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ORAL HISTORY INTERVIEW WITH  
DONALD MacCREARY  
FORMER PROFESSOR OF ENTOMOLOGY  
JULY 14, 1976

Transcribed by:  
R. Herman  
April 16, 1978

Interview with: Donald MacCreary

Newark, Delaware

July 14, 1976

Interviewed by: Rebecca Button

B = Rebecca Button

M = Donald MacCreary

B: This is an interview with Donald MacCreary in Newark on July 14, 1976. Donald MacCreary is a former professor of entomology at the University of Delaware who retired in 1968. Mr. MacCreary, what have you been doing since your retirement?

M: As little as possible. I've taken care of my own place. I've helped the boys out a little bit out at the building and followed my favorite pastime of fishing down in the Delaware Bay. That is just about the extent of my activities since I retired.

B: What kind of fish are you catching? Are they having problems in the bay about the fish catch?

M: It's not quite as good this year as it has been and we've been catching trout down there. I have a friend who has a boat and I'm the first mate and we've had a lot of fun.

B: How did you happen to come to the university?

M: Rather interestingly I graduated from the Iowa Wesleyan College in Iowa and I got a scholarship, fellowship at the University of Maryland and following obtaining a master's degree I was fortunate to get a fellowship supplied by California (unintelligible) Company for a year at the University of Delaware. The year extended to two years and in 1932 I was taken on by the department of entomology which there were three of us in the department at that time and I went on through the usual regime of assistant professor and

associate professor and ultimately a full professor. I was at the university all of that time except from 1942 until late 1945 when I was in the navy.

B: What did you do in the navy? Had you been earlier in the first war?

M: No, I was too young for that fortunately. I was very fortunate and did entomological work in the navy. I was malaria control specialist and did general insect control at the bases where I was established. I was in Norfolk in early 1942 and under instruction at Bethesda in the latter part of that year and then in early '43 to Brazil with the fleet airwing where we had twelve or fourteen bases and I was the man responsible for insect control and malaria control at those bases for about nineteen months.

B: What did that involve?

M: That involved in checking the areas immediately around the bases for mosquito breeding and seeing that it was taken care of and I also had charge of taking care of other insect problems that we had around and in the bases such as screening and that type of thing and flies were a big problem which we had to take care of and strange enough, bedbugs were another big problem down there. There are two. We have a bedbug up here. There's another, different one down in Brazil called the South American bedbug which in some places gave us quite a lot of trouble. So, I took care of all the insect problems and also did work on health problems regarding the sanitation around the galleys so that we tried to keep the natives who worked for us in a healthy condition and eliminate the ones who might be carrying parasites that they could transfer to our men.

B: How did you handle the bedbug problem?

M: That was before DDT and I had a gang of men working for me and we used pyrethrum and sprayed the beds thoroughly and then go back on them in a week or two and do the same thing and we were able to keep them fairly under control but...

B: A daughter of mine worked in Bedford-Stuyvesant in the early sixties in what was called a "cornerstone project" which was to live with the people in the depressed areas in New York City and to be part of their lives. It was part of the sixties civil rights effort and she found to control cockroaches they were putting toothpaste on the bottom of bedsteads. Why would that work?

M: You've got me. I don't know. There's a lot of weird things that are done for roaches and bedbugs. If they work it's o.k. but I don't know why that would be effective. Haven't any idea and never heard of it before.

B: It must be that the bedbug liked the taste of the toothpaste only it won't be on a commercial for the toothpaste.

M: I couldn't say. Possibly it had a repellent effect. I don't know.

B: Did you have particular research in your career as a person in entomology that still retains your interest?

M: Yes, I try to keep up in publications on numerous things. I was a bit of a jack of all trades as you have to be in a smaller institution and mosquitoes...we did the first mosquito survey in the state back in 1932 from which all mosquito control work has taken place after that and I worked with that until well into the fifties, as part of my job of working with the mosquitoes and was on the old mosquito control commission prior to its being dismantled by Governor Buck and transferred to the State Highway Department. So

I've retained an interest in that. I also was much interested in horseflies and have written a bulletin on...the first one published on horseflies of Delaware and I also published a bulletin on the ticks on Delaware. Both of these were back before the war.

B: You were here during the Japanese beetle epidemic. What did the university do in Japanese beetle control?

M: That is a very interesting program. We collected tremendous numbers of beetle larvae and brought them into the lab and infected them with bacterial disease, milky white disease and then the U.S. Department of Agriculture took over from there; ground these up into a powder and mixed it with talc or something and we spread this material. They tried to get it in every square mile of the state. We used what very few people know now today, an old hand corn planter which you just stick in the ground and it releases a certain amount of this stuff so we tried to get that in every square mile of the state and all one summer that operation took place and apparently very effective because our beetle population following the next few years was way down. It has gone up lately.

B: The number of people involved to infect every square mile must have been fantastic. Did you just have one shot per square mile with the corn planter?

M: We had very few people involved. One of the persons involved was a man you undoubtedly know; former Dean Daugherty worked for us in the summertimes at that time. We didn't have but a few people involved but we mapped the state in square areas and they went to them and put it in. It was not put into a plowed field. It was put into pastures or lawns or something like that but it didn't

take too many people because they worked all day long and...

B: How effective would be...I mean wouldn't you almost have to cover all of that square area?

M: No, there was a spread. This beetle would get it and when he died, it died, the material was in the soil and other beetles crawling through that same area, beetle larvae, would pick it up so you gradually infected the whole bunch like that. In recent years they have appeared more in this state. For some time you couldn't hardly find one. I have ascribed it to the fact that we see it more in new developments where they have scraped all the topsoil off and gone ahead and it's been my theory, it hasn't been proved, but it has been my theory that they removed all the bacterial material and as a result beetles can come back in and live in these new lawns that they've put in because the stuff has been removed and that's a theory but at least that's where we see most of the beetles, in the new developments. A few years after the development...Brookside, for instance, shortly after that got going had heavy beetle problems and they also had interestingly enough had a lot of black widows out there for several years because of the lumber that laid around and made attractive places for it and so, there was one doctor here in town that sent for...just automatically...he was a pediatrician and he got lots of calls on these black widows from young mothers out there and he automatically referred them to me because he was sick of talking about black widows.

B: You've just brought up children and insects together. Today in the New York Times there is a very interesting story about a government project to grow fireflies so that Tokyo children may see

them one night of the year. They announce the night when the fireflies are going to be released only a couple of days ahead of time and the children go home after having had the excitement of watching the fireflies and according to the paper, the firefly is no longer in Tokyo or most other urban areas in Japan because of the chemical waste in their streams and the pollution in the air and I'm wondering what...first of all they said that each firefly cost twenty five dollars but nobody minds because they really are happy about the government people who work on the firefly project and they want to pay for it so their children can see fireflies. Thirty years ago in Delaware on a summer night everyone could sit on their porch and watch the fireflies over the lawn. Now we can't see them and what do you foresee about this?

M: Well, I would argue with that because my lawn here I see them. I have fireflies down here in considerable numbers and have had for some time. I can't see how they cost twenty five dollars apiece because recently I read an article about how scientists are working on that firefly light trying to...it's a very interesting thing and they pay kids to collect them and they only pay two or three cents apiece for the kids that pick them up.

B: They meant that for the number of fireflies they were able to release on a summer night like a fireworks display that it cost about twenty five dollars a bug.

M: I see. But to repeat, I still have a lot of fireflies around here. Of course I have a large lawn here that hasn't been disturbed for many, many years, plowed up or anything like that nor treated with an insecticide. So, I have plenty of fireflies.

B: Well, what about the state generally? We must have a reduction in

the number. We used to see many more.

M: I would suspect so because all of the developments have changed conditions completely. Every new development has a...they get in with bulldozers and push the topsoil off and which must destroy most of them and so I would suspect that they happen...particularly in this county. The lower county is not so much affected. Although I don't know the population of them in the lower counties but I...I never noticed that but I...at least right around here we have them.

B: What about the department in terms of its size and diversity?

What about the people you might have brought into the department?

P: When I came here as I say, we had three...there were three people in the department and we were located in what was known as South Hall which was a temporary building built during World War I close to Wolf Hall and we enlarged somewhat in a few years, in the latter part of the fifties, forties and fifties, and since then there's been quite an explosion in the number of people involved and it is now the department of entomology and applied ecology so we have two or three people in there that are ecologists and it's headed by Dale Bray who worked here prior to becoming head of the department and left and came back again as head of the department. There must be about a dozen people working there now in all phases of...most phases of entomology; mosquito control work and crop work with corn borer and numerous things of that nature so that it's quite a...it's a very well known department now and as graduate, give master's degrees and our boys seem to do very well when they go away to either work or take advanced degrees.

B: When did you become chairman and how many people...how did the growth develop?

M: Well now, let's get something straight here. I was temporary chairman for...I was full professor but I was temporary chairman for oh a year I guess while we were waiting to get one and then after we got this new chairman, I was pulled into Dean Worlough's office as an assistant to him for a year and a half. So, I was sort of a jack of all trades as I mentioned before. I can't exactly say how we got into some of these other things, the ecological end of it. I seemed to be a natural growth and Dr. Bray was...he is an excellent man in organizing and getting things done and pulling...and getting into the more...the things that we should have been in.

B: Oh, I see. When he returned to the campus he became the chairman. Well, was that quite a while ago?

M: As I remember that was about 1957 or '58 and Dr. Stearns who had been the chairman from...and in fact was the man that hired me... when he retired then there was this gap while we were getting a new chairman and then Dr. Bray took over.

B: Did your budget continue to go up each year? Did you have money from the state, from the federal government that came to you and did you work with the DuPont Company experimental people?

M: I should say the budget went up, continually went up for quite a number of years. I don't believe it is now although I'm not sure but we had fellowships for some years with the DuPont Company. Prior to the old Grasselli Company that they took over, was located out in Ohio some place and two of their men while they were building their new insect establishment in Wilmington, two of their

men were with us here working on their materials. We also had fellowships with Hercules for several years on fly control and a toxiphine material that is still used was first experimented with us out here at the university. We've had a lot of small grants and fellowships from oh, two hundred dollars to five thousand perhaps that have been put in to test a particular material and, for instance, one of the trustees now, Henry Cannon of Ridgeville, has been very much interested in control of corn borer in peppers. He raises a great many...that's one of the big products of his cannery and is much interested in that and has supplied considerable money to work on it. I rather think he's still doing it although I've been away from it for some time. So we've had support from outside and in fact that has enabled...back in the beginning that has enabled us to grow, to get materials, to get equipment and things of that nature. Without that there wasn't the money to buy equipment so we were able to get things like oh, microscopes and other things of that nature through these grants from different companies.

B: What are you now reading about the problem of insect control over the country? Time magazine one week ago had a huge insect on its front cover and the headline said, The Bugs are Coming.

M: Well, I read a considerable amount of stuff. I would say that the bugs aren't going to catch up with us for a while. I wouldn't be too concerned but if EPA and some of these other organizations get too tough on their control allowing you to use different...cutting off the use of materials, we could get into serious trouble. The use of...some of these people talk about controls that are completely impractical on a large scale and in your home garden you can pick

the bugs off but if you have two hundred acres of beans, you can't pick the bugs off.

B: What about world-wide health problems and insect control?

M: Well, they've apparently from what I read, the health problems are getting in bad shape again particularly regards malaria in India and the Far East because I presume that we must have supplied a great deal of the insecticide particularly DDT to control mosquitoes and since ...at least they're not doing it now and malaria has jumped way, way up. So the health problems from that standpoint are...we're very much concerned about them. So, I suppose they will continue to be like that. I can't see some of these poorer countries buying the stuff and probably us not supplying it so unless we come up with some other kind of material or some other method of control of mosquitoes, we're going to continue to have heavy malaria cases.

B: What about the problem with petrochemicals and their high cost? Are they involved in the production of insecticides as they are in fertilizers?

M: Oh yes. The petrochemicals supply practically all I think of the insecticides except the pyrethrums and rotenones which are plant materials. But the rest of them have to come from petrochemicals.

B: Well, pyrethrum and the other thing that you mentioned, rotenone, the plant derivatives are the old fashioned kind right?

M: Yes they've been known for a great many years and are quite effective against certain insects and pyrethrum still knocks flies down when you spray it on them and rotenone will kill bean beetles and other things. Neither of them are long lasting which from one standpoint is excellent. But from another it doesn't take very long.

It kills what it hits.

B: Well, the problem that the EPA people have with things like DDT is because of their long range factor.

M: Yes, they stick around for a great many years, for a lot, I don't say a great many years but they last for a long time and that is the big problem with DDT, its long lasting properties, DDT and some of the others. So, that they are too long in the environment.

B: When you look back at your long residence here in Newark from 1932...

M: 1930

B: From 1930 when you first came, what are your thoughts when you think of some of the personalities you've known and for example you mentioned Dean Worlough, people you've worked with and neighbors, what do you think about it as the town gown place where you've lived?

M: First I would say that a lot of the people that I worked with and knew were much more attached to the university than a lot of the people that are working for the university today. I regret to say that but I am convinced because I see these boys, the new boys are using it as a stepping stone in a great many cases and there's no getting away from that whereas people like Mike Daugherty, Worlough and a great many of those people, this was their home, their job and they liked it and they were not looking for something else bigger and better, as many are today. I suspect that the town gown situation was a little more quiet back in the thirties because the university was not spreading out at that time. It was riding along on the same size campus and they were not buying property. I think that is one of the things that caused the difficulty between the town and gown.

- B: Could you talk a little bit about George Worlough and what your work with him as an assistant was?
- M: Well, we were friends from the time I came to town. He was already here and we were both unmarried and played around together a lot. I worked with him at that time when he was a 4-H Club agent and then I worked with him when he was a county agent and then I had no more working time with him until he selected me to work while that job was vacant as assistant director and so we were old friends and got along very well, enjoyed each others company I think.
- B: Did you work with him in terms of his work with the legislature when you were an assistant of his?
- M: No, I was not involved in that end of it at all. I was involved in the mechanics of running the school and the department.
- B: Do you remember what the total budget for the agricultural school was when you were there?
- M: Sorry, I can't. It has been a long time ago and I didn't pay a whole lot of attention to that fiscal end of it. That was largely his baby.
- B: I was wondering if you had any kind of estimate because as of last year I believe it was a four and a half million dollar operation including federal grants for experimentation down state.
- M: I would suspect it wasn't very far from that because and in fact I believe in the past year, couple of years they have lost some money. So, it was probably about the same as now when I was there in the late fifties.
- B: Most people in the agriculture school and different parts of the university use their first initials rather than a first name. Do

you know any reason for this?

M: I haven't the slightest idea. I've always signed my name Donald MacCreary and why these other guys do these things, I haven't the faintest.

B: That is a tradition almost in the ag school. Or at least there were many of them.

M: You know me. I haven't the faintest idea why they do that. I guess possibly I am about the only one that looking back on it that uses a full name. I would like to mention one of an individual. Old Dean McHugh who was the Dean when I came here and he was a tough old Scotchman. He was hard boiled and took no nonsense from anybody. The farm and the ag school was his baby and he allowed no one to mess with it. He was a horticulturist and had a great following of the older people down state back in I suppose oh probably from 1912 on and when fruit growing was a big deal here in the state, apples and peaches, and some of the people down there were very fond of him. He had excellent relations with the large fruit growers.

B: When did the peach blight hit?

M: Before I came but the peaches started going out in the thirties for two reasons. I believe one; the price was terribly low in the thirties. They just couldn't make any money and two; the Oriental fruit moth and brown rot. They would ship a car load of peaches to New York and they looked fine when they left here and they were a mass of brown rot when they arrived and Delaware peaches got a very bad...originally had an excellent reputation, got a very bad reputation and brown rot I think practically ran them out of the state so there are very few peach orchards left,

rather small ones and now they can control brown rot but they don't have the market they once had.

B: There are some orchards though and they can control the brown rot. Would you ever expect them to recover? I guess the orchard industry is a long time coming. You would not expect it to go into orchards again?

M: I would doubt it. The people...a market...it takes a while for an orchard to develop. You plant it today and you're not going to get anything out of it and you're going to spend money on it for several years before you get anything and your market; they're always uncertain. When Georgia has a great many peaches, they get in before Delaware does and ruins the market pretty much and Jersey competes with you so that I would doubt that the valuable land down state will be used for orchards from now on except rather small ones that have local markets somewhat like Milbern up here in the edge of Maryland that gets rid of a lot of his stuff right there. And I don't foresee that it'll come back to any extent because the canning peaches largely come from California where they can control everything; the weather, practically the market and everything else.

B: One problem they're going to have I think is the problem of the phosphates which get down into, possibly into their water table. Isn't that a long range problem in California in that great Yosemite...is it the Yosemite Valley? The valley that grows everything. That's not the name of it. San Joaquin?

M: I don't know exactly but possibly you have something there that you build up and of course continual irrigation causes a leaking out of the salts in the soil. That's outside my field but there

is something to that effect that long range irrigation gives you some trouble out there and I suspect the use of some of these things will build up and cause some trouble but I'm unfamiliar with it and shouldn't say very much about it not knowing about it.

B: What about the future in terms of the control of organisms, insects in Delaware? Is everything pretty well organized now, pretty well controlable?

M: I would say that yes that most things are or can be controlled to a certain extent not complete...you don't get...you rarely get complete elimination. You scarcely ever do but I would say that as of right now there's no immediate...the only thing is the gypsy moth which is coming in. Now that's another story and requires... thus far the only thing that controls it is spraying and aerial spraying and it defoliates forests and I would say it is not exactly under control. They're working on various lures and things of that nature but it is one of the big problems and it hits forests and your local trees so that it strips them and trees can't be stripped very often and continue to live.

B: What about the Dutch elm problem on the campus?

M: They've handled that pretty well over the years. They're sprayed with...up until the last year or two they've been spraying with methochlor~~or~~ to kill the beetle that carries it.

B: You'd better spell that for the person who transcribes this.

M: Methochlor.

B: This treatment then you think will probably mean that the elms, the main elms on the central campus will be able to survive?

M: I don't believe they used aerial spraying last year or possibly the year before. They were trying an injection method with a new

material named...it escapes me at the moment but they've tried that some this year and careful pruning of old dead stuff in the trees and I believe they've reduced the loss to one or two percent a year. You're going to lose a few gradually but it appears that this new material that can be injected into trees may solve the problem but where you have a solid planting of one tree, you generally are in trouble if anything hits and that's the case with our elms which are very beautiful trees and which I remember as quite small trees. I should like to mention the origin of the work on mosquito control. Back in 1932, prior to that time Rehoboth had lost the entire group of people that were enjoying Labor Day due to mosquitoes and people down there were very much exercised about this and something had to be done. Mrs. Henry B. Thompson who was a power at that time in the state and had been for a long time was much interested and W. S. Corcoran who developed Henlopen Acres was much interested and between the two they put in the city of Rehoboth...they put up money for a survey of mosquitoes and Governor Buck out of a contingency fund he had put up a little money and we went ahead and made this mosquito survey of the state and published a bulletin which has long since been out of print. Then there was nothing done and there was no money available until I believe about 1933, the WPA and the Civilian Conservation Corps got started and a campus of...made at Lewes and another one farther up state and a great deal of ditching was done and a commission was set up in which included the engineer...center engineer of the State Board of Health and the representative of the ag school which at that time was Dr. Stearns and later myself that administered the work of the CCC and this carried on for quite a

number of years, two or three and a lot of ditching was done in the marshes and people became aware of where the mosquitoes were coming from that were hitting the resort areas and the towns inland. That particular mosquito was the salt marsh mosquito and has a long flight range so it gets way back inland. Following that there was a difficulty between Mr. Corcoran who was the executive running the thing...Governor Buck shifted, dismantled the commission and shifted the whole thing to the State Highway Department. We at the university became their consultants and we ran their traps for them and got a little money from them to do this work and advise them on insecticides or other materials and this has continued at that rate and under those conditions up until just a few years ago when the reorganization of the state government. Now it is under another section of the government and we at the university still maintain the same type of consulting for them and still get some money to do research which will...leads to better insecticides and more safe insecticides and other methods of control.