

Oral History Cover Sheet

Name: Chandler Robbins

Date of Interview: July 1, 2008

Location of Interview: Patuxent National Wildlife Refuge

Interviewer: Mark Madison; David Klinger;

Approximate years worked for Fish and Wildlife Service: 1943 to 2006; volunteer from 2006 to present.

Offices and Field Stations Worked, Positions Held:

Most Important Projects: Bird Banding; Breeding Bird Survey; Pesticide Impact Survey; Albatross / Midway Island Project;

Colleagues and Mentors: Roger Tory Peterson; Rachel Carson; Bob Whitcom. FWS personnel – Robert Stewart, Senior; Fran Euler; Neil Hotchkiss; Ira Gabrielson; Bob Mitchell; Phil Dumont; Johnson Neff; Dale Rice; Carl Canyon; John Aldridge; Gene Kreidler; Hubert Frames; Barbara Dahl; Diane Dawson; Dan Boone; Leland C. Morley; Arnold Nelson; Lucille Stickell; Joe Linduska; Derwood Allen; **Ciel Malley; Louis Horn; Herb Zimm;** Fred Lincoln; Harvey Jackson; Ruth Richards; Maythatcher Cooke; Miss Putnam; Johnny Lynch; **John Sawyer; Danny Bistrack; Rex Allen; Harry Oberholser; Joe Hickey; Sam Droging;** Alexander Wetmore; Paul Bartsch; Aldo Leopold

Most Important Issues: Pesticides; Bird breeding and bird count surveys; Minimum size woodlot for breeding / populations / variety – habitat fragmentation studies; Albatross breeding and populations; Albatross and Midway Island; *Golden Guide to the Birds of North America*;

Brief Summary of Interview: Born in Blemont, MA, July 17, 1918; degree from Harvard in physics; birding at Harvard; started with govt. service in 1943; population studies and surveys; breeding bird surveys; colleagues in 1943; start of DDT studies in 1945; knowing Rachel Carson; design of Breeding Bird Survey; Alaska Breeding Bird Survey problems; albatross problems and surveys at Midway Island; forest fragmentation studies; memories of directors of Patuxent; changes in gender diversification, instrumentation, equipment, etc.; writing the *Golden Guide to the birds of North America*; knowing Rodger Tory Peterson; Ira Gabrielson; Fred Lincoln; Johnny Lynch and snipe studies; highlight of govt. Career (the people); personal meaning of National Refuge System, Patuxent, philosophy; optimism for future of birds and science; Patuxent's greatest contribution – esp. w/birds; importance of involvement w/international bird community; interest in birds – why, what needs to be found out, etc.; being a conscientious objector and his start at Patuxent; continuing studies/resurveying areas and studies done before; growing older and ending involvement w/Breeding Bird audio survey; conservation heroes; knowing Aldo Leopold; people he met from being at Patuxent; things left to do (writing, labeling and digitizing photos, etc.)

MM -- Alright. It's July 1st, 2008, and we're at the Patuxent National Wildlife Refuge in Laurel, Maryland, with Chandler Robbins, R O B B I N S, and Mark Madison and David Klinger and Matt Poole. And Chan, thanks for doing this for us.

CR -- My pleasure.

MM -- And usually our first question is -- when and where were you born?

CR -- When and where was I born? Belmont, Massachusetts, July 17, 1918.

MM -- Okay. And since I know this goes back to your early years, when did you first begin birding?

CR -- I first began to keep records of my birds in 1930. I'd been birding some before that, but had not written anything down, so without a paper trail I don't know when I learned to tell the common birds.

MM -- Okay. And where did you go to college?

CR -- Went to Harvard.

MM -- And what did you study there?

CR -- I got my bachelors degree in physics.

MM -- Chan, why did you study physics instead of

CR -- Pardon?

MM -- Why did you study physics instead of biology?

CR -- In my freshman year I took first year physics and first year biology. And I did much better in physics than I did in biology. So I figured, 'well, I'll just get my degree in physics.' Besides, my physics professor was a bird bander.

MM -- Did you do a lot of birding at Harvard? Did you come into contact with any well known birders at Harvard?

CR -- Yes, it was automatic, if you went to Harvard you joined the HOC -- Harvard Ornithological Club -- so all the birders became members of the HOC and participated in the meetings and field trips.

MM -- Okay so you got your BS in physics. And then when did you first come to Patuxent?

CR -- 1943.

MM -- 1943.

CR -- The spring of 1943. Just in time for the spring migration.

MM -- And what were you doing out here?

CR -- The first year I was working with Bob Stewart, but Bob Stewart senior, and we were doing bird surveys of various kinds. The individual years kind of merge now, and I can't tell exactly what we were doing specifically in '43, but in the first three years, one of the first things we did was a survey of the birds of the whole Patuxent area, which was 2656 acres at that time. And they had just completed surveying the area, and so we had a census trails that were 100 meters apart, with a marker every 100 meters over the whole area. So, by walking along these trails, and having markers every 100 meters, we knew exactly where we were. We had maps of the area. One of the first things we did was make a vegetation map of Patuxent, and then did the bird surveys throughout the entire area. And we started with a survey of breeding birds. And then after that, did a survey of winter birds -- two different winters. And in order to get an idea of what birds we were missing on this field work, we set up a bunch of study sites in specific habitats that we would go back and map bird territories, by taking multiple visits, generally eight visits, to a 25/30 acre site, and map the territories. And then we could look at the records from each trip and see what proportion of each species we missed on each visit. Once we determined what the total population was, we could adjust our counts of birds seen in the field to an estimate of the total population.

MM -- Okay. What was ... pulling back just a sec., what was Patuxent like in 1943? It was relatively new back then, been open about four or five years.

CR -- Right. It was brand new. There was several farmhouses on the property there was Snowden Hall, which was the original plantation house. and there were three new, brick, government buildings -- Nelson Lab, the one with ... we're in right now; and Coburn Lab, the next one just down the hill; and Gabrielson ... no, not Gabrielson ... Marion Laboratory, at the bottom of the hill. Those three office buildings, they housed all of the personnel, for the offices.

MM -- What were your colleagues like back in 1943?

CR -- What were the what?

MM -- Your colleagues like -- your co-workers?

CR -- Didn't get the question.

MM -- What were your co-workers like in 1943? Were they all biologists? Were they all bird people?

CR -- They were all biologists. We had some mammal people, some bird people. Not too much on fish – Fran Euler was working some on fish. Fran was an all-around naturalist. Neil Hotchkiss was ... botanist. Bob Mitchell was another biologist. So we had a real nice group of scientists.

MM -- In 1945, around then, didn't you start carrying out some studies on the effects of DDT on certain birds, like eastern bluebirds, and that?

CR -- Yup.

MM -- Tell us a little about those studies.

CR -- Well, this started in 1945 and continued for five years. And the idea was to have a section of Patuxent refuge sprayed and determine the effect on birds, reptiles, amphibians, fish, everything. The area selected for the study was right where the Patuxent River leaves the refuge. So it was ... if that was sprayed from the air, it would not affect the rest of the refuge. We were very protective about that. So, we had the study site set up [indecipherable] Duvall Bridge / Telegraph Road, and additional study sites for check areas elsewhere in Patuxent. So, whenever we made a study of the sprayed area, we had two alternate areas we were also studying, so's we'd have something to compare. Because populations of birds vary some from year to year, and we didn't want to rely entirely on a single site to determine the effects of the spraying. Well, it's a long story, but we had practically no effects that we could demonstrate that first year. And it was because the spraying was done from the air and we had a heavy canopy. These were trees several hundred years old, part of the area had never been cut; some of them had, some of them had not. But essentially, we were studying a mature forest. And looking back at it ... and also, we had these ... I can't think what they were ... something we put out to measure the amount of the spray that reached the ground ... practically none of the spray reached the ground. So, it wasn't ... it wasn't a surprise that we didn't detect any change in the bird population. So we borrowed some land from the Agricultural Research Center next door, and went over there and set up study sites in the area where there'd been a forest fire that'd actually cleared the trees off. The fire had been a couple of years before, and the vegetation was just regenerating, so the shrubs were about six to eight feet tall. So we had that area sprayed. And right away we noticed a tremendous effect on the bird population. The birds almost ... almost all the species were affected. We did the counts before, and then a series of counts afterwards, for several weeks afterwards, to record the differences. They continued to spray the

original area for five consecutive years, and we continued the studies to see if there's any cumulative effect. And ... I think they had some effects on the fish in the river, but I don't recall for sure. But certainly, as far as the birds, mammals, and other things ... insects, we didn't notice any effect over the five year study there.

MM -- And what made you suspect DDT might have been a problem as early as 1945?

CR -- There were problems other places that the people had noticed the birds were killed after the spray.

MM -- Was Rachel Carson aware of your work?

CR -- [laughter] She had to be, because she was our scientific editor and she had to review all of the papers that we submitted to ... most of the papers went to the Journal of Wildlife Management. And so, unknown to us ... we didn't know that she was a writer; we didn't know that she was a scientist. We knew Rachel as the person who reviewed our manuscripts. But she had to review all of our DDT manuscripts. And she was a wonderful technical editor. We've never yet had a better technical editor than Rachel Carson was.

DK -- Let me follow up on that. Can you tell me why she was wonderful in that capacity? What made her a good technical editor in your view?

CR -- Well, she would rewrite things that I had written and put them in clearer language. Most editors don't do that. But she would look at something carefully and she would change an individual word if it made it clearer. What the study was about or what the objectives were and so forth. So I was very impressed with that, and, as I say, I had no idea that she was also a scientist and that she was going to come out with a book, *Silent Spring*, and all her other books around us that are so famous today. That I really didn't appreciate her for the person she that was, [laughter] I just appreciated her as an editor. She never worked at Patuxent; she came out here and visited occasionally. But I never knew her really well because, as I say, I didn't see her that much.

DK -- But you rarely had any disagreements with her editorial work on your manuscripts

CR -- Oh, no way. No.

DK -- You felt that she consistently improved your work?

CR -- Oh, very much so. Yeah.

DK -- How was she regarded by the other staff here? Did she ... I mean she was reviewing other manuscripts too, was it

CR -- Oh, of course. Yeah. Manuscript review was compulsory in those days, as it still is today.

DK -- But do you recall, in general, the relationship she had with the Patuxent staff as a whole?

CR -- I can't say that I do.

DK -- Okay. Or the reputation she might have had?

CR -- No. That was a few years ago you know. [Laughter]

MM -- Did you meet her in person when she came out to Patuxent?

CR -- Oh, yeah. Yes.

MM -- Any reminiscences about what she was like as a person ... meeting her?

CR -- No.

DK -- Did you ever bird with her?

CR -- Never did. Lots of things I wish in retrospect [Laughter]

MM -- She was just your editor at the time.

CR -- Right. Right.

MM -- Chan, you need a cup of water or anything?

CR -- No, thanks.

MM -- You're okay? Alright. Well, let's talk about some of the other projects you worked on. How about telling us a little about the origins of the North American Breeding Bird Survey.

CR -- Well, the Breeding Bird Survey, in a sense, was kind of accidental in that we, at the time ... this would have been probably 1962 or '63 ... we're starting to get reports of large numbers of birds dying in areas that had been sprayed, especially in lawns, and college campuses, and that sort of thing. And I got

a letter from someone out in the mid west who was real concerned about large numbers of robins that were being killed by one of these operations. And she asked a very interesting question, that we know thousands of these birds are going to be killed on campuses throughout the country, is this going to have an effect on the national population? And I had to write her back and say 'at the moment we don't have any way to measure continental populations of birds, it's something we're going to have to keep an eye on, but at the moment we have no way to do this.' There were waterfowl surveys where people were checking up on waterfowl, which was necessary because of changing regulations and that sort of thing. But, we don't have any civil programs to measure what's happening with songbirds. We were talking about ... setting up a dove survey, and instead of some field work measuring dove populations along roadsides, we'll just put ... that wasn't yet in operation, but it got me thinking that it would become important for us to know what's going on continentally, if there were threats to some of songbird species. So I began to figure out if it might be possible to enroll a group of interested amateurs, on a local basis, to do some studies like this, and find out if it's going to be possible to set up a national survey. And then I did some field testing on methods for three years, and contacted people in Maryland and Delaware. I figured we could do a trial run in Maryland and Delaware, where we knew we had a fairly small area, with a lot of good birders -- people who recognized birds by songs and by call notes, as well as by sight. And, I had enough confidence that we could set up a survey, at least in those portions of the country where we could galvanize a number of birders, and if we could find a way to make it interesting for people to participate, and at the same time, make them feel that they're doing something that's worthwhile, then we might - coerce them in a way - to do it in a scientific manner, so that it would be reproducible. And of course, I had long talks with my colleagues here, I had long talks with my family. And my wife, in particular, said it can't work because you can't regiment people to the point of telling them they could only count for so many minutes and then they have to stop and go do the same thing at another spot. She said birders like to bird and they want to stay there as long as they need to, to get all of the birds that are there. you can't tell them to move on in three minutes or five minutes. So, myself and my son, and a bunch of Maryland friends, went out and did a bunch of surveys, actually set up some 30 stop / 50 stop routes, and ran ... these were 50 stop routes with three minute stops, or five minute stops along a 25 stop route. And we checked the results and try to see where we were using the time the best. Where we could get the largest and most consistent counts on the most species. And this is how we ended up with the 50 - three minute stops. Because, bird activity drops off very sharply after about 9:30 in the morning, so we had to get something that could be completed by 9:30 in the morning. And then of course, there's a question about starting times -- do we start at

sunrise, do we start a half hour before, do we start a whole hour before in order to get owls. And by trying various combinations, we ended up with a system that were still using, which was start half hour before sunrise.

MM -- Okay.

CR -- A problem came up a couple of years later -- when do you start Alaska, what if there's no sunrise. I mean the sun stays up the whole time. So, I spent one June ... a part of a June, in Alaska, doing counts around the clock, starting at midnight and going until 8:00 in the morning, try to see when you get the peak for various species, because different species will peak at different times during the morning. And so, we finally figured out when the best time was

MM -- That's good. Let's move on to another project.

CR -- Pardon?

MM -- Let's move on to another project -- Midway Island, with the albatrosses.

CR -- Okay. Midway was the point from which military aircraft took off to fly round trip to Adak, Alaska. this was what they called the DEW Line -- Distant Early Warning Line -- and they had these ... they didn't have jet planes at that point, they had propeller driven ... four engine, propeller driven planes, with big radar ... ah ... what do you call them [laughter]

MM -- Radar ...

CR -- ... these huge radar screens that were mounted up above the wings. And the problem at Midway was that the ... Midway was one of the chief nesting islands for [indecipherable] and black footed albatrosses, as well as some other sea birds -- petrels and shearwaters and so forth. And, even with the slow military aircraft, the birds were not getting out of the way when these aircraft were taking off or landing the. Birds were abundant enough -- thousands of them on these small islands -- so that it was frequent for these airplanes to run into the birds. Well, albatross weighs something like eight pounds and could do quite a lot of damage to an aircraft, especially through a windshield, or an engine. So, the military was alarmed. They were just at the point to possibly bringing in jets, but it would be even more dangerous with jets ... jet engines sucking the birds in, so, they appealed to the Fish and Wildlife Service to help them with their problem. This was 1954, and Phil Dumont and Johnson Neff went out there in '54, for a brief visit. I've forgotten what it was ... like a month looking into the problem. And then in '56,

John Aldridge and I went out, and a few other fellows also who stayed on after we left. We were just there for like a month I think, at that point. And then Carl Canyon and Dale Rice stayed on for the next year. and then John ... I think John Aldridge went back with me, or possibly it was somebody else, anyway, for the next eight years or so, I went out there each winter, with somebody from Fish and Wildlife Service, or if there was nobody else available from Fish and Wildlife Service, then a friend of mine from Annapolis, who was a retired Navy commander and a birder, he went out and worked with me there. And once we ... Gene Kreidler, from Hawaii Fish and Wildlife, was with me. So we continued those studies for all that time. And, also, a fellow by the name of **Hubert Frames** who was involved. he ... can't think where he was from ... he was working with broadcasting sounds, calls, jet engine noise, all kind of things, trying to find ways to repel the albatrosses. While he was doing that, why, my crew was working on study of bird populations of the ... particularly the albatrosses, almost entirely it was the albatrosses we were working on. Banding large number of birds, you know, in study plots, and determining whether the bird's nest every year, how many young hatch, that sort of thing. And taking counts ... oh, thousands of counts, of albatrosses flying across the runways, different places, to try to find out where the worst of the hazard was, and try to figure out what can be done to alleviate the hazard. So, this extended on for several years. And we finally came up with a recommendations: that the area along the main runway be flat, and be leveled. There were dunes between the runway and the ocean, and the birds were using updrafts off the dunes to fly along, and then they would gain altitude, and then fly out over the runway, and circle out, and then back over the dunes to get more lift to get back over the runway. So we figured that the best thing to do was to level those dunes, and pave the whole area. They also have a problem with fresh water on Midway. And so, by paving an area, you could enlarge the water catchment area. So those two operations, plus the fact that we had to account for albatrosses that were already nesting in the area along the runways, because they were going to come back. So we reluctantly recommended that they kill the relatively small population of albatross nesting along the runways, and then pave that area, and then level the dunes. All of which they did. And it greatly reduced the hazards. We never knew of a single airplane being lost to an albatross strike. That's something we were really concerned about, and the navy was concerned about it too. They did have one accident at the time we were there, but that was human error. They lost a crew ... misjudged the landing strip, or something, when they came in. So that was a sad situation. But, as I say, that was a long story, but it was a lot of fun. We enjoyed working with the albatrosses. And then I had a chance to go back in 2002 and recapture some of the birds in one of our study sites. Actually, the study sites had completely changed over the years, because the land use had changed, so we didn't have the really neat

areas that we previously had worked in. But we were able to find quite a lot of the birds. And I actually found one bird that I had banded on my first trip, which was 52 years old when we recaptured it. And turned out to be a female and was sitting on an egg.

MM -- Wow!

CR -- So, they're very persistent birds, they come back to the very same spot -- within inches of the same spot each year, when they make their nest. And most of the birds do nest every year, or attempt to.

MM -- Let me ask you one more project you did very early on, and that was looking at forest fragmentation, and its effect on birds. You were ...

CR -- Uh hah.

MM -- Tell us a little about the origins of that.

CR -- Okay. I don't know too much about the origins. We gradually became aware of the fact that small woodlots lack quite a few of the species which you normally would find in a larger wooded areas. And a colleague of mine, Bob Whitcom, who was a research entomologist over at the Agricultural Research Center, he's the one that talked me into devoting more time to studying effects of habitat fragmentation. He'd done some of it himself. We worked together on some plots over there at Beltsville, as well as here at Patuxent. And that became a major project for several years. My colleagues here, Barbara Dahl and Diana Dawson, Dan Boone, worked with me on this project. And we would take random samples of woodlots, in various parts of Maryland, and we would segregate them by area -- real small woodlots, medium sized woodlots, and very extensive woodlots. And do a census study of the birds that were nesting at a single point in the center of these woodlots. So, we could find out which species were lacking from the smaller woodlots. It turned out to be an interesting study, lasted about three or four years. The results were published in a wildlife monograph, and widely received. And, just by coincidence, just at the time we got the results from this and published the paper, the folks in the Chesapeake Bay area were getting interested in habitat loss there, and in trying to preserve woodlands around Chesapeake Bay. And they were interested in our study. And so they asked me to come and talk to them about the results of the study and what we found and so forth. And, they used this information in designing ... I can't think what they called it ... Critical Area ... Chesapeake Bay Critical Area Program, where they were designing regulations for which specific habitats, which areas should be concentrated on for preserving them for the sake of wildlife and other interests. And so, they immediately were

putting into practice what we had shown was necessary in terms of woodland use. For a woodland of 100 acres or more would be automatically protected in order to retain the entire breeding population. And then, in Maryland, the Maryland DNR, was able to expand the whole process so it would apply, not only to the Chesapeake Bay Critical Areas, but they expanded it for the whole state of Maryland. So now, if a developer is going in and take a wooded tract and convert it to series of homes, businesses, and so forth, they are required to replace the area that they disturb with a forest area elsewhere, so there would be no net loss in Maryland forests. So that was a real accomplishment, in my thought. I was very proud of that. Even more so than other things that we had done. I felt, actually put something into practice there, was a major milestone.

MM -- Can you remember when you first started those studies and cooperation with the USDA, what years?

CR -- Which studies?

MM -- The first studies you mentioned you were ...

CR -- On fragmentation?

MM -- Yeah.

CR -- Ohfff! I couldn't tell you the date. I could look it up for you. [Laughter]

MM -- Just ballpark though?

CR -- Yeah, early '80s.

MM -- 80s.

CR -- Possibly late '70s.

MM -- Okay. When you started here at Patuxent, 1943, who was the Director of the Patuxent Research Lab?

CR -- At that time we didn't have a Director. Bud Morley was the Superintendent, but they didn't call him a 'Director.' Leland C. Morley. So he was the person in charge. His son, Bruce, grew up here. And he became a ... what do you call it, when you take care dogs and cats ... a veterinarian. He set up a veterinary shop in Laurel, just a block or two from my house. And he just died about a year ago. But his

dad was the person in charge here at that point, and then, very shortly, Arnold Nelson arrived, and he was our first Director.

MM – Do you have any memories of Arnold Nelson?

CR -- Lots of memories. If it wasn't for him, I wouldn't be here today, because he made it possible for me to go to graduate school and get my masters degree. So I was going to George Washington University nights, and University of Maryland daytimes, and Arnold Nelson let me arrange my schedule so I could work on Saturdays and Sundays and early mornings and stuff, and go to school at two universities at the same time. So I owe him a lot. I was sorry to leave ... when he left. I don't know where he went to from here. I don't know whether he retired. He couldn't have retired that early, 'cause he just died this last winter, in Massachusetts.

MM – What did you study at GWU? Biology?

CR – Biology, of course.

MM – You got your masters in biology?

CR – [Laughter] Right. Right.

MM – And then who took over after Nelson, as Director out here?

CR – Gee, I couldn't tell you offhand. I don't think it was Joe Linduska, or Derwood Allen, they were fairly early ... it might have been Derwood Allen. I've lost track. [laughter]

MM – Would you have any memories of working with Derwood Allen or Linduska?

CR -- Not specially. Yeah, I always liked all of my bosses here.

MM – [Laughter] What about Lucille Stickell? She was out here.

CR – Oh, yes, yes, yes.

MM – Tell us a little about Lucille.

CR – Yeah, she ... this would have been later. She was here when I came. She was the only woman scientist here, for many years. Neither she nor bill had their doctors degree when they came. They both got them from working here. I wish I could think who was here ahead of Lucille. Anyway, Lucille was a

real scientist, and she was meticulous. And everything had to be done exactly right. And when you talk, you do not exaggerate. I mean, you really stick to the topic, and you're very businesslike. I remember that, very specifically, about Lucille.

MM – And, any other remembrances about her, as a Director, running the place?

CR -- Not about running the thing, because I never had anything to do with the operations and the budget and all that sort of stuff, had nothing to do with that. Like all the others, she was very friendly and really great to get along with. I enjoyed working with her a lot. And she was interested in the work that we were doing. Some of the other people were not. Joe Linduska was a waterfowl person, and he wasn't that interested in songbirds. But he was a nice guy. I mean, everybody enjoyed Joe. I don't know what else ... one thing I should say, right from the beginning, was that this was a mans world when I started, very much a mans world. And it took a long time for it to change. Right now, if you go out in the field, there are just as many women working here as there are men. But, back in those days, definitely not. Lucille was the only one for many, many years.

MM – Well that's a good observation. What are some other things that changed over the years? You've been birding for what -- 70 years ... [laughter] 80 or so. How has the equipment, and some of that, changed, over the decades?

CR -- Equipment ... [laughter] When I grew up, we were using little opera glasses to look at birds with. By the time I came here, I had prism binoculars. And spotting scopes. Spotting scopes came in about that time, I would say. So, that sort of thing has not changed. But, as far as computers and that sort of thing, there's been a complete revolution in the way things are handled. For years I used to have a secretary and a clerk. The last ten years, of course, I haven't had either a secretary or a clerk, and I often wish I did, [laughter] but that's not the way we work. The budget didn't ... doesn't allow for that sort of thing anymore.

MM – What was your clerk and secretary doing all the ... were they coordinating banding records, or stuff like that, for you?

CR – Well, from the time of the Breeding Bird Survey, both my clerk and my secretary were very heavily involved in correspondence, and in lining up state coordinators, provincial coordinators in Canada, that sort of thing. And sending out material, designing forms. They had their hands full on that. And of course, today the BBS Office has about four people working full time, so those ... sort of thing is what

At the time we started the Breeding Bird Survey, we were doing on it a shoestring, really. We didn't have any additional people come in. My boss was John Aldridge, and I presented him with the idea, and he says 'well, what's it going to cost? What would we need to arrange for?' and I said 'well, nothing, really,' because my secretary, **Louis Horn**, was able to handle the correspondence, and **Ciel Malley**, who was my clerk, would be able to ... she was a whiz with maps, so she'd be able to lay our routes on maps, and distribute the material, and take care of that. and we'd already arranged for the bird banding lab ... summertime's their leisure time when they get caught up on everything, soon as the hunting season comes on they were overwhelmed, but during the summertime they were available to keypunch the records when they came in. So, we just started out with the staff we had, and were able to keep up with the growth of the Breeding Bird Survey, one way or another. Keep it running.

MM – We haven't talked yet about your book the *Golden Guide to the Birds of North America*. Tell us how that book came about.

CR -- This goes back to early 1960s, and **Herb Zimm** had asked me if I would be interested in writing a bird book, he was going to get a series of nature books out. And I said 'no, I can't do that, because we already have a good bird guide, we got Peterson, we don't need another bird guide.' And besides, Rodger was a good friend of mine. I knew Rodger before his book came out. So I said 'no, I'm not going to write a bird guide.' So he came back some months later and said 'well, we're going to do a bird guide anyway, don't you think you'd better do it for us, otherwise we're just going to get somebody else and do it.' And I thought about it a while, and I said 'I'll do it only on one condition, and that is that you'll let me do this, and this, and this, and this, and this, and this, which will be different from things that are in Rodger's book.' And he finally said 'well, most of what you said makes sense,' but, he didn't think we should have Sonagrams. And I said 'well, I think we really need Sonagrams, because I don't have space to describe the songs adequately, and the Sonagrams can be probably out in the margins, wouldn't take much space.' And so, I felt that they were essential. And Rodger said ... not Rodger ... **Zimm** said he didn't think that the publisher would go along with them. And I said 'well, okay.' I said 'I'll do the book if you let me include the Sonagrams.' So he finally said yes. So, I had been making bird recording for several years, and I certainly didn't have Sonagrams for all the species. So, it took me a couple of years to get Sonagrams of the species I was missing, 'cause there wasn't any way I could get Sonagrams from other sources. Cornell had a few, but the ... those were Cornell, and I knew they didn't have all the ones I needed. Some of the ones they had I didn't like. I didn't think they were typical of the songs of the

birds. So I felt I needed to do it myself. So I did, and used the Kay sonograph that they had over at the University of Maryland lab. And printed them all out by hand. That was a job. [laughter]

MM – Yeah. Yeah. That’s great. How did you know Rodger Tory Peterson?

CR -- Pardon?

MM – How did you know Rodger Tory Peterson?

CR -- Well, we had a mutual friend in Belmont, by name of Elisha Atkins. In fact, his grandmother was a friend of my grandmothers, so I had known the family for quite a few years. And Elisha had asked me ... invited me over for dinner, me and one of my birding pals, Clinton Reynolds, who lived almost next door to me ... invited us over one day, and he said he’d like us to meet a famous birder. And so I said ‘well, who is this famous birder? Is this Ludlow Griscom?’ He said ‘no,’ he said ‘this guy’s going to be more famous than Ludlow Griscom is.’ He said ‘his name is Peterson’ he said ‘I know you’ll like him.’ So we had dinner together, and then went out on a field trip the next day, down to the coast.

MM – Did you bird a lot with Rodger?

CR -- Not a lot, because he wasn’t in Boston that much, unfortunately. Birds ... [indecipherable] American Birding Association conventions and stuff like that. and used to bump into him at AOU meetings. And occasionally I had a chance to go to a lecture he was giving nearby, something like that. Never got to really bird with him frequently. Wish I had.

MM -- Now you were right here at Patuxent, you were in the mid-Atlantic, did you have any interactions with Ira Gabrielson while he was Director?

CR – Oh, yeah. He used to come out here, I’d say at least once a month, and sometimes several times a month, because his bird collection was housed here. And so he’d work on his bird collection. And also, almost always, when he was out here, he’d go birding; he’d go for walk. We’d go out with him sometimes. Also, he was interested in the Blackwater Christmas count that I compiled, so he would come over for that for years, long after he’d retired.

MM -- How was Gabrielson as a birder?

CR -- He was excellent. He was good on his songs. He was excellent at skinning birds. I could never figure out how a chap with big hands could skin a bird. It ... what a beautiful job, but he did. He was a

wonderful guy to be around, you always had stories to tell. Of course, he'd been all over the country, been to refuges everywhere, been to Alaska a lot. He and Fred Lincoln had written *The Birds of Alaska*. And Fred Lincoln was my first boss when I came here.

MM -- Tell us a little more about Fred Lincoln.

CR -- Well, of course, he's the one that started the bird banding program, back in the 1920s, 1921 I think it was, when Fish and Wildlife ... Fish and Wildlife ... Biological Survey took over the banding program from the North American ... or American Bird Banding Association. Fred had a office in this building, and he would generally come out about once a week, and he'd do some paperwork and ... I think handle some of the banding correspondence when he was here. Otherwise, he would handle a lot of it back in Washington, with Miss Putnam, his secretary. So, Maythatcher Cooke was in charge here when ... in charge of the banding program when Fred was in Washington. And Ruth Richards was working on ... program involving the bird migration, distribution migration files, which were also in this building. And getting out bulletins once a year -- summary bulletins of bird migration. And then there was one other gentleman who's name slips me at the moment ... Harvey Jackson ... Harvey Jackson was a mammalogist, and he had a office downstairs right under this room. And he handled, among other things, the bat banding program. and the far side of this room from ... well, where those two pillars are, used to be the fur safe -- what had this collection of furs, it was all locked up, I only saw it a few times in my life before they took the furs away, and took that ... took the doors out and enlarged this room. But that had to do with the mammal program.

MM -- I didn't know they had a fur safe in here. [Laughter]

CR -- Yeah. [Laughter] I'm probably the only one here to know it ... knew about it.

MM -- Did you ever work with Johnny Lynch?

CR -- Oh, man, Johnny Lynch was a character. When I was working on snipe ... Johnny ... how did this come about ... it was my job to study snipe populations, because there were a group of noisy people who wanted to have an open season on snipe. And the songbird people did not want to have a songbird season on snipe. The only way they could justify delaying the season was to have someone working on snipe. So, I was picked as the snipe expert. So for several winters, probably five winters or so, I would go down to the Gulf Coast, all the way from Florida to Texas, but primarily in Cajun country, in Louisiana, and Johnny Lynch would help, show me around to some of the snipe marshes, 'cause he knew the area

very well. He was the ... what you call ... wildlife management agent or flyway biologist ... whatever it would be. He had the airplane. So, he would fly me around various marshy areas, showing me good places to work, places I can get to, places I can't get to, [indecipherable] snipe anyway. But the thing I remember about ... most about Johnny was that the ... on one of these flights, he flew me under a power line, which I'm sure was against regulations, 'cause, as I say, he was a real character. He raised ... ohhh ... orchids! He raised orchids. He had a big ... sort of a flexible greenhouse, about the size of this room, just full of orchids. I don't know a thing about orchids ... but that was my reflection on Johnny. But he was a really nice guy, very cooperative and very intelligent, and knew exactly where these birds were. So I would carry the net poles out in the marshes, and set them up, trap and band these snipe, different places, see if they come back to the same place the next year. Most of them didn't seem to do that.

MM -- What was the highlight of your 60 years or so of government service?

CR -- Oh, the highlight -- it has to be the people I've been working with. Just fantastic.

MM -- All of them? [Laughter]

CR -- Almost all of them. Yeah. Almost all of them, really.

?? -- Chan what does the national wildlife refuge system mean to you?

CR -- Well, mostly it means Patuxent. [Laughter] Ohh, gee. Having spent my whole life on a refuge, so to speak, it's home. It's home. I love to visit other refuges, but they're not the same as Patuxent. I just feel more of a [indecipherable] Patuxent, because I kind of grew up with it. But it's changed so much. You know the first ten or 15 years we never even had a statistician here. just shows how much things have changed. We weren't doing much in the way of estimating. We were simply counting what's here; we were doing baseline studies -- on birds that are here, and mammals, reptiles, amphibians, plants, and so forth. Now, it was Gabrielson's dream that Patuxent would remain a research area for wildlife, and that we would maintain the same mix of habitats over the years, provide the various habitats that birds need, so that we can study these birds for a long time and find out what happens to the populations. Back in the early days, we were not thinking about declining populations. Of course, you always realize that waterfowl will have drought years and stuff like that, your really serious things. But as far as songbirds were concerned, nobody was concerned about population changes and ... in songbirds. And I think Gabe figured this would be a good ... good way that we could keep track of changes in songbirds. And in a sense, I've been disappointed that we couldn't maintain early successional habitats, which is ...

we started with a lot of those. And, we weren't able to maintain any large field habitats because of the grain program, we had to accommodate them. So we lost our big fields. But then we get the additional land from Fort Mead, so then got some fields back. And we did get some regenerating forests back, and had opportunities to create more of that habitat here. So even though we couldn't do it on the original 26 hundred and 56 acres, we have been able to continue the kind of studies that Gabe was interested in.

?? -- Given all the research, and all the reading, and just your general sense of awareness over 60 plus years around birds, bird research, wildlife management, where do you find optimism when the question about the future of birds is asked? What are you optimistic about? Do you see rays of sunshine that give us hope for the future?

CR -- Yeah, all the time I see rays of sunshine. Sometimes they're way off in the distance, but ... when Maryland comes up with legislation specifically to protect habitats in perpetuity ... just gives me a lot of hope. You realize that with the increase in human population, which is enormous and had not been predicted really, it's increased a lot more than people thought, you have to think very seriously about what habitats you can save for wildlife. But, there's always hope that we can find more things to do to save more of the places were interested in. And, I think, in some parts of the country there's been an increase in appreciation of wildlife habitats. Now, in Massachusetts, for example, where I grew up, there was a lot of this appreciation from the beginning, and organizations like Massachusetts Audubon Society, which has been operating for more than a hundred people ... a hundred years, and has had active people throughout the state, going into the schools and so forth, and presenting conservation information. That shows it can be done. That people can become aware. We need to have more of that sort of thing. We need to reach the kind of people that were not reaching, so far. But, it seems like, every five or ten years, you have new problems coming in that we didn't have before. We have faster automobiles. We're losing habitat quickly. You've got more in the way of pesticides, or other chemical agents, getting into the environment. And then you've got the problem of communication towers, and wind turbines, and we keep Technology is moving forward so fast, and we can't determine the effects of these things on wildlife in time to use the proper precautions. So, this is the sort of thing I'm concerned about. We're just moving ahead faster than we can keep up with. And I still like to remain an optimist.

?? -- Wonderful.

MM -- David do you have any other

DK -- What would you say Patuxent's greatest contribution has been to ornithology, and to science?

CR -- Oh, it's impossible for me to say because of all the different things going on. I'm very prejudiced toward birds [Laughter]

DK -- Well, alright, let's talk about its contributions to ornithology. Where do you think Patuxent really has been outstanding in its legacy to ornithology?

CR -- Whooo [soft whoosh]. Well, I'm prejudiced again, but I'd say breeding birds survey is one thing which is, you know, covered not only the all the United States but Canada, and now getting into México, and getting people thinking farther south. Things like bird atlases. They didn't really originate here but they got a strong push from here. And, of course, the bird banding program, which we've had here for many years. It's pretty much of a stable program, but ... it's known worldwide.

DK -- Did you have the feeling in the early days, here at Patuxent, that you guys were building the science and you were ... the science was evolving with you? Did you have that sense that history was sort of being made here?

CR -- Not really. I was interested in all these things. I mean, I was ... from going to meetings, going to international meetings, the IOC -- International Ornithological Congress, I went to those for several years ... on my own initiative ... I mean, I paid my way to go to those things, it wasn't initiated by Fish and Wildlife Service ... but seeing what was being done in other countries. For interest, point counts, which we essentially introduced in the United States in the forest fragmentation studies, they were developed first in France. And so, I was aware of the advantage of that type of study. And, I personally knew researchers in Finland who were doing a transect ... bird transect studies, and stuff like that. And I knew people in the BTO -- British Trust for Ornithology, the studies they were involved in, and when people started doing atlases, and they had this ... [noise on tape] plant atlas, what do they call it, anyway the first atlas was a atlas of the vascular plants of Great Britain and Ireland, which was a predecessor of the breeding bird atlases. Why? Because of the international meetings I was going to over there. The International Bird Census Committee -- I was the US representative on that committee -- so, we were meeting every year or two, discussing census methods. So, in that sense, it was just sort of automatic that when something really new and interesting got going in some country in Europe, I would think 'can we apply it here' and then I'd come home and start doing things here. That ... that didn't start the Breeding Bird Survey. The Breeding Bird Survey started right here at Patuxent. that's ... that had nothing to do with Europe there. They've been kind of catching up on Breeding Bird Survey, after we

started. They call it Breeding Bird Survey, but they have different methodology and so forth. But, the interaction with the international colleagues, I felt, was extremely important. And, one thing that I've been less happy with, here, is that Patuxent administration has not been sending people to the international meetings to the extent that I would have liked. For instance, the Neo-Tropical Ornithological Society has had ... what is it, seven meeting now ... seven or eight meetings, and I've been to all except the first one, which I didn't know about. Mostly on my own initiative. And on the last one that I went to, which was in Venezuela, would be last year or year before, I was the only one from Patuxent. I went on my own. I just felt there should have been somebody from the Bird Banding Lab, there should have been other people representing other studies, and also representing Patuxent itself. We should be representatives in international meetings. And we have not been to the extent that I think we should have.

DK -- What intrigues you most

?? -- You got to switch tapes

?? -- Yes

?? -- Okay

DK -- Chan, what intrigues you most about birds?

CR -- Ohhh! That we know so little about them.

DK -- Well, what about them makes them fascinating to you? I mean, you, as a little boy, was birding. What's really drawn you to birds throughout your career?

CR -- Ohhh. Birds are fascinating because there's so many different kind of them, and they're so different, their activities are so different. And the fact that they migrate, and that we still haven't figured out how they come back to the same place every year How does an albatross from Midway get back to Midway after flying thousands of miles over the open ocean? And come back and nest within one foot, or so, of the same place where they nested the year before? I remember walking around with the albatross when they were first coming back to land, where the young ones are first coming back, at age five, and picking up these birds, reading the band numbers, and from reading the band numbers, I could tell where I had been walking through the colony when I banded those birds five years ago, by the consecutive numbers. Young birds coming back to land for the first time, coming back

to the exactly the same spot where they'd raised ... been raised. Just imagine, the birds doing that. Imagine birds from here going back to the tropics, to the same place in the tropics where they wintered the winter before? I can get lost in the woods at Patuxent. [Laughter]

DK -- How would you assess the state of knowledge about birds today versus the 1920s and '30s? How much have we really learned because of Patuxent, and because of your work, and the work of others here? And how much more do we have to learn about birds?

CR -- Well, first we've learned that birds are subject to population declines. This we did not ... did not think about much in the past. Secondly ... well, of course, habitat fragmentation. This has to be something very important that we had not realized. We realized that we need to get the public more involved. Fortunately, Breeding Bird Survey goes a long way toward that. Not just from the people doing it, but they tell their friends, and they get write-ups in the paper, and so the public realizes that it's being done. It's being done for a purpose. That shows that we realize that it's got to be an awareness of problems with bird populations, otherwise there's not going to be the support for the research that's necessary to find out ways in which we can help solve the problem.

DK -- How much more do we have to learn? What are we going ... what is this place gonna be

CR -- It'd be real fun to know how birds find their way. It may be ... may not be terribly important, but it's intriguing. The fact that they do this; the fact that after all these years we don't know ... Now, maybe it's not top priority to find out, but there's a curiosity [indecipherable] why, we really should know. It probably would help us if we did know. I would like to know before I die how these birds find their way. [Laughter]

?? -- I'd like to ask you a few personal questions, if I may.

CR -- Sure.

?? -- I want to take you back to your early days at Patuxent, and you came here in 1943, and I believe you were part of the conscientious objection ...

CR -- Right.

?? -- ... program. Can you tell a little about that?

CR -- Ohh, this was a nationwide program, and CCC camps, in various parts of the country, were where conscientious objectors were sent to. And being from Massachusetts, there was a camp in Ashfordham, Massachusetts, where I went for some months. And I can't tell you how many it was. And then, people were shifted around from time to time. And again, I don't know all the reasons for this, whether it was priority for getting work done various places. The major job at the Ashfordham camp was fire protection, because of the large numbers of trees that were knocked down by the hurricane in 1936 -- a tremendous amount of damage in the northern half of New England. So, from Massachusetts, we were shipped up to New Hampshire. I can't think of the name of the nearest town. It was in the White Mountains of New Hampshire. And again, we were working on ... up there it wasn't as much clearing of dead wood as it was digging of water holes for fire suppression. And I was up there for a winter ... forget which winter it was ... and then some new camps opened up, one of which was at Patuxent. It was called Bowie in those days. And we heard that they wanted someone to work in the Bird Banding Lab, and I figured, boy, this would be a wonderful opportunity, because I was a bander, I had been banding for several years, from when I was in high school. So, I applied for transfer to that camp. And, next thing I knew, I ended up here.

?? -- It's fortuitous ... fortuitous.

CR -- I never thought I was going to stay here that long. [Laughter]

?? -- What lead you to become ... your decision to become a conscientious objector?

CR -- It was primarily my uncle, who had been in World War 1. He was a botanist, and when he got out of the service, he went immediately into the ministry. And he felt very strongly that war was wrong. And we had talked about it some, and his son and I both decided that we wanted to object to the war by going to a civil service camp if we could.

?? -- Was that a tough decision for you?

CR -- What's that?

?? -- Was that a tough decision to reach?

CR -- Of course.

DK -- And an unpopular one I suppose.

CR -- Very unpopular in those days.

?? -- Did you experience any public scorn, or rejection, because of your decision?

CR -- I don't have any recoll ... recollection of that at this point

?? -- What's your philosophy about the natural world, your personal philosophy? and how might your feeling about larger questions like war, and ... do you see any interrelationship between your feelings in that area and your affinity for the natural world?

CR -- I'm sure there's a connection there. It's hard to put my finger on what it would be, but, I feel it's ... all of nature is God's creation, and that we need to protect it. We need to pass it on to our descendents. Pass it on physically as well as ... mentally in a way. Who are we to abolish the birds? We have no right to do that. We need to protect them.

?? -- How do we get a large constituency to support birds into the future? How do we get the general public to care, as you do, and have for so many years, about birds, and where birds live? How do we do that?

CR -- Well, Rachel came kind of close to that when she published the book *Silent Spring*. And many times this spring, when I realized I was not seeing warblers in my yard, I realized that I've lost a good bit of what I used to take for granted. I still hear the warbles ... I mean, still hear the wood thrushes and scarlet tanagers, and, of course, the robins and the bluebirds. But, somehow this spring, I got through the whole spring without seeing a single warbler in my yard. It hurts.

MM -- Any other ...

CR -- Now, you remember my study site on the other side of Snowdon Pond, where the bus stops?

?? -- Where your car was, yeah.

CR -- Yeah. I'm doing a study there, and I set this up as a study site in 1945, and I'm going back, the same area this year, repeating the study the same way. I'm not quite through. I've taken six trips; I've got to make two more trips, which I'll do this week. And the main thing I've noticed is that the second most common bird there for ... in the 1940s was the ovenbird; haven't had a single ovenbird there. Haven't had a single [indecipherable] warbler, haven't had a single Kentucky warbler. Doesn't mean other birds are gone. I've still got wood thrushes; I've got red-eyed vireos; I got piliated woodpecker, which was not

there back in 1945. We've got Carolina wren that was not there in 1945. Their populations go up or down, depending on whether you had a cold winter recently. I've had two hawks this year that I didn't get in 1945 -- Red-tailed hawk, I hear them almost every trip there. And yesterday I had a Coopers hawk fly by me when I was over there. So there's some things that were not there in 1945, but the biggest change is the complete lack of ovenbirds. I hear them across the street, in the lower, moister, forest. But not in the upland oak.

?? -- What motivates you to keep this schedule? And, I mean, you're working ... you're approaching your 90th year, and you have a schedule that, to me, looks like it would exhaust someone half your age, and you still ...

CR -- [laughter]

?? -- ... have so much to do. What ... what keeps you going?

CR -- Well, exactly. I'm still trying to catch up. I mean I've got a long list of things I want to do. Last winter I made a list of things I was going to do this summer. And I was going to go back to four of my old study plots. And it turned out I had an accident, I fell at home and banged my head and I had 17 staples in my head, and postponed my summer. [Laughter] I didn't get everything done that I planned to. And then other things came up that I hadn't known about ahead of time, like John Sawyer and Danny Bistrack and Rex Allen, they have this project to redo the survey that Danny Bistrack did 10 years ago, on the birds of Patuxent. And they're going back to the old survey markers, and these markers are 400 ... or 100 meters apart, they go into every fourth marker over the whole of the now Patuxent, and repeating the study that Danny did 10 years ago. But they ... Danny just made a single visit to each of these points. But, this year, they corralled a whole bunch of people into making multiple trips, multiple stops, to some of these points, in order to measure observer efficiency, and to determine what they're missing. Now, the very first year, back in 1943, when we did these some of these studies plots for the first time, we used the intensive study plots to figure out the percentage of birds that we missed on a one time visit. And then we corrected the end results for all of Patuxent by multiplying a factor to compensate for what we missed. Like for tufted titmice - on one trip you get only 80% of the ones that are there. On a worm eating warbler you only get about 20%, because they're not as vocal. Alright. So you miss them; so you can compensate. Even back in the 1940s, we were trying to compensate for what we were missing. But this year, with a large number of people, they're doing a much more intensive study of the very same sites that we did. And they'll be able to come up with an estimate of populations that we can compare

back with what we did in 1943. So I got involved in that study, see, which I hadn't even planned for. So, I ended up only doing one of my census plots instead of four of them. But this year, for the first time ... for the last time, last Sunday, I did my last Breeding Birds Survey route. I've been doing six routes, in Maryland, right from the beginning. Been doing them every year. But this year was the last time, because I'm missing too much you see. Even with hearing aids I'm not picking up the high frequencies. And on three of my six routes I had somebody else go along with me, keeping simultaneous counts at the same time I was doing it - I'd stand on one side of the car, he'd stand on the other side of the car - and then we'd compare notes later, and I could find out what I'm missing. And I'm missing a lot. 'Cause the other observer would find about 10 more species than I did. So it's time for me to retire from Breeding Bird Surveys. But it's been a lot of fun over the years. Wouldn't have given it up for anything. But now I have to give it up, because I'm distorting the truth by not hearing all the high pitched songs.

MM -- Maybe one last question

DK -- That's very rational. Spoken like a true scientist.

[General laughter]

DK -- Spoken like a true scientist, who would give it up in the name of science.

?? -- Right.

CR -- Yeah.

DK -- Scientific integrity and accuracy.

MM -- One last question for Chan, before we

?? -- How are you doing?

?? -- I asked my questions.

MM -- I asked mine.

[Laughter]

MM -- Well then Chan, thank you

DK -- Do you have any parting words you'd like to leave with us, in terms of thoughts or

CR -- Well, I've mentioned one parting thought, and that is to do with the work that we've done in the tropics. Now, Barbara Dahl was one of my chief assistants during the forest fragmentation work. She's not a scientist as such, but she's trained like a scientist. I mean, she's not classified as a scientist, but she's trained as a scientist. She knows her bird songs very well -- songs and calls. And everything I do she can do better. So, when I needed someone to go with me to the tropics, Barbara was obviously the person to go. And then we got down to the tropics, and she has been doing all the driving -- thankfully. [Laughter] But the thing, is down there women don't drive. Women walk. If you see someone driving a car, it's always a man. And you couldn't believe the people that would stare at us as we go down the road. They just can't believe a woman driving a car. And just shows the difference that we've made with those people, with ... we're training people in those countries. And we're getting college students come out, just as many women as men. We're not telling them that things used to be different up here. But, to me personally, it's a real pleasure to be able have women have equal status with men, because I've seen it so ... so many years when it wasn't true.

?? -- Do you have a number one conservation hero ... personal conservation hero?

CR -- Oh, I've got lots of them. [Laughter] You know, I'd give you a whole list, people that I've known that are conservation heroes starting with Aldo Leopold. He was a good friend of my uncle's, I didn't get to know him really well, but I knew him well enough to appreciate him.

?? -- How did you know Aldo Leopold?

CR -- Well, because he was a colleague of my uncle, in Wisconsin. I'd go visit my uncle, and there's Aldo. I mean, he's like part of the family.

DK -- And you were a young man at that at those meetings? Or, where were you in your career, at that point?

CR -- Well, that was the summer I learned to drive a car, so I ... it was somewhere between 12 and 16.

DK -- So tell me about Aldo Leopold, from your having met him, and your recollections.

CR -- Ohhh, how do I answer that? [Laughter]

DK -- Did you know

CR -- To me he was just part of the family. He was just a great guy. He was interested in birds, we talked birds. Gabe was one of my heroes. Fred Lincoln was one of my heroes. I mean, just a jolly good guy, who was important in the history of ornithology. And, of course, Rodger Peterson. He's everybody's hero. They're having a 100th birthday celebration for him this summer.

DK -- What was it about that era that produced so many giants in natural history? I mean, are we ... is that era past or ... or do we have

CR -- No! We're still going to have Rachel Carsons. I'm reminded of ... oh, I'm terrible on names now, who was the lady who founded Hawk Mountain, I can think of her name just a minute ago ...

MM -- Rosalie Edge.

CR -- [laughter] Just when you wanted to disappear. Anyway, she was a pioneer. A very unpopular pioneer. And yet, she persisted. She had people who hated her. So did Rachel Carson. I mean, they were about a generation apart, I think of them as being sort of equivalents. She was never a professional like Rachel, but it's the same sort of situation, where she was a hero.

DK -- But in your career, you were really around giants.

CR -- I was. And that's one thing about being at Patuxent; people seemed to come and go from here. People like **Harry Oberholser**, who's one of the big names I would never have gotten to know him well if I had not been at Patuxent. **Joe Hickey** did his doctorate here, before he wrote his guide to bird watching. Clyde Todd*, from the Carnegie Museum, when he was working on his *Birds of Labrador***, he spent over a month here. I got to know him real well. A lot of famous people have come in and used our files, because they had to use our files. And we're finally getting them digitized -- these bird migration files -- after all these years. I should have had that done 50 or 60 years ago, but I had other priorities. So finally, **Sam Droging** got some money and he's got a student who's working on these, getting those files digitized. But if they'd been digitized years and years ago, I never would have got to met some of the famous people that turned out to be good friends. And from going to AOU meetings and other meetings like that ... you get to met so many wonderful people. Alexander Wetmore in another one ... another one of my heroes. How many years was he Secretary of the Interior?*** It was a long time.

MM -- Yeah.

CR -- Imagine going birding with Wetmore, and yet I had that privilege.

?? -- Wow! Only about

CR -- Paul Bartsch, remember Paul Bartsch from Smithsonian. He was the guy who banded the first bird in 1904. He was a good friend of mine.

DK -- What was that experience like? Knowing those two giants from, really, another era, a completely different era, we're talking giants of the 19th century and early 20th -- Wetmore

CR -- Yeah, he used to have Audubon picnics at his place, which he called Lebanon. If you've heard of Lebanon, Virginia -- there's no such place. That's his home -- Lebanon. A lot of people got mixed up by that. They'd try to find Lebanon, and you can't find it. But that's what he called his home.

DK -- But you were around just ... just giants of natural history. and I'm sure you were aware of it at the time.

CR -- Oh yes, very much so.

DK -- Were you in awe of these men?

CR -- Huh?

DK -- Were you in awe of these men and

CR -- Oh course! Somebody like Paul Bartsch! My golly! [Laughter] But these men are so ... so personable. I was really impressed with one AOU meeting ... I cant think where it was or when it was ... Alexander Wetmore was walking around introducing himself to students. So seldom do you see anyone at an AOU meeting going around talking to students. They're not. They're talking to their colleagues. But Wetmore was going around introducing himself to students.

MM -- Well Chan I think we have to give you a break. [laughter] We've been doing this for two hours.

CR -- I've enjoyed talking to you.

MM -- I know, it's been wonderful.

Various overlapping voices

CR -- Brings back a lot of memories.

MM -- Oh, yeah.

DK -- This has been a real treat ...

MM -- This has been great.

DK -- ... a real privilege, to spend time with you.

MM -- I didn't know the Wetmore or Leopold connection at all. That hadn't come up in any of the stuff. That's great, Chan. Thank you. Thank you for your time.

?? -- It's been a real honor and pleasure. I was going to make a quick comment, which is clearly obvious to everyone ...

CR -- [indecipherable] pass the water, please. [Laughter]

?? -- I get the sense that, for you, going to work is not like going to work.

CR -- Well, that's right that's right.

?? -- There's a lesson there, isn't there. There's a lesson there.

?? -- What makes you get up in the morning?

CR -- The sun.

DK -- But beyond the physical motivations. You know, mentally, though the ... I have an idea you've kind of operated the same way throughout your career. You've always been as dedicated, but what ... what motivates you?

CR -- There's so many exciting things to do, you can't let it go by, you know. There's always a certain amount of pressure because there are things that are deadlined, like Breeding Bird Survey routes. I did my last one on the last day of June. Well, they should be done earlier in June, but because of my accident I had to postpone it. But ... all the field work I'm doing is stuff that should have been done, preferably, two or three weeks ago. And so, I'm really trying to catch up, do things that I should have done before. I can't let a day go by. This is the last week for the survey on these five minute point counts. As I said, I've got two more days to spend over there on the other side of the lake. Things will ease up I guess, later in the summer, and with my vacation just two weeks away, I just completely forget all these other things. [Laughter] Then I'll be suddenly immersed again when I come back. But there's

so many things I need to do. For example, I've got thousands of photographs, that should be digitized, and I haven't made any plans for doing it. But I've got to do it while I still can. So, I don't know how I'm going to get this done, but I've got ... yesterday I looked to see, make an estimate of how many Kodachromes I've got. I don't have any electronic slides at all. I pulled down my Guatemalan notebooks. I've got approximately 1000 Kodachrome slides from Guatemala. Now, I don't know how many I've got from Mexico, and Belize, and Costa Rica, and Puerto Rico, and United States, but how am I going to get all those things digitized. I could forget everything else and do nothing but digitize the photos.

?? -- Do you work with college interns?

CR -- Not really.

?? -- That sounds like one of the ways to get that done might be in that sort of traditional route. Perhaps somebody

CR -- I sort of feel like the ... how is a college intern going to label a slide from Guatemala? I sort of feel either Barbara or I has to do this, but then she's retired too. She retired shortly after I did.

MM -- That is a challenge you have a ton of slides

CR -- And I've got all kinds of manuscripts, reports, and things, that I need to do. Things that are part written I need to finish. Now one study, that I did here at Patuxent, a banding study, involving breeding birds, with 44 mist nets, that I would set before dawn, run them all day, and hike two miles each time I went around the set, that data's never been published, as such. Part of it has been, but not in detail, what I had planned to do with it. Just ... well, for the past four summers, **Diana Dawson** and a friend of hers from New Zealand, had been repeating a study that I did 30 years ago. So they'll write that one up. I'm not worried about that one. Because they've got the data from the first run, and they're doing it again now. So I'm not worried about that. But I'm concerned about the tropical thing. One of my students has a paper in press from part of it, but there's a lot more that needs to be done. and there's ... I have a study from western Maryland, which I went back to plots that I'd studied 50 years ago, and I haven't finished writing that up. So, I've got things on my mind besides the photos. [Laughter]

MM -- After your vacation. [Laughter]

CR -- After my vacation. Yeah.

MM -- Hey, Chan, we have a

CR -- So you ask why I get up early, or why I come every day. [Laughter]

MM -- To finish your work. [Laughter] Hey, Chan, would you be willing to let us shoot a couple of stills outside?

CR -- Oh, sure.

MM -- Why don't we ... why don't we do that before it

CR -- Let's do it before it gets hot.

MM -- Yeah. And we'll turn the air conditioning on for your poor colleagues. [Laughter]

CR -- Well, I just happen to have my beat-up binocs in the car. [Laughter]

MM -- I read about those [indecipherable]. You've had those for how many years, Chan?

CR -- Oh, I don't know. I didn't record the day I got them. I should have done that.

?? -- Those aren't Nikon binoculars are they? Probably not.

CR -- What's that?

?? -- Bushnell.

CR -- These are Bushnell's.

?? -- Bushnell.

* -- Walter Edmond Clyde Todd

** -- The Birds of the Labrador Peninsula and Adjacent Areas, 1963

*** -- Wetmore served as the Superintendent of the National Zoological Park, Assistant Secretary of the Smithsonian 1925 - 1945, and Secretary of the Smithsonian Institution 1945 – 1952

