

TRANSCRIPT

INTERVIEWEE: **Bonnie McKinney** (BM)

INTERVIEWERS: David Todd (DT)

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Please note that the video includes roughly 60 seconds of color bars and sound tone for technical settings at the outset of the recordings. Numbers correlate with the time codes on the VHS tape copy of the interview. "Misc." refers to various off-camera conversation or background noise, unrelated to the interview.

DT: My name is David Todd. I'm here for the Conversation History Association of Texas and we're a little bit south of Marathon, Texas on April 5th year 2001. And we have the good chance to be visiting with Bonnie McKinney whose a Wildlife Biologist for Parks and Wildlife and who has also worked for the Fish and Wildlife Service. In the field for many years has studied a lot of the vegetation out here and has also done some biological studies as well. And I wanted to thank your for taking the time to talk to us.

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BM: Of course.

DT: I thought we might start by visiting a little about your childhood and if there might have been parents or relatives, friends who could have introduced you to the outdoors and to conservation.

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BM: I grew up in Central Virginia in the Blue Ridge Mountains. We grew up like two miles from the Appalachian Trails which was a wonderful playground when you were a kid. And I was daddy's girl. I did not like staying in the house. And my poor mother she gave up after piano lessons and ballet lessons and I always went with my dad and I loved to hunt and fish with him. And, of course, he had marvelous stories to tell me. You know, he told me all about turkeys and all about black bears and I literally grew up in the woods there and—and spent all of my early childhood. And my sister and I were—were

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probably horrors to my mother because we were always bringing in dead bugs and frogs and snakes and whatever we could find. And we had all these dead collections in our bedrooms and stuff that my poor mother was—have to go in and find a dead snake under the bed or whatever. So we, I had a great childhood. And my—my dad taught me so much about wildlife conservation. Not only teaching me how to hunt and fish, but he—he taught me how to take care of the wildlife. And he was—he would get very upset—of course, the forest back there where a lot clear cutting was happening. And he said, you know, these will never be like they were. You better look at them now because they will be gone. And they are gone today. And—and my great-grandfather was—worked for

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the U.S Forest Service. And so I—I got to go out with him quite a bit and go up in the—the mountains and timber country. And, you know, see all of the different—different habitats and, of course, you know as a young girl this was wonderful. I got to—to see all of the

different flowers and the trees. And I had these huge leaf collections that my mother probably still has in her attic somewhere. So but I—it was great. And it—it—I think it instilled in me a lot of beliefs that I really use today in the field. And my dad always said that, you know, you—you can't manage for just one animal, you have to manage for all animals. And we've seen that approach turn so much now days into total ecosystem management instead of managing for one particular species. So yeah, I—I—it was great. You know, I had a great childhood. I wouldn't trade it for anything.

DT: I often ask people about how they were educated and how that might have opened their eyes to different conservation issues and I understand in a sense you self-taught, how did you teach yourself?

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BM: Well it's—you know, you find a certain field that you're interested in, like say birds. I was always interested in birds. My—my mom and my grandmother always had feeders and we always feed birds. And we kept list of what birds were at the feeders. And when we moved to Black Gap, oh I had bird watched for years before that, but when we moved to the Black Gap Wildlife Management area, I—I wasn't employed by the Texas Parks & Wildlife Department then and I had lots of time. And I wanted to band birds. I wanted to do some banding studies there to—to—and really you, you know, you learn about the species that you're working with by watching these animals. You learn their habits; you learn which habitats they're going to be in, foods that they prefer, things like this. And I read a lot. I did a lot of reading of scientific papers where other people

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had done field studies. And then I sort of just trimmed down a lot of scientific methods to fit the area that I was working with. Low desert country, Black Gap is a hundred and six thousand acres of lower Chihuahuan Desert, shrub habitat. And over the course of the years there, I think I've documented over three hundred species now for the area. And I did a lot of that through mist-netting. And I had—I had some good teachers along the

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way. A lot of people visit Black Gap, particularly years ago with a lot of university groups. So I would always sort of just hook up with them and say "Oh, I'm going with you today". And, of course, I knew the area, so I could take them to areas where they were looking for particular species. And Dr. Barton Warnock, of course, at Alpine, used to spend a lot of time on the Black Gap and I spent many, many enjoyable days in the field with Dr. Warnock. And he taught me a lot about native plants. And then Dr. Rowell, Chester Rowell at Marfa, he just sort of took me under his wing and said "you're gonna learn this." And he taught me taxonomy. He taught me the—he basically refined all

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the—the identification skills that Dr. Warnock taught me. And I had a great opportunity to attend some workshops that Texas Parks and Wildlife had. And, of course, I—I've banded birds. I've had a master of banding permit now since 1982. And I did a lot of work on my own there on the Black Gap. Independent research that was funded through private organizations and—and I just—and you always learn. If you quit learning, you—you need to quit, period. And when it's not fun you need to quit. You know, wildlife shouldn't be a job. It should be something that you enjoy doing and look forward to doing every day. And there's always something new to learn.

DT: You mentioned doctors, Dr. Warnock and Dr. Rowell, and both of them I guess were

pretty noted botanists. Can you talk about some of the field botany you've done? I understand that you have worked with cacti.

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BM: Yeah, I, well for years I've kept the herbarium at Black Gap. We have a large herbarium there and we completely redid that. And, of course, I could not have done it without their—their help because they know all the ANs and these. And they taught me a tremendous amount about plants. And then I—I've always been interested in cactus. In cactus study in—on the Black Gap itself is—is very rewarding because we have so many species. We have, I think, thirty-two species on the Gap. And I—I knew a lot about—things about distribution of certain species that other people didn't know simply because

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they hadn't worked in that area. And I've done a lot of work in Northern Mexico, so I knew a lot about range distribution. Because when you're in the field, you don't just, I mean, you can't help but look at other things even though you may be studying Mexican Jays or Peregrine Falcons. You're going to see cactus and you're going to see other things. And you're going to note these in your field notes or you should. And so I did three projects on cactus, section six projects through Texas Parks and Wildlife. We worked on two endangered cactus in the Marathon Basin and all of that work was done with private landowners. And it—it was just incredible. The—the landowners are doing a terrific job protecting these species. And they know basically where every one of these plants is located. And it—it made my job a lot easier. And then, of course, the third one was a small cactus that grows in the lower Big Bend Region, all in that lower Brewster County, south and southeast portion of the county. And then extends into Northern

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Mexico as far down as Cuatro Ciénegas. So I worked with some Mexican biologists down there to map out some distributions. And we found out quite a bit. We—I mean, these plants are—are very abundant in—in the habitats that they prefer and it certainly gave us some good management options. The studies turned out real well and our private landowners were instrumental in making sure that my studies did turn out well. They oftentimes went with me on the project and actually helped at the study sites. And, of course, by giving me access because over the years, there was no access to these lands, so

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we couldn't adequately survey. And I think that's, you know, no matter how much state land that we own or how much land is federal, West Texas or all of Texas is ninety-seven percent privately owned. And the work that we do on these areas even though it makes a contribution, will never be complete without work being done on private lands. And the landowners and Parks and Wildlife and other agencies working together are the ones that are going to be able to pull all this together so we get true distribution so that we can find species that may need some management before they become endangered. And working with, you know, there's solutions. And it just takes, a lot of it's just sitting down and having a cup of coffee and—and hashing it out.

DT: What are some of the reasons that (inaudible)

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BM: A lot of times particularly species that are in areas where there's a lot of human activity, the ranches are wonderful because they are protected. Most gates are locked therefore, you don't have that threat of people walking in and collecting plants. For many,

many years, the Big Bend area was collected very heavily. I can remember at—on the south side of Brewster County the southwest portion of the county, there were thousands and thousands of small cactus that were dug in the Mexican mountains and brought across the river. They were also dug in West Texas. And the—the people on this side of the river paid a penny-a-piece for 'em. And they stockpiled them. And they sold them to tourists. Most of them burned and died, you know, in hundred-degree weather in the summertime, bare rooted plants and a lot of that is—is education. We

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don't see the collecting that we saw here in the Big Bend area twenty years ago. It's just not here anymore, which is great. A lot of plants are being grown in nurseries. There's been a tremendous amount of education and outreach efforts to—for people that are interested in cactus collection as a hobby, to buy their plants from a reputable dealer. You know, not buying from the wild. And a lot of cities, especially here in West Texas, are a lot more concerned than they were years ago. And they don't allow native plants to be dug from the wild and—and used in landscaping and things like that in—in these

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cities, which is helping quite a bit. But collecting was a—was a major problem. That was the—seemed to be the biggest problem to these plants. Not so much here in the Marathon Basin because they were protected. There's never been heavy duty collecting of these two endangered species. But, some of the other cactus south there was.

DT: Are some of these cactus pollinated by bats?

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BM: No, most of your pollination by bats occurs with your agaves. Like your century plants, your Maguey. And the bats, I know there's—we have one endangered bat in the Big Bend area, the *Leptonycteris nivalis* [Mexican Long-nosed Bat]. And that's mostly occurs in Big Bend National Park. I don—in fact, I don't think it's ever been recorded outside of the boundaries of the park. But, then again, there's a lot of surveys that could be done and some surveys in Northern Mexico because it—it's thought by many scientists that the bats follow the blooming of the plants which puts them into the Big Bend area in—in early summer. And they literally follow the—the nectar all the way up from the valley in Mexico wintering grounds to the Big Bend area. So it's a fascinating—a fascinating aspect of

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following bats that far. We can actually use transmitters on them. They're small enough now to be able to track their movement. And the Big Bend area is very, very rich in bat fauna. I think we have fourteen species on Black Gap, which is incredible for low desert country. And the park, I think, has eighteen or so species, I'm not a hundred percent sure of their species total. But it's a very rich area. We do surveys on the Black Gap once a year and all of our surveys go into bat conservation international, which is a big database that they are compiling on distribution and abundance of bats.

DT: How do you do your survey's of bats?

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BM: We use mist nets like we do on birds. And we mist net over water, around our dirt stock tanks is a great place to catch bats. And we set up nets and mist net all night long and...

DT: The bats come in and...

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BM: And hit the—yeah, they come in to get water and—and also for insects. And then we catch them in the nets. And it's—it's challenging work because the bats—if the wind is blowing in the least little bit, you may as well roll your net up and go home because the bats are so sensitive that they can pick up our nets. And just fly over them or around the ends and—but it's—it's great work. And, you know, occasionally you pick up a rare, or maybe not a rare, but an out of normal range. I think there's been some yellow bats lately that have been reported in the lower Big Bend area. We had a red bat—eastern red bat on the Black Gap that was a great find. So and it's—you know, you never know, and—and our country's changing so fast that I think we'll see migration routes probably change over the years. Fires a lot of times. I know a couple of years ago when Mexico had a lot of forest fires; it literally changed the path of spring migration of birds. And we had eastern warblers all over the Big Bend area. It was incredible. The trees looked like, they were full of yellow jewels. It was—it was amazing what—what actually occurred during that because the smoke was so heavy that birds were kind of thrown off of their normal migration path.

DT: How else do you mean that the land has been changing in this area?

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BM: Well our cities are growing so much. We have so much urban sprawl. And a lot of lands are being sold. A lot of the big ranches are being sold, that are now small sub-divisions and ranchettes. And these large tracks of land are so very important to wildlife, because wildlife move. All wildlife move and it's your distribution. You know, we're forcing or people—we're forcing animals into people habitat is basically what we're doing. And that's where you have conflicts arise with your large carnivores in particular like mountain lions, black bears, coyotes even, nuisance wildlife. And so there's a lot that has to be done with education and outreach to the public because of—of people living in areas that were exclusively wildlife areas for many years. The large ranches or—I mean, they're our saviors as far as I'm concerned. In times of drought the land

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owners are out there, the ranchers are out there keeping their waters up and supplemental feeding their cattle, and our wildlife benefits from all that. Not that I'm saying that feeding wildlife is wonderful, because it's not, it's—it can cause some problems. But pretty natural feeds like alfalfa and things like that, that the wildlife picks up helps them during this period of extreme drought, like the last nine years here. And if, you know, ranches hadn't had water, we would have lost an incredible amount of life—of wildlife. So it—it helps us quite a bit.

DT: You mentioned earlier that when you mist net bats that you net them in a similar way to capturing birds. Can you talk a little bit about some of your bird work? I understood that you worked with elf owls?

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BM: Oh, I had a great project. And it—this was one of those deals where I was—I was driving to town one day and I thought, oh my gosh, they're taking all these telephone poles. Well, in the lower Chihuahuan desert we have such a scarcity of trees. And the woodpeckers, particularly the ladder-back in the lower desert elevations, which is our—our main woodpecker species, they drill holes and ex—excavate those holes for nests in these power poles. Once the woodpecker's through with the nests, then the elf owls use it as their nest sites because they're such a tiny little—little owl. They're the smallest owl in the world. And they—when we take all these poles down, we're losing a lot of nest sites. So

I—I was just, wonder if they would nest in an artificial nest box. So I—I

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talked Parks and Wildlife into letting me design this study using artificial nest boxes on the Black Gap, which is a great area because we have a lot of elf owls in that area. And I had, like eighty percent occupancy the first year, with a ninety-six percent hatch—hatching success and fledgling success. And it was incredible. I actually got to watch those—I mean, it was like raising your own kids because you got to see the—when the eggs actually hatched, you got to see those babies from the time they were out of the egg until they actually flew. And it was—what was really remarkable about the study was, of

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course, the elf owl is a very easy species to work with. They—I designed the nest boxes so they could be opened from the top, and I banded all of the females, and then color banded them, so that I could identify them at a—at a short distance with the color markers. And I had one female that came back. I started the study in '94 and I finished it in '97 and she had returned every year through 1999 to within an eighth of a mile of where I first captured and banded her. So she was getting to be a very old elf owl, which was incredible because they're so small and they make a huge journey in the fall. They leave the Big Bend in September and they go down into the highlands of the State of Oaxaca, Mexico into Guerrero, Michoacan, and then make that incredible migration back

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every spring and come right back to the same nest box practically. So it was an incredible study. And this particular female I named her Old Grouchy because she was a very grouchy little owl to work with. They're a very docile animal—bird normally. And you just open the nest box and pick them up. And they just lay in your hand, and they shut both eyes like you can't see me, I'm not here. And they'll open one eye and look at you and it's just really comical. And she was the only one of the females that would literally sink her little talons, or try to, she'd try to sink them into my hand every time I touched her. So—but it was a great study. We had really good nesting success and I got to identify lots of different food items in the diet that we didn't know about. And a lot of that data was used in the paper that was written on the species account for the Philadelphia Academy of Science for the new life histories of North American birds. So it turned out really well. It was a great study. I had lots of fun doing that study.

DT: You mentioned the small talons on these elf owls. I imagine the peregrine falcons were quite different.

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BM: Quite a difference. The peregrine, if—if there's any bird anywhere in the world that should be labeled "no fear" it's the peregrine. They have no fear of anything. I started the peregrine work in 1984 under contract to the US Fish and Wildlife Service and I did contract work for them through 1990. And basically I started out on a six-month basis the first year just doing some nest surveys. And then I saw very quickly that there was a need for winter surveys because these birds were not migrating. Everybody thought our peregrines left the Big Bend in the fall. They actually don't leave, they are year-round residents. And so I—I went to work full-time doing surveys year round. And I found out some incredible facts about peregrines. I got to—I—you know, you see a

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certain species and you sort of add it to your life list. And you say, okay, I've seen this bird

and I don't need to see it again. But with the peregrine, you can never see enough. They are totally incredible birds. I actually got to—to band one of the young out of a nest that we had here in the—in the Big Bend area. And her parents were, of course, very displeased and the—the little male whom I had called “Peppy” for a couple of years, he was a little pistol. And he would always, when I went into monitor, and I'd be as far as a half a mile away from that particular aerie site using a scope, he would always come in like a bomber on a strafing run, just screaming his displeasure that I was in that territory at all.

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And several times he took the cap right off my head. So he was—and he probably weighed maybe two pounds. So—but no fear, they are incredible birds. Have an incredible lifestyle. It—it's—if you were reincarnated after death it would be wonderful to come back as a peregrine because they always have a commanding view, they always have a beautiful place to live in, and near water. But they're—they're incredible birds.

DT: Can you tell us about some of the things you learned?

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BM: Sure. Well, of course, the big thing here was that out—that the birds were not migratory and that we'd still have a problem within this population. I started some prey studies back in the early 90's and also a collection of peregrine feathers for analysis of contaminants. Of course, DDT and DDE were outlawed many years ago. Many years ago, but it—it's still made and shipped to foreign countries. And, of course, we do border with old Mexico and there's a lot of farmland upriver from the Big Bend country, and so that was a concern. But my main concern, I—I—I kept coming back to the river. I kept, you know, it's—there's—our production there would always tend to be lower than anyplace else. And so I—I did a lot of work trying to figure out what could be the problem in the food chain that's causing this reproductive problem in the peregrines. Nest failures are so very common. We have increased the number of peregrines here. And one of the reasons because—is because we increased our survey area. When the studies first started out, they were only looking at the three major canyons within Big Bend

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National Park, Santa Elena, Mariscal, and Boquillas. Now we look at about a three hundred mile area of river. And my surveys extend into the Maderas del Carmens, in Coahuila, Mexico, Sierra del Carmen, and into the Salaniqa del borro. Also we—we went back and looked at any old sites that had ever had any records of peregrines. And all—everything kept pointing back to the problem—the main problem in reproduction was along the river. So I did a series of different samples and mercury has cropped up in all of our samples. Well it—this area is a—I mean, the rivers—it—there's a natural source of mercury in the whole lower Big Bend because of all the old cinnabar mercury mines that were in that area. And when you pull out the topo maps and you look at it, all

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of these drainages from this country, particularly the Terlingua area, drain into the Rio Grande. Mercury is a very—very harmful chemical. Once it is in the food chain, it changes to methyl mercury. It builds up just like DDT and DDE to a certain extent. And I was seeing a lot of—of really abnormal behavior in some peregrines. It was—it's—it's very frustrating to watch pairs go through a courtship period and lay eggs and then lose that clutch of eggs. They never hatched and the—the birds would sometimes try to re-nest. Most of those attempts were failures. And—and we still have problems today and we're still doing work.

We are in a, I think, a very unique situation because the falcons here in the lower Big Bend area are non-migratory. They're also to a large extent, geographically isolated. They—we don't receive any—our recruitment rate is very, very slow. If we lose one of an adult pair to old age, or, you know, whatever—whatever reason, it may take us three years to recruit a mate. Where in other populations, in less

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than twenty-four hours a mate's been recruited. So we have some recruitment problems. There's just a number of factors. And it's—it's a puzzle that we keep working on and—and a number of people, of course, have helped me, you know, through the years on this, Peregrine Fund, different individuals that have worked with raptors over the years and—and we've all put our head together to try to come up with a solution to this. And—and if mercury is a problem, how can we go about solving it? We don't have enough samples yet to really say anything definitive as to whether mercury is the main problem or not. But we are looking at mercury very hard.

DT: What sort of effect would mercury have on an animal?

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BM: It's—it may not be apparent in the—in the adult birds themselves. But it would actually show up in the generations of young that they produce. And it could be a cause of our nest failures.

DT: Is it a neurological effect?

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BM: Yes, you see a lot of central nervous system. That brings to mind one—one particular aerie that I watched over eight years that there was on—this female was very easily identified by her facial markings. And she would—she would do a lot of really abnormal stuff as far as behavior. Like she would start to scratch her ear, and she would completely fall over like she was having some kind of convulsion or something, and then she'd eventually stand back up very disoriented. And we had a lot—we know that we have young in the aeries, the eggs have hatched and there's actually young and they die before they're ever fledged. They never—never reach the air. And the aeries are very hard

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to work here. They're all situated in this just shaley limestone cliffs that the rock is very unstable. It's almost impossible to get a climber into these aerie sights. And, of course, we don't—we don't even consider going into a site until after the breeding season is over. And then we—we try to go in to collect feathers and eggshell fragments and stuff from the aerie sites. And the last couple of years, we've only been successful in going into one site. It's just very unstable rock and very dangerous.

DT: Can you tell us about some of the efforts to monitor these nests? Do you use rock climbers, or do you use helicopters?

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BM: Oh we—we've had a lot of fun with the—with the peregrines, of course. It's very hard to talk a climber into just literally falling off a 1500-foot cliff and—and, of course, you're very nervous when you're at the top. It's very expensive. We have to have a helicopter for logistics. We have to have permits, private landowner permission, and

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then, of course, you know, you're worrying yourself sick when the climber goes over the cliff and you don't see him, and you don't hear him. You think, oh my gosh, what did I do?

We—we've never had any—any accidents or anything. We've been very lucky. But, you know, they come out to look at the site and they go well, I don't think so. And well, I don't really blame you. It's—the peregrine pick some very neat nests sites. And they're often, you know, just totally inaccessible as far as—as getting to them. But over the years, I guess since '84 to the—the current year, I've probably monitored eighteen different aeries over the years. And—and each pair is—is like a different pair. Each one is very individual. You see a lot of different behavior. I learned a lot about behavior from falcons.

DT: Do you have an example?

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BM: Oh sure. They're—they're very much like—like people on a schedule. They have a set way of doing things, and you can literally time your day to what you know is going to be happening. You know, the male is going to relieve the female so she can get out and stretch her legs and feed and hunt. And he's going to incubate. You get—you get to see the—a very intimate side of the peregrines, you—their daily lives. Many people think that predators always kill the first time. Boy they do lots of hunting and, you know, one out of every seven attempts they may catch a bird. And—and peregrines are—are pretty much prey a hundred percent on birds, songbirds, and doves, and ducks. I—I was

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actually able to see a peregrine literally right in front of me on the Rio Grande take a green wing teal. And he had a lot of trouble flying with the teal once he had him—had him killed. But he actually made it back to the nest with his teal.

DT: Can you describe how that looked?

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BM: Oh it was incredible. I—I was actually watching the ducks and I knew the male was—the falcon was sitting on the ledge upstream. And they see all; they have, you know, the most incredible eyesight. And I was just watching this pair of ducks there and they were just sort of floating around and talking to each other back and forth. And—and I heard the—the falcon before I ever saw him. And it was like a bomb. If a duck could ex—express total horror, that green-winged teal knew his days were numbered. I mean, it was—it was like, oh no. And he tried to fly and never got off the water. And the peregrines have really big feet. They're the color of old dried corn. And they actually ball their—their talons and their foot up into a ball. And he just literally, that duck tried to take off from the water, and the peregrine just, right on top of him, and just really hit

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him hard with that balled up foot which stuns them. And then he just grabs with his talons and continues his flight, and it happens so fast that if you're not watching, you'll miss it. But you'll see the little few feathers float out in the air and that's about it. But they are—they're totally incredible birds. I was flying once in the Sierra del Carmen doing some

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aerial work in a fixed wing aircraft and the—the pilot, for—he was a Texas Parks and Wildlife pilot and he and I had flown together a number of years doing aerial surveys and, of course, he knew exactly how I wanted my surveys flown and—and we—we worked very well together. And we're flying down a sheer cliff face and just as close as we can get to it so that we can—can get good visuals on nest sites and—and the stuff that the peregrines are using and we actually saw a female sitting on eggs. And she just literally glared at us. And it's like, oh my gosh, I don't believe we just saw that. So it was an incredible experience. So

but the—the peregrines are—are fascinating birds. It—

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I hope since they've been taken off the endangered species list that they do continue to do very, very well in the southwestern states, and back east, in the eastern—on the eastern seaboard. A lot of birds were reintroduced into populations that are—were actually—no birds were actually left in some areas. They were—were totally gone, particularly east of the Mississippi. And so, you know, we've all got our fingers crossed hoping they're going to do well. I would hope that Parks and Wildlife continues to keep the peregrine in western Texas on the endangered species list because we do have such a small population.

DT: Let's change tack a little bit and talk about some of the other wildlife that you studied. I think that you have been pretty involved in what your t-shirt shows. Black bears.

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BM: Oh the bears. I love the bear project. That's a great project. You know, historically black bears were found in nearly every ecological region in the state of Texas. And early settlers, you know, there were no hunting regulations, and the bear was—was—there was no regulated hunting season, so therefore there was a lot of hunting. Settlement itself, people moving into this country took a lot of bears out. Bears are like a lot of our other wildlife species. They—they can't live next door to people. They need large spaces. And probably a number of factors. The settlement over hunting, some predator control programs that were in effect particularly the 50's and 60's to eradicate the lobo wolf. Poison. Black bears, of course, have no—no idea. They—they

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are scavengers, they will savage on carrion. And I'm sure that a lot of them were not, course, not being—they weren't actually targeted as the animal to be caught. The wolf was the target but the bear was caught and ultimately died from poisoning. Mexico also suffered a tremendous decline in black bear numbers in northern Mexico. And—and I'm not sure where this story originated from, but it—it was a very—I think it's probably very important because the natural recovery of black bears in—in northern Mexico has literally happened in the last twenty years probably. But there was a former president; I think his name was President Aleman. And he made annual hunting trips to northern Mexico in the state of Coahuila, to the Serranias del Boros, and the Sierra Del Carmens. And in the early 50's on his hunting trip, he came out to hunt bear. He didn't even see a

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bear. So, when he went back to Mexico City, he placed a moratorium on all their hunting in the state of Coahuila Mexico, which ultimately had to start that process of natural recovery. And the bear has recovered quite well in northern Coahuila, which in turn has provided range expansion and dispersal movement from northern Mexico back into western Texas, into historical habitat. And we have a small, but healthy population of black bears in west Texas now. Our landowners are coexisting beautifully with the black bear. We—we've done a lot of education and outreach. There's a lot of—of—of ideas concerning black bear that—that are really just myths and old tales. And people have

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found out that the—the black bear is really not the threat that they perceived on lands that are being used for traditional ranching. And—and that's not to say that we won't have an occasional problem because especially when it's—it's very droughty and dry, and natural foods are in low supply, then black bears, like any other animal, are going to eat. And if they

happen to walk up on a young calf or particularly sheep and goat country, along the border, and it's really mostly along the border that I think we'll have any problems that crop up. Then there's going to be a problem. Texas Parks and Wildlife is—is committed to working with the landowners and solving these problems as quickly and as efficiently

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as we can. And our policy—we relocate the animals. If that doesn't work, we—we try everything possible to—to come to a good working agreement. Our landowners have been really—really great as—as far as calling and letting us know. Since May of this—this past year—May 2000, I was looking a couple of days ago, and we've answered a hundred and six related black bear calls. Of those, we only had to relocate two bears.

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That's—that's pretty darn good.

DT: (inaudible)

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BM: We have not had to destroy a bear yet. We've only had to relocate. Really the bear problems, and—and there're not many, there're just one or two a year, started about 1994. We had a—a sow and her two cubs, small cubs of the year down in Val Verde County. And she was on a private ranch and she was killing the—a sheep or a goat every night. And the landowner called Parks and Wildlife and my husband was the one that actually—actually went down and captured her and both cubs. And we released them in west Texas on some state property. And they—she moved to a—a private cattle ranch, and we were just on pins and needles, because she was a confirmed livestock killer. And she remained there for two years in that one area and never—never attempted to—to kill

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a—a single animal. And there were hundreds of mother cows with calves, and horses and colts, and it was—it was very dry. And this particular area that she relocated in had water and it had good natural food supplies. And so it helped it tremendously on that. The private ranchers have—are really, I mean, they're living in bear country now, it's—it's really incredible. The bear just sort of slowly came back in and one day we—you know, we—we tried for a number of years, we talked about, well we probably really need to get some research going. And I started the—the research project. My co-principal

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investigator is Mike Pittman, who is area manager of the Black Gap. We started our—our project on the Black Gap Wild Management area and I'm sure there were lots of raised eyebrows because the first year of the project, they said, well you can have a pilot project, but, you know, Bonnie, that's really low desert country. And I said, well but the bears are living here year round. And they said well, let's—let's do a pilot study. So the pilot study, we caught nine bears the first—first month and a half of the study, I think.

DT: (inaudible)

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BM: We used covert traps, barrel traps, and leg hold snares, black bear leg hold snares. They're designed to work on black bears and we—we have been, of course, we're out in the field all the time, so we knew where the bear were at. And we—oh, it was great, we had a blast. We caught two bears in one day. And, I mean, it was—it was incredible to think that that low desert country actually is, I mean, you look at it and you don't think of bear country. You think of a black bear as a woodland animal. But they are doing tremendously

well. We have males that are over three hundred pounds. That's very comparable to studies done in Northern Coahuila on adult males. Our females are—are producing young. We have cub production and we also—our—our yearling males are dispersing like a normal black bear population. And we now have three yearlings that we—three little males that have dispersed. A little female yearling that was there in '98

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has cubs this spring. So we've been able to track her from the time we caught her in '98 until the year that she first gave birth. So this is—this is fascinating wildlife work because it—and we're learning so much about black bears. I mean, who would have thought black bears were actually inhabitants of the lower Chihuahuan desert. We've identified twenty-four different food items that the bears actually utilize on a year round or seasonal basis in that lower desert country. And—and we have very few trees.

DT: (inaudible)

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BM: Well we have a—in the—the staple in the diet is the Spanish dagger plant, which is in the yucca—yucca family. They pull the heart out of that Spanish dagger, and they actually utilize about an inch of the heart. The real tender portion that's actually inside—the center of the plant. And then when they eat that, they lay it down right beside that dagger and they move onto the next one. And the great thing about this is it doesn't kill the Spanish dagger, the Spanish dagger comes right back out from the center. Mexican persimmon, the little black persimmons that we have here in west Texas, the bears love them. And it—it is a delicacy. And—and from the research we've been able to determine that we c—we can actually say, okay, April the agarita berries are on the bushes, the bears are going to be in the high—the higher elevations eating agarita. And then we can follow the—the actual blooming period and the fruiting period of vegetation in that desert and actually predict where our bears are going to be and what they're going

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to be feeding on. When the mesquite beans ripen, the bears all leave the canyons and the mountains, and they come to the desert flats exclusively and feed on mesquite beans, which is a great source of fat and protein. And the prickly pear tunas. The tunas are a delicacy. The bears love the tunas. They actually just sit down and pick them off one by one and eat them. The Mexican persimmon, the yucca, the restrada yucca that grows on Black Gap, they also use the heart of that plant. Sumac berries. We have one species of oak in a few of the higher canyons. Sandpaper oak, which produces a very small acorn, but the bears and the Mexican jays literally clean the trees every fall of the acorns. And

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they feed on insects in the winter, the colonial insects that are underneath vegetation, they'll dig them out. Ants, wasps, wasp larva, it's just amazing what they'll—they'll actually feed on, anything that—I—I—almost they can eat, they will. So, it's—it's been an incredible—it's been very revealing as to what these animals will actually feed on and do well on in—in a desert environment. And by finding out this stuff, we can apply this to management of black bears in this lower Chihuahuan desert habitat, which covers a huge amount of country in western Texas.

DT: I guess along those lines, how do you use your knowledge about diet to talk to the ranchers and maybe put them at ease about their herds.

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BM: Sure. Sure. Well, we do—I do a lot of programs for one thing with special interests groups like the ranchers that want to know about these species, I mean, this in incredible we're learning about black bears in Texas, particularly west Texas from the ground up. I think it's very important because we—they've been gone so long, and then to come back in, I mean, a species very—very seldom performs a natural recovery on their own. Some wolves, I think up in Minnesota, maybe that are the only examples that I can think of or up in the North Country, it may not even be Minnesota. But natural recovery very seldom occurs without the intervention of man and reintroduction or

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relocation efforts. And the bears came back on their own. And they've just sort of come in very quietly without a lot of fanfare. And they're doing very well. And a lot of this was just, I mean, information that we're obtaining. You know, when I have a call from a—like I had a particular rancher call me, and he said, there's—there's two bears on my ranch, and I want them gone. I said, well what are they bothering? Well nothing. And I said, well let's—can we just leave them and let's see what happens. And—and we got to talking about the animal itself. Well, you'd think that he owns every one of the bears now, they're his bears. He's very protective of them. And a lot of it is just education.

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You know, and—and we're learning through the research that we're doing on Black Gap. Therefore, we can pass this knowledge on to the landowner with some good management sugg—suggestions and—and sound biological data to back that up. We've—we've had very little predation, and we may have been very, very lucky because bears are predators. But the diet—and the black bear diet is normally vegetation. More than three fourths of the percent of the diet is. Your grizzly. A lot of grizzly bear facts get attached to the black bear, and the grizzly is a pretty much a strict meat eater. A lot—a lot more problems with livestock in grizzly country than the black bear.

DT: I noticed that you have done some raptor censuses. I was wondering if you could tell a little bit about them.

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BM: Yeah, we did a—that was another project that I—I designed for Parks and Wildlife. And it—really it wasn't a lot of research based, basically what it was, was, let's see if we can actually apply highway censuses to baseline inventory, to get an idea of the distribution of raptors across a certain area. So basically what I did was use the four highways that come in and out of Marathon here. And they were ten-mile routes. Ten miles east on Highway 90, ten miles west. Ten miles south on 385 and ten miles north on 385. And I also trapped small mammals to see basically what was in the diet.

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And the ranchers were great. They would—they were always coming in and saying, well what did you catch this morning in your trap, or, you know, there's a red tail out here on 385 on the fourth post from the turnoff to the ranch headquarters. And they gave me a lot of good information on—on raptors. And we were able to take that and actually, you know, it wasn't a—a real scientific study or anything, it was just a simple, can we use this method to do baseline and yes we can. It works very well. There's something like twenty different raptors that use the Marathon basin, some seasonally like during the winter. We added the—the burro—I'm sorry, the—I can't say it—the turkey vultures and the ravens in on these—these transects or these census lines because they're—they're

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sort of considered raptors, and are—and they're very, of course, very obvious. We also used the burrowing owls, the burrowing owl colonies here. And we could kind of keep an idea of what those populations were doing off the highway there on the desert flats. And that was some really good information on distribution for the burrowing owls in this area. And it also showed a marked decline in some species like the ferruginous hawks, which are a winter resident in this area only. And boy, the—the numbers went down

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significantly during the drought. So and—and I'm sure that was directly related to the prey base. Our golden eagles, we—we found out that they were hunting the prairie dog towns and the—pretty exclusively. And they would literally set up on the perches and wait for the prairie dogs to come out of the holes for their lunch. And we—we did pick up several species that hadn't been reported here. We had some prairie falcons that wintered in the Marathon basin here then would actually swap wintering grounds each fall. And they—they seemed to go to where the biggest prey was concentrated, the largest species richness of prey in the small rodents and things like that, and in grassland birds. And we were able to determine that through our—our animal—small mammal trapping. And we'd say well, you know, we've got twenty more percent small mammals over here on this route than we have on the route this bird was on last winter. And he was actually swapping and basically all he was having to do was fly about six miles. We were having to drive quite a bit more. But it—it turned out some—it gave us some real good information on the raptor distribution here, which had not been looked at previously in—in bird work here.

DT: You had mentioned the golden eagle and the fact that you think that they are preying mostly on prairie dogs. I believe that in the past there have been some conflicts between ranchers and golden eagles. I was wondering if you could tell us the history of that and how ranchers were agitated about that.

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BM: Years ago, many years ago, and a lot of sheep and goats were in this country also and the golden eagles were a big problem. They certainly took a significant number of lambs and baby goats. And there was a flying service out of Alpine that actually flew and gunned golden eagles, and that was funded by one of our federal agencies. It was—then at the time, it was considered an effective means of predator control. Now we don't—we don't see the problem with eagles being killed out in west Texas, like we did twenty-five or thirty years ago, it doesn't happen anymore. I have a number of ranches that have golden eagles that are on the ranches year round, and the eagles are actually nesting on their property. But we don't have the sheep and goats in this country, we have mainly cattle now. It's mainly, you know, larger—and—and we haven't had any problem with—with eagles taking calves. And if there was a...

DT: What's the major reason for the change?

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BM: Yeah, as land use changes itself. Right, there's, you know, the drought back in the 50's pretty well put the sheep and goat ranchers in the—this country out of business, and it's mainly cattle ranching now.

DT: Speaking of the land use. Can you say how the land has changed since you first arrived here, if it has?

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BM: Yeah, I think it's changed some. I think the big ranches that are in families have—they've pretty much remained the same. And—and thank goodness because we need the big ol' ranches with these big tracts of land for wildlife. Wildlife corridors and—and wildlife movement, as well as—as habitat. And it's like the—the case of the black bear. If this country was not real well taken care of, a black bear could not survive here. And they are surviving in lower Chihuahuan desert habitat and raising young. And if the ranchers were not—not taking care of that country, this wouldn't happen. The future of the black bear in Texas is not going to be dependent on a study that I do on

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Black Gap or a study that's done in northern Mexico, or a study that's done in Big Bend Park. Those studies all contribute as far as management and ecology. But the private landowner is going to be the one that insures the future of the black bear in west Texas. Without that, we—we won't have black bears, because they have to have room, and they have to have space. And it's—it's really working very well right now because we're seeing the—the landowners are co-existing with black bears. And they're willing to work with us to solve problems, and—and we have made a—a huge effort at Parks and

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Wildlife in the last two years to convey to all the landowners that, you know, we're here, and we will go any time of the day and night. We're willing to work with them and let, you know, so that everybody ha—you know, the problem is solved, we have a solution, we have management techniques that we can use, and—and we can back it up with good data. And it's working very well. Five years ago I—we would have never heard about a sow with two little cubs on a—on a ranch in the Marathon basin here that the landowners were actually getting to see her come in with her cubs every day and—and play in the

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creek. Now they call us and let us know about these things. So they are contributing so much to our distribution of—of the black bear. And, you know, I can stick dots on a map and look at it, and it's like wow, we have this corridor of black bears that are literally moving to the north and the east and the west. So it's—it's given us some incredible information.

DT: You've had your eyes open—your ears perked I guess for trends in wildlife and environmental issues out here in west Texas. Can you point to any major problems that you think needs attention?

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BM: Yeah, one thing really comes to mind in a hurry. We see—today the world is so fast paced, and we don't see the field people like we used to see. I think that if there's a message that kids in college nowadays need, it's get in the fields. No matter how many computers we have, no matter how much modeling we can do, if you don't have somebody in the field that's there observing and doing the actual wildlife work itself, we don't have a lot. We've got to—we've still got to have that information, and I think it's very vital. And I think any young person today, going to college, wanting to work in the wildlife field, does not need to focus on one particular species. They need to learn all they can about everything they can, at every opportunity. And you never quit learning. My—

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my dad always said—I think he instilled that in me more than anybody else—if—if you think you're so smart that you don't need to learn anymore, than you should just find

another place to—to—to apply your skills, or your—or go find another job because you don't need to be in the field that you're in. And I—and I think that's very true still today. I—I do a lot of computer work myself, but there's not place, as far as I'm concerned for me, except the field. The field is where it happens. The field is where it's at, and that's where the wildlife's at and that's the—the wildlife are the ones that tell us their story. All we can do is sit there and take notes and—and try to, you know, there's an old saying I

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think about—the hand of man taketh away, but he can also give back. And I think that today wildlife managers have to be able to compromise. We have to be able to look at lands that were once maybe an isolated tract of land, that's now a big urban development area. We have to see problems before they happen, see the conflicts before they happen, and try to be able to have some sort of working solution that—that's going to benefit everybody. You know, the wildlife, the people, everybody's going to have to work together. This—that's just the way it is.

DT: Well thank you.

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BM: Thank you.

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End of Interview with Bonnie McKinney