

Interviewee Name: Rebecca Cole-Will

Project/Collection Title: Bar Harbor 2019 Collection.

Interviewer(s) Name(s) and Affiliation: Galen Koch (The First Coast)

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Interview Description: This interview is with Rebecca Cole-Will, the Chief of the Division of Resource Management at Acadia National Park. Cole-Will discusses the direction of management within the park to include community collaboration with harvesters. She reflects on the workings of the park and how to manage changes to the climate and increased influxes of visitors. Cole-Will explains some of the current resource management projects, including habitat protection for bats struggling with white-nose syndrome, incorporating indigenous and local traditional ecological knowledge for sweetgrass, worm, and clam harvesting communities, tick education and monitoring and confronting sustainability in the time of climate change. Other park topics such as balancing visitation and restoration on Cadillac mountain are also addressed.

Keywords: Acadia National Park, resource management, worm harvesters, white-nose syndrome, sweetgrass, traditional ecological knowledge, park visitation changes, ticks sustainability.

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Transcribed By: Elle Gilchrist

GK: Galen Koch

RCW: Rebecca Cole-Will

[58:49]

[00:00:00.0]

GK: These are obviously edited, so don't worry.

RCW: So, just to get started, what are you interested in? Are you just kind of looking for any —?

GK: Yeah, I have questions for you. I'll ask you questions.

RCW: Okay. Well, then let's cold open and see where this goes.

GK: Okay. [laughter] So, I'll just have you say your name first.

RCW: Sure. My name is Rebecca Cole-Will.

GK: Rebecca, can you tell me your position and what led you to being in this position? I know that's a big question.

RCW: Sure. My official title is the Chief of the Division of Resource Management at Acadia National Park. So, in the Park Service, we're based on an almost top-down structure, and so each division has an area of specialty and expertise, and we all fold that in together to the management of a park. So, resource managers are the technical natural and cultural resource specialists in the park service. So, I manage a team that includes a program in air and water quality monitoring, vegetation management. It includes a lot of work on removing exotic plants. We have a specialist who just coordinates science with partners and with researchers. We have a lot of scientific research that goes on towards answering management questions. We have a cultural resource specialist whose job is to work with the rest of the park staff on inventorying and protecting archeological sites, historic structures, cultural landscapes, and so it's inventorying and monitoring work related to that. We have a museum curator who takes care of the stuff that's in the park that relates to the park, and we have a GIS [geographic information system] specialist. We have a land specialist. So, you can get the sense — and wildlife biologists, of course. So we have those technical experts who count things, take the temperature of the park, do the inventory and the monitoring, and then roll that information up in terms of ongoing decisions around how we manage resources in the park to protect them in perpetuity, which is the mission of the Park Service.

[0:02:32.6]

We interface with everybody else in the park, so the park's kind of like, if you will, a pretty complex town in its own right. We have the facilities folks who take care of the roads and the building and the trails. We have the resource protection rangers who are our law enforcement folks, who are out there protecting and assisting visitors but also helping to protect resources in the park, and the administration who are the folks who hire and pay the bills and keep us going. Interpreters and educators — those are the front-line folks who most visitors are familiar with, the rangers out there in flat hats that are telling them the story of Acadia. Then the management includes the superintendent who's really like the mayor of the town, if you will, and his deputy superintendent as well as planning folks and public affairs person who is the one who goes out

and communicates to the public. So, it's all that complexity of different specialists who interface to keep the park healthy and ensure that visitors have that experience. That's what we want.

[0:03:59.4]

GK: Yes. You were working at the Abbe Museum for a little while before that?

RCW: For a long while before that. So, I came into the Park Service in an untypical career path. Most folks start out in college. They get a job either working on trails or they get a job as an interpreter and spend seasons doing that kind of work. I had a whole career before I came to the park service. I was the archeologist and curator at the Abbe Museum for many years, did a lot of work on tribal consultation work, and did a lot of environmental impact assessment work related to archeology. So, I worked for Acadia National Park before as a consultant, if you will, through the Abbe Museum before I came to work here. In 2006, I was lucky enough to be selected for the position of cultural resource specialist, so it was the first time Acadia had actually had a permanent position focused on the cultural resources in the park. A lot came in to do archeology, to do tribal consultation work, but also to just develop a program where we really did understand the long history and the relationships of people with the landscape here, and then start to build that documentation and really the history of the cultural side of Acadia.

[0:05:34.0]

GK: Yes. I was curious about that in this age of thoughts of rehabilitation or how we rebuild our relationships with indigenous peoples as being on the land that was once their lands, although "property" is not really in their language. But what that looks like – you say you started that – it sounds like they really, with you, had a shift toward acknowledgment of [inaudible]

[0:06:03.6]

RCW: Well, I don't think it – I won't take credit for that. There was work that was being done on that before I came to the park. But there has been a long history in the Park Service, where parks have been created from – most places from federal land. In most cases, that federal land was indigenous lands before it was that. So, if you think of the big parks in the West: Yellowstone, Yosemite, Grand Canyon, Zion, Arches, Mesa Verde, Chaco. Those are all indigenous lands and landscapes that have been so for thousands of years. In the east, in a place like Acadia, this is Wabanaki homeland, but it's been a long time since the Wabanaki people really fully lived and managed and controlled this land. So, because Acadia became a park a hundred years ago, and even by a hundred years ago, the Wabanaki had been in some ways removed from this landscape, back to the communities that are called reservations. So, what we wanted to do and what we'd been doing at the Abbe for a long time was to consult and listen to Wabanaki people about what are those stories that needs to be told and what service should be done to work with Wabanaki people around issues of landscape and history and even controlling of intellectual property. So, what we've been doing here is a couple of things. One is to just document and acknowledge that this is Wabanaki land or homeland, so that when we consult, the Park Service consults at the level of one sovereign nation to another sovereign nation. So, we interact at that level with the affiliated tribes to consult around the impacts of what the park is doing for projects

related to Wabanaki concerns. That's at the level of what we call the National Historic Preservation Act. That's an ongoing thing, but also around telling stories in a culturally appropriate way or not. I mean is it appropriate for us to tell Wabanaki stories, or should we invite and try to figure out ways to bring Wabanaki cultural experts back to the homeland to do that. That's some of the work we have been doing.

[0:08:53.9]

GK: Yeah. I think about, too – so, some of your work is not only that cultural piece but also the actual resources, natural resources as well?

RCW: Yes.

GK: Natural resource management. My understanding is that in a national park, there isn't any harvesting going on of resources.

[0:09:21.9]

RCW: So the code of federal regulations, which is the federal law and regs that are used to manage and protect park resources, generally – up until 2016, it was codified that no plants or animals could be removed from a national park. Now, that's not entirely true, and there are parks that, as part of their Organic Act, the laws and regs that created them, identified and permitted for the harvesting and use by indigenous people. So, all of the Alaska parks have those rights, and some parks in the West do as well, where indigenous people have been living there and continue to live in those places. But generally, the regulations did not afford the opportunity or the rights of indigenous people to harvest within national parks. So, in 2016, that regulation got changed, and there was a promulgation of a process whereby parks could enter into agreements with tribes to issue harvesting permits. Now, there's a lot of sideboards to that, and we are working on a process here at Acadia first to consult, to understand what are the plants of significance here for the Wabanaki. And the first question we heard was, "Well, we don't know because we haven't been there for a hundred years." So, it was starting with just opening the door and saying, "Here's what we have here. What do you think is important for you?" We brought in a couple of project investigators/consultants to help us work through this process, who were just amazing. One is Suzanne Greenlaw, who is Maliseet, and the other is Michelle Baumflek, who's an ethnobotanist. So the two of them are kind of working together as the co-PI's [principal investigators] on this project to talk to Wabanaki folks around these issues. We quickly settled on – well, not so quickly – the plant of most interest right now that we are working through the process on is sweetgrass. Sweetgrass is salt grass that grows in salt marshes, and it's incredibly significant to the Wabanaki not only for their basket making but also for medicines and ceremonial purposes. The thing about Acadia is because we are a coastal landscape, we have sweetgrass resources that might be appropriate for harvesting in a sustainable manner.

[0:12:23.5]

GK: Want to get some water or something?

RCW: Excuse me. One of the issues that's been going on for Wabanaki people, as I understand it, is losing access to coastal resources, as is the whole coast of Maine, and that's true for a lot of working waterfronts. Working coastal landscapes have been disappearing for a long time, and so it's been harder and harder for Wabanaki harvesters to find places where they can go and get sweetgrass. So it seems like the potential for being able to have that access here at Acadia might be important. So we're working through listening and learning by literally going out in the marshes with people who have been doing this for a long time and really understand the plant and how to harvest it, and the connections to place. So it's been a really fascinating pilot project that potentially and hopefully will lead us to developing agreements where we can issue permits to allow for sustainable harvesting in the park, which will be a really unique kind of change to the way we think about how parks get managed.

[0:13:45.8]

GK: Right. Thinking of what does sustainable mean, I think the feeling of conservation has changed, too, in the last one hundred years, but what it means to have land that is protected and who gets to be on that, and does that mean there is still something – does it help the sweetgrass to be harvested in some way, those kinds of thoughts.

RCW: Right. Those are excellent questions. I think that we are slowly learning some of those answers not just at Acadia but in other national parks, where indigenous people have managed for resources and managed for that use and protection for a really, really long time, and that by listening and learning from that experience, that we can actually do a better job of taking care of parks. For sure, yes.

GK: I am curious, too, in the time that you've been working in Acadia, have you seen the change in the amount of visitors just in your time or in your time in MDI [Mount Desert Island]? If you could speak to some of that.

[0:14:59.0]

RCW: Yes. I think in the last ten years, we've seen an increase in visitation in something in the order of fifty-five percent. So, we went from about two and a half million visitors to three and a half, approaching 3.75 million visitors. That trend of increased visitation is something that the parks service has been seeing across the system, especially in what we call the big parks. Great Smokies sees twelve and a half million visitors, and Grand Canyon sees probably around, I don't know, eight. Those numbers have increased a lot over the last ten years, which is obviously a success story. It says our people value our national parks, and they are a part of the important fabric of what people do. But it also has stressed to the very limits the capacities of parks, and we've seen that here at Acadia in terms of times and places, where it's just very congested, and it's really frustrating for folks because they, for example, can't get to Cadillac Mountain for sunrise because it's just too busy. They can't sometimes get away from others and have that quiet experience that is part of what we want the experience of Acadia to be. So yes, we've seen vast increases in visitation and changes, I guess, probably related to demographics and all kinds of things in terms of how people want to access and use their parks.

[0:16:50.2]

GK: What are some of those changes? You mean in how they want to move around, transportation-wise?

RCW: All of the above. Sure. So, the bucolic classic example of what people used to do in national parks is you'd get in your wood-paneled station wagon and pack in the kids and all your camping equipment, and you'd drive across the country, and you'd camp in your national parks. I think what we're seeing now, especially in Acadia, we're seeing people coming and staying for shorter amounts of time but wanting to have a soup-to-nuts experience. So they want to bike the carriage roads. They want to go hiking. They want to go to Cadillac for sunrise. So, it's trying to figure out – and they want to come in their private car and do it when they want to do it, which of course, is what you'd expect, but it is posing challenges just in terms of congestion at certain times in the year. So, we are seeing that. We're seeing some differences in tours and those kinds of groups coming in. Another big thing in the last twenty years has been the huge increase in the visitations by cruise ships into Bar Harbor. Even though that's a small number of our percentage of our visitation at the park, it does have impacts related to the way they access the park on big tour buses and go to certain places in large numbers at one time and overwhelm the facilities and the resources that we have for them.

[0:18:42.9]

GK: Yeah. I was thinking because when you are down in Bar Harbor – I guess I haven't been in Bar Harbor in a long time. We used to come as a kid. Seeing the congestion with those buses down on the waterfront and then thinking in my head, I remember the roads in Acadia being a little bit narrow anyway when I was a kid and when I drive them now. Thinking about those buses on these roads is kind of amazing. I mean, shocking.

RCW: It's a challenge to figure out. So, we've been working on a transportation plan to just do that, to figure out what are the best times and ways and how to help people gain access to the park without feeling overwhelmed.

GK: Yea, I imagine that poses the question for you of how do you manage people wanting to access the park and keeping the park a place that people will still want to come to [inaudible] resources?

[0:19:50.6]

RCW: That's that huge balance and question the Park Service has been wrestling with for a really long time because the mission is to protect and preserve for all time and, at the same time, afford for visitor experience and use. So, we always have to figure out how to make that balance between the two, and it changes over time.

GK: Have you seen the story on Cadillac of some of that vegetation restoration? Is that something that's happening all over the park, or is that specific to Cadillac?

[0:20:32.4]

RCW: So that is a pilot project to figure out some process and to understand some things at one of the most highly visited places in the park. Cadillac's been a place for people to come to for a hundred and fifty years or more. So, over time, we've seen a lot of impacts, and we're also seeing, of course, the impacts of climate change in a place like that as well. It's part of a fairly unique subalpine habitat with plants that are in some ways uniquely adapted to more higher altitude locations than just along the coast of Maine, but because it's cool and moist there, we see more blueberries and low-growing plant kind of habitat. As a result of a lot of constant use, it's really quite impacted and really fragile. So, we're trying to figure out how to do restoration that is also adaptive as well. Should we be focusing on plants that were here a hundred years ago, knowing that perhaps fifty years from now that climate isn't going to be sustainable? Should we think about how to do that in an adaptive framework? So that's one of the things that we're working on up there. That's not unique. We have other barren alpine tops – the rest of the Sargent Mountain, Penobscot, and the others. But the thing that's unique about Cadillac is that you can drive up there, and lots and lots and lots of people do. We're trying to figure out ways to help them understand how to enjoy that experience, get off and get away from it all and sit on the edge of a ledge, and look out over the landscape. But at the same time, here's a place [where] it would be great if you stayed away from while we try to figure out if we can grow plants back into it to hold the soil and to do a bit of restoration.

[0:23:02.1]

GK: Yes. Is climate change something that, in your position, you are dealing with, thinking about the impacts often?

RCW: Sure. All the time. The park's been here a hundred years. We've had a hundred years of science that has gone on in Acadia. So everything from geology to inventories of marine organisms to botany – just everything. As a result of having that long-term baseline, but also a lot of science that's going on now, we understand that things have changed, and they're continuing to change, and they are changing rapidly and in directions that not everybody is entirely sure where things are going. It's managing in a period of uncertainty. So, to manage for conditions that we had a hundred years ago, or even fifty years ago, is probably not going to give us the right tools to continue to manage and protect the park going forward. So, for example, we've lost something like twenty percent of the native plants that were here a hundred years ago when the first inventories were done. Those plants are not here anymore. We're seeing more invasive plants and plants that are not native at all but that have an adaptive advantage over some of our native plants. So we spend a lot of time looking for those and removing those. We're seeing climate patterns that make it a challenge to manage for a longer growing season, lots more visitation in the fall. October is a super busy month now. Fifty years ago, the park rolled up the carpets by Labor Day, and now it's well into even the first of November before we close things down. So, just in the time of a person's career, we're seeing lots and lots of changes and things we have to think about how to address going forward.

[0:25:28.4]

GK: Are there any studies on sea level and things like that?

RCW: So we issue something in the neighborhood about a hundred research permits a year for all kinds of scientific research. You name it; somebody is doing some kind of work here at Acadia. A lot of that is academic and doesn't necessarily contribute directly to management, but a lot of work does contribute directly to management. So we're seeing sea-level rise, yes, but not the kind of drastic sea-level rise that is of great concern in places further south. We have this rocky headland coastline generally, and so those coastal resources are less vulnerable to sea-level rise and erosion, but we do see that. We had this big Nor'easter last – when was it?

GK: Thursday.

[0:26:33.1]

RCW: Last Thursday – that shut down the Schoodic Peninsula because those roads are low-lying and trees and powerlines came down. That's a place where we're seeing those kinds of impacts. We are seeing a lot more things like storms like that that are highly intense and more frequent than they used to be. So, a storm that you might see every fifty years, we're seeing every five to ten years now. The results of that are things like a lot more erosion of roads, trails washing out, and so the need to think about how to more frequently harden our infrastructure for one thing, but also what are the other kinds of impacts that has on other natural and cultural resources. So there's a lot of work going on, not just at Acadia but across the Park Service, to consider those kinds of effects and how to think about management long term.

[0:27:38.7]

GK: Yes. It feels like it's a really busy time in the management scheme of things. There's a lot going on. [laughter]

RCW: [laughter] Yeah, there's a lot going on. It is super busy. It's very challenging, but it's exciting for that reason, of course.

GK: Natalie [Springuel] had mentioned in an email to me too about some fisheries management. Can you talk about that a little bit?

RCW: Sure.

GK: She didn't elaborate. [laughter]

[0:28:09.0]

RCW: Okay. This is a cultural landscape, and this is a place where people have lived for a really long time. The park is surrounded by local communities. So, folks that have been harvesting fisheries have – that's a tradition that's been going on for hundreds of years. The management and boundary around the park, what we call our jurisdiction in Acadia, is somewhat unique

because Acadia was put together entirely by donated land. It's unlike some other national parks where they were carved out of federal land, to begin with, and somebody just drew a box around a place and said, "Okay, this is going to be Yellowstone National Park." At Acadia, the park was created by the donation of all these private pieces of land, and so the boundary or the jurisdiction of those varies based on that particular deed. Most of the time, the park's jurisdiction goes down to the low watermark. So, if you stand at Thompson Island and you look out towards Hancock, or I guess it would be Lamoine actually, at extreme low tide, you're going to see a mudflat that goes out for a really long way. All that area out there, to a certain extent, would be considered part of the park. The park's responsibility would be to manage that area to protect the resources, but that gets back to that code of federal regulations, which says you will not harvest in a national park. So, there's been that ongoing kind of recognition and tension between knowing that the intertidal zone is really an important resource for people who have lived here a long time and have made their living in the intertidal zone: clammers, wormers, periwinkle gatherers, etc. So, the park had generally managed by recognizing that maybe something – there was harvesting was going out there, but that we weren't necessarily going to enforce severely the requirement that you will not harvest in the intertidal zone.

[0:30:44.9]

That came to a head in 2016 with some conflicts between harvesters and park rangers. It created a serious issue where other stakeholders got involved, including you know the state, the Department of Marine Resources [DMR], and even the congressional representatives who were hearing from harvesters that the park was basically interfering with their livelihood and that people had been doing this for a really long time. So, what we did was to sit down in a room and listen to a lot of other stakeholders, people who know as much about, if not more, about the mudflats and the history and the use of those areas than we did, recognizing that we had to shift into a partnership around understanding what people were doing and trying to make everybody work together to understand what are the concerns around the intertidal zone as a place in a national park. We've been doing work together now for close to three years, so getting together once or twice a year to talk about what kind of research or what kind of work needs to be done in order to, number one, document and recognize that long history of traditional use and also to think about some of the concerns that everybody has with what's going on in the intertidal zone in terms of impacts – invasive green crabs. Now we've got the Asian shore crab that's in the coastline and areas where flats get closed from pollution, and what's climate change doing, and changes in access and use.

[0:33:02.2]

So, what we are doing is shifting from a "Hands-off. Stay away. We don't want to know what you're doing. We don't want you around," to "Hey. Work with us. Let's all figure out what's the best approach to protecting resources in the intertidal zone."

GK: It seems like all of these shifts are all – every single one, the sweetgrass pilot and management of the vegetation, and talking about intertidal zones – it's all the harder way, right? It's the more collaborative, more intentional way of that kind of management. You could just be like, "No, we're not going to engage with you. Hands-off." Why do you think the park makes

the choice to go about that in such a collaborative – not dictating, “Yes, you can be here. No, you can’t.” What’s the shift about? It seems like a cultural shift.

[0:34:07.7]

RCW: Well, it may be. I think that’s more perceived than real. I think any good park manager has always been – recognizes that we are not in it alone, and we really have to work with partners and across broad landscapes of collaboration. I think it’s just – here, especially it’s critically important, you know. Acadia, as I said, is a mosaic on so many levels. We’re a big park and a small landscape. We have something like eleven other communities that surround and interact with the park on a daily basis. We have a long history of other people who have co-managed and shared this landscape. So I think it’s just that recognition that we need to be outward-looking and build partnerships and other kinds of stakeholder engagement, and just communicate. I think, lots of time, people just don’t understand what we are doing or why we do it because we aren’t very good about communicating that. I think that the recognition that there’s so much to do and so many other people that can help us – we can work together – that it’s the only way that it’s really going to work.

[0:35:51.3]

GK: Yeah. Because I am sort of focused – I may do this project in some other communities on MDI too, but the work gets hyper-focused on one town. Because Bar Harbor’s story is so much the park’s too – it’s so intertwined – I think all of the communities probably on MDI have that same relationship. What is your perception of that relationship with Bar Harbor, the town, and the park? It might be out of your wheelhouse.

RCW: Yeah. I’m sitting here, thinking my daily job doesn’t cross with Bar Harbor as much as some other people’s does, and it might be that for that kind of conversation, I would point you to maybe our superintendent Kevin Schneider, or the park planner, John Kelly, or someone who does intersect and work with the town on a lot of the issues related to transportation, for example, which is a really big one, and those other kinds of issues related to tourism probably, as opposed to resource-based issues that are my thing. I spend a lot more time thinking about working with, like I said, worm harvesters or sweetgrass gatherers, but community folks as well. I can point you to some other people who would be able to give you more of a perspective on Bar Harbor than I could.

[0:37:42.9]

GK: Yeah. I want that perspective for the project, but I’m actually much more interested in the resource-based conversations. You said worm harvesters. I knew that you had supported the work of one of the COA students around some of that.

RCW: Yes.

GK: Are some of these intertidal zones open to harvesting for periods of time or on a permit basis?

RCW: So the management of the – yes. The intertidal zone is open for traditional harvesting of marine species, and the codification of the management of that is at the state level with the Department of Marine Resources. So if you're harvesting clams, a clam digger, you have to get a permit; that's through the permitting process in the towns, and each town has their own shellfish wardens and regulations that rolls up to the state. Then for worm harvesting, they have to get a state license, but their license isn't specific to a town or a community, and the reason is because worms aren't – they're not food, so the public health issues aren't managed in the same way. So the worm harvesters get a state permit to dig, and then they dig depending on where they are from, what they are looking for, what time of year it is. It's a whole fascinating real complex understanding of the ecosystem and the habitat and the habits of worms. I mean, who would imagine? But these folks really have an amazing understanding of the resource. One of the dirtiest days I spent in Acadia National Park was the day I went out with Fred Johnson, who's this amazing worm harvester. He took me out into the flats. I got covered in mud from head to toe. It was just appreciating how he could stand on the shore and read a mudflat like a map and how hard these people work. It's truly amazing. It was a really terrific experience. I would recommend that you get in touch with Fred and talk to him.

[0:40:39.4]

GK: Yeah, that would be great.

RCW: I can give you his phone number. He and I talk regularly. I rely on him for a lot of perspective, and he gives me – he and I communicate regularly around what's going on and if there are issues for the harvesters that need to be brought to the attention of the park. He's just a good friend.

GK: Cool. That sounds great. Do you have counts on how many people are out harvesting every year?

[0:41:13.8]

RCW: So, we don't manage that. I think what we want to do is we want to make sure that – primarily, the rangers keep an eye on where people are, but we're not managing their harvesting; that's done through the state DMR and that process. We'd like to know where they are, and we'd like information about what they're observing in terms of the health and the conditions of the intertidal zone. So, a lot of the conversations we have, the work, and the meetings are around advising on building science and research that will help understand what are the conditions and what's changing out in the intertidal zone. So that's some of the work that we're doing on what's a healthy intertidal? For harvesters, of course, a healthy intertidal is one that's sustainable. That sustainability has so many other factors that feed into it. So we're having conversations and thinking about research that can contribute towards that.

GK: Are there stories or projects that you are working on and either excited about or daunted by that we haven't talked about? I am sure you have a lot.

[0:42:43.0]

RCW: Oh my gosh. Where to start? I'm excited and also daunted by the work that's being done by our wildlife biologists to understand the impact of white-nose syndrome on bats species in Acadia. So, since 2010, we think we've lost something in the neighborhood of ninety percent of some of the keystone bat species. Northern long-eared were listed [on] the Endangered Species List to protect habitat, so listed as threatened, and that's related to habitat management as opposed to endangered – the parsing of language – as the result of white-nose syndrome. So, we think we lost – based on pre-white-nose inventories, we think it hit in Acadia at about 2010 based on finding and testing bats, and since then, [we] have been doing long-term monitoring to figure out what the behavior of bats are, where they are, and trying to get some sense of numbers. That's really hard because you have no idea how to count. How do you count to know whether you have a hundred bats or 10,000? But that work, like I said, is very daunting because we've seen just incredible decline. That decline is across the country as well. Bats are such an important keystone species in the whole circle of life, if you will, because of the role they play. They eat a lot of insects. What we're learning here is that we're making management – this is a direct management change. So, bats are here primarily in the summer. We don't have winter caves, where they come and hang out in huge numbers. But they're primarily on the landscape in the summer when they're incredibly vulnerable because it's when they're pupping and roosting. So, we need to protect the habitat for the bats that are here so that they can hopefully have populations rebound. So what we've been learning is that a lot of the bats are out roosting in trees or along the scree slopes and other places in the park. In order to protect that habitat at that vulnerable time, we're changing a lot of the way we're doing work in the park.

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A lot of tree cutting that used to take place in the summer along the roads and the trails – a lot of that work is shifted to winter work now so that we're not impacting that habitat when bats are here in the summer. Trails crew working with our biologists have figured out ways to protect those scree slopes and be aware of the potential that bats can be there. The way we're doing that is by doing a lot of mist netting and acoustics – putting recorders out all over the park and listening for bats. It's very intensive work. It creates giga-gigabytes of data and information that has to be processed, but it's actually exciting because it's directly feeding into how we manage on the ground in the park on a daily basis. So, that's kind of another example of something that's going on.

GK: Wow. Listening to all those hours of audio would be wild.

[0:46:26.1]

RCW: Imagine. So, what these folks are doing is they're using software that can say, based on other kinds of audio recognitions, well, this is a little brown bat, but it might be a Northern Long-eared. So, a person like you with headphones on sits and listens to those squeaks to verify which is which kind of bat it is.

[0:47:00.5]

GK: Wow. That's a huge – and that's been going on for the white-nose syndrome, you'd say?

RCW: Yes. So white-nose syndrome is a fungus that affects bats, and it appears that the fungus was transmitted from caves in Europe into North America around 2006, 2007. The first noted outbreak, bats were dying by the millions in New York. What happens is that the microorganism causes the fungus. One of the features of it is this white fuzziness that will appear on the noses of bats. But it does other things, too. It causes them to wake up in the wintertime from irritation, and then they starve to death or dehydrate because they're moving around when they should be hibernating. So, we see bats when their wing flaps are all scarred from the results of the disease. Some of them are surviving it. A lot of them haven't. There's hopeful work being done to try to figure out – they're looking at soil probiotic solutions that might be a counter to the fungus. So we're hopeful about that, but it was a major cascade die-off of many different bat species, and it's across the country. So that's something that's that my biology team is working on.

GK: This is just a random thought. Are you having tick issues here?

[0:49:00.4]

RCW: Yes, yes. We're having tick – so, everybody is having tick issues, right? And some of the research that's being done here, and this is really cool work, is – and I love it because it's so interdisciplinary. We've got a social scientist from the University of Maine, Sandra De Urioste-Stone, who is working with a tick biologist at the University of Maine on an interdisciplinary project and using Acadia as the place to do this research. Sandra's work is working to interview visitors and to understand visitor perceptions of risk and what they understand about ticks in order to provide info – to help provide us with information that we can share with visitors around. You're coming from a place where there's lots of ticks. “Yes, we have lots of ticks here too. Did you know that?” So you are not in a – just because you went north from Connecticut, you're not out of tick country; there are ticks here as well. So, to understand what people understand about that and also to give them information for doing tick checks. Then, Allison Gardner's research is around doing tick drags, so locating the high-density areas for ticks, trapping small mammals who are vectors for carrying ticks to understand the high-density areas where ticks are in the park. They're everywhere, of course, but some areas are much more hotspots than others. So, to try to understand that and have those two pieces of information pair so we can help visitors to be as safe as possible. But they're here, and we are seeing all of the tickborne diseases, Lyme and babesiosis.

[0:50:58.1]

GK: Yeah. It's changed so much in my lifetime. I'm thirty years old, and in that time – we didn't have to deal with them at all when I was a kid, and now it's like –

RCW: Right. And that's one of those – whether it's climate change or what, but there's certainly a much higher density, and they're here in great numbers.

GK: Yes. Well, it sounds like you have your work cut out for you. [laughter] It's exciting. I would love to – I don't know if it's possible. Part of my work is I like to go and get recordings in the field, this kind of stuff, and then be with people when they're working. So, Fred, definitely – that's an opportunity for that kind of thing. And also, the Cadillac – do you have anything happening with the sweetgrass pilot project?

RCW: Not any fieldwork this time of year. The fieldwork takes place in July and August when the grass is at its best for harvesting, so that's when we have a group of consultants on the project, the gatherers who are really the core advisors who we meet with regularly. They tell us what the next steps for the research should be and gathering that. I mean, you could certainly probably interview Suzanne Greenlaw. She's at the University of Maine. She's a PhD candidate in forestry, and I can give you her contact information. But there isn't any fieldwork going on for that project going right now.

[0:52:53.2]

GK: Right. That could even be something in the future. It sounds like a great project. She is one of the people spearheading that? You mentioned her, but I forget exactly what –

RCW: Susan is Maliseet. She is a PhD candidate in forestry at the University of Maine. So, she lives in both of those worlds and really is an expert on what we call TEK, traditional ecological knowledge, so how do we mesh traditional western science with traditional ecological knowledge, which is science in its own way but is expressed in really vastly different kinds of ways in terms of knowing and communicating and sharing. That's a key component of this project is to value that traditional knowledge as much as western botanical science in understanding what the resource is, what is this level of sustainability, and then communicating that to the place where we can then start managing for those ecological values that are traditional as opposed to park management.

[0:54:24.0]

GK: Yes. It's interesting giving space for that traditional ecological knowledge not only with the intertidal zone –

RCW: Same thing.

GK: It's the same thing, right? Yes.

RCW: Valuing –

GK: Valuing.

RCW: – what people know and have learned as accumulated information over hundreds of years.

GK: This is one of the last questions because I know we're reaching time here, I think. Has it been an hour? Is there ever talk of needing to limit the amount of people that do enter the park, or is that something that would be impossible to do?

[0:55:11.0]

RCW: Well, while we don't think we'd need to necessarily limit the number of people, what we're managing for is really auto-congestion. Cars are limited just by the number of parking spaces we have or just the amount of road that we have. But generally what happens, even on a really busy place like the top of Cadillac, if you can get there and you can find an appropriate parking space, even at the top of Cadillac, you can wander off onto the rocks and go over to the south ridge area. You can be alone on the top of Cadillac Mountain. You can certainly be alone or have a low-density experience in Acadia almost anywhere. So, even though there's lots and lots of people and places at certain times, you can still get away from it all. What we want to be able to do is manage the number of cars probably that come into the park and manage where people park their cars because they sometimes put them in all kinds of odd places, and that's an impact to the resources as well as safety. We think that by starting this reservation system, where you can be assured that yes, you can drive to the top at ten o'clock in the morning and spend two or three hours or how many you want there. You have the assurance that if you've made a reservation, you've got your space so that you can do that. If you don't, then you either need to find another time that makes sense, or you can take a bus or you can ride a bike. So, I think that we're hopeful that by that kind of an approach, then we can continue to allow people to have access to the park, which is, after all, one of the main things we should be doing in a national park.

[0:57:15.8]

GK: Yes. Once November first hits, do you get to have some quiet time? [laughter]

RCW: Well, it's quieter in the park because we have less visitation. It's not quiet anymore anytime. So, starting the first of November will be the period when we start writing all of those proposals for the next phase of research or our funding to support monitoring work or whatever, and so that's a super busy time. We're always busy in terms of partnership and collaboration work and ongoing – having conversations and meeting with people. We'll start the next cycle of hiring for next season's seasonals. We bring in almost a hundred and fifty seasonals at Acadia a year, and so that process starts almost immediately as we shut down the previous year. So, business is good. [laughter]

GK: Constant. Yes, business is good and constant. Where do you live?

RCW: I live in Trenton. I am really lucky. I live in a place where I see the sunrise every morning. I look out over Goose Cove and the mountains of Acadia. I'm just really grateful to be where I am.

GK: That's great. Thank you so much.

RCW: You're welcome. You're welcome.

GK: Yes. Thank you. I am going to turn this –

[0:58:49.3]

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Reviewed by Molly A. Graham 6/12/2022