

TRANSCRIPT

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Field Notes: Arthur W. Cooper (compiled March 13, 2012)

Interviewee: ARTHUR W. (“ART”) COOPER

Interviewer: Yona R. Owens

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Length: Approximately 58 minutes

YO: My name is Yona Owens and I’m interviewing Dr. Art Cooper for the Lewis Clarke Oral Histories Project. Today is March 1, 2012, and we’re in a conference room in D.H. Hill Library on North Carolina State University campus. Dr. Cooper’s field of study was botany. An early environmental activist, he was also head of the NCSU Forestry Department for fourteen years. He has served by appointment at state and national level environment related agencies and in 2000 he was an ACC representative to the National Collegiate Athletic Association.

You’ve had an exciting and multifaceted and award-winning career, and I really appreciate you agreeing to be interviewed today.

AC: It’s a pleasure to be here.

YO: So, to get us started, tell me a little bit about where you’re from and how you got interested in botany.

AC: Well, I was born in Washington, D.C. and I went to college in upstate New York at Colgate University. It may sound quite trite, but probably I got my very first interest in ecology and botany from walks that I used to take with my mother when I was a little kid around her parents’ house outside of Boston. I can remember her showing me the Cardinal flowers and explaining to me that the Cardinal flowers would go extinct if we picked them, and somehow that must have stuck with me because I had this latent interest in ecology that manifested itself late on in my undergraduate years. I started out my undergraduate years as a Phys. Ed. major, but I did end up as a natural science major.

YO: That was your undergrad, was in natural science?

AC: Well, I actually did get a dual degree in natural science and physical education.

YO: [Laughs]

AC: I never practiced Phys. Ed. [Laughs]

YO: Right, right. Well then you got your master’s in botany though, right?

AC: I did. That’s right. I got that at Colgate. The reason I stayed there, Colgate had no particular graduate program in botany but what I was doing was taking basically undergraduate courses

that I'd never had to build up a résumé that would make me a qualified applicant for graduate school at the University of Michigan.

YO: And that's where you went to do your Ph.D.

AC: I did my Ph.D. there.

YO: That was in '58, when you completed your Ph.D., and I'm curious where the term "ecology" started to be used, because I know your Ph.D. has—in your résumés I've seen around it has in parentheses, "ecology," so when, between natural science degree time and your Ph.D., did we start running into the term "ecology"?

AC: Do you mean when did I start to use it, or when was the term being used?

YO: Just in your recollection when did the term start being used?

AC: Well, I knew about ecology through the latter part of my undergraduate program and I knew that that's what I wanted to do. Ecology itself has been a legitimate branch of biology since the late 1800s but through probably 1955 to '60, there were relatively few practitioners of the field and it did not have a great deal of name recognition.

The events that probably brought ecology to the forefront as an important branch of biology were—one of them was the fate of radioactive fallout from nuclear tests in the Pacific after World War II. It became clear that the nuclear fallout was not just disappearing. It was being accumulated in the bodies of plants and animals, possibly with negative effects for man.

The other was pesticides. The movement of pesticides through natural systems also brought a good deal of attention to ecology and of course all of that was brought to a head by Rachel Carson's *Silent Spring*, and from that point on ecology exploded as a science and in fact it has come to be a grossly misused term. In many people's minds, it has no relationship to what ecology originally was.

05:30

YO: What was it originally then?

AC: Well, originally it was a branch of science, not a branch of politics. [Laughs]

YO: It's a movement now, right?

AC: Yeah. The environmental movement was a spinoff of the activity of ecologists and it's gotten to be so that ecology and environmentalism are confused in people's minds. Ecology provides the scientific basis for a lot of environmentalism. There's a lot of environmentalism that has no basis at all. But for that part of it that's credible ecology is the scientific undergirding.

YO: That's a good clarification. As long as I've been around the—having been around on the first Earth Day and been through the movements that have come along, that's a very interesting, to me, clarification.

AC: Well, the first Earth Day was probably, oh, five to seven years after ecology had become a—legitimate isn't the right word—but a much better understood branch of biology.

YO: You became an assistant professor of botany in 1958. What attracted you to North Carolina State?

AC: A job. [Laughs]

YO: A job. [Laughs]

AC: That's too simple an answer but basically it's an answer. I had a friend who came down here, Jim Hardin, who was in the botany department here for a year, and he called me up in Ann Arbor and said, hey, we've got an opening for an ecologist in the botany department here. Why don't you apply for it? So I applied for it and they invited me to come down for an interview and I was hired. And outside of the fact that it was a job at a good institution, the position as it unfolded offered me almost unlimited freedom to teach ecology the way I thought it ought to be taught and to develop the kind of program that I wanted to develop and to do the kind of things that I wanted to do.

YO: What was different about your approach then say what had been done elsewhere?

AC: Well, probably, although it isn't reflected in the first two or three years of my work at NC State, I probably always had a latent interest in the interface between ecology and natural resource management and government. My major professor at Michigan was a man named Stanley Cain who was one of the first ecologists who ever became active in government. He was on the Ann Arbor town council and he ultimately served as an assistant secretary at the Department of Interior. And it was kind of a joke around the office that we used to kid. We couldn't understand how Stan could waste a good career as a scientist messing around in politics. [Laughs]

YO: [Laughs]

AC: But that shows you when you're young you make value judgments too quickly.

YO: Right.

AC: So as I said, I think I always had that latent interest and it began to appear probably about 1962, after I'd been here about three or four years.

YO: I know that you were appointed to several councils but I think we'll get to that in just a minute. Do you remember how you met Lewis Clarke?

AC: No, not really, but I think I can reconstruct a general picture. My sense is that the field of landscape architecture was evolving the same way science was evolving and since landscape architects messed with and messed up the environment, I think many of the thinking landscape architects began to realize that what their students needed in addition to landscape architecture

principles was some understanding of basic ecology. I can't remember who it was, whether it was Lewis himself or someone else who contacted me—and it was probably in '64 or '65—to talk about the possibility of landscape architecture students taking ecology.

10:26 Now I need to inject one thing here. When I first came here, the ecology course that I taught was a plant ecology course but within five years, four years, Tom Quay, who taught an animal ecology course, and I decided that our two courses should be combined into a general ecology course, which he and I taught for several years. So it was general ecology that Lewis was considering his students taking.

YO: He said that he remembered giving the students questions about biology, botany, different types of sciences, and then just giving them carte blanche, go find an expert to talk to. So, I was wondering if you remember any of the students that may have come from his program over to just kind of pick your brain.

AC: Not by name, unfortunately. I do remember there was a young lady who ended up in Charlotte who very likely would have been one of the first students to come over. I wish I could remember her name, but I can't.

YO: How did you approach introducing landscape architecture students to the meaning of what was still at that time a little bit foreign sounding word, “ecology”? How did you go about introducing them to that?

AC: I didn't make any special effort to introduce them to it, which turned out to be one of the sticking points later on. But when I talked to Lewis, I told him that we were happy to have the landscape architecture students in the course and we will certainly treat them the way we would treat any students, but we're not going to alter the subject matter of the course to accommodate them.

So they got dropped headfirst into basic ecology and to some biological principles for which some of them didn't have adequate training. The good ones didn't have any problem with it at all because it's not rocket science. It's just some basic concepts. It's also possible, and this I just can't reconstruct, but it's also possible that some of the intercourse between me and Lewis over ecology could have begun from students who took general botany, because I taught general botany for two years. I lectured in general botany and managed the labs and it's quite likely that one or more of those students had me or I had them in general botany.

YO: At this point I've interviewed at least a dozen former students and a lot of them tell me about your field trips.

AC: [Laughs]

YO: Do you remember your field trips?

AC: Oh yeah.

YO: Where did you take them?

AC: Well, most of the field trips were right here in the Raleigh area. We used to be able to go up into the back part of Umstead Park. By the time you left the fairgrounds you were in open country. I mean it was literally that undeveloped in that northwestern quadrant between Raleigh and Umstead Park. So that's where we took the basic trips, but my guess is that the trip that they're talking about is the one to the coast. Tom Quay and I started that in I want to say '65 but I could be off by a year, and it represented quite an undertaking because by that time the enrollment in the course was upwards of a hundred and twenty-five to a hundred and fifty. So, just getting them down to Morehead City and getting the facilities in Morehead City was sort of like getting Hannibal across the Alps, except we didn't have any elephants. [Laughs]

15:14

YO: [Laughs]

AC: But we used buses and some of the kids drove their own cars and instructors drove their cars and we got down there Friday night and spent all day [Saturday] and half of Sunday in the field. It was really a fun trip. I thoroughly enjoyed it and I think most of the students enjoyed it. I remember there was one landscape architecture student—I do remember his name, a young fellow named Dave Schiller, because once he finished in landscape architecture he shifted over into plant ecology.

But we were headed out into a salt marsh and I had begun my dissertation on salt marshes, explaining to them that where you want to walk in a salt marsh is where the grass is shortest because that's where the ground is firmest, the taller the grass, the softer the ground. Good old Dave, without even paying any attention at all to what I said, was off into the tall marsh grass and he went right in up to his waist in the mud. And of course the class, all hundred and twenty-five of them, they just dissolved. I just stood there and I said, well, what are you going to do, Dave? How are you going to get out? I said, the easiest way to get out is swim out.

YO: [Laughs]

AC: So he had to—he lay down, kind of like this, and got himself out.

YO: Oh, my gosh.

AC: [Laughs] But he was one dirty kid.

YO: I can imagine. [Laughs]

AC: I see Dave probably once a year and hear from him at least once a year, because he lives right here in Raleigh now.

YO: Does he really?

AC: Yeah.

YO: Well, we'll have to tell him that his story—some people had forgotten his name but his story has lived on.

AC: Had you heard the story before?

YO: I hadn't heard it quite exactly the way you told it because I couldn't quite figure out how it was that you ended up on the wrong side of the marsh, but now I understand.

AC: Some of the other things we used to do was we used to go over and look at dunes and the development—the Duke marine lab was our focal point, you know, the place where we stayed and where we did the indoor teaching. But we went over to Emerald Isle and Atlantic Beach and looked at some of the development over there and looked at the dunes and then we also took them over to Bird Shoals, which was the place where Rachel Carson did her work, the work that underlay *Silent Spring*. Over there we had to time it with the tide. But they'd get over there on a low tide and they could dig up horseshoe crabs and sand dollars and for some of the kids—every year we had several kids on that trip that had never seen the ocean before. I mean they just stood there slack-jawed looking at the ocean.

YO: Wow.

AC: And of course getting out on a mudflat or sand flat at low tide was something virtually none of them had ever done before.

YO: I'm sure they were impressed.

AC: They enjoyed it and they learned a lot.

YO: That is wonderful. Did you and Lewis ever talk about his reconnaissance studies and overlay system of site analysis? Did you ever get that technically involved with each other?

AC: Probably we did, but I honestly can't recall enough of the conversations to say anything about it. I know that Lewis was a very innovative thinker in the field of landscape architecture and I'm sure we must have exchanged ideas at one stage or another. As I said, there was one other person at least who was involved in this relationship between landscape architecture and ecology and I simply cannot remember that person's name?

YO: Was he a faculty member?

AC: My recollection is he was a faculty member, either a full blown faculty member or an adjunct.

YO: Could it have been Richard Moore, Dick Moore?

AC: Well, Dick Moore, I had a lot to do with Dick Moore, but he was not the person I'm thinking of in this particular context. No, I knew Dick very well.

YO: Right. I'll have to think on that.

19:49 In 1968 Lewis left the faculty of the school of design, which is now of course the College of Design, for private practice and many former students became employees of Lewis Clarke Associates. Amazingly, this young firm was chosen over Hideo Sasaki to do the master plan for

Palmetto Dunes, which is a two thousand-acre resort in Hilton Head, South Carolina. In addition to the design staff, Lewis assembled a team of experts in various fields like engineering, entomology, and coastal ecology. Can you tell me a little bit about what you remember about being involved in the Palmetto Dunes project?

AC: [Laughs] I remember the flight down and back.

YO: Was it in the company plane?

AC: I guess it was a company plane. The damn thing was a push me-pull you plane.

YO: That was the company plane. [Laughs]

AC: It had a pusher propeller on it and it had twin booms like an old Lockheed P-38, and I can remember looking at that thing and saying, God, I'm going to fly down there in this thing? [Laughs] Of course, it was a beautiful day so we had a wonderful trip.

YO: Was Lewis flying the plane or was Gerry [Rooney] flying the plane? Do you remember?

AC: I think Lewis was not because I think Lewis and I talked. Although having said that my recollection is that it was not easy to talk in that plane, particularly if you were in the back seat because the motor was right slam behind you, so I wouldn't put a whole lot of faith in what I just said.

YO: [Laughs] Right. So you guys landed at Hilton Head Island at that time, right?

AC: I guess, yeah, and then we traveled up to the Palmetto Dunes site and I can remember walking—I think we walked the entire length of the beach at Palmetto Dunes, and of course it was a typical sea island beach with relatively small dunes. That particular part of the South Carolina coast, my recollection of it is that it was a part that was never exposed as dramatically to heavy storms and heavy surf the same way that most of the North Carolina coast is. So I don't recall that there were large barrier dunes and inland dunes. I think most of what we were seeing was just the encroachment of the beach on the forest.

YO: Do you remember, did you write a report for him or did you continue in a consulting basis?

AC: That's a tough question. I must have done something but I could have done it—it probably was done orally. And the reason I say that is my recollection is the trip down there was in June of 1967 and that was the first summer that I taught at the University of Michigan Biological Station and—no, I'll take that back. It was June of 1968 because it was the same June that Robert Kennedy was killed. We were headed up to Douglas Lake where I taught—this was the second summer I was teaching at the University of Michigan Biological Station and I had three trips covering four days, all scheduled right back to back. One was with somebody from forestry up to the Blue Ridge Parkway to look at something up there, and then the trip to Palmetto Dunes with Lewis, and then a trip down to Aurora with one of my graduate students to look at his project, and then within a week we were leaving to go to Michigan.

YO: Good heavens.

AC: So I didn't—I was pretty pushed for time and I do not recall writing a report.

YO: Do you remember any impressions that you had of the site, in conjunction with what they had proposed that they were going to do with that land down there?

24:38

AC: Well, my general reaction is that it was—I think my general reaction was that the density of development was probably fairly typical of coastal developments at that time, more dense than I personally would have preferred. I think that the design team did take into account the necessity to deal with sea level rise and whatever storms did occur, so I think from that perspective it was an ecologically sound development. But if you look at the pictures in this report [referring to the Palmetto Dunes Project Booklet on the table] you can see that it's a fairly dense type of development, although, I'd be quick to point out, not as dense as some that had been planned for the North Carolina coast, specifically the one that was being talked about on Baldhead Island. That would have been an utter disaster if it had ever come to pass.

YO: Yes, we've learned a few things since then and in some places we're still making a lot of bad mistakes, right?

AC: Well, the way Baldhead was ultimately developed did reflect the experiences with coastal development through the '60s when it was pretty clear that densities were only marginally sustainable and water supply and waste disposal were really big issues.

YO: In this period of '65 to '70, right in there, did you have any revelations or premonitions about how important ecology would become to the landscape architecture profession?

AC: I sensed that it was going to become embedded in the profession, but the relationship between NC State's landscape architecture students and the general ecology course that I taught broke down probably '69, '70, and it broke down over something that I alluded to earlier, and that is the lack of background that a lot of the landscape kids had for the general ecology course. I can remember having long discussions with Lewis and several of his peers over there about the possibility of teaching a separate special course in ecology for landscape architects, and I was pretty blunt about it. I didn't want to have anything to do with that. I taught ecology the way I thought it needed to be taught and it was up to them to take what they wanted out of it. And if it reached the point where there was another way of teaching that material that would be more beneficial to their students, I was not the person to do it.

YO: Were they missing a science component in, say, their high school background, or was there some particular training that they should have gotten in high school that would have helped them in your course?

AC: I think it was more the difficulty those kids had grasping the relevance of a lot of the material to what they were going to do, and I think probably by the time they were seniors, they could put that relevance together, but I think a lot of them simply couldn't understand why they

had to mess with all these population dynamics and physiological ecology and things that seemed pretty distant in terms of importance to them.

Now that statement is not a blanket statement because the landscape architecture students fell across a pretty broad spectrum, as you would expect, and there were some that were really, really good. I mean they were crackerjack kids and they had no trouble with the course and they were right out in front of everybody else. Then there were others who were just sort of hanging on. And I think that there were relatively few in the first category and as the number in the second category got larger I think Lewis and his peers sensed that this was not the way to get what they wanted their students to get, which was fine. I think the relationship served a very valuable purpose for four or five years and then I think Lewis and his students went their way, and of course it wasn't much more than a year thereafter that I went downtown, and by 1970 I was pretty deeply enmeshed in the political side of ecology.

30:39

YO: Yes, by 1971 the press was calling you an environmental activist—

AC: [Laughs]

YO: —and in 1979 you were elected president of the Ecological Society of America. I'm assuming you were one of the founders of that particular society, is that right?

AC: Was I a founder?

YO: Were you a founder?

AC: No.

YO: No? It was around for a long time?

AC: No way. It was founded in 1915.

YO: Really?

AC: In fact as one of the past presidents, I'm now helping another past president get ready for the hundredth anniversary.

YO: Wow.

AC: So, no, I—

YO: I'm just a member of the general population so I don't know these things. You have to tell me.

AC: Well, the Ecological Society of America almost started out as a club [Laughs] in 1915. You could probably put all the members around this table.

YO: Right.

AC: The membership of the Ecological Society when I joined in 1955 was like eight hundred, maybe.

YO: In the whole country.

AC: In the whole country, yeah.

YO: So that's kind of a judge of how small and limited the studies were. I find that fascinating that in, what now, forty years we've got the general population interested, or aware of at least the word, so we can take them from there.

AC: It's a little bit like DNA.

YO: How's that?

AC: Well, DNA—nobody in the general population had heard of DNA in the early 1960s. If I remember correctly, it was 1953 when Watson and Crick proposed their helical model of DNA and it took, oh, a number of years before that filtered its way into general biology textbooks. I can remember just talking about that in the most general possible terms in general botany.

YO: Really?

AC: And that was ten years after DNA was discovered. Now everybody knows what DNA is.

YO: It takes awhile. It's interesting to see those things move along in the thinking. Well, what's interesting to me is that when you were elected president of the Ecological Society of America you became head of the NCSU Forestry Department a year later, and considering how much animosity seems to exist in the twenty-first century between environmentalists and the logging industry, how is it that in the 1980s you seem to have steered these two interests into a compatible direction? How did you do that?

AC: [Laughs] Black magic. [Laughs]

YO: [Laughs]

AC: No, just by really using the same principles that I used when I worked downtown. You could raise that same question about the five and a half years that I spent as an assistant secretary in what was then Natural and Economic Resources. I was standing—

YO: That's for the state of North Carolina.

AC: That's right. I was standing with one foot in the science community and one foot in the politics community and what I was doing was serving as a translator between the two and fortunately, I was able to maintain credibility in both camps. Part of that was because I was probably dumb enough never to lie. But I had a reputation for being straight with people. I've

had numerous legislators tell me they disagreed strongly with what I said, but they could always trust that I was telling them the truth. And I did the same thing when I was in the department of forestry.

34:54 Forestry is nothing but a branch of applied ecology, the same way as agriculture is applied ecology. A lot of the environmental concerns with forestry have very little foundation in fact. Some do, and probably the most interesting experience I had in working both sides of the fence, so to speak, was when I served as the chairman of the committee of scientists that developed the planning regulations for the National Forest System. I wanted to ensure that those planning regulations had a solid ecological basis but on the other hand, they had to reflect sound forestry principles. So the committee members and I and the forest service worked to meld those things together, and that's what I tried to do while I was department head in forestry.

Now having said all that, I was department head during the period of time when a department head's disciplinary background became less and less important and what became more and more important was his ability to manage departmental affairs, his ability to deal with people, his ability to represent his faculty with the higher administration, to tell people that they weren't going to get tenure—all those things barely existed when I became department head and by the time I stepped down as department head that's what a department head did.

YO: Wow, that was a big change, wasn't it?

AC: It was a huge change, and I'm not sure that it's a change for the better because I don't think academia has profited from having its department heads metamorphose into basically full time administrators.

YO: You left in '94, so that's the period we're talking about. Well, jumping ahead a little bit from '94, in 2002 in an article in the *Winston-Salem Journal* titled, "Don't Let Forests Become Pawns of Politics," you called for regulations and policies that would guide the use of North Carolina forests and help reduce the risk of wildfires. What do landscape architects need to know about forest management policies?

AC: Well, I think the first thing they need to understand is that forest management policies are simply the application of basic ecological principles to the management of the growth of trees. A very simple-minded example is the phenomenon of natural succession. We're all familiar with the natural succession that takes place here in the Piedmont where you abandon a field and grasses and weeds come in and then pines follow them and the pines mature and then they're overtaken by hardwoods.

YO: Right.

AC: Well, basically what a forester is doing is simply arresting succession. A forester is either arresting succession here in the Piedmont by holding forests in pine forest or he's accelerating succession by accelerating development toward a hardwood forest. So you simply have to understand the basic dynamics of the tree species involved so that you can apply those principles to the particular species you're managing. Forest management, silviculture, is really in a way just the applications of principles of natural succession to growth of trees.

YO: That's interesting. I haven't ever thought of it that way. That's why I'm talking to you today.

AC: [Laughs]

YO: Okay, in 2004 in the *Charlotte Observer*, you were quoted as saying about urban growth and sprawl that, quote, "The land can recover from the worst forestry but it can never recover from concrete." How can landscape architects become more involved in discussions about urbanization challenges, or should they?

40:10

AC: I don't know that I can answer that question because I think landscape architects would have to speak for themselves.

YO: Did you ever run into landscape architects on any of the panels or committees that you were involved with?

AC: Probably, but not in a context where we were talking about landscape architecture. The U.S. Forest Service has a number of landscape architects employed in it and I'm sure I dealt with some of them. Landscape architects—the fundamental problem that I was referring to in that particular quote is that urban sprawl—which is not promoted by landscape architects but landscape architects inevitably end up being involved in it because they're the ones that try to translate what might otherwise be an ugly mess into something that's really a development with good amenities and sustainability. Whether the urbanization should spread or not, that's fundamentally a political question. Whether we should concentrate on in-growth, developing more intensively within existing cities or not, again that's a political question.

YO: We have the citizens' committees that go before the city councils that work on rules and regulations and policies. I just always am curious where we should plug in the experts when these citizen committees come forward.

AC: Well, they need to be at the table when the alternatives are worked out, and they need to be available as experts to talk with the politicians when the alternatives are being explained. But in the end, unless the landscape architect or ecologist is an elected official himself the decision rests with the people's elected authorities. The important point is that people that understand something about the consequences of what's being proposed be available to discuss those consequences when the decisions are being made.

YO: Since you were so active in politics in addition to your work what advice have you got for people—obviously landscape architects—what advice do you have to any of those people about going into service to the community or politics?

AC: Well, I think as a member of society everybody owes society some service. And they need to give that service in a way and at a level that they're comfortable with. Not everybody can handle being in a political environment, and I don't say that to try to aggrandize anything I've done, but I was able to handle myself in a political environment. As I said before, part of it was because I had a reputation for telling the truth, that you could take what I said to the bank. You

may not like it, but that's the way I saw it. Some people simply don't have the temperament to do that, but they do have the temperament to work down at a level that they're comfortable with, and as I said I think everybody owes society some contribution.

YO: At least something, right?

44:58

AC: Yeah. That's part of the price you pay for hanging around.

YO: [Laughs] We're almost through here, so bear with me. This question is a little bit off topic, but as you were a close acquaintance of B.W. Wells, I just wanted to talk to you about him for just a little bit.

AC: Oh my. B.W.

YO: Yes, and for those who don't realize it we have an online interview that you did for Special Collections' B.W. Wells exhibit, and I noticed in that interview that it sounds like Wells challenged long-held opinions about environmental causes and effects to the point that he was publicly ridiculed by his peers, but you still stood by him. I was just curious of that relationship. What attracted you to stay friends and acquaintances with B.W. Wells when he was ostracized so many times for his theories and findings?

AC: Because B.W. was a very, very shrewd observer of the landscape and more often than not B.W.'s ideas turned out to be correct. I mean, he took whizzers on some, there's no question about that, but I'll give you a couple of examples. I won't go through the whole story about the salt spray effect, but with a Flit gun—

YO: How do you spell that, Flit gun?

AC: Flit was an old insecticide back in the 1930s. And you bought it and it had a little pump gun like this. You poured Flit into the tank and then you pumped it like that to kill insects. Well, B.W. got this notion that what was killing the plants on the edge of the ocean was not wind but salt. So he got a Flit gun to mimic salt spray and sprayed plants with it and low and behold they turned black, so he gave a paper on it at the North Carolina Academy of Science meetings. He described the salt spray effect and when he got done several people asked him questions, and then old W.C. Coker from Chapel Hill, who was one of the grand old men of North Carolina botany, got up and said, Wells, that's all fine and good, but we all know it's the wind.

YO: [Laughs]

AC: That's the way—and then Heine Oosting, who was an ecologist at Duke for many years and who I had the pleasure of knowing in his later years—and I mean that in the very best way. Heine was a great guy. Heine told me one time that a paper that he and Dwight Billings wrote, that demonstrated the impact of salt spray on coastal plants—he said, we started out doing that research to prove Wells wrong and all we did was prove him right.

YO: No kidding.

AC: So that's an example of where Wells' ideas were ultimately—and that's well accepted. Now another one that's even more controversial, but I am confident that he's going to be proven right about it, is the Carolina bays. I'm sure you've heard of these elliptical depressions like White Lake and Singletary Lake. They're elliptical depressions and there's thousands of them all over the coastal plain and there's been many, many different theories for their origin, but B.W. ended up espousing the meteorite theory, that these were caused by the impact of a shower of meteors or if not the meteors themselves then the shock waves associated with the smaller meteoritic bodies.

There was a geologist at Chapel Hill named Prouty [William Prouty] who also believed that, but that idea has been ridiculed for probably twenty—no, more than that—probably forty or fifty years. But just within the last three or four years there has been some research done that suggests that those sorts of land forms in other places are the result of meteoritic impacts and it still remains to be seen whether the Carolina bays are or not, but I am convinced that Wells is going to be proven right on that, Wells and Prouty himself, of course. It was not Wells' idea alone.

So you asked me why I stuck with B.W.'s ideas. Because basically he was sound. He was a very sharp, shrewd observer of the landscape.

50:17

YO: What did he look like when he was observing something? What was his technique?

AC: Well see I never knew him when he was active in the field. I knew him—he had retired in '54 and I came here in '58 so there was a four-year hiatus. I did have the pleasure of going on one field trip with him. I invited him to take my advanced ecology class in the first year I was here, in the spring of 1959, on a trip to the coastal plain. I said, would you please just take them on the same trip that you used to take the students in ecology on? So he said he would, and it was grand fun.

B.W. would get so enthusiastic he'd almost froth at the mouth, and wave his arms and gesticulate. In fact the first time I ever met him, I'd been here about a month and I was sitting in my office in Gardner Hall working and this elderly gentleman came around the corner and he said, Cooper, I want to introduce myself. I'm B.W. Wells. I used to be the ecologist here. So we shook hands and he said, do you get *Ecological Monographs*? I said, yes. In fact, I said, the newest one's right here, and he said, well I have mine and there's an article in here about grass balds, and I told the man who wrote this article how they were formed, and look at what he wrote. And he slammed the magazine down on my desk.

YO: [Laughs]

AC: The fellow that he was talking about was a fellow named Alan Mark, and Mark did not believe that the grass balls were formed as a result of Indian activity. He had a different theory. This was typical of B.W. He said, I told him how they were formed, and look what he came up with.

[Laughs] So that was my first introduction to B.W.

YO: He was married, right?

AC: Oh yeah. He was married twice. His first wife was Edna Metz. Wait a minute. [Pause] Yes. Edna Metz. There's a little park down in Cameron [Village] that the city maintains that's named

for her. Then there's—I'm doing a complete blackout on his second wife. She and my wife—Maude, his second wife's name was Maude. Maude was a good bit younger than B.W. and she outlived him by probably twenty years, close to it. And she and my wife and I became pretty friendly and my wife was very friendly with Maude Wells right up to the time she died. So I only knew him as an elderly man. I did not have the pleasure of ever doing any substantive field work with him.

YO: But he was quite a character, right?

AC: Oh, he was that. He was that.

YO: [Laughs]

AC: But a very, very astute observer of the landscape, and that was when—He practiced ecology when ecology was basically observation. You sat and you looked at things and you maybe took a few measurements, a temperature, and that sort of thing. But there was no sophisticated equipment at all. The stuff that we have available now to measure environmental parameters and to measure plant responses, all that stuff didn't even exist in those days. You had to be a very astute observer of the landscape in order to be an ecologist, and that's what B.W. was.

YO: His photographs that we have, his colored slides—

AC: The lantern slides, yeah.

YO: —are just absolutely beautiful and you can tell he was very sensitive to what he saw. Very interesting. You were lucky to know him. I'm envious.

What is the one important thing to know about Art Cooper?

54:53

AC: [Laughs] I guess that I've had a number of lives. I alluded to that when I said I was a Phys. Ed. major in college. My first life was as a teacher of ecology here at NC State. My second life was as a state government bureaucrat, and my third life was as a member of the department of forestry, and my fourth life was I was still a member of the department of forestry but I was the university's faculty athletic representative. And I guess I got a fifth life now that I'm retired. So you could conclude from that that I never really did decide what I wanted to do.

YO: Not yet, right? [Laughs]

AC: That's right.

YO: That's great.

AC: I can remember one of the most hypocritical things that I ever said, and I realized it when I said it. I was lecturing to a bunch of freshmen in the beginning course in forestry and I kept telling them how important it was for them to decide what it was they wanted to do. And I stopped when I said that and I said, what a hypocritical thing to tell these kids considering your own background. I said, in addition to me with my three or four lives, the guy who's helping me

teach this course majored in engineering and was a boiler engineer at Purdue and got into computer science and ended up in forestry through computer science.

YO: [Laughs] Oh, heavens.

AC: So if anything the two of us were the exact diametric opposites of what I was telling those kids to do. [Laughs] What I should have been telling them to do is to get the best education you can and keep your options open. Don't ever close any doors.

YO: That sounds like good advice to me. Well, those are all the questions I have for today, Art. Do you have anything you'd like to add?

AC: No, except to say that I thoroughly enjoyed the forty-plus years that I taught at NC State. During that period of time NC State changed from a college to a university and being part of that change was exciting, and it's interesting and exciting to look back on it.

When I first got here in 1958 my salary was fifty-five hundred dollars and I could remember that because there were fifty-five hundred students here at that time, and of those fifty-five hundred, sixty were women. That's just an example of how much NC State changed in the forty years that I was here.

YO: Amazing.

AC: It is.

YO: Amazing. Well, that's what we've got for today.

AC: Good.

YO: Thank you.

AC: Well, I enjoyed it.

YO: Good enough.

Transcriber: Deborah Mitchum

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