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David Todd [00:00:02] All right. Well, good afternoon. David Todd here with Andy Balinsky. And I have the privilege of interviewing him.

David Todd [00:00:14] And, with his permission, we proposed to record the interview for research and educational work on behalf of the Conservation History Association of Texas. And for a book and a website for Texas A&M University Press and for archive at the Briscoe Center for American History at the University of Texas in Austin. And we want to stress that he would have rights to use the recording as he sees fit. That is his prerogative. It Is his recording.

David Todd [00:00:48] So, with that little intro, would that be okay with you?

Andy Balinsky [00:00:54] Yeah, that's fine.

David Todd [00:00:56] Super. Okay. Well, let's get started then.

David Todd [00:00:59] So, today is December 8th, 2022. It is Thursday and it's about 3:25 Central Time. My name is David Todd and I'm representing the Conservation History Association of Texas, and I am here in Austin. We are fortunate to be talking to Andy, who is also in Austin. But this is a remote interview.

David Todd [00:01:32] Mr. Balinsky is a network security engineer. He's worked at Cisco and for the US Air Force, the University of Maryland, GW Instruments and at Harvard's Atmospheric Research Project.

David Todd [00:01:49] As a volunteer, he has had a long tenure in the conservation field. He has served, for instance, as board chair of the Lone Star Chapter of the Sierra Club and with his wife Julia. He's also invested a lot of time in caring for purple martins, serving as the steward at the Hornsby Bend purple martin colony, since as early as 2003. And in the course of that tenure of maintaining some 90 nesting boards, he and Julia have also helped promote martins to the public at annual purple martin parties at Austin's big pre-migration roost site, reporting on some of those numbers at the roosts to Purple Martin Conservation Association's Project MartinRoost.

David Todd [00:02:45] Today we'll talk about Mr. Balinsky, whose life and career to date and especially focus on his work with purple martins. So that is the plan here. And I thought that a way to begin might be to ask you to tell us about your childhood and early years and if there might have been people or events in your life that influenced your interest in animals and birds and purple martins in particular.

Andy Balinsky [00:03:18] Yeah. Thanks. Thanks for having me on. Happy to be on. This is looking forward to this discussion.

Andy Balinsky [00:03:27] I come from a family of scientists. Both my mom and dad were research scientists and my grandfather on my father's side before that. Actually, he. So I probably got an interest from them. My grandfather, Boris Balinsky, was a, was a research scientist in Kiev during the Soviet times. And he, he became famous in the twenties for some research he did on embryology and developmental, early, early, early embryonic development. And he went on to write the first textbook of embryology, which was published around the world in, I think, five editions and three or four different languages.

Andy Balinsky [00:04:20] And I still occasionally run into somebody like an older vet who asked us within the last five years, "Oh, Balinsky, are you related to the guy who wrote the book that I studied when I was coming up?"

Andy Balinsky [00:04:32] And my mom, being a scientist, used to get that all the time. She'd she'd say her last name. And so he was very well known in the biology, embryology research field.

Andy Balinsky [00:04:46] But so, so nature, we always went on... And my dad was a zoologist and my mom was a biochemist. And they, so they were both employed at universities. And so nature was really something we grew up with.

Andy Balinsky [00:05:06] You know, from day one, we lived in Johannesburg, South Africa, and we used to spend at least one holiday a year going to the Kruger National Park and seeing the animals and birds there. Our vacations, most often, tended to be to natural and wild places.

Andy Balinsky [00:05:28] And so, so that's where kind of that came from. Just a general interest in, in, in nature.

Andy Balinsky [00:05:37] As far as birds specifically... I mean, I took a different course. My brother also got a PhD. But, basically, I come from a line of all PhDs. I'm the least educated member of my family with only a master's degree. My brother also got Earth Sciences, he got a PhD in the, in the sciences and teaching.

Andy Balinsky [00:05:59] So, but yeah, I went, as you mentioned, I pursued computer science. But, so, I've maintained my interest in nature as, as a non-professional, as a, as a hobby.

Andy Balinsky [00:06:15] We've got a birding streak, birdwatching streak in my family, dating back to my maternal grandfather, the other side of the family. He kind of hooked my dad on bird watching. And, and, and they kind of hooked me on it.

Andy Balinsky [00:06:35] So, I mean, at the time originally, like when my dad, we used to go on a lot of birding trips. I wasn't really interested in the, the bird, like the listing and keeping lists. My dad was obsessive about that, like wrote down all the different birds he saw in different places.

Andy Balinsky [00:06:51] But then my mom, when I left college and went to start my first job, my mom bought me a bird book, just kind of, you know, so you can identify the birds you

find. And that turned into, like, the challenge. Like, I really embraced the challenge of like, "Oh, what is that bird?" I've always just had my parents, my dad, tell me what birds these are. So identifying myself became kind of a challenge. So, anyway, I started keeping a life list of birds.

Andy Balinsky [00:07:18] And that's and then as far as martins in particular, that was a bit more of a fluke. We used to go to, my wife and I... I hooked her on birds, too. I mean, she was generally interested in nature and the outdoors. But as far as birds, focusing on birds, that was, yeah, I infected her with that bug.

Andy Balinsky [00:07:44] So we, Hornsby Bend is the most common place we go for birds. It's a local secondary wastewater treatment plant that has these big settling ponds that attract thousands of migrant ducks and ibises and all sorts of, all sorts of wintering and migrating birds.

Andy Balinsky [00:08:06] And somebody had set up a colony there of, for purple martins. I'm not sure the exact history of where that colony came from, but we ran into, we made friends of the person who was, who was taking care of the colony there. And then she needed some help. So, we helped her with some, we helped her with that. And then she, in very quick succession, adopted a couple of kids over, over a couple of years and, and became completely unable to do anything else with the colony.

Andy Balinsky [00:08:43] So, so, since we had more or less mentored under her for a year, just helping her out because it was fun, we basically took over managing the colony. And we've done, and that was in 2003, we took it over. And so, for the last almost 20 years, we've been managing that colony. We now manage a second colony. We'll probably talk a bit more about that. But anyway, so that's where that's where the interest came from, kind of a kind of a narrowing focus on, you know, like general interest to birds, to doing a lot of purple martin and stuff.

David Todd [00:09:21] Well, and it's interesting. It appears that, that your curiosity about birds may be genetic, or at least kind of formed in the bosom of your family. But I'm curious if you had any friends growing up, classmates, teachers, anybody like that that you might have birded with or enjoyed the same kind of outdoor pursuits?

Andy Balinsky [00:09:55] Growing up? Probably not so much. I mean, I don't know that I had friends who I mean, I didn't. I mainly did outdoor stuff with my family. I didn't really do it as part of any clubs at school or anything like that. But, yeah, I guess mainly just in, in .... My interest and like devotion to doing a lot of work with, and volunteer work for kind of blossomed in, in grad school.

Andy Balinsky [00:10:34] I was in the Washington, D.C. area during Earth Day in 1990, and there was a lot of, especially in Washington, D.C., there was a lot of media about, you know, threats, threats to the ecosystems of the planet and the wildlife and, and the atmosphere and all these, all these things. And that was the point where I joined a conservation organization on campus when I was in grad school.

Andy Balinsky [00:11:07] And then when I moved to, about a year later, when I moved to Texas, I just sought out, you know, one of the first meetings I went to was an environmental forum and I talked to all the different organizations. The Sierra Club seemed to be the one that was doing the most effective work. And so I just said, "Okay, how can you how can I help?"

And ended up, basically, since then, since 1991, I've been volunteering in some capacity with, with Sierra Club.

Andy Balinsky [00:11:43] So, I've met various people through and also have been a member of Audubon Society through, probably through some of those same connections.

Andy Balinsky [00:11:52] And, and, so, that's, that's mostly where I've met friends who've influenced me in terms of birding, getting outdoors, hiking, that kind of stuff.

David Todd [00:12:06] Mhmm.

Andy Balinsky [00:12:07] But I guess in school also, I was, I had a biology teacher in eighth grade. I mean, he, he didn't influence me in terms of a career, but I had a biology teacher in ... he would have been, he would have been ninth grade. And we did a, we did a lot of experiments. I mean, he was a, it was a very hands-on biology course. And I did a, I think I consulted with my dad about like what would be an interesting biology experiment, because I think we were allowed to come up with our own experiments. So, I ended up doing experiment breeding fruit flies and, and doing, you know, doing, recording genetic differences in the fruit flies and trying to look at chromosomes under a microscope and things like that. So, you know, I guess from my parents, I had got the idea that doing science was fun. So probably that biology teacher.

Andy Balinsky [00:13:05] But, you know, it didn't change my career path. I had sort of gotten interested in computers and stayed on that path. But, yeah.

David Todd [00:13:15] Okay. That helps a lot.

David Todd [00:13:18] It must be so useful having parents that endorse that kind of curiosity and, and who see the fun in, in science and the natural world.

David Todd [00:13:32] So one thing that I always like to ask people is if there might have been any sort of artifact of the popular culture, you know, books, films, TV shows, anything like that, that caught your interest and might have been a source for this sort of conservation bent that you've had.

Andy Balinsky [00:13:56] Yeah. So, probably, it probably all stemmed after, after I got interested in the, after I got sort of, you know, activated, I guess, by, by Earth Day in 1990 of being aware of all these issues. The, so, I'd, I guess some, some of the authors I might have picked up, just like Aldo Leopold, some of John Muir's writings.

Andy Balinsky [00:14:32] When I, when I started, so, after college, my first, my first job was I was, I got a ROTC scholarship and so I spent four years as an Air Force officer as part of that obligation. That's what brought me to San Antonio and Texas.

Andy Balinsky [00:14:52] But, but immediately after that, after that service, I decided, I resolved to spend a year doing some kind of natural, some kind of outdoor nature work. And so I went to Costa Rica for a year and traveled around, did volunteer work in various national parks, and visited Nicaragua and some other places in Central America during that year.

Andy Balinsky [00:15:23] But there were some books that I read. I'm trying to remember now. If I read them there, I might have I might have gotten my hands on one or two of them

there. But Alexander Skutch was a naturalist, an American naturalist who went to Costa Rica and wrote a number of books, including, I think my favorite of his is "A Naturalist...", just called, "A Naturalist in Costa Rica". And he just talks about his experiences, just living on a farm and trying to do, doing science, just essentially as a lone wolf scientist just on his own in Costa Rica.

Andy Balinsky [00:15:57] We were, I was also probably influenced by public television documentaries like the David Attenborough, you know, mainly David Attenborough sort of, or that style of. We used to watch Nature on TV, on PBS quite a bit.

Andy Balinsky [00:16:18] But yeah, we were, we were very excited probably due to the South African outdoor connection. We, I left South Africa when I was eight, but we went back and visited family every, every few years, as often as we could. And so we always like seeing the documentaries, which are often, especially if they want to focus on big animals, they tend they tend to focus on Africa as the most, the most untouched, sort of, at least in the protected pockets of parks. It's the most sort of complete, you know, beetle-to-top predator ecosystem that still exists.

David Todd [00:17:10] Yeah. Must be so nice to have had that exposure to something that is reasonably complete and intact.

David Todd [00:17:18] Well, that that helps a lot, just to give us an idea about your early years and your education and training.

David Todd [00:17:29] Perhaps we can go ahead and jump in to this question of the purple martins. What, do you remember your first encounter with the martin?

Andy Balinsky [00:17:44] I would say probably not, because I probably, I probably saw one somewhere during my first, when I was birding and just, you know, noted it down, as you know, "Okay, I've seen, I've now seen a purple martin." And I don't remember them being particularly notable from, say, other members of the swallow family. I mean, they're the biggest. They're, they're interesting, but they're not, like I didn't, I would say probably, probably before, before we ran into Jennie Rasmussen, who was taking care of the purple martin colony in Hornsby Bend in 2002, I probably didn't pay them any special attention.

Andy Balinsky [00:18:28] But it was, but I do remember my first sort of interaction, or at least my first, you know, season of interactions with purple martins with Jenny, because, I mean, you'd do some pretty amazing things when you're a purple martin landlord.

Andy Balinsky [00:18:45] You, you, you put your hands in a nest and you, and you count, you count the eggs. Or you take a baby out and you put them put them up against a, you know, or a hatchling, and you put them up against a sizing chart to figure out how many days old it is. Or you, yes, so that's, you know, that's a very, it's a very unique interaction because it's one of the few, if only, it may be the only bird that the, that the non-scientist in certainly North America is sort of encouraged to participate in the breeding cycle of, other than say maybe put up a nest box for bluebirds or something like that.

Andy Balinsky [00:19:32] But, you know, purple martins, we'll talk a bit more about how martins have their unique relationship with humans. But, you know, it's really as, as someone without a biology degree working for a university or something, you don't get many

opportunities to sort of handle a nest. In fact, you shouldn't. It's, it's generally, it's generally, you know, it's, it's widely advised not to get too close to a nest.

Andy Balinsky [00:19:59] You know, for example, if you're a photographer, because you can, you can create a path or a scent trail that can lead predators to raid that nest. So, it's in general not a good idea at all to attempt to interact with nesting birds.

Andy Balinsky [00:20:13] But, but martins are unique. They, they need us to provide their nest sites, but they also benefit from some of the interactions and interventions that we do.

David Todd [00:20:27] That's so interesting that there's this opportunity to engage with them and sort of, you know, bridge that, that usual gap between people and wild animals.

David Todd [00:20:42] Well, could you take this chance to just introduce us to the life history and basic ecological niche that a purple martin fills?

Andy Balinsky [00:20:54] Yeah. And I'll, I'll, I'll tell the story from, from a northern hemisphere perspective, I guess, if you will. So, you know, after spending, after spending the winter in, our winter, in the Amazon basin, mostly Brazil, I think a little bit of Peru, in, in the rainforest, they migrate north, mostly, mostly across, well, some of them come across Central America and some of them come across the Caribbean and go through Florida or reach the Gulf Coast.

Andy Balinsky [00:21:36] And the question a lot of amateurs often ask just in general is, well, actually, a lot of people don't even probably think to question migration, like, well, migration is, you know, birds come here in the spring. And, but the big question would be, if you're sitting there in Brazil and you're in a, you're in a tropical environment that's more or less the same year-round, why would you leave? Why would you risk the, why would you risk all the, all the weather and storms and potential starvation that you could, that you could have on a journey north?

Andy Balinsky [00:22:16] And really, the answer is that the north has a big, has a big eruption of insects that's much, that's much more, there's much more competition in the, in the tropical areas. And if you want to raise a large family of martins, or any bird, coming north where you find an abundance, abundance of insects is worth all the risks of, you know, well, I'll talk a bit about the I think, I think, I won't talk about it here, but, but there is fairly high mortality in the, in the transition north and then back south.

Andy Balinsky [00:23:04] So, so then they come here and they're, and they nest in the spring. They arrive here very early. And most people would probably be surprised to learn that they hit the Texas coast about January and that even as early as late December, like December 31st or even earlier they hit Florida.

Andy Balinsky [00:23:30] And they kind of make their way north because, I mean, it's it almost seems like it's ... they're dependent on insects, so they're 100% dependent for food on insects. So, I mean, it's easy to say this now on a, on an almost 80-degree December day, but, you know, winter isn't the best time for finding insects. Most of them have died. But, but they're able to make, make a living in Texas.

Andy Balinsky [00:23:58] And they move slowly. They move slowly north, more or less approximately maybe one row of states every three weeks, 3 to 4 weeks, and to where they reach Canada by about like maybe early May.

Andy Balinsky [00:24:18] So, they occupy basically the entire eastern U.S., from east of the Rockies and up to about the bottom row of provinces in Canada. There's a, there's another smaller population in the West, but we don't have much interaction there. They're a little bit different. I may mention that when we talk about nest boxes.

Andy Balinsky [00:24:45] So, they spend their spring nesting here. Although they arrive in Texas as early as end of January, or at least, and they probably hit the coast about mid-January and they arrive in Austin by, usually we see them by maybe the 30th of January, sometimes as early as, sometimes as late as maybe the first or second week of February.

Andy Balinsky [00:25:09] But, they won't start nesting yet. What they're doing is claiming nest sites and it's usually the, it's usually the adult males, the full adult males. They take two years to mature. So, they're, when they're, when they're one year old, we call them, we call them "sub-adults" or second-, second-year birds. I guess we call them, "second-year birds". And then after that, then they're full adults and they have their full purple plumage. And you can't you can't tell, you can't tell a two year old bird from a nine year old bird. They look the same. But you can tell those one-year old birds.

Andy Balinsky [00:25:46] Anyway, so it's the older, it's the older males that come first and they will claim, they will claim the colonies. And they're basically looking to stake out territory and say, "Hey, this is my nest hole. This, or this is, you know, this is my territory. I've found the best, I've found the best spot."

Andy Balinsky [00:26:07] And then the females, the females will come in the next few weeks. The second-year birds, which are a year old, tend to follow about two months later. So, so they sort of, I don't know if they need more time in Brazil to, to fatten up from there since it's their first year. Or if they, I'm not sure why they come, they come later. But, but in general, they do.

Andy Balinsky [00:26:39] And then they, and then they nest. They lay their eggs. They spend, they spend about two weeks sitting on their eggs. They spend about four weeks feeding their babies after they've hatched. And then after this, the nesting season, which lasts from about usually late March or early April to the last stragglers will sometimes have nests going through mid-July, although it's getting pretty hot for them by then. So those, what is that about - four months? Almost four months.

Andy Balinsky [00:27:20] And then they start to gather in these big pre-migration roosts. There are places. In Austin, there's a, there's a roost that's been gathering every summer from maybe, maybe late, mid to late June, through probably late September. I don't know if we've ever, like, gone and seen when the actual last few martins are there. But it, it, it grows over the course of the summer and then it shrinks back down. So, it's sort of like a, you can imagine, like the profile of a hill, it kind of rises slowly, and tops, tops out.

Andy Balinsky [00:27:58] And then, in terms of the size of the roost, the population, there can be up to, I've read reports of up to like 500,000 or three quarters of a million at some of these roosts. A lot of these roosts are in some of the southern, the roosts are bigger in some of the southern states. There's, there's a huge one. Well, I think I'll talk about a bit about roosts later.

Andy Balinsky [00:28:25] So, let me just, let me stick with more of an annual summary of what they do.

Andy Balinsky [00:28:30] So, so, they're in these roosts, these big pre-migration roosts, and then they start to, they don't all go in one burst, but they start to filter out of these roosts and head south, head back south again. And they're pretty much all gone by early to mid-October, back to the Amazon.

Andy Balinsky [00:28:51] So, that's their sort of annual, that's what, that's what their life is on a sort of, you know, January to December basis.

Andy Balinsky [00:29:03] And then, as far as their niche, or their, their, you know, their unique place that they've carved out. They are the largest swallow. They're colony-nesting swallows. There are, there are other colony-nesting swallows in North America, but they're the, they're the biggest ones.

Andy Balinsky [00:29:25] So, they probably fly the highest. They can fly up to, I think, 500 feet.

Andy Balinsky [00:29:30] And they eat a lot of insects, including agricultural pests. They're, they got very famous in the fifties. People touted their mosquito-eating abilities. But, for the most part, although they would probably eat any mosquito they found, they generally are active during the daytime and at higher altitudes, which is not the time of day nor the place that you find a lot of mosquitoes. So, I think something like 3% of their diet is mosquitoes, but that doesn't mean they're not useful. They probably eat a lot of moths, which would affect our crops and things like that.

Andy Balinsky [00:30:07] They also eat dragonflies, which some dragonfly watchers get annoyed at the colony of purple martins at Hornsby Bean. And they say, "Why do you have this colony of predators when this is one of the best dragonfly-watching spots in in central Texas? And here they are just, you know, you can see the steady stream of dragonflies being brought in, brought in as prey." But that's their, yeah, that's, that's how they fit into the picture.

David Todd [00:30:43] I see. Okay. Well, I love the picture of, of both the purple martins and the dragonflies and the purple martin stewards and then the dragonfly watchers. A little competition there! So be it.

David Todd [00:31:04] Well, now, you know, I think it's interesting that there are people who have enjoyed watching martins, whether it's at these nest boxes or at the pre-migratory roosts. It sounds like that is something that Native Americans enjoyed doing, or at least were sort of closely allied with over the years. Can you give us a whole idea of the sort of history of the interaction between people and martins in the New World?

Andy Balinsky [00:31:41] Yes. So, I mean, most of this is from reading, reading other sources of it. But it's, it's widely accepted that when European settlers got here, they found indigenous, or sometimes called Native Americans, indigenous Americans, living with martins as part of their agricultural landscape. They would put out gourds that they grew as nest sites. And the martins were living in them, not exclusively as it is today, but they, you know, some percentage of martins were finding it beneficial.

Andy Balinsky [00:32:24] Probably the crops. There were probably a couple of reasons why they, you know, it's you can speculate on both sides why, why do it. Was it just, "Oh, let's bring in these animals that eat our you know, that eat the moths that eat our crops?" Or was it esthetic as well? And then, and, you know, I imagine there was probably both. I, you know, it's because, just because, it's just because of how fun it is to just sit there at the base of a martin colony and just watch them come and go and chirp their little songs. I imagine indigenous Americans were no different, that they, that they had, you know, enjoyed their leisure time watching these birds come in.

Andy Balinsky [00:33:07] And, you know, the question then also is why do the martins do it? What's in it for them? And, I think what they get out of living near humans is, well, number one, a free nesting site, although before people were here, I mean, martins probably, martins probably pre-date people here. You know, people have only been here for, depending on what you read, maybe at most 50 to 60,000 years in North America. So, I'm sure martins were coming here first and, you know, giant sloths weren't putting up gourds for them. So, they were living somewhere.

Andy Balinsky [00:33:49] And, that was mostly probably abandoned woodpecker holes in trees, which is what they actually still do in the western, west of the Rockies. They'll still nest in native cavities there. But, in the eastern, east of the Rockies, they no longer use natural sites. And that was probably an evolution that happened over time.

Andy Balinsky [00:34:11] So, European settlers got here. They found, "Oh, Native Americans put up these gourds and attract, attract, you know, attract these bug-eating birds. That sounds, that sounds fun. That sounds like, you know, maybe a good idea for my crops." So, they started copying them and doing the same thing, and also building wooden housing, wooden nest boxes or nest colonies.

Andy Balinsky [00:34:38] And, but over time, and I don't know, I don't know if that's been documented as to when, you know, when was the last martin in east of the Rockies seen actually nesting on its own in a natural site. But, we also changed the landscape. We cut down ... you know, in order to have a colony-nesting bird, it needs not just one hole in a tree. It needs a number of holes within a reasonable, you know, location of each other. So, once we started to cut down trees and plant plantations or turn them into just agricultural fields, it became harder to find, you know, fifty trees with woodpecker holes in a, in a, in an acre or something, whatever they, whatever they used to, whatever their colonies used to look like before they started living with humans.

Andy Balinsky [00:35:32] But they also, the martins probably also get safety out of it, too, because humans tend to keep, humans tend, places where people are living tend to have fewer snakes and owls and hawks that that will, that will attack martin colonies and eat the eggs or even the nestlings. So, they probably began to associate us with safety.

Andy Balinsky [00:36:00] One of the, one of the clues that that may be the case is that in Brazil, which, they nest right in the Amazon basin. There's thousands of acres of pristine forest around. But, they tend to, they tend to have winter roosts some down there. They tend to have nightly roosts in industrial plants, like with lights and electrical equipment and stuff. And, or public parks in the centers of cities. And, you know, if you think about those places, they don't offer, you know, there's probably not better food there or anything. It's probably

just that these aren't places where hawks and falcons operate. And so, they, you know, they, they get some safety in it.

Andy Balinsky [00:36:53] So, it's been kind of a symbiosis, I guess, if you will. So, we get, we get enjoyment and insect control from them, and they get a lower number of predators, and, at least in North America, readily prepared nesting holes.

David Todd [00:37:16] Well, that's so interesting - the, this sort of trade-off, this kind of mutual benefit that seems to work for both the martin and people.

David Todd [00:37:29] I, I'm wondering if you could give us an idea of the trends with martins. I've read that they are in decline, but I don't really understand why. What do you think is going on?

Andy Balinsky [00:37:44] I think there's probably several factors. Probably, the, well, I don't know which would be the bigger one, but loss of nesting habitat is one thing. So, there was a lot of interest in the fifties. There were several books about putting up purple martin housing, and it was kind of a fad in a way of like, you know, people would put up, people would put up houses in their backyards. Towns would put up, there is, there's pictures from the fifties of these towns putting up massive martin colonies, these wooden, wooden housing, which I mean, they might have had 300 holes, 300 cavities in them, attracting these big martin colonies to the town centers.

Andy Balinsky [00:38:33] And I think that began to fade away. That sort of I mean, there still are martin enthusiasts and there's a number of companies that make martin housing and there's still you know, if you drive around, at least a neighborhood in Austin, you run across martin housing here and there. It's still, still done. But, I think it's not, maybe not done to the scale it is. And they don't, since they are entirely dependent on human-supplied housing, you know, if that, if the amount of available habitat declines by 20%, then that's 20% fewer nests that could possibly happen.

Andy Balinsky [00:39:11] The second one, I think is kind of a worldwide problem, that is loss of their food source, loss of insects. And that comes, I think, from a combination of changes in farming practices, more, more mega farms and fewer, fewer family farms, where family farms might have had more hedgerows in between fields or gardens, you know, around the homestead on maybe a 40-acre field, versus a, you know, a 10,000-acre field run by, you know, run by a corporation which is going to plow from, you know, horizon to horizon with no, you know, nothing, nothing that isn't a corn crop or a soybean in between. In other words, no, you know, no habitat for, for insects. And, and wide pesticide use and or herbicide used to knock out anything that's not you know, that's not the cash crop. So that's you know, that's probably a big thing.

Andy Balinsky [00:40:23] There's, there's been this, there was this, in the environmental community, there was this study done by this, a widely seen study done by these German researchers who found that basically the numbers of insects, just general insects, not any particular kind, had dropped sort of like 80% in the, in I don't know what time period, you know, over maybe a decade or two or, you know, two or three decades that they were, they were studying. You know, we're in, it's, it's you know, we're sort of facing an insect apocalypse, which affects, you know, to the degree that insects are the base of the food chain that supports birds, that supports animals, all sorts of things, pollination, as one of the big threats to our own food supply, that's, you know, that's affecting all birds that rely on insects.

Andy Balinsky [00:41:29] And then, possibly, a third factor, maybe more distant, is maybe possible loss of roosting sites. These, I mentioned these pre-migration roosts and the, the southern summer roosts in Brazil. There have been documented cases of people attacking these roosts. And these roosts tend to generate a fair amount of noise at night and mainly a lot of guano, a lot of, a lot of bird poop. And, you know, people get annoyed by their park benches being, being covered, or their cars in a parking lot, being covered with bird poop. And luckily, none of the roosts that we've seen here have had attacks, but we, you know, there are places where people have, where municipalities or businesses have turned hoses on the martins, or noisemakers to try to drive them off, not understanding, thinking that, "Oh, my God, these birds have moved in. And they were never here before. We never noticed them."

Andy Balinsky [00:42:31] But no, this is a seasonal phenomenon. They'll be here for a couple of months and then they'll go away and they, you know, thinking, well, there can't be any harm to these birds. There must be millions of them. They're all here. But not realizing how, how you know, you're seeing this local concentration of a bird that overall is declining.

Andy Balinsky [00:42:51] So, I don't know. I don't know what to what degree that's affecting the population that has you know, has had these global impacts.

David Todd [00:43:01] And do you think that that the use of insecticides has much role in making big impacts on insect populations?

Andy Balinsky [00:43:09] Yeah. Yeah, I'm sure it has. I mean, I think insecticides, I think industrial farms tend to use more insecticides. Mono-cropping also, also is a practice that leads to, you know, if you have a patchy field of corn here, and if you have patches of lots of different things, you can't get a concentration of things that eat corn. You know, if they eat, if they eat some corn, wipe out a field then they'll find they have nowhere to go because they can't travel to. But, if you have thousands of acres of the same crop, you can, it can support these huge blooms in pest populations. And the way, the way that they control that is with pesticides.

Andy Balinsky [00:43:54] So, it, so, I think there has, you know, with increased mega-farms and increased mono-cropping, especially trends like raising corn for biodiesel and such, has diminished the diversity of farm crops and I think has led to increased pesticide use.

David Todd [00:44:23] It is intriguing to me this, I guess, note that you made about these really big pre-migration roosts and the municipalities or the developers that own these shopping centers, look at them and say, "Ah, it seems like a lot of birds. And they must be pretty robust." Not maybe thinking that they're just very concentrated. It reminds me somewhat of maybe what people's impressions of passenger pigeons might have been.

Andy Balinsky [00:44:58] Yeah.

David Todd [00:44:59] Is that a fair comparison or not much?

Andy Balinsky [00:45:03] Yeah, it could. It could. I mean, yeah, I guess it depends on when you think of the passenger pigeon. I mean, when we first, I've read an estimate that, that there there might have been 5 billion passenger pigeons. They were the most numerous bird in North America when, before European colonization. And so, then they probably were not only locally abundant, but, you know, they were probably abundant across a wide area. But maybe

near the end, when they were greatly diminished, and maybe they still, you know, maybe the ones that were left were still in big flocks. One could think, "Well, here's a huge flock. There must be millions of them." It's like, well, no, maybe there's only, maybe there's only 30 of these flocks left across the United States. If you wipe this one out, you know you're affecting a big portion of the population.

David Todd [00:45:57] Hmm.

David Todd [00:45:59] Well, you know, this makes me think about the issue of how you count birds, in a great pre-migratory roost, where there are literally hundreds of thousands of them, and they're, they're moving and shifting, and it's, it's not an easy target, I bet. Do you have any ideas of how somebody might survey them, canvass them to know how many there might be?

Andy Balinsky [00:46:32] Yeah, it's, I mean, it's very difficult to come up with an estimate. I mean, I've, I've tried various things and I've heard, so, I mean, the general way to count a flock of, a flock of birds that's just, you know, too numerous to go, "One, two, three, four, five," is to, you know, you count a patch. You count ten birds, and then you sort of think of, like if you created a rubber stamp with those ten birds and kind of rubber stamped, you know, rubber stamped that, and go, "Okay, one, two, three, three, four, five, six, seven, eight, nine, ten." Okay, that's ten patches of about ten. That's about 100. And then you repeat that at a bigger scale.

Andy Balinsky [00:47:19] So, okay. So, if that's about, that's about 100 birds in that flock, then, "One, two, three, four or five." So, that's, that's about, you kind of get an idea of how much space maybe a thousand birds take up, and you rubber stamp that across the sky.

Andy Balinsky [00:47:32] Which would be fine if they were all sitting in one place, or, but, you know, these, they're swirling around and the density isn't, isn't uniform. You know, there might be a, it might be thicker over here and thinner over here. And then a bunch of them land, and new ones come in, and then something scares them and they, a new, you know, the ones that were in the trees go swooping up again. So, you know, did I count these already?

Andy Balinsky [00:47:57] And so, it's, it's really, at best, a, you know, a wild guess. You could probably, probably accurately guess how many zeros there should be. But as far as what that number at the beginning of it should be, is a little difficult.

Andy Balinsky [00:48:12] Another technique I've heard is, and I'm a bit skeptical. I mean, I've, I've had, we've had some people from the Purple Martin Conservation Association come down, and I think they've given us some estimates of maybe 100 to 200,000 birds.

Andy Balinsky [00:48:27] There was one Audubon member who had this idea of, like, if you, like, the martins will come into these roosts from all directions. They tend to go out of the city in the morning and you can actually, and they feed in these, they feed in the agricultural areas, which tend to have more insects than the city.

Andy Balinsky [00:48:53] And then they come back in in the evening, and they'll sort of come in, you know, if you think of the, if you think of the directional compass as kind of a clock, you know, you might say, "Okay, so between 12:00 and 1:00, that 1/12 of the sky, you know, if you can count the martins, if you can accurately count the martins coming in from that direction by maybe going a few miles out from the roost and count all the martins you can see passing over, because when they're heading to the roost, they're not doing so much swirling, they're generally going one direction. So, you can count them once and be done.

Andy Balinsky [00:49:33] You know, if you, if you could think, well, if I can count all the martins coming from this 1/12 and multiply that by 12, assuming it's, they're coming from the same number in all directions, maybe that gives me an estimate. He, he, what he observed in one spot and came up with, and used that to come up with an estimate of 600,000 birds, which I think sounds a bit much. And it's, it's possible that maybe he was looking at a very dense area and maybe other, other wedges of this clock were not quite so dense. And so maybe, you know, maybe multiplying his wedge by 12 (I'm not exactly sure what his technique was, if that was, if that if I'm describing it accurately, but it was, it was that basic idea), I think he came up with a bit of an overestimate.

Andy Balinsky [00:50:25] But anyway, that's ...

Andy Balinsky [00:50:31] Another thing that people have used sometimes is taking photos and counting them. But, one of the, and counting after the fact. Just, you know, "Okay, I'm going to take this photo and put, you know, take a red pen and mark each of them that way." I'll know how many birds. But taking, you can't take a 360 fisheye view at the level of detail that would allow you to snapshot all the martins at one time. So, that's also just a way of getting an estimate of one chunk of sky, and then you have to sort of multiply that out.

Andy Balinsky [00:51:06] And then, it's, it's an interesting thing that you see, and you can only really appreciate it when you go to one of these roosts. I mean, you can see what's, what any, any observer would just say, "That has to be tens of thousands of birds just swirling in the sky." And there's, there's multiple layers. Like, if you look with, you know, you can see what you can see with the naked eye. And you put your binoculars up and you realize that there are birds higher up that you can't even see with the naked eye. And they're also thick up there.

Andy Balinsky [00:51:37] But, all these birds end up in about seven trees, seven big, seven live oak trees among probably a few dozen trees at this, at this, well, they have, they've hopped around between several different parking lots lined with oak trees over the, over the years. But, they really try to pack into as small a space as possible. So, you, you would think it might be possible to count the surface, you know, once they've landed and they're not moving around to count them on the trees. And maybe you could if you could somehow get above them.

Andy Balinsky [00:52:18] But, they're so dense. I mean, they're almost, they're covering almost every surface of it. It's just, and there's, you know, there's, there's several layers of them. So, I think even that approach would be would be difficult to count them.

Andy Balinsky [00:52:32] But, I think they have, I think they have characteristics like a school of fish, if one's ever seen a documentary with this twisting school of fish and the dolphin comes in from the right and the whole school sort of separates around it. I think what they're trying to do in clustering into so few trees is nobody wants to be the edge bird in case a falcon comes by or a red-tailed hawk. Everyone wants to be in the middle so that if, you know, if danger comes in the night that they're going to grab whoever is on the outside of the, of the pack, the group, the flock.

David Todd [00:53:08] That is so intriguing when, you know, nature is so big and dense that you can't even get a way to quantify it. You know, it's, you know, you can, you know, describe the qualities, but it's just hard to even get a, you know, reasonably precise number. That's really striking. But, I like all the different strategies. Thanks for sharing that.

Andy Balinsky [00:53:38] Yeah, I wonder. It makes me wonder, and just, I think, I had this thought once or twice before. I don't know if there's any way of weighing a tree of somehow getting some kind of a, a scale like underneath, like, because that would be an accurate. I mean, you can figure out how much a martin weighs. If you could actually get something under a tree that could sense the amount of weight that gets added to a tree, you know, you might be able to say, okay, we've got, you know, three thousand pounds of martin. Each martin weighs a half an ounce. Therefore, you know, this is 250,000 martins. But, I don't know how you get a, I don't know how you get a scale underneath the tree, but...

David Todd [00:54:23] We'll have to ponder that one. That's, that's a good, good idea.

Andy Balinsky [00:54:26] I mean, you might you might have to you might have to plant an acorn on a scale and wait, wait 30 years. But, but, then you'd have to convince the martins to use that tree.

David Todd [00:54:39] Right, right.

Andy Balinsky [00:54:40] That's a good strategy.

David Todd [00:54:42] Well, I'll have to come back later and see, see what you figure out.

David Todd [00:54:47] So, you've told us a little bit about the, the migrations that these birds are preparing to take back to Brazil and Peru. And I was wondering how people learned about this migration. You know, if there were banding or geotagging efforts that might have helped understand that whole migratory route and schedule.

Andy Balinsky [00:55:16] There are some, there are both banding and geotagging efforts. Banding is done on a sort of a more ad hoc basis by, well, banding, it would be really nice if we could just band the birds at our colony and learn something about them. But, banding is very tightly controlled in the United States in order to prevent just random people putting, you know, harming birds, by doing their own efforts. So, you have to, you have to work with a licensed Fish and Wildlife Service bander. And those permits are very hard to come by and come with a lot of training. So, finding a licensed bander in your area to come and band your birds is, is difficult.

Andy Balinsky [00:56:09] It has been done in some places. And I think the Purple Martin Conservation Association, which is an organization located in Pennsylvania, associated with one of the universities up there, they, they have done, they have organized some banding studies, and they've also they've done some banding actually here in Austin. Some of them came down over the last couple of years to, there's a colony at Sunshine Gardens in Austin. It's a community garden that has, I think four or five purple martin houses - I'm trying to picture it in my mind. And a friend of ours does the, does the purple martin monitoring and maintenance there and we've helped her. So, they've set up, they've, they've done some banding there.

Andy Balinsky [00:57:10] What they do, is they band with they band with color-coded, with color-coded bands, leg bands so you can actually, and I think you can actually identify the martin. Most bird banding is done with, with aluminum bands. Most bird banding in general is done with aluminum bands that you can't read unless you find the bird, unless you capture the bird again or find the bird dead later. And that's, that's, that was, that's been done for

decades to sort of determine range and length of migration and things like that. But it's a very hit and miss kind of process, because you have to, you have to band a few hundred birds and you might find a handful of them dead at the end of their, at the end of their lifecycle.

Andy Balinsky [00:58:00] But if you can make a band that can be read with a spotting scope, then you can, and also martins will come back to very specific locations. You know where martins are going to be. They're, you know, you don't know maybe necessarily where a particular martin's going to go. But, if, if martins are banded, they will, they will come to colonies that people are observing. And so, to the degree that those have been identified, they've been able to discover things like site fidelity.

Andy Balinsky [00:58:35] Martins will, generally, like if they've been successful, they will come back to the same site, not necessarily the same. There's no cavity, necessarily, fidelity. They're not going to say, "Well, I was in, you know, I was in this particular cavity at the top level that faced north", you know. But they will generally come to the same site. Maybe they'll go to a different housing structure on that, you know, on that lot. But they will generally come back to the same site.

Andy Balinsky [00:59:08] They've been able to determine that they aren't really, there's no real fidelity to a particular cavity type. Like they might, there may have been raised in a wooden house, and they may come back and, and choose a plastic gourd instead.

Andy Balinsky [00:59:25] They've been able determine that martins will disperse. Like martins that are born in a colony will tend not to come back to that colony because that would promote inbreeding. So, they tend to go to a colony within a sort of 30 to 100-mile radius.

Andy Balinsky [00:59:42] Also, that first-year birds only have about a 15 to 30% survival rate, which, you know, goes back to that thing that I mentioned earlier of why would you migrate if 85, 70 to 85%, of you are going to die in the process? But there's enough benefits for, you know, food, food abundance here that it's worth losing, it's worth losing 70% of your children, if you will, to, in order to have that, those other factors that influence breeding success.

Andy Balinsky [01:00:16] One of the, I think the most surprising, so that, they kind of, those kinds of things they can determine with banding. But, they've also captured some birds and put these lightweight transmitters. Not transmitters. So they're not transmitters. I think they need to actually recover these. But, but, these lightweight geotags - they're able to determine, I think, these, these geotags record basically by recording the light level, the amount of hours of sunlight in a day, they determine the latitude.

Andy Balinsky [01:00:59] So, they actually aren't even, they aren't even a, the trouble with martins is they're very small, so they can't carry much of an electronics package. So, this is basically just a very simple light sensor that writes data to a chip. And when you're able to recover that chip, you can get some interesting data. Basically, you can tell how far north or south they went every single day for the whole migration cycle.

Andy Balinsky [01:01:24] And what they've determined is that some of these, some of these birds, these pre-migration roosts that I mentioned, most birds tend to spend about a month there, although many of the birds spend only 2 to 3 days. So, in that way, you can kind of think of these, like birds that are south-bound will stop at these roosts. But, it's not like they come to Austin and they spend a month here and then go on. The ones that are coming from further

north, they're almost more like train stations. They, you know, they'll maybe stop at one in, I don't know, let's say Nebraska, and then, and then Oklahoma, and then Texas.

Andy Balinsky [01:02:05] And then, further south, the ones that will spend a month at these roosts are more the local birds that are sort of fattening up.

Andy Balinsky [01:02:14] But, they also wander to other sites. The fledglings will wander. And some of them go north. Like they might be born in Austin, they might go north and hang out at a pre- migration roost in Dallas. So, that kind of surprised them, too, that migration isn't strictly a one-way trip. There's wandering, or at least maybe before migration, they might wander around a bit.

Andy Balinsky [01:02:42] They've also figured out that they travel, they can travel up to 180 to 250 miles a day on migration. That's sort of the general pace of migration is about 180 to 250 miles a day. But, they can travel up to up to five or 600 miles non-stop. And they know that because they cross the Gulf. There's nowhere to land. If, if they're, if they're heading south or north, they have to cross the Gulf non-stop or die.

Andy Balinsky [01:03:13] And bad weather can be a real impediment to them. If they hit a, if they hit a Gulf storm and a headwind, they can basically starve to death or burn through all their muscle fat, their muscle mass, trying to, trying to fight it.

Andy Balinsky [01:03:32] So those are, some of the things they've learned from banding and geotagging.

David Todd [01:03:37] That's, that's so interesting that, you know, there are these, these sort of big tides of migrations north and south, but then there are these little eddies.

Andy Balinsky [01:03:46] Yes.

David Todd [01:03:46] Of, you know, the bird raised in Austin that it goes to roost in Dallas. Or, the one that tries to cross the Gulf and doesn't make it, many of those, I guess.

David Todd [01:03:58] So one thing I've heard a little bit about, but maybe you can sort of fill in any gaps I've got, is that these Doppler radar devices have been an interesting lens on, on the martin's movements. Do you, have you followed that much?

Andy Balinsky [01:04:19] A little bit. I've, there's actually a, there's a, there's some researchers who look at some of that. And there's a person, Sheila Hargis, who's a past president of of Travis Audubon Society, has clued me into. I think she went to a class on how to, how to look at these things. But there's, there's certain settings that you can do with basically a weather radar, like a site like weatherunderground.com where you can tweak a couple of the parameters and you can basically see, so, this is something you can do at home with, with a couple of, a couple of settings on a, on a web browser, the weather site, which makes the radar, which shows you the radar image that's more attuned to detecting bird-sized objects.

Andy Balinsky [01:05:13] I mean, weather radar can be used to track anything from, you know, clouds to hailstorms to, you know, tornadoes and such. So there's, there's different settings where it, the, where the reflectivity of the radar is set to bounce off objects of different size. And so, you can tune it to show the bird-sized objects, more or less.

Andy Balinsky [01:05:36] And they've, you can see actually in, the time it's most visible is in the morning, because in the evening, they tend to come over a longer period of time, and they come from various directions. In the morning, they tend to leave much closer to the same time. And you get these sort of ballooning arcs, these expanding arcs, almost, almost like ripples, except it's a, it may be a little bit directional. They may go out in sort of a c-shaped arch, like they may decide, "Okay, you know, for whatever reason, maybe the winds are favorable, or maybe we had a good, we had a good feed of some, you know, there's some outbreak of moths over in this part, you know, in this, in this agricultural field or this area over here." And so they might go out, say, in a 180-degree arc.

Andy Balinsky [01:06:28] And it, and you can, over time, see these expanding arcs of birds at about dawn, right about dawn or maybe a little bit before. And so, I mean, that's interesting to see, to, you know, to think that on a radar map, you can see a cloud of birds, basically.

Andy Balinsky [01:06:52] But, they've also, the, and I talked about the importance of these pre-migratory sites and the importance of, you know, making sure they are not attacked by people out of ignorance or misunderstanding. So, the PMCA, the Purple Martin Conservation Association, has mapped out, has used Doppler radar to map out where are these roosts. Do we even know about all these roosts in North America? And, and so, there's a map you can find on their website where they've got a lot of dots of of known migration roosts, like roosts, they've basically mapped out all the roosts they could find on radar, based on these, these increasing arc signatures.

Andy Balinsky [01:07:45] And then, they, of those, they're like, "Well, which ones do we actually know about?" And so they, you know, they marked all those in a certain color. But, there were quite a good number of them that they were like, "Well, you can see on radar there should be a roost here. But, we don't know, you know, there's no people visiting that."

Andy Balinsky [01:08:01] And so, so, they've kind of put out a challenge to some of their members to, to find these roosts. "Hey, here's a, here's a, radar says there should be a roost here. You know, would somebody mind going there in the mornings and seeing whether this is actually a roost? And is it a, and what's the status of it? You know, is it a place that, is it a place where the martins are? Are there people around?"

Andy Balinsky [01:08:29] Because some of these roosts, many of the roosts are in populated areas, but some of them are not. Like I think there's some island, one of the biggest roosts in the Southeast is, I think, an island in one of the Carolinas. It's like an island in a lake which doesn't have people, but it offers excellent protection from, since it's surrounded by water, it doesn't have sort of feral cats climbing the trees or raccoons or things like that.

Andy Balinsky [01:08:56] That was, that was the biggest threat that we, uh, well, I'm getting off the radar topic here. But, anyway, so it's used to try to find, do we know, do we know where all these roosts are? And, are we making sure that we, you know, take any steps we might need to educate the local landowners about why it's important to just let this roost be, and, you know, if there's a, if there's a poop problem, it'll go away in a couple of months.

Andy Balinsky [01:09:25] And, um, and we did, the roost, and I'll talk a bit about the roost in Austin that we did, my wife and I and some other volunteers. There was a roost for many, many years at Highland Mall, and it probably dated back at least to the eighties from us talking to, talking to security guards, like old security guards there, who'd been there a long

time, and said, "Yeah, they've been coming here ever since I've been working here." So, we don't know when it started, but, you know, at least back to the eighties.

Andy Balinsky [01:10:02] And then, and then partly, possibly due to some of the construction that happened there, they started moving, this roost started moving around. It, it moved to a different property. It moved to like across the road to a different property. It was owned by a bank. And that was fine. There weren't really people there.

Andy Balinsky [01:10:20] And then, at one of the years, they set up shop right outside a restaurant. And so we were concerned. Are these people in this restaurant, you know, they've got customers parking here who arrived to eat a meal, and come home and find their car all covered with poop. Are they going to start taking some steps to try to discourage this?

Andy Balinsky [01:10:40] So, we went and we offered, we said, "Hey", you know, we educated them. "This is what's happening." And then we offered to come by a few times a week and help clean the premises. You know, we'll shovel off the ... I mean, you can get, in a week, you can fill like a, like a lawn bag or two with poop, with the guano. And it's, you know, it's amazing stuff for, for compost or for, for your garden. But, it's not something they particularly, you know, it's not an expense they want to have. So, we just wanted to make sure they knew that, "Hey, we're here to help mitigate this so that you tolerate this for the season and understand that, you know, this isn't a new invasion that's going to be here like forever, from now to eternity. This is a seasonal thing."

Andy Balinsky [01:11:26] And it turned out they were there for a couple of years and moved on to a hotel property. The hotel, we talked to them, did the same thing and they were like, "Oh, this is great. We'll just rope off that area of the parking lot." The bartender created a special drink called the Purple Martini. And they just thought it was a great thing and a, you know, kind of an amenity almost.

Andy Balinsky [01:11:45] So, so we've had, you know, we've had all kinds of reactions to it.

David Todd [01:11:53] I would love to have a purple martini. That sounds great.

Andy Balinsky [01:11:56] Well, I don't know if it would still be on their menu, but the Embassy Suites near the, near I-35 / 290 intersection, in that southeast corner, wherever that Embassy Suites is, maybe the, maybe there's still a bartender there who has it on the menu or remembers how to make it.

David Todd [01:12:15] Well, you know, while we're talking about these purple martinis and these pre-migratory routes, can you just tell us a little bit about the purple martin parties that occur at these roost sites often?

Andy Balinsky [01:12:30] Yeah. So, for the last, I'd, I would say, maybe five years or so, Travis Audubon Society has, has decided to make an event out of these, these roosting, these roosts and kind of use it, to use it as a chance to educate and engage the public. And so, they've set up usually for four different weekend nights in usually July, or whenever, whenever works out with their schedules. The roost is, the roost is probably big and remarkable for about two months, basically July and August. It extends a little before and after that, but it's not as impressive as it is in, say, mid-July to mid-August.

Andy Balinsky [01:13:21] So, they'll set up a canopy with a booth and information and flyers, and tell people about it, and talk to the business owners and get permission to block off a little section of the parking lot so that people can set up lawn chairs. And I think they had maybe 400 people at one of the, at the biggest of the purple martin parties this year. And people would just come out with their, with their lawn chairs and just kind of sit out and watch the, watch this big spectacle come in at sunset.

Andy Balinsky [01:14:04] And, you know, we've had a lot of people at these parties will say, you know, "This is, we've seen the bats." And, you know, Austin is famous for its bats, we've, we've named all kinds of hockey teams and all kinds of things after the bats. It's nationally known for its bats. But, they've said, "This is cooler than the bats because it's more, it's more of a spectacle." The bats, the bats will come out, you know, a large number of bats come out, but they tend to come out in a thin stream over the course of several hours.

Andy Balinsky [01:14:31] Whereas the martins, you get a, you know, maybe a couple of hundred thousand of them come in, in the space of about 30, 45 minutes. And they come into you, and they all land in the trees right next to you. So, it's a, it's I mean, both are wonderful, natural, natural phenomena to observe. But, this, you know, people have said, "Oh, this is this is more impressive and cooler."

Andy Balinsky [01:14:55] So, yeah, it's just a good way to reach out to the public and let them know about what, what purple martins are, and why maybe they're, you know, why they're worth preserving. And, you know, maybe you get a few more people interested again in purple martins and putting up purple martin houses.

Andy Balinsky [01:15:16] Travis Audubon also sponsors a class in the spring, which my wife and I teach, on just how to be a purple martin landlord and what you need, what are the steps you need to do, for to decide where to site a house, to maintain a house, or even, or collect some scientific data that you can collect from these colonies.

David Todd [01:15:40] Well, let's talk about that. So, say I'm a neophyte, total wet-behind-the-ears, aspiring purple martin landlord. What would you try to teach me in your class with, with Julia, your wife?

Andy Balinsky [01:16:02] So, and we go over the basic life cycle, which I talked about earlier. But we go a bit more into specifics about when to expect martins, but also to tell them about different types of housing available. A lot of people think of purple martin, a lot of the, a lot of the houses that people put up in the fifties were these little aluminum, these small aluminum houses that these days people generally recommend that these, that these cavities be bigger. Martins can, are capable of nesting in a little six-by-six cavity, but they get very hot. They're very tightly packed in there. They get very hot. And that might work better in the Northeast. But here we get, we have pretty hot summers. The bigger capacity allows a bit more cooling and circulation.

Andy Balinsky [01:17:04] Gourds, we find, are generally a bit cooler since they're sort of individual nesting, like it's a, it's a structure which has a lot of gourds hanging from, these plastic gourds, hanging from it, rather than a, rather than sort of an apartment building of these, of these cavities packed next to each other, which where they share body heat and things like that.

Andy Balinsky [01:17:28] So, there's a few, the biggest concern in Texas is heat. That's, that's kind of the biggest thing that gets in the way. So you're trying to do things to keep the martins cool, because if the colonies get overheated, and it's probably becoming a little more of an issue with climate change, you know, even a few degrees can make make the difference, the young martins will just get desperate and they'll jump before they can even fly.

Andy Balinsky [01:17:53] And that's basically, unless somebody happens to be there when they do it, or a couple of hours after, that's basically the end of them. The fire ants will find them or a cat will find them if they're there in the evening. So, we educate people on that.

Andy Balinsky [01:18:08] We also educate them on the process of gathering scientific data if they want to do it.

Andy Balinsky [01:18:14] Some people, some people choose to just, there's various levels of involvement.

Andy Balinsky [01:18:20] You can, the most basic level is you buy a house, you put it up, and you never touch it again. That we actually don't recommend for people to do, because there are competitors with, with... There are some non-native European starlings and English house sparrows that have established themselves here, and they will completely take over a colony if, if left to their own devices. It's fairly easy for them to do because they're here year-round, and so they can basically occupy it before the martins get here. And so, it's, people who do that are basically just breeding, breeding more, more non-native house sparrows and starlings to compete with martins. So that that's not good.

Andy Balinsky [01:19:11] The next level would be basically, you set it up, you take some steps, like maybe the, the simplest is just throwing out the nests of the, of the non-native birds, which they're not, unlike every other nesting bird, they're not protected because they're not native. They're not, they're not a, they're not a, you know, they were birds that were introduced by people. We can talk more about that a bit, but I was giving you a summary of what we teach people in the class.

Andy Balinsky [01:19:45] The next level of involvement is that you could go in, and we do this at our, our colonies, is, as you go in about once a week, and you, you count eggs, you count nestlings, you age the nestlings, and you record on these standardized sheets that the PMCA has developed, how many nestlings were born, the ages, like what day they were born, when they fledge, success rate, you know, any martins that if you find a dead martin in there you record that and take it out, eggs that, how many eggs hatched, how many eggs didn't hatch.

Andy Balinsky [01:20:22] All these kinds of things which, which kind of give them - they get several thousand of these, of these reports a year - and they can begin to develop trends. They can start to figure out how, how often, you know, what's the success rate for martins, what kinds of housing units do, do better for them or worse for them. Are there regional differences? Are there long-term trends? Are we getting more, you know, our martins having more difficult time - you know, lower success rates, higher success rates.

Andy Balinsky [01:21:03] Is, you know, how is, how is maybe climate change affecting them over time? Are we, are we seeing lower success rates because more martins are being affected by heat? Are we seeing earlier starts to the seasons because maybe it gets warmer sooner in the season? You know, all these kinds of things, they can, they can begin to use this data to figure out.

Andy Balinsky [01:21:29] So, and then, and then basically just some tips, siting tips. People will ask us a lot of questions about, you know, maybe someone will say, "Oh, I put up a house, but no martins came. Do you have any suggestions?" And we might suggest maybe if they, if maybe they put it up too close to trees. Martins don't like to be next to trees because they're places that hawks and owls can hide and attack the colony from. They prefer to be at least, say, 30 or 40 feet away from trees.

Andy Balinsky [01:21:59] They prefer to be some, at least within, say, a mile of some form of water, maybe even just a neighborhood pond or something.

Andy Balinsky [01:22:11] So, people might, people ask questions about those kinds of things as well.

David Todd [01:22:15] Okay. So, you talked a little bit about a whole variety of things, but the one that sort of caught my attention was the competition with the starlings and English house sparrows. And, you know, the one measure you can take is to just remove the sparrows and their nests. But what do you do about starlings?

Andy Balinsky [01:22:45] Yeah. So, so, starlings are actually easier to deal with than house sparrows, mainly because they're bigger than martins. So, you can't, there are some, there are some holes, but the most basic hole shape is round, and so, you know, when someone thinks of a bird house, they think of a round hole. But that's probably largely due to hole-drilling equipment that existed when people were making, you know, primarily using woodworking equipment to, to make holes in wooden, or wooden houses or gourds.

Andy Balinsky [01:23:23] So, there have been, but, you can't make a round hole that a martin can fit into, that a starling can't also find his way into. But, there are some other shapes that people have come up with, crescent shapes. And, and there's a, there's a patented one. Unfortunately, it's patented. So, it's not as widespread as some of the other ones. But the, it's called an excluder shape which martins can get into, but, starlings, because of the size of their, of their torso, mainly their breastbone, they can't squeeze their way into these. So, these, they're the only, there are some crescent-shaped or "D", a "D" lying on its side, a capital "D" lying on its side, shape that they're marketed as starling resistant. But, we found that that the starlings get into them anyway, if they're just a bit more persistent, they can wiggle their way in.

Andy Balinsky [01:24:23] And the trouble with starlings is not just that they take up the space. That would be one thing you just say, "Well, okay, there's five starlings nesting here. We lost some space. I guess we don't have to deal with it."

Andy Balinsky [01:24:33] The problem is that they're aggressive and they, they compete with, they, well, they attack, there's a probably a scientific word for it, but they'll attack, they'll actually attack the martins. And they'll, they'll peck and destroy martin eggs. They'll take martin eggs, they'll haul martin eggs out and throw them out of the nest and lay their own eggs. They'll build their own nest on top and lay their own eggs. So, they actively, they actively destroy martin nests.

Andy Balinsky [01:25:10] And so, they're, you know, they're not just they're not just taking up space. They're being actively harmful.

Andy Balinsky [01:25:15] So, and so, we generally recommend to people that if they can find these, these excluders, these excluders, or I think one step you can take is just throw out, throw out ... the starling nests when you find them. But, they tend to keep coming back. But if you take, yeah, these excluder shapes, we've never had them get into the excluder-shaped entrances. And so, once you, once you, what we've done with our colonies, we've, we've 100% retrofitted with some after-market plates, the shape of the hole and then the starlings just go away.

Andy Balinsky [01:25:59] And, I mean, if you're a person who loves starlings, it's not like they go anywhere. They just, it's not like they disappear. They just end up nesting in some other hole they find in a tree or they nest in, if you're observant, you probably have even seen them nesting like in the end of light, traffic light fixtures. There'll be these traffic light fixture poles and they'll be, they'll have lost their end cap and there'll be a starling nesting ended there.

Andy Balinsky [01:26:26] So, they're much more adaptable than the martins. They can, they can have their run of those, but we need to keep them out of the martin nesting holes.

Andy Balinsky [01:26:33] The trouble with house sparrows is we can't do the same thing. They're a bit smaller than martins, so anything a martin can get into a house sparrow can.

Andy Balinsky [01:26:41] But, we found that the house sparrows will give up after. You might have to, like the first time in a, in a season, we will maybe have, out of our colony at Hornsby Bend of 66 colonies, or cavities, we'll have to throw out maybe six or eight house sparrow nests. We come back next time, maybe there's like six, then maybe there's four, and then there are ... so they eventually filter off and find some other place to nest.

Andy Balinsky [01:27:10] And house sparrows again are a problem because they'll, they'll also peck the nest. They're not quite as aggressive, but they will still peck the eggs of the martins. But, we've actually, we've been throwing out the house sparrow nests so often that they've actually the last year we didn't have to throw out any because they basically have all given up on trying to nest in the martin houses. Maybe they just had success at some other place and they just decided what's, you know, why go why go to the place where we're harassed? Let's just go where we were last year?

David Todd [01:27:42] Sounds like you're as persistent as they are.

Andy Balinsky [01:27:45] Yeah.

David Todd [01:27:45] Maybe more so.

David Todd [01:27:47] So, I understand that, that the martins have other competitors or predators, maybe both. Can you talk a little bit about some of your strategies for dealing with cats, raccoons, rat snakes, hawks, owls, some of these other challenges that the martins face?

Andy Balinsky [01:28:09] Yeah. So, there's basically two, I guess, there's two, two groups of, two groups of these. Basically, ones that come from the air, and one's that come from come up from the ground.

Andy Balinsky [01:28:20] So, the ones that come up from the ground - snakes, squirrels, raccoons - all of which will climb up and eat martin eggs, or martins. We've found, we've

found rat snakes with three or four lumps in them that used to be little purple martins that couldn't fly, that couldn't fly away yet. It's basically a predator pole guard. It's basically a, it's basically a cylinder, a stovepipe-like cylinder of aluminum that you attach to the pole. And the snakes kind of climb up the middle and hit the hit the top of it. And they can't, it's too big for them. It's, it's too big and too slippery for them to wrap themselves around. So that prevents the snakes and also the raccoons, raccoons and squirrels from climbing. So that's the protection from the ground.

Andy Balinsky [01:29:23] From the air, from the air, it's basically hawks - hawks by day and owls by night - will attack the colonies. We haven't had, we don't have 100% protection at our Hornsby Bend colony. You can, there's some predator guards you can get that are basically pieces of wire that that, that will stick down, that will attach to the cavity and prevent, they basically prevent wide-winged flying birds from getting to the entrance. The martins have narrower wings. They can navigate around it. But these aerial predators have white big wings. And these vertical pieces of wire will prevent them from getting close enough. So, that's their strategy, number one.

Andy Balinsky [01:30:14] The other strategy, the alternate strategy, which we've probably done on more of our, we have a few of those. We just haven't, since we haven't had an attack, we haven't really prioritized defending against it. But, the other thing that works well is there are some gourds mainly made by an Amish company in Pennsylvania called the Troyer Gourd Company. They make these gourds with an entrance tunnel. So, it's essentially sort of a PVC tunnel that is either built into the gourd, or attaches to the front of the gourd, and we're talking plastic gourds here, although I guess you can't, you could even attach these. And the idea is that you basically build this tunnel, maybe like three inches long, this entrance tunnel.

Andy Balinsky [01:31:02] So, you enter the tunnel, the martin lands on the porch, enters the tunnel, and then goes into the the nesting structure. And this tunnel is longer. The hawks and owls basically do their work by landing on the things, sticking a foot inside and grabbing and pulling out the pulling out the prey. So, if you make the tunnel longer than the reach of their of their leg, then they basically they can land, but they can't. You know, the martins can just retreat to the back of the gourd and they can't be reached. And that's, that's probably easier than the, this whole thing of installing all the wire.

Andy Balinsky [01:31:42] It does mean, it does mean, you know, adding something to, or buying different gourds for people who already, which is easy, easy for people who are starting out and maybe a little bit of work, a bit more work or expense for people who already have a bunch of existing gourds.

David Todd [01:32:02] Well, I love these tales of resourcefulness and creativity. It's just very inspiring to hear how landlords have figured out ways to protect their birds. I'm wondering, though, what some of your steward friends are doing about the climate swings that we're seeing between, you know, 100-degree days to freezes like we saw during Uri last February, you know, if those are important or not. Maybe you can tell me first, are those important to martin conservation or, and if they are, then, you know what, what can you do to try to mitigate the impacts?

Andy Balinsky [01:32:56] Yeah, so I would say probably yes. So, we've had, we've had a few experiences with, well the situation, you know, you would, you would probably get some interesting stories if you talked to a landlord from Pennsylvania, because they get, you know, they can get freezing nights even into the you know, even into April. But here, you know, by

the time the martins are here, you tend not to get freezes. Winter storm Uri being an exception.

Andy Balinsky [01:33:30] And the martins on the wing can generally just, either if it's a, if it's a short cold spell, well, so, you know, the reason we call it climate change and not global warming anymore, is because it doesn't always, it doesn't always cause disruptions in a, in a, in a warming way. These cold spells, like tropical storm Uri, I think are probably more of them come to stay. I think they're due to disruptions in the jet stream that allow big pushes of Arctic air to come down here in the winter and stay for longer than is precedented.

Andy Balinsky [01:34:09] But, we've, before, before Uri, the only thing we had experienced was some cold snaps in, in May actually, that we had two different cold snaps in May where, so, so basically 55 degrees is about the sort of magic number for martins and insect hunting. Below about 55 degrees, the insects will sort of stop flying and they're all kind of hunkered down and wait it out.

Andy Balinsky [01:34:45] And if that happens to the martins, first of all, they've got lower temperatures, so they're since they're warm-blooded animals, they have to burn more energy just to stay warm. And add to that that they can't find any insects because they've stopped flying.

Andy Balinsky [01:35:01] They can do that for about maybe two days. Beyond that, they start starving to death.

Andy Balinsky [01:35:07] And, and also, in May, they're right in the middle of feeding their hatchlings. And they start starving to death. They probably starve to death even quicker because they're, you know, they need to eat constantly and they've got smaller body masses - it's harder for them to stay warm because they've got smaller body masses to start with. So, they've got less just sort of natural heat retention. And they're not fully feathered, most of them aren't.

Andy Balinsky [01:35:39] So, we've had, we had one, one May where it got cold for about four, it dropped into the lower fifties for about four days in a row. And we went back at the end of it. And at that point, we'd had 90, 90 birds had hatched by the beginning of that stretch. And we went and we found about a third of them dead. The adults, actually, I think for the most part, survived. But, but 30 of the hatchlings had died.

Andy Balinsky [01:36:09] The next time it happened - it happened a couple of years later - we realized, "Oh, this is going to happen again." What we did was we went to the colony and we actually fed the martins. We brought crickets and mealworms that we bought at the pet store, and we actually brought them food and fed them for a couple of days. And they, we didn't have any, any of the nestlings die during that stretch. So, we kind of learned how to get them through a cold snap.

Andy Balinsky [01:36:42] Uri was different. Well, so Uri was different in that Uri is probably a bit more like what they might experience sometimes in Pennsylvania, where martins have come. They've started nesting. The adults are there. And then, they get a freeze, which stresses the adults as well as the, as well as the young. And if it lasts long enough, the adults can start dying.

Andy Balinsky [01:37:06] What some landlords up in the Northeast do is they, they've figured out a way to feed. You can't just, you can feed a cricket to a nestling that is in the nest, you can take it out and you can basically put the cricket in its mouth. But, you can't catch adults. They're not going to, they're not going to stick around for you to just snatch them out of the air.

Andy Balinsky [01:37:25] So, what they have done, and they won't, they won't take food from a tray. You can't just put a tray of dead crickets or dead mealworms up there. They don't recognize it as food, because they're used to food flying.

Andy Balinsky [01:37:36] So, people have actually taken to flinging crickets with plastic spoons into the air repeatedly, until usually takes like a couple, like a day or two, until they figure out that this is actually, you know, this weird flight of an insect they don't recognize is actually some kind of edible food. But, once they figure it out, then they'll catch every single one that gets flung. And, some of them will then fling like scrambled eggs and other things that.

Andy Balinsky [01:38:06] And I've read that even some of them will even, like, once they get used to realizing, "Oh, these crickets are a food source", they can actually, then, some of them, will have figured out they can put trays. They can they can hike trays up the, up the pole. You know, they can put them on a pulley and put them up where the houses are, and the martins will actually eat out of them, once they've been trained to recognize them as a food source.

Andy Balinsky [01:38:29] But, we didn't really have the ability to do that. Well, during Uri, we were kind of stuck in our house for, you know, the roads were all iced. We couldn't really get anywhere. This martin colony is like ten miles from our house. And, and it didn't, you know, we didn't have crickets on hand. And we just, we probably lost, we don't know first-hand, but we know other people found dead martins in their, in their boxes, where the adults were here, the freeze came, they huddled in the boxes for warmth and they, they died.

Andy Balinsky [01:39:07] We know that happened to a number of birds, where people who found upwards of 20 Eastern phoebes huddled, huddled in a nest box somewhere for warmth. All dead. And they're a bird that lives here every winter and, and, and does okay. But they're also insect-eaters. And so, you know, insect-eating birds that spend the winter here are subject to these cold snaps.

Andy Balinsky [01:39:36] And, what the, so the following summer, the Purple Mountain Conservation Association came down to study the DNA of the birds here because they wanted to look at the DNA of the birds. They had, they had gathered a lot of the birds that landlords had found dead.

Andy Balinsky [01:39:54] What happened is basically these early, these birds, basically some of them might have been smart enough to figure out to head back to the Gulf Coast where it was at least they could maybe get away from the freeze. But, many of them just thought they'd wait it out and, and, and didn't make it.

Andy Balinsky [01:40:10] And that, that year the next wave of birds basically were the ones that started the colony. And we found during the following year, ... '22, spring of 2022, that everything seemed to be about two weeks behind. Like we didn't see martins for about two weeks later than we usually see them. And, the nesting was also delayed by about a week or two.

Andy Balinsky [01:40:39] So, it may be, so what they were trying to figure out, is there a genetic difference between the birds that arrived early and died, and those that came later? In other words, was it just a random set of birds that were here? They died. Other birds came back. Or, is there sort of, is there sort of a gene that the birds that came early have that gene and they sort of were kind of wiped out, so that the population that's left is now sort of genetically disposed to come a little bit later to avoid another freeze like that.

Andy Balinsky [01:41:19] So, they were, I don't know if they got any answers by studying them. So, so what they did is they came and they captured birds. They netted birds that were here that summer to see, to get their DNA, and compare it to the dead birds that they'd found from the storm.

David Todd [01:41:37] And try to figure out if they were different strains - those that.

Andy Balinsky [01:41:40] Yeah.

David Todd [01:41:41] That are related to those that returned.

Andy Balinsky [01:41:44] Yeah.

Andy Balinsky [01:41:47] And, and the other, the other part of climate change that affects us is on the other end. If it's, if the summers are getting hotter. Because we find that, you know, most of the birds tend to have their season, their nests, in a certain period that's, you know, I mentioned kind of late March to mid-June is probably the bulk of the nesting.

Andy Balinsky [01:42:09] But, then there's always some that, that maybe lay eggs in early to mid-June and who just, you know, probably early June because it takes about six weeks from laying the eggs till the young can fledge. So, you know, if they're laying eggs on June 3rd, you know that that baby's going to have to be in the nest if it's going to survive on July 14th, 15th.

Andy Balinsky [01:42:31] And, it's so hot then in any normal given year, you know, we, sometimes, we have this discussion of should we, should we remove these eggs because it's going to be. It's going to be really difficult. And, you know, not that many of them are going to survive. You know, should we just save the martins the trouble of going through all this when a small number will survive?

Andy Balinsky [01:42:57] But, my argument, which I usually I usually end up winning, the argument is, if these, if this is a genetic, if these are birds that are capable of surviving the hotter summer and the hotter temperature, this might be the gene pool that's needed to get, you know, if, say, 20, 30 years from now, summers are just hotter and even springs are hotter. Maybe this is the gene pool that can survive that heat that needs to be expanded or kept alive to, you know, the gene pool diversity that they need to survive hotter temperatures.

David Todd [01:43:36] That's really intriguing. I mean, whether intervening sort of for humanitarian reasons may shift the evolutionary selection enough so that you actually do more harm by trying to, you know, abort those chicks before they invest a lot in them.

Andy Balinsky [01:43:59] Yeah.

David Todd [01:43:59] That's, that's. Wow. Well can you play that out a little bit. So tell me just a little bit more about what you're thinking there.

Andy Balinsky [01:44:08] Well, I guess I'm thinking if, you know, let's say there's three nests that, that nest in early July, early June. And some of them are, some of them are just because they got started late for whatever reason.

Andy Balinsky [01:44:23] And, some of them are, some of them are, actually second, there's, one of the things that PMCA found was, which we didn't know before, was that there are actually a small number that will do a second brood. They'll, they'll start early, they'll raise their young by, say, mid-May, and then they'll lay some more eggs and have a second, second brood. It's, it's very, very much the exception. But, it does happen.

Andy Balinsky [01:44:46] But, some of them also have failed nests. Like, they just, they, they, maybe their nest gets raided by house sparrows or something, or maybe they just, they lay some eggs and maybe they just ended up being infertile, and they will sometimes try again.

Andy Balinsky [01:45:05] So, whatever reasons it is that pushes them to have late nests, you know, let's say, normally I think about 60 to 70% of the eggs that are laid turn into fledged martins. So, let's say the success rate normally is about 60%. Let's say maybe early June, early June, laid eggs maybe only have a 25% chance of making it out. So, but the 25% that do, manage to survive some very hot months.

Andy Balinsky [01:45:37] So if, you know, let's say 5% of the population is birds that were hatched and survived hot months. If that, you know, if it gets to the point where martins are having trouble coping with heat, maybe those ones that did survive have some, some trait that helps them survive warmer months, maybe, I don't know, thinner body feathers or, or more just more ability to pant more efficiently or something and get rid of heat or who knows?

Andy Balinsky [01:46:14] I mean, maybe that's, you know, diversity in a gene pool as well as, you know, in every other thing is generally a benefit in nature.

David Todd [01:46:24] That's, that's great. Thank you so much for explaining that.

David Todd [01:46:29] Well, you know, it seems like you've put just an extraordinary amount of interest and effort into caring for the martins, and teaching other people to enjoy them and to be landlords as well, along with your wife, of course. Can you to speculate about what drives you to do this? I mean, it's, it's, it's unusual. I mean, it's special, but it's unusual.

Andy Balinsky [01:47:04] Yeah. I don't know. Part of it is just kind of, I mean, there's a lot of pleasure in it. There's a lot of joy of just like seeing, you know, seeing animals thrive and knowing that you played, played a hand in it, just, just seeing the, you know, seeing the martins go through their, like during an individual season, just seeing the martins go through their cycle.

Andy Balinsky [01:47:35] And, and, you know, you get this sort of mini, mini, little feeling of success when you come, you know, you come to do your nest checks and record the data and you find a nest that was, had six martins looking like they were ready to fly. And you come the next week and they're all gone. And, none of them, you know, none of them are dead in the box. And, you know, that was a success.

Andy Balinsky [01:48:00] And then, maybe you see them flying around with their parents, maybe see a group flying around with their parents and you think, you know that, those birds wouldn't be there if we hadn't, if we hadn't cleaned out this house, and, and, you know, maybe, maybe done some of the interventions we do. Like, if we find a nest that's got a particularly - they get these feather mites that, that, feather and blood-sucking mites, that will both, that will damage their feathers and take a small, they don't kill them, but they act as a slight, as a stressor. You know, if you're losing a small percentage of your blood, you just have to eat more. And it costs, it costs energy.

Andy Balinsky [01:48:49] And so, if there's a nest that's particularly infested, we'll, we'll change out the nesting material where the eggs, the mite eggs, are and give them a new, fresh, dry bed of pine needles.

Andy Balinsky [01:49:04] And, you know, maybe that helps them survive to the end or have a better, you know, maybe have more body fat when they start, so they've got a better chance of surviving the, the migration.

Andy Balinsky [01:49:17] So, it's just, you know, little things like that.

Andy Balinsky [01:49:19] I mean, sometimes we find very, very direct things that, like there'll be an adult that has died in the box. And here are these fledglings trying to. You know, maybe the other parent is still trying to feed them, but there's this physical dead adult that they can't drag out of there. And you remove that, you know, that feels like, boy, if I weren't there, you know, these, they probably would have been dead.

Andy Balinsky [01:49:43] So, I mean, some of it feels like a need, like, like we have to do this because, you know, if not us, then who?

Andy Balinsky [01:49:51] But some of it's just, just the pleasure of doing it and watching them fly around and knowing that you're part of it.

David Todd [01:50:00] Okay.

David Todd [01:50:02] Well, one last question, if you don't mind.

Andy Balinsky [01:50:05] Yeah.

David Todd [01:50:06] You know, from, gosh, over 20 years of working with these birds, is there something that you've taken away from that experience, some sort of lesson you've drawn about martins or birds or conservation in general?

Andy Balinsky [01:50:27] I guess so. I guess one of them would be just that how, how interested people are in them. We get, when we're doing our nest checks or hanging out at the purple martin roost, you know, we'll run into people. People will sometimes be walking by that are, and they'll just, they'll stop, and they'll ask us about, and my wife Julie is really good about engaging people.

Andy Balinsky [01:51:01] Like she'll, you know, there'll be some family that'll be coming by just maybe to take a walk at the Hornsby Bend property and she'll, you know, they'll come over, "What are you guys doing over there?"

Andy Balinsky [01:51:12] And she'll say, "Oh, come over. You want to see a baby bird, or do you want to hold a baby bird in your hand?"

Andy Balinsky [01:51:17] And just to see these kids' faces, like this is not even a thing that they thought was, you know, of course they want to like I mean, this is just. You know, maybe they thought they were just going out for a walk with their parents. And this is just, yet just another day.

Andy Balinsky [01:51:34] And, you know, maybe that turns into a life-changing experience of like, "Wow, I want to work. This is amazing. And I want to work with animals." You know, maybe they become a biologist or a vet or something.

Andy Balinsky [01:51:46] And, but, just, just to see the so, you know, just the joy in people's faces. And, and at the purple martin roost, these big, big roosts to see people come out because it's like, "Well, my friends told me this is something that was cool to go and see." And then, just, and they see a few birds flying around and think, "Oh, this is kind of interesting." And then, just to see them a half an hour later when there are thousands and thousands of birds in the sky and the, you know, the, the, the, the wonder on their face is just so, you know, ...

Andy Balinsky [01:52:20] I think, you know, for all the, all the threats to, you know, natural life and habitat and everything on this planet, there are a lot of, I think there are a lot of people who are interested, or can be interested, and who care about it. So, I think there's a lot of, you know, there's a lot to be done in interesting people, in getting people interested and involving them that can, you know, create a positive force pushing the other way.

David Todd [01:52:57] Yeah. Well, it seems like a wonderful avenue to caring about these animals, understanding a little bit more about them, trying to do something for them. I know that you're a good teacher and inspirer in that way along with your wife.

David Todd [01:53:14] And so, Godspeed with that. Thank you so much for telling us about it. And is there anything you'd like to add before we wrap up?

Andy Balinsky [01:53:31] Yeah. I mean, not too much. I think it's just, um, I mean, there's an old, there's an old saying. I don't know who made it, but, you know, to conserve something, you have to love it. In order to love it, you have to know it. In order to know it, you have to sort of be shown it or be introduced to it. So, you know, it's a process to get people from not knowing anything about, about something, to learning about it, being involved, loving it, and then working to conserve it.

Andy Balinsky [01:54:09] So, I think it's just a matter of people who do care getting other people involved. And one, and the nice thing about purple martins is there's something you can, you know, it's like, "Well, what can I do about the polar bears except maybe, you know, use less fossil fuels? And does that save this one particular polar bear?"

Andy Balinsky [01:54:29] Maybe. But, you know, there's a long, long thread of, you know, causation that isn't very direct. Whereas with purple martins, you can do something, you know, very directly. You can, you can manage a colony of purple martins with your own hands and, and or help out. You know, we, we involve a lot of volunteers in helping clean out the nests or help gather the data, so, you know, something you can do directly with your own hands that feels like you're making a difference.

David Todd [01:55:00] Yeah. And I guess that has benefits for both the martins and for the people involved.

Andy Balinsky [01:55:05] Yeah.

David Todd [01:55:07] Well, good. Well, Andy, thank you so much. This has been so interesting and valuable. Thanks for taking time and for being patient about our little technical glitches at the outset. I think we conquered them, along with...

Andy Balinsky [01:55:25] Yeah.

David Todd [01:55:26] You know, all the problems facing purple martins. You're a problem solver. I appreciate it.

Andy Balinsky [01:55:35] All right. Thanks, David.

David Todd [01:55:36] All right. Good to talk to you. Say hi to your wife.

Andy Balinsky [01:55:39] I will. Okay.

David Todd [01:55:40] Bye now.

Andy Balinsky [01:55:41] Bye.