

River Meditations: A Journey into Environmental Education

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Abstract: What if a river or a creek were to tell us its story? In this [short film](#) and interview, we offer a glimpse into the ecological philosophy guiding our efforts to create “more sustainable ways of living with water and how to appreciate its capacities to support all life” in Charleston, South Carolina.

If we are truly going to “stay with the trouble,” as Donna Haraway asks us to do, we have to slow down, tune in, and listen to each other – to our fellow humans, fellow species, and as expressed in this film and interview, our fellow rivers.

In conversation with Dr. Merrie Koester, a science educator and artist, we have created a multimedia “sustainability journey.” Our goal is to inspire the next generation of students and teachers interested in and committed to environmental consciousness-raising. Merrie grew up in Charleston, South Carolina, playing in and studying the region’s many creeks and rivers. She is now a teacher and activist of eco-literacy, working to combat climate change, and specifically in the Carolina Lowcountry, bring awareness about the importance of saltmarshes, creeks, and rivers.

As Merrie explains, “I invite my students to make room for not knowing and to deeply consider cause and effect relationships and patterns in their own lived experiences and in worlds into which they may not have yet wandered. What can we notice, as we ask, Why? Why Not? and especially, What IF?”

What if, we ask in [this film](#), if we spoke to the river, and through its own ways of communication, the river spoke back? We hope you are able to pause from stressful workflows, take a break from distractions, and enjoy this short film. If you are curious to learn more, after you watch, please check out our longer conversation. What follows is an abridged version of the interview, which inspired the film.

Keywords: Eco-literacy, Environmental Education, Multispecies pedagogy, Environmental History, Oral History, Documentary Film

*Dr. Merrie Koester is a veteran science teacher and educational researcher, specializing in socially empowering, youth based participatory action research. Her work is focused on building practice partnerships between higher education, schools, community programs, and civic leaders to effect positive change in historically underserved schools and communities. Since 2016, Dr. Koester has directed a community outreach effort called **Kids Teaching Flood Resilience**, which positions youth in flood-prone communities as resources of knowledge and flood resilience.*

Blake C. Scott: Historian, writer, assistant professor of International Studies, Blake is interested in the diverse cultures and ecologies that make up the circum-Caribbean world. He teaches introductory and advanced courses in the International Studies Program at the College of Charleston, examining issues of cultural and economic globalization, travel and migration, and environmental change.

Interview

The reason we are here today is because we want to make sure that people remember the story of the river and its relationship to life here in Charleston. We are curious about people's experience of growing up near the river and why that matters. So to start, Merrie, how did the water become part of your childhood?

Well, I would begin to answer that question by thanking the river. For me, as I begin to think about what you're really asking in that question, in terms of where I grew up, how did the river become part of my childhood, and why did it matter, I really do have to begin with a feeling of gratitude. I truly believe that the creek, which really and truly became the center of my childhood, began to define the way I also moved through the world. I was so fortunate to grow up in a small neighborhood in West Ashley that backed up to an amazing system of tidal creeks. I lived across the street from a creek, and there was an old couple there that did not have any children. They were the age of my grandparents and I just loved them because they were beautiful people. They knew, they could see, I was drawn to the water and they had this old beaten up dock that was just as worn and weathered as they were. And they said, Merrie, our dock is your dock. You just let that be your home.

I couldn't have been more than eight or nine years old and what I began to discover is that it didn't matter how bad a day I had had, I could go across the street and sit on that old dock.

No matter how bad a day I was having, I could walk across the street, sit on that dock and be still and feel whole. It's hard to describe where you come to feel such a deep connection with a place that can be still and moving at the same time and a place where there are so many sensory horizons.

All you had to do was tune in. If you tuned in your ears, closed your eyes, you would hear the snapping shrimp talking to each other, or the sound of a great blue Heron, fussing at somebody. "Get out of my nest." If you hear and if you open your eyes, you'd almost always see a shiny silver mullet doing a back flip, making a very awkward splash. It would get like a two for an Olympic dive and you'd watch that fish. And it would make me laugh to see those mullet. And if you went at low tide, you'd be presented with a different creek than you did at high.

But you came to feel that your blood and your tears and your heart were as one with the ebb and the flow and the cycles of the creek. And I know that it doesn't matter where I am on this planet, I can go back to that creek in my mind and in my heart and in my spirit.

Did that answer your question?

Absolutely! I'm curious, so you would go sit down by this creek, on this dock – what were some of the activities you would do there? Did you swim? What were some of the things you might do down by the water?

Well, first of all, you have to know that I grew up at a time when both my parents were working and at the age of nine, they didn't come home till supper time, and we'd get off the school bus, and the key was behind the ledge in the garage. You let yourself in and I'd get a peanut butter and jelly sandwich and carry it across to the dock. As I grew older, I'd also bring my homework and do it on the dock.

But in the summer time, the best thing to do was to put on your oldest clothes, old tennis shoes, and grab a boat cushion, and just jump in the water and float. And yeah, that was stupid. I should have died 10 times, but I didn't. But if you know the creek, you know the current is at its slowest on the inside bank. And, you know, that's where the mud is. So if you did hear a speedboat coming around, in this 40 foot wide creek, you could get yourself over to the mud. That's part of the thrill of it. To know, there was going to be some sort of adventure around every bend. There's just nothing like it. And I think that's why I love the creek so much, because it's full of surprises. You would occasionally get stung by something, but you know, you get stung by stuff in life too. Right?

And the thing about being in the river, or the creek is it's both confined and it's free. Just like we are!

Can you explain more about that? What do you mean by confined and free?

Oh, look at that river, right there! It's confined by the banks, but it's always moving, unless... The only time the river is not moving is if an animal like a beaver were to dam it up, or a human being would do something to it. In Charleston, we have a history of reclaiming our salt marshes and building on top of them.

But what is the most astonishing thing to me about our salt marshes is that you can pave on top of them and put foot after foot of asphalt, and the water will find a way to come up through the street, through the drains and the marsh will push up through the concrete. It is a symbol of resilience.

That leads into a question that I keep thinking about for myself. I'll try to articulate it. [But then distracted by passing Brown Pelicans flying overhead] They're so beautiful but they almost went extinct, right? Because of DDT?

Yep. That's right. Their shells became too soft. And do you know that they've still found traces of DDT over in Gadsden Creek? I asked an environmental scientist to comment on that and she said in Charleston, they used to regularly spray the salt marshes and all the low mosquito areas with DDT. And that's all over now, right? But she said, she was not surprised when they found that the marsh still has it in it, it gets locked up in the sediments.

And I can only imagine that the shellfish and the fish have traces of it still in them.

That's why you really have to be careful about the shellfish that you do consume in any kind of urban creek, because our urban creeks are grabbing hold of all those pollutants that would otherwise go into our rivers.

You'd be surprised, that without the creeks, the rivers would be that much more polluted.

The services that our saltmarsh creeks provide, whether it's recreation, like I described, finding that reckless abandon, or to art, to food, to energy... I mean there were sawmills in the colonial days that were powered by the tidal creeks in this area.

So that does lead me into my question, what do you think we can learn about Charleston's history from the river? If you were to think of a timeline or list of important activities, what would the river tell us about Charleston's past?

That's a tricky one because so much of that history has in fact been buried under fill and under pavement. We are sitting in a park [Brittlebank Park] that ironically would have been in the middle of the channel of an important Charleston creek. We would have needed that boat cushion, we would be having this conversation while we were merrily floating out into the Atlantic Ocean.

But, if you ask a river or creek to tell you its story, it will. Ideally you want to go to an area that hasn't been as disturbed, where you'll be able to see the many adaptations of the plants that grow in each zone of the marsh. For instance, from the middle of the marsh all the way to the upland. You will also see the adaptations of the animals. You would learn that our plants and animals have learned to be resilient no matter what we've done to them, but you would also, I think, learn from the river and its creeks that it has literally become the lifeblood of this community, whether it is for food, recreation, or holding on to pollutants and holding our stormwater. Also think of the commerce and the industry that depended on the support of the river!

And consider the history we don't hear enough about - the trade of human beings on this same river. The river knows those stories too. I think for us not to bring in the stories of everything that was moved on this river is to dishonor the contributions of the beautiful souls that became such a vibrant part of this community.

The river is part of all of our stories. So simply to tell part of it, because it sounds nicer is to act like you hadn't done any of those things, cause we did. And so I say, let's all come together by the river and flow with the current that can heal. I think we're making important strides in that way. Maybe it's because I'm an idealist, because I am hopeful, but I see the current changing in ways that we are starting to have those kinds of conversations. And I can imagine a time when we would have every single classroom kid taking in the river as part of their natural expected learning experience.

We often think about history in the abstract, but there is also the history of people experiencing and living on the river. If you were to think of a collage of experiences that people have historically had on the river, what activities comes to mind? So that a kid or someone who's living in the 21st century, in the 2020s, they can't imagine that, but maybe in your mind you remember. What are some of the historical activities that people engaged on the river, that you saw in your own life, or that you've read about and appreciate?

You study history, and I am a science educator and an artist. And so to connect that history and that science, I would say that it's really important to notice and to come to be aware of every small thing that perhaps has a connection. The creek that became my childhood creek, it was "my creek." But you know, it has been a lot of peoples' creek too. That creek, which was called Wappoo Creek was named after the Wappoo Native Americans, who knew the flow of that creek as deeply as I ever came to, and who knew that to honor the creek was to honor God and to honor the source of life for which we all owe our thanks. Today, it would be amazing to have the perspective of the Native American who knew that the harm of one is the harm of all and to take and take and take from the river is going to come back and bite us.

How do we learn to honor and remember that which sustains us? That would be the question that I would say we would all do well to consider.

Still thinking of history, but natural history, what are some of the animals that you love that also inhabit the [Ashley] river. What do they do here?

The animals that inhabit the river do some of the same things we do. They have boyfriends and girlfriends and they raise families and they protect each other and they have to duke it out with the next otter over, you know, the best place. I mean, even the fiddler crabs, the little boys are out there like this [waves an arm back and forth], going "have sex with me, have sex with me."

That's how they get their mates. Don't put that in the film. But I mean, we are no different than the fiddler crabs, than the otters, than the birds, than the fish, we are no different. We think we are, that's our hubris and that's our Achilles heel. Matter of fact, maybe the animals are wiser than we are...

Yes, it seems the problem is that we have the disproportionate ability to change the river, to such an extreme degree. Whereas the fiddler crab can change an ecological zone and millions of them can dig holes and things like that, but, there's still plenty of space for other species. Where we have, on the other hand, actually removed species. That's the hubris. But I do get your point that we're animals, like all the other ones, but our power is...

I understand where you're going with that. We have the uncanny ability to throw things out of balance. I mean we've raised it to an art form in so many ways. If you look at the classic tensions in drama, you know, that was the day when they said, "man," and so it would be man against nature, man against himself, man against the world. But it's always man, man, man. I'm a feminist, so I find that offensive. But you don't see that in nature. We almost always create drama in ways that are not positive.

So how do we come to experience love with, and for-, nature and people? To have and feel that love, to feel the tensions fall away.

There's a palpable dropping of the shoulders and the softening of the breath. There's a reason that nature is used as therapy with some of our most beaten, battered and traumatized human beings because it does still the soul. It does quiet the heart, the breath, just to learn again, go back to that history, to sit down and learn how to tie a knot and to make a net requires an attention to detail and mindfulness and appreciation of the art and craft of what you're doing. That again can bring you back to a sense of community and kinship with nature.

How do we get the next generation to embrace these lessons?

I think you're asking me to put my teacher hat on. I would say that we need to deprogram, decouple the minds of our youth from their almost dependence for that quick fix to the screen. We need to figure out a way for everyone's cell phones to simply die. At first it would be crazy because everybody would be, "Oh my gosh, what do I do? What do I do?" But first create a situation where all right - sister survivor and the first survival skill is - can you go without your cell phone for, I don't know, an hour and you put them all in a basket over there and you will instantly see people have experiences of true withdrawal because every time they go to that phone, there's a drip of dopamine into the brain.

At first you've got to stabilize and have people realize they are not going to die if they're not getting that constant little hit of dopamine, but we've got to replace that void that's left. Then you gradually create experiences where a person is asked to sit still by themselves in a place that appeals to them. So I would say, "go to one place that is calling to you." At first they'll look at you. "Like what, can I just have my phone back?" And you'll say, no, it's not going anywhere. I promise. You might actually have to do some breathing with the totally stressed out cell phone dependent person, but all right, walk around, find a place that's speaking to you and sit there and just breathe.

When this young person, this student, comes to the river, what do you think we might see here for the first time?

You have to, in my experience, create a guided inquiry. I would bring a small group of maybe eight to ten, after we've done our breathing and they're realizing they're not getting their cell phones back. And they've gotten all that out of their systems. Then I'll say, all right, find something that's moving. That's not hard when you're by a river. Start easy, to find something that's moving. And now what do you see? Remember you haven't, I haven't qualified or quantified anything, simply find something that's moving. Well, some people will notice the water's moving. Some people might notice a butterfly just flew by. Some people will notice a bird.

How are they doing that, I'll ask? Then people like all of a sudden, they've got theories. How did the butterfly move? Is that different from the way the water is moving? Is that different from the way that plant is moving? What's moving on its own? Oh, okay. Well that snail is moving on its own. That plant moves. And before you know it, you're talking about energy. Well, what is energy? Well, I don't know. Well, give me an example. And then somebody will start jumping up and down and that's their idea of energy. And then somebody else will invariably point to the sun. What about the sun? And in a very short period of time, without them even realizing it, you've come to a deep understanding that we as living creatures are dependent on the energy of the sun to sustain us. Then you end that very short, no more than 10 minute experience with another deep breath and say something like, thank you sun. And that's it.

Thinking of energy and movement, I know you've spent a lot of time on boats and sailing, how does the experience of being on a boat or sailing on the water perhaps reinforce some of these lessons that you're talking about?

Oh a great question! The metaphor of sailing is one you can take in infinite directions because it literally personifies life. Oh, everything's going great, you know, everything you planned for the day, you're on a total broad reach, and if you're lucky, your stern is catching a kick of a wave and you feel the boat just popping up. That's the height of the sailing experience. That's what everybody wants to... That's why you sail.

The rest of the time, well you know, it's not so good sailing. The most frustrating thing that can happen is that you end up in a situation called being in irons. And that is when you are trying to point your boat into the wind and making it do things that it simply cannot do.

You cannot sail your boat straight into the wind and expect it to go anywhere. And so your sail will start laughing and it will be complaining and saying, what are you thinking about? Nobody can sail their boat into the wind. And so I believe that if every child could learn to sail a small boat and have it capsize and turn over and be stuck on the top of it and float down the river, do all those things, have every one of those experiences, you could learn everything there is to know about life from a sailboat.

I was lucky. My uncle was an inventor and his hobby was to build little small wooden boats in his backyard. And I got to sail on one of those, but it was like a bathtub and it turned over and it swamped. And you ended up floating down the river until somebody rescued you. There's a lot of metaphors, good and bad, about floating down the river....

Yes, for good and for bad. I wonder as maybe a wrapping up type of question, at this point in life, when you come down to the river, what does it offer you? Why do you, why do you keep coming back to it?

The day I can't come back to the river would be a very sad day, because for me, the river is energy. The river is substance. The river is moving. The river is the essence of what it means to me to exist. I can't imagine a day so bad that I would not find peace in the river, because I know that there is a power and a source of good, that is so much bigger than I am. When I say that I tear up because I can bring anything to the river because that's where my God is... right there. I share that. I'm sorry. Cut. Oh, brother, here comes the water [tears]. See what I mean?

If the river can give so much and sustain us spiritually and nutritionally and all those things, the reason the city is even here is because of these waterways, then the question is, what can we do to say thanks and give back to the river? What should we be doing as a community or as individuals?

Well, it's certainly nothing that any one person can do alone. We now live in a time that we must show care for this river and for our salt marshes. I believe that we should open up as many salt marshes as we possibly can. We are - the mayor [of Charleston] rightly says – living in an existential crisis caused by climate change and sea level rise.

I believe that until our electorate becomes eco-literate enough to understand the consequences of continuing to fill and build on top of our wetlands, in spite of what we know about how they mitigate flooding, we could cease to be the city we have come to love. Because the river is always going to find a way out. You cannot throw a river in a pipe, just like you can't throw my soul into a pipe.

The young African-American students that I've been working with love to go out into the salt marsh. They love to see how those marsh grasses can push themselves up through the dang pavement. We call the marsh a hip-hop marsh because the marsh speaks the language of resilience to children who know this history of oppression and being buried like the salt marsh, but see that marsh coming back, no matter what... and it's a plant! They can do it too. And by golly, they will do it.

In this moment, in this pandemic, in this time, when a statue of one of the most oppressive so-called leaders [John C. Calhoun] has finally come down and God, a lightning bolt said, this is good. That's cool. That's gotta mean something. That lightning bolt didn't just happen. I think that good is going to come from even this terrible situation that we find ourselves in.

The sun is going down right now. But the beautiful thing about this world is it's going to come back again tomorrow and we get another chance to try to get it right. But I think we're running out of chances.

Listen to what that bird is telling us [chirping in the background]...

I do think regardless, it's coming back. The question is, will we be around to enjoy it? Oh, the river's going to be here, the rivers going to have its way. And that's the way it should be. And I think we can learn to live with the river and still be here too.

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