

**For the Aspiring  
Wildlife Biologist**



**By Christy Fuhrmann**

# **For the Aspiring Wildlife Biologist**

Honors Thesis

Presented in Partial Fulfillment of the Requirements for the  
University Honors Program  
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By

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## **Abstract**

*For the Aspiring Wildlife Biologist* is a narrative-based resource designed to provide practical advice, personal insight, and motivation for undergraduate students pursuing wildlife biology. While classes build necessary knowledge and skills, they often lack the storytelling and personal perspectives that help students understand the realities of the field. To bridge this gap, each chapter features an interview with a wildlife professional - ranging from graduate students and professors to those outside of academia - highlighting pivotal career moments, field experiences, lessons learned, and advice for students. By presenting these perspectives through creative nonfiction, the project emphasizes the power of storytelling to make guidance for aspiring wildlife biology students more memorable and accessible. Ultimately, the book serves as both an introduction to the variety of paths within wildlife biology and a source of encouragement for students navigating their own academic and professional journeys.

## **Description**

University Honors Program  
Fish, Wildlife, and Conservation Biology

## **Subjects**

career  
college students  
conservation  
firsthand accounts  
guide  
interviews  
mentorship  
narrative  
professional development  
story  
storytelling  
undergraduates  
wildlife biology

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*\*\*Photos included throughout this project were provided by both the author, Christy Fuhrmann, and the interviewees featured in their respective chapters. All animals depicted in photographs were pictured over the course of research conducted with appropriate permits in place.\*\**

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## Introduction

When I began my Honors pre-thesis course and started to think about what I wanted my project to be on I knew right away I wanted to do something non-traditional. That is, I didn't want to pursue research or complete a literature review. Now, don't get me wrong, I love science, and those formats are both interesting and very important for conveying scientific information. Yet for my project I wanted to do something different.

To give some context, as I am completing my thesis project I am currently in my second-to-last semester of my senior year here at Colorado State University. I am a part of Warner College of Natural Resources pursuing a Bachelor of Science in Fish, Wildlife, and Conservation Biology with a concentration in wildlife biology. This of course means I am a giant nerd for the outdoors and wildlife. I've spent my whole life growing up in an outdoorsy family camping, riding ATVs, fishing, hunting, and altogether just running around outside chasing wildlife-related adventures. However, I am also a nerd for reading and writing. I've always enjoyed writing, especially in the creative genre. So, when I was deciding upon a thesis project, I knew I wanted to combine these two passions somehow.

At first, I bounced around a few ideas relating to just fictional creative works – such as writing a story in the perspective of an animal as a way to both entertain but also provide scientific facts about different species. This is a subject I may still pursue one day, but for this project I wanted the premise to be a bit more meaningful than just a fun little story. Eventually, I landed on the creative nonfiction genre. I started thinking about my own experiences as a wildlife biology student, particularly in relation to my first two years, and realized there was something lacking in the curriculum: story.

Some professors will still share fun little facts or field experiences in class, but ultimately the goal of courses is to learn the subject, gain a few practical and necessary skills, and then move on to the next course. While that's certainly the point of pursuing an education, there's a degree of impersonality in it. And when one is just starting out, it can feel confusing, or even plain directionless, trying to figure out where to go. I remember having plenty of questions when I first started out: What should I expect from

the workforce? What jobs exist? What experiences do I need? Many of these questions just couldn't be answered in the scope of the classroom.

I was fortunate to have the time to pursue extracurriculars outside of the classroom. This is something that I, and others in this book, highly recommend trying if able. There are so many amazing organizations on campus that provide hands-on experience and opportunities to discover things that would never have been encountered through coursework alone. While classes offer the knowledge needed to pursue this field, there's no practical course or guide for what students should do outside of class. That's why, for my project, I decided to bridge this gap by creating a resource that offers both practical advice and personal insights from wildlife professionals in the field.

Each chapter in this book will focus on an interview with one wildlife professional – ranging from graduate students to professors to people working in organizations outside academia. Everyone comes from a different background and with different goals in mind, so I wanted to provide students with a variety of perspectives and backgrounds to consider. My hope is that someone's experiences in this book will speak to students in some way, whether that's from their personal backgrounds, stories, or general advice.

As for format, I chose a narrative-style approach because I believe in the power of storytelling. While I could present this information as a straightforward guide with just general advice, I find that stories make lessons more impactful and memorable. Furthermore, there are real benefits of narrative and first-hand accounts when it comes to mentorship and lessons, which will be explored in the next chapter. By incorporating personal narratives from wildlife professionals, such as pivotal career moments or favorite field experiences, I hope to create a more engaging resource for students.

Ultimately, my goal is to provide wildlife biology students with a meaningful, accessible guide that helps them explore the field, gain valuable insights from experienced professionals, enjoy a few fun stories, and hopefully feel even more motivated to pursue their passions.

## **Chapter 1: The Power of Narrative & Mentorship**

The power of narrative and mentorship extends beyond entertaining career stories or general advice – it plays a critical role in shaping students’ career identities and perceptions of their future roles (Atkins et al., 2020). In wildlife biology, many students enter the field with only a surface-level and impersonal perception of what the career entails – often imagining themselves simply “working with wildlife” outdoors. As a result, their sense of personal purpose and understanding of where they might belong within the field remains underdeveloped. This uncertainty can foster self-doubt and a sense of loss, which in turn may contribute to stress, anxiety, and depression (Paolucci et al., 2021). Therefore, integrating career storytelling through firsthand narratives and mentorship can provide a powerful tool for supporting students’ career and academic growth. Through storytelling, students can see the challenges, successes, and moments of discovery that shape real careers. Together, mentorship and narrative form complementary frameworks that help foster scientific identity, strengthen mental and social wellbeing, improve academic engagement, expand awareness of career pathways, deepen understanding of the field as a whole, and support professional development (Atkins et al., 2020; Paolucci et al., 2021; Ramirez, 2012; Snowden, 2012).

Mentorship and career advising offers numerous practical benefits for students’ academic and career readiness. Research shows that mentored students are often more satisfied with their chosen majors, demonstrate stronger academic performance, and are more likely to persist to graduation (Ramirez, 2012). Mentorship that incorporates career storytelling is particularly powerful, as it exposes students to career paths and advanced studies they may have never previously considered (Ramirez, 2012). Beyond these practical outcomes, storytelling also supports the development of a narrative identity – building a sense of meaning, purpose, and coherence that helps students understand who they are and the roles they wish to play within their chosen field (Turner et al., 2025).

At its core, identity is a self-defined set of attributes that shape how individuals perceive themselves within a particular role or community – for example, a scientific

identity emerges when one begins to see themselves as “a scientist” (Atkins et al., 2020). For wildlife biologists, this would be when one begins to consider themselves a ‘wildlife biologist or ‘wildlife manager.’ Identities are constructed through self-recognition and experiences that reinforce this sense of belonging. For students in STEM fields, developing such an identity is crucial for academic performance, retention, and degree completion (Atkins et al., 2020; Ramirez, 2012). One effective strategy for fostering scientific identity is mentorship. Mentorship programs can raise GPAs, strengthen self-efficacy, and help students clarify academic and career goals (Atkins et al., 2020; Snowden, 2012). Mentorship also plays a key role in promoting diversity and inclusion in STEM, particularly by supporting students from underrepresented backgrounds. For example, studies have found that women of color develop stronger scientific identities when mentored and recognized by other women of color (Atkins et al., 2020; Ramirez, 2012). Offering mentorship that reflects a diversity of backgrounds and perspectives allows students to encounter voices and experiences they can relate to. Such representation is an essential component of identity development and belonging in science.

Beyond traditional professor–undergraduate mentorship programs, peer mentorship offers its own unique benefits for student mental well-being and academic success. High rates of anxiety and depression are well-documented among undergraduate students, and peer mentorship is a strategy that can help alleviate these challenges (Paolucci et al., 2021). Such mentorship can reduce stress, improve psychological well-being, increase social support, and even promote leadership skills in some scenarios (Paolucci et al., 2021). By engaging in peer mentorship, students are encouraged to participate earlier and more actively in academics, develop subject matter expertise and critical thinking skills through shared ideas and feedback, and mentees can see peer mentors as role models for both social and professional growth (Snowden, 2012). Furthermore, peer mentorship within one’s community enhances engagement and strengthens students’ sense of belonging, which are key components of persistence and success in STEM fields (Paolucci et al., 2021; Snowden, 2012).

Understanding how mentorship and advising can most effectively convey information, support career development, and engage students is crucial. These practices are most powerful when they incorporate narrative approaches. Narratives are “stories with identifiable beginnings, middles, and ends which provide information about scenes, characters, and conflicts, while raising meaningful questions and providing resolutions” (Thompson et al., 2014). They can function as a more natural and engaging form of communication that inspires reflection and, when resonating on a personal level, can help build a “narrative identity” which serves as one’s internalized and evolving story of self (Thompson et al., 2014; Turner et al., 2025). Narrative-based educational methods encourage undergraduate students to reflect on their own identities and to think in narrative terms, which are approaches that promote deeper creativity and critical thinking compared to more traditional instructional models (Turner et al., 2025).

Storytelling, as a means of sharing personal narratives, can foster self-empowerment and confidence (Turner et al., 2025), particularly for students from traditionally marginalized groups who may experience imposter syndrome or stereotype threat (Turner et al., 2025). By sharing lived experiences, mentors provide examples that help students see themselves as belonging within their academic and professional communities (Turner et al., 2025). Individuals who have spent more time in a field naturally accumulate more stories to tell, and, when shared, these narratives guide others in shaping their own identities, clarifying purpose, and envisioning career paths (Caminotti & Gray, 2012). Beyond identity formation, career storytelling and narrative-based experience sharing deepen understanding of the field itself and enhance professional development (Caminotti & Gray, 2012; McCormack, 2009). Through reflection and storytelling, both students and professionals alike can reconsider their roles, challenge underlying assumptions, and engage in more critical thinking about their academic and career paths (McCormack, 2009).

Building on the research above, I designed my thesis project to intentionally incorporate the benefits of mentorship and narrative into both my interviewee selection and questionnaire design. College is a setting that inherently pushes the academia career pathway, and, while this is a valid career path that many may be interested in, it

is not for everyone. So, to reflect the diversity of career opportunities within wildlife biology, I intentionally selected interviewees from a range of professional contexts. This included Colorado State University professors representing the academic route, professionals from agencies outside academia such as Colorado Parks and Wildlife and the U.S. Forest Service, and representation from the nonprofit sector through the Bird Conservancy of the Rockies. Recognizing the importance of peer mentorship and peer connections, I also sought input from graduate students, who could offer perspectives distinct from those of established professionals who have been in the career longer. In total, ten individuals participated in this project: two graduate students, four CSU professors, three state and federal agency workers, and one NGO representative. This small sample is still relatively academia-biased and therefore does not encompass all possible career pathways. However, it does still offer a range of perspectives available within the wildlife field, especially as the professors and grad students represented have experience outside of academia as well.

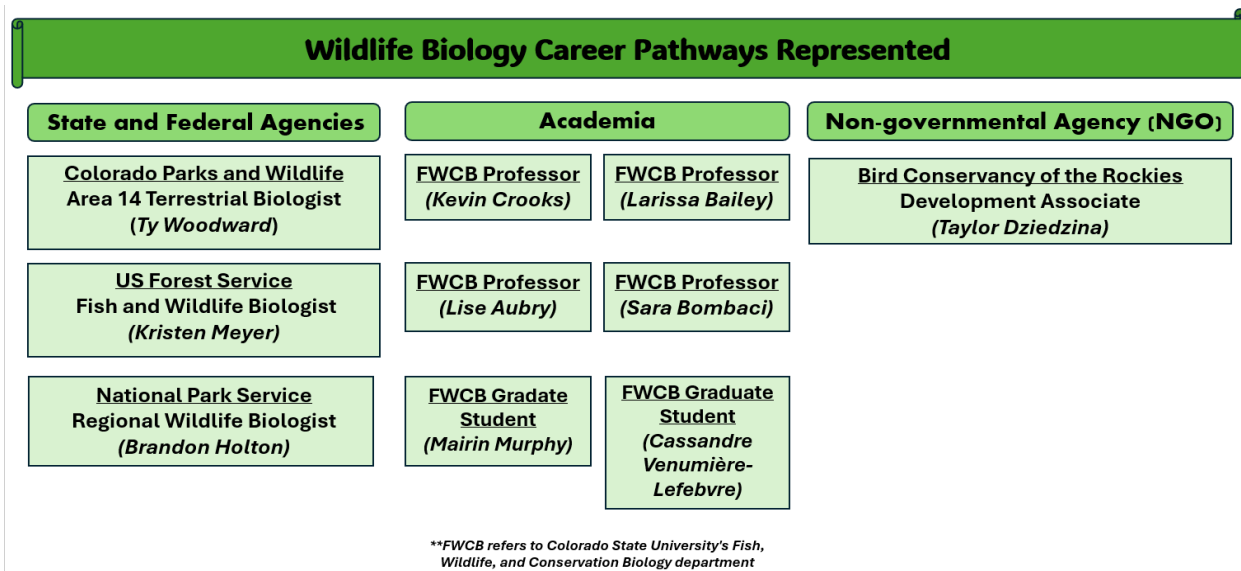


Figure 1. Wildlife biology career pathways represented in the interviews of this book. Keep in mind that these are just a few of all the possible career pathways out there. Additionally, while these broad institutional categories help illustrate diversity of career pathways, the following interviews also highlight the overlap and shared insights across these groups.

In developing narrative stories for this project, I found the advice of Thompson et al. (2014) particularly useful. They emphasize key storytelling elements such as point of view (e.g., first versus third person and how each shapes tone), establishing a central conflict or point of resolution, maintaining logical flow (a clear beginning, middle, and

end), showing rather than telling, evoking emotion, using a natural voice, and finally, on the more practical side of things, revising and seeking feedback. Drawing from these principles, I designed ten questions divided into categories that reflect both mentorship and career storytelling. The mentorship questions focus on professional advice and lessons for students, while the storytelling questions invite interviewees to share pivotal experiences and favorite moments from their career journeys. By blending these two frameworks, I aim to give students both actionable career guidance and firsthand narratives that reveal the diversity of pathways and lived experiences within the wildlife field. My hope is that readers can see themselves reflected in these stories and gain inspiration, perspective, and confidence in shaping their own wildlife biology futures.

Below is an example of the questionnaire used for interviews:

#### *Introduction and Background*

- What is your name and preferred pronouns?
- What is your current position or title?
- What is your academic or career background?

#### *Personal Narrative*

- What drew you to this field?
- Do you have any favorite stories or pivotal experiences that stick out in your mind from your career journey?

#### *Advice and Lessons for Undergraduates*

- What courses or experiences did you find most valuable when first starting out in your career?
- What is one of the most important lessons you've learned in your career?
- If you could give one piece of advice to incoming undergraduate students pursuing a career in wildlife biology, what would it be?

#### *Closing Thoughts*

- What is the most rewarding part of your work and what keeps you passionate about it?
- Is there anything else you'd like to share with students starting out in wildlife biology?

In the end, mentorship and narrative offer a powerful framework that supports students success and professional identity formation. Together, they help students build a scientific identity (e.g., 'feeling like a wildlife biologist'), while also improving mental and social well-being, enhancing academic performance and engagement, introducing diverse career pathways, and supporting overall professional growth. While stories and advice shared through a narrative framework can certainly be entertaining, their deeper value lies in how they foster connection, reflection, and understanding. This framework ultimately serves as the foundation for my project: using firsthand narratives from wildlife professionals to create a more meaningful, accessible, and inspiring resource for the next generation of wildlife biologists.

## Chapter 2: "Say Yes"

When a small group of marine science students had the opportunity to study abroad and live with host families in the Galápagos for three months, Mairin Murphy was right there with them. One day, when everyone was working on counting fish, a small group of Galápagos penguins came up, and one approached Mairin. It swam right up to her and looked her in the eye as they floated together. Not only was this experience exciting, but it was moving as well. There are only a couple hundred Galápagos penguins left in the wild, and here one was swimming right beside her. So, when she got out of the water and shared the experience, what else could she do but happily cry at just how overwhelming and life-changing it was? At the time, she was still figuring out what she wanted to do. She had tried a variety of things and was, for the moment, working in an archaeology lab. After sharing this story, one of her professors told her she had found her love.



*Figure 2. Mairin Murphy holding a duck.*

Mairin is now a PhD student in Dr. David Koons' waterfowl lab at Colorado State University. At the time of our interview, she was about three weeks in, having just started her first semester. Mairin grew up in Northern California and got her undergraduate degree in marine science and biology at the University of Miami in Florida. After that, she bounced around through a wide variety of internships and fieldwork opportunities across the country, including a few international gigs. She eventually decided to pursue her Master's degree at the University of Wisconsin – Stevens Point, where she studied emperor geese on the Yukon Delta in Alaska. For the



Figure 3. Mairin Murphy holding a bear cub.

past year, she's been living and working in Hawaii, helping to start up a conservation program for the endangered Hawaiian duck, *koloa maoli*.

Like many people in the natural resources field, she loved being outside as a kid, and her career fulfills that same sense of child-like wonder and joy. Still, wildlife biology wasn't always on her mind. She's explored many different interests over the years. For a long time, she wanted to be a forensic anthropologist – a passion she still holds, even planning to contribute to forensic science after death by donating her body for research. She also found herself drawn to marine

archaeology, fascinated by both the ocean and marine life, hence her master's work on emperor geese. She's worked in a chemistry lab after discovering an enjoyment for chem classes (though she found the work less exciting in practice), taken jobs in veterinary offices and ski shops; saying yes to all kinds of experiences in search of what truly inspired her. Eventually, her curiosity led her back to wildlife research, specifically with birds, which have always interested her.

When I asked about the courses she found most valuable in her career journey, she listed ones that you wouldn't necessarily expect – at least in the sense that they weren't traditional wildlife courses. One of her favorites was comparative physiology, which taught her how different animal taxa function and could answer interesting questions such as "How can ducks stand on ice without their feet freezing?" Another course that really stood out for her was physical oceanography. This was another class that showed how the world works, and just how important oceans are to weather patterns, nutrient cycling, and the layout of biomes around the globe.

Learning about human cultures and pushing herself outside her comfort zone were especially important experiences for Mairin. Her international experience taught her about how conversation works on a global scale. Moving from those kinds of perspectives to one like that in a North Dakota coal town was important for her in understanding different ways people value wildlife and the human cultures at play. Through all of her experiences, she learned more about the human aspect of conservation than about the animals themselves. Understanding the human side of management is important for conservationists and scientists. Because if you can't get someone on your side, you're not going to make a difference.



*Figure 4. Mairin Murphy on top of an alligator.*

For Mairin, the most rewarding part of her work is being able to share what she does – the species she studies and the places she travels – with people outside of the field. There are so many people who don't, say, think about the Arctic on a regular basis. You can't photograph it and have it look as beautiful or awe-inspiring as it is in person. Or, while people may still find it beautiful, they often feel distant from it. Therefore, the kinds of interactions she finds most rewarding are moments like when she sat next to a couple on an airplane while writing her thesis and was able to tell them about emperor geese or what the tundra smells like. Similarly, this year she and a team of women brought a group of fifth graders to the refuge in Hawaii to show them *koloa*, which, despite being the state duck, many of them had never even seen one before. Providing that kind of access and seeing the kids' reactions, even though she doesn't consider herself especially talented at outreach, was incredibly rewarding. She also finds joy when friends or family show interest in her work. That kind of word-of-mouth enthusiasm is deeply rewarding to her, and she appreciates how it can help spread awareness and inspire others to care about the same spaces and conservation missions that she does. Ultimately, Mairin couldn't see herself doing anything other than what she's doing now.



*Figure 5. Asiatic black bear standing up on hind legs. Photo credit: Mairin Murphy.*

Even on the rough days, when she thinks about the goals and descriptions of other jobs, none of them feel nearly as meaningful or fulfilling as wildlife biology and ecology.

An important lesson Mairin has gained through her journey is to always stay humble. You can learn more and get more out of

experiences by approaching every room as though you are, for all intended purposes, “the dumbest person there”. There’s something to be learned from everyone and every situation. She also emphasizes the importance of hard work and dedication, which can go a long way. You should never count yourself out. Even if you are struggling in a school setting, hard work and caring will pay off in the long run.

For Mairin, this was especially true. The way she got into fieldwork in the first place was through archaeology. Her physical anthropology professor announced one day that he was taking some students to Puerto Rico for the summer. At the time, Mairin had no opportunities and was on the verge of flunking out of undergrad—basically what you would call “rock bottom.” This opportunity was a golden ticket, and she practically begged the professor to allow a marine science student to join, and he did. The fieldwork was intense, and she was introduced to stable isotopes, which now make up half of her PhD research. Because she had this background and was willing to put herself out there, taking a chance on something that had nothing to do with her “career pathway”, she benefited greatly in the long run.

This is a big reason why her major piece of advice for students is to say yes to any opportunity that comes your way. Even if it’s something you don’t think is especially interesting, you never know what might turn out to be the most fulfilling. Even something as simple as weeding, she has found, can be rewarding in some way. Returning to her point about staying humble, even if you feel an experience may be somewhat “beneath

you” or unrelated to your education, at the end of the day you may have restored a plot of land and still made a difference. All the opportunities Mairin has taken that she initially thought wouldn’t lead anywhere have proven valuable in some way. Going out on a limb, taking that leap of faith, or approaching a professor whose work you enjoy, even if it isn’t your “ideal” topic, can open doors to incredible opportunities in the future. You never know where something will lead, so you might as well say yes.



*Figure 6. Emperor Geese on a rocky shore. Photo credit: Mairin Murphy.*

### Chapter 3: "Stay Curious"

On the remote dirt roads of Columbia, a former lab member of Cassandre Venumière-Lefebvre's traveled to interview communities in remote areas which could become nearly impassable during the wet season. Many of the community people there owned livestock and struggled with jaguar conflict. One particular family had been saving up with three cows to afford a proper floor for their home – only to lose those cows to jaguars. For Cassandre, this story was deeply moving because it revealed the very tangible impact that carnivores can have on people's lives. She had originally approached wildlife biology from the perspective of protecting large carnivores and populations as her main goal. Coming from the relatively privileged country of France, where carnivore conflict still exists but feels less tangible, this story opened her eyes to the social justice issues intertwined with carnivore conflict and coexistence. In lower-income or developing regions, predation can have enormous impacts on people's livelihoods and well-being.



*Figure 7. Cassandre Venumière-Lefebvre standing in rocky grasslands.*

Today, Cassandre is pursuing the mission of carnivore coexistence through her research on human–black bear interactions in developed areas. She's a fourth-year PhD student in the Fish, Wildlife, and Conservation Biology Department at Colorado State University (CSU). At the time of our interview, she was nearing the end of her project, with her thesis defense scheduled for May. Cassandre also works with the Center for Human-Carnivore Coexistence at CSU.

Her path has been a fairly academic one, but the field of conservation and wildlife biology were not where she started off. She first wanted to become a veterinarian and began in a preparatory school, but soon realized that track wasn't for her. It was highly structured and end-goal-oriented, with a heavy focus on passing national examinations.



*Figure 8. Black bear in a tree. Photo credit: Cassandre Venumière-Lefebvre.*

Cassandre, however, was curious about many different subjects and wanted room to explore. So, she transferred to a university, initially studying biochemistry while also pursuing art history. She pursued these tracks for three years and progressively began to learn about conservation biology and ecology as fields, which she ended up majoring in at the end of her undergrad journey.

After finishing her degree, Cassandre went directly into a master's program. In France, master's degrees function a bit differently than in the United States as coursework is completed separately, paired with several months of internship experience. Cassandre completed her internship in a lab studying sea turtles and evolution. The following year, she came to Colorado State University to work with the Center for Human-Carnivore Coexistence, helping to develop a working definition of conservation. Here she also started pursuing her PhD research on bears, where she continues to explore how people and carnivores can share the same landscapes.

Her switch to the conservation field stemmed from her desire to be a citizen of the Earth – to make a difference and leave the planet better than she found it. There are many ways to pursue that goal, but she always found her conservation courses to be especially grounding. They were taught by passionate people whose interests and values aligned closely with her own. Conservationists, she felt, were a community of people who truly lived by their ideals, and that resonated with her. One conservation class introduced her to her first real success story, which had a lasting impact. Many other courses, like biodiversity, tended to focus on decline, such as endangered species, habitat loss, and the overwhelming scale of what's wrong in the world. But that first story of an island's endangered species populations being stabilized was a call to action of sorts that helped set her mind on conservation.

For Cassandre, the sense of community is one of the most rewarding aspects of her work. You're surrounded by people who are, in every sense of the word, "badasses" (her words, not mine, though I completely agree). Everyone in the field is inspiring, but also incredibly compassionate and kind. It's rewarding to feel like they're "your people". She also finds any fieldwork experience to be rewarding. You work hard, you're exhausted, and you'll probably end up with a few blisters, but then you spot a really cool bird or capture a great photo, and suddenly it's all worth it. The wildlife that lets you see them is a privilege every single time.

Similarly, when it comes to valuable courses and experiences, Cassandre believes that field courses are especially inspiring because they make you feel it – like you're already a conservation biologist. Opportunities such as field-oriented courses like Natural Resource Ecology and Measurements at the CSU Mountain Campus are a unique and fantastic example of this (by far the best class I ever took at Colorado State University). Yet, any class that shows examples of seeing a project through from beginning to end can be powerful, even if it's not directly in the field. For Cassandre's pathway specifically, she took a lot of statistics courses that have proven useful. Statistical and quantitative analysis skills allow you to work on many different kinds of projects. However, qualitative methods courses were equally important in helping her think about how she conducts science. For example, some of her own research incorporates interviews to learn about policy and governance which applies qualitative skills.

One of the most important lessons Cassandre has taken away from her journey is humility. All the knowledge you gain from university is incredibly valuable, but



*Figure 9. Bear pawprint in the mud. Photo credit: Cassandre Venumière-Lefebvre.*

knowledge can also come from many different places. You'll meet people with such depth of experience and understanding rooted in their local knowledge alone. There will be times when you step into your career or a new project and feel pressure to act like you know exactly what you're doing – but it's important to remember that everyone is fresh at some point. It's ok to be new to something, to not know what things should be called, or to be confused when people drop names or jargon you don't know yet. That's why one of her biggest pieces of advice is to stay curious.

There will be some classes that people tell you are really important, and you just don't feel the curiosity for them – and that's ok! There may be classes that just don't work out; maybe the way that person explains it doesn't click, but one day someone else will explain it differently, and suddenly it will. So don't get hung up on things you don't think you're good at, and don't tie your identity to them (e.g., don't be discouraged from something just because, say, you don't think you're the greatest at math.)

Cassandre and I chatted about writing skills as another example of this. There are plenty of people in our field, and in science in general, who either don't like writing or don't consider themselves very good at it. And that's completely fine. She brought up a great point that honestly, everyone is a little bad at writing until you've written a lot.

Ultimately, interest depends on the person. There are so many different ways to be a conservation or wildlife biologist, and what you bring to the table might be entirely different from someone else. Don't compare yourself too much to others. You should never think less of yourself or feel pressured to follow the exact same path as everyone else. So, stay curious, ask questions, and pursue what makes you passionate.



*Figure 10. Grizzly bear in a field. Photo credit: Cassandre Venumière-Lefebvre.*

## Chapter 4: "Advocate for Yourself"

There have been many role models in Taylor Dziejzina's life, and one who stands out in her mind is Bob Sturtevant. Taylor met Bob at the Mountain Campus when she was part of the first cohort of students who got to take Natural Resource Ecology and Measurements at that location. She took the course from May to June, and in the first week, it snowed. Everything was cold, wet, muddy, and dreary. One day, Bob, who was teaching the forestry section, had his students out working in the muck. Everyone was wet, miserable, and, as Taylor put it, acting like "snotty college kids" who didn't want to be outside in such awful weather. Bob stopped the class, looked at them, and gave a much-needed reality check:

if they thought this was hard, they were never going to make it in the field. Everyone was offended at first, but looking back, Taylor realizes how right he was. Bob is still a



Figure 12. Shallow alpine pond with mountains behind it. Photo credit: Taylor Dziejzina.



Figure 11. Taylor Dziejzina holding a Sharp-shinned Hawk.

reference she uses to this day. He's a wonderful person and an incredible teacher whose attitude throughout the entire course was unforgettable. Taylor now strives to carry that same mindset – that things can suck, especially fieldwork which can get mucky, wet, and downright intolerable at times, but it could also be much worse. Sometimes it just takes a bit of perseverance to get through. (As

someone who also had the forestry section with Bob, I can wholeheartedly agree with how amazing a professor he was.)

So many small moments from fieldwork helped solidify for Taylor that she was exactly where she was meant to be. One such moment came during her bald eagle surveys along the Green River in Utah. Early one January morning, she and her teammate were sitting on a bluff overlooking the river. It was cold and snowy, and they were just waiting and watching to see if any eagles would come through. As they sat there freezing, the sun finally began to rise above the valley. Suddenly, coyotes began calling back and forth below them. Their voices echoed through the canyon in this eerie, beautiful way, and Taylor and her teammate just started laughing. That was the moment. This was why they were there. It was such a cool, rare experience, one so few people ever witness. To this day, she still thinks about it often, still hearing those coyote howls in her mind.



Figure 13. Taylor Dziejdzina working on a Northern Saw-whet Owl.

Taylor is now a development associate for the Bird Conservancy of the Rockies (BCR). The BCR is a nonprofit organization headquartered in Colorado that conducts



Figure 14. Alpine lake with mountains behind it.  
Photo credit: Taylor Dziejdzina.

work from Mexico to Canada and throughout the Great Plains. The organization's main focus is on bird and bird habitat conservation through science, stewardship, and education. Taylor describes it as a bit of a "jack-of-all-trades" organization, with research divisions,

education sectors, and stewardship programs that work with ranchers, agricultural communities, and landowners. Taylor graduated from Colorado State University in 2016 with a bachelor's degree in Fish, Wildlife, and Conservation Biology. Since then, she has worked for Colorado Parks and Wildlife, SWCA Environmental Consultants, and has been with the BCR since March 2022.

For Taylor, one of the biggest reasons she was drawn to this field was because of her dad. She grew up in a small town in Pennsylvania, and from the moment she was big enough to walk, her dad had her out hiking with him. As soon as she could hold a fishing pole or a pair of binoculars, she was tagging along on his adventures. Her dad had been a fisherman and birdwatcher his entire life, and because of that, Taylor has been those things her entire life as well. She's very close to her dad, and anytime she's outside, she thinks of him. He's the reason she ended up here, and so many of her nostalgic and fond memories are tied to the outdoors. Ultimately, she can't imagine her life without this field, or without nature in general. To her, "it feels like home".



*Figure 15. Taylor Dziedzina in a stream.*



*Figure 16. Taylor Dziedzina hiking with her dog.*

Natural Resource Ecology and Measurements at the Mountain Campus was one of the most valuable course experiences Taylor had. It gives students a little taste of what fieldwork can really be like. It's fast-paced, and you're going to be tired and irritated at times, but Taylor learned so much about who she was

as a person throughout it. Gaining knowledge about plant identification also ended up surprising her in the long run – especially for the consulting field, where she is expected to be well-rounded. Knowing a little about a lot of different things is a critical skill to have in a multidisciplinary field like natural resources. In Taylor’s experience, those with some botany knowledge tended to get put on the coolest projects and were always appreciated for what they could contribute. Having that skill set has been incredibly helpful throughout her career journey.



*Figure 17. Taylor Dziejzina holding a Northern Saw-whet Owl.*

Working for a nonprofit as a development associate means that much of Taylor’s work involves fundraising for the organization. She never expected to end up in a position like this – she originally thought she’d be a field technician until she couldn’t move anymore – but this role has become one she truly loves. Supporting an organization whose mission she fully believes in, and knowing she’s contributing to the conservation work that makes a difference, is incredibly rewarding. Taylor also makes a point to go out into the field with her coworkers which helps her to speak knowledgeably about current BCR projects. She further stays passionate by doing the things she loves and reminding herself why she’s here. Taylor backpacks, hikes, swims, paddleboards, and enjoys other outdoor recreation. Even something as simple as reading under a tree in a park can remind her of the places she loved as a kid and will continue to love. Knowing that without her, and others who feel the same way, those spaces wouldn’t exist is inspiring.

Now that Taylor is almost ten years past graduation, one of the most important lessons she’s learned is the value of advocating for yourself. Taylor had a rough time working with Colorado Parks and Wildlife. The office in Denver was an old warehouse,



*Figure 18. Waterfall in a canyon.  
Photo credit: Taylor Dziejzina.*

and most of the offices didn't even have windows. She was commuting from Fort Collins to Denver every day, and because the position took place over fall and winter, she hardly ever saw sunlight. She was twenty-two, fresh out of college, and felt like she had to just stick the job out. When her season ended and she left the position, her supervisor helped her reconcile her struggles with the job. While he appreciated her perseverance, he told her to remember that life is too short to do things you don't enjoy, and encouraged her to find something she would enjoy. That kind of permission – to acknowledge you don't like something and that it's okay to leave – was incredibly meaningful for Taylor. She realized

it's okay to want to do something different, and that you don't have to force yourself to stay in a job you genuinely don't enjoy.

It's somewhat expected in this field – especially for the younger generations coming in – that you'll work for almost nothing, live in rough conditions, go without health insurance or mental-health support, and push yourself to the point of breaking. But in reality, it doesn't have to be that way. Taylor emphasizes how important it is to advocate for what you want and need, because the people who are most passionate about this field are the ones it needs the most. But if those same people are completely burnt out, living on a \$200 stipend, sleeping in their car, and working eighty-hour weeks, they can't stick with it, and the field suffers because of it. Advocating for herself was hard for Taylor at first. She carried the fear instilled early on, so that if she complained or asked for more, she would be replaced. But she's learned that, for the most part, this isn't the case. The core of the field wants its people to succeed. And the only way you can succeed is by asking for what you need. Taking care of yourself first is the only way to make it through.

One of Taylor's big pieces of advice for students, besides advocating for themselves, don't rush it. Many of her friends went straight from undergrad into graduate school or into a field position they stuck with all the way through, only to realize they didn't actually enjoy the project or the experience. There are so many options out there beyond academia or federal/agency work. She says that for students who are very one-track minded, who are deeply passionate about a specific topic or who genuinely love research, the academia route is probably the right path. But for others who aren't as sure, or who simply love everything, she recommends slowing down, enjoying the moment while you can, and seeking out as many different kinds of experiences as possible. Taylor admits that she misses the hectic, spontaneous nature of fieldwork where every day feels different. She wishes she could go back and tell her college self – who thought she had an exact a plan – that it's okay to wander a bit, to explore, to "bop around" before settling into something. There are so many pathways to try before committing to just one. And truthfully, you never have to fully settle down if that's not what you want. Take the time to figure out who you are and what you love.



*Figure 19. Purple flowers with alpine lake and mountains behind them. Photo credit: Taylor Dziedzina.*

## Chapter 5: "Stay Broad"

For Dr. Sara Bombaci, one of her most exciting adventures came during her PhD research in New Zealand. Conducting wildlife and ecology research in another country was an incredible experience. It challenged her to learn about an entirely new ecosystem that was very different from those in the southwestern U.S. where she grew up. Studying this unique environment and immersing herself in a different culture broadened her perspective. There were countless memorable moments from that experience, such as releasing a kiwi into a sanctuary or bushwhacking through thick vegetation to reach a sampling point. The entire adventure was amazing and left her with many stories to tell. Since then, she's also had opportunities to travel to South Africa and will soon be heading to Thailand. Dr. Bombaci has been able to visit many interesting places and collaborate with equally interesting people.



*Figure 20. Sara Bombaci holding a Kiwi bird.*

Dr. Bombaci is now an associate professor in the Department of Fish, Wildlife, and Conservation Biology at Colorado State University (CSU). Her pathway was that of



*Figure 21. Sara Bombaci standing next to a cactus.*

a nontraditional student. She completed one semester of community college right after high school and then decided to take a different path. She worked a variety of jobs before beginning her undergraduate studies at twenty-five years old. Dr. Bombaci was originally interested in general biology but later developed a passion

for environmental biology and science. She attended Fort Lewis College, where she earned her bachelor's degree in environmental science. During her time as an undergraduate, she realized how excited she was about wildlife and wildlife ecology, which led her to pursue that field. Both her master's and PhD programs were at Colorado State University. Her master's was in Fish, Wildlife, and Conservation Biology, and for her PhD, she went more broadly into ecology. Afterward, she completed a one-year postdoctoral position at Clemson University. When a position opened at CSU, she returned as an assistant professor and has been there since.



*Figure 22. Sara Bombaci sitting near a waterfall.*

There was never a single pivotal moment when Dr. Bombaci realized she wanted to be a wildlife biologist. Her career journey was different from many others, as she originally started out in banking and held a variety of other jobs, such as wedding photography. She didn't initially know this was the path for her. Gradually, she was exposed to different aspects of the natural resources field, which slowly piqued her interest. Her biology and environmental biology courses were enjoyable, and her first wildlife course, in particular, was something she really liked.



*Figure 23. Korimako on a branch.  
Photo credit: Sara Bombaci.*

Being introduced to all of these options kept steering her ship toward that path. Along the way, she never had one favorite species or animal she wanted to focus on. Rather, she's drawn to science for its exciting questions and the ability to pursue answers and discoveries. More recently, her work has started to pivot toward the human dimensions and social sciences, after being exposed to that field

and finding it both exciting and interesting, especially in how it intersects with wildlife conservation.

As an undergraduate, her first ornithology course was taught by a very passionate professor. At the time, she wasn't particularly interested in birds, but her professor's energy and excitement about ornithology made her equally excited about the wildlife field. It

helped her realize she could feel that same level of enthusiasm for her own work. As a graduate student, one of the hardest classes she ever took, a heavily quantitative, modeling-based course, was also one of the most impactful. It was her first deep dive into how data could be transformed into knowledge. Up until then, she hadn't really thought deeply about research in a broader, big-picture sense. The course was extremely challenging and a lot of work, but transformative for both her understanding of research and of the field as a whole. She likened it a bit to FW471 – the capstone course all wildlife concentration students have to take, and which Sara now teaches. It can be difficult at times, with plenty of quantitative analysis involved, but the skills gained from it are incredibly useful for working as a wildlife biologist.



*Figure 24. Spotted hyenas.  
Photo credit: Sara Bombaci.*

Over her career journey, Dr. Bombaci has learned to recognize that it's okay to let



*Figure 25. Leopard. Photo credit: Sara Bombaci.*

go of perfectionism. Everyone should still strive to produce good, high-quality work, but learning to let go can prevent hitting walls caused by the pursuit of "perfection". There are checks and redundancies built into the system to help alleviate the stress of trying to make every detail "perfect." Others will help vet work

and look for holes through the peer-review process. This ties into another lesson she's learned: to embrace, and even seek out, constructive criticism. As an undergraduate, Dr. Bombaci was terrified of being wrong, and perfection was something she constantly strove for. Yet, she's come to understand that constructive criticism is essential for growth and improvement, and that quality work doesn't need to be perfect, especially since perfection likely doesn't even exist. We joked about how this advice is particularly relevant for my fellow Honors students out there. From personal experience, both as an Honors student myself and through friends in the program, we can tend to get hung up on things being "perfect." However, it's okay to let that mindset go a bit. Embracing criticism and advice that can help foster improvement in both oneself and one's work is key.

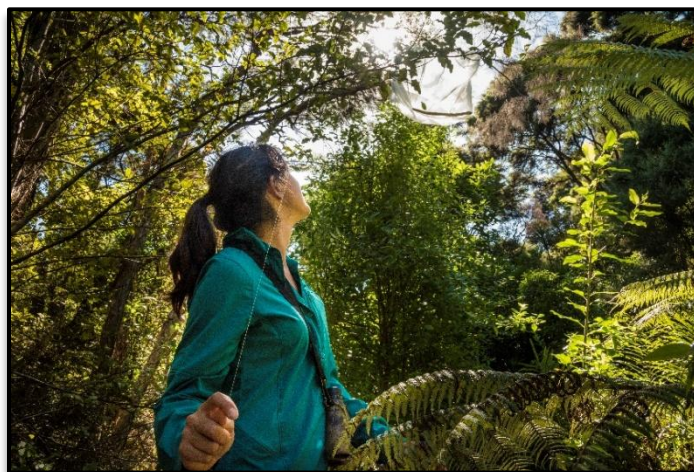


*Figure 26. White-bellied Sunbird on a flower.  
Photo credit: Sara Bombaci.*

One piece of advice Dr. Bombaci has for students is to stay broad and open to different experiences. As an undergraduate, she originally thought she wanted to be a restoration ecologist. Yet after a field season doing that kind of work as a crew leader, she realized she absolutely hated it! So, don't pigeonhole yourself. The thing one thinks they really want to do may not actually be the most enjoyable or the best job fit. Dr. Bombaci has stayed broad in her current work – perhaps even too much so, she jokes – with a wide umbrella of topics that interest her. Being open to new pursuits can lead down interesting and unexpected paths. Learning about all the different career pathways and hearing about a lot of different perspectives can help in understanding where one may want to go. This openness also applies to embracing different skills and learning new things, which can be incredibly helpful later on when framing oneself for different jobs.

When it comes to framing oneself for different jobs, Dr. Bombaci also encourages students to never undersell their soft skills. Oftentimes in the sciences, it's thought that only the hard skills, like radio telemetry or statistics, are what really matter. Those are certainly important, but soft skills like interpersonal communication, organization, and taking initiative are equally valuable. Dr. Bombaci likes to call them the “get-shit-done skills,” and they matter in both the educational and professional worlds. When she's hiring a graduate student, for example, those kinds of skills often rise to the top. Keeping skills broad with a mix of both soft and hard, and analytical and social dimensions, is critical in the conservation field.

Another essential skill is the ability to build relationships with others, such as professors. When a student reaches out to Dr. Bombaci asking for a letter of recommendation but hasn't really talked to her, it's hard for her to provide a strong one. Coming to office hours, regardless of performance in class, having a heart-to-heart, and bringing good energy to class all matter a lot. Effort isn't always reflected in grades, but rather in what a student puts in. Showing up, working hard, and trying goes a long way with professors and in professional environments. For Dr. Bombaci, the most rewarding aspect of her work is always the students she works with. Whether graduate or undergraduate, when students are excited and invested, it makes her job so much fun. Energy is contagious, and she's renewed by her students' passion. The mentorship and education pieces are the best part of her work, and, ultimately, they're what keep her going through the hard days.



*Figure 27. Sara Bombaci in a forest working with canopy nets.*

## Chapter 6: "Celebrate Small Victories"

The first animal Brandon Holton ever captured was also the largest he ever worked with. During the three years he spent in Antarctica, he helped a research team capture Weddell seals for a study on how they forage beneath the ice. Because these seals are enormous, with males able to weigh over 1,000 pounds, the capture process was intense. The team would first get the seals moving across the ice, with two people running alongside them to slip a large mask over the seal's face. Once restrained, the researchers rolled the seal into a net, lifted it with a crane into a snow-tracked vehicle, and transported it to a remote site with a cut hole in the ice – far enough from other holes that the seal would have to surface there to breathe. The researchers then fitted the seals with a sort of helmet cam and even a "butt camera" before releasing them. The resulting footage revealed their foraging patterns beneath the ice. Despite being involved in many different wildlife captures over the years, those Weddell seals remained one of the most memorable captures. The significance of the animals and experience as a whole helped shape the trajectory of his career journey.



*Figure 28. Brandon Holton and teammates working in a river with nets.*

He has a wide variety of other stories he looks back on fondly. On the island of Sumatra, a female orangutan once hopped down and sat between his legs while her baby climbed in the trees overhead. He has watched mountain lions from a ledge above them, looking down to see them sleeping, and even dreaming, as their paws twitched. Brandon has been charged by grizzly bears, an experience that gave him a whole new appreciation for just how fast and powerful they truly are, every step revealing the



*Figure 29. Great Basin collared lizard.  
Photo credit: Brandon Holton.*

muscles flexing beneath their fur. And on a small dirt road in Belize, he once watched a jaguar sprint right across the path in front of his vehicle.

Brandon is now a regional wildlife biologist for the National Park Service (NPS) in the Intermountain Region. This region includes eighty-eight NPS units across seven states. His job is to help resource specialists and other biologists

in the parks with their wildlife projects: anything from captures, disease management, habitat work, endangered species compliance, and much more. This support is especially important for small to mid-sized parks that often have fewer resources available to them.

Brandon grew up in the Southeast and attended the University of Tennessee for his undergraduate degree in zoology and biology. He originally started in animal science on the pre-vet track. Ever since he was a kid, he thought he wanted to be a veterinarian. Over time, through his undergraduate experience, he realized zoology was a better fit and switched, knowing that whatever career he pursued, he wanted it to involve animals. His master's degree is in environmental science and policy from Northern Arizona University. His research focused on mammal community dynamics around water sources in the Southwest. After completing his graduate degree, Brandon worked as a wildlife biologist at Grand Canyon National Park for almost sixteen years on diverse wildlife studies, including mountain lion ecology. Eventually, he wanted to try something new and took his current regional



*Figure 30. Brandon Holton working on a bat.*



*Figure 31. Camera trap footage of a mountain lion. Photo credit: Brandon Holton.*

wildlife biologist position a little over a year ago. An overarching recognition that wildlife needs conservation is what ultimately drew Brandon into the field. In some places very rapidly, and in others more gradually, animals are being pushed out of their natural ranges due to habitat loss and other threats. The situation is becoming increasingly dire, and he wanted to make a difference and contribute to conservation efforts.

One course that really stood out to Brandon during his undergraduate years was aquatic ecology. It exposed him to a field he wasn't familiar with and offered a window into an entirely different world. He found it particularly interesting and fun to learn something completely new. Evolution was another class that blew his mind, especially since it hadn't been emphasized much where he grew up. His first "real gig" in undergrad, as he put it, was volunteering in a lab studying androgen hormones in reptiles. He highlighted here how important volunteering can be and the key role it plays in gaining experience and building a network. In graduate school, mammalogy was especially crucial, in part because of the instructor, who became a good friend and later they coauthored several papers.

Brandon emphasizes the importance of celebrating the small victories in conservation work. There will be many times when the "big win," whatever that may be, simply isn't attainable. Appreciating the smaller successes is what helps keep him passionate about his work. In a world where progress often feels like one step forward and two steps back, those small steps can keep you grounded. Whether that is gaining a new collaborator, making progress on a project, or making localized habitat improvements, persevering and pushing through the hard times are essential, and remembering those small victories can help you move forward and celebrate whenever you can.

Throughout his career journey, Brandon has learned to be adaptable and patient. Nothing ever happens as quickly as you think it will or in the way you expect. Whether it's writing a proposal, doing fieldwork, securing funding, or trying to get published, the process can be slow and tedious. Patience, he says, is essential. This is especially true when studying animals, a field that demands an extra layer of patience. Brandon explains that it's almost a disservice to the species you study if you aren't patient, because fully understanding an animal requires learning how that species thinks and moves in its ecosystem. Getting into the mind of your species – such as when he used to re-create mountain lion kill sites to get a feel for how they hunted – is critical for understanding the system and the animals. He also notes that if your knowledge was originally bracketed in one area, such as large mammals, that doesn't mean that same knowledge can't transfer elsewhere. Skills and experiences often apply across systems and species. The learning curve of figuring out how and when to apply that information, he says, is all part of the fun.



*Figure 32. Desert bighorn sheep. Photo credit: Brandon Holton.*

Brandon advocates for students to consider the understudied species as part of his advice. The large charismatic species, like bears and bighorn sheep, are of course very cool, but Brandon has begun shifting toward the smaller, noncharismatic species (e.g., bats). He's found them to be just as, if not more, interesting, and there's a real need to study them. He also encourages students, if it suits them and they are able to, to get out and travel and see as many things as they can. Those kinds of experiences can open you up to new ideas and cultures, and more doors to explore will inevitably open as a result. Brandon went on a five-year-long "hiatus of learning," as he put it, through travel, which really broadened his mind to the diversity of thoughts and ways of seeing the world.

He highlights the importance of understanding others, collaboration, and how critical cross-boundary and cross-agency relationships can be. For example, integrating Traditional Ecological Knowledge and tribal input has been crucial for bison reintroduction and for developing a more holistic and intrinsic approach to wildlife management. Finally, as someone who has hired undergraduates, he emphasizes how important both internships and volunteering can be. Experience is incredibly valuable, and volunteer work is not looked down on. Any type of experience you can get – whether as an intern, technician, or volunteer – means a lot when applying for future positions, especially with the networking opportunities it offers. While it's important to acknowledge that unpaid work isn't always feasible for everyone, being intentional in choosing opportunities that offer mentorship, networking, or opening new doors can help balance that reality. Any good opportunity you can find is another small victory.



*Figure 33. Brandon Holton holding a bat.*

## Chapter 7: "Opportunity Creates Opportunity"

Any field experience has stories to offer, but one that stands out in Dr. Lise Aubry's mind is a tale of Snow Geese and polar bears. As a postdoc, she spent her summers near Churchill in northern Manitoba, Canada. During that time of year, snow geese become flightless while molting, and Dr. Aubry and her teammates would round them up on the tundra – sometimes hundreds, even thousands at a time. They spent entire days sitting on buckets, weighing, sexing, and banding the geese to study their demography and estimate survival rates based on various factors. This was also the time of the season when polar bears came ashore. To a bear, a pen full of thousands of



*Figure 34. Lise Aubry holding a Snow Goose.*

snow geese looked like an easy meal. Dr. Aubry recalls the first time one approached the group. There were ten people on the team, all focused on their work, and no one was looking up. Eventually someone did and the cry of "polar bear" quickly went up. The team deterred the bear with pyrotechnics and cracker shells to scare it off. This was Dr. Aubry's first close encounter with a polar bear, and the sheer size of it was astounding. They're much larger than one might imagine, and though they can appear slow from a distance, they can be on top of you in no time at all. She's encountered many more polar bears after this, but this first experience left a strong impression.

Today, Dr. Aubry is an associate professor of wildlife ecology in Colorado State University's (CSU) Fish, Wildlife, and Conservation Biology department. She is originally from France, where she completed most of her studies. Her undergraduate degree was at the University of Toulouse in biology, with a minor in animal ecology. She earned her master's at the same university, where she researched the impact of habitat fragmentation on roe deer population dynamics. Between these programs, she also had the opportunity to study abroad for a year through an exchange program between



*Figure 35. Polar bear walking through bushes.  
Photo credit: Lise Aubry.*

France and Canada at Concordia University in Montreal. That year was particularly important for her, as it helped her discover her passion for ecology and evolutionary biology. Dr. Aubry completed her PhD in Germany at the Max Planck Institute for Demographic Research. She then moved to the United States to pursue two postdoctoral positions at Utah State University: one focused on waterfowl

management and population dynamics, the other on human- carnivore interactions. At this same university, she eventually became a research assistant professor, which later evolved into a faculty position as an assistant professor. A few years later, she moved to her current role at CSU.

Dr. Aubry's love of nature and wildlife drew her to this field. This passion began in her childhood, as her family spent a great deal of time traveling and hiking. One of the most impactful moments she still clearly remembers was when her family moved to Alberta, Canada. She was originally from rural France where there was mainly just farmland, and suddenly found herself in a place filled with black bears, moose, elk, and deer. Even as a young child, this experience left a lasting impression. Discovering that such incredible landscapes and wildlife exist all around the world had a profound effect on her. Although her family eventually returned to France, she never forgot her time in Canada or the passion for nature it helped ignite. Today, she often finds herself gravitating more towards the poles for work. There's something magical about these arctic landscapes and the incredible life histories of the species that live there.

The year Dr. Aubry spent abroad at Concordia University was one of the most valuable experiences of her journey. She took a course on behavioral ecology and evolution, which she describes as by far the best course she has ever taken. It was filled with theoretical concepts, but also engaging examples and applications that sparked her curiosity about how species adapt to their environments and the timescales behind evolutionary processes. She found the entire topic fascinating, and the professor made the class incredibly fun. While her main focus was conservation biology, this experience helped her realize how much this other dimension interested her and how it connected to conservation.



*Figure 36. Polar bear walking along shore.  
Photo credit: Lise Aubry.*

Fieldwork was also a crucial part of her development. In France, there were few opportunities to gain hands-on experience, so that aspect came relatively late in her career. Those opportunities showed her that while you can have questions and develop hypotheses, understanding how to collect the right data, that's also high-quality, and how to analyze it is essential. Being outdoors is fun and rewarding, but it's equally important to design ways to collect reliable data that can answer questions. Those experiences taught her about the scientific process and that the ability to answer scientific questions is only as strong as the data you collect.

Dr. Aubry never initially intended to end up as a faculty member at a university. It was a path of "I did my bachelor's, now what's the next thing," then, "oh, I like science and making inquiries," and realizing she enjoyed wildlife and population dynamics. That led to a master's, then a PhD. Each door she traveled through led to another one opening. What Dr. Aubry has learned along the way is that you have to be willing to learn and can't get too complacent.



*Figure 37. Polar bear in an inlet.  
Photo credit: Lise Aubry.*

Being willing to learn from others and to collaborate is also a big part of a successful career. Dr. Aubry likes to say she only works with friends because she surrounds herself with people who are equally passionate, can teach her a lot, and who she can hopefully teach something to as well. When those collaborations are found, the odds of carrying out successful projects and doing good science with

good people increase. So, she's learned to keep learning and to keep collaborating.

Working with these friends and getting to travel to amazing places are things Dr. Aubry is grateful for and that help sustain her passion. She gets to travel for conferences and fieldwork, which have brought her to places she never would have gone otherwise. Seeing students succeed, and seeing them have fun and develop a love for research and science, is also incredibly rewarding for Dr. Aubry. They're making a difference in the world by improving conservation and wildlife management outcomes. It's amazing to see the people you care about being successful in what they're passionate about. Even on the hard days, when things don't go as planned, seeing that success makes it all worth it.

When it comes to traveling for this career, especially on an international scale, many people think they could never do it – especially students who often find potential internships too logistically challenging or expensive. Yet Dr. Aubry encourages students who truly want this path to explore the opportunities out there as they'd be surprised by how much is available. She wants to move away from the idea that these opportunities are only ones that can be bought into. There are other ways to make it happen (e.g., through fellowships, scholarships, grants, etc.). Dr. Aubry studied in four different countries by following opportunities and leads that allowed her to do so. This highlights the importance of networking and communication. Reaching out to others in a way

that's respectful but also conveys one's passion can open up a wealth of opportunities down the line.

Ultimately, Dr. Aubry encourages students not to close any doors. Don't restrict oneself to a specific species, location, or a single question. Be willing to explore different "flavors" of ecology and gain experience in the field to discover what one does and doesn't enjoy. Be open to any opportunity that looks promising, even if it doesn't align perfectly with what one thinks they want to do. It's only through experience that one learns what they enjoy most. Dr. Aubry's work with roe deer, for instance, was a total failure – but that experience taught her that experimental work wasn't for her, and that studying natural systems in their natural forms was. Her PhD experience was wonderful precisely because her master's had shown her what didn't work. Being open-minded and following one's passion, while also remaining willing to try different things, is essential. Opportunity creates opportunity, and if one explores enough paths, eventually they'll find the right one.



*Figure 38. Polar bear in a marsh. Photo credit: Lise Aubry.*

## Chapter 8: "Maintain Perspective"

Since Ty Woodward's kids have been in grade school, he has been invited back to their school multiple times to talk about his career and the field of wildlife biology. Every visit over the past five years has reminded him why he is in this field. There are times in this career when it's easy to get bogged down and lose sight of the bigger picture, but interacting with kids and seeing their excitement about wildlife always reaffirms why he does what he does. He mainly gives bighorn sheep-related presentations, talking about general biology and the importance of conservation. Last year he also had the chance to lead a special event with his son's fifth-grade class. Colorado Parks and Wildlife (CPW)

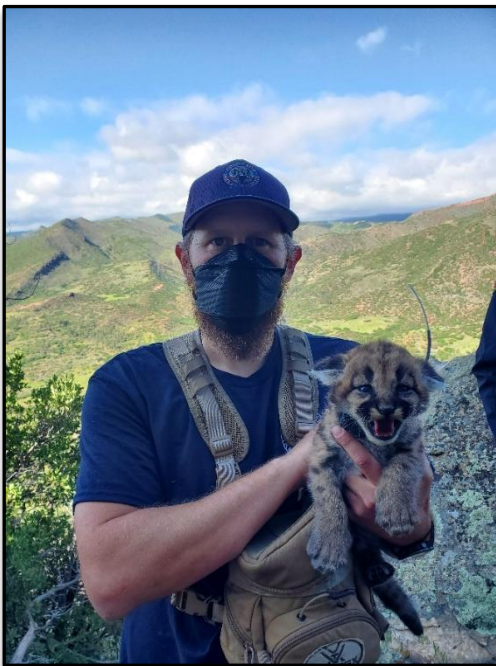
was planning a bighorn sheep trapping and translocation program at the time, and after seeing how enthusiastic the kids were about sheep, Ty decided to involve them in the baiting process. He helped the school organize chaperones, buses, and snacks for the outing. When the group arrived at the bait site, there were sheep on the hillside, and the kids got to help put out bait while excitedly watching the animals run around. Later, the sheep were successfully captured and translocated, and Ty returned to the class to share the results and explain the role they played in the project. He said this experience was important for both the program and the agency as a whole, but ultimately it was the experience of seeing the kids excited and fostering a potentially new generation of wildlife biologists that was most memorable.

Ty Woodward is the Area 14 wildlife biologist for Colorado Parks and Wildlife, working out of the Colorado Springs CPW office. He completed his undergraduate degree in biology at Colorado College and earned his master's degree in biology from Colorado State University - Pueblo. His graduate research focused on Lesser Prairie-Chicken habitat, specifically examining the Conservation Reserve Program and the habitat quality provided by rural lands. Ty first got his foot in the door with CPW during



*Figure 39. Ty Woodward.*

his undergraduate years when he worked as a habitat technician out of the Colorado Springs office. Most of his work, however, took place in Lamar, Colorado, and near the Cripple Creek area. He found that job through a friend who was working as an aquatics technician in Lamar. At the time, Ty was a history major, and this job opening helped him realize that he could have a career where he got paid to go out and “catch critters”. That realization led him to switch to a biology major, where he began working in habitat-related roles before transitioning into more species-focused work later in his undergraduate journey.



*Figure 40. Ty Woodward holding a mountain lion kitten.*

When Ty first started college, he didn't know exactly what he wanted to do. He really enjoyed history, so he assumed that was the direction he should go. Wildlife biology and conservation had never been presented to him in high school, and growing up in the small rural town of Lamar meant that wildlife-centric work didn't feel like an apparent path. It wasn't until he got to college and discovered the wildlife track that everything clicked, and it became clear what he wanted to pursue.

I think this is an interesting trend that still happens today. Personally, I didn't learn about this field until midway through high school. I've heard the same from many others makes me curious about what factors contribute to this: outreach, public perception, media coverage, or something else? This is also why I really enjoyed Ty's story about letting kids help with the bighorn sheep project as it was such an amazing way to both spread the message of conservation and raise more awareness for the field.

Even though Ty entered college as a history major, his love for wildlife and the outdoors started at a young age. Growing up, he spent many summer days with his grandmother, who often took him fishing at local reservoirs. He and his cousins would

run around catching lizards, snakes, scorpions, and anything else they could find. He interacted with wildlife through hunting, fishing, and simply catching and releasing for fun. Ty also believes there is something inherently instinctual in humans that draws us toward nature. It's a place of peace and solitude, where a person can rest and be reenergized. For those who feel that pull especially strongly, there is something deeply fulfilling about spending time in wild places.

While impactful conservation actions – such as releasing bighorn sheep from a trailer after a translocation project or finishing that last acre of habitat restoration and watching wildlife begin to use it – are incredibly rewarding, Ty's perspective has shifted since becoming a dad. Seeing his kids engaged with conservation when he takes them out on Pikes Peak for sheep counts, watching them lie in the grass with binoculars in hand and help, means a lot to him. So does hearing their questions about the role hunting plays in wildlife management or how disease management of sheep works. One of his favorite moments from the baiting project mentioned earlier was when his son helped give a presentation to his classmates about how to age bighorn sheep. Ty was incredibly proud as his son is usually on the quieter side, but he absolutely knocked the presentation out of the park.



*Figure 41. Ty Woodward standing in front of a helicopter.*

There were several professors throughout Ty's education who were impactful and encouraging as he pursued a career in wildlife conservation. His zoology and ecology courses as an undergraduate were especially meaningful and informative. At Colorado College, he was also in the block plan, which allowed him to take a single class for three and a half weeks, which provided a lot of flexibility. Because of this structure, his



Figure 42. Mule deer muzzle. Photo credit: Ty Woodward.

classes were able to take week-long to ten-day field trips that let students engage hands-on with the material. In one course, for example, the class traveled to Utah, Western Colorado, and Rocky Mountain National Park to meet with biologists and conduct aquatics work with native fish species. They went electrofishing and netting to catch native

species, and for Ty, this was an eye-opening experience into what Colorado's waters should look like in terms of native species composition. He still remembers holding a native fish in his hands and realizing the conservation value represented by that one threatened individual.

Being in Dinosaur National Monument and waking up after camping to see bighorn sheep along the nearby cliffs, or hearing elk bugling during the rut in Rocky Mountain National Park, were also incredible experiences that fully engrossed Ty in these systems. In graduate school, Ty had the opportunity to lead ornithology class field trips to observe lesser prairie chickens and talk about their habitat. The talks were focused on ornithology in general, but he also tied in his own background and the species he was studying for his thesis. He took undergraduates to the field sites and had the chance to talk with them about their futures and possibilities in the wildlife field. (These kinds of experiences, getting out into the field and seeing the actual systems and species in action, are so fun and impactful. Shoutout to "Conservation and Management of Large Mammals," where my entire class took a trip to Yellowstone. If you can find opportunities like these, I highly recommend taking them.)

One of the most important lessons Ty has learned over his career is to stay grounded and maintain perspective. His work with education and outreach helped him realize the importance of this field to future generations. Additionally, focusing on the

fundamental goal of wildlife management and conservation can help you stay centered amid outside influences from society, politics, and other pressures. He also emphasizes not being afraid to speak up for what you believe in. There will be many occasions where you'll be pressured to do one thing or another, but holding onto your perspective, and continuing to advocate for wildlife and conservation, is essential in a field like this and for staying grounded.

The big piece of advice Ty has for students is to be tenacious. Staying grounded may give you the “why” behind being in this field and pursuing its mission, but tenacity is what helps you stick with it and stay resilient. It's a hard field to break into, especially if you have a specific job in mind, and being persistent while keeping your eye on the prize is what it takes to be successful. Ty jokes that he was what some might call a “supertech,” because he worked wildlife and habitat technician positions for almost nine years before landing his full-time job with Colorado Parks and Wildlife. Because of this he also strongly encourages students to be flexible, something he admits he wasn't. He stayed exclusively in the Colorado Springs area and had to pass on many opportunities. Being willing to move from job to job, and even place to place, can open up far more possibilities.

From that perspective of having been a technician for many years and now being someone who hires technicians, Ty adds that there's a lot to be said for showing up early, staying late when possible, and being willing to ask how you can help. People with a strong work ethic tend to stand out, whether they're the most qualified on paper or not. Someone who works hard, is adaptable, and takes on challenges with the drive to overcome them speaks volumes in a work environment. There will always be minimum qualifications, but a “go-get-'em” attitude is a real asset.



*Figure 43. Ty Woodward and his family standing in front of a Rocky Mountain bighorn sheep herd.*

## Chapter 9: "Ask Questions"

There was never one single spark or defining moment that inspired Dr. Larissa Bailey to pursue wildlife biology and conservation. Rather, she considers her pathway to be a true journey – one that she traveled step by step, often without realizing exactly where she was heading, but always drawn by some feeling in one direction or another. There were many small moments that, together, led her to



Figure 44. Larissa Bailey holding a frog.

where she is now. One such example came when she started graduate school. Her original project was going to focus on estimating the abundance of carnivores in the tropics using camera traps, which were a relatively new technology at the time. However, the project didn't come together quite as planned. Instead, she found herself working on salamanders in the southern Appalachians, specifically in Great Smoky Mountains National Park. Still somewhat related to her original idea, this new project involved estimating the abundance of a cryptic species. This region, both for the United



Figure 45. Larissa Bailey collecting water samples in the field.

States and globally, is a hotspot for salamander diversity, with more than thirty species present. Dr. Bailey likely encountered ten to twelve species regularly, and with the right conditions and enough patience, she could find them crawling all around her.

Dr. Bailey is a professor in the Fish, Wildlife, and Conservation Biology Department at Colorado State University. She double-majored

as an undergraduate, earning a Bachelor of Science in Biology and a Bachelor of Arts in History, along with a minor in Mathematics. She went on to complete a master's degree in Biomathematics which blended her interests in biology and math, before pursuing a Ph.D. in Zoology. While she certainly grew up with an appreciation for the outdoors, one of the biggest draws for Dr. Bailey to the wildlife field was the people in it. She found the field to be very welcoming and where everybody shares a goal of conserving ecosystems and native species. People naturally formed a common bond, which fostered an environment that was welcoming, encouraging, and challenging in an enjoyable way. Similarly, her enjoyment of teaching started young. She comes from a



*Figure 46. Larissa Bailey holding a rat.*

family of teachers, with many immediate and extended family members in education. She tutored others in high school and found that kind of one-on-one relationship very enjoyable.

For Dr. Bailey, teaching and mentoring are the most rewarding aspects of her work and what keep her passionate and hopeful about the future of the field. She enjoys it when students enter the class with apprehension but leave confident in both the material and its real-world applications. Making information accessible and engaging is important to her, and it's always especially meaningful when former students reach out

after entering the profession to acknowledge the mentoring that supported them – something that she considers vital to this field. Hearing about their adventures, achievements, and the challenges they've overcome is equally rewarding. She also finds great joy in mentoring graduate students: watching them grow, defend their research, publish their work, and secure meaningful positions. On the more scientific side, Dr. Bailey has participated in several groups responsible for making management decisions and ensuring science is incorporated into those decisions. She finds it

incredibly fulfilling to see the appreciation those groups have for diverse perspectives and how a team can work collaboratively toward conserving species.

When I asked Dr. Bailey about courses and experiences she found especially important in her journey, she was hard-pressed to name one that *wasn't* useful in some way. There was always something to learn, and each skill or bit of knowledge proved valuable in different contexts. Having a combination of history, mathematics, and biology courses, taught by instructors who were genuinely interested in their students and who tailored their teaching to the class's interests, helped draw her in as a student and allowed her to see real-world connections and applications. Additionally, during her undergraduate years, she hadn't yet fully decided what she wanted to do – she simply enjoyed learning a variety of subjects. In retrospect, she's come to recognize how valuable having a background in both science and the humanities have been for understanding the historical context behind conservation and conservation decisions. That foundation has given her a deeper appreciation for context and has helped her navigate and interact with people from many different backgrounds.



*Figure 47. Larissa Bailey using radio telemetry.*

One important lesson that Dr. Bailey has learned over her journey, and one that applies to the field as a whole, is the value of patience and persistence. It takes time and dedication to bring a group of people together to work toward a common goal. It's easy to look at a situation from a single perspective, yet doing so rarely leads to a sustainable conservation or management plan. Therefore, both inclusivity and persistence are essential qualities to have. No one does science alone, and both science and conservation are collaborative endeavors. Being willing to work with others,

to listen, to recognize what you know, and to acknowledge what you don't are all important characteristics to have.

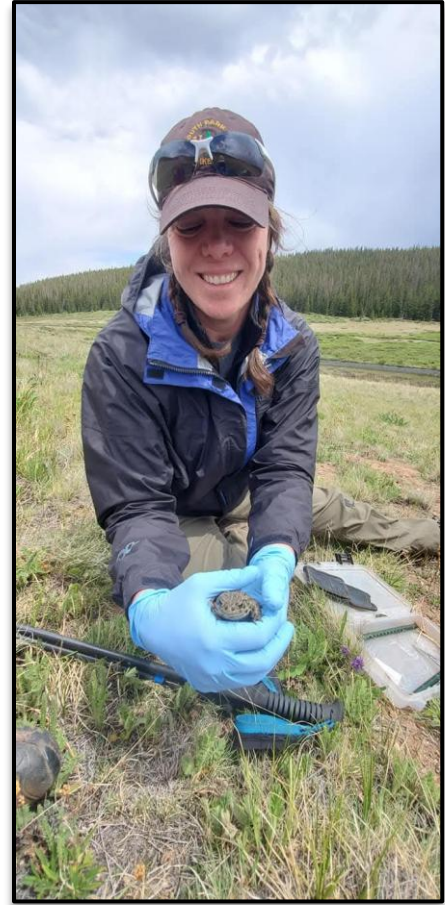
Hence, one of Dr. Bailey's main pieces of advice to students is to be willing to ask questions, especially of those who may know a bit more than you. As Dr. Bailey emphasizes, questions also open the door to learning from others' perspectives, which is just as important in scientific careers as it is in coursework. Sometimes people, particularly students, can be reluctant to ask because they're afraid their question isn't a good one or might sound silly. I know that when I was a freshman, it could be very intimidating to speak up in class or go to a professor afterward for clarification. Yet Dr. Bailey has never encountered a question she considered "silly," nor has she heard others respond with, "well, you should know that." In most cases, if you have a question, others in the class probably do too. Questions are appreciated and are a necessary part of learning. In the end, it comes down to a choice: continue not knowing, or ask the question and gain an understanding. So, don't be satisfied with not knowing – seek out answers, both in the classroom and throughout your career as you pursue science.



*Figure 48. Boreal toad. Photo credit: Larissa Bailey.*

## Chapter 10: “Be Flexible”

A large part of the work Kristen Meyer does with the Forest Service involves habitat improvement projects. For the past seven years, she has been working on a major project to remove an abandoned utilities dam near the Lake George, Colorado area. It was a huge undertaking that required substantial funding, building partnerships with a wide range of stakeholder groups, incorporating knowledge and expertise each person brought to the table, and ultimately restoring the river and surrounding areas back to a natural system. Looking back now, standing on the ground where the dam once stood, Kristen can see the results of the immense amount of coordination, planning, and persistence that went into the project. Continuing on this project as one of the leads from start to finish, and witnessing its recent success, has been incredibly satisfying for her. (As a personal side note, I am from the Lake George area and hearing about an amazing successful project like this in the area where I grew up was both exciting and inspiring.)



*Figure 49. Kristen Meyer holding a toad.*

Kristen is employed as a wildlife biologist for the Forest Service under the U.S. Department of Agriculture. While her title is “wildlife biologist”, she has taken on additional roles covering tasks for aquatics and botany. Her undergraduate degree is in natural resources management with a minor in wildlife biology from Colorado State University (*note: this minor is no longer available at CSU and is instead a major*). After graduating, she spent many years working with the National Park Service (NPS) in a variety of roles. She first got her foot in the door at Rocky Mountain National Park as a volunteer in visitor services, then was officially hired as a park ranger working in the backcountry office where she helped people plan backpacking trips. In the following



*Figure 50. Kristen Meyer holding a net in a stream.*

seasons she worked on the wilderness crew where she patrolled backcountry campsites and trails and assisted in search and rescue operations. She later held a winter seasonal position in Everglades National Park as an outreach interpreter.

Kristen's first permanent job with the NPS was in the Black Hills region on a fire use module team that

covered several parks across the Intermountain Region. She traveled extensively for this job, and that experience helped her land another position at Bryce Canyon National Park as a fuels technician, where she worked for several years. Eventually, effects to her health from smoke exposure resulted in seeking out other career options. Additionally, she realized she did not want to continue to work in fire management long-term. At this stage in her life, Kristen had been out of school for almost ten years, and she decided it was time to return to Colorado State University to pursue a master's degree.

Her master's program was officially in forest sciences, but her thesis project focused on breeding bird monitoring programs. She really enjoyed the graduate experience and the courses she took. After earning her master's degree, she returned to seasonal work at Rocky Mountain National Park for a while, this time on wildlife-related projects. Eventually, she secured a permanent position with an environmental consulting company, where she worked for a few more years. Kristen later moved into an ecologist position with the Forest Service's Rocky Mountain Research Station contracted through a non-profit organization. After about a year and finalizing a publication on fuels treatments in riparian zones, she transitioned to the Bureau of Land Management in Grand Junction, Colorado as a wildlife biologist. Finally, she came to Fairplay, Colorado, where she now works as a Forest Service wildlife biologist – a position she has held for almost fifteen years.

Kristen grew up with a love for the outdoors and for nature as a whole. She grew up just outside of Loveland, Colorado, along the foothills, where her family had a big backyard that became her first field site. She spent countless hours exploring the critters that lived there. A small ditch ran behind the house, and she loved trying to catch fish and bring tadpoles home to her mom. Nearly every weekend, her family headed to Rocky Mountain National Park to camp and hike. Because of this, her passion for public lands was fostered from a young age. Kristen didn't always know what she wanted to do for a career, but once she realized she could work with nature and the outdoors, that was the path she followed.

Some of the most influential courses in Kristen's career came from her graduate experience. While she doesn't point to one specific class, she shares that, overall, they were all important, each helping her practice flexibility, strengthen her writing, and tackle research that required critical thinking and pulling ideas together. For hands-on experiences, though, her work journey was the most impactful. Her coursework gave her the practical knowledge she needed to enter the field, but she feels she learned the most from the trial and error that comes with being out in the field. This is also a career where writing is incredibly important – Kristen jokes that she can't seem to get away from it – but because of that constant practice, her writing skills have improved steadily over time. Similarly, learning how to build partnerships on the job and developing collaborative skills has proven invaluable throughout her career. She notes that strong working relationships, especially with the State Wildlife Agency (e.g., Colorado Parks and Wildlife), have been key to successfully planning habitat improvement projects and protection measures from impacts due to the multiple-use nature of the Forest Service management.



*Figure 51. Kristen Meyer holding a lake trout.*

For Kristen, a story like the dam-removal project described earlier in this chapter represents one of the most rewarding aspects of her work. Being able to carry out a project on the ground and then see the results, whether it's wildlife using the restored habitat or people enjoying the improved fishing, makes all the effort worthwhile. Those tangible changes that are outcomes of years of hard work are incredibly meaningful to her. Alongside that, she finds outreach and education rewarding. Seeing people's appreciation for these projects grow, and watching them get excited about learning something new, is fulfilling. Kristen loves fieldwork, and she shared that she doesn't see herself moving to higher administrative levels because she's already at the stage she loves most, one where she can be hands-on and directly connected to projects.

One of the most important lessons Kristen has learned over her career is to be flexible. Sometimes you won't be able to do things the way you initially planned, or you may have to wait on a process or decision. Being open to other thoughts, approaches, and ideas is critical. Along with that, she emphasizes that hard work and maintaining a positive attitude are key to success. Partnerships, she says, are equally crucial. Nearly all of her projects have involved some level of collaboration – whether with state agencies, county officials, non-profits, or professionals from other disciplines. Getting things done is always easier when everyone can come together, share ideas, and work toward creating the best possible plan.

Kristen advises students to seek out as many opportunities as possible and to approach them with flexibility. Taking any opportunity that helps you get your foot in the door, even those not directly related to wildlife biology, can set you on the right track for a future career you may really want. Experiences outside the wildlife field, such as her work with fuels and vegetation, helped her qualify for the job she has today. This field is inherently multidisciplinary, and having that “big picture” mindset goes a long way. She also stresses the importance of demonstrating your work ethic and enthusiasm in every experience you take on because people will notice that. Taking initiative, being willing to take the lead on things, and sticking with tasks – even the ones you may not enjoy – will stand out to others and pay off in the long run. Ultimately, Kristen says that if students truly want to pursue this field, they need to be willing to move around, stay open to new

experiences, and remain persistent. Even if you are struggling to get something right off the bat, situations can change, and sometimes it's just a matter of waiting for the right moment to arrive. Flexibility and persistence go hand in hand: staying open to new paths while continuing to move forward is what will ultimately lead to the right opportunities. So, be flexible and don't give up.



*Figure 52. Boreal toad. Photo credit: Kristen Meyer.*

## Chapter 11: "Grit, Tenacity, and Perseverance"

One summer during his undergraduate studies, Kevin Crooks had the opportunity to go to Mexico to study a troop of macaques for his Honors thesis project. This was part of a field studies course that still exists today at Colorado State University. After that summer, he returned as an undergraduate TA for the class where he continued his studies.



*Figure 53. Kevin Crooks and teammates working on a mountain lion.*

For his thesis, he asked basic, fundamental behavioral questions related to kin selection, investigating whether closely related individuals groomed each other more than not as closely related individuals. The experience was incredible with long days beneath hot, humid canopies watching the monkeys in their natural habitat. Because of this experience, he initially thought he wanted to become a primate biologist and focus on studying primate behavior.

However, toward the end of this experience, he had an epiphany of sorts. Here he was on a heavy summer afternoon, studying a troop of monkeys whose native populations were endangered and whose habitat was being destroyed – and he was studying grooming behavior. This realization struck him with surprising force. He felt that he was not doing anything to actually help these macaques or the ecosystems in which they lived. It was then that he decided whatever he did moving forward would need to somehow benefit the animals and systems he worked with. That fundamental mission goal set him on the path of conservation.

Dr. Kevin Crooks is now the director of the Center for Human-Carnivore Coexistence (CHCC) at Colorado State University, as well as a professor in the Fish, Wildlife, and Conservation Biology Department. The CHCC was officially established in 2020, and he has served as its director since its formation. Dr. Crooks grew up in



*Figure 54. Kevin Crooks with a black bear.*

Littleton, Colorado, and earned his undergraduate degree in zoology from Colorado State University. He then spent a year and a half working at the San Diego Zoo – first at the primate research center and later at the cheetah research center. Afterward, he attended graduate school at the University of California, Davis, where he earned a master’s degree in ecology studying carnivores on the California Islands. Enjoying research and wanting to continue along that path, he went on to

pursue a Ph.D. at the University of California, Santa Cruz, focusing on carnivores in urban environments. He completed a one-year postdoc position at the University of California, San Diego, before accepting a faculty position in the wildlife department at the University of Wisconsin-Madison. After about two years there, he returned to Colorado when a position opened at Colorado State University, where he has now been for almost twenty-three years.

Growing up in Colorado, Kevin spent a lot of time outdoors camping, hiking, fishing, and exploring the mountains with his family. This instilled a passion for nature and wildlife. Interactions with his grandfather further fostered this passion. His grandfather had been in one of the first cohorts of wildlife biologists, serving as a Wyoming game warden in the 1940s. He worked his way up to become the state game warden and later served on the state wildlife commission. Dr. Crooks grew up listening to his grandfather’s stories about his profession and all his incredible experiences in the wild frontier. From a young age, Dr. Crooks was passionate about animals. As a child, he covered his walls with animal posters and initially thought of becoming a veterinarian. In high school, he worked as a vet tech but realized that the career by nature primarily involved caring for sick animals, which he found too depressing. So, he pivoted to other ways to work with animals. Over time, through his education, he gradually narrowed his focus to wildlife management and conservation.

The most formative experience Kevin had as an undergraduate was his macaque Honors thesis project. It was transformative in the sense that, while he ultimately did not pursue primate behavior research, he still gained invaluable experience from it.

Conducting research, developing questions, writing proposals, collecting and analyzing data, writing a paper that was later published, and presenting

talks at conferences were all stages of the scientific process that he still goes through today. Another key experience came from an ecology course taught by a wildlife professor who provided hands-on experiences outside the classroom – such as trapping pronghorn in Wyoming and southern Colorado. Dr. Crooks also took a summer class in Rocky Mountain National Park. Each of these experiences reinforced his passion for wildlife ecology.



*Figure 55. Camera trap footage of a mountain lion and kitten. Photo credit: Kevin Crooks.*

One of the most important lessons Dr. Crooks has learned over his career is highlighted in his master's work with the island fox and the island spotted skunk on Santa Cruz Island. His primary focus was the spotted skunk – an animal others had called “the mythical creature of Santa Cruz Island” because they were so rare. Few people had ever seen one, and no one at the time had studied them. Dr. Crooks spent a year preparing for his fieldwork, which proved to be incredibly challenging. It took him months upon months to trap even a single spotted skunk. He arrived on the island in the fall and set traps everywhere, catching plenty of foxes but never a skunk. Determined, he told himself he wasn't leaving the island until he caught one. Christmas and New Year's came and went, but he remained on the island. Finally, in January, he caught his first skunk. When he walked up to the live box trap and saw it inside, he couldn't believe it. Adrenaline pumping, he placed a radio collar on the animal and spent the next three to four days tracking it almost nonstop every hour, learning everything he could about that one skunk. By following its movements, he set new traps in those areas and, lo and



*Figure 56. Camera trap footage of a bobcat and kitten. Photo credit: Kevin Crooks.*

behold, began catching more skunks. He even discovered a den site. This experience taught him the true value of perseverance. Later in life, Dr. Crooks brought that same lesson to coaching his daughter's youth soccer team, where he would tell the players "grit, tenacity, and perseverance." This mantra applies to more than just soccer though as seen with his skunk field experience. Sticking with things and keeping at them is so

important in field work, but also in both life and career journeys in general.

Dr. Crooks also emphasizes the importance of exploring the many different opportunities that come one's way. One will encounter countless paths in life where they'll need to make choices. His path to working with carnivores began with an opportunity at a cheetah breeding and research facility. He had just graduated from college and was still focused on primates, working with them at the San Diego Zoo, when this new opportunity arose. He decided to take it, and it became his first experience working exclusively with carnivores – an experience that ignited a lifelong passion. This was in 1989, and he's been studying carnivores ever since. To this day, he still says it was the best gig he's ever had. However, after more than a year there, he realized he both wanted and needed to return to graduate school to advance his skills and expand his ability to contribute to conservation. He could easily have seen himself staying on that path and becoming a keeper at the facility. This still would have been a great career, but he met people at the facility with advanced degrees who were working on incredible projects. He realized he wanted to be like them. That realization led him to make the decision to leave that awesome job and go back to grad school.

Dr. Crooks looked back at the many choices he's made and the routes he could have taken: becoming a veterinarian, studying primate behavior, staying at the zoo, or stopping with a master's and ending up in a different academic position. None of these

paths would have been inherently wrong or right – just different, with each leading to a different outcome. At every stage, he used his past experiences to guide him toward the direction he most wanted to go. That’s why one of his biggest pieces of advice for students is to follow their passion and keep that passion alive throughout their academic and career journey. Never lose hold of it. Even through some of those intro classes that are not a favorite (looking at you, calculus), keep in mind the end goal and persevere through.

Dr. Crooks also urges students to go out into the world, whatever path they may take, and make a difference. One of the greatest sources of optimism in his life, and one of the main reasons he loves working in academia, is seeing students do just that. The students he’s had the privilege to work with over the years have gone on to accomplish great things – whether that is within this field specifically or in their personal lives, families, and careers. It’s rewarding, he says, to see that every year the eagerness, passion, and care in students remains as strong as ever. The problems and challenges behind conservation and policy can seem overwhelming at times, but he reminds students not to get lost in that feeling. Focus on the things that can be controlled and where differences can be made. Everyone can make a difference in the world by the way they act, in how they treat the people around them, and in how they support communities and younger generations. Impact comes from many scales, and each one matters, no matter how small it may seem. Redefine measures of success, and savor every victory. Ultimately, Dr. Crooks encourages students not to give up – this discipline, and the planet itself, needs their grit, tenacity, perseverance, and care now more than ever.



*Figure 57. Camera trap footage of a mountain lion.  
Photo credit: Kevin Crooks.*

## Conclusion

I took Natural Resource Ecology and Measurements at the Colorado State University (CSU) Mountain Campus in June 2023. It was the summer after my freshman year, and while I was a bit apprehensive going in, I was ultimately very excited. The Mountain Campus is a beautiful place located in the mountains at over 9,000ft. The campus is nestled in a moraine valley with rivers and ponds all around, forests surrounding it, and wildlife everywhere.



*Figure 58. Christy Fuhrmann in front of Kite Lake.*

Looking back, I can confidently say it was simultaneously the best and hardest class I ever took at CSU. Academically, it was a heavy load, with lots of assignments and some serious hardcore studying, but you couldn't ask for a better place to have class. I have so many fun and wild stories from that experience: meeting moose at the bathhouse, hearing coyotes outside the cabin at night, being hailed on while standing in a river, using a chainsaw for the first time, hiking through stunning landscapes, taking my final



*Figure 59. Moraine Park, Rocky Mountain National Park. Photo credit: Christy Fuhrmann.*

exam in a rainstorm, and so much more.

What stood out to me most about this experience was that I had never done any sort of fieldwork before. Having the opportunity to be outside collecting data opened my eyes to how this field works in practice. It was also a multidisciplinary course that introduced me to topics outside of

wildlife, such as forestry, which I ended up really enjoying. But if I were to share one story that sticks with me the most from my four weeks at the Mountain Campus, it would be the first solo hike I ever took. While my family is outdoorsy through lots of camping and riding ATVs, none of them were ever particularly into hiking, so I didn't grow up doing it much. I'd gone on a few hikes with my sister and friends, but I had never hiked alone. At the Mountain Campus, though, I made it a goal to complete as many of the nearby hikes as I could, and while most of them I did with friends, my hike to Surprise Pond was a solo one.

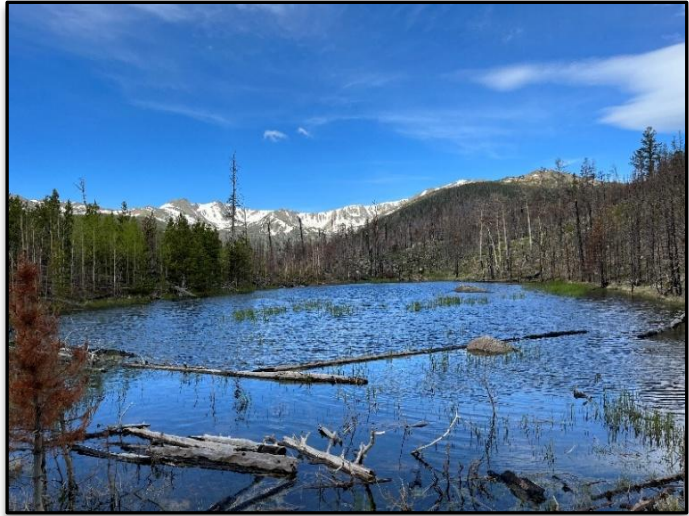


Figure 60. Surprise Pond. Photo credit: Christy Fuhrmann.

I remember most how silent and peaceful it was to follow a trail through the



Figure 61. Christy Fuhrmann holding a bull snake.

woods completely on my own. I ran into Dusky Grouse and mule deer along the way, and at the end of the trail I found Surprise Pond – a small, shallow, bright-blue pond that lined up perfectly with the Mummy Range behind it. After spending some time there, taking it all in, I looked for the rest of the trail that supposedly looped back to campus according to my map. But after nearly thirty minutes of searching, I couldn't find it. Now, I'll admit, this freaked me out a bit. Here I was on my first-ever solo hike... and I was lost. Fires and heavy precipitation in previous years had washed out parts of the trail, but thankfully, after some more

searching, I managed to find the spot where the trail had disappeared and just followed the original path I took back down.

This moment stands out to me not only because it's a little humorous in hindsight, but because of what it gave me: confidence. Even in a tricky situation, I proved to myself that I could stay calm, think through the problem, and navigate safely on my own. That confidence in myself, in my abilities, and in being out in nature was critical for me as someone who had never done anything like that before. It helped solidify that this is the field I'm meant to be in because the experience was still super fun, and it allowed me to picture myself out in the field doing similar work as part of my future career.



*Figure 62. Bull elk bugling. Photo credit: Christy Fuhrmann.*

Yet, self-doubt is a crippling thing and can often become a self-fulfilling prophecy. There have been plenty of times throughout my college journey when I've seriously questioned whether I'm in the right field. Sometimes that doubt comes from physical limitations – my fellow asthmatics know what I mean when it comes to strenuous hikes – and sometimes it comes from the mental side of things, such as feeling like you don't



*Figure 63. Lily Pad Lake. Photo credit: Christy Fuhrmann.*

know what you "should know," or simply not enjoying the discomfort of cold rain or long days outside. All of that can weigh you down. But then I have an experience like seeing an alpine lake, watching a fox hunt in the snow, or hearing elk bugling across a valley, and I'm reminded all over again that this *is* where I'm meant to be.



*Figure 64. Christy Fuhrmann holding a crayfish.*

With that confidence comes perseverance and tenacity – a theme that, in one form or another, every one of the previous interviewees in this book talked about. There will be hard moments in your journey. That’s simply part of life. But pushing through, keeping your eye on the prize, and staying grounded both in your sense of self and in the mission of wildlife management and conservation can help you persevere. This field, at times, is very much a “long game,” which means patience is essential, another trait several interviewees highlighted. I remember a guest speaker who came to one of my Wildlife Society club meetings and bluntly told us he didn’t get his

“dream job” for ten years. To some, that might feel discouraging, but I actually found it grounding and reassuring. He worked at park entrance stations and other less glamorous roles for years before finally landing the wildlife biologist position he’d always wanted. I loved that story because it showed how having confidence in yourself, and being willing to persevere over the long run, can guide you to where you want to be.

As I mentioned at the very beginning of this book, CSU, and I’m sure many other colleges, have some amazing student organizations that help you meet others in your field, provide hands-on experience, and introduce you to opportunities you may never hear about through coursework alone. Through these organizations, I’ve gotten to participate in educational outreach, attend field workshops to learn how to use different types of equipment, and collect data through real fieldwork



*Figure 65. Mirror Lake. Photo credit: Christy Fuhrmann.*



*Figure 66. Christy Fuhrmann doing trail work at Mueller State Park.*

experiences. There are so many outdoor-related organizations beyond just the Wildlife Society, and I encourage students to look for one that piques their interest. Even something as simple as attending one meeting or event a semester can connect you to people and opportunities you might not have found otherwise.

Meeting others is so crucial in this field, and the themes of collaboration and networking were repeated time and time again by the interviewees. Wildlife biology is inherently interdisciplinary, and growing your own knowledge across different topics, while also being willing to work with people from other disciplines, is something you will absolutely have to do. One of the best ways to accomplish both is to say yes. Saying yes to opportunities was something every single interviewee emphasized. Opportunity creates opportunity and one door almost always leads to another. Staying broad, being flexible, and staying adaptable as you pursue new experiences will introduce you to so many pathways down the road.

Saying yes is something I've been told over and over again by professionals in the wildlife field, and now I have a very recent example of that advice in action in my own life. This past summer, I applied for several jobs that I unfortunately didn't get. It was disappointing and even a bit disheartening, but while those doors closed, another opened through volunteering. (As several interviewees have mentioned, if you're able, volunteer positions can be just as valuable as paid ones for growing your skills and network.) One day, while volunteering on a trail crew at my local state park, I met a man I got to chatting with. When he learned I was studying wildlife biology, he told me he had been volunteering on a bighorn sheep project for years. Through him, I was able to get connected with a Colorado Parks and Wildlife biologist (Ty Woodward from earlier in this book) and volunteer on that same project. I don't necessarily love trail work — it can be

hot and brutal on the arms — but I never would have found this bighorn sheep opportunity without saying yes to trail work volunteering.

Ultimately, my goal in pursuing this thesis project was to create a resource that could offer other wildlife biology students real stories of lived experience and meaningful advice from

professionals in the field. Beyond all the amazing lessons and insights, I hope you also take away one central truth: not a single person I interviewed had a linear journey. No one followed the exact same path, and no one said, “everything unfolded exactly as I planned.” Every story contained unexpected turns, failures, victories, and lessons that shaped who they became and where they ended up. So, whether your origin story looks different, whether you follow a “traditional” or “non-traditional” path, whether you’ve changed majors or careers, or whether you’re still not entirely sure where you want to end up, remember that there is no single correct route. You don’t have to have everything figured out yet (I know I don’t!), but you do have to keep taking those small steps and opening those doors.

Wildlife biology isn’t the easiest field: pay can be low, hours can be long, the weather can be terrible, species can keep declining, projects can fall apart, and jobs can be scarce or require moving all across the country. But every interviewee I talked to share a love and passion for the field. For them, it is worth it. If you keep that spark of passion that brought you to this field and keep persevering through hardships, you’ll ultimately find what you’re looking for – even if it’s not what you originally imagined. When I first came into the field, I thought I wanted to study only large carnivores, wolves especially, which have been a favorite animal of mine since I was little. However, through exposure to different fields from courses and organizations, I’ve begun to



*Figure 67. Herd of Rocky Mountain bighorn sheep. Photo credit: Christy Fuhrmann.*

realize how much more is out there and how many other things I'm passionate about, like collaboration and science communication for example. So, take a chance and say yes to an internship that may scare you a little. Take a course you wouldn't normally consider. Stay curious. Advocate for yourself and what you need. Stay broad. Celebrate the little things. Maintain perspective on why you're here. Ask every question you've got. Be flexible and tenacious. And keep persevering.

To end, for the aspiring wildlife biologist, I leave you with one last piece of advice:

Your life is a story, so don't be afraid to write it the way you want.



*Figure 68. Teton Mountain Range. Photo credit: Christy Fuhrmann.*

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## Appendices

Colorado State University and the Department of Fish, Wildlife, and Conservation Biology provide a wide variety of information and helpful resources for students to access. Included in the appendices will be lists of resources that I found useful whether it was for finding clubs and organizations that spoke to me, accessing job boards and career resources, and learning more about the field as a whole.

### General

Fish, Wildlife, and Conservation Biology Department homepage –  
*The main hub for FWCB news, program information, research labs, faculty contacts, and more.*

<https://warnercnr.colostate.edu/fwcb/>

### Career Resources & Job Boards

Warner College of Natural Resources Career Services homepage –  
*Offers career advising, news, resume reviews, internship/job search support, workshops, and career pathway information tailored to WCNR students.*

<https://warnercnr.colostate.edu/career-services/>

Texas A&M Natural Resources Job Board –  
*One of the most widely used job boards in the wildlife field, updated daily with technician, seasonal, graduate, full-time positions, and a variety of other opportunities.*

<https://jobs.rwfm.tamu.edu/>

USAJobs General Natural Resources Management and Biological Sciences –  
*Federal job listings across agencies like NPS, USFWS, USFS, BLM, and more.*

<https://naturalresources.usajobs.gov/search/results/?j=0401>

The Wildlife Society Career Center –

*Wildlife-centric listings from entry level internships to full-time positions. The Wildlife Society is a major professional organization for wildlife professionals and offers a wide variety of resources from news, career development, events, and much more.*

<https://careers.wildlife.org/>

Conservation Job Board –

*Collection of conservation, ecology, forestry, wildlife, and fisheries positions from entry-level to full-time.*

<https://www.conservationjobboard.com/>

State of Colorado Job Opportunities –

*Government positions in Colorado. Can filter by the Department of Natural Resources. Commonly lists Colorado Parks and Wildlife positions among others.*

<https://www.governmentjobs.com/careers/colorado>

*\*\*Word of mouth and networking are also key in job searching. Multiple interviewers, especially those who hire technicians, emphasized how just talking to potential employers can go a long way in getting your name out there and knowing what positions are available. \*\**

## **Wildlife & Outdoor Organizations at Colorado State University**

Warner Student Organizations homepage –

*A list of some of the major student organizations housed under Warner College of Natural Resources. Include a variety of organizations from geosciences, forestry, ecological restoration, and much more.*

<https://warnercnr.colostate.edu/student-organizations/>

Some wildlife and conservation related organizations include...

The Wildlife Society

Backcountry Hunters & Anglers  
Rocky Mountain Elk Foundation  
Field Ornithologists  
American Fisheries Society  
Ducks Unlimited  
Society for Conservation Biology  
Entomology Club  
Fly Fishing Club  
...and many more related to the natural resources field!

RamLink –

*CSU's campus-wide directory of clubs and student organizations. Great way to search up all organizations and to get connected with them.*

<https://ramlink.campuslabs.com/engage/>

*\*\*One of the best way to discover new organizations is to go to involvement expos held every semester. Many organizations also have social media presences where you can explore more.\*\**

### **Other Useful Resources**

CPW Connect –

*Colorado Parks and Wildlife's volunteer management system for getting involved in a variety of projects.*

<https://cpwconnect.state.co.us/>

*\*\*Many other organizations and agencies also offer volunteer opportunities: from USFWS to NGOs, and it takes just searching around or talking to someone in those organizations to find opportunities.\*\**

