S1 E2 Esteban Fernandez Juricic

42:09

SUMMARY KEYWORDS
animal behavior, birds, species, behavior, visual, research, question, field, animal, people, lab, society, scientists, lights, lead, reproducibility, study, called, foraging, variation

SPEAKERS
Esteban Fernandez Juricic, Amy Strauss, Magdalena Wlodarz

Esteban Fernandez Juricic 00:00

One of the wonderful things about animal behavior is that it's a thread that allows you to go from thinking from an evolutionary point of view from a developmental point of view from a functional point of view.

Amy Strauss 00:22

Hello, and welcome to the Animal Behavior Podcast. I'm Amy Strauss. In today's episode, I speak with Dr. Esteban Fernandez Juricic who performs question driven research that combines empirical, theoretical, and comparative approaches to explore topics spanning visually ecology, behavioral ecology, and conservation biology. In this episode, we talk about how vertebrates perceive the visual world around them. How variation in visual systems maps onto behavioral variation across species, and how understanding these systems can be applied to solve real world conservation problems, such as bird-airplane collision. Then, after the break, we talked about research reproducibility, an issue that Esteban is quite passionate about that has gotten recent attention across scientific fields. We close by hearing about his leadership within the Animal Behavior Society, and why he's excited about the future of the field of animal behavior. I hope you enjoy. Let us know what you think at animalbehaviorpod@gmail.com. My guest today is Dr. Esteban Fernandez Juricid, a Professor of Biological Sciences at Purdue University. He's also an elected fellow and the current president of the Animal Behavior Society. Esteban's research is highly interdisciplinary and his lab is highly collaborative using an evolutionary framework to investigate the mechanisms underlying animal behavior. He has made substantial contributions to our understanding of how visual perception shapes behavior, and has been a leader in bridging basic question driven research to applied conservation projects. Esteban. Welcome to the Animal Behavior Podcast. Thanks for being here.

Esteban Fernandez Juricic 02:01

Well, thank you for having me. It's a pleasure.

Amy Strauss 02:04

One of the overarching themes of your research program is about understanding how visual perception influences behavior in animals. In doing so you're working to link what we know about visual physiology, and what we know about how animals interact with each other and with their environments. Can you tell us a bit about these two areas and your work bringing them together?

Esteban Fernandez Juricic 02:25

During my first postdoc, I was fascinated by questions related to social cohesion in animal groups, particularly in birth. And I was trying to focus my attention on the mechanisms that animals use to stay connected with a flock. This is in the context of social foraging in birds. So as I was looking at these from both empirical and theoretical points of view, I became fascinated by some models of social foraging, and the assumptions that these models were making relative to how animals would gather information, particularly information from groups. And as I was doing that, I was exposed to literature on visual perception in birth. So I started reading the literature. And one of the things that I noticed is that there was a big gap between the assumptions of many of the social foraging models that I was trying to test empirically. And the way birds would actually be perceiving their world vision. So that fascinated me. And then I started working on ways in which we could reconcile these two sort of bodies of literature. And that process kind of led the initial direction of the research program that you just explained, which at the beginning was exploration at theoretical level, a lot of behavioral experiments, but very little visual physiology. So it wasn't until I became an assistant professor, that's when I started to bring into my lab, visual physiology techniques. So at first, we brought one technique, which was measuring the visual fields of birds how much by an ocular vision or lateral vision they have, and it was fascinating the insights that we were learning. Well, if we know the visual fields now we want to know how acuity varies within the visual field. Well, then we need to look into the retina. And you know, now that we're looking into the retina, let's look at color vision. In other words, you know, bla bla bla bla bla. Eventually right now, my lab has a pretty nice set up to investigate questions related to how visual perception affects behavior in birds on the other vertebrates. We can look at foraging behavior, anti predator behavior, mating behavior, collective behavior, and so forth.

Amy Strauss 04:47

How would you characterize the variation across birds or across vertebrates or across animals in these different areas: acuity, color, vision, etc. How much variation is out there and how generalizable are your discoveries in this area across species.

Esteban Fernandez Juricic 05:03

Let's start with birds and humans. The overall structure of the eye, there are a lot of commonalities. But there are also a lot of differences that likely affect the way we perceive the environment making it different from the way birds perceive their environment. Many bird species have their eyes more laterally placed. The species not just have binocular input, but they have very strong lateral input. They

have large eyes relative to their body masses. If we go into their retinas, then we can find out that birds have an extra cone that works in the context of color vision, birds can see color that we cannot. Birds also have in their cones, an organelle, called an oil droplet that filters light, we believe that those droplets enhance color discrimination. Birds tend to have a higher, simpler visual resolution. Overall, they're pretty remarkable differences in the way humans and birds might be perceiving the world. Now, when you get to birds, the degree of between species variation is just really, really high. One of the things that we were quite surprised about when we did a study of little finches is that we were expecting them to sort of converge. And actually what we found out is that even closely related species phylogenetically, there were huge differences. I guess, there are two implications of your question, What explains those differences, and how those differences affect behavior. And we're interested in both. Running the studies or the competitive level, considering multiple dimensional acuity, color vision, visual configuration so forth, it's you know, it's kind of a career wide goal. I have been extremely lucky. With grad students, postdocs technicians, and we have right now a database in the lab from which we try to inform a bunch of our behavioral work between 25-30 different species of birds. Comparative analysis can get us more interesting insight into the evolution of these deficiencies.

Amy Strauss 07:21

I imagine in these comparative studies, you may find that while phylogenetic relatedness may not explain variation in visual systems, there could be factors such as foraging strategy, ecological niche migratory status, that explain convergence on certain traits within the visual system.

Esteban Fernandez Juricic 07:37

With the information we have so far, which is not a lot, do we see some trends, and the caution here is that as more species are studied, those trends might completely disappear. For species that detect food items at farther distances, think of raptors, fly catchers, you know, that sort of thing. What seems to happen is that they have relatively narrow binocular fields, which we were not expecting. They have wide blind areas, which we were expecting, given that many are predatory species. They have in each eye, two centers of acute vision, we humans have a single center of acute vision, they cannot move their eyes a lot. Now, when you look at the species that they take for the close distances, think of a carnivorous species, right? They tend to have a really wide binocular field, relatively narrow blind areas, which makes sense, you know, the predators, they tend to have one center for acute vision. But the fascinating thing about that single center effective vision is that what we found so far is it does not project into their binocular fields, even though their binocular fields are really wide. So in humans, our visual sensory experience is such that our most acute vision coincides with our binocular field. So imagine these species in which that's not the case in which their high acuity vision is actually outside of their binocular field.

Amy Strauss 09:12

As with many animal behavior studies across sensory modalities and ecological contexts, it's so hard for us as humans to imagine the sensory world that the animals we study, and this is certainly no exception.

Esteban Fernandez Juricic 09:24

Maybe the answer lies in the brain in the way in which they're integrating that information. I think it's a gut feeling right? That the next frontier is trying to understand that integration process in the brain, and one eye is on one side, the other is on the other side. They are processing and integrating this information in a way that allows them to do fine. Finding means reproducing, avoiding predators, and so forth.

Amy Strauss 09:52

While you largely use birds as a model system, you're clear in that you approach your research through a question driven lens. Why have birds lend themselves so well for the kinds of questions you ask?

Esteban Fernandez Juricic 10:01

One of the reasons is because of the huge, huge diversity in their behavior, you know, and I'm talking about anything right - foraging mating, whatever you can think of. And also how that seems to also be matched at the physiological level, at least from a visual sensory point of view. So they're really interesting systems to understand the evolution of visual systems. And you know, loosely speaking, the coevolution between behavior and sensory experience. The other thing that which we started learning a few years ago, is, within a given species, there seems to be quite a bit of between individual variation in the visual system. So now we're trying to better understand what are the functional consequences of that variation? Most of the work that we have done has been in the context of nature, you have right there an opportunity to seek connections between... between individual variation and speciation and habitat configuration, and blah, blah, blah, blah. We're very early to be able to address questions at that level.

Amy Strauss 11:16

How would you define behavior?

Esteban Fernandez Juricic 11:19

It's an interesting question, right? What I'm going to say is absolutely incomplete. Absolutely. But I think about behavior a lot from a mechanistic point of view. So if you have an animal that is still well, I would argue there is behavior going on there. But you know, let's say that there is not a lot, but any variation in the position of the animal, in the orientation of the animal in three dimensional space in the movement of the animal, and so forth, is, in a way, is behavior. That's from a very descriptive point. The next layer, which is the one that many people are very interested in is, what does it mean? Number one, how the animal did that. And number two, why the animal did that? So I remember, when I first was exposed to animal behavior, as an undergrad, I was trying to do an undergrad thesis on the vocal behavior of parrots, I had to go to a protected area that was very far from where I used to live. This particular species of parrot was present in my local zoo. So what I decided to do at the beginning of all

this, because I didn't know, how do they be here, I don't know. So I would spend four hours a day for weeks feeding, I don't know, 10 meters, or 10 yards away from the big cage where these were just looking at it. You know, some people might think, Oh, my gosh, but the amount of insight that I got through that observational experience, I cannot begin to tell you. So then when I went to the field, I kind of got the vibe of the species. And it gave me an opportunity to, among other things predict, okay, so they are here, where should they go now? I don't think I would have gotten that without that process of surveying my study species. For any of the listeners who are studying in animal behavior, if there is kind of a tip, go and observe your study species, not necessarily in the context of your study, outside of that, some people might not have that species in the local zoo, or whatever. But that's the beauty of the resources that we have these days, you know? YouTube to check out the behavior, the amount of insight that you can get it pretty, pretty substantial.

Amy Strauss 13:40

This is great advice. And it's especially useful to hear right after you've shared all of this information about the advanced technologies you're using in your lab today to look into visual physiology. While high tech lab equipment can help us answer questions. There's a lot to be said for the insights that can come from simple organism observation. Along these lines, let's back up a bit. Can you tell us about your personal story or pathway to becoming the scientist you are today?

Esteban Fernandez Juricic 14:05

Right. So you know, I became fascinated about biology through the series Cosmos. That's what brought me into biology and science and STEM. I went into biology, actually, to study genetics. And you know, we had Genetics 101, right. And I was like, so so excited, you know, this is it for me. Unfortunately, I did not have a good experience. I don't think the instructor was really committed to encourage an environment in which learning about this was cool. And that was my expectation. So suddenly, I decided to quit biology. And then a friend of mine said, I think you need to come with me and we need to go and travel to Patagonia in Argentina. I was living in Argentina at that time, and just take a look at the penguins that the sea lions and the whales and I'm like... Just come with me. I went there and I fell in love with zoology, you know, organismal biology. And I went back, the rest is history in that I've been pursuing projects related to organismal biology. The way it worked out is that I first started studying marine mammals. Sea lions. It was really cool. Um, so I did a couple of research projects here. But then I started asking questions, and it was very difficult to answer these questions, because most of the year the sea lions are at sea foraging. So then I feel a little bit like, oh, you know, it's a shame that we cannot address these questions. I mean, we could if we had a lot of money, but I was not in such a lab. So then I sort of redirected my attention to birds simply because they became so called easier study species. They're not but, the easier study species to answer questions that I was very passionate about. And that sort of connects back to the question driven philosophy in my lab.

Amy Strauss 16:10

Something really exciting about your research program is that you perform basic curiosity driven research, and you also perform research that can be applied in a conservation context. I think this is

something you do really well, that others in the field may want to be able to do, but perhaps aren't sure how to bring in that applied angle. For example, how have you woven your basic research into your conservation work, and vice versa?

Esteban Fernandez Juricic 16:33

I owe it to a really good colleague and friend of mine, Brad Blackwell is research scientists at the USDA, I was an assistant professor in Long Beach, and we were thinking about the visual system in birds evolution, behavior, all this stuff. So one day, he calls me up, and he says, I have a problem. And the problem is that there are a high rate of collisions between birds and airplanes. And that's really bad for everybody involved in really, really bad cases, it could lead to crashes where people unfortunately die. So what we're trying to do here is to try to see potential solutions. And one of the things that we are pursuing is trying to develop lights to tell birds "Hey, I'm an airplane, and I'm flying really fast. Please move away." The problem that they had is they didn't know how birds will perceive those lights. So he reached out to me seeking help. Can you help us out here? Because we have no idea? Should we use a white light? Should the light be flashing? Or should be steady? And if it is flashing? At which rate should it be flashing? Do all birds see the same way, you know, so that got me into the application of all the things that we are doing to try to help different researchers and conservation practitioners solve some of these problems. Many of these problems, and it's not just birds colliding with airplanes, it's birds colliding with buildings, wind turbines, solar panels, one of the things that conservation practitioners are trying to do in that context is trying to modify the behavior of the bird. And the idea is, what can we use, from a visual point of view, given the birds are visually oriented organisms to try to steer them away? So, and in many cases, they try to explore the possibility of using visual stimuli. So then the overall question is, how can we tune that visual stimulus to the eye of the birds? I have to say that, in all the projects that we participate in, it has been extremely rewarding. I think, to solve these human wildlife interaction problems, we really need to be truly interdisciplinary. You know, one of the great examples is that in the last few years, the field of conservation physiology there is a journal now has shown this huge increase in attention. A part of that is the realization that to really be able to manipulate the behavior, you know, going back to behavior, we need to understand the physiological constraints that these animals have in order to help them out in a way.

Amy Strauss 19:23

And has the research progressed to a point yet, in which you have recommendations for say, planes or windmills or buildings on what kinds of lights might lead to these behavior changes to reduce bird collisions?

Esteban Fernandez Juricic 19:35

That's the million dollar question. Yes and no. I have these conversations with my colleague, Brad Blackwell, very regularly, is fascinating, the sort of clash of both worlds, we need a solution, right? And the sort of scientists more oriented towards basic science and you're trying to connect of course, well, you know, we need to be methodic and you know, blah, blah, blah, right. They are right, they need a solution tomorrow. Through the years of collaboration, not just with Brad, but with other people, we had

to make, you know, some kind of tough decisions to try to get to some partial solution. You can spend years collecting information on the visual system and how they perceive lives of a bunch of different species. But there is no unlimited funding, actually, funding is pretty limited. So at which point, you say well enough. In order for us to inform the engineers about the characteristics of the light, we have to characterize multiple components of the visual system of a given species. So given limited resources, what we decided to do is okay, we're going to, instead of dilute the resources, we're going to focus all of them on a single species, the Brown-Headed Cowbird. So we got to a point in which we were able to identify the so called visual sweet spots. So these are areas of the visual sensory space, conformed by different wavelengths, different speeds of lights, pulsing different distances, sizes of the lights, and so forth, and so forth. Where are the points in which we know that the retina will be stimulated the most.

Amy Strauss 21:23

So I'm curious how you go about finding this sweet spot. Is this lab work with live birds or computer modeling or behavioral trials in an aviary, or a combination of all of the above?

Esteban Fernandez Juricic 21:35

It's a combination of physiologic work, and more. So with those two things, you can get the sweet spot. Now, this is the beautiful thing about it. Okay, you identify the potential sweet spot, that doesn't mean that the animals are going to behave, the way you assume they're going to behave, it's a deep question, actually, because, okay, so the retina of the species will be highly stimulated. But that could lead to the animal saying, "Okay, I don't care", or the animal freaking out, or the animal, being attracted to the stimuli. The final step is to try to use the literature for mate choice and bring a preference test. So given a choice, would you choose this slide or not? Now, we have a pretty solid body of evidence that we can trace back all the way to the eye. These are physiological traits that cowbirds have. We model those traits, we use this visual model to identify these visual sweetspo. Of all these visual sweetspot, which ones would lead to avoidance behavior? Okay, these two. Okay, great. We are the phase in which we need to start communicating with engineers to try to see is there any way we can implement these lights in aircraft? Is a bunch of regulations that the Federal Aviation Administration have that limit your flexibility of producing those? So then you have to become creative? Can we use the existing lights and modify some components of existing lights? Obviously, the next step will be to test these in sort of, without these lights and with experimental lights, then, you know, can companies commercialize this information? So we're a few years away from those things. But I think we're moving in the right direction. This would not be possible without the willingness of these different stakeholders to invest in these sorts of integrative ideas. So this is not, oh, this happens all the time, right? No, it doesn't. These are people that say, You know what, let's give it a shot. Because maybe there is something here, this is important. And this shows, it shows two things. One, that there are many people invested in solving some pretty important conservation problems, thinking outside of the box. And number two, there is a willingness to integrate across disciplines. And that's not easy to do. Because each scientists in these multiple disciplines have different backgrounds, different ways of thinking about these, and trying to bring everybody on the same page is quite a bit of challenge. And I have to say that Brad Blackwell has done a fantastic job.

Amy Strauss 24:33

We're gonna pause now for a quick break. When we come back, we'll shift gears a bit and talk about open science and research reproducibility, as well as the past, present and future of the Animal Behavior Society. First, here's a two minute takeaway.

Magdalena Wlodarz 24:51

Hi, I'm Magda, a master's student from Germany. Currently working on my thesis about barn owls. I'm comparing young and adult barn owl pellets to see whether the parents feed their young other prey than those they consume themselves. Pellets contain the undigested regurgitated parts of their diet, such as skulls or jaws. The investment of parents, which you also may know, as parental care is a balancing act between the survival of the current brood and the parents chance for reproductive success in future. I expect the parents to give prey to their young, which is balanced in its benefit cost ratio. The owl is an opportunistic hunter and after a successful catch, it has two options. Do I eat it myself now? Or do I transport it to the nest box? The delivery of food costs energy and time, in addition to the added risk of injury while hunting. My research is an approach to confirm a characteristic food spectrum in young owls, while I'm taking different breeding places and their prey composition into account. I'm analyzing the biotopes close to the nest boxes to figure out why the owl has chosen this place. If we know what owl parents are looking for, we can use the knowledge for better fitted conservation projects. Owls are important in reducing small animal populations, which make them an excellent natural pest control. Thank you for listening.

Amy Strauss 26:28

And we're back. On this side of the break, I'd like to talk first about an issue that's gained widespread attention recently within the broad scientific community. And that's research reproducibility. There are many people working hard to raise awareness and come up with actionable steps towards addressing the concerning research reproducibility situation, and you're one of those people. Can you start by explaining or defining what is meant by the term research reproducibility.

Esteban Fernandez Juricic 26:54

One of the tenets of the scientific endeavor is that we do research and we report research in such a way that theoretically, other scientists should be able to replicate our work and hopefully get similar results. And that's why we tell our students the detail in the Materials and Methods section. And you know, make sure you write everything you have done, blah, blah, blah. That's something that is prevalent in science. Now, the next question is, well, does that happen often? Do people go and rerun experiments from other scientists on a regular basis? And the answer, unfortunately, for different reasons, is no not very frequently. That's an interesting thing, because we are running science under the assumption that well, everything should be reproducible. So what some scientists have been talking about for many years now, actually, can we check just to make sure? And when people have gone and checked, they were shocked. Because the answer was actually no. And this has been done in multiple fields within medicine in the psychological sciences more recently, and the rates of replication, they are

not high. That's a problem. We are relying on these studies to some extent that cannot be replicated to make multiple conclusions about a particular scientific field. And one easy way to think about this, the psychologists have talked about this at length, many of the papers that they try to replicate are in psychology book. So they're shaping a given field, well, then the field loses its shape. And you know, where are we? Are there trends or not? The reproducibility crisis, as many people call it is this inability to reproduce these landmark studies that we tend to rely on. So then the question is, well, what can we do to tackle that problem?

Amy Strauss 29:01

Right. As a student of science, we learn that studies must be designed, carried out and reported in a way that's replicable. But when picking a project, we're trained to identify something new or novel that nobody's ever done. So we're not directed towards ever considering running a replication study.

Esteban Fernandez Juricic 29:17

Many people argue that what you just said, is one of the many reasons we are in the situation we are right. We put the incentives on, it has to be something new. So everybody is in this race to... I have to be different. It has to be novel, right? It's not that it doesn't need to be like that. It's okay like that. But it's trying to balance that. If it is something novel that you do, can you replicate. We have to also acknowledge that in ecology, evolutionary biology, particularly if you do field studies replicating the study might be in some cases impossible. So there are so many things to balance here. I don't believe we have to be on one extreme or the other. I think we really need to explore the grades and try to balance things a little bit more.

Amy Strauss 30:04

At the 2020 Animal Behavior Society meeting, you co organized a symposium on this topic with Dr. Ambika Kamath, can you tell us about what inspired you and Ambika to put this symposium together? And how you came to be particularly interested in this issue originally.

Esteban Fernandez Juricic 30:19
So one of the issues that I've been noticing for many years in my lab is how low reproducibility we have. So let me give you a very specific scenario, right? So a PhD student, super productive graduates moves on to something else. So of course, by the moment of graduation, and moving on, some papers are published, some papers are not published. So grad student takes on new tasks, grad student says, I'm super busy, I won't have time to lead the paper, but feel free to leave the paper if you want to, and you know, I'll help. So then I go great. Happy to do so. And I start reading the methods and I go, oh, no, we need more detail. The random structure of the mix model needs to be explained in the methods. Oh, I cannot find the code, although I have all the files, but the files are labeled in a way that I don't understand. I open a folder that says data, there are 300 files all with code. And then the consequence of that, is that very likely that paper will never see the light. I started thinking about this and say, well do people have this problem or is it just me. So I started learning about research, reproducibility, and how you can streamline the process within the lab of improving the communication between different lab

members across time. And that led me to, to sort of a big push in my lab to... Hey, we need to change because this is not sustainable. So much unpublished work. And it's because to a larger degree, it's this problem of reproducibility within the lab. So that led me to experience firsthand the process of trying to become reproducible in the lab. And it was really, really tough, not just for me, but for all my grad students.

Amy Strauss 32:06

So I imagine this endeavor involves a lot of standardization across the lab, which may be different from what many of us are used to, in which each person organizes and analyzes their science in whatever way works best for them.

Esteban Fernandez Juricic 32:18

It required that, you know, some people were using some stats using SPSS. No, no, no, we all need to use R, so we can share all these in the single platform, training everybody in R including myself in different types of analysis. They're really time consuming and paper productivity during that period of time tanked. As I learn more about the relevance of doing these, not just within labs, but between labs. In doing that, talking to other colleagues within the society, or the members of the society, feeling that we were not all on the same page. We felt the need to come up with this symposium to try to bring these issues to the table.

Amy Strauss 33:02

I attended the symposium and thought it was really effective at communicating that message. And from what I could tell it was well received across the society. How do you think it went? And what do you think our current priorities in this area?

Esteban Fernandez Juricic 33:14

These are personal points of view? Okay, so I'm not speaking on behalf of the society or the leaders. I do think that we need to put some thought on the well being of the discipline, because I'm pretty sure everybody, every member of the society and every person on planet Earth doing animal behavior would love to see animal behavior keep growing as a discipline as a healthy discipline. We need to engage in a process of self assessment, what are the things that are working? And what are the things that are not working relative to these science reform movement, as some people call? My personal viewpoint is that there are many things that we can do at the level of the society, the way we submit them, our manuscripts, the way the editors of journals process and assess those manuscripts. And the same applies for... for reviewers. There is an overemphasis on did you get significant results? Yes, great! No, oh, I'm so sorry. I'm really, really sorry. You don't have a career, I guess, well have a great life. But that's, that is a misunderstanding of what a p-value means. So that doesn't mean oh, we need to get rid of the p-values. I'm not a proponent of that. Big proponent of we need to look at the p-values. And along the same lines, we need to look at the effect size. Are those effect sizes representative of behavioral change? If they are, what does it mean functionally for the animal? We're not having that

conversation. This has led to the so called p-hacking process. So that's something we need to work on as a community. Another thing that we need to be working on is this over reliance on "Oh, you're testing hypotheses, your paper is better than if you're doing descriptive research." That's not how science works. So both have value that has led in some situations to editors or reviewers saying, "Oh, you didn't have your hypotheses, write one now." If that hypothesis was not developed before collecting the data, then we have a bias called HARK: Hypotheses After Results are Known. HARKing leads to a misrepresentation of the way we publish research and the way we interpret research.

Amy Strauss 35:41

Can you tell me about one realistic action step that you feel can be taken now towards improving the situation in animal behavior?

Esteban Fernandez Juricic 35:48

Most journals now say. Well, you have to submit your paper and the date. Not very many journals say you also have to submit the code for the first submission for the peer review process. And some authors don't want to do that, some authors have no problem doing that. So that's an easy way to improve reproducibility, we can provide feedback to the author's relative to everything. Did they analyze these data the right way, given the the structure of the dataset? So many people say, "Well, you know, I ran out the linear mixed model." Tell me more about your random structure. Tell me about your fixed effects. Tell me about the way you are interpreting those fixed effects. People argue against this. Well, that's more work for the reviewers. Indeed, it is but we are providing a higher level of assessment of the manuscript, and we're making the research more transparent, I would argue of better quality.

Amy Strauss 36:53

Shifting gears a bit, you're the current president of the Animal Behavior Society, what do you see as the role of the ABS president and what drove your interest in serving the society in this way?

Esteban Fernandez Juricic 37:04

First of all, it has been an honor to serve as President of the Society. I didn't grow up in the US, I came here as a postdoc. And eventually, I was very fortunate to get a faculty position. It was difficult for me to integrate myself in the local academic community, and the Animal Behavior Society, opened its arms and embrace me from day one. It has been such a friendly society, such a wonderful place to find colleagues who would be willing to mentor me, and I'm trying to give back. And that's what I've been trying to do. Not by myself. There are three other presidents that helped me all the time, we're in constant communication. There is an executive committee that assesses new initiatives and vote. So this is more of a group endeavor than you know, just me right. A few years ago, we decided to develop a new communication strategy that involves heavy footprint and heavy investment in social media, and particularly one platform, which was Twitter. And as you know, because you were part of the initial Social Media Committee, we grew in a fantastic way. So we went from close to 400 followers two years or so ago to now over 8000 followers. In that communication strategy, we're trying to promote the

research of early career researchers and underrepresented groups in different ways. We have teamed up with ASAB, which is our counterpart, the Association for the Study of Animal Behavior in the UK to organize the first Global Animal Behavior conference on Twitter, our hashtag was viewed by, got 70 million views. We launched the animal behavior YouTube channel, we develop with one group within the ranks of the society, the Black in Animal Behavior Twitter campaign that even got media attention. We are supporting workshops in Latin America, we're supporting virtual courses being taught by researchers in Latin America, and also researchers in North America. I think by doing these things, we are creating more space for early career researchers to feel more comfortable in doing their science.

Amy Strauss 39:24

Well, thank you for all the hard work you've done for the society. It's exciting to see this progress in action. And to get a bit of insight from your perspective. I want to close out our interview with two broad questions. First, why do you study animal behavior?

Esteban Fernandez Juricic 39:38

Because it's so cool. You can go into the sensory system and connect it with behavior as we're doing. You can go and derive applied implications with potential conservation applications and you do all these but by navigating the field of animal behavior, and that's extremely attractive to me.

Amy Strauss 39:59

Lastly, What excites you about the future of animal behavior?

Esteban Fernandez Juricic 40:04

The early career researchers, I think we are so lucky to have the junior scientists that we have. And I'm so proud of all the early career researchers doing animal behavior. They have taken the lead to try to make the field a better field. And I think that in a way, it's the responsibility of the more senior scientists to create an environment in which all of you are going to thrive in the next step. That's what makes me extremely excited seeing the new generation of scientists go through the ranks. We're going to be great.

Amy Strauss 40:46

Dr. Esteban Fernandez Juricic, thank you so much for joining us today. I enjoyed our conversation.

Esteban Fernandez Juricic 40:52

Thank you for having me.

Amy Strauss 40:53

The Animal Behavior Podcast is produced by me, Amy Strauss, and Matthew Zipple. If you like what you heard, please subscribe wherever you're listening now, leave us a rating or review and share us with your friends and colleagues. You can contact us at animalbehaviorpod@gmail.com and find us on Twitter @AnimalBehavPod or just search our full name. Our theme song is by Sally Street, Assistant Professor in evolutionary anthropology at Durham University in the UK. You can find her on SoundCloud under the artists name RainbowRoad. Musical transitions by André Gonçalves, a researcher at the Primate Research Institute at Kyoto University. His Twitter handle is @fieryangelsfell. Our logo was designed by Adeline Durand-Monteil, a master's student in ecology and evolution. You can find a link to her website in the show notes. The Animal Behavior Podcast is produced with support from the Animal Behavior Society. Thanks for listening, and we'll catch you next time