Episode 52: Field Safety

[intro clip]

Susan: Hi everyone, welcome to Making Waves. My name is Susan Washko, and I'm here with my co-host Eric Moody, to talk a little bit about field safety. In Episode 44, we demonstrated the importance of field experiences for undergraduate students. However, students in the field, they experience what they're going through in different ways due to their different identities. So, field safety is increasingly being discussed for improving diversity, equity and inclusion in science. We wanted to dedicate an episode specifically to this type of information because the aquatic sciences can be especially perilous because being near water can be dangerous. Students might not know how to swim, they might not be able to judge the depth of the water velocity or be able to tell if the water quality is questionable, they might not have the gear to be comfortable while being wet or students working in rural or urban settings could face potentially threatening encounters with other people. And all of these different dangers can be exacerbated in the field. Being a woman, a person of color, someone who's identifying as LGBTQ. So today, we would like to chat with some experts to learn about what instructors, mentors, and supervisors need to consider before bringing students to aquatic field sites or to the field in general. So today we have Jabari Jones, and Lauren Diaz. And would you mind introducing yourself for our audience?

Lauren: My name is Lauren Diaz. I'm currently a PhD student at Oregon State, and I consider myself a general freshwater ecologist I mostly work on critters like amphibians and fish.

Jabari: Jabari Jones, PhD candidate at the University of Minnesota, studying hydrology and geomorphology and generally interested in how rivers change over time.

Eric: All right. Thanks, Lauren and Jabari. This is Eric Moody talking now. So, I'm going to start us off with a first question which is, generally speaking, what are some of the hazards that you prepare for if you're taking students or your employees or people you supervise into the field to do field work in aquatic environments?

Lauren: The three big things that I would think of are the weather, the experience level of the student or employee, and also maybe the surrounding cultural landscape and how comfortable that person is with those landscapes. In terms of whether, especially when it comes to like clothing and gear, it's really easy for people who have grown up being outdoors to know exactly what to do. It's kind of like second nature. But I mean, a lot of people of color, a lot of people coming from immigrant communities don't really spend that much time in nature, not because there's no intrinsic interest but a lot of it is just it's harder to do, it's kind of expensive, so we may not know like, Oh, you shouldn't really wear cotton if it's going to be cold and wet or how many layers to bring if it's going to be cold. And I know that I've been in situations where I was not prepared, and nobody told me, so I didn't know and I was freezing and extremely uncomfortable and it's hard to do a good job, you know, if you're just extremely uncomfortable so it's best to just assume nobody knows anything I guess, and really lay it out and just make sure that everybody knows exactly what they're getting themselves into and if people don't have the appropriate gear, like as a company, as an agency provide it. Don't assume that they have the right jackets don't assume that they have the right kind of sun protective equipment just, you know, it should not be on them to purchase it. So, that's my two cents on that.

Jabari: Yeah, I think, in addition to those things, I try to think about every single thing that a field experience is going to entail. Starting from, you know, how are we going to get there, to if we're driving to the field site, how many cars are we taking? Does everybody know directions to get there? What happens if their phone dies while they're driving, you know, do you need to print out a printed set of directions to make sure that people can get there on time and sort of being that detail-oriented when thinking about each step. So if we're working in a river, what's the water level going to be? How tall are the students? If they're wearing waders and they're short, there's more risk that their waders are going to overtop versus somebody who's seven and a half feet tall, right? All of those kinds of things are factors that you want to think about, and be as detailed as possible and sort of listing each of the potential risks or dangers or pitfalls that you could run into.

Lauren: Also I think it's really important to not send people out alone if at all possible. A lot of times we work in really remote areas, we may not have cell service, if you're out there alone, which I've had a truck break down like super far down a forest road with no service, and it's a bit stressful and a bit scary. So I think that's really important. And just having a workplace culture of empathy and respect, rather than competition, so that people feel okay speaking out when they're uncomfortable, so that they feel okay speaking out when they don't know something or don't know what they're supposed to do. I think that also keeps people really safe.

Susan: I know you just mentioned some strategies within those contexts, but are there any really specific strategies that you use to make field work safe for all the people that are involved?

Jabari: I think for me, thinking about each detail helps you to think about strategies for keeping things safe. So if you list out each of those potential risks, and you think about what a solution or what a plan that you need to have ahead of time would be. So, if you know it's a rendezvous at a field site where everybody is driving separately, having everyone making sure that everyone has contact information so that if they are running late, or if their car breaks down, they know who to call. Lauren already mentioned providing gear and making that available for people who might not have it. And I think being really explicit upfront about what the experience is going to entail can help everyone to plan for that experience. And then, as Lauren also mentioned having a culture where people feel comfortable saying, oh I don't have those things, can they be provided for me as a way to ensure that people feel comfortable getting what they need so that they can be safe.

Lauren: Yeah, there's maybe some specific concrete things like contact landowners even if you're not going to be on their property. I have a small anecdote where a labmate of mine had a gun pointed at him, even though he was technically on public land, but the neighbors not perceive it as such. So, that's something that can be done, having pre-field work meetings to go over any potential concerns, and even active bystander training that everybody takes part in, so that when you're out in a team, and something seems to be going wrong and you know you have kind of a sketchy encounter, how can we help each other out, how can we safely navigate this situation?

Jabari: Yeah, I think there are other trainings that could be useful as well like first aid, ensuring that at least somebody has wilderness first aid training in case someone gets hurt in the field. If

you're going to be working in fast moving water bodies, maybe someone on the team needs to take a swift water rescue course, things like that.

Eric: Lauren, you mentioned that people who have spent a lot of time outdoors, they're used to being outdoors feeling comfortable in that scenario, kind of know how to prepare and know what hazards they might face. But people may have a harder time empathizing with how other people may feel in that setting. And so I was wondering if you could talk a little bit about how some of the hazards and strategies you discussed are particularly relevant to people of color, women, and/or queer scientists working in the field.

Lauren: Yeah, I think, especially when you are white, or cishet, or a man, there are things that you don't even consider to be a risk because you never think about them. And, you know, this goes back to having a workplace culture of empathy and respect where you want people to feel comfortable, you want them to feel safe coming to you, if they if they feel uncomfortable with something. And I mean I'm Cuban-American, but I'm really white-passing so that keeps me safe, I'm queer but I am also passing so that keeps me safe, and I can't really speak to my experience in those situations. But definitely as a woman, there's kind of like an always looming cloud of violence that kind of follows us everywhere we go. And it's something that men don't think about, they don't think about if they're going to be safe if they step out of the truck for five seconds in a rural area. But I've had some situations where I am going out into really remote areas, and I would see a lot of hunters and I was by myself. And every time I would see one it would be like, well I hope this man with a gun chooses to not hurt me. And in those situations it's best not to be alone. So yeah, that would help a lot. Yeah, just make sure that you have conversations with people about what they're willing to do what they're comfortable with. I had a friend during my masters, she was trans, and she was working in a remote area in the south, and had to live in this kind of small town and do her life there and get groceries, and was actively harassed multiple times just like, existing in the town. And it wasn't really something that was understood by her advisors very much, and it ended up that she quit her whole program because of it. So, we're losing out on valuable scientists. And it just it doesn't need to be that way. We as humans matter, as well as the data we're trying to collect.

Jabari: Yeah, I, I've had some experiences. So I'm African American, and I've worked in lots of rural places around the US, some in the rural south where some of the field sites we went to we would drive by 20 Confederate flags on the way to our field site. And I never felt like, oh no somebody's going to run out of his house with a gun and attack me, but even that sort of baseline level of anxiety about, I'm going to a place where people that look like me are not welcome or historically have not been welcomed is sort of always sitting in the back of your mind when you're working in those kinds of spaces. And it's difficult to know from a supervisory position, exactly what you could do to alleviate that. And I think, Lauren was talking about this a little bit that, you know, thinking about thinking that through ahead of time and having those conversations ahead of time to say, Are you comfortable going to this place, knowing what the history has been there, knowing that there's a potential for discomfort or even danger outright? Are you comfortable doing that work, can we send someone with you? Would it be best if we send someone with you? These are the kinds of conversations that you could have ahead of time to alleviate some of that stress, I think.

Lauren: Yeah, and I'll add to that that it's a hard thing to deal with as a supervisor as a professor, because these problems are not like something we can solve, you know they're societal problems. So, at the end of the day, the work, a lot of time just needs to get done, and you're not going to hire white men because it's easier to send them out in the field versus hiring women and people of color. So, if there's not really a clear answer, I guess. But also just not avoiding these topics at work, I think a lot of people feel uncomfortable talking about these things if they've been around for a while. Society has changed so much in the last like 10-15 years that a lot of people who have been in these positions for decades, this is all very kind of new and overwhelming to have these kinds of not business-like conversations at work that deal with personal things. But, I mean, it's just necessary.

Eric: Yeah, I think it's important to note the point of those stories that you shared with us shouldn't be that transgender or Black people shouldn't go into aquatic ecology, it's that it's on us as mentors, or instructors, or supervisors to make a safe environment for everyone to work.

Jabari: Yeah. I think one other thing that I think of as a strategy to potentially do that is to work with any partners you're working with early on to tell them, hey, these are the students that we have coming to the field. So say you're going to, you know, the National Forest for a national forest to do field work, contacting the Rangers in the National Forest ahead of time and saying, "we're bringing these students into the field for these dates, you know, if we run into any trouble, who in your office could we contact, you know, to come out and help us if there were a situation" would be kind of a concrete action you could take ahead of time to catch some of those problems.

Susan: Thanks so much for sharing those stories and tips, I think it's really, really helpful to hear, especially for people who want to lead people in the field I think that's really important. So you all still do field work, despite the hazards. why is it worth it to you?

Jabari: I think ultimately there's data that needs to be collected. If there is a particular place that you're interested in, and you need to know the settlement transport rate, the only way you're going to get it is to go there and measure sediment transport in the river. And so, for certain questions you just, you don't have a choice about whether or not you go to the field, but for me personally I also love doing fieldwork. It's what drew me into the science in the first place was that I got to go and camp in beautiful, spectacular places, and to ask and investigate interesting questions about the earth, and about these particular places and to understand their dynamics and what makes them interesting. Yeah, I think for me, those are the two reasons that I do it.

Lauren: Yeah, along similar lines. I mean, most of us get into this field because we love fieldwork. You know I didn't really grew up going outside too much, I come from a big city. And so going to college and, you know, majoring in wildlife, my field trips were pretty much my first experience with like real nature,like I didn't camp until I was 20. And I was just like so blown away by the fact there's like whole jobs where you can go and catch animals, and that like totally made me fall in love and I just keep falling more in love the more fieldwork I do. And so that makes it worth it and at the end of the day, maybe I don't actively think of the safety concerns most of the time, even though they're always kind of in the back of your mind sometimes, they have never really stopped me. But I have had second thoughts sometimes like, "oh, maybe I should go tomorrow instead of going today because the weather's better or

because I can get someone to come with me” or something like that. But yeah, the work needs to get done, we're all here because we believe in the science and we want to do something for these systems that we love. And the more you experience being out in the field, the more you also understand the system and the greater insights you can have.

Jabari: And I think from a teaching perspective, you know there's that potential to inspire students right that Lauren was just talking about that all of a sudden you get a student in your classroom and you tell them “there's this field, this career out there where you get to go outside and jump around in rivers for a living.” And that has the potential to, you know, lead somebody down a path where that's what they want to do. And then you're also imparting skills for them, you know if they're going into that career path, they have to learn how to do those things and so I think taking students into the field is critical in that way.

Eric: Thank you for sharing all of your experiences and perspectives, and particularly inspiring us that field work is so important and can be so enjoyable. I wanted to just close by giving you the opportunity to share any other final thoughts you have about this topic that may not have come up in any of the questions that we asked.

Lauren: I will just reiterate that communication is honestly the key to all of this, and acceptance of those around you. If people feel like they can be themselves, and they feel like they can voice how they feel about things, everyone is going to be happier, everyone's going to be more productive, and everyone's going to be safer.

Jabari: Make sure that everyone has food. I did some fieldwork earlier this summer where we skipped lunch one day because we were trying to really finish getting some data and it made me very cranky.

Lauren: And water.

Eric: Thanks again. To recap our discussion, you just heard from Lauren Diaz, a PhD student at Oregon State University, and Jabari Jones, a PhD student at the University of Minnesota, about the importance of keeping everyone safe when you’re taking students, employees, or yourself out into the field.