reference

- Lloyd, C. G. *Mycological Notes*. 64: 985. 1920. With a photograph.

William Chambers Coker 1872 – 1953

Living entirely in the Carolinas, Dr. Coker was born in Hartsville, South Carolina, on October 24, 1872. Sometime later, he moved to North Carolina, where all his remaining years were spent.

Coker's father, Major James Lide Coker, studied for one year at Harvard under Asa Gray and Louis Agassiz. Later, W. C. Coker learned much of the local flora under instruction from his father.

Coker entered The University of South Carolina in 1891, and in 1894 he graduated with distinction. He then took a position in a bank in Wilmington, North Carolina, but, after three years, entered the Graduate School at The Johns Hopkins University. There he studied under Duncan S. Johnson, and was awarded the Ph.D. in 1901. Coker's doctoral thesis dealt with the gametophyte and the embryo of *Taxodium*, later published in the Botanical Gazette. Following this period of study, he spent one semester with Strasburger, noted botanist in Bonn, Germany.

At the age of 30, Coker accepted a position of Associate Professor at The University of North Carolina, Chapel Hill, where as Kenan Research Professor of Botany, he remained to retirement (1945).

Coker's wide interest in biology is attested to in his publications which cover trees and shrubs and several of other botanical subjects. But mycologists knew him for his studies and writings on the fungi. It is said that he arrived in Chapel Hill with a well-annotated copy of Atkinson's "Mushrooms". Students of agarics are aware of his series of monographs on mushroom genera, which began in 1917 with his "The Amanitas of Eastern United States", published in the Elisha Mitchell Scientific Society Journal. This paper was followed by similar treatises on *Lactarius*, Hydnaceae (book), *Cantharellus*, *Collybia*, *Laccaria*, *Clitocybe*, *Clavarias* (book), *Gasteromycetes* (book), *Mycena*, *Psalliota*, *Pleurotus* (smaller species), *Volvaria*, Boletaceae (book). A list of his publications beginning about 1902, numbers more than 130 titles.

Dr. Coker's graduate students found him to be a superb teacher. The writer can well understand this evaluation, for during several summers, from the 1930's through 1950's, I had the good fortune to work beside him on agarics at The Highlands (North Carolina) Biological Laboratory. There I came to know him well, and a rather warm friendship developed between us.

Coker was quiet, always generous with his time and money (he was financially rather well-to-do), was dignified but never aloof, and he freely encouraged us in our work. It is quite appropriate that The Highlands Laboratory was some years ago dedicated to him, and it now bears his name.

Reference

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Mordecai Cubitt Cooke 1825 – 1914

A well-known Englishman of his day, Cooke's birthplace was Horning, Norfolk, England; he was born on July 12, 1825, and died in November 1914. As a child, he was introduced to botany by his mother on flower walks. He was well taught in the Classics (Latin, Greek, and Algebra) by an uncle, The Rev. James Cubitt. At the age of 15, he learned the wholesale and linen drapery business.

Following his mother's instruction in the flowering plants, a neighbor, a Richard Ward, introduced him to the fungi, especially the toadstools. By the 1850's he gave informal classes in botany in the neighborhood and took youngsters on field trips. In 1862, some of them formed "The Society of

Amateur Botanists”.

Early in mycological life, Cooke read papers at meetings, and published some items in the Journal of Botany. One of his publications, outside the fungus field, was his “Easy Guide to Hepaticae”. He also published in “Popular Science Review” a series of popular papers on fungi which later were expanded into his book, “Rust, Smut, Mildew, and Mold”, illustrated by the Englishman Sowerby. In 1871, Cooke published his 2 volume work, “Handbook of British Fungi”; the 2nd edition appeared in 1891. A large pretentious work was his “Illustration of British Fungi”, which appeared in several volumes from 1881 to 1891, containing 1198 plates in color, on the Hymenomycetes. Cooke also issued “Fungi Britannici Exsiccati”, 700 numbers, from 1865 to 1874. Many of his papers were published in the journal, Grevillea, which he started in 1871. In some of these articles, he described collections from California and South Carolina (Ravenel), and from Australia as well as England.

Cooke's published works have been evaluated with some reservations. All biographers seem to agree that his publications were voluminous; he was a good artist; and he had, in Ramsbottom's view, greater influence on British mycology than any other Englishman with the possible exception of Berkeley. But his work was characterized as thin, much of it of the “scissors and paste” type, and slipshod. Again, Ramsbottom (English) states that when Rostafinski's monograph on the Mycetozoa appeared in 1875, Cooke was able to make out some of it and applied it in his “Myxomycetes of Great Britain”, 1877. Lindau and Sydow's Thesaurus lists some 350 titles of Cooke's publications, and thus they were numerous if not substantial. The Europeans said that as an artist he was so talented that he could draw a picture of an agaric that he had never seen. Lloyd, even if critical, admired him because he was conservative in his nomenclature. Lloyd further suggested that should a monument be erected to Cooke, he hoped they would carve on it in large letters “He was never a name juggler”. Actually, on his monument in East Finchley, England, is carved a clump of *Coprinus micaceus*. But Lloyd should have been happy at this since the authority for the binomial as well as synonyms were omitted!

Cooke's herbarium of some 46,000 specimens and his collection of 22,000 drawings, of which 6,000 are original, are at Kew Gardens, London. His publications, despite criticisms against them, did bring him honorary degrees in the United States: in 1870, St. Lawrence University gave him a M.A.; in 1873, Yale also gave him an M.A.; and in 1874, New York University the LL.D.

Worthington G. Smith, an acquaintance, said that Cooke was an inveterate pipe smoker, and when not smoking, he was singing. Cooke was a student of literature, and he wrote and gave lectures on poetry. In 1881, he became afflicted with severe paralysis, and thereafter was somewhat limited in his work.

Late in 1933, I had, through Inter-Library Loan, borrowed this set from the Lloyd Library, for use in research, and it was lost in the 1934 fire. The University was too poor to own it, but we had to find the money and replace the burned set.

References

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- Murrill, W. A. A list of some of Cooke's publications, especially those in Grevillea. Photograph in

Jour. of Myc. 11: 105. 1905.

Arthur Disbrowe Cotton **1879 - 1962**

Lloyd states that Cotton worked for a time on the algae, but really specialized on the Clavarias. Cotton was a student at the Royal Horticultural Society Garden at Chiswick, England. Subsequently, he took work under Farmer at the Imperial College of Science (London), where he first became interested in mycology. His later positions found him as, Demonstrator in Botany and Lecturer at Manchester University; as assistant at Kew, under Masee, Head of the Department of Cryptogamic Botany. Here, Masee assigned him to work on the algae. In 1922, he became Keeper of the Herbarium at Kew, a position he was holding when Lloyd visited him.

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Charles Crossland **1844 - 1916**

An English amateur, Crossland at the age of 13 was a helper in his father's general store in Halifax; at 16, he became a butcher, and at age 20 he moved his business to Wyke.

One day in 1884, he perchance assisted his daughter in making a flower collection for an exhibit sponsored by her Sunday School. He had a hand lens and, using it, became interested in flower structure. This experience led him to become a member of the Halifax Scientific Society. In 1888, he attended a fungus foray of the Yorkshire Naturalists' Union at Leeds. Here he met George Masee who turned Crossland's attention to fungi, and in 1890 Crossland published his first mycological paper. In 1892, the Yorkshire Union formed a mycological committee, with Crossland as secretary. His strong attention to this work resulted in Crossland's joining Masee in the publication of the "Fungus Flora of Yorkshire", 1902-1905.

Feeling the inadequacy of the preservation of fleshy fungi by drying, Crossland set about to draw and paint his specimens. Shortly before his death, his paintings, 550 in number, were purchased by Kew Gardens.

In 1914, Crossland had an attack of paralysis, and his mycological work then came to an end. One of his contributions, even though an amateur, was, as President of the Yorkshire Naturalists' Union, an address which later was amplified and published under the title, "James Bolton, an Eighteenth Century Halifax Naturalist". Among his close associates were M. C. Cooke, Carleton Rea, and George Masee. Crossland was born on September 3, 1844 and died December 9, 1916.

Reference

- Ramsbottom, J. Charles Crossland. *British Mycological Soc. Trans.* 5: 466-469. 1914-1916. With a group photograph including Crossland, Masee, Rea, and others.

Moses Ashley Curtis **1808 – 1872**

A native of Massachusetts, Curtis was born at Stockbridge on May 11, 1808. After graduation from Williams College in 1827, he was ordained in the Episcopal Church in 1834. The next year, 1835, he was sent to western North Carolina, at Lincolnton, to engage in missionary work for the church.

In that period, botany received little public encouragement, and there were few openings for professional botanists. Much of the botanical work was done then by physicians and clergymen as an avocation. Two of the most eminent cryptogamic botanists then were Schweinitz and Moses Ashley Curtis, both ministers.

In 1831, Curtis noted Schweinitz's "Synopsis Fungorum", a publication which undoubtedly stimulated Curtis in his interest in the fungi. At the same time, doubtless earlier, Curtis had studied and collected flowering plants, and in this group, he never lost interest. It was in mycology, however, where he did his most notable work.

Soon after Curtis took up work in North Carolina, Asa Gray made the statement that no living botanist is so well acquainted with the vegetation of the Southern Alleghany Mountains as the Reverend M.A. Curtis. Later, as Curtis gave more attention to the fungi, Gray urged Curtis to prepare a manual of the fungi of the United States. This was a good idea, but Gray hardly realized the impossibility of it then; a manual of the fungi similar to Gray's Manual of flowering plants is still in the realm of impossibility for one man to write.

By 1847, Curtis had begun to correspond with Berkeley in England, and to send him material of his collections. Curtis collected, Berkeley identified, and jointly they published the species, and thus many fungus binomials carry the familiar "Berk. & Curt." Berkeley (in *Grevillea* 1: 33) refers to more than 6,000 collections of fungi which Curtis had forwarded to him from time to time. Curtis not only sent to Berkeley material which he (Curtis) had collected, but also specimens which had been sent to Curtis by his American correspondents, such as Michener, Peters, Ravenel, Sprague, and others. Although Berkeley identified many of Curtis' collections, and also confirmed many of Curtis' identifications, it appears also that Curtis named many of his collections himself. It appears that Curtis began correspondence with Ravenel of South Carolina in 1846.

Curtis was a collector! In fact, Lloyd (*Myc. Notes* 38: 510. 1912.) makes the statement that Curtis was a collector rather than a mycologist and goes further to state that Curtis could not suggest the generic name of even one out of ten collections. It is also true that Curtis published relatively little himself. Dudley (1886) lists 7 papers in his account of Curtis' life. Shear and Stevens (1919; 1920) state that "perhaps the most important single piece of work undertaken jointly by Berkeley and Curtis, was their study of the Schweinitz collection of fungi". Being a collector, however, does not take away the importance of his contribution to American mycology. When he died, his main herbarium of thousands of numbers was purchased by V.G. Farlow, Harvard, and it is now in The Farlow Herbarium. Before his death, one set of Curtis' "spare fungi" was sent to Peck at Albany, another lot to C.E. Bessey at

Nebraska, and a third lot of some 1627 packets to Brown University, Providence, Rhode Island.

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John Dearness 1852 – 1954

There were a number of characteristics which marked Dearness. He was 102 years of age when he died; he was an amateur in the sense that he followed mycology as an avocation; he was filled with enthusiasm; he was exceptionally active in community affairs.

Dearness spent much of his life as a teacher and an administrator in Canadian schools, and from 1888 to 1914, he served as Professor of Biology at Western University. His community activities brought the press running—he was good copy! The people of London, Ontario, honored him when they built “The John Dearness Home for Elder Citizens” in 1952. In 1935, he received the King's Medal for his community service.

At the age of 87, Dearness attended the 1939 foray of The Mycological Society of America at Gatlinburg, Tennessee. It amazed all who attended how he was the first one in the field in the morning, the last to leave the laboratory at night. He was not only a collector of fungi, but published several papers, some alone, and some with J.B. Ellis, on Canadian fungi. From time to time, I sent him leaf-parasitic fungi from the Smokies; these he determined, and finally in 1941 he published a paper in Mycologia 33: 360-366, which was based on these collections—several of them new species chiefly belonging to the Fungi Imperfecti.

References

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Bernard Ogilvie Dodge **1872 – 1960**

A prominent mycologist in his time, B.O. Dodge served at The New York Botanical Garden from 1928 to emeritus status. There his title was plant pathologist, but much of his time was spent successfully in mycology. In the journal *Mycologia* alone, he published, either as sole author or jointly with another, some 45 papers in mycology and related topics.

His works on the taxonomy of the Discomycetes, and more especially those on *Neurospora*, are noteworthy. On *Neurospora*, he studied the nuclear history, and as well as some genetical aspects, including the pattern of inheritance of numerous characters, and the formation of hybrids. When published, his work attracted wide attention not only among mycologists but also geneticists, and more especially the cyto-geneticists.

Dodge was born at Mauston, Wisconsin, in 1872. He was graduated from the Milwaukee Normal School, later served as principal of two high schools, and took the Bachelor's degree at The University of Wisconsin. In 1908, he entered Graduate School at Columbia University, and during two summers held research fellowships at The New York Botanical Garden. In 1912, he received the Ph.D. from Columbia, and then accepted a position on the Columbia Faculty in Botany. In 1920, he went to the Bureau of Plant Industry as fruit pathologist, and then in 1928 returned to the Garden as plant pathologist.

Reference

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Marinus Anton Donk **1908 – 1972**

For me, it is nearly impossible to describe, much less adequately evaluate the-achievements in mycology by Dr. M.A. Donk. He was a world figure: he had travelled widely, spoke several languages, had an international outlook on mycology, and was a leader. His biographer (Singer, cited below) has performed admirably in his sketch on Dr. Donk's life. Donk was truly "one of the most outstanding figures of contemporary mycology" (Singer). At any age, he could hardly be spared from mycology, and his death at 64 is the more regrettable. His mind, his special kind of mycological work, and his role in building the Department of Mycology at The University of Leiden, The Netherlands will not be replaced. Only those who have worked in association with him for a period of time can comprehend something of his contributions, based on his vast knowledge, his vivid imagination when dealing with complex mycological problems of the fungi, and his seeming limitless acquaintance with the field.

Donk's background, like the man, is unique. He was born on August 14, 1908, in Java (Indonesia) of

Dutch parentage. He attended high school in The Hague, and in 1933 took the Ph.D. at The University of Utrecht. He had earlier (1928) published his first mycological paper. His doctoral thesis (1933) dealt with Aphyllophorales, a subject which brought him in contact with the eminent French mycologist H. Bourdot (See: Bourdot & Galzin, *Hymenomycetes de France*, 1-761. 1927).

In 1941, Donk went to the Dutch East Indies where he taught in a Lyceum and the Medical School. He was also made mycologist at The Herbarium of the Botanical Gardens at Buitenzorg (now Herbarium Bogoriense). While there, during World War II, Donk fell prisoner to the Japanese, and during his months in prison he was treated in a most inhumane manner. His wife was, at the same time, being held prisoner in a different camp, and thus for months they did not hear from each other; at one time, she was told that her husband had died. When freed, they met again, and in time seemingly recovered from their dreadful experiences.

On return to his laboratory, he found that three manuscripts had been destroyed or lost. By 1952, he was made Professor at The University of Indonesia. It was here that Donk developed an interest in mycological nomenclature. In 1956, he returned to Leiden where he was made Head of the Department of Mycology. In a short time, he brought together a superior staff, built around Maas Geesteranus, Bas, and van Brommelin, and as well, assisted in starting the new mycological journal, *Persoonia*, in 1959.

Donk will long be known for his contributions to mycology. For some years prior to his death he was head of the Nomenclatural Committee of the International Congress, in which he was a vigorous leader, reinforced by his usual knowledge of mycological literature, and his clear understanding of nomenclatural problems. Singer, at one point, says of him: "... Donk's influence on modern taxonomical thinking in the Basidiomycetes is profound".

His direct research dealt especially with the Basidiomycetes, and particularly the Polyporaceae and the Cyphellaceae. During 1969-1970, when he was Visiting Professor of Botany at The University of Tennessee, Knoxville, he brought his huge manuscript on polypores of Europe almost to completion. Having but one copy, he carried it in his hand from Knoxville to Leiden on his return home.

The Staff in Botany, at Knoxville, will ever remember his sojourn here in 1969-1970. It was a most fortunate experience for us all.

His collections and card index, and a part of his private library are at Leiden.

Reference

- Singer, Rolf. *Marinus Anton Donk*. *Mycologia* 65: 503-506. 1973. With a photograph. (A list of his publications was published in *Persoonia* 7: 120-126. 1973.)

Benjamin Minge Duggar **1872 - 1956**

Few Southern Botanists have shown the brilliance or have gained the respect of international botanists for his scholarly achievements as has Dr. Duggar. During much of his life he was hardly considered a full-time mycologist, but rather most of his noteworthy work was in the field of plant physiology. His plant

physiology work was enhanced to an unusual extent by his deep understanding of chemistry, particularly organic and physical chemistry. The latter subject he once taught during a war emergency period in a medical school. But he did a considerable amount of study and some publishing in mycology.

Dr. Duggar was born on September 1, 1872 at Gallion, Alabama. He attended The University of Alabama in 1887-1889, then transferred to Mississippi A & M (now Mississippi State University) where he took the B.S. degree in 1891. He next attended Alabama Polytechnic Institute (now Auburn), under Atkinson, and there received the M.S. degree in 1892. In the academic year 1893-1894, Duggar studied with Farlow at Harvard, there took the A.B. in 1894, and the M.A. in 1895. His next move was to the Illinois State Laboratory of Natural History, where serving as Assistant Botanist, he worked on bacterial and fungus diseases of plants.

During the years 1896 to 1901, he studied at Cornell University, again with Atkinson, first as Assistant Cryptogamic Botanist, then as Instructor, and finally as Assistant Professor of Plant Physiology. Meantime, in 1898 he took the Ph.D. degree under Atkinson.

During the next 40 years, Duggar continued to move from one experience to another. By 1901, he had become a thorough student of the physiology of the fungi, and in that year, he became physiologist in The Bureau of Mushrooms. It is understood that Duggar was the pioneer in the United States in the artificial cultivation of mushroom spawn. From 1902 to 1907, he was Professor of Botany at The University of Missouri; there he completed a manuscript on "Fungous Diseases of Plants", published in 1909. Some years later, it was so told, Duggar had revised and greatly enlarged this edition and when the manuscript was ready for the printer, it suddenly disappeared from his office. He was never able to recover it; consequently mycology-plant pathology suffered an irreparable loss. Duggar did not attempt to go back and do the work all over again. His 1909, first edition, is regarded as the first American "text" on plant pathology.

In 1907, Duggar went to the College of Agriculture at Cornell University, as Head and Professor in the Department of Plant Physiology, in which position he served until 1912, when he accepted an appointment as Professor of Plant Physiology in The Shaw School of Botany, Washington University, St. Louis. From Washington University, he went to The University of Wisconsin in 1927; there he was Professor of Plant Physiology, and for periods of time also as part-time plant pathologist. He retired as Emeritus Professor from Wisconsin in 1943. For several years after 1943 he was employed by The Lederle Laboratories, Pearl River, New York. It was while there that Duggar developed aureomycin. (See: Ann. N. Y. Acad. Science 51:177-181. 1948.)

For all his brilliance and achievements, he was recognized by three Universities by Honorary degrees: the LL.D., University of Missouri, 1944; the D.Sc., Washington University, 1953; a second D.Sc. degree from The University of Wisconsin, 1956. He died on September 10, 1956, at New Haven, Connecticut.

It was an unusual experience for me that I worked with Duggar for one summer (about 1928) at The Ohio Agricultural Experiment Station, at Wooster. I was then engaged in a study of fungicides and their use, while Dr. Duggar was general consultant to the whole staff in Plant Pathology at the Station. He also spent much of his time, searching for better strains of the wild *Agaricus* for commercial use, and was also consultant to a large commercial mushroom growing company at nearby Akron, Ohio. I found him highly personable, well-poised, a lover of sports, and a man from whom we all learned how a superior scholar thinks and works.

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Elias Judah Durand **1870 – 1922**

Known for his studies on Discomycetes, Durand was born in Canandigna, New York on March 20, 1870. He died in St. Paul, Minnesota on October 29, 1922.

In 1893, he was awarded the A.B. degree, and in 1895, the D.Sc. degree, both from Cornell University. Thereafter, he remained at Cornell for seven years as Fellow, then Assistant, and finally Instructor in Botany, with Atkinson. In 1910, he accepted a position as Associate Professor of Botany, at The University of Minnesota, and in 1918, he was promoted to Professor.

During his days at Cornell, Durand published his excellent monograph, "The Geoglossaceae of North America", in *Annales Mycologici* 6 (5): 387-477, 1908. In his studies, he accumulated a rather large private collection of Discomycetes, 12,087 specimens, which he left for Cornell University.

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Franklin Sumner Earle **1856 – 1929**

Except for short periods at The New York Botanical Garden and at The Bureau of Plant Industry in Washington, D.C., Earle spent most of his adult life in the southeastern United States and in Cuba.

He was born on a farm near Dwight, in Grundy County, Illinois, on September 4, 1856. He took some work with T.J. Burrill on fungi at The University of Illinois (Urbana), but did not finish his degree. While there, he became acquainted with A.B. Seymour (Harvard). After one year's appointment to the Mississippi Agricultural Experiment Station (1894-1895), he was made Assistant Plant Pathologist in Charge of The Mycological Herbarium, USDA. In 1896, he returned to the South as Horticulturist and Professor of Biology (1896-1901) at the Alabama Polytechnic Institute (now Auburn University); he went there to replace L.M. Underwood who had gone to Columbia University in 1896. In 1902, that Institution awarded him an Honorary degree of Master of Science. While in Alabama, he collaborated with S.M. Tracy, also in the South, an agronomist who was interested in fungi as a hobby.

That same year (1902), Earle was made Assistant Curator at The New York Botanical Garden Herbarium, where he remained for two years. There he was in charge of the mycological collections —a position which permitted him to devote full time to fungi. During this period (1902-1904), he prepared a manuscript which later was published in the Bulletin of the New York Botanical Garden 5: 373-451, 1909, entitled “The genera of the North American gill fungi”. This work appears to be quite noteworthy, although somewhat overlooked. In it, Earle presents a list of agaric names, the name of the type species and date of original publication of each, a key to genera of agarics and a brief description of each genus. It is interesting that one of Earle's then new genera, *Flammulaster*, based on *Naucoria carpophila* (Fr.) Quel., has only recently been given full recognition (Watling: Roy. Bot. Gard. Edinburgh .28: 65-72. 1967). In addition, Earle erected some 33 other new genera, only a few of which (such as *Galerina*), however, are now generally accepted.

Meantime in 1904, Earle went to Cuba where he served as Director of the Central Agronomic Experiment Station until 1906. He then went with the Cuban-American Sugar Co., in Cuba, as Consultant, until 1911. Finally, 1924 to 1929, he was with the Tropical Plant Research Foundation, also in Cuba.

Earle published his first mycological paper on *Podosphaera* (Erysiphaceae) in 1884; and, in 1887, with T.J. Burrill, published “The Erysiphaceae of Illinois”. While at New York, he published, in addition to his paper on agaric genera (see above), two papers under the same title, “Mycological Studies I”, in New York Bot. Garden Bull. 2: 331-350, 1902; and II, in 3: 289-312. 1904. Finally, while Director of the Station in Cuba, he published on Cuban fungi, in “Informe Annual de la Estacion Central Agronomica de Cuba” 1: 225-242. 1906.

Earle died of pneumonia in Herradura, Cuba, on January 31, 1929.

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Claude Wilbur Edgerton

1880 – 1965

Edgerton is another of several persons who was trained at the graduate level in mycology but took a position in plant pathology as a livelihood. He earned Ph.D. degree with Atkinson at Cornell. University in 1908.

He was a native of Iowa, having been born at Woodbine on March 9, 1880, he died at Baton Rouge. Louisiana, on April 6, 1965. He went to, Baton Rouge directly on taking the doctorate at Cornell. In 1903, Edgerton had taken the B.S. degree at The University of Nebraska.

Edgerton spent his professional life on the campus of The Louisiana State University. He was at first plant pathologist to the Experiment Station. In this position he worked on the fungus and other diseases of sugarcane, cotton, citrus, and vegetables.: In 1924, he became Head and Professor of The

Department of Botany, Bacteriology, and Plant Pathology, a position he then held to retirement in 1950.

His studies of the anthracnose disease of cotton led to two valuable mycological papers (in 1912 and 1914) on the sexuality of strains of *Glomerella*. In this paper, he was first to report hybridization between strains of a higher fungus, and he showed that genetic analysis could be carried out with homothallic species. It can well be said that Edgerton was equally at home in plant pathology and mycology.

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Job Bicknell Ellis 1829 - 1905

When W. A. Kellerman proposed to begin the publication of the *Journal of Mycology*, in 1885, Ellis heartily joined in the enterprise, and agreed to furnish practically all the copy for the periodical. His part in starting the *Journal of Mycology*, and his fungus studies are said to have done more than any other botanist of his day had done toward making the parasitic fungi known in the United States. Ellis was, in these ways, highly influential in American mycology.

Ellis was born on a farm near Potsdam, New York, January 21, 1829. At the age of 16, he taught school at the compensation valued at \$10 per month - \$5 in cash, and the remainder in grain; and the last grain owed was turned over to him twenty years later.

In June 1851, Ellis graduated from Union College with the A.B. degree. Two years later, in 1853, he moved to Poughkeepsie, New York, where, in the Bartlett's boarding school, he taught Classics. In his spare time there, he collected plants with Buckhout, who later was at Penn State. In February 1855, he went to Charleston, South Carolina, and called on one of the faculty members at South Carolina College. Ellis told the professor that he had come South to live and teach. The professor inquired whence he came, and the reply was "New York". The professor then commented: "Well, the state of feeling between the North and the South is such that I doubt very much whether you will succeed". He didn't! Ellis then returned to New York and in 1856 he became Principal of the Canton Academy. Ellis then spent the winter of 1864-1865 in the Navy, where one of his fellow members spoke highly of the climate in Newfield, New Jersey. Ellis believed the man, and then moved to Newfield.

Besides numerous published papers on mycology, one of his major contributions was a large (793 pages) book entitled, "North American Pyrenomycetes", with Everhart with whom Ellis had become associated in 1880. The illustrations were by F. W. Anderson - see reference below. Ellis was notably involved in three exsiccati series, as follows: (1) "Fungi Nova-Caesarensis", New Jersey fungi. One set went to Farlow (Harvard). It was suggested by a Mr. Martindale that Ellis call the set North American Fungi. So, Ellis then withdrew the series he had distributed, and re-named it as suggested to him, "North American Fungi". Shear, after talking with Ellis, felt that the latter withdrew the series called Fungi Nova-Caesarensis because Farlow was critical of the lot; then, Farlow offered to help finance the

project. (2) “North American Fungi” was issued in two lots: Series I, by Ellis alone, but with important contributions by colleagues over the United States; the first Century was issued in 1878, and the last (XV) in 1885; Series II, by Ellis and Everhart, Centuries XVI (1886) through XXXVI (1896). Sets are on deposit in numerous herbaria over the United States. (3) “Fungi Columbiani”, issued by Ellis and Everhart, Century I in 1893 to LI in 1917, exsiccati which they regarded as a “second edition” of their “North American Fungi”, and containing 5100 specimens. Besides Ellis' own collections, nearly 150 persons from over North America contributed. Sets are in widely scattered institutions in the United States. Stevenson (1971) states that following the issuance of Century XIV, C. L. Shear took over the series at Ellis' request; but Shear, after one Century, persuaded Elam Bartholomew to continue the publication of it to its termination with Century LI (51), in 1917.

Ellis was characterized by Lloyd as a timid person, of charming personality, lovable disposition, and earnest in his work—one greatly admired by Lloyd.

Although Ellis, during much of his life, worked part time on the fungi and published some early papers (about 1874-1878), it was not until 1878 that he began to devote full time to the subject. His papers appeared in several different journals, including Journal of Mycology, Botanical Gazette, Bulletin of the Torrey Botanical Club, The American Naturalist, and Philadelphia Academy of Science Proceedings. Some of his work was published jointly with M. C. Cooke in Grevillea, who had started this journal in 1872. Ellis also collaborated with several other mycologists of his day in the publication of papers notably with Bartholomew, Everhart, Galloway, Macbride and a few others.

In 1857, Ellis began to correspond with H. W. Ravenel, a mycologist in South Carolina, and this correspondence continued until Ravenel's death in 1887. From Ravenel, Ellis must have learned a great deal about the fungi. He sold his phanerogamic collection to St. Lawrence University, Canton, New York; and his fungus herbarium, which contained several exsiccati, was purchased by The New York Botanical Garden.

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Benjamin Matlock Everhart 1818 – 1904

To the mycologist, the name of Everhart is known when linked with that of Ellis. Their volume on “North

American Pyrenomycetes”, 1892, is still useful in identification of these fungi.

Everhart was born on March 24, 1818, in Chester County, Pennsylvania, and after a time in the local schools, he entered nearby West Chester Academy. He often worked in his father's mercantile business, and later succeeded him, and there amassed a comfortable fortune. He developed an interest in the natural sciences, and made collections of plants, birds and insects. Although he had no formal instruction in botany, this was his favorite field.

Everhart met J. B. Ellis, of New Jersey, and finally there began a long association with the issuance of Century XVI (1886) of “North American Fungi”, exsiccati published by them jointly. This set extended through Century XXXVI (1898). In 1893, they issued their “Fungi Columbiani” (1901). Following Century XIV, Ellis persuaded C. L. Shear to take it over; Shear put it out for one year, and then, in turn, was able to convince Elam Bartholomew that he should assume the burden. It finally terminated with Century LI (1917). It is said that in Ellis' work with Everhart, Ellis was responsible for the mycology, and Everhart provided the funds. However, he collected large numbers of fungi and other cryptogams, was Associate Editor of The Journal of Mycology from 1885 to 1888, and a contributor to its pages in vols. 5 and 6. He also compiled an index to Ellis' North American Fungi.

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Charles Edward Fairman 1856 – 1934

A superior student of Pyrenomycetes, Fairman was, by vocation, a country physician at Lyndonville, New York. He was born in the village of Yates, near Buffalo, New York, on December 28, 1856. In 1858, his father, a teacher, took a position at Shurtliff College, Alton, Illinois. The son, Charles, studied at this college until 1873 when his father accepted a position in Cook Academy, Montour Falls, New York. At this time, young Fairman entered The University of Rochester, where he took the A.B. degree in 1874. He then studied at St. Louis School of Medicine, and there received the M.D. in 1877. Following graduation, he returned to his home area, and established practice at Lyndonville.

When Fairman was about 30 years of age, he began to study fungi. He and his father-in-law, Dr. J.D. Warren, undertook to raise edible mushrooms. Soon, however, Fairman was attracted to the sphaeriaceous fungi, and began to make the acquaintance of such mycologists as Ellis, Peck, Saccardo, Rehm, Arthur, and Fitzpatrick, and later accumulated a library on fungi and started a private herbarium. He contributed some of his collections to N. A. Fungi and Fungi Columbiani (exsiccati). In his work on fungi, he described several new species, and a few new genera, in the Pyrenomycetes and Fungi Imperfecti.

Although his publications list is modest (some 17 titles), Fairman was regarded in his time as the most critical student of the Pyrenomycetes in the United States. Although his herbarium went to The

University of Rochester where he took his A.B., the officials there were persuaded by Dr. Fitzpatrick to lend the collection to Cornell for an indefinite period.

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William Gilson Farlow 1844 – 1919

A New Englander by birth, Farlow was endowed not only with rare native ability but also with an enviable combination of wealth, family background, social prestige, and position. Added to these were his zeal and determination.

He was born near Boston, Massachusetts, on December 17, 1844, and after living most of his years nearby, he died in Cambridge on June 3, 1919. One of his biographers (Clinton) pronounced Farlow quite appropriately as “the foremost cryptogamic botanist of America”. This same biographer, also a student under Farlow, refers to him as a “master of high order”.

Dr. Farlow graduated from Harvard College in 1866, and from The Harvard School of Medicine in 1870. His interest in botany had been noticed by his undergraduate teacher, Asa Gray, who in 1870, appointed Farlow his Assistant in Cryptogamic Botany. After two years of teaching, Farlow in 1872 went to France and Germany, and in the latter country he enjoyed the good fortune to study in Strassburg under Anton de Bary. There also, he met many of de Bary's European students. In 1874, Farlow returned to Harvard, where he was appointed Assistant Professor of Botany, stationed at Bussey Institution, at nearby Jamaica Plains. At Bussey, Farlow began a series of studies which included fungus diseases known as potato rot, black knot of plum, downy mildew of grape, onion smut, and the relationship between the aecial stage (*Roestelia*), of some fruits, and the telial stage (*Gymnosporangium*) on cedar, his first paper appearing in 1875. This work, and that of Burrill (Illinois), are regarded as pioneer studies in American plant pathology. But Farlow, as well as his students, were always equally interested in both the mycological and pathological aspects of their researches. His first graduate student appears to have been Byron D. Halsted, an undergraduate from Michigan State, and subsequently Long at Rutgers University.

In 1879, funds supporting Bussey diminished, and Farlow was made Professor of Cryptogamic Botany, at Harvard College. Here, he built an herbarium and library, trained many young men, and generally stimulated other workers throughout the country. One of these men he had trained was Thaxter (Harvard Ph.D. '88) who, after a period of employment at Connecticut, was brought back to Harvard (in 1891) where the two men became very closely associated in cryptogamic teaching and study.

It is said with regret that Farlow published too little of his vast knowledge of fungi, and of algae, mosses, and lichens. But one of his valuable contributions of that day (50 years ago now) was his bibliography of

American fungi, with Wm. Trelease, begun in 1887. It was finally published in 1905 under the title, "Bibliographical Index of North American Fungi". Another work, with A.B. Seymour, was a host index to fungi in the United States. Later, Seymour and Thaxter revised it as a memorial volume to Farlow. His "Icones Farlowianae" is mostly on agarics, and with beautiful color illustrations.

Farlow's influence on cryptogamic botany is well summarized by one of his biographers (Clinton), abridged here as follows: (1) he was a pioneer in plant pathology in which he set the tone; (2) he developed at Harvard a new kind of cryptogamic laboratory and herbarium, including one of the most complete collections of Exsiccati sets of fungi in the world; (3) with these facilities, including his magnificent private library and his scholarly leadership, he sent a large band of young men; (4) he contributed heavily to the sane stabilization of mycological nomenclature.

Farlow left his library, collections and an endowment to Harvard. His library is priceless in its completeness, and his herbarium (in 1964) contained 1,012,150 collections, including several herbaria which with his own private funds he had purchased (such herbaria as those of von Hohn, Patouillard, Bartholomew, Curtis, as well as Tuckerman's lichen herbarium, and Sullivant and James bryophytes).

In 1943, a mycological journal, "Farlowia", initiated by David Linder (who succeeded Thaxter as Director of the Farlow Herbarium), first appeared as a memorial to Dr. Farlow. It was discontinued in 1955.

A complete list of men who were trained under Farlow is not now available to me. Some of the names recalled, however, are Burt, Clinton, Duggar, Halsted, Linder, Pammel, Seymour, Thaxter, Weston, White; all are deceased as of (November 1974) except Weston who is retired and living in the vicinity of the Harvard Campus.

Farlow was distinguished in appearance, rather short of stature, but a man of great reserve and rare dignity, was regarded as the wittiest member of the Harvard Faculty, was a superb critic but never unduly harsh. Throughout life he kept up a lively correspondence.

As a graduate student, I recall having seen Farlow at an AAAS meeting. Also, I had then become interested in a controversy which many years earlier had taken place between de Bary and Hallier. It was known that Farlow had spent some months studying with de Bary, whereupon I wrote Farlow asking for any comments which he might make come to me from Farlow detailing side-lights of the affair. He not only took time to write, but also, as with all his hundreds of letters annually over the years, the letter was entirely in his own hand-writing. Even with his wealth he did not employ a typist; he felt, so I was told, that a typewritten letter was too impersonal.

From the standpoint of American academic mycology and plant pathology, Farlow may well be viewed as a pioneer. It must be remembered that Schweinitz, much earlier (1780-1834), as commented by Lloyd, had "blazed the trail for fungus work in America". His work was early and trail-blazing without question, but not done in any college or university. It has been said that mycology was first taught at Harvard in 1875 by Farlow. It was, as we see it, Farlow who began scholarly research, the systematic teaching of young men in cryptogamic botany, especially mycology, in an American academic institution. Finally, it may be noted that Farlow took advanced work in medicine; then went to Germany for work under de Bary, who in turn had taken an M.D., then went into the study of fungi.

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Harry Morton Fitzpatrick 1886 - 1949

Since I was first a student then an associate on the faculty at Cornell with Fitzpatrick, I came to know him rather well. Two characteristics of the man stood out in my memory: he was an unusual scholar and teacher; and he was a recluse.

Perhaps no one could surpass him in his ability, in his teaching, to state the essential characters of a family, genus or species of fungi, in presenting his views and those of others on phylogeny, in quoting nomenclatorial rules, or in generating in his students a lively interest. In their minds, Fitzpatrick was "Mr. Respect". He had an orderly mind, and this characteristic carried over into his lectures, his syllabi, his laboratory materials, and even in the neatness of the top of his desk. I saw him frequently in his office when he was writing his monograph on the *Coryneliaceae* and of that on the *Nitschkieae*. His desk was a model of good order and cleanliness throughout.

Fitzpatrick was born in Greenwood, Indiana, on June 27, 1886. Later, the family moved to Illinois, then in 1897 to Crawfordsville, Indiana. A few years later, he met H.H. Whetzel who was then a student in Wabash College, at Crawfordsville. It was perhaps natural for Fitzpatrick to attend Wabash, where he entered in 1905. Meantime, Whetzel had gone to Cornell as a graduate student under Atkinson. In 1907, Atkinson needed a graduate assistant, and Whetzel recommended Fitzpatrick who went to Cornell at the beginning of his senior year. There Fitzpatrick took the A.B. degree in 1908. Whetzel left Atkinson's department in Liberal Arts and established a new Department of Plant Pathology in the College of Agriculture on the same campus. In 1911, Whetzel brought Fitzpatrick into his new department as Instructor in Mycology. In 1913, Fitzpatrick took the PhD. under Atkinson, his thesis being entitled, "Fruit Body Development in *Phallogaster*, *Kystrangium*, *Gautiera*", published in *Ann. Mycol.* 11: 119-149. 1913. He remained in this Department and soon became Professor of Mycology. Fitzpatrick was author of some 60 titles during his professional career (1911-1949). Among these, were, in addition to his thesis, a number of papers on certain Pyrenomycetes, and a book on the Phycomycetes (1930).

Fitzpatrick was highly respected by other mycologists, but only a few knew him well. He was quiet, and often seemed dubious of the sincerity of some individuals. Through poor health and a brooding over the suicide of a favorite son, Fitzpatrick himself took his own life in December 1949.

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Elias Magnus Fries

1794 – 1878

The present day student in mycology knows of Fries primarily because of his “Systema Mycologicum”, 1821, which publication marks the starting point of fungus nomenclature.*

(*With the exception that the starting point for rusts, smuts, and Gasteromycetes goes back to Persoon's “Synopsis Methodica Fungorum”, 1801.)

At this writing, three biographical sketches of his life and work were at hand: one by Killerman (1927), translated by Miss Ruby Rice then (1933) a student in Botany at The University of Tennessee, Knoxville; another by Wm. R. Dudley, Cornell University in 1886; and one by Lloyd in 1909.

As Killerman states, Sweden has produced two great botanists: Linnaeus (or Carl von Linne, 1707-1778) and Elias Fries. The fame and contribution to biology of Linnaeus have been summarized by such words as “unparalleled”, “unerring judgment”, “without Linne's foundations the temple of science could never have been built” (the last by Schleiden).

Somewhat similar characterizations of Fries might be made by some historians. Certainly, in his time, he furthered mycology more than any other person. Such evaluations need not, and do not, detract from the contributions of Persoon (1755-1837). The publications of both men are indispensable to those working in the taxonomy, nomenclature, and history of the fungi.

Fries lived his life in Sweden. His ancestors were clergymen. He was born the son of Dr. Theodor Fries and Sara, in the parsonage at Femsjö-Smoland, on August 15, 1794. He attended school at Wexio, and entered The University of Lund in 1811, and there took the Ph.D. in 1814 at the age of 20. In that same year, he was appointed Lecturer in Botany at Lund, and in 1824 was made Professor. After eleven years (1835), he went to Uppsala where he remained until death on February 8, 1878. He was active during the period of his retirement.

Fries began the study of fungi at the age of 12, when he found a specimen of *Hydnum coralloides*. His father was a student of nature, and the two took walks together in the woods and fields. On these walks, young Fries was required by his father to converse entirely in Latin. It is said that he learned Latin even before Swedish. Being an apt student, Fries, even before leaving school, had learned to distinguish 300 to 400 species of fungi. When he went to Uppsala, the library there had the mycological works of Jacquin (1727-1817), and the plates by Buxbaum, and in these Fries found names for the species he had seen in the field and woods at Femsjö. From one of his teachers, Agardh, at Uppsala, he borrowed the use of Persoon's “Synopsis Methodica Fungorum”, 1801, and also Albertini's “Conspectus Fungorum in Lusatiae”, 1805, the latter, more than any other book, drawing Fries into natural science, as admitted by Fries himself (Fries, autobiography, “Historiola studii mei mycologici”, 1857). In 1813, the rains were heavier than usual in Sweden, and a large crop of fungi appeared. The next year after taking the Ph.D., he went to Copenhagen to examine the literature. While there, his “Observationes Mycologicae”, 1815, was published. In it, he described the fungi he had collected in 1813.

At about that time, Fries came to know O. Schwartz (or Swartz, 1760-1818) who Fries characterized as one of the best and kindest men he had ever known, “and the one who laid the foundations of mycological study in Sweden”. On the advice of Schwartz, Fries wrote his Swedish Pyrenomycetes which

was submitted to the Stockholm Royal Academy in 1816. The next year, he prepared the second volume of his "Observationes", published in 1818. His first major work was "Systema Mycologicum", published in 3 volumes: Vol. 1, in 1821; Vol. 2, in 1822 and 1823; Vol. 3, in 1829 and 1832. Killerman calls the set 4 volumes. All are in Latin.

In the preface of his "Systema", he states that since Persoon's work in 1801 and later, mycology had made advances through the publications of Johann H. F. Link (1809) and of Christian G. D. von Esenbeck (1817) usually cited as Nees, as well as many illustrated publications, including, with their dates of publication: Sowerby 1795-1815; Swartz (Schwartz), 1797-1808; Schumacher, 1801-1803; de Candolle, 1805-1815; Albertini, 1805; Ehrenberg, 1820; Schweinitz, 1822, 1832. Fries used such of these works as were available to him. He also used Vaillant, 1727; Micheli, 1729; Battara, 1775; and especially Schaeffer, 1762-1774; Batsch, 1783-1789; Bulliard, 1780-1793; and Bolton, 1791-1820.

Fries dealt mostly with Swedish species - this in contrast to the works of Persoon, Berkeley, Montagne, and Leveille, all of whom published not only species which they found in their respective native lands, but also those sent them from foreign countries. Based on his Swedish collecting, Fries estimated that the number of agarics there to be 2000 to 3000; and for the world 20,000 to 30,000. Despite his complaint that his microscope was inadequate for spore study, he seemed to have the idea that the spores of different species of agarics did not differ much, and that therefore the microscope was perhaps not of great value after all. He did rely on good illustrations for distinguishing species thus, he was critical of any illustrations which he considered atypical. His "Icones Selectae Hymenomycetum nondum Delineatorum", 1867-1884, of 200 plates represents his concept of the species included. These plates were painted under Fries' directions. It is said that he finally prepared or had prepared under his direction, some 1600 plates in all.

Fries' collections, many foreign, were left to Uppsala. He was buried in The University Botanical Garden after death at 84 (see photograph of his grave-stone in Lloyd).

Fries had eight children, four daughters and four boys. It is recorded that the oldest boy, Theodor Magnus Fries, succeeded him as Professor of Botany at Uppsala, with the lichens as his specialty; the second son, Elias P., became a mycologist but died at the age of 24; the third, J. Otto, was an engineer, and came to America; the youngest, Oscar Robert, was a physician, and died in 1908 in Goteburg. The last also published a little on the Hymenomycetes.

Despite the feeling of some mycologists that Fries was masterful, others find that after all he was human. It is claimed that he made errors, such as the inclusion of different species under the same name. It is also reported that his records of taste may not be entirely reliable, since he was a user of snuff. In any event, Fries was well-born, was a brilliant scholar, a tireless worker, and is still looked upon as a remarkable mycologist.

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Charles Christopher Frost **1805 – 1880**

One biographer of Frost states quite appropriately that “the pioneers in cryptogamic botany in America have, almost without exception, been professional or business men, who pursued their favorite study as an avocation.....The study was pursued by them, therefore, purely for a love of knowledge gained and from an intellectual passion for investigation. Certainly this characterization must apply to the life of Mr. C.C. Frost”.

In his highly respected work, Frost described many species of New England Fungi. He also sent a number of his collections to Peck at Albany, and today mycologists are familiar with Frost's name alone or in association with that of Peck as authorities for the name of a new species.

In 1874, Frost published a catalogue of New England boleti in *Buffalo Society of Natural Science Bulletin* 2: 100-105. It included some new species; and in 1875, Tuckerman and Frost published a catalogue of plants growing around Amherst, Massachusetts.

His biographer states that Frost's study of botany stems from the influence of a physician who advised Frost that, for reasons of health, he should go into the out-of-doors. Thus, Frost began collecting wild flowers, and later ferns, mosses and liverworts. He ordered a copy of Fries' “*Systema Mycologicum*”, 1821, whereupon he found that to read it he needed Latin. This language he learned (self-taught) within 6 months, and was then able to read other works of Fries, and those of some other mycologists.

Frost is known to have left school at the age of 15, when a hot-tempered teacher struck him; immediately Frost gathered his books and terminated his formal schooling. He followed his father's shoemaker business, and apparently continued in that vocation during his remaining years. During store hours, he spent much time reading, but he published relatively few titles. He had the philosophy, it seems, that he did not wish to gain fame through publication. Nevertheless, he did publish two titles, mentioned above. In the second one (with Tuckerman) there is an enumeration of 1190 fungi, in addition to 192 mosses, 47 hepatics, and 7 Characeae.

Dudley, of Cornell, when writing Frost's biography, appealed to his readers that Frost's herbarium should be preserved; accordingly, it finally went to The University of Vermont.

References

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- Bull. Torrey Bot. Club 7: 72. 1880; *Torrey*, August 1880.

Beverly Thomas Galloway **1863 - 1938**

One of the earlier workers in American mycology and plant pathology, Galloway became, in 1888, the first and only Chief of the Division of Vegetable Pathology and Physiology, in the USDA. Thirteen years later, 1901, he was active in the establishment of the new Bureau of Plant Industry and was its Chief from 1901 to 1912. He then served as Assistant Secretary of Agriculture, 1913-1914.

Although his livelihood came largely from his activities in plant pathology, he was especially interested in mycology. He published on the powdery mildews of Missouri, and directed the publication of the *Journal of Mycology*, volumes 5 through 7, during which time the USDA had taken over its publication. Further, he published several papers with Ellis, Tracy, and others. His interest in the development of a herbarium in the USDA led him to employ both F. S. Earle and Flora W. Patterson. This federally owned herbarium is now known as The National Fungus Collections, and in 1964 it embraced 675,000 collections. (790,000 in 1974.)

Galloway was born in Millersburg, Missouri, on October 16, 1863. He graduated from The University of Missouri in 1884, with major emphasis on botany and horticulture. He remained there as an Assistant until July 1887, when he was appointed by the U. S. Department of Agriculture Commissioner (Coleman) to the Section of Mycology. In 1888, Galloway succeeded Scribner, at Washington, when the latter went to The University of Tennessee. While at Washington, Galloway merited the reputation he had gained in his strong influence in the development of cryptogamic botany in North America, especially in its relationship to agriculture. He surrounded himself with a number of young men, such as Erwin F. Smith, Pierce, Swingle, Fairchild, and Webber, all of whom assisted Galloway in developing a strong program. In recognition of his unusual contributions, Galloway was awarded the honorary degree of LL.D. by The University of Missouri, in 1902; and another honorary degree of Doctor of Agriculture by The University of Maryland, in 1923.

In 1914, Galloway was induced to accept the Deanship of The New York State College of Agriculture, at Cornell University. This move proved to be a disaster, both for him and Cornell.

I recall that Galloway's short sojourn as Dean of The College of Agriculture at Cornell, ended rather abruptly when the inevitable happened. Before coming to Cornell, he had had little or no academic administrative experience, but he had been persuaded by Whetzel and others to accept the deanship there. It was unfortunate for him that he should follow at Cornell so skilled an administrator as Liberty Hyde Bailey (an Asa Gray trained botanist). Galloway brought with him from Washington some of the Federal Bureaucracy practices in vogue there, and somehow these were both unfamiliar and unacceptable to the Cornell Agriculture Faculty. Galloway's inaccessibility to the Faculty, his ineptness in handling the Legislature to get funds, and his general image all resulted in a few special faculty meetings (which I attended) to discuss what the Faculty felt was a grave problem. The net result of all this activity was pressure which was applied in such a way that in 1916 Dr. Galloway was led to resign. He then returned to the USDA and pursued his work in plant pathology until retirement (about 1930). He died on June 13, 1938.

References

- Stevenson, John A. Beverly Thomas Galloway. *Mycologia* 30: 597. 1938.

- Woods, A. F. Beverly Thomas Galloway. *Science* 88: 6. 1938.

Ernst Albert Gäumann **1893 – 1963**

A native of Switzerland, Gäumann was perhaps best known to many Americans for his “Vergleichende Morphologie der Pilze”, a 626-page tome which he published (in 1926) at the age of 33. His biographers state, perhaps aptly, that the book is “a veritable modern de Bary”. Fortunate for many Americans (those not too proficient in the German language), this volume was translated by C.W. Dodge in 1928. In 1929, with Edward Fischer, Gäumann published another book of 429 pages, entitled, “Biologie der Pflanzenbewohnenden Parasitischer Pilze” which deals with susceptibility, fungus virulence, environmental influences, host tissue reactions, and other topics. He also published other books, and as well a number of papers on immunity, fungus evolution, and a variety of other subjects. A prodigious worker, Gäumann’s list of publications numbers well over 200 titles. His superior physical and intellectual equipment made it possible for evaluation by his biographers as “the greatest combined plant pathologist and mycologist of his time”.

Reference

- Gardner, M.W. and H. Kern. Ernst Albert Gäumann, 1893-1963. *Mycologia* 57: 1-5. 1965. With a photograph and a list of other biographies of Gäumann.

Edward Martinus Gilbert **1875 – 1956**

Born in Wisconsin, Gilbert remained there throughout most of his adult life. He took the Ph.B. degree in 1907 under Dr. R.A. Harper at The University of Wisconsin, by whom Gilbert was greatly influenced, especially in fungus cytology, which was Harper's specialty. In 1914, Gilbert took the Ph.D., with Harper as his major professor. Later, he spent a short time studying under Thaxter, at Harvard. At Wisconsin, he was also stimulated by Dr. J.J. Davis who in 1911 had come to Wisconsin as Curator of the Cryptogamic Herbarium, and who was interested in parasitic fungi.

When Harper left to accept a position at Columbia University, Gilbert was assigned the mycological teaching work at Wisconsin. He was made Assistant Professor, and later full Professor of Botany and Plant Pathology. He was a devoted conservationist and was active in the founding and the developing of the arboretum at The University of Wisconsin. Although the area of his greatest competence was fungal cytology, he interested himself, under Davis' influence, in parasitic fungi, and so did some creditable studies on taxonomy, on the black knot of plum disease, and on certain entomogenous fungi.

Reference

- Backus, M.P. and H.C. Greene. Edward M. Gilbert. *Mycologia* 49: 151-155. 1957. With a photograph and a list of 7 titles.

Henry Campbell Greene **1904 – 1967**

A member of the staff at The University of Wisconsin, Department of Botany, Madison, Dr. Greene is known for his studies on parasitic fungi: "Host Index of Parasitic Fungi Collected on Plants in Wisconsin, 1880-1950", published in 1951. This publication was revised, and the title changed to "Fungi Parasitic on Plants in Wisconsin", in 1965. Earlier, Greene had published "Wisconsin Myxomycetes".

Dr. Greene was primarily a mycologist, but his interests extended to phanerogams and ecology, and he published, with J.T. Curtis, in 1955, an exhaustive bibliography of Wisconsin vegetation.

He was a native of Indiana, born at Fort Wayne, of well-known Hoosier parents. He attended Wabash College for two years, which college he remembered generously in his will. He took the A.B. at The University of Washington, Seattle, in 1928; and the Ph.D. at The University of Wisconsin in 1933.

At Wisconsin, Greene became associated with Dr. E.B. Fred, Bacteriologist, and later President of The University, and published important researches on industrially important fungi. Finally, he became Curator of the Wisconsin Cryptogamic Herbarium, in 1941. His published papers in mycology number nearly 40.

Reference

- Backus, M.P. and R.I. Evans. H.C. Greene. Mycologia 60: 994-998. 1968. With a photograph.

James Walton Groves **1906 – 1970**

Canada has produced a number of excellent students of fungi, and one of these is Dr. Groves. He was a native of Canada, born on October 18, 1906, at Kinburn, Ontario. He died May 6, 1970. In 1918, the family moved to Ottawa, where he attended high school and later a Normal School. In 1926 to 1928, he taught in the public schools, and in 1930 was graduated from Queen's University, Kingston, where he majored in biology and chemistry. Later, Groves took the M.A. in 1932, and the Ph.D. in 1935, from The University of Toronto. During 1935-1936, he studied fungi under H.S. Jackson (an Arthur rust man, and later a student of Thelephoraceae). That year (1936), he accepted a position with the Canada Department of Agriculture (Ottawa); and in 1951, he was appointed Chief of the newly formed Mycology Section. After 16 years, he gave up administrative work in order to pursue full-time research. The Canadian National Herbarium is a highly respected institution of more than 100,000 collections, which Dr. Groves vigorously promoted during his years there.

During much of his research career, Groves was greatly interested in the Discomycetes, their conidial stages and life cycles. Later in life, he became interested in agarics and boletes, largely through demands made by the local hospital staffs. In turn, he was led into association with H.A.C. Jackson. Groves was author of many papers (some 25 titles), and in 1962, a book entitled "Edible and Poisonous Mushrooms of Canada", designed for the amateur.

Groves, with a wide range of avocational interests, was enthusiastic about music, art, politics, ornithology, hockey, and murder mysteries.

Reference

- Shoemaker, R.A. James Walton Groves. *Mycologia* 63: 1-4. 1971. With a photograph.

Robert Hagelstein 1870 - 1945

The study of slime molds (Myxomycetes) too often a neglected group, was Hagelstein's long time hobby. He not only acquired a large herbarium of this group, but his work was also accepted as entirely authentic and reliable.

Hagelstein was a successful business man, and as his biographer states, Hagelstein brought to his slime mold studies some worthy habits of mind, such as that of hard work; a rigid, sustained work-schedule; and an ability to port out and evaluate facts in order to arrive at a sound conclusion.

Beginning his science study in mineralogy, he later took up microscopy, looked at diatoms, and prepared an outstanding collection of diatom slides. He was sent on three expeditions to Puerto Rico and the Virgin Islands (1926,1928,1929), and in 1939, his report on these expeditions was published. Beginning in 1935, he gave fuller attention to Myxomycetes. He finally published 27 papers on this group of interesting organisms, and a book, "The Mycetozoa of North America", pp. 1-306. 1944.

After retirement from business, he became Honorary Curator of Myxomycetes, at The New York Botanical Garden. He gave to the Garden his private collection of 4800, which together with other collections makes what is said to be the largest collection in North America (of some 10,000 specimens).

Mr. Hagelstein was born in New York City on May 16, 1870, and died at Mineola, New York on October 20, 1945. He was one of a large group of American men and women who made Mycology (Myxomycetes, in his instance) a hobby, and as an amateur became an authority.

Reference

- Burke, Joseph F. Robert Hagelstein, 1870-2945. *Mycologia* 38: 115-119. 1946. With a photograph and a list of publications.

Byron David Halsted 1952 - 1918

It is stated that Halsted was Farlow's first student in plant pathology; he took the D.Sc. degree at Harvard in 1878. At his death, he had been Professor of Botany, at Rutgers University, New Jersey, for nearly thirty years.

Halsted was a native of Venice, New York, having been born there on June 7, 1852. He died on August

28, 1918. Preceding his doctorate at Harvard, he took the B.S. (in 1871) and the M.S. (in 1874), both at Michigan State. From 1885 to 1889, he was Professor of Botany at Iowa State College (now University). From 1889 till death, he served as Professor of Botany at Rutgers. Stevens of Illinois and Martin of Iowa were among his students at Rutgers. During his professional career, Halsted published some 300 titles, on fungi and plant diseases.

In 1905, Halsted was appointed to the Advisory Board at the outset of North American Flora; and served as Editor of the Bulletin of the Torrey Botanical Club for a time.

References

- Fairchild, David. Byron David Halsted, Botanist. *Phytopath.* 9: 1-6. 1919. With photograph. (Fairchild was Halsted's nephew.)
- A notice of death in *Mycologia* 10: 293-294. 1918 (probably written by Murrill, the Editor).

M. E. Hard

An amateur mycologist, Hard evidently was living in Chillicothe, Ohio, when he wrote the Preface to his book, "The Mushroom, Edible and Otherwise, its Habitat and Its Time of Growth", 1908. The title-page, however, gives his residence and occupation as Superintendent of Public Instruction, Kirkwood, Missouri. Thus far, I have seen no biography, and no list of his other publications, if any.

In the book mentioned above, Dr. W.A. Kellerman, of Ohio State University, Department of Botany, wrote an Introduction. Immediately following Kellerman's statement, Hard wrote one-half page entitled, "In Memoriam", a recognition of Dr. Kellerman, who died shortly after writing the Introduction to Hard's book, and before it was published. The book, a popular one, published some sixty years ago, is now rather rare.

Robert Almer Harper 1862 - 1946

A distinguished figure in botany, especially mycology, Harper was born in Le Claire, Iowa, on January 21, 1862. He graduated from Oberlin College with the A.B. degree in 1886. During the next two years, he taught Latin and Greek at Gates College, in Nebraska. In 1888-1889, he studied at The Johns Hopkins University. The following two years, he was Instructor in Science in The Lake Forest Academy, in Illinois (1889-1891). In 1891, he took the M.A. degree at Oberlin, and was then appointed Professor of Botany and Geology at Lake Forest College, near Chicago. Subsequently, he studied at Bonn, Germany, under Strasburger on the cytology of fungi, and there took the Ph.D. in 1896. He then became Professor and Head of The Department of Botany at The University of Wisconsin, where he remained until 1911; and in 1911, he became Torrey Professor of Botany at Columbia University, and continued in this position to retirement in 1930. He died on May 12, 1946, at Bedford, Virginia.

Although Harper did some field work in the fungi, and was interested in their collection, he distinguished himself in his studies of the morphology and cytology of fungi, especially the Ascomycetes and

Myxomycetes, with reference to their sexuality and reproduction.

In 1914, Harper was elected President of the Torrey Botanical Club. As head of it, he appointed a Committee on Local Flora, and at the same time appointed himself to make a special study of Cortinarius. I have not found that he published on this subject.

While at Columbia, Harper was involved in The New York Botanical Garden: he was a member of the Board of Managers for 31 years (1911-1942); Chairman of the Scientific Directors from 1918 to 1933; and he spent one day each week at The Garden for many years. In 1945, he gave his collections and about 15,000 reprints and other literature to The Garden. Thus, for more than 30 years Harper maintained a close relationship and interest in The Garden. In 1942, The Torrey Botanical Club celebrated his 80th birth year.

About 1928, I visited Harper at Columbia. I found him an imposing figure, over six feet tall and weighing perhaps 220 pounds. He had an unusually pleasing voice, was distinguished in appearance, and had great personal magnetism. David Fairchild wrote (see Dodge, 1947) to the effect that he was overjoyed to meet and feel his charming personality, with an irresistible smile, outstanding presence. He had a sense of humor: Harper admired a (then) young physiologist, W. J. Robbins, later Director of The New York Botanical Garden, and took Robbins on a mushroom hunt. Once they gathered *Polyporus sulphureus* which Harper cooked. On tasting, he remarked: "Well, I believe that it is fully equal to a good grade of filter paper cooked the same way".

References

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- Stout, A. B. Robert Almer Harper. Jour. New York Bot. Garden 47: 267- 269. 1946. With a photograph.
- Dodge, B. O. Robert Almer Harper. Proc. Linn. Soc. London 158(2): 134-136. 1947.

George Grant Hedgcock 1864 - 1946

Dr. Hedgcock was a forest mycologist-pathologist, with an interest in forest tree rusts, especially of the genera *Coleosporium* and *Cronartium*.

In his work, he collaborated considerably with Ellsworth Bethel, W.H. Long, and M.R. Hunt, and their joint publications numbered more than 100 titles. His rather numerous collections, especially rusts and wood rotting fungi, are deposited in The National Fungus Collections, Beltsville, Maryland.

He began his professional career in 1902, at The Mississippi Valley Laboratory, at St. Louis. Subsequently, he transferred to The Office of Forest Pathology, Washington, D.C., and there did further work on forest tree diseases.

Reference

- Stevenson, John A. George Grant Hedgcock. *Mycologia* 39: 131-132. 1947.

William Herbst **1833 – 1906**

A native of Pennsylvania, Herbst was a practicing physician, who later in life gave attention to the Basidiomycetes.

He was born on September 24, 1833, near Reading, Pennsylvania. His father was a doctor, and often took his son on his rounds to visit the sick. While the father was engaged with his patients, William collected phanerogams. He attended three seminaries, in succession, Nazareth Moravian, Freemont, and Williston (the last in Massachusetts).

After attending these schools, he returned home to “read medicine”, under his father. He next entered the Jefferson Medical College in Philadelphia, and there graduated in 1855. He soon located in Trexlertown, Pa., where he practiced medicine for a time. Later, his knowledge of botany brought him an appointment to the Chair of Botany, at Muhlenberg College, Pennsylvania. It was at Muhlenberg that he gave much attention to the higher fungi (Basidiomycetes) and accumulated a large herbarium.

One of his correspondents was Charles H. Peck, of Albany. He sent Peck collections to identify or to confirm. One was a *Sparassis*, which Peck named as a new species, *Sparassis herbstii* Pk., perhaps a synonym of *S. spathulata*. In Peck's Report for 1985 are found described four new species sent to him by Herbst. Dr. Herbst published on “Corn smut and superstition”, and “Mushrooms and Toadstools”.

Reference

- Harshberger, John W. William Herbst. In: *Botanists of Philadelphia*, pp. 281-293. 1899.

E. W. D. Holway **1853 – 1923**

The life of Edward Willet Dorland Holway is noteworthy in both his vocation and his avocation. Holway was a banker in the town of Decorah, Iowa, but he retired at the age of 51 in 1904, when he settled in Minneapolis, near The University of Minnesota, where he pursued his old hobby of collecting and studying rust fungi. His interest and achievement in the mycological field is attested to by the 19,000 collections, which he gave to The University of Minnesota, and the publication of his “North American Uredineae”, printed by The University of Minnesota Press. His non-rust fungus collections are at Iowa State University Ames. He also issued “*Reliquiae Holvayanae*”, which was composed of 25 sets of 700 specimens of rusts which found wide distribution over the world (North America, South America, England, Germany, Sweden and Japan).

He was well-known for his critical and abundant collecting of rusts, for his skill in photomicrography, and in his unusual devotion to an avocation. Like Hagelstein and others, he was an amateur who became a highly skilled mycologist.

Reference

- Dearnies, John. E.W.D. Holway. A Banker's Avocation. *Mycologia* 38: 231-239. 1946. With a photograph and a list of publications.

Elliot Calvin Howe 1828 - 1899

As a botanist, Howe had broad interests, and was quick to encourage younger persons to engage in plant study. He is included here, not for his very few publications in mycology, but rather because he called to Charles H. Peck's attention the opportunities for the study of fungi and urged Peck to enter the field. His mycological papers were, indeed, very few. But, during his days he collected phanerogams, mosses and fungi, and contributed many of these to the Peck Herbarium, at Albany.

Howe, being of broad interests, spread himself over a wide field of activity. Born at Jamaica, Vermont, February 14, 1829, he soon developed an interest in natural science, and studied botany, zoology, and geology. But, he also studied music, composed several pieces of music, directed a church choir, and taught music at several different schools. Among his various activities Howe studied medicine and pharmacy. He then took the M.D., and practiced medicine in a number of New York towns (New York City, Troy, Yonkers) In his several teaching positions, Howe gave instruction in music, physiology, and botany at Charlotteville, New York; in music, botany, and German at Fort Edward Institute; and at these places, he did botanical field work. It should also be added that while practicing medicine in New York City, he also served as a reporter on the New York Tribune, which was then under the management of Horace Greeley. While continuing his interest in botany and especially the fungi, he corresponded with The Rev. M.A. Curtis, of North Carolina, as well as with Asa Gray and others. In his biographical account, Peck states that Howe was the first person to take up the study of New York fungi in earnest.

Reference

- Peck, Charles H. Elliot C. Howe, 1828-1899. *Torrey Bot. Club Bull.* 26: 251-253. 1899.

Herbert Spencer Jackson 1883 - 1951

Known as a student of rusts and later of the Thelephoraceae, Jackson spent his last years at The University of Toronto. He was born at Auguste, New York, in 1883, and died in Toronto on December 14, 1951.

Jackson's academic training included the A.B. degree, which he took at Cornell under George F. Atkinson. There, also, he came to know Whetzel; and later Arthur, not to mention Kern, Fromme, and other rust students. In 1905-1908, Jackson served at the Delaware Experiment Station. In the academic year 1908-1909, he was Austin Teaching Fellow at Harvard with Farlow and Thaxter. From 1909-1915, he was Professor of Botany and Plant Pathology at The Oregon State University, Corvallis. For the next

13 years, he was Chief in Botany, at The Purdue Agricultural Experiment Station, Lafayette, Indiana, and from 1928 to 1951 (death), he was first Professor of Mycology, and later also Head of the Department of Botany at The University of Toronto.

Essentially, Jackson was a fungus taxonomist. During much of his professional life he gave attention to the rusts; but, later, he took up the Thelephoraceae. In the field of mycology, he published more than 50 papers.

For one summer session (about 1917) Jackson returned to Cornell to teach plant pathology. During this period of some two months, I came to know him rather well. He was amazingly acquainted with rusts in the field, as well as in the laboratory. He also knew the smuts. I observed that he always seemed to be on solid ground in matters of taxonomy, nomenclature, and was wholly conversant with the literature of his field.

Reference

- Bailey, D.L. Herbert Spencer Jackson. *Phytopath.* 42: 406. 1952. With a photograph.

Arthur de Jaczewski 1863 - 1932

The eminent Russian mycologist and plant pathologist was born near Moscow on November 3, 1863. He was serving in the Federal Service as Director of the Bureau of Mycology and Plant Pathology when he died in 1932. Although born on a farm, the family apparently had money - at least enough that he attended school in Switzerland. He graduated, however, at The University of Moscow in 1887. As with many mycologists of his day and since, he spent much of his professional energy on the study of plant diseases, but he found time to collect and study fungi. At one time, he visited the United States, and while here spent some hours with Lloyd in Cincinnati. Lloyd found him to be well informed in mycology, and an unusual linguist (he spoke French, German, Italian, Spanish, Dutch, and English—not to mention Russian). Lloyd states that his knowledge and handling of English surpassed that of most Americans.

In Switzerland, he studied at the University of Berne under Ed. Fischer. While there, Jaczewski published his “Erysiphaceae de la Suisse”, 1890. He later published on the Pyrenomycetes, 1894-1895. With Tranzchel, he distributed “Fungi Rossiae Exsiccati”, consisting of 7 fascicles, 350 numbers.

In 1896, Jaczewski became Director of the Botanical Garden at St. Petersburg, and as stated before, in 1907, became head of the newly established Federal Bureau of Mycology and Phytopathology. He was a leader in the establishment of the Mycology Society of Russia, in 1920.

References

- Jones, L.R. Arthur Jaczewski. *Phytopath.* 23: 111-116. 1933. With a photograph.
- Lloyd, C.G. *Mycological Notes.* 68: 1169. 1923. With a photograph.

Ivar Jørstad **1887 – 1967**

A native of Norway, Jørstad, was the son of a minister, and was Born on July 14, 1887. In his early years, he was employed by the Norwegian postal service. When he was 23, he went to Australia where he worked as a woodsman. This experience “down under”, in the backwoods, is said to have stimulated his interest in botany; later, he returned to Norway to study at Oslo University. There he majored in botany, and took the bachelor's degree in 1919. In the year following, he entered The University of Wisconsin, Madison, where he took the degree of M.S. In 1920, he became Government Mycologist, in Norway, which position he held until 1957. During these years, he contributed heavily to the taxonomy of the Norwegian flora through his collections and study. His collections are preserved at The Museum of Botany, University of Oslo. Jørstad 's interest covered most fungus groups, but his specialty was the rusts. He published on the rusts, and also on the powdery mildews (Erysiphaceae); the smuts (Ustilaginales); the Fungi Imperfecti; and several of the Ascomycetes.

During his active days, he became widely known, and was able to accumulate a large private library which he donated to the Norwegian Plant Protection Institute. Both the University of Helsinki and the Copenhagen Royal Veterinary and Agricultural College awarded him honorary doctorates.

Reference

- Røed, H. Ivar Jørstad, 1887-1967. Mycologia 63: 697-700. With a photograph.

Petter Adolph Karsten **1834 – 1917**

An agaric taxonomist, Karsten is said to be the first serious student of this group in his native Finland. William Nylander had published some notes on fungi, but later gave nearly all his time to lichens. Karsten gained his knowledge of fungi independently, for he was neither a student of Nylander nor of Fries. It is true that Karsten followed Fries in his earlier works, but later developed his own system of classification.

It is said that Karsten was the son of an impecunious farmer in southwestern Finland. He entered The University of Helsingfors in 1856, and after four university terms, was graduated in 1857 with a degree in science. By 1859, Karsten had prepared as his doctoral dissertation a short treatise on the Polyporaceae of southwestern Finland which dealt with 67 species.

After a few years as a school teacher, Karsten was, in 1864, appointed Lecturer in Botany at The Mustiala Agricultural Institute (of college grade) in southwestern Finland. As a result of this appointment, he was sent to Sweden, Denmark, and Germany to prepare for the teaching of botany. In 1861, he participated in an expedition to the Kola peninsula, and this field study resulted in publication of his “Enumerato Fungorum et Myxomycetum”, in 1866, in which he lists 425 species of fungi. From 1865 to his death, he remained at Mustiala. In this area he collected fungi with great vigor, and soon issued “Fungi Fennicae Exsiccati”, Nos. 1-1000, 1865-1870. In 1871- 1879, Karsten also compiled a

fungus flora of Finland under the title, "Mycologia Fennica", which appeared in 4 volumes, of 1071 pages, embracing 1662 species. He later made an expedition to northern Russia, with Nylander, and reported 425 species of fungi. Other important publications are listed in Murrill (1916). In his overall contributions, Karsten is credited with being a pioneer in the use of spore characters in species diagnosis, despite the fact that the microscope had not developed as far as desirable.

References

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Calvin Henry Kauffman 1869 - 1931

During much of the 20th century, the student of agarics will place Kauffman, Peck and Murrill, as leaders in the field. His "Agaricaceae of Michigan", 1918, with 884 species described, was, for many years, the "Bible" of mushrooms for American students. It is a systematic presentation, and its value lies in part, in that he has there brought together in one volume (plus a volume of photographs) the subject for the Michigan species (Lloyd).

Although Kauffman, like so many mycologists, first developed an interest in botany in youth, did not specialize in this field in college. Instead, at Harvard, where he took the A.B. in 1895, he concentrated in foreign languages. But later, while teaching in a normal school, at Bushnell, Illinois, he came upon a copy of Atkinson's "Mushrooms", and then began to collect agarics. The following year, Kauffman studied under Dr. R.A. Harper, at The University of Wisconsin (later at Columbia), and became interested in the Saprolegniaceae. But, he came back to the study of agarics when, in 1902-1904, he worked at Cornell under Atkinson. His teacher there encouraged him to study the genus *Cortinarius*, which, in 1932, he finally monographed for North American Flora (see: vol. 10: 282-347).

In 1904, Kauffman was appointed Instructor in Botany in The University of Michigan, while working at the same time on the Ph.D., which degree he took there in 1907. His doctoral thesis dealt with the cultural influence of culture media on the sexual reproduction in the Saprolegniaceae. For some time, at Michigan, he taught not only courses on the fungi, but also on forest pathology, algae, mosses and ferns. Finally, he confined himself to the first two.

Kauffman was greatly interested in the development of the herbarium at Michigan. As a young man, he had started an herbarium of those flowering plants which he found growing near his Pennsylvania home. His collections at Michigan grew rather rapidly, and in 1928 he acquired the Krieger collections as a gift from Dr. H.A. Kelly, a Baltimore physician. The following year, The University purchased the library and the lichen collection of Dr. Bruce Fink, of Miami University, Oxford, Ohio.

Subsequent to the publication of his “Agaricaceae of Michigan”, Kauffman also monographed the genera *Armillaria*, *Clitocybe*, *Flammula*, *Gomphidius*, *Inocybe*, *Lepiota* and *Paxillus*. All are in The University of Tennessee Library, Knoxville. In his agaric studies covering a quarter of a century, Kauffman described more than 200 new species of fungi, many agarics but also some in other groups. During his active years, he collected widely, not only in Michigan but also in the Pacific Northeast, the Rocky Mountains, Tennessee, North Carolina, and Kentucky.

Kauffman was born on a farm near Lebanon, Pennsylvania, on March 1, 1869. He died in Ann Arbor on June 14, 1931. At Michigan, he was advanced from Instructor to Assistant Professor in 1912; to Associate Professor in 1920; and to Full Professor in 1923. Drs. Mains and A.H. Smith are two of his students.

It was my lot to associate with Kauffman during the month of February 1918, in The Office of Plant Disease Survey, Washington, where both of us were on short term appointments. In my talks with him, a great deal of time was devoted to agarics, but at the time his mind was heavily on a controversy in which he was then engaged with the head of his Department at Michigan. For that day and time, I found him to have an unusually clear understanding of the fungi, and he was very enthusiastic about mycology, the field in which Kauffman was deeply respected.

References

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Karel Kavina 1890 - 1948

One of the foremost Czechoslovakian botanists and mycologists, Kavina was born September 4, 1890, at Smichov-Prague. At the time of his death on January 21, 1948, he was Professor of General and Systematic Botany of the Technical University at Prague.

Kavina studied natural science at Charles University where Dr. Joseph Velenovský noticed that Kavina was an unusually gifted student and urged him to become a demonstrator at the Botanical Institute in 1909, and an assistant in 1910. He took the Ph.D. in 1912. In 1915, he became docent (lecturer, teacher) at The Commercial Academy in Prague. In 1919, he was promoted to Associate Professor, and in 1923 Professor of Botany (at Prague).

Kavina was at first interested in the medical and then the other biological sciences. He studied mosses and hepatics, and in 1912 he published “The Genus *Sphagnum* in Bohemia”; in 1915, “Monograph of the Bohemian frondose hepatics”. Then, he began to devote his attention to the fungi. Through his “Atlas of Fungi”, he contributed to the popularization of mycology. Between times, he wrote a textbook of botany

especially designed for students in agriculture and forestry.

Further in mycology, Kavina monographed agaric genera, especially *Lactarius* and *Inocybe*, but these manuscripts were destroyed by the Germans during occupation. Other mycological titles published were "Cystidia of Hymenomycetes", 1919; "*Boletus parasiticus*", 1935; and morcheloid forms of the Agaricaceae. Finally, with A. Hilitzer, Kavina issued "Cryptogamae Exsiccati".

References

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Karl Frederic Kellerman 1879 – 1934

Born the son of Dr. W.A. Kellerman, the latter a founder of the *Journal of Mycology*, Dr. Karl was for many years Associate Chief of the Bureau of Plant Industry, USDA. He held other important positions in Washington, D.C. He also launched *The Journal of Agriculture Research*, a periodical which contains many articles on pathogenic fungi.

William Ashbrook Kellerman 1850 – 1908

A native of Ohio, W.A. Kellerman was born in Ashville, on May 1, 1850. He entered Cornell University, and in 1874 took the L.S. degree. Although I have seen no statement that Kellerman took botany with Prentiss, it is probable that he did.

Kellerman began his teaching career at The Oshkosh State Normal, in Wisconsin in 1874, and continued there until 1879. That year (1879) he went abroad and took the Ph.D. at Zurich in 1881. On his return to the United States, he accepted a position as Professor of Botany, at The University of Kentucky, Lexington, Kentucky. From Kentucky, he went to a similar position at The Kansas State College of Agriculture, Manhattan (the year not stated). From Kansas, he went to Ohio State University in 1891 as Professor of Botany, a position which he held until his death (1908).

Kellerman conceived the idea of establishing a periodical on mycology; he presented his ideas to J.B. Ellis, of New Jersey, and Ellis readily agreed to join in on the project, and also agreed to furnish much of the copy for it. Thus, Kellerman inaugurated the *Journal of Mycology* in 1885. He carried the responsibility for its publication from 1885 to 1889, when he persuaded the U.S. Department of Agriculture to accept that burden. Later (1902), Kellerman again assumed the role of publisher and editor of the journal. Finally, Kellerman continued to publish and edit the *Journal of Mycology* until his death, when the journal was terminated. The *Journal of Mycology* was then succeeded by *Mycologia*, which issued its first number in February 1909.

In addition to a number of papers published by Kellerman, many of them in the *Journal of Mycology*, he issued two sets of exsiccata. In 1901-1905, he issued "Ohio Fungi", fascicles I-X, with 200 numbers. This issue contains a wide range of fungus species, but many of them are parasitic fungi, including a good representation of rusts. In 1906-1907, Kellerman issued "Fungi Selectae Guatemalenses Exsiccata", in decades I and II. His plan to continue this series was terminated by his death. In addition, Kellerman collected rather vigorously while he was in Kansas. These collections, he distributed under the label "Flora of Kansas", but this lot does not qualify as fungus exsiccata, according to Stevenson (1971).

His herbarium apparently reached some 30,000 numbers by the time of his death, but I have not learned whether or not he left it at Ohio State.

The circumstances surrounding Kellerman's death should be recorded here. He made a total of four collecting expeditions to Guatemala while he was at Ohio State. On December 17, 1907, with three students from Ohio State, Kellerman went on his fourth trip to Guatemala. Just prior to leaving Guatemala for home in March 1908, he showed signs of malarial fever. On their way, the party stopped at a hotel in Zacapa, Guatemala, where Kellerman died. Since his family had travelled widely, it had earlier been agreed that if any member should die while away from home, he should be buried there; consequently, Kellerman was buried in Zacapa.

References

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Howard Atwood Kelly 1858 – 1943

Apparently, Dr. Kelly, a physician, was research-minded throughout his life. He was interested not only in medicine, but also in other sciences. He became interested in the fungi, and with ample personal funds, he built an extensive private library, perhaps second only to that of Dr. W.G. Farlow, Harvard. It contained 12,000 items, and in 1943 was valued at \$100,000. In his library were found copies of many rare publications some of which were said to be the only copies in the United States.

For many years (1918-1928) Kelly had in his employ Mr. L.C.C. Krieger, also of Baltimore, an eminent artist and student of the fungi. Krieger not only painted more than 300 fungi, but also assisted Kelly in the acquisition of his superb library. In his library there are also some of the letters of Berkeley, Schweinitz, and Peck. In 1928, Kelly gave his private collections of books and fungi to the University of Michigan, Ann Arbor, where it is now housed.

In 1924, Krieger published a catalogue of Kelly's library in book form, of 260 pages. The list of titles is arranged alphabetical by author; and included also in his exsiccati, books on floras, and periodicals.

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Frank Dunn Kern 1883 – 1973

For many years an administrator as well as general botanist and mycologist, Kern's real preference was for the fungi. On retirement in 1950, at The Pennsylvania State University, he was made Emeritus Professor of Botany, and Dean of The Graduate School there. Some two years prior to his death, the Board of Trustees of Penn State named the new graduate center The Kern Graduate Building.

Dr. Kern was born June 29, 1883, in Reinbeck, Iowa, and was awarded the bachelor's degree at The State University of Iowa in 1904, and the M.S. at Purdue University in 1907. He accepted a fellowship at Columbia University in 1910, and there took the Ph.D., with a thesis entitled "A Biologic and Taxonomic Study of the Genus *Gymnosporangium*". Earlier, Kern was at Purdue (1904-1910) as Associate Botanist to the Experiment Station, and Collaborator with the USDA. At Purdue, he was an assistant to Arthur, and there launched his mycological career in a study of the Uredinales. At short intervals from 1906 to 1910, he served as research scholar at The New York Botanical Garden. Kern returned to Purdue in 1910 as Instructor in Cryptogamic Botany, and in 1913 he went to the (then) Pennsylvania State College. There he succeeded W.A. Buckhout as Head of the Department of Botany. Finally, in 1922, Penn State organized a Graduate School, and Kern was its first Dean.

Throughout his career in administrative work at Penn State, as both Head of Botany and Dean of the Graduate School, he continued his activity, even though often to a limited extent, in mycology. It is said that his magnum opus was his revision of his doctoral thesis, the revision having been published by the Penn State University Press under the title, "A Revised Taxonomic Account of the Genus *Gymnosporangium*", 1973.

With Whetzel, Chardon, and others, Kern made collecting expeditions into Puerto Rico, Colombia, Venezuela, and Santo Domingo, and published a number of papers on his rust findings in these areas. With all this program, he also published a textbook on biology in 1947.

Reference

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Louis Charles Christopher Krieger 1873 – 1940

Krieger is a unique personality in mycology because of his unusual art ability. He used that ability to paint agarics in water-color. Some have said that his paintings were the best in North America, and perhaps equaled in Europe only by Boudier. Krieger's paintings were both accurate and beautiful.

Born in Baltimore, Maryland, on February 11, 1873, his innate art potential led him to the Maryland Institute School of Art and Design, in Baltimore; later, he also studied at The Charcoal Club School of Fine Arts.

Krieger's professional life began in 1891 when he was appointed Assistant Artist in The USDA, Washington, D.C., in the Division of Microscopy, under Thomas Taylor. It so happened that Taylor was interested in mushrooms, and he set Krieger about to paint the agarics of the District of Columbia. In 1895-1896, Krieger studied at The Royal Bavarian Academy of Fine Arts, Munich. He then (1896) returned to Baltimore where he was appointed Instructor at The Maryland Institute which he had earlier attended as a student. After six years, he became a Mycological Assistant to Farlow (in 1912), where, among other accomplishments, Krieger painted the plates for Farlow's "Icones Farlowiana", 1929. While at Cambridge, he, being a skilled violinist and pianist, became deeply interested in the Boston Symphony Orchestra.

In 1912, he returned to the USDA, The Bureau of Plant Industry, and was then assigned to the Plant Introduction Garden, at Chico, California, where he painted many species of the cactus family. These paintings are on deposit at The Smithsonian Institution, Washington. His first preference, however, was to paint mushrooms; thus, in 1918, on invitation of Dr. Howard A. Kelly, he returned to Baltimore to engage in this kind of work. In 1920, Krieger published his superbly illustrated article on mushrooms in The National Geographic Magazine, Vo. 37, pp. 387-439. In 1936, he also published "The Mushroom Handbook", with 32 colored plates. While with Dr. Kelly, Krieger assisted him in building his excellent mycological library of some 12,000 titles; and Kelly's library, paintings by Krieger, and Kelly's fungus collections were finally deposited at The University of Michigan.

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Jakob E. Lange **1864 - 1941**

Mycologist Lange, of Denmark, is another example of one who earned his livelihood at one vocation, but who in his spare time studied and wrote about nature (fungi, in particular). He did teach botany and social economics in his alma mater (Danish Agricultural College) for 30 years, but for his favorite subject, the agarics, he had to find the time to devote to them. Once, he published an illustrated book on wild flowers for children (it sold nearly 200,000 copies), and also some volumes on social economics. Lange, in addition, was a leader in politics - the Danish liberal and radical party. During his last years he was president of a Folk school, near Odense, which was taken over and occupied by the German Gestapo. The British, during World War II, however, destroyed Lange school building by bombing.

Lange is perhaps best known in North America for his “Flora Agaricina Danica”, Vols. I-V, 1935-1940. The descriptions, keys, and discussion are accompanied by 200 colored plates, all painted by Dr. Lange from fresh collections. Because of the high quality of this work, and especially the paintings, it is regrettable that it has been out of print for some years. This work was preceded by his “Studies in the Agarics of Denmark”, a series of twelve publications which appeared in “Dansk Botanisk Arkiv”, began in 1914, and was completed in 1938.

In his work, Lange followed the Friesian taxonomy, with some exceptions in which he did accept Quélet and Ricken.

He visited the United States on three occasions (1927, 1932, 1939). On the trip here in 1932, a Foray was arranged for him in the Adirondack Mts., following which he published a paper on his impressions of the fungus flora of North America (Mycologia 26: 1-12. 1934). In this paper, he stated that 70% of the agaric species he met could be identified with European species known to him. In 1939, he attended the Mycological Society of America Foray, at Gatlinburg, Tennessee. In the Great Smokies, he found that he did not know more than about 30% of those species seen.

I recall that, in my good fortune, I attended the Adirondack Foray in 1932. Lange brought with him his 200 completed plates, later published in his “Flora Agaricina Danica”. The weather being clear and calm, one day he spread all the plates over the lawn of our cottage for us to view. I recall also that one of his paintings (a *Lepiota*) was made by Lange out on the lawn, where he used a barrel for a table and an orange crate for a stool. To complete this painting required some fifteen or twenty minutes, as I witnessed the job. It appears perhaps as one figure in either plate 12 or 13.

Lange also brought with him his wife and his son, Morten, then about 8 years old, and at that time he knew many of the agaric genera at sight. (Dr. Morten Lange has for some years now been mycologist in The University of Copenhagen.)

Dr. Jakob Lange was born in Jutland, April 2, 1864, and died December 27, 1941. He was of rather exceptional physique, perhaps 6 ft., 4.in. in height, 190 lbs., lean, good humored, a delightful personality, he spoke and wrote excellent English, and, as a conversationalist, one of the best. His devotion to the people led him, while here at the Foray , to visit The Penland (N.C.) Folk School.

Reference

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David Hunt Linder 1899 – 1946

It was my good fortune to know Linder in his prime. He was brilliant, had the habit of listening closely to what others might say, was very responsive, and was possessed of other good characteristics which one comes to associate with Harvard mycologists (Farlow, Thaxter, Weston).

His first mycological paper seems to be that published at the age of 25; and in his remaining years, he published some 43 titles, not a few of them on Fungi Imperfecti.

A native of Massachusetts, Linder was born in Brookline on September 24, 1899. His father, a chemist, is said to have instilled in Linder an interest in natural history. He entered Harvard in 1917, and was soon in the SATC, where he suffered through the experience of operating under a sergeant whose characteristics were just as described in the story- book. Completing the A.B. in 1921, he then entered the Harvard Graduate School. As an undergraduate, Linder was guided to a considerable degree by his great-uncle, Dr. W.G. Farlow, of Harvard fame, but who died in 1919. An important part of Linder's experience was his first trip to Europe and the British Isles, which was financed by Mrs. Farlow. Linder took both the M.A. (1922), and the Ph.D. (1926), from Harvard.

On the death of Dr. Thaxter, at Harvard, in 1932. Linder was appointed Curator of the Farlow Herbarium, a position he held to his death in 1946. During his tenure, nearly 200,000 cryptogamic specimens were added to the Herbarium, which now includes more than 1,000,000 collections. One also finds there the collections of Bartholomew, Blackford (with some of Peck's types), Curtis, Patouillard. The Farlow Library also showed expansion under Linder, growing from 19,750 volumes in 1932 to 37,208 in 1946. During this period, Linder initiated the journal "Farlowia" (named in honor of Dr. W.G. Farlow), a periodical somewhat companion to "Mycologia". One of worthy achievements was in 1940 when he was elected President of the Mycological Society of America.

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Curtis Gates Lloyd 1859 - 1926

Lloyd's biographer, Dr. H. M. Fitzpatrick, expressed it well when he said that Lloyd was one of mycology's distinctive personalities. Even most of us who knew him find it difficult to describe this odd, near eccentric, but highly interesting character. He favored breaking with tradition and did. He would be classed as an amateur, but only because he never earned his livelihood in mycology. Lloyd was fortunate in one way: he was financially well-to-do, which meant that he could do several things others could not do. He was able to retire early; he travelled widely and collected fungi over the world; he purchased books and built the well-known Lloyd Library in his home city, Cincinnati and left a heavy endowment for that Library.

Born in Florence, Kentucky, on July 17, 1859, he lived there until 1868 when the family moved to Crittenden, Kentucky. He attended country schools, but apparently never went to any college or university. Whether or not this latter fact influenced him to chide the professors or not can hardly be established. He did this in his writings, and often in a highly amusing fashion. Lloyd was at least unorthodox in that he felt that the professors described too many new species; and he did not agree that one should place his name after any binomial and was well-known for his tirades against those who did. He referred to this practice as being a high form of self-advertising. To help emphasize this to his readers, Lloyd created a small idol erected to the god Tso Kay, which, as he said, was guardian of "priority, pedantry, Kuntzeism, and other irregular practices indulged in by mycologists". He had made a

cut of his idol and placed it beside those paragraphs where he chided some professor for putting his own name after a species name. With reference to the creation of new species, Lloyd felt that there were really only a few endemic species in North America, and that our species would finally turn out to be the same as those already discovered and named in Europe. Once, however, he made one concession by saying that one author was somewhat justified in erecting several new species because one could not determine whether his collection was the same as some European species because of the poor descriptions prepared by the Europeans.

Despite the fact that Lloyd thought that the professors described too many new species, it is interesting to note that Lloyd himself described a surprisingly large number of new species and made many new combinations. But he scrupulously avoided placing his own name after the new binomial. His list of new combinations and new species is compiled in Bulletin No. 35, of the Lloyd Library, 1936. The list extends over 200 pages (see Stevenson and Cash, below).

When young, Lloyd went to nearby Cincinnati from his old home in Crittenden. He got a job as a dish washer in a drug store. At the age of 25, he formed, with his two brothers, John and Nelson, The Lloyd Brothers Pharmacy, of Cincinnati. His natural interest in higher plants, gained early, was helpful to the newly organized firm. Finally, however, he came in contact with Dr. A.P. Morgan, who interested Lloyd in the fungi, especially the Gasteromycetes. Morgan had retired, because of poor health, to a farm near Preston, Ohio, and there Lloyd visited him frequently. On retirement, Lloyd gave full time to fungi: travelling, collecting, identifying specimens which he requested through his bulletins, buying books, and building a library and an herbarium. His Library is still at Cincinnati, supported the endowment he left, and in 1927, its holdings number over 50,000. After his death, his herbarium of some 60,000 specimens, mostly larger (but not many agarics; he felt they were too much trouble to preserve and care for), went to The National Fungus Collections, Beltsville, Maryland.

Shortly after coming to Tennessee, I took occasion to ship a few polypores and related things to him. He responded promptly, and asked for more, which I continued to send for some time. One hot September day, I had stopped overnight in Cincinnati, and went to see Mr. Lloyd, at his herbarium. I found the place, stepped to the open door, and rang the bell. I saw an older man sitting very close to, but with his back to the open door. He was attired in only blue-jeans and an under-shirt, and no shoes. I continued to ring, but he seemed to pay no attention. Finally, the housekeeper answered with a "ye-e-e-ss"! I said I wished to see Mr. Lloyd. She replied: "Right here", and pointed. Finally, I gave her my name, whereupon he wheeled around, greeted me, and then took me (he bare-footed) all over that herbarium. I asked what he intended to do with his enormous collection. He said: "Some good institution will get it".

That Lloyd had a sense of humor could hardly be disputed. At a AAAS meeting in Cincinnati, he showed up in the hotel lobby. He was showing all the professors a very unique cup-fungus. He had them all puzzled, even the Discomycete specialists were. Finally, it developed that his specimen was of clay—a model he had prepared for the occasion.

A few years before his death, he erected a monument to himself to gratify a vanity. Other mycologists, he said, gratified their vanities by placing their names after binomials; so, why should he not erect a monument to himself. The inscription on the monument says: "Curtis G. Lloyd. Monument erected in 1922 by himself for himself during his life to gratify his own vanity. What fools these mortals be."

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William Henry Long **1867 – 1947**

Long is perhaps best known as a student of forest disease fungi. Born on March 7, 1867 in Texas, he took the A.B. in Baylor University in 1888. From graduation to 1892, he was Professor of Natural History at Baylor. In that year he left Baylor for a position at Burleson College at Greenville, Texas. Later (in 1900), he received the M.A. at The University of Texas. He also spent several summers studying with Dr. G.F. Atkinson, at Cornell University. Long taught for a time at The North Texas State Normal College, Denton, and there he emphasized in his research the collection and study of rusts. In 1903, he published "The Ravenelias of the United States and Mexico (*Bot. Gaz.* 35: 111-133). By 1907, he had accumulated a sizeable collection of rusts and other fungi, but these were lost in a fire at his home.

During his active days from 1910 to retirement, Long was in Washington, D.C., first on the staff of the Experiment Station Record, then (1902) he took a position in the Office of Forest Pathology.

There he became associated with several other well-known figures in forest pathology, such as Metcalf, Hedgcock, Spaulding, Wier, and Meinecke. He spent most of his time in the study of wood-rots and tree-rusts. Finally, he was assigned to a laboratory in Albuquerque, New Mexico, where he completed his career. Following retirement in 1937, he began the study of Gasteromycetes on which he published a series of papers, I-XVIII, many of them in *Mycologia*. His herbarium accumulated, after his first one burned in 1907, was bequeathed to The Smithsonian Institution.

Reference

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Thomas Huston Macbride **1848 – 1934**

Best known as a student of the Myxomycetes, Macbride published papers on a variety of mycological subjects. On the slime molds, he became a world authority. During his productive years, he was at The State University of Iowa, at Iowa City (1878-1934). There he served, for 56 years, as Professor of Botany, President of the University and President-Emeritus.

Of interest to us, Macbride was born in Rogersville, Tennessee, July 31, 1848. His father, a Presbyterian minister, was a strong abolitionist, and the family was compelled to leave Tennessee. They settled in Iowa, first near Salem, then at New London, Cedar Rapids, and Princeton. He took the bachelor's (1869) and master's degrees (1873) at Monmouth College, and received honorary degrees from Iowa and other colleges. He taught languages and mathematics in Lenox College from 1870-1875, and in 1878 he

became Assistant Professor of natural history at Iowa. Soon, Macbride took up the fungi and the slime molds. He and an associate are credited with starting the publication, *Bulletins on Natural History*. His first paper on Myxomycetes was published in 1892. In 1899, Macbride published the first edition of "North American Slime Moulds"; in 1922, a revised edition; and in 1934, a third edition, with co-author G.W. Martin. Macbride's Myxomycete collection is at The State University of Iowa, Iowa City.

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Edwin Butterworth Mains 1890 – 1968

Those who know of Mains' work only of the last quarter century, look upon him as a student of entomogenous fungi of *Cordyceps*, and of the Geoglossaceae. However, after taking the Ph.D. under Kauffman, at The University of Michigan, with his thesis on host-parasite relationship in the rusts, he took his first professional position at Purdue University, in 1916, where he worked as an Assistant Botanist with Dr. J.C. Arthur. There he remained until 1930. During this period, and somewhat later, he contributed in a major way to Arthur's "Manual of the Rusts in the United States and Canada", published in 1934. Mains, himself, published a number of important papers on the rusts: he described at least 3 new rust genera (*Angiopsora*, *Bitzea* and *Spumula*), and reported studies on heteroecism and physiologic specialization (biologic strains).

Dr. Mains was highly regarded as a teacher at Michigan, where he went from Purdue at Kauffman's death in 1930. In 1931, he became Director of The University Herbarium, and as such succeeded in developing the plant collection there from relative obscurity to one of international distinction in just under 30 years preceding his retirement.

Reference

- Smith, Alexander H. Edwin Butterworth Mains, 1890-1968. *Mycologia* 61: 449-451. 1969. With a photograph. (A list of 29 papers which Dr. Mains published in *Mycologia*, 1909-1966, is found in *Mycologia Index*.)

George Willard Martin 1886 – 1971

For the last thirty years of his professional life, Dr. Martin served on the Botany Faculty at The State University of Iowa, at Iowa City. Aside from his contributions to mycology, other interesting facts about him are on record. He was a high school drop-out, but later (in 1913), began to publish the results of his research. His papers indicate a wide variety of interests: apple and potato diseases, water molds, the food of the oyster, mushrooms, jelly-fungi and their relatives, dinoflagellates, Myxomycetes, a fungus classification (keys, etc.), and other topics. His biographers give an excellent account of Martin's life and

work. However, they committed an unpardonable sin in publishing a photograph taken at age 85, shortly before his death. Those who saw him in middle-age are shocked by this thoughtless error.

Dr. Martin was born in Brooklyn, where he entered Boys High School in 1899. In his second year, a student monitor falsely accused Martin of throwing matches on the floor. The school principal confronted Martin with the ultimatum of a confession, but Martin, having nothing to confess, terminated his high school career.

From 1901 to 1908, he held a job in New York City. Finally, by study at home, he prepared for and passed the entrance examinations at Rutgers University, where he attended from 1908 to 1912. There, he met two men who influenced him to take up mycology: 1) Byron D. Halsted, a leading plant pathologist, and student of the fungi; and 2) Mel T. Cook, also a plant pathologist. In 1912, Martin took the Bachelor of Literature degree, and in 1915 the M.S. degree (at Rutgers). From 1913-1915, he was an assistant in plant pathology in the New Jersey Agricultural Experiment Station. His further graduate work was pursued at The University of Chicago, where he studied from 1915 to 1917. From 1917-1919, he served in the U.S. Armed Forces, and was wounded in France. From 1919 to 1923, he was Assistant Professor of Botany at Rutgers (where for one year he taught English as well as botany). Martin was awarded the Ph.D. at The University of Chicago in 1922.

Martin's thesis work led him to an interest in water-molds and the marine dinoflagellates, on which groups he published papers. In 1923 (at age 37) he went to the State University of Iowa as Assistant Professor of Botany; and six years later (1929) was made full professor. Finally, in 1953-1955, he served as Head of the Department of Botany, and in 1955 he retired.

At The State University of Iowa, Martin became associated with T.H. MacBride, a world-known student of the Myxomycetes. As a result, Martin began publishing on this group; he not only was author of several papers on the slime molds, but also a monographic study (N.A. Flora 1: 1-190. 1949), and finally a book (Co-author C. J. Alexopoulos, Texas), "The Myxomycetes", 560 pages, 1969.

Likewise, at Iowa, Dr. Martin became interested in the Tremellales, and from time to time, he published several papers on this rather neglected group of fungi. Mycology is indebted to him for his work on Myxomycetes, Tremellales, and his work on taxonomy and classification.

Reference

- Wells, Kenneth and Paul L. Lentz. George Willard Martin. Mycologia 65: 985-998. 1973. With a photo and a list of 140 publications.

George Martin 1826 - 1886

Born near Claymont, in Delaware County, Pennsylvania, Dr. Martin graduated from The University of Pennsylvania Medical School in 1847. He then practiced medicine in his home county for a time.

During the Civil War, he was connected with several different hospitals. In 1866, he moved to West Chester, where he remained until death in 1886. By 1878, he began to devote much of his time to

mycological studies, especially parasitic fungi on living leaves. Since his bibliography is short, it is listed below.

Martin's Bibliography

1. New Florida fungi. Journ. Mycol. 1: 97.
2. Synopsis of the North American species of *Asterina*, *Dimerosporium*, and *Meliola*. Jour. Myc. 1: 133, 145.
3. New fungi. Jour. Myc. 2: 128.
4. The phyllostictas of North America. Jour. Myc. 2: 13, 25.
5. Enumeration and descriptions of the Septorias of North America. Jour. Myc. 3: 37, 49, T3, 84.

Reference

- Harshberger, John W. George Martin. In: The Botanists of Philadelphia, pp. 247-248. 1899. With a photograph, and the above list of papers.

George Edward Massee 1850 – 1917

Massee, the first President of the British Mycological Society, died of influenza on February 16, 1917. He was born in East Yorkshire on December 20, 1850. His father hoped that George would follow his vocation of farming, but he had more interest in flowers than in agriculture. Soon his interest turned to the larger fungi, of which he made drawings and paintings. His parents then sent him to the York School of Art where he did well.

His mother's cousin, Dr. Richard Spruce, himself a botanist, encouraged young Massee in the field of plant study. After a short stay at Cambridge University, he travelled to South America on a collecting expedition (plants in general, orchids in particular). On return he served for a time in The French Legion, but subsequently his mother prevailed on him to return to the farm.

At his father's death, he and his mother moved to Scarborough, where he taught botany in the schools. Meantime, he had painted a number of agarics, many of which were used by Cooke in his "Illustrations". His valuable paintings were acquired by the British Museum.

In the 1880's, he and his mother moved to London, then later to Kew. Here he worked as free-lance in the Herbarium where he published his "Monograph on the Myxogastres", in 1892, which perhaps was over-shadowed by Lister's monograph, in 1894. Finally, in 1892, the first volume (of a 4-volume work) appeared under the title, "British Fungus Flora", 1892-1895. Unfortunately, this work treated only the Basidiomycetes, Discomycetes, and Hyphomycetes.

Cooke meantime had been editing Grevillea, but decided to sell it, and Massee (with a Mr. Batters) purchased it. Cooke retired from Kew in 1893, and Massee succeeded him, and was appointed Principal Assistant in the Cryptogams. In 1899, Massee published his "Text Book of Plant Diseases", followed (1902-1905) by the "Fungus Flora of Yorkshire" (Co-author Grossland), and finally (1905) by his "Textbook of Fungi". His titles number more than 250 original papers.

His biographer (Ramsbottom) says of Masee that although often brilliant, he was careless; he was cynical and sharp of tongue, although often jovial and kind.

References

- Ramsbottom, J. George Edward Masee. *British Mycol. Soc. Trans.* 5: 469-473. 1914-1916. With a group photograph, opposite page 182.
- Lloyd, C.G. *Mycological Notes.* 34: 446. 1910. With a photograph.

Charles McIlvaine 1840 - 1909

As stated by at least one of McIlvaine's biographers (Bowser), he was known to most professional mycologists only through his "One Thousand American Fungi", 1900. Those amateurs who know his book, are aware that he was the man who tested the edibility of several hundred species of fleshy fungi which he had collected.

McIlvaine was born on May 31, 1840, at Springton Farm, Chester County, Pennsylvania. His father, Abraham Robinson McIlvaine, was a successful farmer, and a prominent politician (a Whig), and served both in the State Legislature (1836), and in Congress (1842-1846). In the national body, he opposed President Polk and some congressmen in their aggressive attitude in the Mexican War. The son, Charles, a Republican, was never active in politics.

Charles attended local schools, but never went to college. After Grammar School in Philadelphia, he worked for a time on the railroad, and when the Civil War began, raised a company of volunteers in support of the Union, and was made Captain. In 1863, he was appointed Major, but declined the promotion and returned to his home.

In 1873-1874, McIlvaine toured Europe, and on his return, he apparently went to West Virginia. There in the mountains in 1880 to 1885, he began studying and eating mushrooms (he is said to have tested nearly 500 species). He recalled an article by Julius A. Palmer, Jr., entitled "Toadstool eating", published in *Popular Science Monthly*, May 1877, which may have started his mycological career. It appears that professional (academic) mycologists had some doubts about his mycological reliability, which doubts he felt, and so he sometimes used the pen name, "Tobe Hodge". But he also wrote under his own name. By 1900, he had published his "One Thousand American Fungi", which subsequently underwent revisions. On the title page, Robert K. MacAdam is listed as co-author.

During his mycological career, McIlvaine worked closely with Charles H. Peck, at Albany, New York, and this relationship continued until death intervened. For years, McIlvaine was active in mycology in Philadelphia. He formed a club known as The Philadelphia Mycological Center, an organization, which organized forays, and in particular advice of The Center through McIlvaine was sought by physicians on the treatment of mushroom poisoning. He was able to advise because he had tested the edibility of so many species and was himself victim of mushroom poisoning who had survived the experiences. His reputation spread to other states, and in Chautauqua County, New York, he served as President of the Chautauqua School of Mycology where he taught a summer course on wild mushrooms. This School was

claimed by McIlvaine to be the first mycological club in America. It apparently is no longer in operation. The Boston Mycological Club, dating back to 1897, is generally conceded to be the oldest active mushroom club in America.

McIlvaine later moved to Cambridge, Maryland, where he spent his remaining days. He died there on August 4, 1909. Recently, The North American Mycological Association honored McIlvaine, by inaugurating as its official organ a periodical which first appeared (vol. 1, No. 1) in January 1972, under the name "McIlvainea".

References

- Bowser, W. P. The man who ate mushrooms. *McIlvainea* 1: 1-8. 1972.
- Harshberger, John W. Charles McIlvaine. In: *The Botanists of Philadelphia*, pp. 313-315. 1899. With a photograph.

Ezra Michener 1794 – 1887

A country physician, Dr. Michener spent most all of life in Chester County, Pennsylvania. During his life, he accumulated a valuable herbarium, which contained not only fungi but also lichens, mosses, and a few hepatics. It also included some of Schweinitz's collections, which were mostly named by Berkeley and Curtis, and a few identified by Dr. Michener himself. Shear and Stevens (1917) are of the opinion that the collections of fungi will prove to be of great value to American mycologists. The lichens were largely named by Tuckerman. The herbarium was finally sold to The Bureau of Plant Industry (now, in The National Fungus Collections).

Some years after Michener's death, it was learned that he had mounted the fungi in The Schweinitz Herbarium, at Philadelphia. He also compiled a list of fungi which, apparently, was published in "Conchologia Cestrica", by William D. Hartman and Ezra Michener, Philadelphia, 1874. Although Michener carried on considerable correspondence with both Curtis and Ravenel, most of the letters are apparently lost. Michener used Fries, "Systema Mycologicum" in at least some of his identifications.

Reference

- Shear, C.L. and Neil E. Stevens. The botanical work of Ezra Michener. *Torrey Bot. Club Bull*, 44: 547-558. 1917.

Julian Howell Miller 1890 – 1961

Although Dr. Miller was born in Washington, D.C., he spent most of his life in the State of Georgia, and about half of it at The University of Georgia, Athens. There, for some years prior to death, he was Head of The Department of Plant Pathology and Plant Breeding, and Regents Professor of Botany. At the University, he received the B.S. degree in 1911, and the M.S. in 1924; four years later he took the Ph.D. at Cornell University. The excellence of his scholastic achievements was recognized by Phi Beta, Phi

Kappa Phi, and Sigma Xi; and his career accomplishments were noted when he served as President of The Mycological Society of America, as well as head of other organizations.

Always a successful teacher, he found time to study and publish, notably in the field of the Pyrenomycetes. At death, his world monograph on *Hypoxylon* had just gone to press and is now available at The University of Georgia Press, Athens.

Dr. Miller's memory and discriminating eye were well demonstrated to me in 1934. The old biology building at Tennessee (Morrill Hall) had burned, along with all our herbarium collections. During the following summer of 1934, Miller, along with several other specialists, was induced to come, collect and start replacing the lost materials. When Miller arrived, I had perhaps 100 collections of Pyromycetes laid out for him to identify. I assumed he would require at least a few days for the job; to my surprise, he named nearly all of them at sight within two or three hours. These and other collections named subsequently by him are now in our herbarium at Knoxville.

Dr. Miller was a gentle, scholarly man, of even temper, gracious, and was a world-respected mycologist because of these and other qualities. The Southeast could ill afford to lose him and his influence in our region.

Reference

- Campbell, W. A. Julian Howell Miller. *Mycologia* 53: 111-114. 1961. With a photograph and e list of mycological publications.

Arthur Jackson Mix 1888 - 1956

Although a mycologist, Mix had wide and varied interests. Moreover, he had a sense of humor so that his contacts with both faculty and students found him delightful. His address, in 1952, to The University of Kansas Chapter of Sigma Xi is pleasant and humorous. He became a world authority of the genus *Taphrina*, which he pursued for many years.

Mix was a native of Bolivar, New York. He held the A.B. from Hamilton College, 1910, and the Ph.D. in Plant Pathology from Cornell, 1916. His doctoral thesis dealt with "Sun-scald of Fruit Trees, A Type of Winter Injury", and his graduate work was directed jointly by H.H. Whetzel and Donald Reddick. In 1953, he was awarded the honorary degree of LL.D. by Hamilton College.

Mix accepted an Instructorship in 1916 at The University of Kansas, and in 1931 became Professor and Chairman of the Department of Botany there. In his earlier years, he had worked for short intervals with the USDA (1917-1918); and in 1929-30, and 1939, he made collecting expeditions to Europe; he studied for a time at Harvard in The Farlow Herbarium, and did some teaching at Cornell in 1939-40.

Dr. Mix was exceptional, not only in his personal qualities and in his devotion to the fungi, but he was also an unusual linguist. With facility, he read French, German, Danish, Norwegian, and Swedish; and he read rather well both Dutch and Russian; spoke German well; and was well-grounded in both Latin and Greek.

Reference

- McClung, N.M. A.J. Mix. Mycologia 50: 315-325. 1958. With a photograph. (Another account is found in Kansas Acad. Science Trans. 6, with a list of his publications. Also, a note in Phytopath. 49: 441. 1959)

Kingo Miyabe **1860 – 1951**

Born in Tokyo, April 27, 1860, Miyabe attended Sapporo Agricultural College, (graduating in 1881), where he studied botany under the American teacher, D. P. Penhallow. He then took work under R. Yatabe at Tokyo University. The Japanese government then sent him to Harvard to study cryptogamic botany under W. G. Farlow (1886-1889), and there received the D.Sc. degree in 1889.

Following the doctorate, Miyabe became Professor of Botany at Sapporo, which had become a unit in Hokkaido Imperial University. There many of his Japanese students became prominent mycologists and plant pathologists.

Lloyd states that his Museum was enriched with a very full set of Japanese fungi.

Reference

- Lloyd, C. G. Mycological Notes 67: 1137. 1922. With a photograph.

Andrew Price Morgan **1836 – 1907**

It was A. P. Morgan who gave C. G. Lloyd an introduction to the study of fungi. Morgan finally came to reside on his farm near Preston, Ohio, which is not far from Cincinnati (Lloyd's home).

Morgan was born in Centerville, Ohio, on October 27, 1836; he died of pneumonia at Preston, Ohio, on October 19, 1907. He began a study of botany while a high school teacher at Dayton, Ohio. There he taught Mathematics. When he went into the army, Morgan carried with him a copy of Gray's Manual in his knapsack. He fell ill with typhoid while in the army and was released; later, he became partially paralyzed.

About 1870 Morgan purchased a copy of Fries' "Hymenomycetes of Europe" for \$8.25, and some of his first agaric collections were named by Peck, at Albany. For a time, he resided in Vermont, his wife's home state, and while there met Charles C. Frost (1805-1880), an amateur agaricologist and one of Peck's correspondents.

At one time, Morgan was interested in educational work, but his health failed, and he moved to his Ohio farm. He ultimately became a respected student of the fungi. He gave attention to the Gasteromycetes, but later confined his efforts to the agarics. He published some of his work in the "Journal of the

Cincinnati Society of Natural History”, but more especially in the “Journal of Mycology” (in vols. 13-14). His series under the general title of “North American Species of the Agaricaceae”, included monographic studies of the genera *Lepiota*, *Marasmius*, *Heliomyces* et al. In the literature of mycology, one will find some species named in honor of Morgan, such as *Boletus morgani*, *Polyporus morgani*, *Lepiota morgani*, *Russula morgani*, *Cantharellus morgani*, *Hypoxylon morgani*, *Peziza morgani*. Historically at least, the publications of Morgan are indeed valuable.

References

- Kellerman, 17. A. Obituary: Professor A. P. Morgan. Jour. of Myc. 13: 233-236. 1907. With a photograph and a list of publications.
- Lloyd, C. G. Mycological Notes. 31: 398. 1908. With a photograph on the cover.
- (A number of his papers are cited in Murrill's bibliography, in North American Flora 9: 443. 1916.)

Elizabeth Eaton Morse 1864 - 1955

So far as the record shows, Miss Morse was never on the faculty at any college or university. After the graduating from high school in Ashland, Massachusetts in 1882, she taught in elementary schools until 1889, when she entered Wellesley College. Here she was awarded a diploma by the School of Art in 1891. Finally, in 1926, Wellesley awarded her the A.B. degree, with a major in botany. Meantime, she had taught and had supervised in schools of New York State and Massachusetts.

Following her baccalaureate, she devoted the summer of 1926 to collecting fungi in Yosemite National Park. From that autumn until death, she lived in Berkeley, California. While there, she took graduate work, and as a guest was provided with space in which to study her collections. Other collecting expeditions took her to areas in California, Washington, Oregon, Alaska, Hawaii and Maine.

Miss Morse's collections were finally distributed to The University of California, at Berkeley; to the National Fungus Collections; Beltsville, Maryland; to the New York Botanical Garden; the Farlow Herbarium; Wellesley College; and to the California Academy of Sciences.

Her published works cover some of the larger fungi: Gasteromycetes, agarics, and morels. With A. H. Smith, she published “The genus *Cantharellus* in the western United States”, *Mycologia* 39: 496-534. 1947; also, alone she published “A study of the genus *Podaxis*”, *Mycologia* 25: 1-33. 1933.

Reference

- Bonar, Lee. Elizabeth Eaton Morse. *Mycologia* 48: 439-442. 1956. With a photograph and a list of her publications.

William Alphonso Murrill 1869 - 1957

One of the distinctive figures in North American mycology is Dr. W. A. Murrill. He worked furiously, loved his vocation, did not hesitate to deviate from the middle-of-the-road taxonomy and nomenclature and in the field he had an extremely discriminating eye. He began publishing at the age of 28 and during his life he contributed a remarkable number of titles in mycology. His North American biographer states that his notes, reviews, and popular articles as well as his more technical mycological papers, total at least 510, about one-third of which were published in "Mycologia" alone. His contributions published in "North American Flora" are also extensive, and since their appearance a half-century ago have been of enormous value to mycologists. Being of amateur spirit, he spent his retirement years in Florida collecting and describing agarics and others of the larger hymenomycetes.

A brief recital of some of his background, training and occupations might help to understand some of the characteristics of this engaging personality.

Murrill was a Virginian, born near Lynchburg, October 13, 1869, of Scotch-Irish-Welsh parents, from whom he inherited the gene for ambition and talent. An interesting home environment influenced in Murrill a special appreciation of music. His precocity accounts for his entrance into the A. & M. College, a Blacksburg, at the age of twelve, and with highest honors was graduated in 1887, with the B.S. degree. In 1889, he received a second B.S. from Randolph Macon; in 1890, the A.B.; and in 1891, the M.A. During the summers, he worked on the home farm, and also studied Latin, Greek, Philosophy, and Music. For two years (1891-1893), he taught at Bowling Green Seminary, and for four years (1893-1897), at Wesleyan Female Institute (both in Virginia). During these years, he visited The University of Virginia, where he audited lectures in the Sciences; he came to be a great admirer of Agassiz. In 1897, with a fellowship in botany, he entered Cornell. There he took work with Dr. G. F. Atkinson, as well as with other notables, such as L. H. Bailey (botanist-agriculturist), E. J. Durand (of Geoglossaceae fame), K. M. Wiegand (Phanerogams), and J. H. Comstock (Entomology). In 1899, he succeeded B. M. Duggar as assistant cryptogamic botanist, finally taking the Ph.D. in 1900.

Immediately, in the fall of 1900, he became a teacher of biology in the DeWitt Clinton High School, in New York City. There, he joined the Torrey Botanical Club, was active in meeting several botanists, and also went to Europe where he collected and gave lectures. Since he lived near Columbia University, he visited that Institution frequently where he was helped greatly in his career by Dr. L. M. Underwood (Professor of Botany, at Columbia, 1896-1907).

In 1904, he was appointed assistant curator at The New York Botanical Garden; in 1908, became Assistant Director of the Garden; and in 1919, Supervisor of Public Instructor until he resigned in 1924. While at The Garden (1904-1924), he published many monographs and other papers; he is credited with having founded "Mycologia", of which he was editor for 16 years. Likewise, his travels and 20 years of collecting at home and abroad resulted in some 70,000 specimens which are now on deposit at The New York Botanical Garden. His travels abroad brought him in touch with such men as Bresadola, Spegazzini, M. C. Cooke, Masee, Romell, Patouillard, and others of that day—invaluable contacts in his mycological work.

Murrill's administrative duties at The Garden grew heavier by the year; his use of the American Code of Nomenclature (which goes back even before Fries, 1821, for a specific name) and also required by the Garden, and his splitting genera, brought a heavy denunciation of his treatises from those who more conservatively followed the International Rules (in most fungi, going back to Fries, 1821). Under the pressure of administrative problems and the unhappy state of mind of his American mycological friends, he suffered physical and nervous difficulties. At the same time, his wife, feeling neglected, and also

ailing physically left him and then served on him a divorce decree. On top of it all, he suffered financial difficulties, and in final discouragement resigned (1924), and went back to Lynchburg to recuperate. Murrill had earlier visited Florida, and one day he was discovered (by Dr. G. F. Weber) living in a tourist camp in Gainesville, and one evening was entertaining tourists in their recreation hall by his piano concert of classical music. Murrill then lived more and more in Gainesville until it became his home. During the last 15 years of his life, he had no retirement or other income; his friends, and finally the state of Florida contributed most or all of his needs. Dr. Weber, plant pathologist and mycologist at The University of Florida, really “mothered” Dr. Murrill during several of his last years, during which period he remodeled an abandoned garage into Murrill's last domicile. Weber succeeded in turning Murrill's time and talents chiefly to the Florida agarics of which, he described some 600 new species of mushrooms and other higher fungi chiefly from around Gainesville. Although his Florida types are at The University of Florida, he sent parts of many types to other herbaria; at The University of Tennessee, Knoxville, we have several of such type collections.

He made many friends, for he was a capable writer, Scout Leader, Sunday School teacher, artist, painter, stamp collector, philosopher, musician, and linguist (he spoke French, German, Spanish). In mycology, his descriptions of new species are myriad, and surprisingly a vast majority have stood up. On one field trip in Florida which I took with him (he was then past 80 years), I was struck with his ability to put a name on each agaric met with that day. Despite his rather pitiful economic status in later years, his contributions to mycology are monumental.

References

- Weber, George F. William Alphonso Murrill. *Mycologia* 53: 543-557. 1961. With a photograph and a list of publications covering 5½ pages in small type.
- (See also: *Mycologia* 58: 457-458. 1956. A photograph and a note on a birthday celebration for Murrill on his 86th birthday. Also, an earlier photograph, perhaps at about age 45 in *Mycologia* 22: opp. p. 48. 1930.
- Lloyd, C. G. In *Synopsis of the Section Apus of the Genus Polyporus* 1915. Pub. by Lloyd Library. A photograph, perhaps at middle age.

Lee Oras Overholts 1890 - 1946

A distinguished student of the Polyporaceae, and well acquainted with other fungi, Overholts spent most of his professional life at The Pennsylvania State University. He was conservative, quiet, and generous of his time to the scores of persons who sent him fungus material for identification.

Overholts came from Ohio, having been born in Camden on June 23, 1890. He took the A. B. degree at Miami University, Oxford, Ohio, in 1912, where he studied under Dr. Bruce Fink, noted lichenologist. It was Fink who really inspired Overholts to pursue mycology.

During the period from 1912 to 1915, he did graduate work with Dr. E. A. Burt, at Washington University, The Shaw School of Botany, St. Louis. As an undergraduate, Overholts had become interested in the polypores, and when a junior he published “The known Polyporaceae of Ohio”, in vol. 11, of *The Ohio Naturalist*. During his graduate days, he further pursued the polypores, and based his thesis on the

paper he had previously published in Ohio as a student at Miami. He took the Ph.D.

at Washington University in 1915, with his thesis entitled, "The Polyporaceae of the Middle-Western United States", which that year was published in Washington University Studies 3: 3-98.

For a short time, Overholts served as an assistant to J. C. Arthur, at Purdue, where he did rust culture work. On taking the doctorate, he went to Pennsylvania State (now University). There he began a series of 13 papers under the general title, "Mycological Notes," all but one of which were published in Mycologia, from 1920 to 1943; one paper was published in Torrey Botanical Club Bulletin vol. 49, 1922. An index to the 275 species of fungi treated in this series of papers is found in Mycologia 47: 140-144. 1955.

When Overholts died in 1946, he left a large manuscript on polypores almost ready for publication. It then fell to the lot of Dr. J. L. Lowe, polypore student at Syracuse University to edit and finish that manuscript and it was published in 1953 under the title, "The Polyporaceae of the United States, Alaska, and Canada", a volume which has proved most useful for students of this group.

Those interested in Southern polypores will find that many of the collections in The Herbarium at The University of Tennessee, Knoxville, were identified by Overholts. He also named many others of our Hymenomyces.

Reference

- Kern, F. D. Lee Oras Overholts. Mycologia 40: 1-5. 1948. With a photograph and a list of 51 publications.

Julius A. Palmer, Jr. 1840-1899

In the Bulletin of the Torrey Botanical Club 12: 67, 1885, is a review of Palmer's "Mushrooms of America, Edible and Poisonous". Published by L. Prang & Co., Boston, the date not indicated.

The review is short, and states that it is a collection of twelve colored plates for popular readers. The species illustrated are the more common edible ones. Each plate carries a description, and for edible species also gives the best methods of preparing them for the table. The illustrations are said to be most accurate.

The reviewer of Palmer's book disagrees with the author, however, in his usage of the terms "mushroom" and "toadstool". Palmer uses these two terms interchangeably for any fleshy fungus. On the other hand, the reviewer reserves "toadstool" for fungi of the Order Agaricini, and the genus *Boletus*; the term "mushroom" is restricted by the reviewer to *Agaricus campestris*. It was said (in the review) that if the book sells, supplementary plates are planned finally to include nearly all the edible fungi of America.

Louis Hermann Pammel

1862 - 1931

A plant pathologist-mycologist, Pammel published a good number of papers on the fungi. He was born in La Crosse, Wisconsin, on April 19, 1862. He attended The University of Wisconsin where he was graduated with the Bachelor of Agriculture in 1885. There he also took the M. S. in 1889. After a short period of study at Harvard under Farlow, Pammel went to The Shaw School of Botany, Washington University, St. Louis, where he was awarded the doctorate in 1896. When Byron D. Halsted (another Harvard man) left Iowa State (at Ames) in 1889, to accept a position in Rutgers University, New Jersey, Halsted was replaced by Pammel.

Reference

- Gilman, Joseph C.- Louis Hermann Pammel. *Phytopath.* 22: 669- 674. 1932. With a photograph and a list of mycological and plant pathological papers. (A more complete list, including non-science papers, was published in the *Iowa Acad. Science* 38. 1931.)

Narcisse Theophile Patouillard

1854 - 1926

An eminent French mycologist, he published, among many other titles “*Les Hymenomycetes d'Europe*”, 1-166, 1887; and later, “*Essai Taxonomique sur les Familles et les Genres des Hymenomycetes*”, pp. 1-184, 1900. Others of his publications are listed in *North American Flora* 9: 445. 1916; and in Singer, “*Agaricales in Modern Taxonomy*”, p. 822, 1962.

Patouillard' s herbarium is at Harvard, in the Farlow Herbarium, and some of his collections also in Paris.

References

- Lloyd, C. G. In *Synopsis of the Sections Microsporus, Tabacinus, and Funales of the Genus Polystictus*, 1910, With a photograph.
- Singer, Rolf. *Agar. Modern Tax.*, 1962, a photograph, Plate 2; in the legend Singer states that using anatomical methods, Patouillard first integrated “exotic” Agaricales in the system of classification.

Flora Wambaugh Patterson

1847 - 1928

During the last 28 active years of her professional life (1895-1923) Mrs. Patterson was a member of the staff of the (then) Division of Vegetable Pathology and Physiology a section of the USDA which finally became the Bureau of Plant Industry, Washington, D. C. (now at Beltsville, Md.). In later years, she was Mycologist in Charge of Mycological and Pathological Collections (in the BPI) .

Although Mrs. Patterson cultivated a wide interest in fungi, she published a paper on the Exoascaceae in

1895. Most of her work was published in bulletins from the Bureau of Plant Industry, but a few were issued in journals outside the Bureau.

In 1902, Mrs. Patterson prepared and distributed duplicate fungus specimens to various institutions in the United States. This series included 543 species, largely parasitic forms, such as rusts, smuts, Phycomycetes, Ascomycetes, and Fungi Imperfecti. Again, in 1921, she was involved in sending out another set, with the assistance of W. W. Diehl and Edith Cash. This set contained 943 fungus specimens of rusts and smuts.

A native of Ohio, she was born in Columbus, September 15, 1847. She attended Antioch College, Ohio, where she took the A. B. degree, and in 1883, the M. A. from Wesleyan College. Apparently, Mrs. Patterson took a second M. A. from the State University of Iowa, at Iowa City, in 1895. A year later (1896) she taught Biology in a Boston Private School. After a period of study in The Gray Herbarium, Harvard, she entered on her final position with the U. S. Department of Agriculture (see above).

References

- Charles, Vera K. Mrs. Flora Wambaugh Patterson. *Mycologia* 21: 1-3. 1929. With a photograph.
- Galloway, B. T. Flora We Patterson, *Phytopath*, 18: 877-879. 1926.

Charles Horton Peck 1833 - 1917

Born in Sandlake, New York, on March 30, 1833, Peck's parents were of English descent. At an early age he displayed some interest in natural history. He entered The State Normal School at Albany in 1841. There he met a young lady who invited Peck to accompany her on a field excursion to collect flowers. This experience heightened his interest in botany. At The Normal School, Peck also joined a voluntary class in botany (not then in the curriculum), taught by J.H. Salisbury. Following graduation from the Normal, he returned home to work on the family farm where he collected plants in his spare time.

In 1855, Peck entered Union College, and in 1859 was granted the A.B. degree, the M.A. in 1862, and the honorary D.Sc. in 1908. As an undergraduate at Union, he studied botany under Jonathan Pearson. From 1859 to 1862, he taught classics, mathematics, and botany at The Sandlake Collegiate Institute. In 1865, he taught Latin and Greek at The Cass Academy, in Albany.

One day, around 1865, it is reported that Peck noticed a moss on stove wood. This observation prompted him later to visit Brooklyn where he was advised to consult Sullivant's work on mosses. With this publication, and a \$12 microscope, he set about to name mosses. In The New York State Cabinet Report, vol. 18, for 1865, Peck published his "Catalogue of Mosses...".

In January 1867, Peck was appointed by the State of New York to "fill the herbarium with specimens representing the plant life of the State". This assignment led to his remaining there until retirement in 1915. In 1883, The Office of State Botanist was created, and Peck was appointed to this post, although not without some difficulties.

At about this time, there was in New York State a son of Governor DeWitt Clinton, whose name was George W. Clinton, who was an amateur botanist and who was to have considerable influence on Peck's life, George Clinton became a member of the State Board of Regents. While thus serving, the State

having no botanist, Clinton wrote the botanical reports for the State Museum in 1864 and 1865. Clinton, realizing that the State needed a botanist, proposed to the legislature that such a position be created. But only after many skirmishes with that body did Clinton succeed in his effort. Finally, an appropriation of \$1500 was made, and in 1883 Peck was appointed the first State Botanist. In days to follow, Peck and Clinton worked on mosses. But, a mycologist by the name of Eliot Calvin Howe (1828-1829) suggested to Peck that he should study fungi, which Peck did with great zeal.

Annually, Peck published his Reports from 1868 to retirement (1915). He also published papers on fungi in *Torrey Bulletin*, *Journal of Mycology* and a few in *Botanical Gazette* and *Mycologia*. In his many papers in journals and Reports, Peck described large numbers of new species and new varieties, this number being set at 2700 by Burnham (1919). For good reason, Peck will long be remembered for his series of Annual Reports on fungi. An index to all his described taxa has been published in two papers: the first is *New York State Museum Bulletin* 131: 51-190, 1909; and the second is the *Mycologia* 54: 460-465. 1962. Both are invaluable for one doing research in the fungi, and especially the agarics. Under the older system, mycologists then recognized some 50 genera of agarics; Peck appears to have monographed 28 of these genera in New York up to 1912. Lloyd (1912) lists these genera so monographed and gives citation to the Peck Report where published.

It was stated above that Howe started Peck studying fungi. Early in his career as a mycologist, Peck purchased a set of M.A. Curtis' fungi. In this way Curtis must have influenced Peck in much of his work. Farlow, of Harvard, was for many years a contemporary; and, Atkinson had gone to Cornell in 1892. Peck and both these mycologists were mutually helpful, not to mention the great influence which the mycologists of Europe, through their published works, had influenced and helped Peck.

In 1912, I was able to visit Peck in his laboratory at Albany. He was a man of medium height, moderately slender, quiet, one of relatively few words, and an intense listener. He was generous with his information and advice. I saw his microscope which was of the old type - one which was focused by twisting the barrel while simultaneously pushing down or pulling up. From his drawings, I would guess that he had about 300-400 magnifications.

Lloyd's evaluation of Peck and his work is somewhat what anyone who knew Lloyd would expect. With reference to Peck's new species, Lloyd, being confident that very few American fungus species are endemic, he doubts the validity of many of Peck's so-called "new species". On the other hand, that there is some excuse for naming many taxa as new, since it is sometimes nearly impossible to recognize American species from the inadequate descriptions of the European descriptions. Fortunately, the European descriptions are now much better in the more recent publications. Lloyd finally states that he considers Peck "the father of systematic American mycology". No one can dispute the enormous contribution which Peck made to American mycology; but Peck, unlike Atkinson and Farlow did not train students in the field. In their researches, all three of these men, along with Kauffman and Murrill, contributed enormously to American mycology.

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Leigh Humboldt Pennington

1877 – 1929

Those who have used North American Flora, Volume 9, have noted that the treatment of the genus *Marasmius* for North America was written by L.H. Pennington. Some will have also observed that he prepared the manuscript on *Coprinus* for Kauffman's "The Agaricaceae of Michigan". Although not the best known in the field, he was a good mycologist and a very sound forest pathologist.

Pennington was born in the hamlet of Pennington's Corners, Michigan, on October 26, 1877. He took the A.B. degree at The University of Michigan, in 1907; and, working under Dr. Newcombe there, he was awarded the Ph.D. in 1909, although the record available does not specifically so state, he undoubtedly studied mycology under Kauffman.

After teaching for one year at Northwestern University, Evanston, Illinois, he went to Syracuse University as Assistant Professor of Botany. Soon he was promoted to Associate Professor. Finally, in 1914, he became Head of the Department of Forest Botany, at Syracuse, where he remained until death.

Christiaan Hendrik Persoon

1762 – 1836

Regarded by many as one of the foremost botanists of Europe, Persoon was a student of the fungi, and was considered by the Germans to be "the prince of mycology". In a sense, his works are even today regarded as of supreme importance. Dr. A.P. van der Eyl (1926) stated that Persoon is considered the father of systematic mycology, and that his descriptions of fungi will ever remain as masterpieces in the annals of mycology; and Lloyd (1904) expresses the feeling that Persoon was not only the father of mycology, but also the greatest genius that ever worked on the subject.

Persoon was born in South Africa on December 31, 1762 and died in Paris on November 15, 1836. (In apparent error, Murrill gives the dates as 1755 and 1837.) Persoon's parents were of German and Dutch origin. At the age of 13, in 1775, he was sent by his father to Holland to study theology. Soon, however, he found that he was more interested in medicine than in theology, and he went to the Universities of Leiden and Göttingen; but while there, he became interested in botany. In 1799, he was awarded the doctorate.

From Germany, he went to Paris where he was to spend the remaining years of his life. Even before going to Paris, his reputation had preceded him, and when he arrived, he was quite favorably received. Soon thereafter, however, he was abandoned by the French because of his dire poverty and his homeliness.

One of his biographers (Fée), according to Benjamin (1953), once stated that Persoon was a man of large, bony features, with long legs and arms attached to an uncomely body; his skin was red and scaly, and blemished; his scant hair grizzled; his mouth enormous and his teeth shaky; his eyes gray and small and lost behind puffy cheeks; and his clothes bizarre, worn through by long service.

As for his financial distress, Fée suggested to Persoon that he exchange his herbarium with the Dutch

government for a pension. Although fiercely proud, Persoon finally did prepare a formal application to the Dutch government which finally gave him an annual pension of 800 florins (some \$350) for his collections (see Benjamin for the detailed petition by Persoon).

The story of how the Persoon Herbarium got to Leiden, The Netherlands, is of interest. In a few words, that story is as follows: For some years, Belgium and Holland were under one king. During this period, the Rijksherbarium was started at Brussels. Years later when the two countries split, many herbarium specimens were spirited out of Belgium and brought to Leiden. At any event, it is there and in good condition; and recently, Demoulin, at Liege University, found some of Persoon's specimens also (a few hundred) in the old herbarium there. There are also a few of his collections at Kew which the authorities there purchased recently from a book dealer near London.

From accounts, it is apparent that the earliest work of Persoon is his "Observationes Mycologicae", in two vols., vol. 1 published in 1796, and vol. 2 in 1799. His work of great significance, however, is his "Synopsis Methodica Fungorum", 1801, which is the starting point for the nomenclature of the smuts, rusts, and Gasteromycetes. This work established Persoon as an authority on the fungi. Although his system of classification is no longer used, his principles are still the basis for modern taxonomy. A list of his works is found in Benjamin (1953), and in Murrill (1916), and they are enumerated and described in detail by Stafleu (1967). An interesting and important note by Fitzpatrick (1944) gives an account of a volume companion to Persoon's Synopsis; it is of hand-colored plates prepared by Persoon to illustrate some of the less common species described in Synopsis. These plates were published in 1803-1808. Although the volume is rare, it is found in some twenty American libraries, chiefly in the North, but a copy is in the Library at The University of North Carolina, Chapel Hill.

While in Paris, Persoon carried on a heavy correspondence, but I have not seen a list of those with whom he corresponded. For some years, of course, he was a contemporary with Fries, Schweinitz, Albertini, Swartz, Secretan, S.F. Gray, and several others.

Persoon was buried in Paris, France, in the Cimetiere le Pere la Chaise. In a recent article by Hugo (1965), the grave-stone has become partially buried and is in great disrepair. But it now appears that the South African Delegation in Paris has offered (in 1965) to restore it as nearly as possible to its condition in 1836.

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Albert Nelson Prentiss

1836 - 1896

Prentiss' professional life was divided between Michigan State College (now Michigan State University) and Cornell University. He was born on a farm near Cazenovia, New York, on May 22, 1836. After public school education, he attended the Oneida County Seminary in Cazenovia, New York. He entered Michigan State College in 1858, and was graduated in 1861 with the B.S. degree, in a class of seven members—the first class to graduate from the college. All seven enlisted in the army during the Civil War, but his camp was closed, and he was ushered out after army around 1862.

In 1862, he became principal of the Kalamazoo High School, and in the following year (1863) he resigned to accept an instructorship in Botany and Horticulture at Michigan State. There he received the M.S. degree in 1864; and in 1865 he was promoted to a fall professorship in Botany and Horticulture. In this position, he was also in charge of the campus grounds.

Among his students at Michigan State were Charles E. Bessey, later Professor of Botany at the University of Nebraska; V.P. Wilson, later Professor of Botany at the University of Pennsylvania; Byron D. Halsted, subsequently Professor of Botany, Rutgers University; S.M. Tracy, later Professor of Botany at Mississippi State College, and Botanist and Director of the Agricultural Experiment Station.

At the opening of Cornell University of 1868, Prentiss was appointed the Chair of Botany, Arboriculture, and Horticulture. The first course offered there by him was in systematic botany with four students enrolled. In the next term, however, general botany was given with 144 students enrolled. Since a large part of Prentiss' time was devoted to supervision of the campus grounds he needed help in teaching; so, in 1873, he appointed one of his students, David Starr Jordon, as instructor, and in the following year (1874) he appointed another of his students, W.R. Dudley, as instructor. In 1876, Dudley became assistant professor; and eventually David Starr Jordon became President of Stanford University. Among Prentiss' students at Cornell who became prominent in botany were: J.C. Arthur, of Purdue; F.V. Coville, Chief, Division of Botany USDA; M.B. Thomas, Wabash College; R.R. Dudley, Cornell and Leland Stanford; J.A. Holmes, University of North Carolina; W.A. Kellerman, Ohio State University; C.W. Mathews, University of Kentucky; W.W. Rowlee, botany and grounds keeper, Cornell; George F. Atkinson, Cornell; Wm. Trelease, Missouri Botanical Garden and The University of Illinois, Urbana.

Although he was said to be a mycologist (Bishop: *History of Cornell*, 1962, p. 171), he published papers on higher plant systematics. Perhaps Prentiss' contribution to mycology was in teaching young men who became mycologists. These men, in turn, trained several other mycologists. Prentiss retired and was succeeded by George F. Atkinson, where he had graduated in 1885. He died in Ithaca on August 14, 1896.

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Henry William Ravenel 1814 - 1887

A native of South Carolina, Ravenel was born in the Parish of St. Johns, near Berkeley, on May 19, 1814. Following completion of high school, he attended South Carolina College where, in 1832, he graduated with the A. B. degree, with distinction. He then began the life of a planter, which vocation he followed to 1854, and at the time became very active in the study of plants. During his years on the farm, he built an herbarium which was then said to be "probably the most complete collection of both phanerogams and cryptogams to be found on either side of the Atlantic."

As was somewhat the practice in the 19th century, at least more so than later, Ravenel prepared and distributed 1300 exsiccati of fungi, in two sets: (1) under dates 1852-1860, he issued five volumes of 100 specimens each, entitled "Fungi Caroliniani Exsiccati", which constituted his first contribution to American mycology, and the first series of American fungi ever issued; (2) 1875-1882, (with M. C. Cooke, of England) "Fungi Americani Exsiccati", issued as centuries I-VIII, a total of 800 specimens. These attracted considerable attention, especially abroad, and later he prepared several other volumes of exsiccati with M. C. Cooke, of England (see Stevenson, 1971).

Ravenel's work resulted in his appointment as Botanist (mycologist) for the Federal Government to investigate a cattle disease in Texas. It had been suspected that the malady was caused by a fungus, but Ravenel's study proved otherwise. Special notices of the high regard for his mycological work include a citation from The Philadelphia Academy of Sciences, honorary membership in the Vienna Zoology-Botany Society, and in 1866 the honorary degree of Doctor of Laws from The University of North Carolina, Chapel Hill.

Earlier (1854), Ravenel had moved to Aiken, South Carolina, where he lived the remaining 34 years. At the time of his death he was serving as Botanist to the South Carolina State Department of Agriculture, As the years went by, Ravenel became more and more deaf, a condition which some felt kept him free from becoming a professor in a college or university. It is further recorded that during the Civil War, all of Ravenel's property was confiscated.

For some years, Ravenel and M. A. Curtis, who were contemporaries, were, along with Schweinitz, among the Americans who best knew the fungi of the United States. This common interest in fungi brought them into correspondence with Berkeley, Fries, and Montagne.

Ravenel died in Aiken on July 17, 1887. The following year, a notice signed by Mrs. H. W. Ravenel, of Aiken, South Carolina, appeared in the Journal of Mycology 4: 119. 1889, announcing for sale the Ravenel Herbarium of about 10,000 phanerogams and cryptogams, which he had left to his family. Finally, the collection was purchased by The British Museum.

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Carleton Rea **1861 - 1946**

Most American mycologists have known Rea only through his “*British Basidiomycetae*”, 1922, a handbook to the larger British fungi. What may be less well known is the fact that Rea, with M.C. Cooke, George Masee, and Charles Crossland, founded the British Mycological Society (see: files of its Transactions). It is said that the development of the Society was at first discouraging. Cooke was too old, Masee became offended and quit, and it was then left largely to Rea to keep the organization moving, which he did.

Rea was born in Worcester, England, and was graduated from the Oxford Law School in 1883, and thereafter he was a successful practicing attorney. He began the study of fungi in 1888, and in 1918, he was made an honorary member of the British Mycological Society. In 1898, he married Emma Amy Rose, who made for him more than 1700 paintings of British fungi.

Although Rea was an amateur mycologist, his mycological associates requested him to write the “*British Basidiomycetae*”, which he did, and which was published under the auspices of The British Mycological Society. The book is based on Rea's thirty years of study. In the preface, he acknowledges the insufficiency of the classification of Fries, and his volume, as he states, is really based on Patouillard's “*Essai Taxonomique sur les familles et les genres des Hymenomycetes*”, 1900. Rea also accords credit to such mycologists as Galzin & Maire (French), Bourdot (French), Bresadola (Italian), and Burt (U.S.). He also had the advice of several eminent British professional mycologists in the preparation of the book, including Cotton, Pearson, Ramsbottom, and Wakefield.

At the age of 64, Rea attended the Ithaca International Congress, at which time I saw him, and met only a brief few seconds. He was a distinguished looking English gentleman, with knickers and a monocle, with all the air and deportment which one is inclined to assign to our beloved British brethren. As yet, I have not seen an account of his death.

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Lars Romell **1854 - 1927**

Although Romell lived and spent much of his time at The University of Upsala, he was not a member of the staff there. He studied law, earned his livelihood as a patent attorney, and came to be highly respected by his contemporaries.

Romell was born at Kumla, Sweden, on December 4, 1854, and died July 12, 1927. He entered Uppsala where he took the A.B. degree in May 1885; and was awarded an honorary doctorate, in 1927, just weeks prior to his death.

While a student at Uppsala, Romell was greatly stimulated in his study of fungi by Hampus von Post, who had been associated with Fries. In this indirect way, Romell came to be regarded by some as the greatest living authority on the Friesian concept of Swedish species of higher fungi.

Romell apparently was a tireless worker. He pursued fungi at such a pace that he scarcely took time to eat his meals. He collected and tested large numbers of fleshy forms for their edibility, both those said to be edible and those reputedly poisonous, and his son, L. R. Romell, recalled that his father once ate *Entoloma lividum*, and became very ill.

During the period 1915-1920, he organized the fungus collections at The Naturhistoriska Riksmuseum at Stockholm. When he died, he left his private collections to this institution, along with the Bresadola (Italy) herbarium which Romell had acquired for the purchase price of 18,000 Swedish crowns. The Riksmuseum Herbarium is large, and in 1926, was said to contain nearly 3,000,000 collections of all plant groups.

Romell, in earlier days had planned to become a pastor or a missionary. In his undergraduate days at Uppsala, however, he became a liberal, free-thinking individual. In one of his earlier positions as a school teacher, Romell found himself in conflict with the parents of some of his students because of his unorthodox views, a situation which led to his resignation. He then became a patent attorney.

Both W.C. Coker and C. L. Shear visited Romell, and both report him to be a very enthusiastic and unusual collector, and one who was most hospitable to visiting mycologists. He readily shared his amazing knowledge of the Swedish fungi with all who came.

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Frederik Georg Emil Rostrup 1831 - 1907

A Danish Uredinologist, Rostrup was born on January 28, 1831, on a farm, near Stensgaard, and died January 16, 1907. Although Rostrup had no formal academic instruction in mycology, or even in sciences he did study natural history in The Polytechnic School and University, at Copenhagen. Here he met the

well-known rust mycologist Oersted, who doubtless gave Rostrup immense private instruction in the fungi in general, and the rusts in particular.

After several years as a clerk in offices he became, in 1857, a teacher of science and mathematics at Skaarup, where he remained for 25 years. At Skaarup, Rostrup began more seriously the study of fungi, at first agarics, then the polypores, and finally other mycological subjects. In 1866, he published his first fungus paper on "Cultural studies of sclerotia".

In 1883, he left Skaarup and went to Copenhagen where he remained until death. At Copenhagen, he was first appointed Docent, then Lecturer, and in 1902, he became Professor in the Royal Veterinary and Agricultural College (in Copenhagen). His large private collection of fungi, of some 30,000 specimens, is at The University of Copenhagen Botanical Herbarium and Museum.

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Pier Andrea Saccardo **1845 - 1920**

An Italian mycologist, Saccardo was born on April 23, 1845 at Treviso, and died at Padova on February 12, 1920. Among mycologists, he was best known for his "Sylloge Fungorum". However, he published numerous papers in mycology (see: Lindau and Sydow, "Thesaurus"), and he built an herbarium at The University of Padova.

Saccardo was an Assistant in The Botanical Institute at The University of Padova, from 1866-1872; Professor of Natural History in The Technical Institute at Padova, 1869-1879; Professor of Botany and Director of The Botanic Garden, from 1880 to retirement, when he became Professor Emeritus.

Lloyd visited Saccardo, and also his herbarium which he found to be one of the largest private collections, unusually rich in exsiccati, including a full set of Rick's, as well as Kmet's Exsiccati. Thus far I have seen no figure on the number of collections in the Saccardo Herbarium.

With reference to the value of Saccardo's "Sylloge Fungorum", there are two somewhat opposing views. But, as Kern, in his presidential address states (*Mycologia* 38: 611. 1947), during the last three-quarters of the 19th Century, and of course later, many new species of fungi were being described over the world, and these descriptions appeared in a wide variety of journals, many of which were not available to all mycologists. Thus, one might describe as new a species which had already been described, or he might withhold description in the fear it had already been described.

Thus, an important step in overcoming this situation was by the publication of Saccardo's "Sylloge Fungorum", which he initiated in 1882. It continued until 1931, in 25 volumes, when it ceased publication, eleven years after Saccardo's death. In this series of volumes Saccardo undertook the monumental task of bringing together descriptions of all new species which he could find in the world literature. All his descriptions are in Latin and have been translated by him. In some ways it is valuable,

even indispensable, when one wishes to compile a list of specimen names of a given genus, or larger group, or when it is necessary to find the citation to the original description; there are doubtless other uses. As Lloyd states (Mye. Notes. 83:946), it is a convenient index which one must constantly consult. Lloyd also states that through 22 volumes, Saccardo had published the descriptions of 72,438 species of fungi. It is generally agreed that "Sylloge" is valuable in mycological work of a taxonomic nature.

On the other hand, Lloyd points out that "Sylloge" is not practical in determination of fungus species; and, while true, "Sylloge" was never intended to serve this purpose. But Lloyd goes further and even holds the view that: "It is a question if the completion of Saccardo's Sylloge has on the whole advanced the science of mycology; on the other hand, it has probably greatly retarded it (fungus) species are of wide distribution, and the fungus flora of the entire world is practically the same." It must be remembered that Lloyd held the view that each mycologist who described a new species was influenced by the opportunity to place his name after the binomial (as "self-advertising"); Lloyd's alternative to this "sin", one may conclude, is to force the species into a taxon already described, and further to remove the name of the author from any and all fungus binomials. Finally, most mycologists would agree that, in spite of Lloyd's assertion, many (most?) species are not world-wide. Based on morphology and on micro anatomy, many described new species are valid, and "Sylloge" is of great assistance in coming to this conclusion.

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Lewis David de Schweinitz 1780 - 1834

It has been said that mycology in the United States began with the fungus collecting of Schweinitz. Of German parentage, Schweinitz was born on February 13, 1780, in Bethlehem, Pennsylvania. Early in life, he was impressed by his father's activity in the field of religion, and he thus developed a desire to enter a similar career.

In 1787, Schweinitz was placed in a Moravian institution, at Nazareth, Pa., where he remained for 11 years, to age 18. Here he appears to have enjoyed life, and he received his first stimulus for the study of plants. One of his teachers at Nazareth gave him some instruction in botany.

In 1798, his father was called back to Germany, and the family accompanied him. At Niesky, Upper Lusatia, he entered a theological seminary, where one of his teachers was Johannes Baptista von Albertini (1769–1831), to whom Schweinitz was closely drawn. Both men were interested in fungi, and by 1805, Albertini and Schweinitz published their "Conspectus Fungorum in Lusatiaesuperioris agro Nieskiensi Crescentium e Methodo Persooniana".

After preaching for a time, his church work took him back to the United States, and his ship,

encountering storms, landed on the shores of North Carolina, in 1812. Soon, Schweinitz began church work in Salem, N.C., where he also continued his mycological studies. But, before leaving Germany, his work had been so recognized that the University at Kiel bestowed on him the honorary degree of Ph.D.

By 1822, Schweinitz had written his "Synopsis Fungorum Carolinae Superioris", published in Leipzig. In the same year, he visited England, France and Holland, and after his return he also published his descriptions of some 78 Hepaticae. Also, in 1822, he sent to Silliman's Journal, a monograph on *Viola*. He then returned to Bethlehem to take charge of a girls' school, and to continue his church work.

Again, he went to Europe in 1824, and while abroad his paper entitled, "Descriptions of a number of new American species of *Sphaeria*" was brought out by The Philadelphia Academy of Sciences. This work was followed, in 1832, by his "Synopsis Fungorum in America Boreali Media Degentium", published by the American Philosophical Society. By now, his health had begun to fail, and although a trip on church affairs to Indiana seemed to revive him, he died at the age of 54 on February 8, 1834.

Schweinitz's herbarium of some 23,000 specimens is preserved at The Philadelphia Academy of Sciences (Pennell 1934). It is said that Schweinitz also sent large numbers of his collections to Fries, at Uppsala.

Schweinitz carried on correspondence with Fries (Shear 1949), Persoon (Barnhart 1934), John Torrey (a New York City physician) and 75 or more other individuals over the world (Barnhart 1934).

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Frank Lamson-Scribner

1851 - 1938

For a time, Scribner served as Professor of Botany at The University of Tennessee, Knoxville. While here, he strengthened an already growing reputation as an unusual botanist. His research and publications at Tennessee attracted a wide and favorable attention of other botanists of the day.

Scribner was born Frank Lamson on April 19, 1851, at Cambridgeport, Massachusetts. In his youth, both his parents died, and at the age of three, he was adopted by a family named Scribner. At times, his surname is written with a hyphen, and again without a hyphen. In searching the literature on his life and work, his name may be listed under either Lamson or Scribner.

The Scribner family who adopted him lived in Maine, near Augusta, and in 1886 he entered Bowdoin College (in Maine). It is not clear how long he remained there, but in 1870 he enrolled at The Maine State College of Agriculture at Orono, where, in 1873, he took the B.S. degree. Subsequently, in 1920, the College at Orono awarded him the honorary degree of LL.D. After graduation, Scribner was first a public school teacher in Maine; then for two years, he was Clerk to Secretary of the Maine State Board of Agriculture; from 1876 to 1885, he served as an officer in Girard College, in Philadelphia (a school for orphan white boys).

In 1885, Scribner left his post at Girard and went to the USDA, Washington, D.C., as a Special Agent in Charge of The Mycological Section, a position he gained under competitive civil service examination, and which he held for one year (1885-1886). In 1886, he was appointed Chief of the Section of Vegetable Pathology and Physiology, a position he held for two years (1886-1888). Scribner next served in botanical work at The University of Tennessee until 1895 when he resigned and returned to the USDA, Washington, and became Chief of The Division of Agrostology. He remained as Chief until retirement in 1922.

The circumstances surrounding Scribner's coming to Tennessee, as well as those relative to his leaving, deserve comment. When Charles W. Dabney, Jr. was elected President in July 1887, he was given a free hand to reorganize the University. His first move was to discharge several faculty members; next, he proceeded to bring in several outstanding younger men, one of whom was Scribner. Within two years after Scribner's arrival, Dabney appointed Scribner in 1890 as Director of the Agricultural Experiment Station, an additional responsibility. The next move by Dabney, according to the 6th Annual Report of the Station for 1893 (published in 1894), was to assert that since the Station is a department of The University, like other such units, it shall be under the control of the President, aided by a committee of the Trustees; that the Office and title of Director of the Station is hereby abolished; and these duties are transferred to the President. Although Scribner had been both Director and Botanist to the Station from 1890 until 1893, his title after the above action was merely that of Botanist to the Station; however, he did retain his position and title of Professor of Botany and Horticulture in the Academic Department. However, in 1895 (sometimes given as 1894) he resigned and went back to Washington, this time as Chief of the Division of Agrostology. Whether abolishing the Office of Director of the Station in any way influenced his decision to return to Washington is only a matter of speculation.

After Scribner's return to Washington, he seems to have developed a new skill—that of planning and setting up exhibits. He apparently made a study of this whole problem, as evidenced by the various advisory and administrative positions which he held from 1904 to about 1933. For example, from 1904

to 1922, he was Special Agent and expert on the preparation and display of exhibits shown over the United States at State Fairs. He did similar work in preparation for the World's Fair at St. Louis, in 1904; for an exhibit in Portland, Oregon, in 1905; in Seattle, Washington, in 1909; the San Francisco Exposition, in 1915; a number of Federal Food Conservation exhibits, 1917-1920; the Sesquicentennial Exposition in Philadelphia, 1926-1927; and the Brazilian Exposition, in Rio de Janeiro, 1922-1923. In connection with the exhibit problem, Scribner also gave public lectures. On November 30, 1921, he addressed the Chicago Meeting of the Association of Fairs and Expositions, and on May 26, 1931, he spoke to the American Association of Museums, at Cleveland, Ohio.

Services at Tennessee

Scribner came from the USDA to Tennessee on November 1, 1888 and returned to Washington in 1895. During these seven years, he served in what was then called the Academic Department as Professor of Botany and Horticulture, and also as Botanist to The Agricultural Experiment Station. Two years later, President Dabney appointed him to an additional responsibility; he was named Director of The Station, in 1890, which position he held until 1894. In that year, the office of Director was abolished by President Dabney by his recommendation to the Board of Trustees. In 1894-1895, his last year here, Scribner had the title only as Botanist in The Station along with his Professorship in the Academic Department. Thus, he served as teacher in the Academic Department; he did research in The Station; and he found time to serve in the area of public relations.

Academic Work. It seems clear that Scribner was a vigorous teacher. He brought with him some (then) modern ideas of instruction. As Professor of Botany and Horticulture in The Academic Department, his activities in teaching are gauged somewhat by the University Announcements (catalogs) for the years 1888 through 1895. Although at first, his course offerings were a bit vaguely described, in the second half of the freshman year, Organography and phanerogamic botany were listed, and the student was also expected to prepare an herbarium of specimens. The texts used included Gray's "Structural Botany," Gray's "Manual," and Chapman's "Southern Flora." In the sophomore year, the student studied Morphology, at first the higher groups, then the Thallophytes, including fungi of economic importance. Texts listed included Arthur, deBary, and Strasburger. In the junior and senior years, the students took Horticulture. For 1891-1892, the Announcement carried more specifically numbered, named, and described courses, as follows:

1. Botany begun
2. Botany, Histological, physiological and Cryptogamic.
3. Botany, Systematic and Economic.
4. Horticulture.

For his remaining years at Tennessee, there were no important changes in the listings of courses in botany.

Some events of interest during Scribner's tenure here, include: the provision of student microscopes; the acquisition of the Gattinger Herbarium (see: Announcement for 1890-1891:36); the addition of two staff members in teaching - a Mr. Watts, Instructor (1891-1892), and Samuel M. Bain (first listed in 1891-1892 catalog). Mr. Watts was a Horticulturist; and, when Scribner left The University in 1895, Mr. Bain was placed in charge, with the title of Instructor (later he was promoted to Professor).

Experiment Station Work. It may be assumed that President Dabney brought Scribner to Tennessee in his effort to strengthen both the Station and Academic Staffs in Botany. Scribner arrived here at the age of 37 and had already earned a notable reputation through his publications on grasses. While at Tennessee, Scribner continued to publish papers, not only on grasses, but also on plant diseases - more especially those of the grape. Although many of his articles were of popular nature, their substance was based on his research as Botanist to the Experiment Station.

The University Herbarium. As a result of Scribner's energetic field work, he accumulated numerous collections of plants, especially of grasses, but also many other phanerogams and some fungi. According to Harshberer (1899:359), Scribner had one of the largest American collections of grasses, and he places this number at nearly 5,000, but adds that these were "recently destroyed by fire" (a loss not to be confused with that of the 1934 fire).

The University Herbarium may be said to have been established by Scribner. Under his direction, he managed the purchase of "the most excellent" Gattinger Herbarium (Exper. Sta. Rept. for 1888:15); in the Report for 1889 (p. 12-13), Scribner writes that during the year he had collected 4,703 sheets of grasses; in the Report for 1892, page 7, he states that 800 phanerogams and some fungi were added to the Herbarium; and finally, that S. M. Bain, then of Union University, Jackson, Tennessee, had contributed some 80 collections new to the Herbarium, all from West Tennessee.

Public Relations. It appears that Scribner made numerous trips to the field, where he talked with farmers about their plant diseases and his experiments in their control. He spoke to The East Tennessee Farmers' Convention at least once, and to other farmers' groups; and he was invited to give addresses, in and out of the State, before various other groups and conventions. One of his first public appearances here was when he gave an address on the Campus at The University of Tennessee on March 26, 1889, on the topic "Southern Botanists," a paper which was published in The Torrey Botanical Club Bulletin 20:315-334, 1893.

Notices and Recognitions. There is little question that for years Scribner stood well among his contemporaries. His botanical work, including mycology, was noticed, was favorably received, and at times especially rewarded.

When he was to move to Tennessee, the Editor of the Botanical Gazette (vol. 13:139. 1888), in his "Notes and News," stated that Botany is strongly represented in the organization of the Tennessee Agricultural Experiment Station by the employment of F. Lamson-Scribner.

At the time that he was being considered for the position of Chief of the new Division of Agrostology, USDA, that he was highly respected is shown by the strong recommendations made by four eminent American botanists: C. E. Bessey, Nathaniel L. Britton, John M. Coulter, and W. G. Farlow.

In 1893, the Botanical Society of America was organized, and twenty-five botanists were invited to become charter members. These included such mycologists as Arthur, Atkinson, C. E. Bessey, Halsted, and Underwood, and other botanists; Scribner was one of these charter members (See: Fifty Years of Botany, 1958. McGraw-Hill Book Co.).

An examination of his bibliography below indicates that he was co-author of several papers with such eminent botanists as Arthur, E. D. Merrill, Pammel, Trelease, Vasey, and the notable French

pathologist-mycologist Viala.

His reputation was wide to the extent that the Philippine Government asked him to prepare and publish a "List of Philippine Agricultural Products and Fiber Plants," in 1904. Moreover, on invitation, he addressed the Massachusetts Horticultural Society in Boston in 1896; The American Association of Fairs and Expositions, 1921; and The American Association of Museums, 1931.

Scribner's active work in grape diseases was recognized by the French Government, for on New Year's Day, 1889, that Government bestowed on Scribner the special honor—Chevalier, Merite agricole.

When Scribner left The University, he was succeeded by his assistant, S. M. Bain, whom Scribner had brought to The University in 1892. Bain had been at Union University, Jackson, Tennessee, but came to the Herbarium here to compare some of his collections with those in the Herbarium. Scribner was so impressed with Bain that he appointed him assistant, beginning that Fall (1892).

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Scribner's Publications

Obviously, Scribner developed an interest in plants at an early age, for in 1870, at the age of 19, he published his first paper on "Weeds of Maine." Later, he wrote a second paper, "Ornamental and useful plants of Maine," 1875. While an officer at Girard College from 1877 to 1885, he continued his studies, as evidenced by some two dozen papers which he published during those years. He was equally a prolific writer in his positions both at Washington, D. C., and at The University of Tennessee. While at Tennessee, he published "Fungous Diseases of the Grape and Other Plants and Their Treatment," 1891, the first American book on plant diseases.

Because Scribner's publications titles seem not to have been assembled, they are included here. And, although he was known as an Agrostologist, he did pioneer work with the fungi and thus an account of his life and work are included here. It is a matter of regret that I never met Scribner, for he was very much a mycologist.

On the following pages is a list of Scribner's some 174 publications which I found to date; it seems certain that further search will reveal additional titles.

- 1870.
 - Weeds of Maine. Maine State Bd. Agr. Rept. 1869: 239-292. 1870.
- 1875.
 - Ornamental and useful plants of Maine. Maine State Bd. Agr. Rept. 1874, 85 pp. 1875.
- 1881.
 - Notes on *Cynosurus cristatus*. Torrey Bot. Club Bull. 8: 35. 1881.
 - Grasses new to California. Torrey Bot. Club Bull. 8: 59. 1881.
 - The grasses of North America. Torrey Bot. Club Bull, 8: 59. 1881.
 - Cohesion of glumes in *Agrostis elata*. Torrey Bot. Club Bull. 8: 78. 1881.
- 1882.
 - A list of grasses collected by Mr. C. G. Pringle in Arizona and California. Torrey Bot. Club Bull. 9: 74-77; 86-89; 103-105. 1882.
 - Change of name in a grass. Torrey Bot. Club Bull. 9: 32-33. 1882.
 - Note on Oregon grasses. Torrey Bot. Club Bull. 9: 34. 1882.
 - Notes on *Andropogon jamesii*. Torrey Bot. Club Bull. 9: 52. 1882.
 - *Eleocharis nodulosus*. Torrey Bot. Club Bull. 9: 56. 1882.
 - Notes on grasses. Torrey Bot. Club Bull. 9: 153. 1882.
 - A list of grasses from Arizona and New Mexico. Torrey Bot. Club Bull. 9: 145-149. 1882.
- 1883.
 - Grasses collected by Mr. Pringle. Torrey Bot. Club Bull. 10: 8. 1883.
 - Notes on grasses. Torrey Bot. Club Bull. 10:7-8. 1883.
 - A list of grasses from Arizona and New Mexico (con't.). Torrey Bot. Club Bull. 10: 29-32. 1883.
 - A list of grasses from Washington Territory. Torrey Bot. Club Bull. 10: 63-66; 77-78. 1883.
 - Notes on *Spartina*. Torrey Bot. Club Bull. 10: 85-86. Plate 36. 1883.
 - Agricultural grasses from central Montana. Soc. Prom. Agr. Sci., pp. 12. 1883.
- 1884.
 - New North American grasses. Torrey Bot. Club Bull. 11: 5-7. 1884.
 - Notes on some new species of grasses. Torrey Bot. Club Bull. 11: 45. 1884.
 - Observations on the genus *Cinna*, with description of a new species. Philadelphia Acad. Nat. Sci. Proc. 1884, p. 289.
 - *Boutelona gracilis*. Torrey Bot. Club Bull. 11: 133. 1884.
 - Arizona plants. Bot. Gaz. 9: 186-187. 1884.
 - Notes on a hybrid grass. Bot. Gaz. 9: 167. 1884.
 - New species of *Andropogon*. Bot. Gaz. 9: 281. 1884.
 - A new *Eriochlora*. (with George Vasey) Bot. Gaz. 9: 85. 1884.
- 1885.
 - Fungous diseases of plants. USDA Rept. 10: 76-88. 1885.
 - A revision of North American Melicace. Philadelphia Acad.-Nat. Sci. Proc. 1885, p. 40. 1 plate.
 - A contribution to the flora of Kansas —Gramineae. Kansas Acad. Sci. Proc. 1885, 5 pp.
- 1886.
 - Botanical characters of the black-rot, *Physalospora bidwellii* Sacc. Bot. Gaz. 11: 297-302. Plate IX. 1886.

- Black-rot — *Physalospora bidwellii* (Ell.) Sacc. Soc. Prom. Agr. Sci. Proc. Ann. Meeting 7: 82-88. 1886.
- Fungous diseases of the vine and their remedies. New Jersey State Hort. Soc. Proc. 1886.
- Notes on the orange-leaf scab. Torrey Bot. Club Bull, 13: 181-183. 1886.
- Report on the fungus diseases of the grape vine. USDA, Bot. Div. Bull. II, 136 pp. 1886.
- Report as Special Agent in Charge of the Mycological Section. USDA Ann. Rept. 31 pp., 8 plates, 3 maps. 1886.
- Some arctic grasses. Bot. Gaz. 11:25-26. Plate III. 1886.
- Grasses of Yellowstone National Park, I. 3ot. Gaz. 11: 169-178. 1886.
- Agricultural grasses of Arizona. Soc. Prom. Agr. Sci., 5 pp. 1886.
- Orange-leaf scab. Bot. Gaz. 11: 246. 1886.
- Making drawings with a dissecting microscope. Bot. Gaz. 11: 310-311. 1886.
- The grasses of Coulter's Manual. Bot. Gaz. 11: 95-97. 1886.
- Grasses (Gramineae). Bot. Gaz. 11: 138-139. 1886.
- 1887.
 - The powdery mildew, *Uncinula spiralis*. USDA Rept. for 1886, 105 pp. 1887.
 - Black-rot, *Physalospora bidvelli*. USDA Rept. for 1886, 109 pp. 1887.
 - Anthracnose, *Sphaceloma ampelinum*. USDA Rept. for 1886, 112 pp. 1887.
 - Celery-leaf blight, *Cercospora apii*. USDA Rept. for 1886; 117 pp. 1887.
 - Orange-leaf scab. USDA Rept. for 1886, p. 120. 1887.
 - The potato-rot, *Phytophthora infestans*. USDA Rept. for 1886, p. 121. 1887.
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 - Ejection of ascospores from the asci of *Physalospora bidwellii*. Torrey Bot. Club Bull. 14, p.207. 1887.
 - Treatment of the potato and tomato for the blight and rot. USDA, Sect. Veg. Path. Circular 4, 8 pp. 1887.
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 - _____, J. C. Arthur and W. Trelease. Report of the mycological section. USDA Rept. for 1886, p. 99. 1887.
 - _____ and P. Viala. Le greenerie fuliginea, nouvelle forme de rot des fruits de la vigne observee en Amerique. Compt. Rend. 105, p. 473. 1887.
 - Grape leaf-spot disease and black-rot. Colemans Rural World (St. Louis), 1887.
 - Observations the past season on grape rot and mildew. New Jersey State Hort. Soc. Proc. 1887.
 - White rot of grapes. Colemans Rural World, 1887.
 - A new fungus disease of the vine. (With P. Viala) Agriculture Science I, p. 210. 1887.
- 1888.
 - Report on the experiments made in 1887 in the treatment of the downy mildew and the black-rot of the grape vine, with a chapter on the apparatus for applying remedies for these diseases. USDA, Sect. Veg. Path. Bull. 5, 113 pp. 1888.
 - Pear scab. Orchard and Garden 12, p. 8. 1888.
 - Report of the chief of the Section of Vegetable Pathology for the year 1887. USDA Rept. for 1887. 1888.
 - *Gloeosporium fructiganum* Berk. USDA Rept. 1887: 324. 1888.
 - New observations on the fungus of black-rot of grapes, and successful treatment of

- black-rot. Soc. Prom. Agr. Sci. Proc. for 9th Meeting. 1888.
- Fungicides or remedies for plant diseases. USDA, Sect. Veg. Path. Circular 5, 10 pp. 1888.
- Some results of mycological work in U.S. Dept. of Agriculture. Bot. Gaz. 13:14-16. 1888.
- Diseases of the grape. (A review of Viala and Ravaz, 2nd edition). Bot. Gaz. 13:44-45. 1888.
- Black rot (*Laestadia bidwellii*). (With P. Viala). USDA, Bot. Div., Sect. Veg. Path. Bull. 7, 29 pp. 1888.
- On a new fungus disease of the vine, *Greeneria fuliginea* (with P. Viala). Soc. Prom. Agr. Sci. 87h Meeting. 1888.
- Esperienze sul trattamento del black rot e del brown rot in America. Rassegna conegliano II, p. 528. 1888.
- Mr. Pringle in Mexico. Bot. Gaz. 13: 19. 1888.
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 - Report on the experiments made in 1888 in the treatment of the downy mildew and black rot of the grape vine. USDA, Bot. Div. Bull; pp. 6. 1889.
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 - Plum leaf of shot-hole-fungus. Canadian Horticulturist 13, p. 315. 1890.
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 - Powders for combating the fungus or cryptogamic diseases of plants. Rural New Yorker 50, p. 453. 1891.
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Fred Jay Seaver

1877 - 1970

For about forty of his 93 years, Seaver served at The New York Botanical Garden. In 1908-1911, he was Director of Laboratories; 1912-1943, Curator; 1943-1948, Head Curator. While at The Gardens, Seaver also served as Associate Editor of *Mycologia*, 1909-1924; as Editor or Editor-in-Chief, 1925-1945, and as Managing Editor, 1933-1947. He retired in 1948 and died in 1970.

Dr. Seaver was born in Iowa, took the B.S. degree at Morningside College at Sioux City, in 1902, the M.S. (1904) and the Ph.D. (1912) at The State University of Iowa. His doctoral thesis was published in *North American Flora* in 1910 and entitled "Hypocreales in North America". For the Master's, he presented a thesis on "The Discomycetes of Eastern Iowa". In his later years, he was best known for his papers on the Discomycetes; and for his 2 volumes on "North American Cup- Fungi": vol. I on Operculates, 1928; vol. II, Inoperculates, 1951.

While studying Discomycetes, he accumulated many collections which were left to The New York Botanical Garden.

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Arthur Bliss Seymour

1859 - 1933

Of English ancestry, Seymour's forefather migrated from England to Connecticut in 1639. His own family moved, in 1853, from Massachusetts to Moline, Illinois. There, he became an orphan, and was then brought up by his aunts and uncles to be devoted to religious idealism. He had a shyness which perhaps was emphasized by a partial deafness, from scarlet fever at age 5.

Seymour became interested in plants at an early age, and he sought the teaching of Dr. T. J. Burrill, at the University of Illinois, where he entered in 1878. While with Dr. Burrill at Illinois, Seymour and other students assisted Burrill in a state-wide survey of fungus diseases. One of these students was F. S. Earle, with whom Seymour was associated in this work, Earle working on the mildews, and Seymour on the rusts. These activities led to the publication of two monographs on the parasitic fungi of Illinois.

In the year 1883-1884, Seymour accepted an opportunity to work with Farlow, at Harvard, under whom Seymour was engaged in indexing fungi. Two years later, 1885-1886, William Trelease, at The University of Wisconsin, employed Trelease to teach general botany. But more to his liking, Seymour went back to Harvard in 1886 on a permanent appointment. In the spring of that year he had taken the M.S. degree at Illinois. At Harvard, as his biographer states, The Harvard Indexes were to dominate the rest of his life, and in 1929 The Harvard Press published his "Host Index of the Fungi of North America", of 732 pages, and 80,000 host and fungus names, a monument to his 40 years of work.

In 1884, Seymour travelled to the Pacific Coast, collecting enroute in Minnesota, North Dakota, Montana, and Washington. Sets of these collections were distributed on an exchange basis.

Seymour and Earle (students together at Illinois) issued Fascicles I - XI, "Economic Fungi", exsiccati with supplements, from 1891 to 1900.

In the 1920's, I visited the Farlow Herbarium, and, among others, I met Seymour, and found him to be enthusiastic, keen-eyed, a good listener, always trying to learn in our conversation—a high form of flattery!

Reference

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Cornelius Lott Shear 1865 - 1956

From 1898 to 1935, Shear served in different capacities in the USDA, at Washington, D.C. Although he was vocationally engaged in work on plant diseases, his special interest was in the fungi as such, and especially the Pyrenomycetes. His list of mycological and plant pathological titles reaches nearly two hundred in number.

Born March 26, 1865, Shear grew up on the family farm in Coeyman's Hollow, New York, about fifteen miles south of Albany. Soon he became interested in natural history, through stimulation by his mother, and by the family physician who lent him books to read.

He attended the Albany State Normal School where one of his teachers there was Dr. E. A. Burt, later at Washington University at St. Louis, and student of the Theleporaceae. Shear graduated at Albany Normal in 1888. While there, he also became acquainted with Peck, with whom he kept in touch until Peck's death in 1917. During these and subsequent years, Shear collected fungi, and from 1893 to 1896, he issued three centuries of exsiccati, "New York Fungi".

Although Shear taught school for some time (1888-1894), he was never quite satisfied in this vocation.

In 1894, he moved to Osborne, Kansas, to live with his wife's parents and although he taught school there for a short period, he soon accepted an undergraduate fellowship (which paid \$250 for 10 months) at The University of Nebraska, where he studied under Dr. Charles E. Bessey. There, Shear took

the B.S. in 1897, and the Master's in 1898. During his undergraduate days at Nebraska, Shear was associated with other students who in time distinguished themselves: Dr. Frederick E. Clements, Dr. E. A. Bessey, and Dr. Roscoe Pound, the last a botanist who later became Dean of the Harvard Law School. While a student at Nebraska, Shear held summer appointments in the (then) Division of Agrostology, in the USDA, at Washington, D. C. His work there so impressed his Chief of that Division, F. Lamson-Scribner, one time botanist at the University of Tennessee, Knoxville, that, in 1898, he employed Shear as Assistant Agrostologist, a position Shear held until 1901, and there published his studies on the genus *Bromus*. During these years as officially an agrostologist, Shear worked in his spare time, unofficially, on fungi.

As Stevenson states (1957), with the formation of The Bureau of Plant Industry in 1901, Shear was appointed to a position in vegetable pathology. This appointment allowed him to devote full time to fungi. Soon he began to study diseases of cranberry, and later two men of note became associated with him: H. F. Bain (whose father was Professor of Botany, University of Tennessee until his death in 1919), and Neil E. Stevens (whose son, Russell, was for a time on the faculty in Botany here). As a result of Shear's cranberry disease studies, he published a comprehensive account in 1907, which account also served as his thesis for the Ph.D. (in 1906) at Washington University. Subsequently, Shear did noteworthy work on a disease of cotton, and diseases of small fruits—strawberry, grape, and others. His list of publications indicates a large number of important studies on fungus diseases.

In 1923, Shear was appointed head of the newly established Division of Mycology and Disease Survey. Mycologists are aware of a cooperative effort by Shear with F. E. Clements (of Nebraska) on a volume entitled "The Genera of Fungi", which proved to be helpful to all mycologists. Shear was also active in botanical nomenclature; he was appointed a delegate to the Brussels Congress, in 1910 (although he was unable to attend). Another contribution by Shear was his series of papers under the general title "Mycological Notes", published from 1937 to 1940, in *Mycologia*. In 1954, Edith Cash (USDA) published an index to this series of articles. Shear's notes, correspondence, fungus collections, and much of his library are a part of The National Fungus Collections, at Beltsville, Maryland. He retired in 1935, and died in Monroe, Louisiana, February 2, 1956.

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Erwin Frink Smith

1854 – 1927

Noted for his work in bacterio-pathology of plants, but less known for his publications on fungi, for his contributions to laboratory method Smith still claims a place among mycologists.

He was born at Gilberts Mills, New York, on January 21, 1854. His family moved to Ionia, Michigan,

where he finally entered high school, in full beard, at the age of 26 (in 1880). Smith later entered Michigan State University (then Agricultural College), but he held a part time job with the State Health Department at nearby Lansing, and his attendance at college became somewhat irregular. Later, he entered The University of Michigan at Ann Arbor, where he graduated with the bachelor's degree 1886; and in 1889, he took the Ph.D. also at Michigan. His thesis there was on "Peach Yellows", a very destructive disease throughout the peach growing areas of eastern United States.

In Smith's home town of Ionia, he became acquainted with a druggist, Charles F. Wheeler, who was an amateur botanist. He not only interested Smith in botany, but also was instrumental in inducing him to learn French and German. In 1881, Wheeler and Smith published "The Flora of Michigan".

While at Lansing, he was induced to review the literature on modern sanitation. His ability to read French and German made it possible for him to write a very impressive report on his literature review, and also brought him into contact with names such as Pasteur, Lister, and Koch. Although Smith had thought of becoming an M.D., he transferred his interest to parasitism and pathology in plants and to some extent, in animals. Thus, in 1885, he published a study of the potato rot, a very destructive fungus disease caused by the Phycomycete, *Phytophthora infestans*. This paper was his first and was published in Michigan Crop . Report 50:3-5. 1880.

By 1886, Smith had begun work in the USDA, at Washington, D.C., where he remained until retirement in 1922. During the years 1892-1922, Smith studied and published mainly on bacterial diseases of plants. One of his noteworthy contributions was his studies on crown-gall of plants, caused by a bacterium. He pointed out that this disease had numerous similarities to human cancer (such as the phenomenon of metastasis), and for many years his counsel on methods and concepts were sought by cancer researchers over the world.

Smith's list of scientific publications number about 200 and includes a large number of papers and 4 books on bacterial diseases of plants. These titles appeared from 1894 to 1929, the last one appearing two years after his death. As a mycologist-pathologist, he published some 25 titles from 1885 to 1921 on fungus diseases of plants—on topics such as peach rot, leaf curl, and mildew; potato rot and blight; apple scab; tomato blight; cotton and melon wilt; and banana and tobacco diseases.

I visited Smith in his laboratory at Washington around 1916. He was a man of short stature, neat and distinguished in appearance; with a soft voice; and quite noticeably alert to what others were doing - even to what I, as a beginner, was doing in research. His contributions to knowledge of bacteria and their pathogenic relations have scarcely been matched, either before or since his day. His methods were freely copied by mycologists, he understood mycology in the sense that he had worked with fungi which were pathogenic, and he set a good example for mycologists in his laboratory procedure.

Smith's death at Washington, D.C. on April 6, 1927, was noted in several American journals, including bacteriological and other, as well as in a number of foreign periodicals. A list of 22 biographers is found in Jones (1939), prepared by F. V. Rand. About 1925, Smith was persuaded to prepare a detailed synopsis of his researchers (see: In Jones 1939).

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George Smith **1895 – 1967**

England has been the home of many important mycological figures, one of which is George Smith. He went into investigation of the fungi by way of chemistry. His biographer characterizes him a “self-taught” mycologist, who became a superior student of green molds.

Smith graduated from Manchester University in 1916 and took the M.S. in 1918. Later he was employed as a chemist by a large textile manufacturing firm in his home town of Great Harwood. The firm shipped some of their textiles to India, and in the 1920's were experiencing the problem of the prevention of mildew. Smith became interested in this problem, and his chemical laboratory was transformed into a mycological one. In 1928, he published his first mycological paper on, “The identification of fungi causing mildew in cotton goods: the genus *Aspergillus*”, in *Journal of Textile Institute* 19:T92-T100. 1928. A second part of this paper appeared three years later, soon after he joined the staff of the London School of Hygiene and Tropical Medicine. There, with collaborators, a series of publications from 1931 to 1964 ran to 116 papers on the bio-chemistry of organisms. He was finally termed a world authority on *Aspergillus* and *Penicillium*. During World War II, he worked on the problem of molding of army equipment which was sent into the tropics.

After retirement, Smith took an amateur interest in larger fungi, and was a familiar figure at British Mycological Forays.

His biographer states that Smith had a deep interest in music (as a listener and a performer), a wide reader, and a good cook.

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Worthington George Smith **1835 – 1917**

Lloyd has published a paragraph on Mr. Smith, who served in the British Museum (London), the Mycology Department. He was a compiler of books, and a very good artist. Lloyd felt that perhaps a man living in London would find it as difficult to learn about fungi “as for an Arab living in the desert of Sahara to write a book on the culture of ginseng”. Further, Lloyd admits not having known him personally, but says “...I have no doubt he was a very fine old man. Anyone who loves dogs is worth cultivating.”

In 1908, Smith published, through the British Museum, his “Synopsis of the British Basidiomycetes”

which is a descriptive catalogue of the drawings and specimens in the Department of Botany at the British Museum.

Reference

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Frank Lincoln Stevens 1871 - 1934

Stevens is one of those individuals who were both mycologist and plant pathologist, but at heart perhaps more of the former. His early years were spent on a farm near Syracuse, New York, where he was born. There he began to develop an interest in natural history, as evidenced by his collection of ferns and geological specimens.

He attended college at Hobart, Geneva, New York, where, at the Agricultural Experiment Station in Geneva, he became acquainted with David Fairchild, who, in turn, suggested that Stevens go to Rutgers University and study fungi and plant diseases under Halsted. He graduated at Hobart in 1891; went to Rutgers, and there took the B.S. in 1893 and the M.S. in 1897. Finally, in 1900, he was awarded the Ph.D. at The University of Chicago. In the meantime, he had taught for one year (1894) at Racine College, Wisconsin, where he met a practicing physician, Dr. J. J. Davis (known for his "Parasitic Fungi of Wisconsin") himself an avid student of the fungi. The following year (1895), Stevens took a position as teacher of chemistry and botany in a Columbus, Ohio, high school. In his spare time, he worked in the laboratories at Ohio State University (doubtless under Kellerman's guidance).

At Chicago, he was awarded (in 1900) a fellowship under which he went to Bonn and Halle, Germany, and also studied at Strassburg with Klebs and others. On his return in 1901, he took a position as Instructor in Botany and Plant Pathology at North Carolina State College (now University), at Raleigh. In 1902, he was promoted to Professor of Botany and Vegetable Pathology, at Raleigh. From 1912-1914, he served as Dean of the College of Agriculture at the University of Puerto Rico. While in Puerto Rico, he spent much of his spare time collecting fungi, including especially the black molds (Meliolias, and myrangiaceous relatives). Finally, he accepted the position of Professor of Plant Pathology, at The University of Illinois, Urbana, where he remained until death in 1934.

At North Carolina State, he worked with J. G. Hall, and together they published "Diseases of Economic Plants", 1910 (Macmillan Co.), a volume which contains much mycology. Later, alone, he published "The Fungi Which Cause Plant Disease", subsequently revised and condensed in a volume titled, "Plant Disease Fungi".

For his studies on the black molds, Stevens collected not only in Puerto Rico, but also in South America, Panama, Hawaii, and the Philippines, and these collections formed the basis of his monographic studies of his tropical material.

Reference

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Phytopathology 26:500, for a notice of his death.)

Neil Everett Stevens

1887 – 1949

Fortunately for mycology and for Stevens, he was able to spend some 24 years of his adult life (1912-1936) associated with Dr. C. L. Shear, U.S. Bureau of Plant Industry. Both Shear and Stevens, like so many mycologists, were plant pathologists by vocation, mycologists by avocation. It helps to place Stevens when it is noted that one of his sons, Russell, served for a few years on the staff in Botany, at The University of Tennessee, Knoxville.

A native of Portland, Maine, he was born April 6, 1887, and died rather prematurely at 62, on June 26, 1949. His schooling consisted of a high school diploma in 1904, from Auburn, Maine; the A.B., Bates College, 1908; the Ph.D., Yale, 1911, with membership in Phi Beta Kappa and Sigma Xi. At Yale, interestingly enough, Stevens worked with Bryologist Dr. Evans, where he published his first two botanical papers, one on hepatics and the other on trailing arbutus. His doctoral thesis dealt with heterostylous plants.

Following his graduation at Yale (1911), he taught for one year at Kansas State College. Then, through Civil Service examination, he took a position in 1912, in the Bureau of Plant Industry, where he worked on Chestnut blight. In 1915, he was transferred to fruit disease investigations where he began a study of strawberry fruit decay. Subsequently, he took up cranberry diseases, which work took him to the Carolina coast, the Adirondacks, Michigan, Washington and Oregon. He encountered many fungi in his field studies, which led him to the herbaria of some of the older mycologists (Schweinitz, Ravenel, Curtis, Ellis, Peck). This experience led Stevens farther to become interested in these men themselves. Consequently, he published biographies of several of them, and also reported (with Shear) on his studies of Schweinitz's fungus collections (*Mycologia* 9:191-204; 333-344. 1917). Shear and Stevens planned to write a history of mycology, but never were able to achieve this goal.

From 1931-1936, he was Adjunct Professor of Botany at George Washington University. In 1936, he accepted a position as Professor of Botany, at The University of Illinois, Urbana. There, as always, he was youthful in appearance, was quite informal, but highly regarded as a teacher, a scientist, and was a distinctive personality.

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David Ross Sumstine

1870 – 1965

Honorary Curator of Fungi, The Carnegie Museum, Pittsburgh, Dr. Sumstine earned his livelihood as an

educator (Director of Curriculum and Research in The Pittsburgh Public Schools). He became interested in the fungi as a graduate student, and in 1900 contributed a number of collections to the Carnegie Museum.

Sumstine graduated from Thiel College (Greenville, Pa.) with the A.B. in 1890, and was awarded an honorary Doctor of Pedagogy in 1931. In 1908, he received the M.S. from the University of Pittsburgh, and in 1910 the D.Sc. from Gettysburg College. Next, he attended theological seminaries in Chicago and Philadelphia, and was ordained in the Lutheran Ministry in 1900. For some years, he served as a supply pastor and a teacher in the Pittsburgh Lutheran Training School. Sumstine also taught in several elementary and high schools, until in 1926 when he was appointed Director of Curriculum and Research in Pittsburgh public schools, from which he retired in 1939.

Sumstine collected fungi in Pennsylvania and adjacent states, and from Florida, and Indiana. His collections, of more than 10,000 specimens, were probably left to the Carnegie Museum. He died at the age of 95.

Reference

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Leo Roy Tehon 1895 – 1954

For nearly all the years from 1921 to his death, Dr. Tehon was on the staff of the Illinois Natural History Survey. Since he did his graduate work at The University of Illinois, where Stevens worked, it is hardly surprising that he should have had interest in *Meliola* and other Ascomycetes. Some of his papers also give helpful information on some of the Fungi Imperfecti.

Tehon, a native of South Dakota, was born on June 21, 1895. To help meet family expenses and his early schooling, he worked as a brake man on the railroad. He took the A.B. in 1916 at The University of Wyoming, and in his senior year there he held an assistantship in botany. After a period in the army, he was for two years (1919-20 and 1921-22) in charge of the barberry eradication campaign in Illinois (the barberry is the alternate, or aecial, host for wheat rust). From 1921 till death, Dr. Tehon was a collaborator with the U. S. Plant Disease Survey. He finished his graduate work at Illinois, taking the M.A. in 1920, and the Ph.D. in 1934. While he was with The Illinois Survey, he also was, in 1947 made Research Professor in The Graduate College, University of Illinois.

According to his biographer, Dr. Tehon cultivated his interests outside mycology by playing classical music on the violin, in reading pioneer history, by working with the Boy Scouts, the Junior Academy of the Illinois State Academy of Science, and in keeping up with certain foreign languages. A great service was performed to mycologists and plant pathologists when Tehon translated from Italian to English, a classical work by Tozzetti on "... Rust, the Bunt, the Smut, and Other Maladies of Wheat and Oats ...". This work was originally published in the 1700's, and the translation, published in 1952, was designated as No. 9 of "Phytopathological classics".

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Roland Thaxter 1858 - 1932

Many mycologists, in their student days at least, came to know Dr. Thaxter, of Harvard, for his work on the very fascinating fungus group—the Laboulbaniiales (named after the entomologist Laboulbene). Their peculiar habitat and their striking morphology may be unmatched in the fungus kingdom. Thaxter collected and studied this group over a period of 40 years. Among his publications on them is a series of Contributions, parts I-V, a monumental tome, part V of which was published in 1931. However, Thaxter did not confine his efforts to this strange Order of insect-inhabiting, parasitic Ascomycetes. His research covered a rather wide range of topics, including rusts, fungicides (in 1890, at The Connecticut Agricultural Experiment Station), potato scab, Hyphomycetes, a new Order of Myxobacteriaceae, and aquatic Phycomycetes (especially insectivorous forms).

The deep literary background of Thaxter contributed to his genuinely cultured life and spirit. His father was a lawyer, but was also an authority on Browning, and a member of a literary group which included James Russell Lowell, Henry D. Thoreau, and Nathaniel Hawthorne. His mother was also a rather well-known poet. Thaxter's intellect, and the fact that he grew up in a home of literary cultivation, help to understand something of his character and personality.

His schooling measured up with his inheritance. Born in Newtonville, Massachusetts, on August 28, 1858, he attended the Boston Latin School, and the Kendall Private School. He entered Harvard College in 1878, and took the A.B. in 1882, *Magna Cum Laude*. Next, he entered the Harvard Medical School in 1883, where he studied medicine for two years, and then entered the Harvard Graduate School of Arts and Sciences. Here he majored with W. G. Farlow, and this assured his career in mycology. In 1888, he was awarded the Ph.D., with his thesis on "The Entomophthoraceae of the United States". It is recalled here that Thaxter really began his long life of publications with papers on insects. In his first 9 years (1875-1884), Thaxter published 10 titles on entomological subjects. In 1887, he published his first mycological paper—on the rust *Gymnosporangium*. At this time, he took a position with the Connecticut Experiment Station, which position he held until 1891. Although at Connecticut he did outstanding work in plant pathology, he preferred the more basic rather than the applied facet of mycology. It is quite true that Thaxter trained such mycologists as Clinton, Barss, Jackson, Rorer, Faull, Drechsler, and Meier, and they became very well-known and respected pathologists. Thaxter had a reputed scorn for second-rate ones. He called them, privately, "squirt-gun botanists", and Thaxter was "puzzled" when George R. Lyman, one of Farlow's students, left Dartmouth to become Director of The Plant Disease Survey Office, USDA, Washington.

In 1891, in order to get back to the basic, he returned to Harvard as an Assistant Professor with Farlow, and the two continued a professional association until Farlow's death in 1919. In 1901, Thaxter became a Full Professor, a position he held until retirement in 1919. Mycology was his specialty, but he had an unusual knowledge of the algae, was well acquainted with the Bryophytes, and he gave a great deal of attention to the lichens. Although not much was made of his travels, record shows that he collected

fungi in Newfoundland, the White Mountains, and in 1887 he made an extensive expedition into the mountains of North Carolina and Tennessee. Subsequently, he visited Florida, Jamaica, South America, British West Indies, and Europe.

Thaxter, with Linder, initiated the issue of "Reliquiae Farlowianae", exsiccati in 10 centuries, 1922-1946, as a memorial to Farlow, his teacher and colleague. Much of the routine work was done by A. B. Seymour and others.

One of his biographers (Weston, one of Thaxter's students) states that Thaxter followed a sustained, strict daily schedule, from 7 a.m. to 6 p.m. or later - an indication of his devotion to his work, despite his poor health. He was austere, reserved, and was interested in literature and architecture. Dr. Thaxter was against smoking; he felt that nicotine would impair the hand for making drawings. He excelled in his fungus drawings, an ambition which he pursued vigorously. Like Farlow, he answered most of his correspondence by handwriting; he also felt (as did Farlow) that typing was too impersonal. But, with his reserve, his prejudices, and other characters, Thaxter was a kindly man, and one of the "greatest mycologists of his time".

Thaxter's generosity was shown to me on one occasion. I had just come to Tennessee, and for my course in mycology I felt the need to demonstrate one of the Laboulbeniales to the students. I wrote Dr. Thaxter begging for one specimen for this purpose. To my surprise and delight, he sent a box of 25 slides-mounts representing four or five genera and several species for my use. He also sent me a handwritten letter.

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Charles Thom 1872 - 1956

The work engaged in by Dr. Thom was finally that of microbiology- mycology. He spent about the first half of his life in preparation for the last half—in schooling, teaching in high school, earning his degrees, gaining broad experience before settling in the laboratories of the USDA, in Beltsville, Maryland.

He was born on a farm near Minonk, Illinois, on November 11, 1872; he died May 24, 1956, in Port Jefferson, New York. He entered Lake Forest Academy, in Illinois, in 1889, and there came under the influence of Dr. R. A. Harper, then an instructor in the school. Later, in 1891, he entered Lake Forest College where he found R. A. Harper teaching botany, and also where (later 1893), the well-known botanist, John M. Coulter came as president of the college. After teaching for one year (1894-95), in

Danville, Illinois high school, he returned to Lake Forest College, and there took the M.A. in 1897 with Harper. Finally, he took the doctorate in 1899, at the University of Missouri. Meantime, he had visited such eminent personalities as Whetzel, Duggar, and Atkinson, at Cornell, and the last-named employed him as a graduate assistant in mycology. In 1904, he was recommended for a position in Dairy Mycology, at the Storrs Experiment Station in Connecticut, where he worked with H. W. Conn on mold-ripened cheeses. His studies soon uncovered the taxonomy problem of *Aspergillus* and *Penicillium*, on which he began study, and in 1910 he published his "Cultural Studies of Species of *Penicillium*", as Bull. 118, U. S. Dept. Agr. Bur. Animal Industry. From 1927 to 1942, he was Mycologist in Charge of the Division of soil Microbiology. When he retired (1942) he became consultant to a number of different industrial laboratories.

Reference

- Raper, Kenneth B. Charles Thom. Mycologia 49: 134-150. 1957. With a photograph and a list of 114 titles in the field of dairy, soil, and food mycology.

William Sturgis Thomas 1871 - 1941

A physician by vocation, Thomas is known by his "Field Book of Common Mushrooms", 1936. The first edition appeared in 1928. He prepared the book for the amateur, and naturally it includes information on the edible-poisonous problem in mushrooms.

Thomas was a physician of note, and a full account of his activities appeared in "The Journal of the New York Botanical Garden" in January 1942.

Reference

- Seaver, Fred J. William Sturgis Thomas. Mycologia 35: 133. 1943. With a photograph.

Mason Blanchard Thomas 1866 - 1912

A teacher of renown, Thomas made a contribution to mycology, and to allied plant pathology of considerable proportions by a group of aspiring men he sent on to graduate school. He spent his professional career at Wabash College, at Crawfordsville, Indiana.

Thomas was a native of New Woodstock, New York, having been born there on December 16, 1866. Following his local schooling, he attended Cazenovia Seminary (in New York State). In the summer of 1886, he was a successful contestant for a scholarship at Cornell and entered there in the Fall of that year. In 1890, he took the B.S. degree at Cornell, and at the same time he was awarded a fellowship in Biology. He then proceeded to pursue graduate studies at Cornell for the Ph.D. degree, in 1890-1891. In the Fall of 1891, however, he accepted a Professorship in Biology at Wabash, a position made vacant by the resignation of the eminent botanist, Dr. John M. Coulter, who completed his career at The University of Chicago.

In 1895, The Department of Biology at Wabash was divided, and Thomas was made Professor of Botany; in 1904, Thomas was appointed Dean of the Faculty at Wabash, and served the College in both positions till his death in 1912.

A complete list of Thomas' publications is at this writing not available to me, but it is a short one. Those I have found follow:

- The collodion method in botany. Bot. Gaz. 15: 296-299. (Also published in Amer. Soc. Micros. Proc. Am. Meeting 13:123-127.) 1890.
- A dehydrating apparatus. Micros. Jour. 1891, p. 7-8. 1891.
- Forestry in Indiana. Indiana Acad. Sci. Proc. 1901: 33-54. 1902.
- The woodlot for central Indiana. Published in Indianapolis, 1909. (No other data available.)

While a student at Cornell, Thomas unquestionably took courses in botany with Professor Albert N. Prentiss, who served at Cornell from 1868 to 1896. Thomas studied "Microscopy" (methods of imbedding, sectioning, staining, of plant tissue) with the then famous Simon Henry Gage.

When I entered Wabash as a freshman in the Fall of 1907, I took general botany with Thomas. He was first of all a superb teacher; he was equally a distinguished figure in his appearance. It finally developed that in subsequent years, I took his courses in physiology, anatomy (and methods), cytology, morphology of phanerogams, mycology (and there must have been one or two others). All students felt that Thomas was exacting, fair, patient with the poorer students, and stimulating. At a memorial service for Dr. Thomas, held at the home of Dr. Gage, one of Thomas' students eulogized him saying that if he were to write Thomas' epitaph in one word that word would be "inspiration".

Samuel Mills Tracy **1847 - 1920**

Professionally, Tracy was an agronomist, who collected fungi and higher plants for recreation. Most of his field work was done in Colorado and in the southeastern States. It was his habit when collecting to gather large numbers of specimens and to distribute these to others. In this manner, he did much to make southern plants available for important American and European herbaria. Most of his collections bore the label "Plants of the Gulf States", but they were not issued in the usual formal exsiccati sets. Many of the fungi which are found in his sets were named by Earle.

Most mycologists are familiar with the combination of "Tracy and Earle". They collaborated in their collecting and prepared the manuscript on the fungi for Baker's "Plantae Bakerensis", 1901, which is a report on southwest Colorado collections. Sets of Tracy's collections may be found in the herbaria of The National Fungus Collections, Beltsville, Md., Michigan State University, University of Nebraska, and The New York Botanical Garden.

To date, I have found little of Tracy's life and education. He apparently began professional work as an Agronomist, specializing in cotton. From 1888 to 1897, he was Director of the Mississippi Agricultural Experiment Station, at Starkville.

References

- Stevenson, John A. An Account of Fungus Exsiccati Containing Material from the Americas. Beihefte Nova Hedwigia Heft 36: 470-471. 1971.
- Anon. In Jour. Mycol. 9: 81. 1903. A photograph.

William Trelease 1857 – 1945

A famous leader in botany, William Trelease was born at Mt. Vernon, New York, on February 22, 1857, and died at Urbana, Illinois, on January 1, 1945. As with many famous botanists, he had a wide interest in the field, from bacteria to angiosperms.

Trelease was graduated from Cornell with the B.S. in 1880, with a major in Entomology under the celebrated J. H. Comstock. Apparently, he was at once appointed by the Federal Government to study cotton insects. Soon, however, he got back to the field of his preference, botany. In 1881 to 1883, he served as Instructor in Botany, at The University of Wisconsin, Madison; and in 1885, he was made Professor of Botany there. In the summers of 1883 and 1884, he taught botany at Harvard, where he became more interested in Cryptogamic botany under the influence of Dr. Farlow. His studies there brought him the Doctor of Science degree at Harvard in 1884.

While at Wisconsin, Trelease gave much of his attention to the bacteria and the fungi, and for some time he was regarded as a leading mycologist in the U. S. He began a study of parasitic fungi in Wisconsin about 1880, and five years later he published a list of such fungi for the State. His work was continued by J. J. Davis, and then by H. C. Greene. In 1885, however, he was appointed Englemann Professor of Botany at The Washington University, St. Louis, where he soon opened the newly organized Shaw School of Botany. Circumstances there channeled his efforts toward the phanerogams, and he apparently gave less attention to the fungi thereafter. From 1889 to 1912, Trelease was also Director of The Missouri Botanical Garden. But, in 1913, he accepted the position of Professor and Head of the Department of Botany, at The University of Illinois, Urbana, which position he held to retirement in 1926. As Emeritus Professor at Illinois, he remained active in botany until only a few months prior to his death.

References

- Buchholz, J. T. William Trelease, 1857-1945. Science 101: 192-193. 1945.
- Bay, J. Christian. William Trelease, 1857-1945. Privately printed at The John Crerar Library, Chicago, Ill. 12 pp. 1945. (Copy in A. J. Sharp private reprint collection.)

Lucien Marcus Underwood 1853 – 1907

It is noted that Dr. Underwood lived and worked in the second half of the 19th century. During that period, it was common for some science specialists to begin their professional work by teaching in the schools, and then in colleges. Moreover, it was also common for them to be interested at first in several

fields of botany. Such was the experience of Professor Underwood, who finally spent his last eleven years (1896-1907) at Columbia University, New York.

Underwood was born October 26, 1853, near New Woodstock, New York, on a farm. He died in Redding, Connecticut, November 16, 1907. As a child he made collections of grass leaves and of rocks and minerals. Again, as often seems to have been the case with mycologists, he showed an early interest in natural history.

He entered Cazenovia Seminary in 1868. Soon he was forced to take over the home farm, but in 1873 he again attended Cazenovia in the spring term. At this time, a teacher (who was also a judge) suggested that he should go to college, and that fall (1873) he entered Syracuse University. Although there were not enough science courses to please him, he did begin building a private herbarium in about 1875. By 1877, he had graduated from Syracuse, and accepted the principalship of the Morrisville Union School, at an annual salary of \$700. By the next year, he had completed one year of graduate work at Syracuse, and had purchased Hooker's "Synopsis Filicum", began collecting ferns in earnest. In that school year, 1878-1879, he taught natural science in the Cazenovia Seminary, and in 1878, published his first botanical paper, on a list of 44 ferns found around Syracuse, and his first mycological paper, published in *Botanical Gazette* 13:3012302. 1888. and dealt with clover rust.

During the next two decades, Underwood had a rather wide variety of experiences, which are here enumerated rapidly: 1879-80, Professor Natural Science, Hedding College, Abingdon, Illinois; 1880-1883, Professor of Geology and Botany, Illinois Wesleyan University, Bloomington, Illinois (there, he took up a study of Hepaticae); 1884, he published a Catalogue of Hepaticae in The Illinois State Laboratory of Natural History, as a bulletin; 1883-1890, Instructor in Zoology and Botany, Syracuse; 1886, promoted to Professor, Syracuse (there he introduced the laboratory method of teaching biology); 1884-1885, he visited Asa Gray, and attended AAAS meeting at Ann Arbor where he met J. C. Arthur; 1887, spent the summer collecting in Tennessee, Georgia, and Virginia for the Smithsonian Institution; 1889, with O. F. Cook, published "A Century of Illustrative Fungi, with Generic Synopses of the Basidiomycetes and Myxomycetes" (Cook was one of Underwood's outstanding students); 1890, Underwood accepted a Fellowship at Harvard where he studied Sullivant's and Taylor's hepatics, and also looked at polypores; 1891, he studied an orange disease in Florida; 1890, appointed Professor of Botany, DePauw University, Greencastle, Indiana; 1892, he was sent as a delegate to the International Botanical Congress, in Genoa; 1895, the Department of Botany at DePauw was abolished for lack of funds; 1895, appointed Professor Biology at Alabama Polytechnic Institute (now Auburn University); 1896, became Professor of Botany, Columbia University, where he remained until death (1907). He was awarded the Honorary LL.D. by Syracuse University, in 1906. He served as Editor of the *Bulletin of the Torrey Botanical Club*, 1898-1902.

His book "Moulds, Mildews, and Mushrooms" was well known during its day (1899). He also published papers on polypores, edible fungi, morels, plant disease control, rusts, and other similar subjects.

Underwood distributed two sets of exsiccati: (1) Indiana Flora, Parasitic Fungi, nos. 1-100. Sets of this issue of fungi went to Missouri Botanical Garden, USDA, Columbia University, and to his own private herbarium. While at DePauw he was also Director of the Botany Division of the Indiana State Biological Survey. (2) With O. F. Cook, "A Century of Illustrative Fungi, with Generic Synopses of the Basidiomycetes and Myxomycetes". This set included not only Underwood's collections, but also some of those by Holway and Pammel. Sets are at Brown, Colorado, Cornell, DePauw, Iowa State, University of Mass., University of Michigan, N. Y. Bot. Garden, N. Y. State Museum, Penn. State, and University of Toronto.

References

- Curtis, Carleton Clarence. A biographical sketch of Lucien Marcus Underwood. Torrey Bot. Club Bull. 35: 1-12. 1908. With a photograph.
- Barnhart, John Hendley. The published work of Lucien Marcus Underwood. Torrey Bot. Club Bull. 35: 17-38. 1908. (A long list of titles)
- Howe, Marshall Avery. Lucien Marcus Underwood: a memorial tribute. Torrey Bot. Club Bull. 35: 13-16. 1908.

Josef Velenovský 1858 – 1949

Lloyd commented on Velenovský when he (Lloyd) received a copy of Velenovský's "Česke Houby" (Bohemian Fungus Flora). Lloyd confessed that at that time, the impression in America was that most European mycology was in France and England. He surmised that perhaps a great amount of work was going on in eastern Europe (and about which, at least in the West, little or nothing was known). Lloyd was constitutionally opposed to the prevalent practice of most professional mycologists of two counts: (1) describing many new species; and (2) of placing after the new binomial "those 'mystic letters' after them".

Lloyd concludes his brief statement on Velenovský by quoting his correspondent (whom he does not identify): "In his native country he was for political reasons pushed aside, although his merits for the botanical and mycological science are the largest from our people".

Reference

- Lloyd, C. G. Mycological Notes 75: 1349-1350. 1925. With a photograph.

Carlo Vittadini 1800 – 1865

Prior to Vittadini's work, very little was known to the mycological world on hypogean fungi; thus, Lloyd states that this Italian will ever be known as the "Father of Hypogean Fungi" (truffles).

Vittadini was a practicing physician in Milano, and his work on fungi was for him a recreation. He acquired a trained dog and hunted truffles (trained hogs have also long been used). He developed a system of classification for these underground forms and published colored illustrations on them. Vittadini distributed specimens which are preserved in Berkeley's and Tulasne's herbaria. His principal collection, however, was secured by Mattiolo, Torino, Italy.

Lloyd's evaluation of Vittadini was that he, along with Mattiolo and Tulasne, were masters of the subject; other good workers included (by Lloyd) Berkeley, Fischer, and Gilkey. Finally, groups whom Lloyd called "rotters" and "posers" included Burt, Harkness (U.S.), Corda, Bucholtz (Russian) and Massee (British).

Reference

- Lloyd, C. G. Mycological Notes 70: 1219. 1923. With a photograph.

Elsie M. Wakefield **1886-1972**

Born in Birmingham, England, she made a start in botany under her father's teaching. He was, for a time, a lecturer in science, and, from boyhood, was a naturalist.

Miss Wakefield studied botany at Oxford, and on graduation went to Munich where she spent almost a year in the Forstbotanisches Institute under von Fubenf. In 1910, she was appointed assistant to Masee, at Kew. When Masee retired, she succeeded him as head of mycology, in charge of the collections there. In 1920, she spent six months in the West Indies and two months in the United States and Canada.

Reference

- Lloyd, C. G. Mycological Notes 72: 1209. 1924. With a photograph.

Erdman West **1894 - 1965**

A plant pathologist by vocation, at The University of Florida, West learned about the fungi at Pennsylvania State University under Drs. Kern (rusts) and Overholts (polypores and other Hymenomycetes). He also learned much and was stimulated by Dr. Murrill who retired to work in Florida, from 1942 to 1957. Likewise, Dr. Robert Hagdstein, who made his headquarters in Gainesville while collecting Myxomycetes in Florida, stimulated West to hunt and identify species of this group, on which he published a list for Alachua County (see Florida Acad. Sci. Proc. 4:212-217. 1940).

Meantime, West was also a student of the higher plants, so that he became an authority on Florida higher plants and on the fungi. He also conducted botanical forays so that at the time of his death, the herbarium at Florida, which he established, numbered 150,000 specimens.

Professor West was a native of Pennsylvania, took the A.B. at Penn State in 1917, and was a nursery inspector in New Jersey, 1917 to 1924. The following year he joined The University of Florida staff, and there took the M.S. degree.

Reference

- Weber, G. F. Erdman West, 1894-1965. Mycologia 58: 179-183. 1966. With a photograph and a list of 39 publications, in mycology and plant pathology.

Herbert Hice Whetzel 1877 – 1944

Probably few biologists have been known to generate more enthusiasm about their work than Whetzel. This characteristic was enhanced by an abundance of energy and good will. He was entirely at home in the class room, in a faculty meeting, or with a group of laymen. His suggestions to graduate students were always numerous and sound, and highly interesting because they showed his unusual imagination. As a leader, he was a living example of hope itself; it was very difficult to discourage him in any undertaking. I was more than fortunate to have studied under Whetzel, and to have served for some seven years with him on his Plant Pathology Faculty, at Cornell University.

Whetzel was born September 5, 1877, on a farm, near Avilla, Indiana. His parents were Pennsylvania "Dutch". He finished high school at Avilla in 1895, and two years later (1897) he entered Wabash College. After dropping out for one year (because of eye trouble), he took the A.B. at Wabash in 1902. At college, he came under the influence of Mason B. Thomas, an exceptional teacher of botany. Thomas had come to Wabash from Cornell in 1891 as a successor of the eminent John M. Coulter when the latter went to The University of Chicago. Under Thomas, Whetzel became interested in the fungi. At graduation in 1902, it seemed natural for Whetzel to take an assistantship under Atkinson, at Cornell. There, Whetzel began collecting agarics, boleti, and other fungi, in company with both Atkinson and Kauffman (later at Michigan).

Whetzel all but completed the Ph.D. under Atkinson, but, in 1906, he left Atkinson's Department of Botany in The College of Liberal Arts to accept the position of Assistant Professor of Botany in a new department organized by Dean L. H. Bailey in the College of Agriculture. The next year, 1907, his title was changed to Assistant Professor in a new Department of Plant Pathology, said to be the first department to be established under that name. Whetzel accepted honorary degrees of M.S. in 1906, and D.Sc. in 1931 from Wabash.

Whetzel was especially adept at organizing, anything and everything with which he came in contact, including his rapidly expanding department, the curriculum in plant pathology, and even his own time-budget. With his numerous increasing responsibilities, he found time to collect, not only parasitic fungi on crops, but also saprophytic fungi in all groups. Finally, he became interested in *Sclerotinia*, and several of his best works dealt with this genus and some of its relatives.

One of Whetzel's ambitions was never realized, largely because of relatively early death at age 67. He had encouraged some of his staff to write manuals (in a series edited by L. H. Bailey) of certain crop diseases, and with these same staff members, he had planned to write a textbook of general plant pathology. He had developed and sharpened his concepts of terms, and had the book been published, it might well have stabilized for some time terminology on the field to a high degree.

References

- Fitzpatrick, H. M. Herbert Hice Whetzel. *Mycologia* 37: 393-413. 1945. With photographs and a list of 57 titles.
- Barrus, M. F. and E. C. Stakman. Herbert Hice Whetzel. *Phytopath.* 35: 659-670. 1945. With a photograph and a list of publications more than 5 pages in small type.

W. Lawrence White

1908 – 1952

At the age of 44, death by automobile accident cut off what mycologists then felt was an exceptionally promising young man in the field. At White's death, he was holding the positions of Director of the Farlow Herbarium and Associate Professor of Botany at Harvard University.

Born on May 29, 1908, in Salina, Pennsylvania, he in time entered Pennsylvania State College, where in his undergraduate days he served as a student assistant to Dr. L. O. Overholts. White learned of polypores and telephoras from Overholts, of rusts from Kern, and smuts from Zundel (one of my students at Cornell). These men advised him to take graduate work at Cornell, where he studied under Fitzpatrick, and also from Whetzel from whom White became greatly interested in the Discomycetes. On the family Helotiaceae especially, he became an authority.

In 1941, White took the position of Bibliographer and Assistant Curator of Fungi at the Farlow Herbarium under Dr. David H. Linder. One of his projects there was to undertake a revision of Seymour's Host Index, a manuscript which he completed (up to 1942).

During World War II, White suddenly, in 1943, took up a study with the Chemical Corps, at Massachusetts Institute of Technology, and subsequently published on his researches on the deterioration of fabrics used by the Army. His works serve today as a basis for the development of mildew-proofing treatments for textiles, leather, paper, wood, and other materials.

In 1948, he succeeded D. H. Linder as Director of the Farlow Herbarium.

Reference

- Siu, R. G. H. and E. T. Reese. W. Lawrence White. *Mycologia* 45: 605-612. 1953. With a photograph and a publication list.

Sanford Myron Zeller

1884 – 1948

Zeller's early life and parentage follow that of some other scientists. His father was a minister, and thus Sanford was born into a home of some culture. Naturally, he went to college around 1905.

Interest in science was aroused in young Zeller by a high school teacher. He first entered Lawrence College, Wisconsin, then transferred to Greenville College in Illinois where he took the B.S. in 1909. Later, he took the A.B. and M.A. at The University of Washington, Seattle, where he became an instructor. Zeller took the Ph.D. at Washington University St. Louis, in 1917. There (1917-1919) he did research in tree diseases, when, in 1919, he was made Assistant Pathologist at The Agricultural Experiment Station, at Corvallis, Oregon. He remained there for the next 29 years.

Although mycology was his choice field of study, his livelihood was from his work in plant pathology. Zeller did excellent work on crop diseases in Oregon, especially on tree fruits and berries. In his last year,

he spent a semester on leave at The New York Botanical Garden, working on a manuscript dealing with the Gasteromycetes for North American Flora (never reached publication, so far as I am aware). He also had great interest in the hypogeous fungi. His publications number some 155 titles, including a series of papers on fungus physiology (enzymes and wood decay), pathogenic fungi on fruits, and then Gasteromycetes.

Reference

- Gilkey, Helen M. Sanford Myron Zeller. *Mycologia* 41: 357-368. 1949. With a photograph and publication list.

George Lorenzo Zundel 1885 - 1950

As with many another student of fungi, Zundel spent his professional career in both mycology and plant pathology. He earned his livelihood in plant pathology, but his preference was for the study of fungi.

Zundel was a native of Utah, took the B.S. degree in Agriculture in 1911. He entered graduate school in plant pathology at Cornell in 1913 and was awarded the Master's degree in 1915. In 1920, he became Extension Pathologist in The State of Washington and in his work there became greatly interested in the Ustilaginales (smut fungi). This interest led him to enter Yale in 1926, where he was able to study under G. P. Clinton (at Storrs), an internationally known figure in this group of fungi. Armed with the Ph.D. (Yale, 1938), he went to Penn State in 1928, where he completed his career in plant pathology.

In the field of the smut fungi, Zundel described one new genus and several new species. During his career, he began the mammoth undertaking of a monograph of the smuts of the world. His rather early retirement and death left his monograph in manuscript form. His herbarium is at the National Fungus Collections, at Beltsville, Maryland.

I remember Zundel for his energy, pleasing personality, and his honesty of intention; he took my course in general plant pathology, at Cornell, about 1913.

Reference

- Stevenson, John A. George Lorenzo Zundel, 1885-1950. *Mycologia* 43: 1-4. 1951. With a photograph and a publications list.