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David Todd [00:00:00] Well, good afternoon, David Todd here. And I have the distinct privilege of being online with Louise Chambers. And with her permission, we plan on recording this interview for research and education, work on behalf of a non-profit group called the Conservation History Association of Texas, and for a book and a website for Texas A&M University Press, and finally, for an archive at the Briscoe Center for American History, which is located at the University of Texas at Austin.

David Todd [00:00:37] And she would have all rights to use the recording as she sees fit, of course.

David Todd [00:00:44] And so that is the plan that I had in mind. I wanted to make sure that that's okay with Ms. Chambers.

Louise Chambers [00:00:50] Absolutely. And I appreciate being asked to share some information and history about purple martins. It's going to be fun.

David Todd [00:01:01] Well, good. Well, I'm very grateful. Well, with your go-ahead, let's get started.

David Todd [00:01:10] It is Tuesday, August 9th, 2022. It's about 2:40 in the afternoon, Central Time. And my name again is David Todd, and I am representing the Conservation History Association of Texas. I am based in Austin and we are very fortunate to be conducting an interview with Louise Chambers, and this is a remote interview. She is based in the Corpus Christi, Texas area.

Louise Chambers [00:01:48] She has been long associated, for over, well, close to a quarter century, with the purple martin Conservation Association. And she is a student and a steward and an advocate and an educator about purple martins. And today we'll learn about her background and experiences and her insights about conservation of the purple martin.

David Todd [00:02:17] So I thought we might start of just sort of chronologically, and ask you if there might have been some experiences during your childhood and early years of growing up, whether there might have been some people or events that influenced your interest in animals and birds and, of course, purple martins in particular.

Louise Chambers [00:02:41] Well, I didn't meet purple martins until much, much later, but as a child, my family lived in a suburb east of Cleveland, Ohio. We were based right practically on the bluffs that ran down to Lake Erie. And the whole outdoors was where we hung out and played. We were very lucky in those days. There was, there were woods nearby. There was some meadows, some water, plenty of mud. Plenty of mud. There were places to look for

toads and salamanders and crayfish. And most of my interest then was, "What can I find around my feet?".

Louise Chambers [00:03:20] We didn't look at birds too much. But my mom had always been interested in birds. And you kind of absorbed some of that, whether you mean to or not. And I remember one year, after there had been a violent summer thunderstorm over the lake, there was a long-eared owl in the willow tree behind our house the next day. And it sat there all day looking very cross and clacking its beak if we went out to look at it. And it was gone the next day.

Louise Chambers [00:03:48] And then sometimes she would point out, oh, a flicker or evening grosbeak, something like that. But the big deal was playing outside, by ourselves or with other kids, and we enjoyed it immensely.

David Todd [00:04:05] Did you have any childhood friends that shared this kind of interest in the outdoors?

Louise Chambers [00:04:12] All of us played outside, and I remember running through what we called the meadow, which was, I guess, several vacant lots, an undeveloped area, that would be really thick with goldenrod and Queen Anne's lace and all kinds of flowers later in the summer, and roaring through there and catching grasshoppers and making them spit tobacco, that sort of thing. And swinging on vines over a bit of a ravine and riding our bikes up and down the street. So, you know, there were neighborhood kids all over and my siblings. We didn't get into too much trouble.

David Todd [00:04:54] You know, it sounds like a lot of this is just sort of informal experiences and childhood play. But I think that your mom had, as I understand it, binoculars and a field guide. And I was curious if she gave you any sort of more sort of academic pointers about, I mean, you said that she pointed out a flicker and a grosbeak, but did she talk to you much about what she was seeing and enjoying?

Louise Chambers [00:05:26] She was, she was, went one step better. She showed us stuff. She would put us in the wagon and take us along by the lake shore when we were still pretty little. And she would turn over rocks and there would be a whole nest of ants running around with those little pupae, and taking them to safe places. Or there would be those big red centipedes and she'd have an old spoon and pick them up and bring them over to the wagon so we could be horrified and fascinated at the same time. So she, her degree was in science, biology, that sort of thing. And so it was, it was second nature to her. And she believed in showing the kids all this stuff, too. So we were very fortunate in having a mom who was curious about nature and encouraged that in us.

Louise Chambers [00:06:17] And when I went through my phase of bringing dead animals home, there were little shrews that fit in my dollhouse and so on. She once even let me boil a possum carcass on the stove in our kitchen because I wanted the bones. So she was a very tolerant woman, bless her.

David Todd [00:06:37] I love that. Well, I'm sure she was delighted that you shared her interest. It's always fun to watch your kids explore with their own little laboratory experiments on the stove.

David Todd [00:06:52] So I think that when you were kind to share some thoughts before we spoke that you also had some organized activities with Campfire Girls. Is that right?

Louise Chambers [00:07:05] Yes. Yes, we did. And, and I'm glad we did that as well, because part of Campfire Girls was going to a summer camp and just doing outdoor things. Again, they didn't really focus on nature as much as I see some of the camps doing nowadays. But we were outside. There were campfires and cabins and cicadas raining down from the trees in late summer, which was horrifying to me. Bugs were my last love, the last critters I learned how to really appreciate. But the Campfire Girls were good.

[00:07:42] And summers, we would go to our grandmother's, her mom, in northwest Pennsylvania and stay for two weeks in the country. Again, a lot of time outdoors, helping to pick those big tomato horn worm caterpillars off the tomato plants and things like that. Being outside a lot, catching lightning bugs and so on, even feeding them to my pet toad. And you could see them blinking on and off, on and off through the toad's belly skin. It was very entertaining. Nature is if you let yourself sink into it.

David Todd [00:08:19] I love that. So it wasn't sort of a clinical, educational experience. It sounds like something you really enjoyed and kind of reveled in.

Louise Chambers [00:08:32] Nature by immersion, I should call it, I guess.

David Todd [00:08:36] Yeah. Now it sounds like you spend a lot of time outdoors and I'm sure picked up a lot from, you know, just being in with possums and seeing flickers and grosbeaks and lightning bugs and toads. Did you happen to read much about animals or see nature films or TV shows that might have encouraged this kind of interest?

Louise Chambers [00:09:10] Well, heck, this was the era of Walt Disney. So we we loved all the regular, I think it was Friday night or Sunday night, when they had the Walt Disney show and they would have the movies with the animals. And of course, those were probably highly manipulated, but they were fun. And we all enjoyed anything that had animals in it.

Louise Chambers [00:09:32] And reading, we had all these encyclopedias and books about aquatic forms of life. And I can remember just going through those nature encyclopedias over and over and looking at the pictures of all the different critters, whether they were bats or birds or turtles, and reading about them, when I could read, and yeah, over and over. A lot of repetition there. So I guess that helps it sink in. And it probably further encouraged my natural interest in just living critters all around us.

David Todd [00:10:08] Yeah, I guess there's a sort of affirmation when you find out that somebody is on in the trouble of writing a book or making a TV show or, you know, making a film and you realize, oh, there's a a world not just of, of creatures, but of people that, that share that interest.

Louise Chambers [00:10:32] Yeah, so, well, I guess we'll be talking about birding a good deal today. And I was hoping that you might give us an idea of how you got introduced to birds and to birding.

Louise Chambers [00:10:46] Well, my mom, as I said, had binoculars, had binoculars, had a field guide. I think it was the Golden Guide to Birds. And when we our family went on some camping experiences, she was the only one who got up early and went out with a naturalist to

look for birds. And we all kind of teased her and razzed her about how nerdy it was to be interested in birds.

Louise Chambers [00:11:09] But later that bug bit every one of us kids. And for me it didn't hit until I moved to the country in the early 1970s. I graduated from, from college, the Cleveland Institute of Art, and I moved to rural country, south of Cleveland a couple hours. And I was living in a rented farmhouse out in the country. A lot of our neighbors were Amish. There were farm animals all around, but there were also birds. There were orchards and ponds and birds were everywhere. And that's how I got hooked on them. I was surrounded by them.

Louise Chambers [00:11:43] I remember seeing the red-winged blackbirds nesting out by the pond, or the day I saw all these goldfinches eating the seeds out of the catnip plants that we put outside a window for our cats. That was neat to see them all in there. There were barn swallows nesting in the barn, and one day a small hawk hit a window and sat in a bush for a few minutes and then flew away. So we were just, just surrounded by birds.

Louise Chambers [00:12:09] And I became more and more interested. I found an old, old pair of binoculars that had belonged to one of my mom's brothers and in a junk store, I found a really old set of hardcover bird guides for about a quarter and they didn't have all the plates and information that books now have. They had plates of some of the birds. But the neat thing was, one, there was a little tiny bird, a warbler, hanging upside down from a cherry tree. I was able to use that old book and those crummy old binoculars to identify it as a Cape May warbler, which was really exciting.

Louise Chambers [00:12:46] And from there it just got worse. I got better binoculars and better field guides. Every few years things would upgrade, and I wanted to do birdwatching every chance I could get. I was obsessed and I was in my, eh, mid to late twenties then and you know, it's still there. It hasn't eased up any.

David Todd [00:13:07] You know, it's interesting to me that one of those early birding experiences was seeing this unidentified bird hanging there and then, you know, looking at the cues and the marks and figuring out, aha, that's a, that's a Cape May warbler. And I'm wondering if part of the appeal for birding to you is this puzzle of a, you know, learning about and figuring out what is going on, and what that creature is, and what its behaviors is like, and so on. Is that part of the attraction or are there other things that intrigue you?

Louise Chambers [00:13:48] You've nailed it with that. That is a big part of the attraction. There's a bit of a mystery, a puzzle, and you use what you see and what you hear, and then your whatever your books or research materials are, you figure it out. And that is just absolutely compelling.

Louise Chambers [00:14:07] And it got to the point where years later, I was on a trip, I think, in Arizona, and the person I was with, I'd see a brand new bird that I'd never seen before. Before I could name it, this other person would announce what it was, and I was so ticked off! I wanted to figure out the puzzle myself. And I've met other people who feel exactly the same way. That challenge, and then the ability to overcome the challenge, is personally rewarding. We must be, have some peculiar trait that makes us value that. But it is so much fun. It it's just absolutely riveting.

David Todd [00:14:49] So I understand that you moved to northwest Pennsylvania and started, as you say, you know, birding with other people. I guess this wasn't maybe going all the way to Arizona, but at least locally with your regional Audubon chapter. And I was hoping that you could tell us about some of those early outings with people that shared this interest with you.

Louise Chambers [00:15:21] Boy, that that was such a wonderful step for me, was finding friends who could teach me things -where to go, how to do better at being able to spot and identify birds. It was fun. First I signed up for a just a small local birdwatching course in the nearest small town (and they were all small towns in the area, very pretty countryside, hilly and with lots of wetlands, lots of birds, lots of woodlands).

Louise Chambers [00:15:51] And then I started going on field trips with the Audubon Group, and we just happened to be very close to a major migratory pathway. And boy, oh boy, warbler migration in the spring! I was just in love. And all of these people who would help me or say, "Hey, there's this warbler or that warbler over there. Come on, we'll go find it.".

Louise Chambers [00:16:12] And then I signed up for another class through the Edinboro University. It was nearby and they had community outreach and I signed up for that bird watching class and I just kept going up, up the ladder.

Louise Chambers [00:16:24] And later I took various workshops on learning to identify shorebirds or gulls or hawks.

Louise Chambers [00:16:31] And it's ... learning is fun. I think that's something I got from my mother - a good sense of curiosity and a love of learning.

David Todd [00:16:42] So this link with Edinboro University seems important in your life. I understand that one of the instructors was a fellow named Jamie Hill, and I was curious what he has meant to you.

Louise Chambers [00:17:02] Well, boy, oh, boy. My life, my life really changed. I mean, we could, we could track it back to moving to the country and those first birds. But getting to know Jamie Hill introduced me to the purple martin. He was one of the instructors of that bird watching course I signed up for, and he had just started the Purple Martin Conservation Association, or "PMCA", the previous year, a nonprofit funded by donations and memberships and some sales. And it was focused on studying the purple martin, helping overcome their population decline through public education and research. And he needed volunteers.

Louise Chambers [00:17:48] Well, of course, I signed up as a volunteer immediately and took a keyboard-refreshing course because I hadn't typed for a long time and learned to use a computer, which I wouldn't have done otherwise. And so along with going on more and more field trips to spot birds, I started learning about how to manage a purple martin colony because Jamie Hill had one right in town and did weekly nest checks. And boy, what a, what an introduction to a whole 'nother world that stuck with me for the rest of my working life. And that's still with me.

David Todd [00:18:27] You know, it's interesting to me that, you know, the, the efforts to protect a bird, and restore a bird, or any creature, often relies on office skills, you know, as you said, keyboarding. And I imagine there was envelope-stuffing, and there was putting postage stamps on envelopes and, you know, having T-shirts printed, and preparing catalogs

and newsletters and, you know, just all this sort of non-profit educational work that goes into keeping a group going and keeping its mission front and center and progressing. And I was hoping you could talk about those tasks that you filled at PMCA.

Louise Chambers [00:19:26] Well, to to start with you, you certainly summarize them well. I think you have some experience in this area.

Louise Chambers [00:19:34] But myself and a bunch of other local bird ladies, as I will call them, and a lot of the biology department students from the nearby Edinboro University would come over and help Jamie. He had an office there, but most of the work was done at his home nearby because there wasn't enough room in that little, tiny office.

Louise Chambers [00:19:59] We'd print labels and put them on catalogs or magazines or whatever kind of educational materials we were sending out. And we would type in addresses. We would make phone calls. We would write letters. Sometimes we were just putting gourd seeds into envelopes to send to people so they could grow their own purple martin homes.

Louise Chambers [00:20:23] And it kept us pretty busy. We always had someone in there typing, logging data, getting some research projects going that way.

Louise Chambers [00:20:31] And it was, it was a lot of fun. It was, you know, we'd get pizza and we'd keep working and chatting. And we were right, we looked over a very nice lake called Edinboro Lake that had bald eagles, beavers, all kinds of ducks until the lake froze in the winter, loons, tundra swans.

Louise Chambers [00:20:54] So there was a lot to keep us entertained outside the windows as we did these kind of drone-like chores inside.

Louise Chambers [00:21:04] And then going out to do the nest checks was even more fun because you got to see how the birds were progressing from the time the first adults came back in April till they all left sometime in late July. It was busy and it was quite, oh, compelling. It was just really interesting to see the birds develop and all the behaviors.

Louise Chambers [00:21:28] That's the most fun about martins, is being a colonial nesting bird, they have a lot of stuff going on, like you would with neighbors in an apartment building. We saw fights between females, fights between males, thievery. One female would wait till her neighbor left and then she'd stick her head into the neighbor's compartment and come out with a beak full of nest material to take back to her own place. It was just endlessly fascinating to watch these birds and figure out what was going on.

David Todd [00:22:03] That's great. Gosh, you have a ringside seat to this.

Louise Chambers [00:22:08] Yeah.

David Todd [00:22:09] This whole sort of soap opera, I guess, of these birds dealing with one another.

David Todd [00:22:17] Well, and the PMCA, while we're, we're talking about it, I mean, you were there at the very beginning and here it is 35 years later. And I'm curious how the Association has grown and evolved over that course of time.

Louise Chambers [00:22:39] Well, one of the, we still have, and I'm retired several years now, but I'm a "we" when it comes to the PMCA, the staff is still pretty small. There's not a lot of cash flowing in except, you know, you make enough to keep going. But it's not where anybody's getting rich off of this. It's done out of love and the clear need that the birds have for specialized help. There is no other bird in North America that nests in this way and is dependent on people. So the best thing, as the PMCA chugged along, sometimes we developed products like a recording called "Dawn Song" that's available as a tape or a CD that people can play to help attract martins to their new empty martin housing.

Louise Chambers [00:23:34] And that we had some friends, fellow researchers, some were from Toronto, from York University. One was from the Smithsonian Institution. He was a senior researcher. These folks somehow crossed paths with us in Edinboro, and they really helped us by partnering with the PMCA on various projects, and offering us encouragement when it came to banding and later color-banding the birds, improving the housing, improving the methods we used to keep them healthy and keep good records.

Louise Chambers [00:24:11] And plus they became good, life-long friends over the years. And then it expands. And pretty soon you have a network of people all over the country that contribute help, that send articles to be published in the magazine, that share information from their own colonies. It became like a giant family.

Louise Chambers [00:24:30] And it keeps going. They moved their location of their office up to Erie, to Presque Isle State Park, set up new housing there and have more birds. And they continue to expand in the research area. And partner with Disney's Conservation Fund is a big part of things. Lately there is research trips to South America where the martins have their winter roost and they're tracking the birds with new methods as well.

Louise Chambers [00:24:59] So it's pretty exciting stuff and it's turning out valuable information about why martins might be declining in some areas and how we might help them.

David Todd [00:25:13] You mentioned that the PMCA had this group of friends, really a network of people that are almost like a family. And I understand that, that there are some literal family members who share this interest with you in purple martins, and that your husband has been intrigued by these birds, too, and has been involved in lots of martin work as well. And I wonder if you could tell me about that shared experience that you have with him and the sort of things that he is focused on.

Louise Chambers [00:25:56] Oh, he's, he's something else. You wonder how someone who lived in Pennsylvania would end up moving to and marrying someone in Texas. It's because Texans don't leave Texas. At least that's what he said.

Louise Chambers [00:26:08] But I remember the first time he called the PMCA office, and I talked to him on the phone about a problem he was having with his birds. And eventually I met him in person at a purple martin festival in Tennessee. And after that, we just kind of hit it off and I ended up moving down here to work.

Louise Chambers [00:26:29] He already had a martin colony. He had a couple of them and was helping start a lot of others because he believes in mentoring, which is helping other people become landlords, teaching them how to put up their housing and how to take care of

it, which is a really important part of keeping martins going. If we don't have those people, boots on the ground, putting up and taking care of housing, the birds are not going to thrive no matter what.

Louise Chambers [00:26:55] So, besides doing that, he also gives donations to local conservation groups to help them put up housing at locations. He got himself trained as a bird bander and started banding purple martins and traveling elsewhere in the state to do that as well as right here in Corpus Christi.

Louise Chambers [00:27:16] And he even got involved in a special project to put geolocators, little data loggers, onto some of our birds one year, with the help of some of the researchers who came down from York University in Toronto and the Smithsonian and the PMCA.

Louise Chambers [00:27:33] So, he's gotten us into some stuff that I wouldn't have because he was not afraid to tackle things in that area. And it's, it's been pretty rewarding what, what has come as a result of all that.

David Todd [00:27:49] Well, you know, speaking of of learning about these birds, this might be a good moment to talk a little bit about the life history and ecological niche that the bird fills. And I know that there's reams of information that you could probably talk about, but maybe you can just give us a sort of "101 level" introduction to the, you know, behavior and the place that this bird fills in the natural world.

Louise Chambers [00:28:29] Well, I'll try to do that very concisely, because we can't take all day as would be easy to do.

Louise Chambers [00:28:37] They're the largest species of swallow in North America, and they only exist in the New World. There's barn swallows all over the globe, but martins are only in North and South America. They nest only up here in the United States and Canada and dip a little bit into Mexico.

Louise Chambers [00:28:57] And originally they nested in natural cavities, either old woodpecker cavities, or cavities that had formed naturally in snags. And they are also found out west, west of the Rockies. They nest in live trees and in snags. And in Arizona they nest in cavities in saguaro cactus that the woodpeckers have excavated and then moved on. So they need a cavity.

Louise Chambers [00:29:26] And they only eat flying insects, being swallows, and they're also colonial nesters, which is pretty unique. Cliff swallows are too, but cliff swallows are not dependent, as martins are today, on human-supplied housing for most of their nesting needs. Now, out west, they still mostly use natural cavities, but they do use some gourds and some boxes there. It's a little different.

Louise Chambers [00:29:52] But here in the east, east of the Rockies, somehow, and we don't know how exactly, the indigenous people here, mostly the Choctaw and Chickasaw, discovered that martins would nest in a dried, hollowed gourd. Now they used gourds for all sorts of things, and they probably had some extra ones, maybe lashed to a tree near a pond or something that they might have used for drinking. Somehow they discovered martins would nest in those and they must have enjoyed them because they have a lovely song and they're fun to watch. They eat insects. So it became kind of a tradition to put gourds up specifically for the Martins lashed to a pole in each little community.

Louise Chambers [00:30:35] And when the Europeans started coming into this country, into this area, they saw it and they did the same thing, too. And they also put up wooden nest boxes with multiple rooms, very similar to the dove cotes that are used to raise pigeons for the table. And I bet martins nested in dove cotes, too, down in in the southern states where those were a common structure.

David Todd [00:31:03] That is so interesting, this kind of interrelationship between the birds and the people and that that they really became sort of interlocked and interwoven. And you think that that it was both kind of aesthetic thing that they enjoyed the sound and the, and seeing them fly. But there was also maybe some sort of, I guess, I hate to say practical, but there were some bug-eating skills that they appreciated too. Was there anything else that, you know, the Native Americans might have seen value in these martins for?

Louise Chambers [00:31:46] Well, some of the early ornithologists or other travelers who wrote up accounts of what, about what they saw, particularly John James Audubon and Alexander Wilson, I think wrote a bit about that the gourds, the martins and the gourds, were for the purpose of eating insects.

Louise Chambers [00:32:06] Now, I don't really know that they could have determined they were eating only pests because they eat all kinds of insects, but that possibly the gourds were there to protect furs or meat or fish that was drying from pests, you know, maybe vultures or something that would come in and try to raid that food as it dried because martins will go after and mob intruders.

Louise Chambers [00:32:32] I know in my, one of my colonies right here near Corpus Christi, we have some crested caracaras which are beautiful birds. And they've learned that if they land in a certain spot, my husband will toss some meat scraps out for them. Well, the purple martins, if they have babies, they have a fit and they dive-bomb them relentlessly, which the caracaras don't care for.

Louise Chambers [00:32:57] We used to have a friendly road runner, and if he came into the yard, again, the martins would just strafe the daylights out of the poor guy. And at one point, my husband actually had to help the woodpecker, or rather the roadrunner, cross the yard to get to its meat scraps because it didn't want to go out there by the martins and get strafed.

Louise Chambers [00:33:17] So if they did that after our bird friends, our roadrunners and caracaras, they probably did go after vultures that came near their drying meat or hides, that sort of thing.

Louise Chambers [00:33:29] And they do provide, I believe, quite a bit of entertainment because you watch all these social interactions, you hear the different songs and calls that mean different things, and they're beautiful. And when you see them skimming around in the sky, they do some pretty impressive aerodynamic feats. And sometimes they play, they'll drop a leaf and take turns catching it as it spirals down to the ground.

Louise Chambers [00:33:54] So considering, they must have found a lot to enjoy about them.

David Todd [00:34:00] That's great. And I guess it's fortunate for the purple martin that there is this kind of appeal for people and especially since evidently martin had been on the decline for what I understand maybe the last couple of generations. And they, they need they need the

help and the conservation support. And I was curious if you have any insights about why they've been in decline in recent years?

Louise Chambers [00:34:35] Well, part of the decline is certainly, can be attributed to weather. Martins and other aerial insectivorers - think of flycatchers, other swallows, nighthawks. And that's just a few. There are many others. They're all susceptible to bad weather because if it's much colder than the mid-forties. If it's also windy, if it's raining, even a light misty rain, can spell disaster. If they have small nestlings that need to be brooded and fed, well, when it's in the low sixties, raining, windy, there's no insects to be found. Or the adult martins might even have to leave the nest knowing that their young won't survive to feed themselves or die.

Louise Chambers [00:35:21] So, weather is a big, big factor in martin success. And over the years, as their breeding range has declined, most of the northern extension has probably suffered the most. And I know there was one particular event, Hurricane Agnes, in Pennsylvania, in the early seventies. I read that it rained for about three weeks straight and that almost all martins in Pennsylvania died. And for years, in fact, even till today, some places have not got any martins again. Because once a population is knocked down that heavily, it is hard to recover, especially when other birds may claim the housing in their absence.

Louise Chambers [00:36:08] Other reasons for their decline: well, one of them may be that how much of the original forest we cut down as we developed this country. A lot of the standing snags that provided natural cavities for the martins were removed. And so that left them more dependent on human-supplied housing.

David Todd [00:36:31] That's so interesting. These, these things that happen without maybe a lot of commentary, or seeing those connections, between felling a forests and the loss of habitat for this bird. And then years later you realize, ah, that was, that was a really serious, serious challenge for the bird.

David Todd [00:36:54] So aside from, you know, the, the weather problems that have faced the martin from time to time, I think that you also shared at one point that there have been some long-term declines in insect numbers that, you know, are, I guess, more sort of wide-ranging and long-term than any particular storm might account for. Is that right?

Louise Chambers [00:37:24] Yes. And, you know, if you go to pretty much any site that focuses on bird conservation, and, or you look up the topic of aerial insect declines, you'll find information that shows going back to the 1960s, the populations of aerial, insectivore birds declined along with the decline of insects. And it makes sense. There's such widespread use of pesticides in agriculture. It's not that we can't use any pesticides. We certainly need to use some. But I think their use overall is just sometimes ... matter-of-fact recommendations to use them, whether they're really strictly necessary or not.

Louise Chambers [00:38:21] And some of the newer ones are systemic insecticides. Neonicotinoids are one, one group that's being eyed pretty, pretty heavily as a source of trouble for our migratory birds and our aerial insectivores. The systemics are taken up by the roots. They're in every bit of the plant. So if an insect feeds on it, it may be contaminated. They can contaminate groundwater where the insects that come out of that water are not good food choices anymore for the birds. And I don't explain this particularly well because I'm not a biologist, but I know that it is being studied and believed to be a factor in the heavy declines of insects more recently.

David Todd [00:39:12] Okay. Well, that's important to know. Thanks. Thanks for introducing us to that.

David Todd [00:39:19] So one of the things that I've often heard people just be amazed at with the martin and, and I think you suggested it when you were talking about earlier your husband's work with geotagging and banding and some of the field trips and research trips that have been taken down to Amazonia is that these birds are just master navigators and migrants. And I was hoping you could talk a little bit about these migrations that the bird takes and you know what you've learned about that.

Louise Chambers [00:39:59] Well, it is absolutely remarkable. Martins aren't the longest distance migrant in North America. I think there's a shorebird or two that claims that honor. But the fact that they can go from, say, the Yucatan Peninsula home to Erie, PA, where they nest, in something like two weeks, is just kind of mind-boggling.

Louise Chambers [00:40:28] And that wasn't known until recently. When you put bands on a bird, they can be useful if the bird is recovered or spotted again. But you don't know where it's been between when you put the band on it and when you recovered it. The data loggers or geolocators that they started using about 2007 or so, give us a lot more information.

Louise Chambers [00:40:55] They measure daylight and we did that here in Pennsylvania, I mean, in Texas, (my mind is both places) in about 2009. We had this team of researchers come down to help us put the tags on some of our birds. They needed more data. And the Pennsylvania birds that they'd done for a couple of years, they weren't quite getting the returns that they were happy with. You want to get a 50% return of those birds wearing the tags, 50% or better. Or maybe that project will get discontinued because it may be impacting the bird survival.

Louise Chambers [00:41:37] Well, when we did it here, we had to go out at night after the birds were in and carefully plug selected cavities where we knew the age of the parents, how many babies and how old and so on. And then very early the next morning, you had to retrieve, you had to remove the plugs, remove the birds, put them in little bags for processing. So we were going up and down these ladders like ninjas in the dark to try to get the birds we wanted without disturbing the other birds.

Louise Chambers [00:42:09] And our tagging team sat there putting these tiny little harnesses on the martins. They were tied and glued in place, so this little tag fits on them like a kid's backpack and the harness loops go around their legs so it won't impact their flying. And we were able to get all that done and the birds released and they went right back to feeding their babies.

Louise Chambers [00:42:31] And then next spring we had to find those birds. And that's one of the reasons you put it on a bird at a nesting colony, because it is likely to return. And you have to look for what was about the size and shape color of a grain of rice on a bird's back.

Louise Chambers [00:42:48] But we were able to get more than 50% of our birds back. And that helped get that project moved forward. And they were able to then start doing it in numerous other states and provinces.

Louise Chambers [00:43:02] And the technology has continued to advance and now they have little GPS tags. You still have to catch the bird and get the tag off it, but it records a lot more data and is a lot more precise about the location of where the bird has been.

Louise Chambers [00:43:17] But with either of those methods, you create a map when it's downloaded into a computer, a map of its journey day by day, where it stopped and spent time where it traveled more quickly. So it's just very exciting new technology. And it was first used in songbirds on martins and, now it's used on many other species as well. So the purple martins were kind of ambassadors or test pilots for that very valuable research program.

Louise Chambers [00:43:46] And it's, it's still leading to more good things. Now they're using something called Motus towers that, like a cell phone pings off towers, these Motus towers get a ping from the GPS tags and they're getting, again, more precise locations. And for that, they don't have to capture the bird. It just pings the tower as the bird is traveling past it. So this is very new stuff. And they're finding where the martins roost in South America and just all kinds of good stuff from this.

David Todd [00:44:20] That is terrific. It's exciting to get a, a view of where these birds go when they're not in your, your martin house.

David Todd [00:44:32] So one of the things I've been intrigued with is, is as much as the the route of the migrations, but also the schedule, these migrations. And I'm wondering if you're seeing any changes over the course of your experience of the bird, about when martins arrive and when they leave. Any sort of seasonal changes there?

Louise Chambers [00:44:59] Actually, there are. And this is something that researchers are looking at with purple martins and with other bird species, too. A lot of our neotropical migrants have changed their, their migration timing. And we always said martins are the first neotropical bird to return to North America in the spring. And that's true because there are other swallows back a little sooner, such as tree swallows, but they are not neotropical migrants. Martins, though, are going down mostly to Brazil, to the Amazon and becoming jungle birds. It's very exciting.

Louise Chambers [00:45:39] They, they used to come back, say, to Florida, their first return location. It used to be mid-January or so. Now we're seeing the, typically, the first one will be reported before Christmas, before the end of December. So that's several weeks earlier. And it may be not a good thing because their return should be timed to sync with the best insect supply so they can feed, feed their nestlings and raise more nestlings. If the insect cycle, the plant cycle, and the bird return cycle are not all linked up together correctly, it may be something that negatively affects the birds.

Louise Chambers [00:46:21] And so, it's not just martins, it's other, other species too. And plants too - I've read a little - are blooming earlier and so on.

Louise Chambers [00:46:31] Departure, though, isn't so much affected. Except that martins migrate by age. The oldest birds head south first, complete their molt of feathers, and therefore they're the first to return and nest. But they always wait after they come back. And they don't form a form of nest and pair bond and lay eggs until it's the right time of year for good feeding.

Louise Chambers [00:46:57] In Arizona, for instance, they're nesting now in sync with the monsoons, which will give them an ample supply of insects. The younger birds that nest later go south later and return north later. So there's, that's a good thing. It means not all the martins are in the same place at the same time. So a weather event hopefully won't affect all of them unless it happens during the nesting season.

David Todd [00:47:24] Right. You know, one of the things that I think has been really intriguing about martins' migrations are these pretty spectacular pre-migratory roosts that we're fortunate to see in Texas and I guess elsewhere. But, but they're really pretty spectacular here in the state. And I was wondering if you could sort of describe what they're like, whether it's the sound, or the smell or just the cacophony of all those birds?

Louise Chambers [00:48:01] Well, they're, they're a spectacle, an absolute spectacle put on by Mother Nature. You know how people love to go and see the bats come out from under the bridge there in Austin? Well, the martin roost gatherings can be just as exciting, as impressive and can draw some good crowds. In fact, I know the roost in Austin of martins has been something that people really enjoy going out to watch, and the Travis County Audubon Group does public education and helps people learn what they're seeing.

Louise Chambers [00:48:37] So these, these roosts come at the end of the nesting season, once all the babies have fledged and they're independent of their parents, about ten, ten days to 14 days after they have flown. They've learned to feed themselves. The birds don't head south immediately. They go to what's called a pre-migratory roost. And it's a big, big gathering.

Louise Chambers [00:49:02] It's usually, often, but not always near water because that means lots of food. Sometimes the roost is right over water. Up in Erie, they roost in a cattail island in Lake Erie. Just, they, they sleep all night, just inches above the water, clinging to these cattails. And they come in by the thousands, 10,000, 50,000. And when you watch them all show up just around sunset, you have the beautiful orange and purple of the sky, and then you get this wonderful swirl of birds coming down like a tornado into their roost habitat, whether it's trees or the cattail island.

Louise Chambers [00:49:42] And there's a lot of noise, a lot of chatter. If you cup your ears while you're looking at roost, you'll hear what is described as hissing steam. That is very characteristic of a martin roost. So it's something to see and to listen to and just kind of awe-inspiring. And it's like watching fireworks, except it's birds and you don't want to stand right under them. You want to sit back and in a lawn chair or something and just enjoy the show.

Louise Chambers [00:50:11] They are all over Texas because we probably have more martins than any other state because of our size, and they'll stay at these roosts for anywhere from 2 to 6 weeks. What they're doing is fattening up for the trip south, and they're doing some molting, too. They'll lose a few feathers on each wing and then grow in new ones before they move on further south.

David Todd [00:50:38] That is so interesting. And like you say, just an amazing experience, to, to watch.

David Todd [00:50:46] So one of the ways that folks watch them is not just by being there at a roost site, but I understand that, that these flights, especially the emergences in the mornings, can even be seen on Doppler radar. Is that right?

Louise Chambers [00:51:04] Yes, it's, it's kind of fascinating. Well, I think a lot of this is fascinating, but the Doppler radar for finding roosts is amazing. And what they do is in the morning, all the martins are leaving at once and they're leaving in all directions at once. And the Doppler radar, which, and I'm not going to explain this well, because I'm not that savvy to the technology. The beam goes over the, over the surface. And as the martins leave, it shows up as almost like a rainstorm, but it looks more like a donut in red or yellow. And so if you get up at the right time of day and you go to your computer and you find some of these spots where you can look at weather radar, you can actually locate the general area where a roost is leaving in the morning. Then you can send a group out there to find them the night before and locate a martin roost and put it on the map.

Louise Chambers [00:52:07] There's, the PMCA, has a website where people record the roost locations and where they also report their scout arrivals every spring. And it's, they're live maps. So it's really fun to see what's going on. The roosts may stay in the location for years and years and years, or they may move after just a few years. They're very dynamic.

Louise Chambers [00:52:32] Yeah. Oh, so you've told me a little bit about these roosts, which I guess can involve tens, maybe hundreds of thousands of birds. Maybe this would be a chance to talk about something that's a little bit smaller scale, but maybe more intimate. And that's these relationships that purple martin landlords have with their, "their" birds, I guess.

Louise Chambers [00:53:00] Yeah.

David Todd [00:53:00] Quotes around "their". Can you talk to us a little bit about the shelter that modern landlords now provide and maybe how it's evolved from what the Chickasaw and the Choctaw might have done in years past?

Louise Chambers [00:53:17] Oh, sure.

Louise Chambers [00:53:18] Well, first I should mention that the landlords are in general a very dedicated group. There's a brotherhood and sisterhood of people who maybe learned from their grandparents about putting up martin homes or maybe discovered it on their own. But, the original martin home, the natural gourd, is still a really good martin home. They're lightweight. They'll last for years, if you keep them painted and we've got some that are 20, 30 years old. Grow your own. That makes them even less expensive. And you can customize them with various features, like a clean-out hatch where you can also observe the baby nestlings, or the baby birds, special entrances that will keep out starlings. And sometimes people build in little sunshades for the very hot weather.

Louise Chambers [00:54:12] But people like to use a really wide variety of homes, and the wooden boxes are still very popular. A lot of the Amish like to make their own, and they'll use wooden houses and gourds. You do have to paint those. And so some landlords like to go lower maintenance and will use lightweight metal houses and plastic gourds, which are the most recent newcomer to the martin house world. But they're very popular too.

Louise Chambers [00:54:41] And the birds will do well in any type of those houses, as long as they meet the minimum requirements of compartment size, entrance size and are pretty waterproof. And they have to be set out in the open in the sun because that's, martins want an open setting all around. So houses need to be ventilated and drained and opaque so they don't let any sunlight come in.

Louise Chambers [00:55:07] But landlords love to tinker. Someone's always coming up with a better mousetrap is, as we might say. And they share their ideas. Now that the the Internet kind of broke the martin world open from just mailed newsletters and word-of-mouth, to big, big communities that live online and share videos and plans and experiences and tell each other what they can do to take even better care of the martins in their backyards.

David Todd [00:55:40] Well, this is really intriguing. And, you know, maybe you can talk a little bit about how this community of martin landlords have developed some, some sort of tricks of the trade. I think that you mentioned just in passing the starling excluders. Maybe you can tell us a little bit about those and how those were developed and what they do.

Louise Chambers [00:56:11] Well, in my opinion, that has been one of the greatest aids to landlords and martins that's come along since someone hung up a martin gourd. That idea, well, first I should back up just a little and explain that there are two non-native bird species in North America - the house sparrow and the European starling. Both were brought over from Europe and released here because they thought they would be good, good residents of our country. But it proved out to be an ecological disaster.

Louise Chambers [00:56:48] Nowadays, we work hard to keep non-native species, be they a fungus or an insect or a snake to keep them out of North America, like the pythons that are eating everything in the Everglades these days. We know that nature's puzzle works best when you keep all the pieces in that puzzle and don't add new ones.

Louise Chambers [00:57:11] So house sparrows are a little bit smaller than martins. They have a very strong beak. They will break eggs, peck nestlings, and throw them out, and fight with the adult martins to take over their nest cavities.

Louise Chambers [00:57:24] Starlings, unfortunately, weigh more than a martin and have a long, powerful beak. So they will kill adult martins to take, take over a cavity and of course, throw out eggs and babies.

Louise Chambers [00:57:37] Keeping starlings out is what was achieved by using these new entrance holes that were originally called a starling-resistant entrance hole, or SREH. And it was a landlord, a wonderful mad inventor type up in New Brunswick, named Charlie McEwen, who came up with the idea of a half-moon hole to keep starlings out. He kind of studied the anatomy of starlings and martins, and when he compared them, he could see that with the long legs that the starling has, compared to the short legs that a martin has, if he made his hole shorter - instead of a two-inch round, he brought it down to about an inch and a quarter - starlings couldn't limbo in there, but martins could.

Louise Chambers [00:58:25] So, he tested them and then he shared the idea with the PMCA. We tested it, shared it with the landlord community, and it really took off because it worked so well. If you could keep the starlings out, you still had to work to keep house sparrows out, but you no longer had to worry that one starling was going to go in there and kill half a dozen of your adult martins, which they can and will do.

Louise Chambers [00:58:51] And then further, those landlords that like to tinker, further refined this. And today there's about a dozen variations, all based on that original crescent-hole height of one and 3/16th inches. And one of the most successful variations is called an excluder. The man who came up with that was from Pennsylvania. His name is John or "Duke"

Snyder. And it looks like a telephone receiver on an old-fashioned telephone or like a, a Batman signal. It also has that right height and it has a few other features that he added to it to help keep starlings out.

Louise Chambers [00:59:32] Both of those entrances are really successful and are used on all of the manufactured gourds and houses these days. So that's a huge, huge aid to landlords and to martins.

David Todd [00:59:47] That is terrific. I love this, this sort of better-mousetrap culture that's grown up around the martin landlords.

David Todd [00:59:57] So, that sort of excluder technology strategy seems to help with the aerial predators, the starlings. What do you do if you're a martin landlord and you have raccoons, or ratsnakes, or other terrestrial predators that may be a problem. Are there tactics that you can use to reduce the harm to the martins?

Louise Chambers [01:00:28] Well, there, there sure are. And I always kind of say that a martin house or a gourd system is only as good as the pole you put it on, which means don't use a little skinny piece of pipe. Use something sturdy. Use a three-inch diameter pole. A lot of them nowadays are square and aluminum, the commercial ones. But you also don't ever want to put up a martin house or any kind of bird house without putting a baffle on the pole. A baffle is meant to stop raccoons.

Louise Chambers [01:01:01] And the original design a lot of these are based on comes from the bluebird community, from a man that figured out how to make a baffle out of stovepipe, quarter-inch chicken wire at the top, mounted right below the house and mounted so it wobbles. If a raccoon tries to climb it, it wiggles and they just can't get a good enough grip on it to get up there. And there's specifications such as the size and placement and plans for those are available on the internet. So you just look up baffle for bluebird house and martin house.

Louise Chambers [01:01:36] There's a lot of variations there too. Some of them are PVC pipe, but you have to keep the raccoons out because raccoons are amazing climbers. People don't believe it if they haven't seen it. But a landlord I know didn't put them on because he didn't like the way they looked. He went away on a trip and he came back and he had hardly any martins left, and he was wondering about it, standing on his deck, when he saw a raccoon come out of the woods and just zip up that pole so fast, his, the landlord's mouth was hanging open.

Louise Chambers [01:02:07] Well, he did save what he had left by putting baffles on, but he didn't have to lose them to begin with. We all live where there are probably raccoons around, and a lot of us, especially in Texas, have a good, healthy population of ratsnakes around and they're very beneficial critters. We don't want people to think they need to dispatch them. They do good things. They control some rodents for us. But it being Texas, we have some really big ones here and they are also excellent, excellent climbers. And they can clean out a martin house and then leave. And you'll never know that they were there. You'll just wonder, why don't I have any martins this year?

Louise Chambers [01:02:48] So, the baffle that stops raccoons will not necessarily stop large rat snakes. So some people add a little puff of bird netting right above the baffle, but the trick there is that the snake gets entangled and can't get loose and it's important to release them immediately or they will die because if they're in the sun, they can't control their body

temperature and they'll, you'll lose them quickly. So it's easy to cut them loose. I've done it many times and take them to the nearest safe shelter away from your martin system and release them.

Louise Chambers [01:03:23] And of course, the landlord tinkerers who always go one better have figured out a way to hook up a fence charger to your poles, and the little zap of electricity won't harm a raccoon or a snake, but it will stop them from climbing up and raiding your pole so if people can set that up with a fence charger and little underground cable in a PVC pipe. That's what we've done at our rural location. And it has been a big, big help. We never have to worry that a snake will get caught in the net and die, and we don't have to worry that our colony will get wiped out. So there's always a way to improve what you've got out there. But the first step is to put a baffle on your pole and figure out, "Do I need to do something about snakes too?", depending on your location.

David Todd [01:04:13] Okay. Well, so you've mentioned some of the things that landlords do, and very creative things that they do to protect the martins. Now, I think one of the rivals that you mentioned, the, the English house sparrow, is maybe difficult to exclude with one of the starling devices. And my understanding is that landlords revert to lethal means. And I was wondering if you could talk about that, both how it's done and then also just the, the sort of ethics of it, because I know that purple martin landlords are bird lovers, and yet they're in this situation where they have to do something they're probably reluctant to do.

Louise Chambers [01:05:11] Well, it is a good thing to talk about, because I think before people decide to spend a lot of money on a martin system, they want to know the ins and outs of what are my requirements, what am I going to need to do to build a healthy martin colony? And keeping the house sparrows under control is very, very important.

Louise Chambers [01:05:33] I know at one of the public sites I tend here at a, at the local botanical gardens, I had one house sparrow, male, that was just, I don't know if he was super smart, but I could not trap him. I have little live capture traps that go into, inside the housing unit. While I was trying and trying to catch him, he pecked and threw out 55 martin eggs. So I was really unhappy that I couldn't trap him. And when I did trap him, of course, I humanely dispatched him because you could take him across town and release him, but he'd beat you back to that site.

Louise Chambers [01:06:11] And there's really nowhere to release a house sparrow that's not going to harm some of our native birds. Bluebirds have really suffered since the introduction of house sparrows, and so have any other of our small cavity nesters like chickadees and titmice, some of our fly catchers, and tree swallows.

Louise Chambers [01:06:34] So, a healthy colony will be free of house sparrows and starlings, both. And that means you do have to learn how to humanely euthanize, which is very simple, very quick, and painless.

Louise Chambers [01:06:52] [Pardon me. I had to cough there.]

Louise Chambers [01:06:54] The quickest way to do it is just called, "cervical dislocation", which means giving it a strong, strong pull on one hand, one hand on the rib cage and one hand on the skull and giving a strong pull. And it really is quick. That's what I prefer to do.

Louise Chambers [01:07:18] [Cough.]

Louise Chambers [01:07:18] Some landlords like to...

Louise Chambers [01:07:21] [Excuse me.]

Louise Chambers [01:07:23] Use a pellet rifle to dispatch them. It's, of course, legal to shoot or trap, either, because they're not native species and therefore not protected.

David Todd [01:07:36] Okay.

David Todd [01:07:38] [Do you need to take a drink of water? I don't.

Louise Chambers [01:07:41] [I'm working on that right now.].

David Todd [01:07:43] [Okay. No rush. No rush.]

Louise Chambers [01:07:47] [Actually, iced coffee.]

David Todd [01:07:49] [Oh, all right.]

Louise Chambers [01:07:51] [Okay, I think that's under control. Must have been some of that dust.].

David Todd [01:07:55] [Yeah, that's right.]

David Todd [01:07:57] Well, so while we're talking about birds, I understand that one of the challenges for landlords in recent years has been this, you know, rise of of the Cooper's hawk. And I understand that that owls have been a problem as well. But the Cooper's hawks have really been a worry. Can you explain what's going on there and what the challenge is?

Louise Chambers [01:08:26] Well, um, if you look at a range map for, say, purple martins and for great horned owls, there's great horned owls everywhere in places where there are no martins and are martins. So all of us with a martin colony live near a great horned owl, whether we realize it or not. That's not to say your colony is going to be attacked, but you should be aware of the possibility, or, and if it's not great horned owls, it might be barred owls that typically live in woodsy, maybe swampy locations.

Louise Chambers [01:09:08] Cooper's Hawks, where we are in south Texas, are not.

Louise Chambers [01:09:15] [Excuse me. I'm going to take a quick break. Okay?

David Todd [01:09:18] [Oh, absolutely. Not a problem.].

Louise Chambers [01:09:39] [Okay. Armed with two things of water.]

David Todd [01:09:43] [Okay. Well, this is a marathon of talking, so I totally understand if you need a break.]

Louise Chambers [01:09:48] [Well, I'm, I'm, I'm a comfortable talker.]

Louise Chambers [01:09:52] Let's back up a little and talk about Cooper's hawks.

David Todd [01:09:56] Yes, please.

Louise Chambers [01:09:58] Predation from hawks, mostly Cooper's hawks and possibly sharp-shinned hawks or American kestrels, is part of nature, and it's going to happen. But in some cases, landlords will find their colonies under heavy, heavy pressure from Cooper's hawks, particularly if they have some nesting nearby, or the others, the kestrels, sharp-shinned hawks. But Cooper's hawks are amazing fliers and birds are their normal, regular prey. They're, they're always been considered a woodland hawk, and they're very agile and can zig and zag and fly between branches and things very swiftly.

Louise Chambers [01:10:45] But when they learn about a martin colony, which is basically a McFeeder for them, you know, just full of birds, just the right size to dine on, they may focus on that as a source of food. And if that happens, the landlord may really suffer because it's very challenging to deal with Cooper's hawks.

Louise Chambers [01:11:09] They aren't in all areas. And here in, say, where I am in Corpus Christi, there are not many nesting pairs at all. Mostly we'll see them here during spring migration and over the winter months. And I know that they're here in the winter because there will be dove carcasses falling from the trees, usually the white-winged doves - that's a very popular prey for Cooper's hawks. Martins are a little smaller. But if you have them and they're nesting near your colony, you may want to take some steps to protect your martins if you're coming under a lot of attacks.

Louise Chambers [01:11:46] People have found that there is hunting decoys in the size and shape of a mourning dove. Some of them even have flapping wings. You could put some of those up on, say, maybe tall bamboo stakes around the perimeter of your colony to distract the hawks before they get too close to the martins. You can also put up decoys of purple martins. There are some life-size ones that are inexpensive: put those also around the outer perimeter of your colony, not in the center where your real birds are, but away.

Louise Chambers [01:12:19] You can make sure that you trim trees. You may want to say raise the canopy on oak trees in your yard. If that's too close to where the housing is, the bird, the hawk, can ambush them from those trees. So try to create more clearer areas where the martins can spot a predator that's coming and get safely into their housing or up into the air before the hawk is too close.

Louise Chambers [01:12:46] I know one landlord actually created a slalom course to slow the hawk down. He put up tall stakes with flags on top of them, the flappy plastic triangular flags that you see at a car lot. He put those up. He'd observed the hawk use the same flight approach time after time. So he set the stakes and flags up in such a way that the martins had time to get away while the Cooper's was zig-zagging around this slalom course of tall poles.

Louise Chambers [01:13:18] Some landlords will put some kind of home-made caging wire mesh around the outside of houses and gourds so that the martins are out of reach of the hawks. And some landlords will be outside in the evening when the martins are coming in, they'll arm themselves with one of those big boat horns, it's a can of compressed air with a honker on top of it, and they add their vigilant eyes to the martins'. And if they see the hawk, they can honk that thing and alert all the martins and perhaps startle the hawk.

Louise Chambers [01:13:53] I know one guy in the Dallas area who was smart enough, he took a martin decoy, put a magnet on it, and had a second magnet that was attached to something that made a noise. So when the hawk grabbed the decoy and separated the magnets, the noise device went off with quite a loud bray and usually made the hawk drop the decoy and get the heck out of Dodge because those large noises were unpleasant.

Louise Chambers [01:14:23] So all of that's work, but they can all, they're are all techniques that a landlord can use if they need to help protect their martins from Cooper's hawks.

David Todd [01:14:35] That is amazing. I love the, this sort of inventive energy that goes into this challenge, and, and I guess the frustration when you've got two protected species, the Cooper's hawk and the purple martins. And so you have to, I guess, figure out these ways of discouraging what their natural instincts are.

Louise Chambers [01:15:04] Exactly. And I'm sure there's, people will keep coming up with things that really do help, don't hurt anybody. But the landlords, you're right, they're an extremely inventive group. And I don't know what the key to that is. Is it that a lot of them are country people? Well, here in the south, we have a lot of city folks who are martin landlords, too. So I don't know what the key is, but maybe it's the fact that they share ideas and keep building on each other's successes or tweaking the failures to come up with something a little bit better.

David Todd [01:15:44] Yeah, well, I wish them the best - more progress.

David Todd [01:15:50] Now, I think that some of these inventive minds have kind of put their creative talents to protecting martins from feather mites. Why is that a concern? And maybe you can tell us a little bit about mites and how they affect these birds.

Louise Chambers [01:16:10] Well, there's a lot of different kinds of mites, and all birds have them. Some of them are very specialized. For instance, there's nasal mites that live in the nasal cavities and nowhere else. There are some that chew on feathers. And actually the feather mites are not such a big problem. The martins have those. They have lice. They have fleas. It all sounds yucky, but they've always had them and they don't usually caused much of a problem. They, you know, if a parasite kills its host, its killed its food supply. So those things are usually in balance.

Louise Chambers [01:16:52] But the type of mite that can become a problem with martins is a nest mite, and I can't remember their wonderful Latin name, but, there are a lot of different types of ectoparasites besides all the different types of mites, the fleas. And there's blow flies which we don't have down here. The nest mites, because of martins being colonial masters and cavity nesters, that's where the problem comes in. There's normal numbers of nest mites that won't cause any real big problems: they take blood meals off the nestling birds and the adult birds.

Louise Chambers [01:17:39] If their population explodes: maybe it's the perfect weather or the perfect storm weather for nest mites. It's hot, it's humid, and there's all this debris in the nest. And during the day, they can hide down in that, burrow down in there. And the martins can't, the adult martins, can't pick them off and eat them to get rid of them. At night, they come up and feed on those birds.

Louise Chambers [01:18:03] Their numbers can go sky high. And as one nest fledges, as the babies are mature, they fly away, their parents fly away, all the mites from those empty nest can pour into the few remaining nests, to the point where a gourd that looked white one day looks gray the next because it's just covered with mites. I've literally seen that where it's gray inside and out.

Louise Chambers [01:18:27] And you don't want the baby martins in there. They will lose so much blood, they become anemic. They may jump out to try to get away from the itchy heck that is a gourd-full of nest mites. The parents may refuse to land and feed them, so landlords need to keep an eye on that, especially here in the South because of our weather.

Louise Chambers [01:18:48] And if they see a bad situation with nest mites, there's a few remedies they can try. None of them is perfect, but they're better than not doing anything. If you're using plastic gourds, you can take an identical empty gourd, put some nest material, dried pine straw usually, in it, move the babies into the clean one, take down the buggy one, and put the clean, refilled one in its place. You can just take a paper towel and wet it with some rubbing alcohol and wipe down a lot of the mites that you see.

Louise Chambers [01:19:21] In a house, you can't replace one room in a house, but you could take out the babies, put them in a covered container, clean out all the nest material, wipe everything down with that paper towel full of rubbing alcohol and then put in clean material. But of course, the mites will go compartment to compartment, so you're probably going to have to clean the whole house to physically remove those mites.

Louise Chambers [01:19:47] There is not any pesticide that's legal for use in a wild bird nest and nothing has really been tested because it's not legal. Companies aren't going to put the money and time into testing a pesticide. Regardless, some landlords use a very small amount of 5% Sevin Dust, which is carbaryl, under the nest material, which will knock down the mites very quickly.

Louise Chambers [01:20:13] But its long-term safety isn't really known. And I know that some researchers are looking into this and it's used, carbaryl is used, in poultry farm operations and so on. But they're testing, so far, shows that if it's, if it's around the poultry house, if it's, you know, dusted in the house and so on, it usually works, it works its way into every part of that bird's system, eventually, into their blood and skin and so on.

Louise Chambers [01:20:47] So, if you've got bad mites, you've got to control them. But I wouldn't want to routinely expose the baby birds to something that we were not sure of its long-term safety.

David Todd [01:21:02] Right, right. Gosh, what a, what a puzzle.

Louise Chambers [01:21:06] A dilemma. Yeah.

David Todd [01:21:07] Yeah. Well, so something else that I understand is, can be, a real challenge for landlords, and, of course, the martins in particular, is just the kind of extreme weather that we can sometimes get where there just isn't enough food naturally occurring for the martins to prey on. And so I hear that these ever-resourceful landlords have found ways to feed these aerial insectivores, which I think is just stunning. And maybe you can tell us more about what that involves.

Louise Chambers [01:21:45] Yeah, it is pretty remarkable. And I remember the first few landlords to kind of fine-tune a procedure for feeding their martins and how they promoted it. The first that I remember was a landlord in Indiana, and I don't remember his name, but there was cold weather and it was going to continue cold, too cold for flying insects, maybe in the low forties or something like that. And it was going to continue for more than three or four days, which four or five days was the cut-off point where adult martins will starve to death with no food.

Louise Chambers [01:22:24] And his martins were sitting, huddled out on a perch. It was sunny but cold. And he just said to himself, "My martins aren't going to die." And he went off to a pet store or a feed store, and he bought a few hundred mealworms, and he got out his slingshot and he turned those mealworms into flying insects. He kept shooting mealworms past the martins, not at the martins, but past them.

Louise Chambers [01:22:47] And he could see that they were following these little things, flying through the air. And eventually one of the martins sallied out, grabbed the mealworm, went back to the perch. It ate the mealworm.

Louise Chambers [01:23:00] Well, he kept it up, and pretty soon all of his martins were darting out and grabbing the mealworms. He slingshot it up for them, and he saved his martins. He kept feeding them that way until the weather broke. And, you know, you wouldn't feed them all day long. He might feed them two or three times a day. It kept them alive.

Louise Chambers [01:23:20] And so, that was an innovation. We all hated when killing weather came and it was going to kill the adults or kill the babies. But nobody had a way to overcome it until now.

Louise Chambers [01:23:33] And then another landlord, this, this man was in Illinois, he was very inventive. And he trained his martins to come to a little pan full of insects that he put up on a stepladder near the housing. And he would ring a bell every time he put the insects out there and they learned to associate the bell with feeding. And so when he had bad weather, they would, they would get fed. He kept feeding them through good weather because he wanted them to remember about it. So when they had lots of babies and were needing more food, he would daily put out some worms and he also (mealworms), and he also started offering them little bits of scrambled egg, which is pure protein and eggs turn into birds. So that was a good food choice, too.

Louise Chambers [01:24:20] And those two stories just kind of spread, and people started trying it in their own backyards. And then one spring, the PMCA, it was late May and we had a freeze. We had a lot of martins back and there was no food. We got some mealworms, we got those slingshots out and we went down to the martin houses and started slingshotting martins up there. And eventually, yeah, they caught on, and they learned how to eat the mealworms.

Louise Chambers [01:24:50] We even put up a special tray feeder that went up and down a pole with a rope like a flagpole. And we could put mealworms in all of those trays and we'd load them up. And the martins, they watch each other, and one does something, pretty soon the others are trying it. They were all coming and just scarfing down mealworms, the only food available.

Louise Chambers [01:25:10] And we ran out of mealworms and it was a weekend. We couldn't get any more shipped to us by FedEx. We couldn't get any at the local pet store. So we said, "Well, we'll try the scrambled egg." And we started scrambling eggs in the office microwave and cutting them up into little worm-size shaped pieces. And the martins weren't touching them. They were sitting on the shingle roof in the back of the office roof because it was a little warmer there. The shingles were dark and absorbed some sunlight. So we started tossing handfuls of the little egg worms up there around the martins. And as one of those little pieces rolled down the roof, maybe it looked alive, like a mealworm, and a martin dived on it and ate it, and pretty soon they were all gorging on scrambled egg. We couldn't scramble them fast enough.

Louise Chambers [01:25:59] One martin saw, another martin wearing a yellow leg band and tried to eat the leg band. I was carrying out a big tray full of egg pieces and a desperate bird just skidded through the eggs on my tray. It was going to get there first and get fed. They knew they were on the verge of starvation, and so they overcame their normal fear of people to get their eggs. And we got them through the bad week in that way.

Louise Chambers [01:26:23] And it's not an ideal food long-term, especially for babies. It will turn their poop very liquid after a few days. But in an emergency, we were mighty glad that we knew to try the eggs. And we also now all keep big, big bags of mealworms and crickets in our freezers for emergencies.

David Todd [01:26:46] You know, who knows? You may need it for an appetizer before the next cocktail party or something.

David Todd [01:26:54] Well, you know, it sounds like this supplemental feeding is a great plan B when the weather turns foul. And I know that here in Texas, we've had a couple of bouts of pretty extreme weather, the, the Uri storm of last February, 2021, this extended, really deep freeze. And then this summer, just I think here in Austin, we've had 55 or more days of 100-plus degree temperatures. And, and I'm wondering how you, how you cope with this and whether you see any sort of trends here for the martin that we should be aware of.

Louise Chambers [01:27:49] Well, both of those were just horrible events, winter storm Uri and this year's drought and heat. Of the two, I think the drought is more harmful because you can't feed, you cannot out-feed a drought. You know, this is so long-term. We, my husband has been putting out hundreds of mealworms and crickets every day. And there're feeding trays that they know to use. And they're shuttling those into the nestlings as fast as they can.

Louise Chambers [01:28:22] But, and this is our city backyard. It's not the best food source. It's not the worst. We have maybe three dozen pairs of martins, two dozen, three dozen pairs. So we're supplying as much food as we can for them.

Louise Chambers [01:28:37] But we've lost, I think, more nestlings this year than I've ever seen. A lot of them are, I'll know that this baby is 26 days old, it should be ready to fly. But I weigh it and it weighs what a 16-day old should weigh. I mean, they're, they're going to die when they're that thin.

Louise Chambers [01:28:55] You, some of the sites that are in better habitat, like at are botanical gardens here, those birds are doing a lot better because they've got abundant natural habitat and water all around them.

Louise Chambers [01:29:09] So, I hate droughts more than I hate the winter freeze. But the winter freeze was truly awful. It killed thousands and thousands of martins in Texas, in Louisiana and in Alabama. We, online reports from landlords that shared on social media - 40, 50, 60 martins dead, you know, in their housing.

Louise Chambers [01:29:33] It, you can feed just a few birds through weather like that. And I know one year we got a martin through five days in the twenties here because we put hand warmers in his nest every afternoon and hid them under the nest material. And we dumped a load of food in there twice a day with a little cup, and he would eat the food. But this year, the freeze lasted a little too long. And we had so many martins back at that time of year that not all landlords know about feeding them or know about how to warm their housing. And it was, it was pretty bad.

Louise Chambers [01:30:10] What saved us. And, of course, it killed all kinds of birds and bats and wildlife. That was truly heartbreaking. I worried so much about the hummingbirds and tried to put up heated hummingbird feeders and so on. And I know other people did that, too.

Louise Chambers [01:30:29] Yeah, these weather extremes are very hard, very hard for the birds that eat insects, and hard for the landlords who are trying to get them through it. You just have to do the best you can and kind of think on your feet.

Louise Chambers [01:30:43] If when it's really hot, some people are putting shades over the housing. They're putting little ice packs in a little pouch under the housing to cool it, without coming into contact with the babies. But that doesn't overcome the fact that there's just not enough insects to feed the nestlings and get them out of the nest intact.

Louise Chambers [01:31:04] But that is why martins lay 4 to 6 eggs. A martin only has to replace itself once in its lifetime to keep the population stable. But of course, in Texas, we're doing pretty well overall. It's other places that are suffering a little more.

David Todd [01:31:22] You know, you mentioned that you also keep an eye on the fate of other birds, hummingbirds and so on, during these trying times. And I was wondering if you could talk a little bit about what you've learned from purple martins that can be applied to other birds that are reliant on people. And I'm thinking of the chimney swift, or I think earlier you were talking about the bluebird, you know, where there're these kind of generations of folks that have learned how to help creatures that are, that are in need. And maybe you can talk a little bit about the, you know, what these other birds might have taught you for dealing with martins, or vice versa.

Louise Chambers [01:32:15] Mm hmm. Well, the first thing that I think of is I think we have at least 60 species of birds in North America that are cavity-nesters, that need a cavity to nest in, and most of them can't create their own cavity. Only woodpeckers can do that. So I think it would be really enjoyable if more people researched what cavity-nesters live in my area. What could I attract to a nest box or a gourd? Because in my city backyard here in Corpus, we have had brown-crested flycatchers nest several times and that's a pretty exciting treat to have in a city backyard.

Louise Chambers [01:32:58] And when you have a bird box with babies in it, you can show them to little kids. And if you want to get kids interested in nature, nothing will hook them quicker than showing them eggs and baby birds. They just are really drawn to that. And it

doesn't have to be anything too big and fancy and expensive. A bluebird box will host titmice, chickadees, bluebirds. The flycatchers need a slightly bigger hole. So the woodpeckers often help us with that. And we've put up nest boxes for woodpeckers too. And in the winter, sometimes screech owls roost in them, which is really exciting.

Louise Chambers [01:33:38] So, if people knew how much fun it is to help the birds with just a simple nest box, I think more people would do that.

Louise Chambers [01:33:47] They'd put up a good birdbath. Not all birds come to feeders, but they all need water. And sometimes, if you add a bird bath, you don't know what you're going to see. We've had an enormously long coach whip drinking at ours. We've had bobcats drinking at it at our sight in the country. It's really exciting to see what comes along.

Louise Chambers [01:34:07] And you just have to put something out there in nature that helps them, that they need, whether it's water or a nest box or a source of food.

Louise Chambers [01:34:15] Now, chimney swifts, chimney swifts are really special. I think they are even, in some respects, in a more precarious situation than purple martins because they truly need chimneys to nest in anymore in this country, in this continent. They used to nest in hollow, dead trees. Well, there aren't too many of those around anymore, are there?

Louise Chambers [01:34:40] And if you walk around your neighborhood and look, unfortunately, most people have covered their chimneys. And if you open your chimney, you could very easily get one pair of chimney swifts to nest in there. And you'll hear their voices talk a little bit in the middle of the night. If you get up for a drink of water, you might hear the parents or the babies chattering away. They don't do a bit of harm. I think people confuse them with bats and are nervous about them, but they're pretty delightful. And when you see them drop into that chimney, they do it tail first with their wings up over their head, fluttering in the air. They're amazing birds and they eat probably more mosquitos than a purple martin. And they need our help.

Louise Chambers [01:35:24] So, I think a lot more people should open their chimneys. They're only going to be there spring and summer. And then you can have your chimney cleaned and use it for fires. Their nests are tiny, and I think more people should make friends with chimney swifts. You can put up nesting towers for them too, but the simplest thing to do is just uncover your chimney. And there's a great website for them with lots of information.

Louise Chambers [01:35:49] They're cool birds.

David Todd [01:35:52] You know, you've mentioned that one of the appealing things to these nest boxes is that they're great windows on the natural world. They're great devices for teaching. And I know that you're an avid teacher and that you've been active at the South Texas Botanical Gardens and Nature Center and also at summer nature camps. And I'm curious what kind of experiences you've had there teaching about purple martins, and what sort of reaction you've gotten from the visitors, and kids in particular, that that you might have worked with?

Louise Chambers [01:36:33] Oh, that, that is so much fun. And it's one of the highlights of my summer. The botanical gardens here is a wonderful place. They have, I forget how many hundred acres, but they have, you know, orchid houses and all of this sort of stuff and planned gardens and they've got natural areas, they've got a lot of water, unless it's a drought. And so

every summer they have a series of nature camps and kids of different ages come. And different camps have a different focus. There's one on birds, one on insects and so on, one on photography.

Louise Chambers [01:37:08] And when I get to talk to the campers, well, we'll talk a little bit about martins. I'll show them some gourds and a little martin stuffed animal that sings the martin's song. And then we'll go out and I'll lower a house or a gourd rack. And usually I can show them eggs, I can show them little pink babies and some older babies and some still older babies. And the kids absolutely love it. They want to touch them. They want to hold them. I don't let them hold them because if somebody drops a baby or then steps on it, that would not be a happy event. But because the babies are young enough to not get excited and try to fly away, they can each gently touch a baby on the back.

Louise Chambers [01:37:55] And how often does any little kid get to do that? It's special for them.

Louise Chambers [01:38:00] And I can show them how their feathers grow, how old they are when their eyes open and look at their ears, just a little opening. And the minute you pick up a baby martin, it poops. So that's another part of the program. I can pick up those little sacs: they're called fecal sacs. Your fingers don't even get dirty. They're like a little kind of a gelatinous baggie with poop in it. And the parents carry it away and drop it. Or when the babies are really tiny, they eat them because there's a lot of nutrients still in there before the babies have very efficient digestive tracts. So I show them the bird poop and we talk about that too, and the fact that the parents might eat the poop and that they feed the babies live bugs.

Louise Chambers [01:38:43] And the kids react with a "Wow" to everything. And that makes it fun for me. And I just love seeing them get excited about nature.

David Todd [01:38:54] Well, it's, I can understand why the kids give you a good reception. You're a good teacher.

David Todd [01:39:03] Well, you, and you've been so generous with today's lesson. I see where we're going a little long on your time, and I thought perhaps we could just ask you one open-ended question, if there might be something you'd like to add that maybe we gave short shrift to, we skipped over earlier, something that you think you'd like to mention?

Louise Chambers [01:39:28] Oh, gosh. I appreciate this opportunity to talk about martins and conservation so much. I mean, this is a really important topic for everyone to be a little more aware of. If we take better care of our planet, it'll be kinder to us is one way of looking at it. And appreciating what we have outside. And we have so much here in Texas. We've got an amazing number of bird species and just get outside and enjoy them. Plants some good native plants that will support insects and hummingbirds and butterflies. And then put up a few nest boxes. And if you've got a good location, maybe put up some martin gourds. You won't be sorry. It, it's the way to the future.

Louise Chambers [01:40:26] And be sure to share it with kids and with grandkids. And you will stay young at heart when you share it with younger kids, especially. It's wonderful.

Louise Chambers [01:40:38] And wear some good chigger spray and go for it!

David Todd [01:40:45] Well, I'm so glad that that you've clearly made a practice of sharing this not just with us, but with lots of people. So thank you so much, Louise. And I hope that our paths cross. I would love to get to take one of your visits to a martin house in person and see the poop sacs. And, you know, I'm, I'm still a little boy at heart, and that just really appeals to me.

Louise Chambers [01:41:20] Oh, well, thank you, David. This has been really enjoyable and I appreciate what you're doing, this project very much. It's right on target.

Louise Chambers [01:41:30] Well, it wouldn't work without people like you. So thank you very much for participating.

Louise Chambers [01:41:38] I guess I can let you go in just a moment. I'm going to hit a button here that says, "stop". And, and so I may take this opportunity to say, "thank you". And I hope that, you know, this was a good experience for you.

Louise Chambers [01:41:57] I've enjoyed it immensely. David, thank you so much.

David Todd [01:42:02] Well, likewise.