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An Historical Perspective: Mycology In The Departments of Botany and of Plant Pathology at Cornell University and the Geneva Agricultural Experiment Station¹

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Perhaps a better title for this report would have been “An idiosyncratic historical perspective,” for this is a very personal view of the history and the development of mycology, in particular, within the framework of both the botany and plant pathology departments at Cornell and at the associated Geneva Agricultural Experiment Station. It consists of reminiscences and rambling based in part on the best historical records I could locate, in part on my own, not always dependable, memory, laced with a scattering of autobiographical details.

My qualifications for this task derive, much to my surprise, primarily from my age, which has crept up on me almost unawares. For so many years I was “the young kid on the block,” finding myself an elder (if not an elder statesman) in the Department was an unexpected awakening. I arrived as a freshman student on the Cornell campus forty-eight years ago this current autumn, just turned 17 years of age, coming from a well-to-do middle class family with homes in Westchester County, New York, and in New Fairfield, Connecticut. I was the product of a prestigious private school, Riverdale Country School² in New York City, and chose Cornell University for study with the vague notion that I might like to become a gentleman farmer. My freshman year was an exciting one in which I encountered three of the best teachers I have ever had, a professor in Poultry Science, one in Botany, and one in Theatre Arts. It was the botany professor, Loren C. Petry, who insisted that during my second year I “must take the course from Professor Whetzel upstairs in Plant Pathology.” Dutifully I enrolled in H. H. Whetzel’s course in Introductory Plant Pathology, the last time that he ever gave that course, in the fall term of 1943, and I became instantly enamored of both Prof Whetzel (the fourth of the great teachers I encountered) and of the field of Plant Pathology. I obtained my bachelor’s degree in 1946 with a major in botany, and immediately enrolled in the field of Plant Pathology for a Ph.D. with a major in mycology, and minors in genetics and general botany, receiving that degree forty years ago in 1950.

1 Based on seminars presented to the Departments of Plant Pathology at Cornell University and at the Geneva Agricultural Experiment Station, November 1990.

2 At the age of 16 I had my first taste of formal teaching when I was placed in full charge of the course in Biology at Riverdale when the master employed to teach it entered the armed services. Many of the students were older than I, and in retrospect I am convinced that this experience had an enormous impact on my future and on my decision to enter the teaching profession.

Botany, Horticulture and Arboriculture

- 1868 Albert Nelson Prentiss, M.S.
- 1876 William Russell Dudley, M.S., Assistant; Botany. 1883.
- 1879 William Rane Lazenby, M.Ag., Assistant; Horticulture. 1881.
- 1883 William Russell Dudley, M.S., Assistant; Cryptogamic Botany.
- 1888 Liberty Hyde Bailey, Jr., General and Experimental Horticulture,

Fig. 1. Faculty in Botany during Cornell's first 20 years (*The Ten-year Book of Cornell University II, 1868-1888*).

I'd like to start this guided tour with a view of the young University. **Fig. 1** is from the *Ten-year Book of Cornell University*, in which you see listed the personnel who comprised the Department of Botany, Horticulture and Arboriculture during the first twenty years. First on the list is **Albert N. Prentiss (Fig. 2)**, appointed as Professor of Botany and head of the Department at the founding of the university in 1868. The first fall Prentiss had four students in his botany course, all advanced students who had transferred to Cornell from other institutions. The next year saw an increase in enrollment to an amazing 144 students, and apparently numbers remained high thereafter. Notable among Prentiss's students was David Starr Jordan, who in his senior year (1871-72) appointed the first Instructor in Botany. Jordan of course later became President of Stanford University, and also is notable in having received one of the only two honorary degrees ever awarded by Cornell University (the other was to the university's first president, Andrew Dickson White; both received an L.L.B.) Probably the first scientific paper on fungi from the new university was Prentiss's "Puffballs and their kindred," published in 1871 in the *Cornell Era*, a scholarly, instructive essay on the organization and structure of gasteromycete fruitbodies. Prentiss gave the first course of lectures on fungi two years later in 1873, at which time he was assisted by **W. R. Dudley (Fig. 3)**, who as an undergraduate was given the instructorship in 1872 on Jordan's departure. After graduation Dudley was appointed Assistant Professor of Botany from 1876 to 1883, and then Assistant Professor of Cryptogamic Botany until 1892. In 1887 Dudley trained for a year with the famous German mycologist, **Anton De Bary (Fig. 4)**, our only formal tie to that early mycologist and plant pathologist. One of Cornell's most eminent botanists, **Liberty Hyde Bailey (Fig. 5)** joined the Botany Department in 1888, and was later to become Dean of the newly designated New York State College of Agriculture, and to be instrumental in establishing the Department of Plant Pathology in that College.

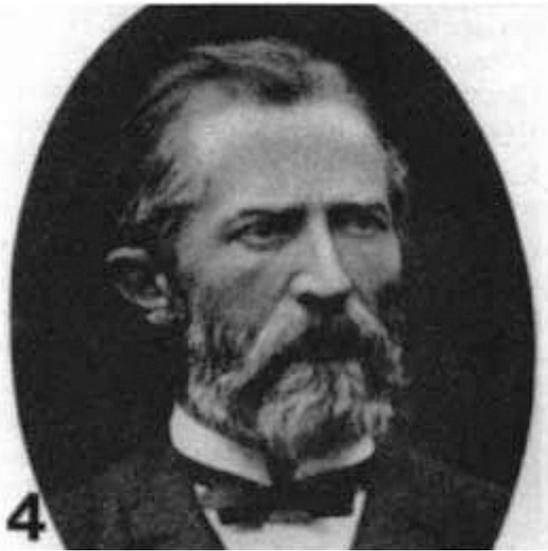
Dudley left Cornell in 1892 to go to the new Leland Stanford University, one of the many great teachers who were enticed away by David Starr Jordan in establishing that university. But during his tenure at Cornell he produced



2. A. N. Prentiss



3. W. R. Dudley



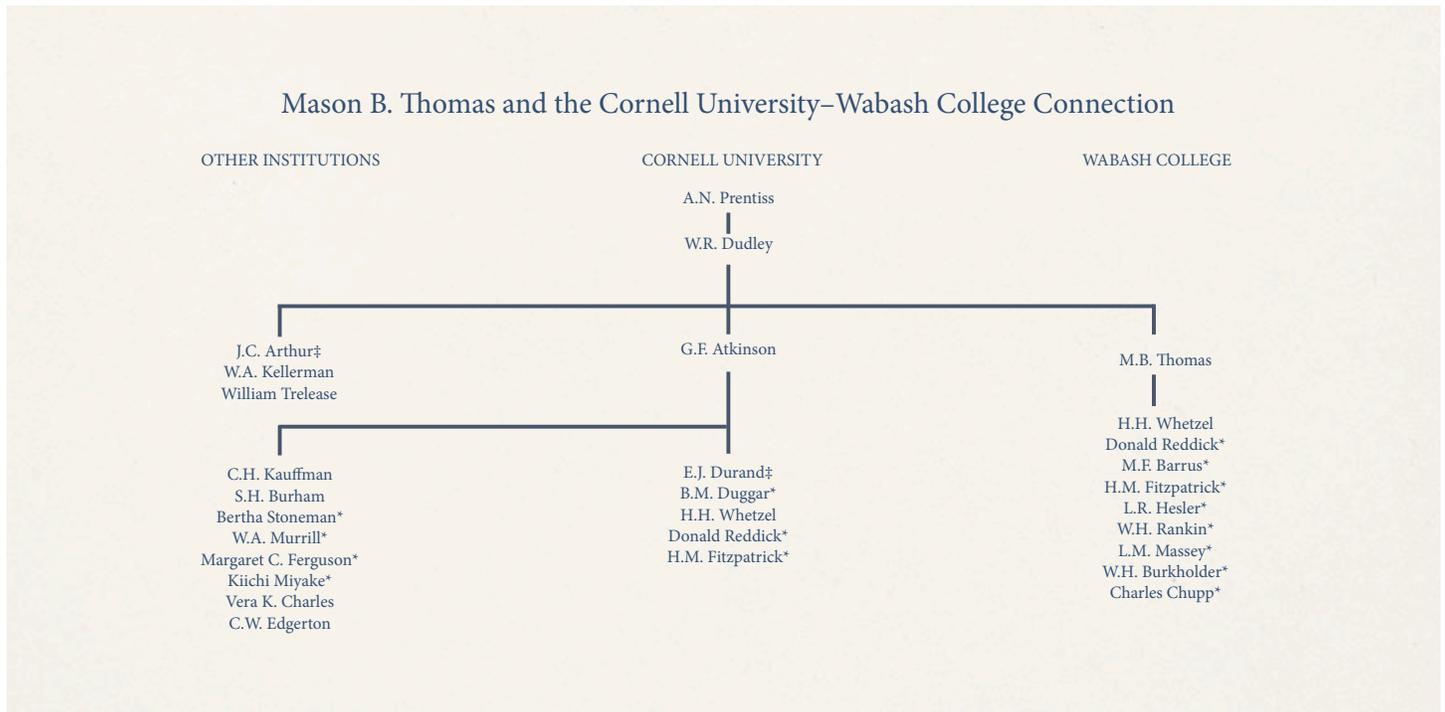
4. A. De Bary



5. L. H. Bailey.

five highly influential botanists (Table 1). One of these, W. A. Kellerman, was a mycologist interested in rusts and smuts, first at Kansas State Agricultural College and later at Ohio State University, who founded the *Journal of Mycology*, predecessor to the current major American mycological journal, *Mycologia*. William Trelease was also a Dudley student, and became one of the most important botanists in America at the Missouri Botanical Garden and later as head of the Botany Department at the University of Illinois.

Table 1.



**All of Thomas's listed students did their graduate work in mycology/plant pathology at Cornell and all later became faculty members of the Plant Pathology Department, Cornell University*

‡ Received Cornell D.Sc. degree

* Received Cornell Ph.D. degree

I wish at this point to focus on **Joseph Charles Arthur (Fig. 6)** who received the first doctorate in mycology from Cornell in 1886. His degree was that of a Doctor of Science, and was an earned, not an honorary degree. (Cornell awarded 108 Ph.D.'s in its first 30 years, 19 earned D.Sc.'s, and one D.V.M. degree.) Arthur is probably best known to most mycologists for his monument work on American Uredinales, but it is worth pointing out here that he became the first plant pathologist ever appointed to an experiment station when he was given the position of Botanist in 1884 to study plant diseases at the New York State Experiment Station. That station was organized in 1880 at Geneva, New York, some 60 km to the north of Ithaca. His first paper was a plant pathological treatise on pear blight.



6. J. C. Arthur

This is perhaps as good a point as any to introduce the connections between experiment stations and Cornell University. A year before establishment of the station at Geneva, the Cornell University Experiment Station was founded in Ithaca, and many professors of the university, particularly in agricultural areas were also given titles and duties in the Experiment Station. By 1887 the federal government's Hatch Act led to a change in the name to the Cornell University Agricultural Experiment Station. It was not till 1898 that the College of Agriculture was established at Cornell (from the old Department of Agriculture), so that the Cornell University Agricultural Experiment Station is actually a year older than the College of Agriculture.

Let us examine now the further development of the Geneva station. Arthur resigned in 1887, E. S. Goff and M. H. Beckwith took over investigations on plant disease. Then, in 1894, **F. C. Stewart (Fig. 7)** was appointed Mycologist, and was headquartered in Jamaica, Long Island. In 1898 Stewart was transferred to Geneva, given the title of Botanist, and placed in charge of the new Division of Botany, a position he held for 38 years. The two experiment stations, at Geneva and at Cornell, were merged in the 1920's. Another Cornell-trained plant pathologist, **W. H. Rankin (Fig. 8)** joined the Geneva staff in 1922, leaving for the New York State Department of Agriculture and Markets in 1934. In 1936 Stewart was named head of the newly created Division (later Department) of Plant Pathology at Geneva. Today graduate students enrolled in Cornell frequently pursue their research at Geneva and take their course work on the Cornell campus, and Geneva professors, who are also professors of the university, direct their research.



7. F. C. Stewart



8. W. H. Rankin

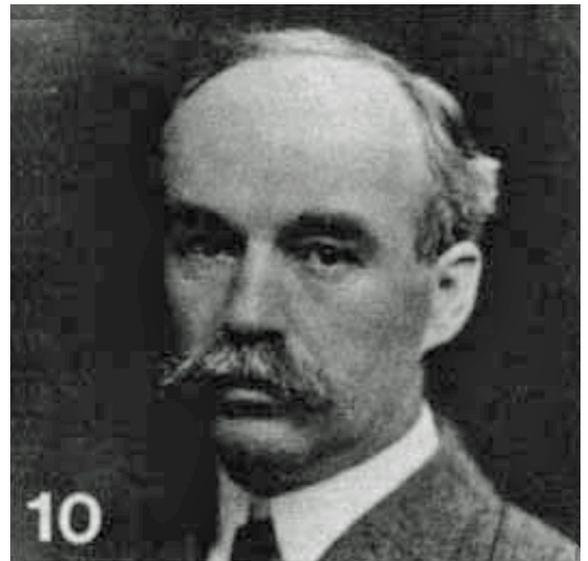
At this point I wish to return to our early Cornell history, and to two of W. R. Dudley's other students who had impressive roles in the development of mycology and plant pathology at this university. Neither obtained a doctorate degree, but at that time such a degree was by no means mandatory for appointment to a professorship.

The first of these two Dudley students I wish to examine in detail is **Mason B. Thomas (Fig. 9)**. He accepted the call to a professorship at Wabash College, in Crawfordsville, Indiana. He was, by all accounts, a truly exceptional teacher, and he maintained ties to Cornell that were to shape the whole future of Cornell's work on fungi and plant diseases. As you will see from Table 1, from this small college Thomas sent to Cornell for graduate work nine young men, all of whom became members of the Department of Plant Pathology, all but one (Whetzel,) earning their Ph.D. degrees here, either under the direction of Atkinson or of Whetzel. How such a contingent of first-rate scientists could have been found and selected by Thomas seems incredible. The Wabash College connection to Cornell University probably has no counterpart in American science. (If I may be permitted an aside at this point, I will point out that when I was doing my undergraduate and graduate work at Cornell from 1942-1950, seven of those nine were still professors here! Only W. H. Rankin and L. R. Hesler had moved on to perhaps greener pastures.)

For the rest of this paper I shall devote myself mostly to the mycological side of the history. This will, of necessity, have much relationship to plant pathology, for in the early days all plant pathologists had their training as mycologists first. Any such history must continue with the line of mycology leading from Prentiss, through Dudley, to Dudley's mycological heir at Cornell, his student **George F. Atkinson (Fig. 10)**, who left Cornell on graduation in 1885 after receiving the Ph.B. degree. His interests were then chiefly in zoological subjects, and he became Assistant Professor and then Associate Professor of entomology and zoology at the University of North Carolina, Chapel Hill from 1885 to 1888. He moved on in 1888 to become professor of botany and zoology, and botanist of the University of South Carolina, and from 1889 to 1892 was professor of biology and biologist of the Experiment Station at Alabama Polytechnic Institute, where he published his well-known paper on nematodes, and others on cotton and fig diseases, as well as on fungi. When Dudley left Cornell in 1892 Atkinson was recalled to replace him, becoming head of the Department of Botany on Prentiss's retirement in 1896.



9. M. B. Thomas



10. G. F. Atkinson

Atkinson's students (Table I) were among the elite of mycologist and botanists. C. H. Kauffman, whose work on the Agaricaceae of Michigan is still a classic, and **Stewart H. Burnham (Fig. 11)** both studied under Atkinson. Burnham later did graduate work under Atkinson's teacher, W. R. Dudley at Stanford University. Bertha Stoneman received her Ph.D. from Atkinson for studies of anthracnose diseases, and then went to South Africa as a botanist.

William A Murrill took his doctorate under Atkinson, and became one of the world's foremost agaricologists at the New York Botanical Garden. Margaret Ferguson received her Ph.D. under Atkinson and became Head of the Botany Department at Wellesley College. Kiichi Miyake also obtained his Ph.D. under Atkinson, returning to Japan to become a professor at Imperial University, Tokyo. Vera K. Charles and C. W. Edgerton were also Atkinson students wielding influence on the development of the science of plant pathology.

Back at Cornell, an Atkinson student who was appointed to the staff and remained here for an extended period was **Elias J. Durand (Fig. 12)**, one of the most respected mycologists of his era, and a specialist in Discomycetes. He was an Assistant Professor under Atkinson for fourteen years before leaving for posts at Missouri University in 1910, and later at the University of Minnesota, where he died in 1922. His extensive herbarium of Discomycetes, including portions of the types of nearly all American species described prior to 1920, and his mycological library were purchased by Cornell's Department of Plant Pathology after his death (and is one of the major reasons I was so delighted to accept appointment here in 1951, since my research, too, is primarily with discomycetes, and the Durand collections are exceptionally useful for such taxonomic work).



11. S. H. Burnham



11. E. J. Durand

B. M. Duggar (Fig. 13), who first studied with Atkinson in Alabama, came to Cornell and received the Ph.D. under him in 1898, and occupies an important place in the history of American phytopathology. He returned to Cornell in 1907, when he was named head of the Department of Plant Physiology, until he left again in 1912 for the Missouri Botanical Garden. In 1909 he published in Ithaca the first American book on plant pathology, *Fungous diseases of plants*.



13. B. M. Duggar



14. Herbert Hice Whetzel

But it was, of course, *Herbert Hice Whetzel* (Fig. 14) who figured most prominently in the development of plant pathology at Cornell.

The first course in the “more important parasitic fungi” (Botany II – Mycology) had much earlier been offered by Atkinson and Durand in the Department of Botany, and by 1906-1907 a course in Methods of Research in Plant Pathology was also offered in that department. In the same year a course was listed in the new College of Agriculture’s Department of Agricultural Botany as 2a - Plant Diseases, offered by Whetzel. In 1907 Whetzel convinced Dean Bailey to rename the department Plant Pathology, and his title was changed to Assistant Professor of Plant Pathology. Two courses were offered in 1907-1908, 1a – Plant Pathology and 2a – Methods in Plant Pathology, both taught by Whetzel and Donald Reddick, one of the “Wabash boys.” By 1908-1909 five courses, plus seminar and research, were offered by Whetzel, Reddick, and another of the Wabash group, Barrus.

Whetzel was an exceptionally talented and energetic man, and frictions amongst the rapidly expanding department members and Whetzel developed to the point where by the early 1920’s there was open rebellion within the Department. In 1921 Whetzel stepped down as department head, and was succeeded by his student, yet another Wabash product, L. M. Massey, who remained head of the Department until 1950.

Whetzel would be an anomaly among leaders in phytopathology today, for he was trained as a mycologist, brought the science of plant pathology to fruition as no other did, and yet remained a mycologist till his dying day. His idea of training plant pathologists was to take them out into the field and woods to collect fungi. His early interest in sclerotial fungi led him to become the world authority on the group of Discomycetes for which he was to coin the name Sclerotiniaceae, and to work with students such as F. L. Drayton, W. Lawrence White, and Thomas L. Sproston on these fungi.

One of Whetzel's first actions was the establishment of a department herbarium, which he considered the backbone of documentation for both mycology and plant pathology. The herbarium at first consisted of the donation of his own mycological herbarium of over 5000 numbers, and that herbarium has grown over the years till it now encompasses over 300,000 collections, and is probably the fourth largest fungus collection in the United States. Many important exsiccati sets were purchased from departmental funds. Staff members constantly accessioned new materials, and a huge photographic record was backed up by the actual specimen photographed. A strong interest in Latin American collecting by Whetzel and his students, with trips as well to the Caribbean and Bermuda, make up special collections unrivalled elsewhere. At that time the station at Geneva also maintained a more modest but significant herbarium, in large part consisting of F. C. Stewart's personal herbarium and many published exsiccati sets that had been purchased, as well as materials deposited by station members. These collections were eventually transferred to the Cornell University Plant Pathology Herbarium during my tenure as mycologist, when they were deemed to be seldom consulted and to be occupying too much valuable space at Geneva. Once the new Plant Science Building was occupied by Plant Pathology in the early 1930's, the old Botany Department herbarium consisting of Atkinson's and his students' collections and photographs were transferred to and incorporated in the Plant Pathology Herbarium as a special collection. Also many of Stewart Burnham's New York collections ended up in our herbarium when his phanerogamic collections were given to the Wiegand Herbarium at his death. Other significant accessions include the *Chaetomium* collections of **A. H. Chivers**, a Harvard Ph.D. who became a professor at Dartmouth College, shown here (**Fig. 15**) at the center, together with **Julian H. Miller**, a Cornell Ph.D. whose doctorate work on pyrenomycetes at Cornell led to his becoming a world authority. Miller was named head of the Department of Botany and Plant Pathology at the University of Georgia. The third person shown in **Fig. 15** is S. C. Teng, from China, who studied here in the 1920's, and who single-handedly spirited about one-fourth of the Chinese National Fungal Herbarium out of China in the face of the Japanese invasion in the 1930's. Some of that material was divided, half of each collection at Cornell and half at the Bureau of Plant Industry, Beltsville, while the rest of the material was deposited only at Cornell, where it is still maintained.



15. J. H. Miller, A. H. Chivers, and S. C. Teng

Side by side with the development of the herbarium was Whetzel's continuation of the purchase of mycological and phytopathological books for the Cornell and Plant Pathology libraries. Many trips to Europe were devoted in part to browsing through antiquarian book stores and sending back rarities—an extension of the efforts of the first university president, Andrew Dickson White, and of the botanists from Prentiss through Dudley and Durand. Whetzel was convinced his new science could not grow without a major herbarium and world-class botanical li-

brary (and Cornell's library then and now is surely only equalled in this country by those at Harvard University, the New York Botanical Garden, and the Library of Congress).

On founding the Plant Pathology department Whetzel understandably sent all the plant pathology students down to the Arts College to take their mycology from Atkinson, but Atkinson's greater and greater preoccupation with the agarics led to a somewhat distorted course offering. When **Harry M. Fitzpatrick (Fig. 16)**, who while at Wabash had been thoroughly indoctrinated and encouraged by Whetzel, completed his doctorate under Atkinson in 1912, Whetzel installed him in the Plant Pathology department to teach mycology. From 1912 on Fitzpatrick taught the mycology courses (a year-long introductory mycology course, and a two-year-long advanced mycology course) in the College of Agriculture, while Atkinson continued to teach in the College of Arts and Science's Botany Department. In 1917 Atkinson was relieved of teaching by the university trustees in order to complete his proposed illustrated monograph of North American Agaricaceae. (Atkinson had long championed photography, and won many awards for his photographs; his illustrations in his book, *Studies of American fungi mushrooms edible, poisonous, etc.*, first published in 1900, with later editions, are renowned.) On a collecting trip to the western US a year later Atkinson died during an influenza epidemic. His position as mycologist in the Botany Department was never refilled, and thus the work on mycology permanently "moved" from the College of Arts and Sciences to the College of Agriculture.

Five more of the Wabash group completed their doctorates shortly, thereafter. **L. R. Hesler (Fig. 17)** remained at Cornell for some years as a plant pathologist before ending up at the University of Tennessee as mycologist and world-renowned agaricologist; W. H. Rankin also stayed on the Cornell faculty, some six years before moving to Canada and shortly thereafter to the Geneva Agricultural Experiment Station; L. M. Massey, who replaced Whetzel as held of the department in 1921, Walter H. Burkholder, and Charles Chupp all stayed on as professors in the department after completion of their Ph.D.'s under Whetzel

There were many distinguished students in the department over the years, but I am compelled to single one out. **Anna E. Jenkins (Fig. 18)** was a New York State native who obtained her bachelor's, master's, and doctorate degrees from Cornell in 1911, 1923, and 1927. Anna worked all her life for the federal government in the Bureau of Plant Industry as a mycologist, first appointed in 1912, with particular interest in the Myriangiales. She had very fond memories of Cornell, and visited here often during Fitzpatrick's life, and also after his death during my tenure as mycolo-



16. H. M. Fitzpatrick



17. L. R. Hesler



18. A. E. Jenkins

gist. On her death her estate was bequeathed to the Department to assist in the mycology programs, and through her generosity it has been possible to support many students and visiting scientists in the department as Anna E. Jenkins predoctoral fellows, postdoctoral fellows and associates, and visiting professors.

One other “character” in mycology should be mentioned here, **Curtis Cates Lloyd (Fig. 19)**, an eccentric, wealthy, self-taught mycologist. Lloyd had many, peculiarities, among them an early aversion to citing the names of authors after Latin names. He called such citations “advertising,” and railed against name “jugglers” that he conceived as having self-interest in changing names and creating some of the new combinations that were being published, to which their names were appended. He had apparently been scorned by one or more academicians early in his career, and thus never published in any journals except his own privately printed ones. These could not be obtained on subscription but only by barter for fungus specimens sent to him by correspondents. Lloyd created a tongue-in-cheek fictional character, “Professor N. J. McGinty,” whose greatest joy seemed to be making name changes, many of which Lloyd published with McGinty cited as the combining author. Some have held that McGinty was modelled on G. F. Atkinson, but I have been unable to trace such a connection. Lloyd would often change from esteem of a scientist to scorn, and he did not hesitate to publish his at times scurrilous opinions. For reasons quite incomprehensible to me Lloyd coined the generic name *Jugglerandia* to “honor” Elias J. Durand, who had had the audacity to change the name of a species of *Holwaya* (Discomycetes); a short while before Lloyd had had nothing but praise for Durand. Since Durand made very few name changes throughout his career, Lloyd’s barb seems singularly misplaced. Nonetheless, there is another, and for us brighter, side to Lloyd’s character. He was a lifelong bachelor, and in the early 1920’s visited Cornell University where his nephew was enrolled in the entomology program. Fitzpatrick heard that Lloyd was in town, contacted him, and invited Lloyd to lecture to his students and to accompany them on a number of field trips in the area, Fitzpatrick’s kindnesses, and for Lloyd perhaps unexpected “acceptance” in academia, led Lloyd to purchase, unbeknownst to anyone in the Department, three major collecting grounds, which he then gave to the University. These are now called the Lloyd-Cornell Preserves at Ringwood, McLean, and Slaterville Springs, to this day some of the best areas in which to collect fungi within a 50 km radius of Ithaca.



19. C. G. Lloyd



20. H. H. Whetzel

This now brings us up to the time that I arrived in the Department, forty-seven years ago. What remains is a quick rogues gallery of the people who were here at that time, and a select few who arrived later.

This now brings us up to the time that I arrived in the Department, forty-seven years ago. What remains is a quick rogues gallery of the people who were here at that time, and a select few who arrived later.

In 1943 my first encounter with plant pathology was with that fabulous teacher who so changed my life, **Herbert Hice Whetzel**, the professor in the introductory plant pathology course, shown here (**Fig. 20**) at the age I first saw him. My laboratory instructor in that course was a young man just finishing up his Ph.D. with Whetzel, **John S. Niederhauser (Fig. 21)**, later briefly appointed as an assistant professor in the Department, who was recently named the World Food Prize Laureate, and is affectionately nicknamed “Mr. Potato.”



21. J. S. Niederhauser



22. M. F. Barrus

One of the most unusual and to my mind most important features of Whetzel's course was that each student was held to complete 16 oral examinations, each on one week's work. These examinations were given both by laboratory instructors and by those professors in the department who might have worked with the disease studied that week. By virtue of Whetzel's commanding and demanding personality, almost every professor in the department took part in the oral examinations, usually lasting 20 to 30 minutes in that professor's office. As a first term sophomore student I thus met on a one-to-one basis most of the people I will now mention. The few I did not meet in this way soon became acquaintances through the regular departmental afternoon coffee hour, attendance at which was "expected" by Whetzel, whose sonorous, booming, clarion call, on a rising and then declining pitch, "Coffee, coffee!" shook the whole building daily. For simplicity's sake, I shall go through the roster in alphabetical order.



23. F. M. Blodgett



24. W. H. Burkholder



25. A. B. Burrell



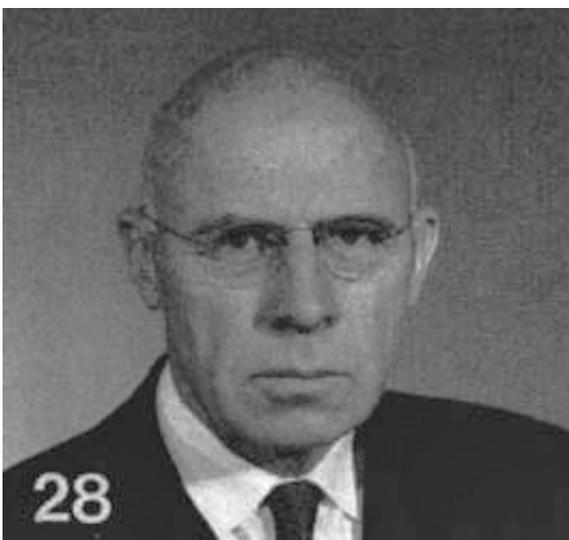
26. C. Chupp



27. A. W. Dimock

M. F. Barrus (Fig. 22), a gentle, delightful man, had worked with diseases of beans, potatoes, and fruit. *F. M. Blodgett* (Fig. 23), somewhat terrifying to a young student, but in reality kind and helpful, who had also been briefly at the Geneva Station, was yet another potato disease man by this time in his career, and *Walter H. Burkholder* (Fig. 24) was our bacteriologist, perhaps best known as “Burkie” and as a friend of graduate students and an inveterate partygoer *Arthur B. Burrell* (Fig. 25) was a fruit pathologist, primarily working with apples, and *Charles Chupp* (Fig. 26) was one of the most beloved of the professors, always cheery, filled with fun, a vegetable pathologist with a lifelong interest in the taxonomy of the genus *Cercospora*, whose 1954 book, a monograph of the genus, is still in demand today. Another sweetheart in the department was *A. Watt Dimock* (Fig. 27), floricultural pathologist, whose dedication to students and to the Department was outstanding.

Karl H. Fernow (Fig. 28) was in charge of the New York State seed potato certification program, and by the summer of my junior year I found myself employed first as a roguer for seed potato plots, and soon after as a full-fledged potato inspector. This was during World War II. Many of the potato inspectors had been drafted or had enlisted in the armed services, which resulted in my meteoric rise in stature in the certification program. Because of these circumstances Johnny Niederhauser and I came to be lifelong friends, since we were both potato inspectors for the program at the same time. At age 19 I was throwing out large acreage fields of potatoes for such problems as excess potato leaf-roll virus, for example, to the great dismay of the growers whose income was threatened thereby. Understandably they would call up Fernow and ask him to reinspect the fields I had rejected. That he did, and



28. K. H. Fernow



29. L. M. Massey

despite obvious wholesale roguing by the grower between my visit and that of Fernow, he always found enough left of whatever pathogen I had marked in excess that he was able to confirm rejection of the field.

An exceptionally awesome figure to a young undergraduate was the rather dour department head, *L. M. Massey* (*Fig. 29*), whose work on rose diseases in particular brought us to his office for an examination. *W. D. "Bill" Mills* (*Fig. 30*), who worked on many fruit diseases, was the one to develop a forecast system for apple scab, a disease almost all of us studied in the introductory course.



30. W. D. Mills



31. A. G. Newhall



32. K. G. Parker



33. L. C. Peterson

Next on my laundry list is the inveterate *A. G. Newhall* (*Fig. 31*), extension vegetable pathologist par excellence, raconteur, who is still with us at 96 years of age and still as sharp as a tack. Al made an effort to contact every graduate student and to host each in his home. *Ken Parker* (*Fig. 32*) was also a fruit expert, while *L. C. Petersen* (*Fig. 33*) was another of the potato men primarily concerned with late blight resistance and the potato breeding program. (It was he who confided to me years later, when I returned to the faculty and canvassed the professors about what the mycology courses should be in their opinion, that though he had taken Professor Fitzpatrick's two-year course in mycology, Fitz had never once mentioned the fungus that Petersen had spent the rest of his life studying.)



34. D. Reddick



35. D. S. Welch

Then there was **Donald Reddick** (Fig. 34), a potato breeder, an internationally known pathologist and the purported ringleader of the revolt against Whetzel's chairmanship that rocked the department in the early 20's. And finally, there was Donald S. Welch (Fig. 35), always a gentleman, a student Fitzpatrick had convinced to come from Harvard to work with him. Welch pursued a mycology major with a taxonomic monograph on the genus *Cucurbitaria* and by the time I met him was the shade-tree and shrub pathologist here. I owe him a particular debt, since my major professor, H. M. Fitzpatrick, died during the final stages of my thesis preparation, and it was Professor Welch who saw the thesis to final completion (along with that of my fellow-student mycologist, Clark T. Rogerson).

So at long last it is time to talk about **Harry Morton Fitzpatrick** (Fig. 36), my professor, a brilliant teacher, and a historian.³ I met "Prof Fitz" for the first time when, in the second term of my sophomore year, I enrolled in the introductory mycology Course (by this time a one-term course), and at the same time in Welch's course on plant disease control. I quickly discovered that what had so excited me about Whetzel's plant pathology course was not so much the diseases, themselves, or their control, but the fungi that caused plant disease. And in the field trips I quickly learned that many equally fascinating fungi don't cause disease at all, but may be significant in other ways, or even just delightful to examine. Prof Fitz was a consummate field man, having been well-trained by Atkinson, and was provided with an enviable photographic memory. He never used notes for lectures, relying always on his memory to fill blackboard after blackboard with classifications, diagrams of fungal structures, and life-histories. He was a meticulous man, to excess, which contributed to his eventual health problems and death. I can remember his office well: it seemed there was an acre of carefully polished desk top, for he had desks all around the walls of his office, and all were pristine. On the desk at which he sat were usually three pencils carefully lined up, and a note pad. When I consider the clutter in which I normally work, I remain amazed that Fitzpatrick ever accepted me as a student.⁴ He was often considered morose, but in fact had a deep sense of humor, though he could often

3 Without Fitzpatrick's meticulously preserved documents and notes, this paper could not have been realized.

4 Fitzpatrick had had ample opportunity to observe me further as an undergraduate, for in my junior year I enrolled in the year-long advanced mycology course, normally open only to graduate students, and in both semesters of my senior year I enrolled in undergraduate research in mycology, where I began taxonomic studies of the discomycete genera *Chlorosplenium* and *Cyathicula*.

In addition to a lack of neatness, I had at least two other attributes that Fitzpatrick certainly, found annoying. At the time I was a thoroughly addicted pipe smoker, and I smoked from morning till night (except in Fritz's laboratories, where smoking was prohibited). The other annoyance for him was my consuming interest in the theatre and in acting. Almost the first day I arrived on campus I had come under the influence of a truly great drama teacher and director, Professor Alexander M. Drummond. I had been acting in plays all my childhood, and during my undergraduate days I cannot remember



36. Harry Morton Fitzpatrick.

be put off. He was said to have been a champion at pitching pennies in the hallways, a departmental pastime in which he is reputed to have relieved many a graduate student of his or her horde of pennies. During the war his greatest tragedy was not being able to drive his car very far during the days of gas rationing. Those of us with a few extra coupons often helped Prof Fitz realize his desires to drive into the country. I cannot resist quoting two “tales seldom told” collected by G. C. Kent and A. G. Newhall back in 1983, which shed some light on Fitz and on Prof Whetzel as well:

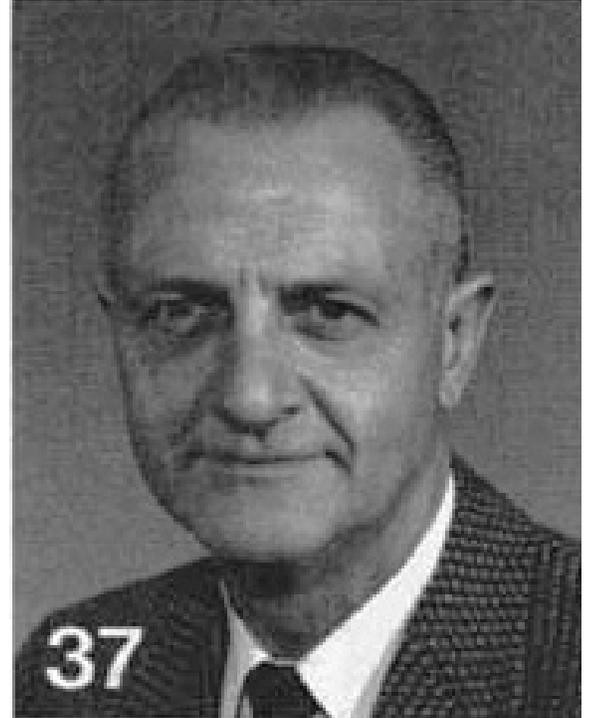
“Fitzpatrick was a good tennis player and enjoyed playing with students. However, it was commonly known among students that they should never beat Fitz the day before an exam.

“Fitz hated cigar smoke and Whetzel smoked much of the time. He particularly liked to stand in Fitzpatrick’s doorway and TALK AND PUFF and watch Fitz squirm. Fitz would later slam open the door and window and then go for a walk.”

even a two-week period when I was not busy learning lines, rehearsing performing or writing drama reviews for the *Cornell Era*. Prof Fitz thoroughly disapproved and thought I should devote all my time in my graduate school years to mycology. I had no intention of giving up my favorite avocation, so for the next four years I resorted to subterfuge. Whenever I appeared on the Cornell or Ithaca stages or in radio dramas over the local radio station, it was under the pseudonym “Jonah Webster,” just in case Fitz happened to listen to the radio or to read a theatre review of a play in which I was performing. My connection to Cornell and Ithaca theatre groups continued after my return to the Cornell faculty, and culminated in 1985-1986 when, for a year, I was loaned to and appointed halftime as the chairman of the Theatre Arts Department in the College of Arts and Sciences when that department in the throes of “Strum und Drang.”

Lest this story leave you with the notion that Fitz held any animosity towards Whetzel, I think it prudent to point out that Fitz's opinion of Whetzel's work as a mycologist was one of unbridled praise. The cigar smoke may have offended Fitz, but when Whetzel died in late 1944 and left his major mycological opus half-completed, it was Fitz who painstakingly completed it and saw it to publication in *Mycologia* in 1945 as Whetzel's *A synopsis of the genera and species of the Sclerotiniaceae, a family of stromatic inoperculate discomycetes*.

Between 1943 and when I obtained my Ph.D. degree in 1950 a few others came to the Department and stayed to become professors. To teach the course in Plant Disease Control came **Leon J. Tyler (Fig. 37)**, whom I was to know particularly well during the last three years of my graduate work, since I was appointed teaching assistant for the course that he taught.⁵ Our nematologist from 1946-1983, **William "Bill" Mai (Fig. 38)**, taught the first plant nematology course at Cornell and trained 27 Ph.D. students who have significantly influenced the development of plant nematology in the US and developing countries. **A. Frank Ross (Fig. 39)** joined the staff as virologist in 1946. **George Kent (Fig. 40)** arrived from the mid-west the same year to teach the introductory plant pathology courses. In 1950 he was named head, to replace Massey, who retired at his own request. **Carl W. Boothroyd (Fig. 41)** was a student while I was an undergraduate, began his Ph.D. under Whetzel and completed it under Welch, with teaching assistantship, in mycology (under Fitzpatrick) and in plant pathology. He then joined the staff in extension, and in 1950 was appointed to teach our introductory plant pathology courses.



37. L. J. Tyler

One of Kent's early actions was to invite me back to Cornell in 1951 after my first year of teaching at Glasgow University in Scotland. The man whose job in Scotland I was filling, **Steven Hutchinson (Fig. 42)**, was Acting Professor of Pathology and taught a mycology course here in 1950-51.

The place of Cornell University in the historical development of Plant Pathology⁶ is secure, for surely it is and has always been one of the leading departments in this country. What may not be as widely known is Cornell's influence on the science of mycology. For, as our most eminent mycological historian, Donald P. Rogers, acknowledged to me, Cornell has far outstripped any other university in producing mycologists, many, indeed, taxonomists, and

⁵ Prof. Massey came up to me one day and announced that beginning in the fall, whether I liked it or not, I was to be the plant disease control teaching assistant; because there was a shortage of TA's I would just have to fill in if I wanted to continue my graduate work in mycology.

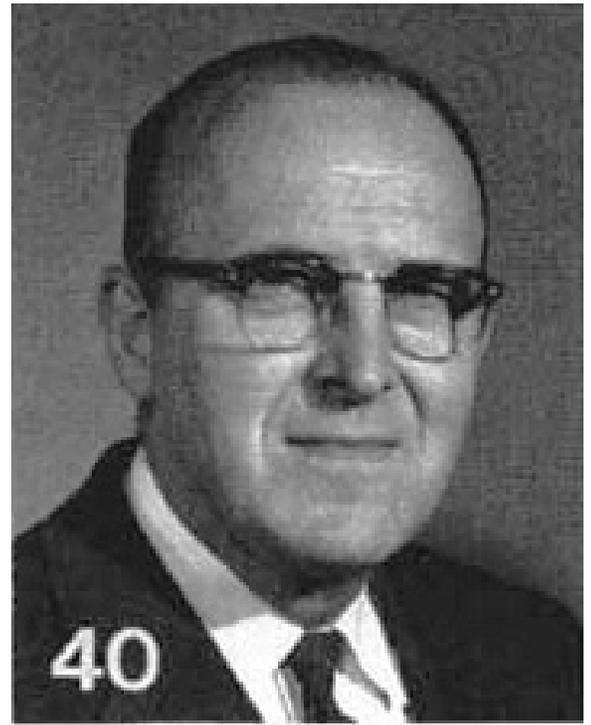
⁶ I must admit to my great dismay at the breaking of one formal tie between plant pathology, and mycology in 1970, when the major phytopathological abstracting journal, *Review of Applied Mycology*, changed its name to *Review of Plant Pathology*.



38. W. F. Mai



40. A. F. Ross



41. G. C. Kent



41. C. W. Boothroyd



42. S. A. Hutchinson

many of them of truly world stature. In this vein I have prepared a seven-generation genealogy of Cornell mycologists (and I have left off many of the plant pathologists who might equally well consider themselves mycologists), an updating and partial correction of a similar family tree I prepared on the occasion of a history of mycology exhibit at one of the meetings of the Mycological Society of America a decade ago (Table II).

ACKNOWLEDGEMENTS

I wish to thank our departmental photographer, Kent Loeffler, for preparing the photographs used to illustrate this account, Susan Gruff of the Plant Pathology Herbarium for much and varied help, George Abawi, Herbert Aldwinkle, and Jeanne Samimy of the Geneva Agricultural Station for pointing me to the right sources for information on that organization, Mr. Robert Dirig, of the Bailey Hortorium, Cornell University, for sharing some historical slides he used in his recent history of that institution, and the Cornell University Archives. William R. Burk, University of North Carolina, called Prentiss's early mycological paper to my attention. Former students of the departments, and also Meredith Blackwell, Louisiana State University and Donald P. Rogers, Emeritus Professor, University of Illinois, have also been helpful in running down leads for the genealogy. These been good years for me. Thanks for my reminiscences.

MAJOR SOURCES

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NOTE: A few minor corrections have been made to the original 1991 article.

Table II

A Seven-Generation Genealogy of Cornell Mycology:
Generations I–IV, Prentiss–Dudley–Atkinson and Their Students

[Sites of major mycological publication and/or later affiliation(s) are noted in square brackets]

