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JOHN NATHANIEL COUCH

*1896—1986*

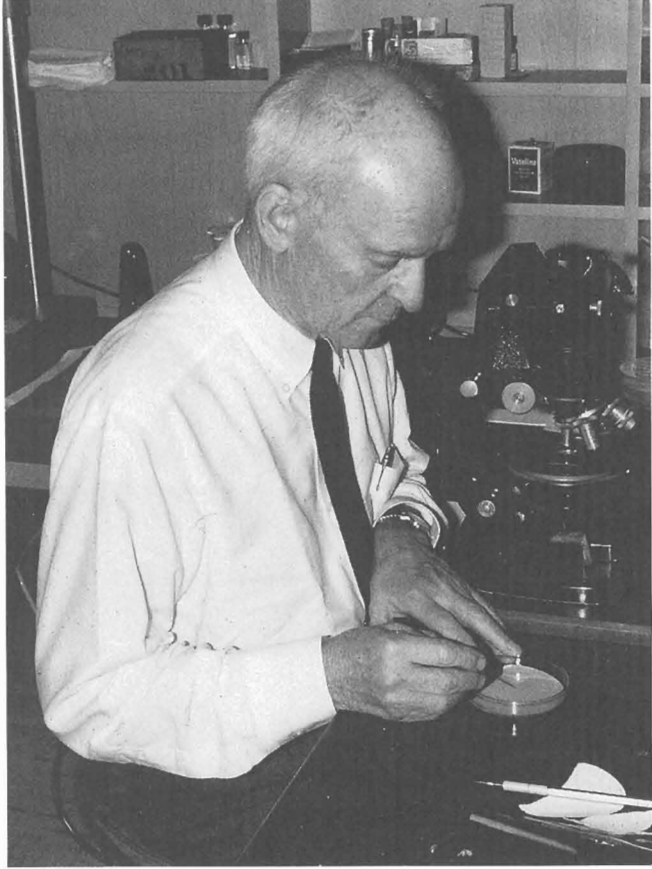
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*A Biographical Memoir by*  
PAUL J. SZANISLO

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*Biographical Memoir*

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*J. M. Couch*

## JOHN NATHANIEL COUCH

*October 12, 1896–December 16, 1986*

BY PAUL J. SZANISZLO

“**H**AVE YOU SEEN our latest book?” The question came from John Couch, my graduate professor and mentor from some twenty years earlier. This man was ninety years old, and he was signing and presenting me with a publication that was hot off the press! As we sat in his comfortable living room that pleasant afternoon in Chapel Hill, we discussed the book and his thoughts for the future. He asked about my work and students, and he questioned my daughter, who was entering the University of North Carolina as a freshman, to ascertain whether or not her father had given her an ample foundation in mycology!

I was amazed at his sharpness and his continuing interest, and I thought as he talked how extensive this man's influence has been in his lifetime. He taught his first students in 1919, and here he was, nearly seventy years later, ready to search anew for a spark of interest in a college freshman. Indeed, his time and accomplishments span an even greater distance.

From his birthplace in Prince Edward County, Virginia, in the fall of 1896 to his final resting place in the Old Chapel Hill Cemetery in the closing days of 1986, John Nathaniel Couch's life journey took him across the southern United States, through a Europe at war, to Long Island

and a young woman destined to share his life, to the steamy forests of the Caribbean and the cooler American Midwest, and back to his beloved South. In each of these destinations, another facet of John N. Couch—the gentle man, the curious scientist, the diligent teacher—would develop. A curiosity was sparked, and he followed it. The trail that he blazed during that life's journey leaves a plethora of knowledge about fungi from which the scientific community will continue to benefit and which Couch's students, and theirs, will carry through research and teaching into the next century. By then, the journey and influence of John Couch will have touched at least three centuries.

John Couch contributed to a broad spectrum of professional activities during his long and distinguished career: research, teaching, administration, and service to professional organizations. He believed that one area related to the other and that activities in one benefited all. However, he is probably best known for his research in mycology through his work with numerous diverse fungi. His earliest major contribution was born out of his Ph.D. research in which he described for the first time the existence of physiologically distinct and separate male and female strains in an oomycete. In subsequent major research, Couch described, with his mentor W. C. Coker, the *Gasteromycetes* of the eastern United States and Canada.

He then moved on to do extensive work with *Septobasidium*, a large genus of fungi which previously were thought harmless to the trees on which they grew and, in fact, beneficial because members destroyed infestations of scale insects on the trees. Couch found quite the opposite, that not only did *Septobasidium* and the scale insects have a mutually reliant relationship, but that together they destroyed the host tree. His treatise on *Septobasidium*, published in 1938, may remain to this day the most definitive

contribution related to these fungi and their symbiosis and pathogenesis.

All types of fungi were of interest to John Couch, but particularly his interest in the aquatic fungi led to his inadvertent discovery of a new group of bacteria. He eventually established this group as a family, the Actinoplanaceae, which he included in the bacterial order Actinomycetales. This pioneering work at first appeared to establish a link between the "higher bacteria" and the "lower fungi," but Couch remained skeptical. Later research conducted in his laboratory proved that, although morphological similarities exist between Actinoplanaceae and some fungi, the similarities are superficial and only reflect the parallel evolutionary trends that created the sporangial bacteria and fungi.

In his later years, John's major research emphasis involved the potential role that fungi of the genus *Coelomomyces* might serve in biologically controlling mosquitoes by parasitizing and killing their larvae. The possibility of controlling malaria and other mosquito-borne diseases with fungi held exciting prospects for a devoted bench scientist. His nearly fifty-year fascination with these fungi, commencing with studies in the 1940s and his early recognition of their blastocladiaceous affinities, culminated in 1985 with his last major research contribution, the publication of the edited volume with Charles E. Bland, *The Genus Coelomomyces*.

Although deeply involved in research, Couch also found time to be a conscientious teacher and to serve his university, state, and nation. He first taught general biology at the secondary level and then botany and mycology at the university level for more than forty-five years. During this time he was recognized with numerous awards for his teaching abilities and dedication to students. Forty students received graduate degrees under his tutelage. During a major portion of this same time, Couch also served the University of

North Carolina as department chairman from 1944 to 1960. His success in this capacity, and the continuous support provided by his colleagues during such a long period of leadership, attests to the personal and professional traits of this gentleman and scholar.

In these very active years, John Couch still found time and energy to serve several professional organizations as an officer, chair, or editor. He served as president of the Elisha Mitchell Scientific Society; secretary-treasurer, vice-president, and president of the Mycological Society of America; president of the North Carolina Academy of Sciences; vice-president of the Botanical Society of America; and chairman of its southeastern section. He also served as associate editor of *Mycologia* and as editor of the *Journal of the Elisha Mitchell Scientific Society* and was on the editorial board of *Mycopathologia et Mycologia Applicata*. His scholarship and research activities led to a variety of other honors, including his election to membership in the National Academy of Sciences (U.S.A.) in 1943, being named Kenan Professor of Botany at the University of North Carolina at Chapel Hill in 1945, and being elected in 1955 an honorary foreign member of the National Academy of Sciences of India.

#### THE EARLY YEARS: FAMILY AND EDUCATION

John Nathaniel Couch was born in Prince Edward County, Virginia, on October 12, 1896, to John Henry and Sally Terry Couch. His father was a Baptist minister and his mother a teacher. One of seven children, John's early education was influenced at home by his mother, a disciplined and aggressive teacher, and at seven different public schools—his father following the calls of Baptist churches throughout several southern states. By John's high school years, the Couches resided in Chapel Hill, North Carolina, from where he traveled to Durham to attend high school.

Upon graduation in 1914, Trinity College in Durham (later to become Duke University) admitted John and, under a common practice at the time, provided a tuition-free education to him as the son of a minister. So, in the fall of 1914, as his parents moved on to another call, John the freshman moved in with an uncle in Durham and, with some financial help from home, began his higher education. For two years he studied mostly classical subjects—literature, history, language, and mathematics. He read widely and, like most college freshmen and sophomores, pondered where his interests and abilities lay.

After narrowing his choices to law and medicine, John, during his third year at the university, had his first major exposure to natural science while studying biology and chemistry. His curiosity was awakened in Professor J. J. Wolfe's botany class and by a subsequent invitation to join the Biology Journal Club. A precursor of what ultimately would be John Couch's passion came with his first report to that club, "Edible and Poisonous Fungi." His interest in botany had become so keen that he asked to work in Professor Wolfe's laboratory for the summer, where his time was spent collecting and identifying freshwater algae under Wolfe's direction.

His attraction to science now clear, John dropped thoughts of a career in law and transferred for his senior year to the University of North Carolina (UNC) in Chapel Hill. His goal was to prepare for admission to its medical school. However, at UNC his path crossed that of another botanist, this time the eminent botanist and mycologist W. C. Coker, whose work with fungi fascinated Couch. John's decision was made. Medicine, like law before, was no longer his choice. He would continue his education in graduate study with Professor Coker, and mycology would henceforth be forever enriched.

## THE INTERMEDIATE YEARS: GRADUATE TRAINING

*Battlefield, Laboratory, Classroom*

Events an ocean away deterred Couch's immediate plans for graduate school. World War I and Uncle Sam called. Service as a private with Company B, 56 Pioneer Infantry, took him to Belgium, France, and Germany from August 5, 1918, to July 27, 1919. However, while waiting to be mustered out and sent home after the Armistice, he managed to spend four months studying botany at L'Université de Nancy in France.

Upon his return to Chapel Hill in 1919, John began his formal graduate work at UNC under Dr. Coker's supervision. In order to pay for and while continuing his studies, he also taught science at Chapel Hill High School and the following year at Alexander Graham High School in Charlotte. After finishing a master of arts degree in botany in 1922 with his thesis, "Spore Formation and Discharge in Some Genera of Water Molds," Couch became an instructor in the UNC Botany Department as he continued his Ph.D. studies. Thus began Couch's faculty association with the university and the department that was to continue for over half a century.

The doctoral degree was conferred two years later. Couch's dissertation, "Sexual Reproduction and Variability in the Genus *Dictyuchus*," included the report of his discovery of the mode of sexual reproduction, called heterothallism, in the water mold *Dictyuchus*. Some believe that his dissertation may have been his most significant contribution to mycology. In it he described for the first time separate "male" and "female" strains in *Dictyuchus*. While studying the physiology of sex in some members of this genus, he observed that the male branches were attracted over relatively long distances by the female. This observation ultimately led to the discovery of sex hormones in Oomycota



by John R. Raper, one of Couch's first graduate students, whom Couch introduced to *Achlya*. Later still, hormone A, stored for years after Raper's initial research, was characterized as the first steroid hormone of nonanimal origin by another of Couch's students, Alma Wiffin Barksdale, and by Trevor McMorris at the New York Botanical Garden.<sup>1</sup> The original work of Raper on *Achlya* contributed to his election to the National Academy of Sciences. The chain of events in this research exemplifies the multiplier effects of Couch's observations and the span of his influence.

Except for the summer of 1923, when Couch studied with Professors E. M. Gilbert and C. E. Allen at the University of Wisconsin, all of his graduate work was done with Dr. Coker. The culmination of their years of collaboration, *The Gasteromycetes of the Eastern United States and Canada*, was published in 1928, although it is clear that as an instructor with Coker, Couch was an important contributor to *The Saprolegniaceae*, published in 1923. It was probably this latter effort that most imbued Couch with a lifelong love of the aquatic fungi. His initial work with *Dictyuchus* was so revolutionary for oomycetes at that time that he was awarded a National Research Council fellowship for postdoctoral work under the direction of A. F. Blakeslee at the Carnegie Institution at Cold Spring Harbor, Long Island, New York, for one year and with B. M. Duggar at the Missouri Botanical Garden in St. Louis for an additional year. The stint with Blakeslee was particularly appropriate because it was Blakeslee and his colleagues who first showed just after the turn of the century that Mucorales were strictly homothallic or heterothallic. With Duggar he most assuredly was introduced to the intricacies of spore dormancy and germination phenomena.

In the summer of 1926, between his two postdoctoral appointments, Couch jumped at the chance to spend two

months in Jamaica, British West Indies, with the Johns Hopkins Botanical Group directed by Duncan S. Johnson. Typical of his curiosity and love of observation, he wanted to go just to see what fungi he could find. It was there in the steamy forests of Jamaica that Couch became interested in *Septobasidium*, a group of fungi found in abundance growing on trees heavily infested with scale insects. Previous to Couch's intrigue with the characteristics of these fungi, the commonly accepted assumption was that species of *Septobasidium* killed scale insects, thereby preventing them from destroying the trees they infested, and that the phenomenon was unique to the tropics. Couch's research described, however, a mutually beneficial relationship between the fungus and the scale insects, which combined to destroy the host tree or shrub. He also demonstrated that this pathogenic and symbiotic existence was widespread beyond the tropics into temperate climates as well. His findings were published in 1929 and garnered considerable interest. Later, these subsequent and related findings were to result in a round of accolades, including highest honors bestowed by his university and by the United States scientific community. But we're getting ahead of his story . . .

#### THE PROFESSIONAL YEARS: GENTLEMAN AND SCHOLAR

It could be argued that John Couch was a professional scientist earlier than some magical date on which he received a degree or began a career as an academician. Clearly, his work on *Dictyuchus* and *Septobasidium*, and his work with Coker on the Saprolegniaceae and Gasteromycetes, was conducted with the curiosity, thoroughness, and integrity of a professional. His discoveries already uncovered in his preparative training could be envied by scientists twice his age. Formally, however, John Couch returned to the

University of North Carolina in Chapel Hill as an assistant professor in 1927.

John's return from his postdoctoral studies was with more than a keen eye for new fungi. While at Cold Spring Harbor, his eyes had fallen on something else with attractive appeal and intellectual stimulation, which would keep his interest for the rest of his life. This young woman, whom John met and married, was Else Dorothy Ruprecht, a recent Wellesley graduate who had started her first job working at the Carnegie Institution studying animal genetics—mapping genes in fruit flies—with Dr. Charles Metz. Thus, John Couch, the gentleman, brought his gentle lady with him to Chapel Hill where he was to become, over the next fifty years, the scholar as he is known today. The partnership that was established between John and Else was strengthened during these years by her complementary interests, allowing her to understand and appreciate his long hours in the laboratory, absence from home, and enthusiasm for scientific discovery. Mrs. Couch's skills in foreign language were periodically put to use in translating papers for Couch and many of his students. Her artistic skills are reflected in many of his publications that she helped illustrate.

With his formal training complete, and his home established, Professor Couch embarked on forty additional years of teaching and research, advancing to associate professor in 1929 and to full professor in 1932. The first students to receive graduate degrees under his direction, Andrew G. Lang, Ph.D., and John R. Raper, M.A., completed their work in 1936.

In 1937, Couch began a long history of service to the several professional organizations to which he belonged by serving as president of the Elisha Mitchell Scientific Society and as an associate editor of *Mycologia*. Also commenc-

ing in 1937 was what was to become a steady stream of awards, with receipt of the Jefferson Medal and Poteat Award from the North Carolina Academy of Sciences. In 1938, Couch received the Walker Prize of the Boston Society of Natural History for his contribution to clarifying and correcting the natural history of the fungi/scale insect/host relationship in his work on *Septobasidium*. This was a fitting tribute to Couch's efforts and correlated with the publication of his classic book, *The Genus Septobasidium*, which represented the culmination of over ten years of research that elucidated the fungus-host-plant relationships, re-described about ninety known species, and described for the first time eighty-two new species. The semidiagrammatic transverse sectional view, depicted by Couch in 1931, of the mycelial mat of *S. burtu* parasitizing a scale insect that in turn is parasitizing the cambial tissue of a tree continues to this day to be a standard illustration in most mycology textbooks.

The ten-year span between 1935 and 1945 was packed with increasing activity, responsibility, and honors for Couch. Yet he continued to carry on in his modest way, eager to contribute directly and indirectly to mycology in whatever way he could. By 1940, Couch was serving as secretary-treasurer of the Mycological Society of America, a track that would take him through the vice-presidency to president in 1943. He also served that year as a special adviser to the chairman of the U.S. Office of Scientific Research and Development and was elected to membership in the National Academy of Sciences. In 1945 the University of North Carolina named him Kenan Professor of Botany. It was mainly during this period that Couch made a series of observations that ultimately led to a complete rethinking of the relationships existing among the diverse organisms known collectively at the time as the Phycomycetes or the

lower fungi. Starting with an abstract in *Science* in 1938, and followed by his classical paper in 1941 in the *American Journal of Botany*, Couch first clearly demonstrated the presence of at least two kinds of flagella in fungi, the tinsel type and the whiplash type. He then proposed for the first time that the flagellation patterns exhibited by the zoospores and some gametes of certain fungi were reflective of phylogeny. This insight, in my opinion, remains to this day one of his most important legacies to mycology. His observations clearly represented the starting point and basis for the eventual replacement of the class *Phycomycetes* with a number of major taxa, which today are each given ranks as low as classes or as lofty as phyla.

Couch's work with graduate students during this same ten-year period continued as intensively as ever, with an additional twelve master's and three doctoral students (George A. Christenberry, James A. Doubles, Jr., and Alma J. Whiffen) completing their degrees. The breadth of their activities and of Couch's interests at the time is reflected in the titles of these students' theses and dissertations, which indicate efforts ranging from taxonomy to cytology and physiology, and with fungi and related organisms as diverse as *Octomyxa*, *Blastocladia*, *Pythium*, the *Mucorales*, some yeasts, *Aspergillus* and some myxomycetes.

By the end of these ten productive years, Couch turned fifty, an age when many scientists begin to reevaluate their career goals, often begin to slow their research efforts, and even begin to rest on past laurels. Certainly with his scientific record and stature secure, Couch could have done the same. However, the laurels continued, and so did his own research and that of his students. Colleagues in his adopted home state honored him between 1945 and 1950 with additional awards, such as an honorary doctor of science from Catawba College, electing him president of the North

Carolina Academy of Sciences, and appointing him editor of the *Journal of the Elisha Mitchell Scientific Society* (a post he held until 1961). He returned these honors by graduating another doctoral student (Arthur W. Ziegler) and seven more students with master's degrees. He also began to describe for the first time a number of sporangial bacteria that he had discovered. The first of these new organisms had been isolated from soil collected by Lane Barksdale, the husband of his former student Alma Wiffin, while he was in the Philippine Islands in 1945. Couch isolated the first species of these bacteria by the classical fungal procedure known as the sporangial push technique, recognized that it represented a filamentous bacterium of the bacterial order Actinomycetales, clarified its uniqueness by observing the production of vesicles at hyphal tips in which flagellated motile reproductive cells originated, and then described it in 1950 as *Actinoplanes philippinensis*. Ultimately, Couch described five genera and ten species and erected the family Actinoplanaceae, which today contains a number of additional genera and species.

The momentum increasing instead of decreasing, Couch passed through the 1950s at full tilt—continuing throughout the decade to teach; to practice bench science; to administer the Department of Botany; and to serve as an officer, committee chair, editor, mentor, husband, and father. Recognition of his contributions continued in the United States by his receipt of a Meritorious Teaching Award in 1955 from the Association of Southeastern Biologists and a Golden Jubilee Merit Citation in 1956 from the Botanical Society of America. The latter was awarded to him as one "whose studies of the small, the intricate, and the odd among fungi and their relatives have come to fructification in the vivid, the significant, and the delectable."<sup>2</sup> During this decade, Couch's influence was also recognized

beyond the United States as well. Admiration of his work, presentations, and personal demeanor by colleagues in the international arena resulted in election as an honorary foreign member of India's National Academy of Sciences.

Remarkably, John Couch's guidance of advanced graduate students during this same period intensified instead of diminishing, with the number of his students receiving degrees increasing by nine, with five of those receiving doctorates (Elizabeth K. Goldie-Smith, Maeburn B. Huneycutt, William J. Koch, Charles E. Miller, and J. Thomas Mullins). He also significantly contributed to graduate education in India by serving on numerous Ph.D. committees of Indian graduate students. Not infrequently he would receive bound theses for review and hand-carved slide boxes containing preserved documenting evidence for the conclusions reached by aspiring Indian Ph.D. candidates. It is well known that he judiciously reviewed these items, and, consequently, no doubt significantly influenced the current cadre of Indian mycologists.

By the 1960s, Dr. Couch was in constant demand as a scientific speaker, consultant, or adviser, serving on the North Carolina Governor's Science Advisory Commission, as adviser for the U.S. Public Health Service's Communicable Disease Center, and on a review committee of the University Grants Commission of India. The State of North Carolina honored him with a Gold Medal Science Award in 1964, and the university where he began his undergraduate studies, Duke University, awarded him an honorary doctor of science degree in 1965. He continued his service to the many professional organizations to which he belonged as vice-president and chairman of the Botany Section of the American Association for the Advancement of Science, as vice-president of the Botanical Society of America, and as a member of the editorial board of *Mycopathologia et Mycologia Applicata*.

During the final decade before his retirement, numerous students continued to pursue degrees under Couch's direction and in his laboratory. Thus, at the venerable age of sixty-five-plus years, he graduated his final three master's students and five more doctoral degree students (Clyde J. Umphlett, Miriam K. Slifkin, Paul J. Szaniszlo, William A. Sherwood, and Charles E. Bland). These were his golden years—and also transition years for Couch and these students who elected at such a late date in his scientific life to learn from a master biologist, microbiologist, and mycologist who had five incredibly productive decades of experience. They were transition years for him and his students because both were keenly aware that biology was changing, whether one liked it or not (Couch never confided that particular opinion to me). The change was from a predominantly organismal orientation in such fields as botany, mycology, algology, and zoology toward the more detailed study of fewer and fewer model organisms at the most sophisticated physiological, biochemical, and genetic levels. Thus, Couch had to convey to his last students his consuming enthusiasm for organisms in general, and fungi in particular, without discouraging their interest in or need to study systems at more "modern" levels, a sometimes difficult, but in his case, not impossible task.

In my own experience, as Couch's third-to-last Ph.D. student and as one having interests not only in traditional mycology but also in the application of newer technologies to mycological questions, I found my mentor surprisingly receptive to forward thinking. As long as students with tangential scientific interests attempted to appreciate and master traditional mycological concepts based on morphology and cytology, Dr. Couch would enthusiastically embrace their attempts to use the then-new biology. In fact, although he did not require his last students to master



biochemistry or genetics, he certainly encouraged such efforts by students who felt compelled to learn and conduct research along those lines. This attribute of his character was particularly important because it allowed some of his students to work at a leading edge of microbiological science, within the framework of his years of experiences with numerous fungi and bacteria. In fact, in my case he formally established that my Ph.D. would involve cosupervisors, himself and Harry Gooder of the Department of Microbiology and Immunology in the UNC Medical School. Couch's foresight regarding my scientific future and training ensured that my Ph.D. research would be microbiologically competitive, a gift for which I thank him to this day.

When I look back into my own past and his influence on my scientific career, I realize that John Couch provided me with a number of other gifts in the form of a venue of very important philosophical approaches to teaching and academic research. These can be identified in retrospect as guiding principles that at first unknowingly influenced my research activities and my interactions with graduate students and subsequently seemed to solidify somewhat into my own philosophy. Foremost among these is the need to encourage students to understand the nature of relevant whole organisms and their relationships prior to committing them to detailed study of their isolated parts and functions. For Couch this seemed to allow students to appreciate better their observations and discoveries and to put them into the context of broader issues. In my own case Couch encouraged me first to study a whole fungus at the research level before attempting to investigate cell-wall biochemical aspects of Actinoplanaceae, the bacteria he discovered and on which I originally went to his laboratory to work. I am very grateful for this particular guidance because it encouraged me early in my career to study in some detail

one of those wonderful eucaryotic microbes he loved so well and at a time when one could still pay attention to their morphological and cytological beauty, in an environment of true organismal appreciation, without any trace of embarrassment. It was this experience, coupled with my love of microbiological approaches, that prompts me to this day to continue to return to the fungi as research resources after brief and frequent excursions into other systems.

Among the other approaches used by Dr. Couch, as unwritten guides in his research activities and interactions with students, I think I recognized at least three that are additional legacies from his philosophy of academic science. Most important of these may be to allow students beginning their research activities to find their own problems within the context of the major professor's interests and within the feasibility of the funds available. Couch always suggested that from his experience those students who defined, or thought they defined, their own M.A. or Ph.D. problems were the most committed to and interested in the outcome of their research. Next in importance may be to allow students to study their research questions using the methodologies most commensurate with their interests, talents, and background. Certainly it was obvious that he did not require students to be clones of himself, although as already mentioned he did require them to be mycologically literate and to do competitive work. Finally, he had one somewhat selfish approach that seems to have served him well and hopefully will do the same for those of us who continue in his footsteps. On a number of occasions he confided that he tried consciously to change his research emphasis about every ten years. Most likely he did this to learn new things, maintain enthusiasm, and avoid the trivialization of his own efforts. It is clear by any

measure that this last philosophical approach, as reflected by his scientific accomplishments, was adhered to by Dr. Couch, either purposely or by accident, and was enormously successful.

#### THE LATER YEARS: RETIREMENT

Though John Couch officially retired from the University of North Carolina in 1968 at the age of seventy-two, "retired" was not the way most of us would have described him. He was, in fact, active until his death at the age of ninety. Except that he was weaker and unable to keep long hours, his mind remained active and creative. He was an editor, with Charles Bland, of his final publication in 1985, *The Genus Coelomomyces*, and even remarked to Chuck after its completion, "Now that we have gotten *Coelomomyces* out of the way, we need to get started on a revision of *The Genus Septobasidium*."<sup>3</sup> Like the latter, *The Genus Coelomomyces* represented a retrospective review of years of his own work and work by colleagues and students. In addition to his recognition of the blastocladiaceous affinities of *Coelomomyces*, Couch was responsible for establishing the family Coelomomycetaceae, describing numerous new species and varieties, possibly maintaining for the first time in the laboratory mosquitoes infected with *C. punctatus*, and making innumerable additional observations that helped other investigators clarify the life cycle of *Coelomomyces*.

Even after retirement the honors continued. The University of North Carolina at Chapel Hill (UNC-CH) awarded Couch an honorary doctor of science degree in 1973, and the Mycological Society of America recognized him with the Distinguished Mycologist Award in 1981. In 1979 the Department of Botany at UNC-CH named its library in honor of Dr. Couch who, over the years, had generously provided

books, subscriptions, and other support for its collections. And he continued to return the favors in his retirement as he had throughout his career, culminating with the John N. Couch Professorship in Botany established in 1984 by Dr. and Mrs. Couch.

The Couches shared sixty years of marriage and enjoyed a son, a daughter, three grandchildren, and two great-grandchildren. His wife, Else, remains in Chapel Hill, where she has maintained her late husband's tradition of giving by establishing a memorial fund in the UNC-CH Department of Biology (botany and zoology merged into one department in 1982) to be used for a John N. Couch Undergraduate Award for Scholarship in the Plant Sciences. Their son, John Philip, is a professor of romance languages at UNC-Greensboro. Their daughter, Sally Couch Vilas, an artist and wife of UNC-CH professor of bacteriology Harry Gooder, lives in Chapel Hill.

As those who knew him will attest, John Couch was a modest man who took his many honors as results of contributions he could make, rather than as personal accomplishments. He believed in hard work, in frugality, and in leaving no possibility unexplored. He carried his personal and professional life in his modest way, with curiosity in the lead, with intensity of purpose and attention to detail close behind, and always with integrity and kindness. His life's journey has touched many, and its influence will continue into generations ahead.

ACKNOWLEDGMENT IS MADE TO earlier articles honoring John Couch, including "The Career of John Nathaniel Couch," by Leland Shanor, published in *Mycological Studies Honoring John N. Couch*, a special issue of the *Journal of the Elisha Mitchell Scientific Society*, 84:1-280, 1968, edited by

W. J. Koch, and work done by William R. Burk of the Couch Library at UNC-CH and Chuck Bland, Couch's last graduate student and collaborator, of the Department of Biology, East Carolina University, culminating in "John Nathaniel Couch, 1896-1986," *Mycologia*, 81:181-89, 1989.

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