

Sarah McConnell: There's nothing quite like the City of New Orleans. A lot of family is there, and I love the people, the food and architecture, the smells, and of course, that distinctive sound.

Sarah McConnell: It's not just the music. New Orleanians also have distinctive accents and ways of saying things.

Katie Carmichae: Everybody knows everyone's family, and so that's this thing, checking in with your mama and them. Your mama and them means everyone that you're related to. How's your family?

Sarah McConnell: From Virginia Humanities, this is With Good Reason. I'm Sarah McConnell.

Sarah McConnell: Today on the show, how Hurricane Katrina changed the accent of the Crescent City.

Sarah McConnell: Later in the show, stories about some of America's iconic shorelines that are disappearing.

Rick Van Noy: The town that Bob Dylan sang about in Tangled Up In Blue, he talks about being right outside a fishing boat, right outside of Delacroix. That's no longer there.

Sarah McConnell: But first, Katie Carmichael is a linguist and a Professor of English at Virginia Tech. She says Hurricane Katrina was a perfect storm for accent changes. She's interviewing hundreds of New Orleans residents to uncover how their accents and ways of talking have changed since the hurricane.

Sarah McConnell: Katie, you were in college at Tulane in New Orleans when Hurricane Katrina struck. Did Katrina break your heart?

Katie Carmichae: Of course. It broke everyone's heart. This is one of the things that when I do interviews with New Orleanians, you hear the most heart wrenching stories and people, they're absolutely traumatized by this.

Katie Carmichae: On the other hand, you also find this love for the city that is so strong, is so overwhelming, and feels different from other places. There is this sense of we almost lost what we had, and there's this real treasuring of New Orleans as a place, New Orleans as home, my connection to New Orleans amongst New Orleanians, whether they left, were displaced or not.

Sarah McConnell: After Katrina hit, what first gave you the idea accents have changed in New Orleans to some extent?

Katie Carmichae: Yeah. There were a lot of ingredients in the recipe for language change, okay. Anytime that you have increased contact between groups that speak differently, that were not in contact before, you often will get language change, and it can

be in different directions. It can be people talking more like each other, or it can be people emphasizing the differences between me and you, this insider outsider thing.

Katie Carmichae: In New Orleans, you have this physical movement, this physical displacement of people both from the city. Everyone was displaced for at least a month when the city was evacuated. So people who historically hadn't ever lived anywhere else are now in contact with people from elsewhere. Those people are saying things like, "Well you pronounce that funny."

Katie Carmichae: There's this awareness that builds, and then there's also just this exposure to other ways of thinking, and other ways of talking. Then you also have these outsiders coming in. Post Katrina, the population of New Orleans is really quite different, and has a lot more non-locals than it's ever had.

Sarah McConnell: You have a National Science Foundation grant to interview a couple hundred people in New Orleans. Any that just delight you that you could tell me about?

Katie Carmichae: Oh, there's so many characters in New Orleans. People just have this delightful way of telling stories, where you just get this really vivid coloring of what it's like to live the city.

Katie Carmichae: One thing that I ask everyone about is their favorite place to eat. That is a question that New Orleanians have opinions about. I mean, capital O opinions about. I also ended up using that as a recommendation, so I would go and say, "Oh great. This is a great place to eat."

Sarah McConnell: Did any of them epitomize some of the language differences that you love?

Katie Carmichae: Sure, yeah. Anytime that I would hear someone say something like "making groceries" for going grocery shopping. Some folks would be dropping the Rs, so saying darling. That iconic New Orleans dialect that frankly I think a lot of the rest of the United States isn't aware that New Orleans folks, they don't sound like southern bells, they sound like New Yorkers.

Sarah McConnell: Can you imitate it a little bit for us?

Katie Carmichae: Oh gosh.

Sarah McConnell: I heard relatives from that area, my relatives from New Orleans, often talking about dah-lin. What is that?

Katie Carmichae: That is actually two features in one right there. That's a great word for an example. We have the feature of R-lessness, so dropping Rs, which this is that feature that you hear in Boston and New York as well. New York, and park your car in Harvard Yard, darling. You absolutely get this throughout New Orleans.

Katie Carmichae: Then it's also this other feature that affects the ah vowel, where your tongue is slightly raised when you say it. Instead of ah, it's aw. Again, this is a thing that sounds New Yorkie to us. You would get this in words like bought, and caught, "I caught the ball." But in darling, you get both.

Sarah McConnell: Is that what they used to call the New Orleans, the Irish Channel accent?

Katie Carmichae: Sure. Yeah, uh huh. Yeah, the Yat accent. The Yat is another word that every other New Orleanian knows, but a lot of people who aren't from New Orleans don't seem to be aware of. Yeah, the Yat accent, which is from the Irish, Italian and German working class immigrants in New Orleans, mostly the ones who worked along the river.

Katie Carmichae: The Irish Channel is a neighborhood in New Orleans. It's along the Mississippi River where you had a lot of the folks who worked in the shipping industry there.

Sarah McConnell: Give me more longer examples of the Yat accent, other than, "Hey, [inaudible 00:06:42]. Where you at?"

Katie Carmichae: Well, one of the ones that people talk about a lot in New Orleans is asking about your mama and them. That is, I think also iconic because again, New Orleans has this population that a lot of people there, they go back for generations. When you live on your block, in your neighborhood, you know your neighbor's mom, aunt, uncle, cousin. Everybody knows everyone's family, and so that's this thing there is checking in with your mama and them.

Katie Carmichae: Your mama and them means everyone that you're related to. How's your family? Again, this idea of these multi-generational relationships in New Orleans too.

Sarah McConnell: What do you think has been more influential after Katrina, the influence of people from New Orleans who went to other areas and added their dialects to there? Or the influence of northerners and more white people coming to New Orleans, and changing the accent there?

Katie Carmichae: That's a great question. Yeah, I'd think that a lot of it is this newcomer population that's coming in, and they're bringing what I would call their from anywhere accents. They sound, we would say standard, and they're bringing that to New Orleans.

Katie Carmichae: One of their really interesting things that they're doing, so your accent is a way of signifying who you are as a person, it's a way of signifying where you're from. When you have these folks coming in with the from anywhere accents, and they're meeting up with these folks who have these really rich New Orleanian accents that indicate that they're authentic, that they were here before Katrina,

that they're from here, what you find is a lot of these from anywhere folks want to borrow pieces of that.

Katie Carmichae: Post Katrina, one of the things that I noticed was this influx of T-shirt shops with local phrases on the T-shirts. They would have mayonnaise pronounced as my-naise. Rinse your dishes in the zink. These phrases, these catchphrases that are very New Orleanian, "make groceries". What you mostly see is people who don't natively use this, who don't talk like this wearing these T-shirts.

Katie Carmichae: Again, this borrowing of these linguistic features as saying, "Well I belong here too. I'm part of this place too, even if I can't natively produce these linguistic features." But I do think that a lot of these features, as more attention is drawn to them, they start to go away because people want you to listen to what they're saying, and not how they're saying it. If you spend enough time pointing out, "Oh, that's so cute how you say that," people stop doing it that way. Or if you say, "That sounds ignorant," people stop doing it that way.

Katie Carmichae: I do think that some of this heightened awareness about the things that make New Orleans English unique is part of what is ushering the decline.

Sarah McConnell: When you talk about the New Orleans accent, of course there's so many.

Katie Carmichae: There's so many, yeah.

Sarah McConnell: Describe some of the hallmarks of the most distinctive ones.

Katie Carmichae: There's three dialects that stand out so far in our research. This is the Yat, the white working class dialect; the black dialect; and the creole dialect, a historic mixed race, typically black, white, indigenous and French heritage group.

Katie Carmichae: Starting with the Yat dialect, this is the dialect that sounds like New York. This is the dialect where you're going to hear that R-lessness, that dropping the R. The Park your car in Harvard Yard, and that aw sound, that bought sound in it as well.

Speaker 4: Hello, YouTube. I've seen all these accent takes, and I realize that Southeast Louisiana, especially the New Orleans area is very underrepresented. Nobody has done our type of accent yet that's called a Yat accent.

Speaker 4: The reason why they call it a Yat accent is because we don't ask how we doing, or what's going on? We ask, hey, where you at? That is an across the board meaning for where are you at in life. We say things a little bit differently down here, and that is one thing that irks us the most, is when Hollywood films something down in New Orleans, and then they say, they give us these country draws and everything, make us talk like we from South Carolina or Georgia, something like that. We don't talk like that. Mainly in other parts of Louisiana, but not in New Orleans.

Katie Carmichae: The African American presence in New Orleans is a major part of the music, culture, heritage, food scene, and linguistically also there is a way of speaking that seems to iconically point to this specific New Orleans black identity as well. Here you'll hear a clip of a person who is doing a YouTube recording of themselves, and displaying some of the distinctive New Orleans features.

Katie Carmichae: One thing that a lot of interviewees commented on a lot to me was the pronunciation of baby, which in New Orleans, in the African American population, seems to be pronounced with an extra long initial vowel, so baby.

Speaker 5: We do not say N'Orleans. I don't know why people think we say N'Orleans. Now we say New Orleans. We will say New Orleans, but we at least pronounce the New. We say the New. We don't say N'Orleans. Nobody says that. Stop thinking we say that because we don't. It's fake, it's a fraud.

Speaker 5: I didn't even realize. I mean I knew I had a accent, but I didn't realize it was as thick it is until I moved out here to Atlanta. Everybody's like, "Say that again. Say that again." If I have to say baby for somebody else again, I'm not. I won't say it. Okay, I'm not.

Katie Carmichae: One of the ways that we look at language change in sociolinguistics is by interviewing people of different ages, and looking at how older people and younger people talk. The younger people are indicative of the trajectory of change. The really interesting thing, when you look at white, black and creole New Orleanians is that the younger populations are doing something completely different than the older populations, and that actually the white and black ways of speaking in New Orleans are diverging further than they had in the past.

Katie Carmichae: This feels a little unexpected, given the history of race relations in New Orleans, and the segregation that lasted until relatively recently in the history of the city. How do we reconcile that with the facts. Well again, when you are more in contact with people, sometimes you sound more like each other, sometimes you sound more different because you are emphasizing this is my identity, it's different from yours, we are different groups.

Katie Carmichae: The other interesting things was our creole speakers. Our older creole speakers tend to pattern more with the white New Orleanians, and the younger creole speakers tend to pattern more of the black New Orleanians. It also seems like there is a shift there in the ethnic affiliation that you find.

Sarah McConnell: It also amazes me how many distinctive words and phrases there are in New Orleans, that you don't hear elsewhere, right?

Katie Carmichae: Yeah. Mm-hmm (affirmative). I would point to a lot of that being from the French heritage, but also the particular mixture of immigrant groups that came there, and of course the presence of African Americans and some of these words come directly from African languages as well.

Katie Carmichae: Gumbo, for example. Gumbo is a stew that you eat over rice. It can be seafood or it can be andouille sausage. Gumbo comes from an African word for okra, the okra plant. Okra is a key ingredient in gumbo.

Katie Carmichae: Another example that comes from the French heritage would be lagniappe. Lagniappe is what we would say a little something extra. If you go to the butcher and they give you an extra few slices of meat, that's lagniappe. That's a little something extra. It's a bonus kind of.

Sarah McConnell: From a young age, I've really cared about the disappearing island populations on the East Coast, in the Gulf of Mexico and elsewhere, where people have lived for generations and had very distinctive accents. It pains me to think that we're losing them through climate change.

Sarah McConnell: You have Isle de Jean Charles off the New Orleans coast, where you have populations there for instance that still speak a French dialect English. Why does it feel painful that we're losing something we can't get back?

Katie Carmichae: Because language is identity, language is heritage, language is history. But language is always changing, it has always changed. That's why when you read Shakespeare, it sounds really different from the way that we speak today. It's tough because change is inevitable. If you don't embrace it, then you'll be left in the dust.

Katie Carmichae: But I absolutely get what you mean about the nostalgia of it as well. I think that's what fuels a lot of the linguistic choices that you find in New Orleans post Katrina is nostalgia, and is wanting this piece of New Orleans' history that precedes Katrina, this version of New Orleans where maybe Katrina hadn't happened yet, or it never happened, and to have that through the way that you speak.

Sarah McConnell: Katie Carmichael, thank you for sharing your thoughts on this on With Good Reason.

Katie Carmichae: Thank you.

Sarah McConnell: Katie Carmichael is a linguist and a Professor of English at Virginia Tech.

Sarah McConnell: Up next, climate change is uncovering beachside graves.

Sarah McConnell: During a visit to a melting glacier in Alaska, Rick Van Noy starting thinking about the climate change conversation. So often we focus on polar bears and ice caps, but there are changes happening all across America. Van Noy is an author and an English professor at Radford University. He set out across the south to collect southern stories of climate and resilience. His new book is called Sudden Spring: Stories of Adaptation in a Climate-Changed South.

- Sarah McConnell: Rick, where did you start looking for places in the south that are experiencing climate change?
- Rick Van Noy: I probably started in Norfolk, since I'm in Virginia. I happened to go to Norfolk on what's called a sunny day flood. There was some westerly wind that had moved a small storm surge inland, couldn't even get to the boat ramp where I was going to meet the Chesapeake Bay Foundation because there was so much water in the streets. There was about a foot of brackish water. Then we got into the boat, and we went through some of the neighborhoods, and we really saw some sidewalks and streets that were underwater.
- Rick Van Noy: Of course, also in Virginia I got up to Tangier Island. They've lost about 2/3 of their land mass.
- Sarah McConnell: Tangier is losing its land so fast that you can even see human remains from cemeteries that have washed into the sandy shore.
- Rick Van Noy: Yeah. We were ... A woman named Carol Pruitt-Moore had taken me to this island that's north of Tangier called the Upperds. People used to say they were going upward, so they called it Upperds. We walked around and scanning the shore, and we were looking at oyster shells, and an oyster mitten. She had been talking about how there are arrowheads there from the Pocomoke tribes while I was scanning the ground to look at some, and then she said, "Don't step there, there is a leg bone." It was the remains of a body that had washed out from one of the storms.
- Rick Van Noy: There were tombstones that were flattened, that I called the introduction tombstones by the sea, because it just seemed like a kinda grim portent for communities up and down the East Coast that are seeing changes, and experiencing changes.
- Sarah McConnell: Talk about some of the places you visited and that you noticed in Florida.
- Rick Van Noy: I started in Orlando and New Smyrna Beach. We went down to Cape Canaveral. That was really interesting because near Cape Canaveral National Seashore, you're also out near NASA. Near NASA, they've had to do some beach nourishment projects, and rebuild the dunes just so that the launchpads for the rockets aren't inundated with sea water. They were even talking about moving those pads inward, what's sometimes called managed retreat. Managed retreat is something that some of the cities are also talking about in Florida, and in other places in Virginia too.
- Rick Van Noy: The other word they sometimes use is intentional departure. These are scary words. Going to NASA was also interesting because NASA is also one of the government organizations that gives us the science to understand carbon dioxide levels, etc.

Rick Van Noy: But also in Florida, I went to the Keys. In the Keys, I definitely saw some of these landscapes that almost look like moonscapes. It's where salt waters come in and drowned out some of the vegetation. One of the things at that a person at the nature conservancy was talking about is the Key deer. If you go to the Keys, there are these small deer that have adapted to living in the Keys, and they depend on the fresh water there. But while the salt water is coming in and pushing out that fresh water lens, and so the Key deer are in a lot of trouble.

Rick Van Noy: He's looking at off-site conservation plan for some of the Key deer. That tombstone was another scary sign about climate change. If we have to move species off the island, then we eventually have to move people off the island.

Sarah McConnell: In Louisiana, you were visiting there with your sons and going through areas on a map that you realized were now submerged. So areas on a map that was not that old are now underwater.

Rick Van Noy: Yeah, I think NOAA, the National Oceanic and Atmospheric Administration, NOAA has released these new nautical charts. Plaquemines Parish, which is below Louisiana, and they've taken about 40 places names off the chart. I think they've lost land that about equal to the state of Rhode Island. They've lost a lot of land there.

Rick Van Noy: One of the towns, the town that Bob Dylan sang about in Tangled Up In Blue talks about being right outside a fishing boat, right outside of Delacroix. That's no longer there. You can zoom in on Google Earth, and see just grasses in some of these former places.

Rick Van Noy: But my son and some of his friends were with me, and they were going to camp and canoe in the bayous. We went to the Isle de Jean Charles, and that's one of the places that's talked about as being where there are the first climate change refugees. There's money to relocate them from the island. When you get to the island, there's a sign that is written in faded ink, and marker, and fading letters. What it basically says is, "We are not leaving." He also says something like, "If the island is not good. Stay away."

Sarah McConnell: But that's a different issue, right? People do love where they're from, where they grew up, where they live. Everybody loves living on the water. No surprise that people don't want to move. How does that argument related to climate change? It's that we'll have to spend billions to try to keep people in these soggy, ever rising waters.

Rick Van Noy: I think that's the way the state looks at it, and it's also yeah, it's human safety and wellness. I think in Louisiana, I think they drew a plan for places they could protect and save, and places they could not in that community.

Rick Van Noy: Unfortunately now it's poor, and it's Native American, so that also gets into the issue of environmental justice. Why were they not included? It's a complicated issue, and there's only about 25 families on the Isle of Jean Charles.

Rick Van Noy: One person said to me, "If you can't figure this all out for 25 families on an island, how are you going to figure it out for New Orleans or Miami?" But that's the issue, is ...

Sarah McConnell: It's money.

Rick Van Noy: ... is the flooding, and it's the prevention, and it's doing something on the front end to prepare for eventual disaster on the backend. I think that was the lesson of Katrina, is they needed to invest. They've spent billions of dollars on new surge barrier. They lost some of their wetlands, so they have new surge barriers, and they have new pump systems, and they've upgraded things that they can. Of course, it still might not be enough.

Rick Van Noy: They're consulting with the Dutch, so is Norfolk. That's the Dutch attitude about this, is let's try to adapt, and let's try to manage it as much as we can.

Sarah McConnell: It hurts my heart to hear you describe it.

Rick Van Noy: Yeah. I think you eventually experience a little bit of grief, a little bit of sadness when you do this. At times, you experience something else. You wonder it's so big and so vast, surely we can't damage it. But then you get up close to it, and you see some of the damage.

Rick Van Noy: I definitely, I think I was on Cumberland Island, and there was a live oak and some other trees that were down. I reached out a hand to touch it, and it was almost like I was touching a body laid to rest. That affected me.

Sarah McConnell: What did you notice about the politics of the region? Here you have people that are plenty smart, and people that know the water is changing, the climate is changing, and the effects are very real. What are some of the ways you saw people get around the politics of that?

Rick Van Noy: I did have this hypothesis that surely people, they wouldn't deny climate change if they had these front row seats to it. But that wasn't always the case. Not the case in Tangier Island, not the case in Florida, and some places where I think they wanted to ban the word, or not use the word in official reports.

Rick Van Noy: But other places, other cities and communities, and some with Republic mayors, mayors from both sides of the political aisle, they really just see it more as a practical issue. They are used to solving problems with sidewalks, taking out the trash. Increasingly they're taking calls though about flooding, and what are we going to do about the flooding? It's a quality of life issue that's affecting people's

ability to get to school or the store. That's how they're seeing it. The problem is, yeah, there's not really a national discussion.

Rick Van Noy: Even though you've got these communities in the south that are doing things, and leading on this, and trying all kinds of initiatives, not just on the adaptation front, but on the mitigation front, solar initiatives and things like, we don't yet have this coherent national strategy. But maybe these conversations and these things that are happening at the local level will eventually bubble up.

Sarah McConnell: You wrote about measures in Florida regarding transportation, that the older folks won't vote for because they don't think they'll be around.

Rick Van Noy: One planner said they had a hard time getting public transportation initiatives in Florida because a significant portion of the voting block is over 60, and they worry they won't get around to use those public transportation initiatives.

Sarah McConnell: Rick Van Noy is a Professor of English at Radford University. His new book is *Sudden Spring*.

Sarah McConnell: This is *With Good Reason*. We'll be right back.

Sarah McConnell: Welcome back. From Virginia Humanities, I'm Sarah McConnell, and this is an encore presentation of *With Good Reason*.

Sarah McConnell: Residents of tiny Tangier Island could become some of America's first climate refugees. Through a partnership with Google, an online project has been raising awareness of Tangier's plight by allowing people from anywhere in the world to visit the endangered island virtually. Former *With Good Reason* Producer, Kelley Libby was a collaborator in the project, and she sent us this audio postcard.

Carol Puitt-Moo: That pole, that's the last remaining pole of the dock that used to be here. It was a long dock, and that's where we tie our boat. Now that's gone.

Kelley Libby: Carol Puitt-Moore is a resident of Tangier Island. Almost every day, she takes her boat to this place, a marshy area north of Tangier called Upperds.

Carol Puitt-Moo: Then all through here was fig trees, and wild rose bushes, and asparagus, and wild [inaudible 00:29:10], and just wild roses everywhere. It was beautiful. It's all gone now.

Kelley Libby: Before the 1930s, she says, there was a community here called Canaan. Pruitt Moore's grandmother lived here. Today, the last remnants of Canaan are being washed into the Chesapeake Bay, including what's left of a graveyard. Among the sea glass and arrowheads, Pruitt-Moore comes here to collect are headstones and human bones.

Kelley Libby: For residents of Tangier Island, Upperts represents not just a piece of the island's history, but its possible future. That's because the rise of the sea can be measured by the loss of a whole community.

Matthew Gibson: The Upperts is in some ways, a way for them to think about the urgency which they have to move forward with.

Kelley Libby: Matthew Gibson is Executive Director for the Virginia Foundation for the Humanities. I'm here working with Gibson and his team on a project that makes it possible to virtually visit Tangier.

Kelley Libby: We're here through a partnership between VFH and Google Outreach to capture the first 360 degree street views of the island.

Matthew Gibson: It's here and then out to there. You're going to press pause there.

Peter Hedlund: Right there before you do ...

Matthew Gibson: [inaudible 00:30:22] there.

Kelley Libby: Normally Google Street Views, which allow you to virtually plop down at any address on earth are captured by Google Street View cars. You might have seen one. They're colorful cars with big cameras attached to the top. But to capture remote places like Tangier, a different tool is employed.

Matthew Gibson: Then I'm going to cross the river ...

Kelley Libby: It's called the Google Trekker.

Matthew Gibson: I'm going go up the West Ridge.

Matthew Gibson: It's hard to describe it. It's basically you get this big globe over your head, this big colorful backpack around your body, and whenever you walk down the street with it, people give you looks because they never seen anything like it.

Speaker 12: What is that you have on you back?

Matthew Gibson: This is a Google Trekker.

Speaker 12: A Google Trekker.

Matthew Gibson: Yeah.

Speaker 12: Well, okay.

Matthew Gibson: Have you ever used Google Maps, and Google Street View where you can zoom around different streets and things like that?

Speaker 12: Yeah, my husband showed me yesterday where we live on Google.

Matthew Gibson: That's right. Now you're actually going to be able to move through the streets of Tangier and to the beaches, which will be cool.

Speaker 12: Yes.

Matthew Gibson: It's going to be a way to hopefully help you guys to create a narrative about yourselves for advocacy.

Speaker 12: I see.

Matthew Gibson: Tangier will be here tomorrow.

Speaker 12: All right.

Matthew Gibson: That's the idea.

Speaker 12: Yeah, that's nice, if it will help us [inaudible 00:31:32].

Matthew Gibson: That's right. That's what we're trying to do.

Speaker 12: That's what it is, huh?

Matthew Gibson: Take care.

Kelley Libby: Outfitted with this 50 pound backpack Gibson and his partner in the project, Peter Hedlund hiked around the entire island, on its streets, where the most common form of transportation is the golf cart. But also along its shoreline, Hedlund is the Director of the VFH's Encyclopedia Virginia, and he captured more than a mile of Tangier's main beach.

Peter Hedlund: It's a beautiful sandy beach. You might think you're looking out at the Atlantic or Pacific Ocean when you're standing on it. Behind the beach are marsh areas full of all sorts of migratory birds, and wading birds. There's not a soul there. It's completely deserted, it's a really pristine environment. We wanted to make sure we not only got the man made environment at Tangier, but also the natural.

Kelley Libby: Tangier Island needs a sea wall to protect it from further erosion. But some policymakers who have the power to make that happen, may never even step foot on the island. It's out of the way, in the middle of the Chesapeake Bay, and getting there requires taking a long ferryboat ride. That's why Hedlund says, capturing Street Views is important.

Peter Hedlund: I think if you're trying to evoke sympathy or solidarity for your cause, it's important for people to have a sense of what you are. One of the easiest ways to do that is to walk down the main street of your community.

Peter Hedlund: At the very minimum, we've provided a way for people to virtually visit the place and see what especially unique community it is at the ground level.

Kelley Libby: The street views captured by Gibson and Hedlund are now available on Google Maps and Google Earth.

Kelley Libby: For With Good Reason, I am Kelley Libby.

Sarah McConnell: Residents of Tangier face losing their homes and having to move inland, but what if there was no place to go. That's the situation faced by small Polynesian island nations like Kiribas, located in the Pacific about midway between Hawaii and Australia. In just five years, the island will be unable to provide food and water to its 10,000 citizens; in 10 years, it will be uninhabitable; and in, it 20 it will be gone.

Sarah McConnell: Anthony Boese is a former instructor from Virginia Military Institute in the Department of English Rhetoric and Humanistic Studies. He researched the economic and philosophical questions when rising waters destroy entire communities.

Sarah McConnell: Tony, how long before they actually have to board planes and boats, and leave the island?

Anthony Boese: Sure. Somewhere in this question is also one of the smaller problems. I think when people talk about disappearing land, they want to know when will the land disappear, right. They have a picture of the last few colonists sitting on the island like the band on the Titanic, like doing what they do as the island dips below the waves. The issue is now, so I think the real question is, when is the island no longer sustainable for life? That's now, or in the next couple years.

Sarah McConnell: This has drawn your attention because you've been looking at the plight of people who are a nation, who lose their nation.

Anthony Boese: Right. Even in your question, we note the problem. The only way we have to talk about these things is with words like nation and state, which imply things like proximity and territory. When you lose your territory and you no longer have proximity, we don't have a word for that. We don't have a way to deal with it philosophically, legally, anything.

Anthony Boese: If they're not a citizen, how do we deal with them? If they are a citizen of a government, you generally have to interact with that government about their citizenry, but the government's gone, so who do you call? At the very least a cynical person might say, "Just send them back home," but where is home at

that point, where are the territory? In this case, it's going to be completely gone, or in another case, it might be politically and socially different in an undesirable way.

Anthony Boese: Say they all go Australia. When they show up in Australia, what do we call them? They're certainly not Australian citizens yet. There's no way to understand citizenship without a state, and again, we don't have a way to understand a state without territory and proximity. You have a maybe government that might be sovereign or maybe doesn't exist. There's a rule of law that these people should beholden to, but this is the domino effect of the whole thing, and the entirety of our international exchange, how we deal with visitors, how we deal with foreign nationals, how we deal with treaties and agreements. All of this is centered on the idea that there are states, and people are members of those states.

Sarah McConnell: Let's imagine they would go to Australia.

Anthony Boese: Sure.

Sarah McConnell: Must Australia accept them? If they were to come to Australia, would they be given over government lands and said, "These lands are now the lands of the islanders"?

Anthony Boese: That would be my hope. Although, the U.S. government doesn't have the greatest track record with them, than Native American nations in the United States, which are domestically dependent sovereignties, would be a good model. Must Australia accept them? That's an unfair question for anybody outside of Australia to answer and that'd be paternalistic.

Anthony Boese: I think one of the reasons why Australia stands out is we want wherever they end up, if they end up somewhere, and again these people do want to stay contiguous, they don't want to be put in dysphoria and thrown it all over the world. If they need to stay together, we need to find a place that has enough land and enough money to support this. Also, probably somewhere that's in a similar climate because it would be horrible to drop them in the middle of Montana when they've lived in a tropical paradise their whole life, somewhere that's relatively cultural, is culturally similar, where there is some of that island culture that still exists in Australia.

Anthony Boese: So it seems like a really good place to go, and hopefully they'll accept them. I think the big concern is going to be money, should Australia flip the bill? The answer to that is certainly no.

Sarah McConnell: Do we need a generous government with proximity to ocean life? Or do we need a system of laws at the UN level to say, "How do we handle people whose countries disappear from underneath them?"

Anthony Boese: Well we must certainly need new legal codes and systems that are going to deal with this. This isn't going to be the last island to disappear, certainly not. The problem though, I worked with the UN briefly and they're not exactly the quickest people to get things done. It's not going to get done fast enough, at least for the people, say Kiribas. We're, again, talking about people that need to start leaving now.

Sarah McConnell: What are the islanders themselves thinking these days. They're very much torn between what should happen within the next 20 years.

Anthony Boese: Most don't want to leave. The population is aging, and it is a people that this is where they've lived, and it is their home. As you've pointed out, it's a special and unique place, and they're pretty confident they're never going to see its likes again.

Anthony Boese: When reporters go in or when polls are taken, it's usually almost a 50/50 split, or sometimes even weighing towards people that just don't want to leave. Even when presented with the fact of, "Look, if you stay here, you will die. If international aid comes, it's going to come to take you away. It's not going to come to help you stay here." The answer is still, "Fine, this is my home. I'll stay with it and go down with the ship."

Anthony Boese: There are arguments, there are ethical considerations that we might have a cosmopolitan responsibility to intervene in this case. Some might even call it stopping a suicide in a sense, which we think is legally and ethically a good idea. But on the flip side, showing up somewhere and telling somebody they have to leave their home when they don't want to is also paternalism, and it's also coercive. It's a very sticky wicket.

Sarah McConnell: And the best case scenario, are there mechanisms at the global nation level where we may pay for flights, and boat trips, and such, and pay for resettling families, and groups of children, and that kind of thing?

Anthony Boese: While there are options principally centered around charities like UNICEF, and Oxfam, and Red Cross, there's no official mechanism in place. The hope would be probably unfortunately trying to peg some notion of responsibility for climate change, manage some form of bill or penalty because of those effects on climate change, put all that money in a pot. That'll be what pays for the boats, and that'll be what helps Australia build more roads and build buildings.

Anthony Boese: I think the most important thing is going to be splitting up the cost. I think that nations will be more happy to take on people if they know they will have help supporting those people.

Sarah McConnell: Are nations like the United States, which has such a large carbon footprint and contributes to global warming be asked to shoulder more of the bill?

Anthony Boese: Absolutely. At least that's my suggestion. Not only because we were in part, part responsible for the problem, and we're going to be even more responsible as things are looking now with the withdrawal from Paris Accords and things like that, but we also have the capacity to do so.

Sarah McConnell: Will you at any point play a role in informing some of the global leaders who may be looking at the intricacies, and how to save these people?

Anthony Boese: That would be the hope, one of the few places where philosophers are still respected as something other than naval-gazers is at the UN. I've worked and under some professors that have helped write ... Like UN Bill of Rights was principally written by philosophers and legal theorists. There's two of us in the world that are doing anything about this, really. It's almost never talked about. It's very little covered. The last major paper published was published about five years ago by a philosopher at Yale. That's really the last we've heard of it.

Anthony Boese: I think once the governments of the world realize there's an issue, and start casting about for people with answers, there's only going to be a few of us to find.

Sarah McConnell: Is there ancient wisdom that you could share with us where this has happened before, and how people looked at loss of nationhood?

Anthony Boese: Plato does talk about Atlantis a little bit, but he just wants to offer it as this is a thing that could happen, we should be concerned about it. Maybe we should think about having an answer for it.

Anthony Boese: Also, you get Roman historians who are concerned about a lot of the volcanic eruptions that happened in Ancient Italy. Not quite the same, because it's not as though Italy disappeared. There is Iceland has a history of disappearing land, and Norse mythology has histories of disappearing land. In almost all cases, these are cautionary tales about respecting the fierceness of the planet. Very rarely are they anything about what's the legal precedent we can discover here.

Anthony Boese: While the real answers are going to have to come from high minded philosophy, and people pouring through thousands of pages of books, and precedent and things, that's not a motivating factor. Why legal theorists and why the UN should focus on this is because the environment is important to me. Environment has always been important. It is a political issue, but it is also an environmental issue. We all share the planet, it's a closed system.

Anthony Boese: What strikes me as very strange is that's a message that we give to children. Children understand that the environment is important. The Lorax is a fine example. Or when I was a kid in elementary school, read a book called The Great Kapok Tree. It's about a logger in Brazil. The logger falls asleep because it's hot, and he's tired. I don't remember if it's a daze or in a dream, but somewhere on the fringes of conscious reality the animals start to come to him, and express

to him what he's doing. A snake comes and talk about how it lives in the root, and birds come and talks about how they live in the leaves, and about how he's destroying this world, this habitat for these animals, and how massive an impact that it is. It's much more than just cutting down a single tree.

Anthony Boese: I suspect that there's some break then where we have these elementary school students who love this book, and take those messages home, and seem to talk about it and care about animals. Then something happens over the next 20, 30 years, and we seem to forget about it. We need to be aware of the fact that our climate change isn't just it's getting a little warmer.

Anthony Boese: It isn't just losing parts. I know that Louisiana is suffering from lost land too, and that's unfortunate, but they have other places to go. The U.S. government can help them in some ways. We're not cutting down the tree in that situation, you're only pruning a few branches. When it comes to something like Kiribas, the tree will be gone. We have effectively, with our carbon footprints, been the logger in The Great Kapok Tree, and we are destroying an entire habitat, and destroying an entire home for many organisms and people. It's hard and it's sad, and somebody needs to do something about it.

Sarah McConnell: Tony Boese, thank you sharing your insights with me on With Good Reason.

Anthony Boese: Thank you for having me.

Sarah McConnell: Anthony Boese is a former instructor from Virginia Military Institute in the Department of English Rhetoric and Humanistic Studies.

Sarah McConnell: Coming up next, the eye of the hurricane.

Sarah McConnell: My next guest is looking for a better way to assess the potential damage of an approaching hurricane. Stephanie Zick is a Professor of Meteorology at Virginia Tech. She's studying how, where and when hurricanes lose power.

Sarah McConnell: Stephanie, some forecasters are thinking we're going to have a livelier hurricane season, now that we're into it, partly because the Atlantic is warmer, and partly because there doesn't appear to be El Nino in the Pacific. How would the absence of El Nino relate to hurricane formation?

Stephanie Zick: El Nino is this warming of sea surface temperatures in the Pacific. Whenever there's an El Nino, there tends to be stronger winds across the Atlantic basin. They will basically tear apart a hurricane. There needs to be pretty weak winds for a hurricane to form because they need to be vertically stacked like a stack of pancakes. So whenever we're not in an El Nino, that tends to be a more favorable environment for tropical cyclones or hurricanes to form.

Sarah McConnell: You've developed a new way to determine the intensity of hurricanes. How have we been measuring intensity up to now?

Stephanie Zick: Right. In the Atlantic, we are able to fly into hurricanes. After they form, we generally go out and do reconnaissance. But there's another method for estimating intensity, it's called the Dvorak technique. It uses satellite imagery. It looks at the shape of cloud patterns, and you can estimate the intensity of a hurricane without flying into one. That's very important.

Stephanie Zick: What we're starting to see are some features that we can look for in satellite imagery, or in the rainfall patterns that can be useful in predicting the future intensity change. It's basically comparing the shape to a circle. That's what I have been doing in my research, I've been comparing the shape of the rainfall pattern to a circle.

Stephanie Zick: Another one is how close is the rainfall to the center of the storm. Whenever precipitation is closer to the center, the energetics are much better for the storm.

Sarah McConnell: Can you name some of the well known past storms that show probably had we measured these characteristics, we might have projected intensity?

Stephanie Zick: Right. A great one that a lot of people have heard about is Hurricane Katrina from 2005. It made landfall in South Florida as a Category 1, but then it moved out over the Gulf, and intensified very rapidly into a Category 5 hurricane. The shape metrics all show this consolidation into a very compact storm, very circular. Then as it reached peak intensity, these metrics actually indicate that the structure is changing. It's becoming less like a circle.

Stephanie Zick: These indicators actually happened before it reached peak intensity. If we're able to see these shape changes happen, we might be able to have a better indication when these storms are going to lose intensity as Hurricane Katrina did, as it approached landfall.

Sarah McConnell: The importance of that is we could have, had we used your metrics, perhaps have warned people to the east of the storm it was going to be worse there.

Stephanie Zick: Yeah. In these storms, especially if we're thinking about storms that are going to be dumping a lot of precipitation, if we're able to target the areas that will see the heaviest precipitation, then we can put out a better forecast.

Sarah McConnell: Can you tell me about a few of the others storms where you applied your model in looking at past storms?

Stephanie Zick: Right. I've looked at basically all the storms in the Gulf of Mexico since 1998. All of the storms that were Category 3 strength or higher actually weakened in their approach to landfall. That's a startling thing. That included Hurricane Lili from 2002, Hurricane Ivan from 2004, Hurricane Rita from 2005, Hurricane Isaac from 2012.

Stephanie Zick: Hurricane Ivan, Hurricane Katrina, Hurricane Rita, these were storms that became very large out over the Gulf of Mexico, and they affected broad regions as they made landfall. Luckily, they did weaken as they approached landfall. Hurricane Rita from 2005 made landfall in Texas just after Hurricane Katrina. I know that a lot of people from Louisiana had actually evacuated to Texas.

Stephanie Zick: Ivan was from 2004. It made landfall in the Florida panhandle. It also weakened slightly as it approached landfall. Although it did weaken, there were a lot of tornadoes with it as it made landfall, especially on the eastern side.

Stephanie Zick: Hurricane Isaac from 2012 was another great example of a storm like this. It was a little bit smaller than these massive storms like Hurricane Katrina and Rita, but it also had a very large storm surge. It made landfall in Louisiana, but it impacted a lot of the areas that had impacted Katrina. All of these storms show indications of these shape changes prior to landfall.

Sarah McConnell: Stephanie Zick is a Professor of Meteorology at Virginia Tech.

Sarah McConnell: Major support for With Good Reason is provided by the law firm of McGuireWoods, and by the University of Virginia Health System, connecting doctors and patients through telemedicine to deliver high quality care throughout Virginia, the U.S. and the world. UVAHealth.com.

Sarah McConnell: With Good Reason is produced in Charlottesville by Virginia Humanities. Our production team is Allison Quantz, Elliot Majerczyk and Cass Adair. Jeannie Palin handles Listener Services. Special thanks this week to Josh Jackson at Radio IQ. For the podcast, go to withgoodreasonradio.org.

Sarah McConnell: I'm Sarah McConnell, thanks for listening.