

Mississippi State University Libraries

Lloyd-Ricks-Watson Project

Oral History

Dr. Clinton Graves

April 4, 2012

Interviewer: Ms. Mattie Abraham

[Edited on 10/14/2012]

(Tape Side One, 000)

Ms. Abraham: With Dr. Clinton H. Graves, I'm Mattie Abraham, the interviewer, and today is April 4th, 2012. Good morning and thank you for coming to do an interview on the Lloyd-Ricks-Watson Building and your association with it. We're really pleased to have you.

Dr. Graves: Thank you for having me.

Ms. Abraham: We did have some questions that we've been asking every interviewee, but Dr. Graves has been kind enough to prepare some information ahead of time. And so, in response to this first question we usually ask, 'What is your relationship to the Lloyd-Ricks-Watson building?' I think Dr. Graves is going to give us a little history of his department and how he fits in.

Dr. Graves: Okay, I was a member of the Department of Plant Pathology, first called the Department of Plant Pathology and Physiology and then the Department of Plant Pathology and Weed Science for 40 years between 1953 through 1992. I would like to tell a little bit of the early history of our department before we entered Lloyd-Ricks. Members of our department have always enjoyed joint employment between the experiment station and the University or Mississippi State College, as it was originally (called).

[Edited (added by Dr. Graves on 10-14-2012)]: The Department of Plant Pathology and Physiology had roots going back to the very beginnings of the Mississippi Agricultural Experiment Station (1887) [Edited (deleted by Dr. Graves) counter at 16 – 250]. In 1981 J.M. White was given the title of Assistant Botanist, and part of his duties were to work on fungal pathogens.

S.M. Tracy and F.S. Earle are listed in Mycological History as reporting on the fungal flora of Mississippi with emphasis on plant pathogens. Tracy was the first Director of the Experiment Station at Mississippi Agricultural and Mechanical College (now MSU).

G.W. Herrick, G.L. Clothier, and H.W. Barre (who later became President of Clemson University) were among the earlier workers having to do with plant diseases.

Dr. L.E. Miles joined the staff as Plant Pathologist in 1929. (He) worked closely with Pathologists, H.H. Wedgeworth and L.M. Fenner of the Mississippi State Plant Board. He was joined subsequently by T.D. Persons and Dr. J.M. Epps. Dr. Epps later became the head of the Department of Plant Pathology at Clemson University.

Plant Pathology was first noted as a separate department in 1932, with Dr. Miles as the head; working on watermelon diseases, introducing a new variety of watermelons. Dr. J.A. Pinckard was named as Head of the Department in 1942; he worked on cotton wilt, seedling diseases, sweet potato, and watermelon diseases. Dr. Pinckard resigned in 1944; Dr. J.T. Presley succeeded him in 1945.

Dr. S.S. Ivanoff, 1946, DR. H.H. Foster and Dr. W.W. Hare (1948) were added to the department; each with different specialties in disease research.

The name of the department was changed in 1948 to (the) 'Department of Plant Pathology and Physiology' with the addition of Dr. O.A. Leonard, a noted Plant Physiologist. Dr. Leonard pioneered the field of chemical weed control in row

crops. With his work at Mississippi State, he is often referred to as 'the father of chemical weed control'.

As an undergraduate student (1946-1950) majoring in Botany in the Science School - Dr. J.C. McKee (Head of the Botany Department) as major professor, I worked part time for Dr. Presley - learning pure culture techniques involving plant pathogens, etc. At that time, Plant Pathology and Physiology was housed administratively within the Science school and located on the first floor of Harned Hall. Dr. Clay Lyle was the Dean of the Science School.

In 1950, Dr. Presley accepted an appointment with the USDA in Beltsville, MD – Dr. W.B. Ennis, Plant Physiologist, was named Head of the Department. In 1950, the department was moved from Harned to the first floor of the Lloyd-Ricks building (now known as Lloyd-Ricks-Watson Building). Dr. Clay Lyle became the Head of the Mississippi Agricultural Experiment Station – his office also moved to the first floor of the Lloyd-Ricks building.

Upon receiving my BS degree in Botany, minor in Chemistry, I applied and received a Fellowship from the Wisconsin Alumni Research Foundation to do graduate work at the University of Wisconsin in the field of Plant Pathology. However, I was asked by Mississippi State College to resign the fellowship in order to accept a Rockefeller Foundation General Education Board Scholarship – one of 20 such scholarships offered to students of the southern states, and the first one received by a student of Mississippi State College. This scholarship paid all expenses for one year to the University of my choosing, anywhere in the world. Upon completion of my year at the University of Wisconsin, I received my fellowship back – thus was able to move through my PhD program rather quickly. I returned to Mississippi State in January 1953 as an Assistant Plant Pathologist in the Department of Plant Pathology and Physiology, Mississippi Agricultural Experiment Station – to be housed on the first floor of the Lloyd-Ricks building.

At the time of my arrival, January, 1953, the department consisted of Dr. W.B. Ennis, Physiologist, Head; Dr. V.H. Goodman, Physiologist; Mr. Vernon Harris,

Physiologist, who had received his MS degree under the guidance of Dr. Leonard; Dr. S.S. Ivanoff, Plant Pathologist; Dr. W.W. Hare, Plant Pathologist; and Dr. A.B. Wiles, Plant Pathologist with the USDA appointment. E.B. Hollingsworth and R.D. Palmer were listed as graduate students in Plant Physiology, both subsequently receiving MS degrees. Palmer moved to LSU, and Hollingsworth to Cornell for further graduate work. My assigned office upon return from Wisconsin was shared with Dr(s) Goodman and Hollingsworth. J.W. Broyles was added to the department in 1954, replacing Hollingsworth in our crowded office. We each had a desk, a cabinet or two, and a filing cabinet. Broyles received his PhD, University of Minnesota in 1956. Plant Pathology had one laboratory shared by all Pathologists on the north side of the hall connecting the West Wing with the East Wing (occupied by the Extension Service, Mr. Mose Shaw as Head of Mississippi Extension Service). Plant Physiology had one laboratory on the south side of the connecting hall shared by all Physiologists.

My office was on the northeast end of the first floor hall of the West Wing. Dr. Clay Lyle's office was on the south end of the hall. There was no air conditioning on campus at that time. We each had to buy our own fans for survival in the summer.

Upon appointment of Dr. Ennis to a position with the USDA in the department in 1954, Dr. Ivanoff assumed duties as Head of the Department. Dr. Ennis remained with the department until 1956, when he was transferred to Beltsville, MD, where he served in an administrative position.

Dr. Goodman resigned for employment elsewhere in 1955. Tildon Easley, M.S., and Dr. W.C. Normand, Plant Physiologists, were added to the staff in 1956. Easley was transferred from state employment to the USDA position abandoned by Ennis in 1957. Dr. D.C. Bain, Plant Pathologist, was transferred from the Crystal Springs Branch Experiment Station to our department in 1955 to work on diseases of field crops. R.D. Palmer, having received his PhD from LSU,

returned to the department in 1959. Dr. Normand resigned in 1961 for employment elsewhere.

Major changes occurred in 1962. Undergraduate teaching in Plant Pathology and Physiology was transferred from Arts and Sciences to our department as a part of the School of Agriculture. Dr. G.K. Parris, who had followed Dr. J.C. McKee in teaching Plant Pathology in Arts and Sciences, was transferred to our department to continue teaching the basic undergraduate course in Plant Pathology. He was also assigned research duties in Forest Pathology. Graduate programs were established in Plant Pathology as well as Plant Physiology, and we became members of the graduate faculty at that time.

I established a basic course in Introductory Mycology in the fall of 1963. This was taught as an upper level undergraduate course for Plant Pathology majors, but also was offered as a graduate level course for graduate students. I was invited by the National Science Foundation to attend the Virology Institute, University of Maryland, all expenses paid by the Foundation, wherein the leading Virologists from around the world gave lectures and laboratory experiences. The whole idea of the National Science Foundation was to bring the level of expertise in virology, which was a very rapidly developing science at that time, up to date. I subsequently established a graduate level course in Plant Virology in Spring 1965 taught on the second floor, Harned Hall. There was no sufficient laboratory space for these courses in the beginning.

The name of our department was changed in 1963 to the Department of Plant Pathology and Weed Science since all of the Physiology endeavors had to do with the expanding chemical weed control effort. Dr. J.W. Broyles was killed in an accident in 1963, and Dr. E.E. Rosenkranz replaced him, working on corn diseases. Dr. Ivanoff retired June 30, 1964, and Dr. W.W. Hare succeeded him as Head of the Department. In 1966, Dr. E.F. Eastin was added as Assistant Weed Scientist; 1967, Dr. M.C. Futrell, USDA, working on corn diseases; and Dr. J.A. Spencer, working on diseases of ornamental plants.

It was at this time that we were able to leave Lloyd-Ricks and move to Dorman Hall, where there were beautiful new teaching and research laboratories available.

When I arrived on campus, my research assignment had to do with diseases of ornamentals, fruit, and nut crops. Most of my earliest endeavor was related to a young emerging industry for our state involving greenhouse pot mum culture. This work had to do with developing control systems for root rot and foliar diseases. Progress was difficult as a result of the limited laboratory space in Lloyd-Ricks. Much of the work was done in the Pathology greenhouses, utilizing our magnificent soil autoclave that I acquired through grants. Fungicide screening for peach disease control was established utilizing the peach orchards (and free labor) at the Mississippi Penitentiary, Parchman, MS. One very successful piece of work during this time period had to do with petal blight of azaleas. Petal blight, a fungus disease, causing a browning of the beautiful azalea petals during moist periods in the spring was a problem of much concern for those maintaining commercial gardens, particularly along the Gulf Coast. With the aid of Dr. Walter Davis of the Horticulture Department, we were able to establish an azalea planting at the Poplarville Branch Experiment Station. With this, a highly successful fungicide program was developed that I understand is still in use today. A demonstration was carried out on a row of beautiful azaleas in Mason Park, Laurel, MS. The results were so striking, pictures were published in the New Orleans Times – Picayune Newspaper.

Prior to Hurricane Camille, pecan culture was a significant industry for our state, mostly in the southern part. The pecan scab disease, caused by the fungus *Fusicladium effusum*, may, depending on weather conditions, cause a total loss of crop on susceptible cultivars. The Stuart cultivar of pecans was considered resistant to this disease, and prior to the 1950's became the most widely planted cultivar in the Southeastern United States. This cultivar was developed, propagated, and sold by the Bass Pecan Nursery, Lumberton, MS, the nation's largest pecan nursery. Unfortunately, a strain of the scab fungus infecting the

Stuart cultivar, was found in Mississippi. Other states threatened an embargo on nursery plants from Mississippi, adversely affecting the Bass Nursery. Consequently, Dr. Clay Lyle came to my office and suggested that we had to (do) something about this threat. That was in 1956. We were able to avoid the embargo by virtue of the fact that the scab fungus was found building on Stuart cultivar in other states. As a result of this, much of my research career had to do with techniques for scab control on pecans; first with the use of fungicides and methods of fungicide distribution on these very tall trees utilizing expensive power sprayers, concentrate sprayers, and aerial application with fixed wing aircraft and helicopters. An extensive disease resistance program was established, making crosses with other hickories (creating a hican nursery, etc.). Significant progress was made in determining the mode of resistance.

Ms. Abraham: Did they provide additional resources, or you just pretty much could work with what you had in there Lloyd-Ricks to...

Dr. Graves: We had to work with what we had at the time. But, of course, I was able to get grants, and the USDA provided grants for me, and we had many graduate students that got degrees, some of them with PhDs, and some of which are still on campus today.

Ms. Abraham: How much of your work was in the field versus what was actually accomplished there in Lloyd-Ricks?

Dr. Graves: Well, let me finish that...

Ms. Abraham: Yes, I don't want to interrupt your thoughts.

Dr. Graves: In 1967, we moved into Dorman Hall. Most of my research, you know, much of my research then, of course, was in Dorman Hall. In Dorman Hall we had wonderful laboratories, even a good Virology Lab, a good Mycology Lab... I was privileged to work with the architects in planning space our department in Dorman Hall. One of the things I'm still proud of today is that teaching lab in Dorman Hall for Plant Pathology and Weed Science, it has prep rooms and all of the types

equipment needed to have good laboratory teaching. Of course, the research labs in Mycology and Virology and Weed Science areas were also used in teaching. That got me past Lloyd-Ricks.

Ms. Abraham: Now at that point, then your relationship with Lloyd-Ricks was more at a distance?

Dr. Graves: Yes.

Ms. Abraham: More as you needed administrators?

Dr. Graves: Our department moved out of Lloyd-Ricks in 1967. That's about the same time Dr. Spencer came on our faculty.

Ms. Abraham: So really Lloyd-Ricks was more foundational; it got you all started perhaps. And that was where you did your planning for what was going to come to pass in Dorman...

Dr. Graves: Absolutely. That's right.

Ms. Abraham: ...And probably sent a lot of students through during those years before 1967 and got them started.

Dr. Graves: You know, I mentioned graduate students that were there. At the time I returned in 1953 they were in Plant Physiology, and there were several graduate students that were carried through, and I can't enumerate all of those; but our first Plant Pathology graduate student was my student, Dr. W.F. Moore, who became the head of the Extension Plant Pathology Department. Dr. Moore arrived, I think, that was the year in 1962 when we became a teaching department and Plant Pathology became a part of the graduate faculty. Subsequently, I've had quite a number of graduate students.

Ms. Abraham: One thing I need to clarify, because nobody's mentioned it; you mentioned that you also taught in Harned, I believe? But did you also have classrooms you taught in Lloyd-Ricks, or your offices were only there?

Dr. Graves: No, only the offices and our one lab.

Ms. Abraham: And our labs. So your classes were always in...

Dr. Graves: Classes had to be elsewhere because there was no room in Lloyd-Ricks.

Ms. Abraham: Where were your first classes then?

Dr. Graves: On the second floor of Harned Hall.

Ms. Abraham: Of Harned, they were always on Harned Hall.

Dr. Graves: I was setting up my Mycology Lab getting ready for a class in Harned Hall when President Kennedy was assassinated, and I heard the roar from the dormitories to the north there, and someone came down the hall and told me about what had happened.

Ms. Abraham: Hmm. The roar was the reaction on campus?

Dr. Graves: The reaction over the word that President Kennedy had been assassinated.

Ms. Abraham: Oh, for goodness sakes. So was it that arrangement with your offices here and your classrooms elsewhere and how did that work out?

Dr. Graves: Well, it's not the most...

Ms. Abraham: It's not ideal.

Dr. Graves: ...Ideal situation (*laughs*).

Ms. Abraham: Because the students not only, they did their labwork in Lloyd-Ricks? Or did some labwork in Harned?

Dr. Graves: Well, they did their research, you know, the graduate students in Weed Science, did much of the research. That is one thing that I did not mention, during this period we had constructed beautiful greenhouse facilities which are located just south of the Student Health Center; the head house is still there, it's where that

parking lot is now; and I was responsible for purchasing a huge soil autoclave, wherein we could sterilize soil in order to do work with root pathogens.

Ms. Abraham: So the students were literally in those greenhouses and then...

Dr. Graves: And they operated in the greenhouses and, of course, our research labs that were in Lloyd-Ricks...

Ms. Abraham: Mm-hm.

Dr. Graves: ...Climbing all over each other.

Ms. Abraham: (*laughs*) That sounds like it was interesting. People have mentioned things like even the elevators not working that well, and possibly some floods that might have happened, and...

Dr. Graves: There was never an elevator in the West Wing of Lloyd-Ricks while I was there (*laughs*).

Ms. Abraham: Well once they got the East Wing were you tempted to go in that elevator and then walk all the way over, or...

Dr. Graves: No, not really because we were on the first floor and it wasn't necessary.

Ms. Abraham: So unlike some who had to carry everything up and down, you did not; well that's good. Although, there are, let's see, I'm trying to think... you can go right in to the first floor. I have to think about that.

Dr. Graves: Well, you know, there's a basement floor.

Ms. Abraham: Right.

Dr. Graves: Horticulture was in the basement floor. Ag Economics and Agronomy were in the upper floors. I'm not sure how they divided that space up there, but I'm sure Dr. Watson will fill you in on that.

Ms. Abraham: Well at that time, was there a lot of interaction between those other departments, a lot of interdisciplinary work, or was, you were...

Dr. Graves: Certainly with Horticulture, and Agronomy, there was always interaction.

Ms. Abraham: So more in the offices, or were there lots of committee meetings like we have today?

Dr. Graves: In the planning, and the type of research. Sometimes we had joint research projects; for example, some of my research projects were jointly with the Horticulturist, Dr. J.P. Overcash, and Dr. Walter Davis with Ornamental Horticulture. You know, they were very instrumental in pointing out problems that needed work that I would address, and we even travelled a lot, you know, in our research efforts. Dr. Walter Davis was very instrumental in helping me set up some plots at the Poplarville Branch Station to do the work on azalea petal blight, which turned out beautifully. And Dr. Overcash was always helping, you know, with the peach diseases. I worked on peach diseases, I worked on, of course, pecans, and in the ornamental field. I had a lot to do with the development of the pot mum industry which was just beginning back in those days, and they ran into root problems, and controlling those root pathogens is always important. And, of course, in peaches we worked on scab, and brown rot, and bacterial spot, and then subsequently a problem with a root rot that entered our industry. In apples I did a project on bitter rot which turned out quite well; we didn't have a big apple culture in this state, but there were a few.

Ms. Abraham: So there was a lot of serious work that went on and you might not have had the best offices and labs in the world, and you cooperated. Are there any things that you remember that might have been, you know, a more fun side to working in the building... remember personalities that you especially remember, or events?

Dr. Graves: Well, of course we, we had a lot of fellowship between all the departmental people. I would often go to coffee with Dr. Broyles, you know, up at what is now

in the place where the flower shop is now; I think that was the D.P. they called it, Dairy Products. We'd walk up there for coffee, sometimes go over to the grill...

Ms. Abraham: Mm hm...

Dr. Graves: ...And back in those days where the post office is now there was a restaurant called The Shack. And often we would have coffee over there. And I notice that you mentioned Dr. Baker; we were close friends. But his son, Lester, was a student here when...

Ms. Abraham: Now this is Dr. Baker Andrews?

Dr. Graves: Yeah, Baker Andrews.

Ms. Abraham: Baker Andrews, okay.

Dr. Graves: Yeah, forgive me for my...

Ms. Abraham: No, that's alright, I just wanted to make sure that we were clear.

Dr. Graves: Dr. Andrews, of course you know, was given credit for developing anhydrous ammonia as a means of fertilizer, and subsequently went with Mississippi Chemical and left the University. But his son, Lester, was a student here, and as a young professor I would sometimes see Lester over at The Shack and we'd sit and talk about his planning for his career, and I told him the big thing coming up now is Molecular Genetics... Biochemistry. Well, he went into Chemistry and was outstanding, and has an outstanding career at the University of West Virginia and is a very noted Chemist, with lectures in Europe and everything...

Ms. Abraham: I'm just curious, did you have a certain set number of advisees also like they do now in addition to your...?

Dr. Graves: Oh yes, undergraduates.

Ms. Abraham: ...Number of undergraduate advisees.

Dr. Graves: One thing that I didn't mention; we developed an undergraduate curriculum jointly with Entomology called Pest Management. There were some students that would get a master's degree in Pest Management which would give them a broad spectrum in plant diseases, weed control, and insect control and they'd become consultants around the state, a number of them. Much of that occurred after we left Lloyd-Ricks, but it had its beginnings when we were in Lloyd-Ricks.

Ms. Abraham: So did those advisees, you had a lot of students coming to your offices in Lloyd-Ricks?

Dr. Graves: Oh yes, mm-hm.

Ms. Abraham: Mm-hm.

Dr. Graves: The department was not very big when we were in Lloyd-Ricks. It blossomed when we got into Dorman Hall, but...

Ms. Abraham: You probably couldn't have managed it if it had been that big, though.

Dr. Graves: ...One thing I remember is that after we became a teaching department and we began to have undergraduate students majoring in Plant Pathology, or subsequently in what we called Pest Management, they asked me to set up a plant pathology seminar, which was held in the conference room there on the first floor of Lloyd-Ricks, and sometimes there would be conflicts between the timing of my seminar. Dr. Clay Lyle was followed by Dr. Louis Wise, who became Vice President, and Mr. Henry Leveck became Director of the Experiment Station, and I remember one time Mr. Leveck was dealing with the planners for Dorman Hall and he had set up a little meeting, and he asked Miss Billie Nowlin; I should have mentioned her, she kind of ruled the roost around there for Dr. Lyle, and subsequently for Dr. Louis Wise...

Ms. Abraham: When you say ruled the roost...

Dr. Graves: Well everything had to go through Billie (*laughs*) if you went through the administrative part. Anyway, well she was very efficient and well-known and...

Ms. Abraham: She made their appointments and...

Dr. Graves: Yeah, and anyway, it turned out that maybe Billie, without realizing, set up this appointment with the architects between Mr. Leveck, and they were going to meet in the conference room, that one little room that we had there; and it turned out to be the same time our seminar was to be held. And so I kind of was a little upset about it, I had a bunch of students coming in there and the room was where we were to meet. A student had prepared his seminar to present, and so I went down and pled with Billie, and Billie contacted Mr. Leveck, and one of the people under Mr. Leveck came down there and told me, 'Don't you know that Mr. Leveck is the boss?' (*laughs*)

Ms. Abraham: (*laughs*)

Dr. Graves: Anyway, we got to hold our seminar and he had them to meet in his office, which was plenty of room.

Ms. Abraham: That worked out well. So Mr. Leveck did influence a good outcome. Those things happen... And you had one conference room.

Dr. Graves: One conference room.

Ms. Abraham: How long did that seminar last?

Dr. Graves: Just an hour.

Ms. Abraham: I mean was it a whole semester, though?

Dr. Graves: It was like a scheduled course for graduate students. One of my students back then that I valued was Mr. William Gazaway, who passed away just this past week. One of my remembrances about him, he was an outstanding student, made practically straight As; he wanted to go on and work on a PhD, and I thought, well, he'd be a good student to send up to Wisconsin where I went, so I did. [Edited 37:44 - 39:48] He went on and completed his Doctorate at Texas A&M and wound up the Head of Extension Pathology at Auburn University, and

then retired, and doing consulting work. All of my students have made a fortune doing consulting work after they retired. Some of them, retired before I did. But Bill wound up with a lung problem and he died just this past week. He married a young lady while he was in Wisconsin and they had no children; I know she's going to be lonesome over at Auburn.

Ms. Abraham: Well that's a good story, though. [Edited 40:23 - 40:34]

Dr. Graves: But I'm proud of all of my students, one thing I can say, about Plant Pathology, it was a small department, and we often got crammed because we were small; but all of our students obtained jobs in the field in which they were trained, essentially, most all of them, which is something you can't say about so many other departments; and they've all excelled. I'm real proud of them. I have a number of them that got their PhDs with me here. Two of them that I'm real proud of are still on the faculty here; Dr. Susan Diehl who is in Bioremediation, and Dr. Hamid Borazjani in Bioremediation; and they have passels of graduate students who have really done well and gotten lots of grants.

Ms. Abraham: So there's a legacy from your beginnings all the way down to today.

Dr. Graves: I'll end here. I know you have enough of this. [Edited (deleted by Dr. Graves) counter at 622 - 743]

Ms. Abraham: Thank you very much.

(Tape Side One Ends, 748)