GOOD NATURED S2-EP1
DINO MARTINS

GOOD NATURED
A PODCAST SERIES FROM CONSERVATION OPTIMISM

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INTRO

Julia: Welcome to Good Natured, a podcast where you can join us for uplifting chats that shine a light on conservation challenges.

Sofia: Welcome back to Good Natured! We are thrilled to be back for season two and to be interviewing some more inspiring conservationists from different backgrounds who are all engaging with conservation in their own way.

Julia: I'm Julia.

Sofia: And I'm Sofia! Today we will be speaking with Dino Martins.

Julia: And you can expect to hear about the beauty of insects, the importance of collaboration, and also using art to inspire people.

Julia: Hi Sofia!

Sofia: Hey Julia! Today we are thrilled to have Dino Martins as a guest. Dino is a Kenyan entomologist, which is a scientist who studies insects, and an evolutionary biologist. He is the Executive Director of the Mpala Research Center in Kenya, and he is a research scholar and lecturer in ecology and evolutionary biology at Princeton University.

Julia: And that's already quite an impressive background, but on top of that, Dino also is a Whitley Award winner. He won the 2015 Whitley Gold Award, which is very prestigious and that was for his work on plants, people, and pollinators.

Sofia: So you probably got the sense just from the list of his research interests, that he's a very multifaceted person and researcher, and in addition to being a conservationist and scientist, he is also an artist. So we're really looking forward to hearing about how he mixes these different parts of his life.

Julia: And also we're really excited to talk to someone who is so excited about insects. So let's hear from Dino.

INTERVIEW

Julia: Hi Dino! We're so excited to have you on the podcast today. We wanted to start this podcast episode by asking you a question that, you know, is kind of like the starting point question, which is how did you become a conservationist?

Dino: That's a great question. And it's often a question I ask myself. And one of my earliest memories are actually of insects and I became a conservationist from being a naturalist and this early memory I have is of sitting by a stream in the rainforest in Western Kenya, and just being surrounded by clouds and clouds of butterflies. And they were just dazzling colours, every possible colour you can imagine. And just millions upon millions of them. Of course, in the child's eye view or world view, they seemed so much bigger and more colourful and more, more wonderful and exciting than anything I'd ever experienced up to that point in my fairly young life.

But really the moment I became a conservationist was also revealed to me when I was sitting watching the pollinators of a very, very special plant, the African violet, which everybody knows the African violet. They grow in pots on grandma's windowsills and in everyone's rooms around the world. But this plant is very endangered in the wild and comes originally from the Eastern Arc Mountains in Kenya and Tanzania.

And I'd been studying this because that's what we do as scientists. We go and study things and I was watching these lovely bees. In fact, one is just sitting on the windowsill here right now. And they have these amazing blue bottoms with the bands across them. And these bees were flying up to these African Violet flowers and grabbing them, vibrating them at a very special frequency and the pollen was being released. And I was studying the pollination of this critically endangered plant and then I'd been watching the bees for a few days and I realized those bees were flying out into the surrounding farmland. And the same individual bees were pollinating the African Violet and pollinating crops in farmer's fields.

And I had one of those light bulb moments, realizing that this was such a deep connection between the survival of species in the wild and the production of food, that was nourishing the farmers and many other people in that same landscape. So that for me was the moment I think, I really thought: “Yes, I can study insects.I can learn about life and I can also contribute something to saving these intricate connections that support all of us”.

Sofia: That makes so much sense. And so now a lot of your work focuses on insects and you have spoken so passionately about insects, but I think not everyone sort of immediately shares that feeling. What techniques have you employed to get people to care about and relate to insects?

Dino: That's a wonderful question. Insects are the little things that run the world. As E.O. Wilson famously said, insects are everywhere. They're responsible for so many important processes. And the hardest thing with insects is that a lot of people are frightened of them but I think that's a fear that's learned rather than innate and the way I

work on connecting people with insects, it's just showing them. I love showing people their shapes and colours, getting them to sit quietly and watch and listen and observe.

And I find that's an incredibly powerful way. People realize, you know, here's this small creature that looks so alien and yet it's so much like us. They have all the challenges and emotions, I would even argue behaviours that we have and we face, and they interact with the world. And then the other thing about it is we couldn't survive today without insects.

Whether it's pollinating food, the food that we eat, the flowers of the food that we eat, or helping create soil or contributing to other ecosystem services, dealing with so many different aspects of life in the ecosystem that we take for granted.

Julia: I absolutely love the points you made about, uh, you know, having people see the shapes and colours of insects because I feel that's an amazing thing about insects. And I don't know if you've heard of Levon Biss but he's a photographer who's done really close up photographs of insects and showing how shiny and colorful they can be. He was exhibited at the Oxford Museum of Natural History a few years back and I thought this exhibition was one of like my favorite exhibition of all time. It was just amazing.

Dino: Fantastic. Yes, the colours and structures of insects, as an evolutionary biologist, that remains one of the most remarkable things that is a source of incredible wonder, research, and discovery. You know, of all the species described which is almost two million of them, over a million of those are insects.

So the simple, sheer diversity in the magnitude of insect forms and shapes and colours and life histories and behaviours out there is mind boggling. And actually, really, we should think of ourselves as guests on the planet of the insects. You know, this is not the planet of the apes. This is the planet of the insects! Ha ha.

Sofia: I love that concept as well! My next question bring us to a slightly different topic, but we know that a lot of people and some conservationists, consider the agricultural sector a bit as an enemy sometimes. And when we wereresearching about your work and what you do, you seem to have quite a different perspective. So we were wondering if you could tell us a bit more about that aspect of your work.

Dino: Thank you. That's a very important question. Agriculture is one of the biggest sources of severe negative impact on the environment. But agriculture is also the way in which the entire human population is sustained apart from maybe a very few remote communities that can still subsist, hunt or gather.

Everybody else on this planet is connected to the food systems and the earth through agriculture. And I find working with farmers, one of the most powerful and rewarding ways in which to connect with nature. Farmers are often portrayed as the enemy. And that's not good. That's not correct.

I don't believe that that's right, because I really believe that many farmers have a connection with nature that just needs to be better understood and they need help and support. And farmers all over the world are struggling in many ways, but we couldn't survive without them. You know, all the cities, the, the museums, the universities, the art, the music, the everything that we enjoy is underpinned by our food production systems.

And, and if they're not working well, we need to fix them. I learned to respect farmers growing up in a rural farming community, myself. And parts of my family were farmers and are farmers. And I think for me, something I learned early on from my mum is that you catch a lot more flies with honey than with vinegar.

So that's a philosophy that I've adopted in life is it's easier to work with people when you're listening to them when you're respectful towards them, when you're understanding. And I think in conservation, for me, the big success stories are really those ones that listen and respect, and engage and, you know, find a way of producing knowledge and solutions in a shared manner.

So one of my favourite things with farmers, because many farmers think insects are the devil incarnate, is when I show farmers insects up close and even aphids, you know, the bane of farmers and gardeners everywhere in the world. When I show a farmer, an aphid through a microscope or through a magnifying glass, they're just blown away and their jaw drops.

And they're suddenly filled with wonder, because there's this tiny aphid and it's giving birth and it's got eyes and legs and it's navigating this complex world and it's being preyed on by predators, lady bird, beetle, larvae, and lacewing larvae. And it's living in a group and they are all watching out for each other and they're terrified and joyful, and curious.

I think that for me what we really need is to engage more with farmers is the sense of wonder that we all share, whether it's in producing food or it's finding solutions for the planet that we're all part of.

Sofia: I love that even your guiding mottoes have to do with insects. Cause what are you trying to catch with the honey or the vinegar? I think that those are such lovely points about collaboration and the importance of respect within conservation projects. That just seemed to be so many dimensions to your work and I know that there's one other dimension to your work, which is that you're an artist and you're currently working on an illustrated book about grasses. So, what do you gain from your artistic side and how do you find it relates to your science as well?

Dino: Thank you. Yes, I'm an artist and I feel like it was art in some ways that led me into science. And when I was growing up in, in rural Kenya, in Western Kenya, in Eldoret, it's a small farming community, to be honest, I didn't have the easiest childhood

and to cope with some very difficult times I turned to drawing and I drew insects. I drew flowers and this provided for me a great sense of peace and a deep, deep connection with nature that I needed. I needed to heal from some pretty difficult things that I'd gone through as a child. And as a result of that, it also made me learn to be patient, to be still, to be quiet, and to observe things very, very deeply.

And in a way that actually allowed me to see, you know, with a clarity that I think is something that as scientists, we are always seeking. So I see art and science as a sort of interconnected way of experiencing the world. I don't see them as separate and I don't draw a line between art and science. I actually see many, many points at which they are integral.

Now the kind of art I do is in the tradition of natural history and many people who've studied natural history across the world have started out drawing and painting. Now we have cameras, but in the early days, when many naturalists and many people were exploring that was all they could do was draw and that drawing was a way of sharing that wonder, those colours, those shapes, the behaviours, you know, all these bizarre and wonderful things.

And I find that something that is innately human. Some of the oldest art in the world are depictions of animals of wildlife. And I think there's a reason for that. It's because we recognize the spiritual bond, this nutritional bond, this emotional bond with other beings on the planet. And I also believe that we have evolved as an evolutionary biologist I believe we've evolved to see detail. The details really matter. And by seeing that detail, we actually excite and connect and build parts of our brain and parts of our soul. And so I don't think it's unusual. What I think is unusual is that we lose that by being in cities and being educated in ways that disconnect us from nature.

And I think all fields would benefit from more immersion in natural history. And one of the things that I work on now is really trying to get more children and young people connected with nature. And the easiest way to do that is to go out and watch and think and observe, and then to draw. Draw with a pencil, paint, you know, just become part of that moment.And I think that for me is something very special and we all have it as children. It's just that some of us lose it and we should all think about maybe not losing it and keeping it.

Sofia: I loved what you were saying about the quality of attention that can be channeled by both science and art. I sometimes draw and take photographs as well and I think that you're right that it makes you see things through a completely different lens. Like you notice so many details and it's reminding me as well of this photographer called Anna Atkins, who, I don't know if you're familiar with her work, but she did cyanotypes in the 19th century. And she was essentially one of the first women photographers. And I think that spending time in nature and with components of nature in this way can just make us notice them and see them in a totally different way, which can be very beneficial for science as well.

Dino: Absolutely. I think I've seen some of her work and many scientists have actually started out as artists, at least in the past that was much more common. You see one of the worries I have today is this increasing focus on STEM (science, technology, engineering, and mathematics), which is very important, especially in a country like Kenya. But we mustn't do that at the expense of language and music and art and storytelling and all these other ways of understanding the world.

And I adore Greta Thunberg and she's just a hero for all of us, but the one thing I slightly disagree with her on is she keeps saying, listen to the scientists, which absolutely as a scientist, I'm thrilled and I believe in but I think we also need to listen to the artists and the philosophers and the poets and the musicians, because that message is just as important for our humanity and our role in the world.

Julia: I love that point and actually that kind of connects to our next question, which is: when you look at the future of the planet what makes you optimistic?

Dino: The future of the planet I think is exciting. I'm optimistic because of two things. One is the sheer resilience of nature. I've worked in Northern Kenya now for quite some time and this is a very harsh landscape. It's dry, it's hot. And yet life survives here, you know, it thrives in any space that it's given a chance. It rebounds, even if it's been abused and beaten down and exploited. And just the sheer resilience of seeds. Some of those plants that we study the seeds fall into the soil and the grasses. For example, there are species that bury themselves. They actually awakened when they land on the soil and they become animate and they bury themselves, they dig down into the soil, an individual seed can do this. And they wait there for years for decades, droughts come, fires, trampling hooves of animals come, but the day will arrive when that seed will find the right conditions and it will burst and spring to life. And that for me is one of my greatest sources of optimism is that the sheer abundance and resilience of life is unstoppable.

My other great source of optimism as a academic, as a scientist here at Mpala in Northern Kenya, we welcome students and scientists from all over the world. And for me, working with the students and just seeing the power of the passion they bring to follow questions to work really hard, and the willingness to really change things and shift paradigms, and think differently and demand accountability and change is very inspiring. I think we are seeing this in movements like Extinction Rebellion. We're seeing this in a demand across the world for racial justice and equity. We're seeing this in the wider social justice discussion that we're having. And we're seeing it in the changes that are happening in the environmental movement. This is because people are saying, I am part of this world and I demand that it be better run and better stewarded. Because we have that responsibility. We are stewards of the earth. We’re all its children. As you know, countless cultures and indigenous people across the world show this relationship with nature. It's a maternal relationship. And that for me is a really powerful thing. I just see the students are so less willing to take any nonsense.

They will cut through the BS and they will make things happen. And that passion and that drive is unstoppable.

Sofia: I love how the images of the students just breaking through and making things better and demanding change sort of aligns with your other image of the seed breaking and just kind of starting to grow.

Dino: We've seen places up here in the north where after decades of drought, and now obviously the effect of climate change, and they've been overgrazed, they've been burnt and destroyed, but if they are protected, literally within just one season with the right kind of seeds, just scattered over the soil, you'll go from bare, unproductive, desolate ground to lush, verdant gras filled with wild flowers and birds and insects and joy and, and sound. And to see that transformation happened so quickly, imagine if we could do that across so many different systems and habitats in the world, and we can! Even in England and in parts of the temperate world, just protecting a roadside verge and instead of mowing it, leaving wildflowers to grow in a single season that changes from a very sterile environment to one that's filled with life. And I think the idea of rewilding is something that's catching on because it really is a powerful way of re re-establishing the life support system that protect both us and other species on the planet.

Julia: And actually for listeners this episode will come probably in like a few weeks' time, but at the moment it's May in the UK and in my garden we've been doing No Mow May which is a campaign to increase flowers and make sure that insects have the food they need. And it's been really fun letting the garden go and see all the things that have just appeared in three weeks' time.

Dino: Oh, I love that!

Julia: What is the key advice that you have for any budding conservationists at the moment?

Dino: That is a very powerful question and a very difficult question. So the advice I would have for a young conservationist today is first of all, to be hopeful, even when it seems there is no hope. To be inspired, even when it feels that there's little to be inspired by to find a space that they can find that's celebration and sense of wonder that is what brought almost all of us in fact, all of us to our first, you know, discoveries and connection with nature. And that will be a source of nourishment in those very difficult times.

Sofia: Dino, we just have one last question for you, which the question that we ask all our guests on the podcast this season, do you think you could tell us about another conservationist who inspires you or has inspired you during your career and why?

Dino: One of my all-time heroes was one Wangari Maathai, the Kenyan environmentalist, who went on to win a Nobel Prize as well in, in the Peace Prize in

2010. But my current hero is Dr. Paula Kahumbu. Paula just won the Whitley Gold Award and has been an amazing voice and fighter and activist for conservation in east Africa, in Kenya for a long time. I've known Paula for over 20 years and it's just been so inspiring to see how fearless she is. And I think for me, you know, that is one of the key things right now.There's so much out there that is scary. That's happening around the environment and Paula brings to the fight this incredible energy and passion and charm, but also the willingness not to back down and not to be beaten down. And she will take on big corporations and government and international organizations and anyone that's trying to hurt wildlife and nature.

And then the other thing that has really touched me that Paula has done has been to tell the stories of conservationists, grassroot conservationists, young scientists, and passionate people on the front lines of nature uh, and wilderness here in Kenya, she started her own television series and some years ago I was part of the initial series. And now Paula has grown that to become the first major wildlife filmmaking and storytelling series that features Africans in their own voices from the grassroots from the front lines. And, and I just feel very humbled and privileged to have friends like Paula being a, being a conservationist can be very lonely at times, but because we have each other in the field, we have people like Paula who will stand up for the right thing. That helps because we know that we can always speak to someone who will understand why we're doing something, even when everyone is telling us to do it differently.

Sofia: What an amazing tribute to Paula! I love this idea of how important it is to have people who are willing to stand up, maybe don't give in to the fear and just continue to do what feels important to them. Thank you so much for being on the podcast. This has been an amazing conversation.

Dino: Thank you. And thank you so much for reaching out.

OUTRO

Sofia: Wow, that was such an amazing interview! After it concluded Dino confess to us that the whole time he'd been sitting there with a fly swatter trying to scare away hornbills who began to peck out the windows asking him for food. So that is some incredibly impressive multi-tasking. What did you think of the interview, Julia?

Julia: Well, I thought what was really interesting about his answer is the fact that the two people he mentioned were inspirational were people that were local to Kenya. So often you kind of need local heroes to get you into a field or get you interested. It's interesting to reflect on who are the people around you and in your own country, that kind of make a difference and are inspiring.

Sofia: I also liked that the qualities that he mentioned really admiring about Paula were these very human qualities. Things like having energy and passion and charm and determination. And just talking about the human aspect of doing these difficult things, like standing up to people who maybe are doing things that are not good for nature.

And another thing that I thought was really nice in the interview is the way that he talked about interlinking. So, for example, interlinking conservationists and the importance of that community, but also interlinking different systems and thinking across sort of mindsets and backgrounds. So the way that he had described in his story that the same bees are pollinating crops and endangered species. So it's really important to be able to work with farmers, understand that goals and kind of combined forces in a way.

Julia: And I think that's super interesting as well, this aspect of just making sure that you knew who your stakeholders are for your project when you're doing conservation work. And in that case, I thought it was really interesting how sometimes the agricultural sector is seen as the enemy and he was really emphasizing that seeing it that way is not necessarily very productive and that actually you really need to engage and work with people.

Sofia: Yeah. I mean, definitely communication. That's something that's absolutely crucial within conservation. And I wonder whether Dino from growing up in these rural areas actually did have a sort of perspective that allowed him to communicate and understand these rural farmers better than someone who maybe is coming in from another country or something like that. I think it's really great that he is working within a context that he knows to some extent.

Julia: And I think putting in the time to build these connections with people is just so important. But as you said, it's either you're already embedded within that context, or if you just make sure that you put in the time. And it connects really well as well with another thing that he brought up that I thought was quite interesting, which was that not only listening to scientists when it comes to like the future of the planet and everything that's happening, but also really listening to like philosophers writers, artists. I thought that was a really good point and something that sometimes we do tend to forget a bit.

Sofia: Definitely. I mean, we've thought about it a lot. I think I already liked the way that he said the art and science and maybe not as separate as we tend to think of them as, uh, I loved how he talked about the all of the benefits that art brings home. So they could be maybe therapeutic allowing contemplation, but also just having this attention to detail that I think science is really good for as well. And I loved the simplicity of the suggestion that he had for our listeners or for anyone who just wants to be more engaged in the natural world to go out, sit in nature and draw, and you can do that with different mediums. I suppose you could do it with pencils or pens or pastels or watercolors or whatever it is that you happen to have, or want to use but it's very doable, I think, which is really nice.

Julia: I think it also links up very nicely with the fact that with insects I think sometimes what happens is, you know, they can be like quite tiny. You sometimes see them as a nuisance when you have like wasps or when people see specific insects, they kind of think of the negative before thinking of the important work that all these insects do.

But I thought what was really cool is the way that he kind of said, you need people to see the beauty and the colours and the shape of insects. And I think it's a really great way to engage people with insects specifically kind of like growing up with the frame of the beauty and the amazement of just the way they look.

Sofia: And I loved how Dino was saying that he likes to show farmers aphids or other insects from this different perspective, kind of like the photographs that you were talking about, in order to make them see them in a different light. But obviously that takes a bit of effort and maybe some special equipment and things like that but I think that's something really beautiful about the notion that maybe just by showing someone something from a different perspective it might really change the way that relate to it. But I mean, that's the thing that is so difficult to do, isn't it in science communication, being able to push across a perspective.

Julia: Yeah, I always think of science communication as building bridges between different people, different perspectives. So I also thought that that was really quite striking when he mentioned that example. I thought: “what a great way to engage, again, different stakeholders with what's actually happening in their backyard, these creatures that they know exist but they haven't seen that close up before”. Building bridges! I think that's probably a great way to end this episode on, what do you think Sofia?

Sofia: Yes!

Julia: So we're really excited to be on season two. We'll have other episodes coming out soon so keep an eye on your feed. And as usual if you want to leave us a review, if you want to share this episode on social media, if you want to subscribe to the podcast on Spotify, it just helps us in the way that it makes people know we exist, which is quite important. And as usual, we always keen as well to hear your thoughts so if you have anything that comes to mind after listening to the episode, you can send us a voicemail at podcast@conservationoptimism.org.

Sofia: You can also write to us on Twitter @conservoptimism.

Julia: The Good Natured Podcast is hosted and produced by Sofia Castelló y Tickell and myself, Julia Migné. Our music is by Matthew Kemp and our transcripts are available thanks to the help of Alexandra Davis. The insect sounds in this episode are from Spanac and are available on the Free Sounds Library. This season of Good Natured is supported by the University of Oxford's Department of Public Engagement with Research Seed Fund, Synchronicity Earth, and the Whitley Fund for Nature.