



CONVERSATION ENGAGEMENT FIELD WORK SEDIMENTATION STRATIGRAPHY WATER
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Jamie Allen Catherine Russell

IT ALL BEGINS ON THE SURFACE

Being a Sedimentologist in the Anthropocene

The generous discussion presented here began as a conversation between Dr. Catherine Russell, Anthropocene sedimentologist and now a [US-UK Fulbright-Lloyd's Visiting Scholar at the University of New Orleans](#), and Dr. Jamie Allen, an artist and media researcher. Catherine's interests in Anthropocene research began through its elaborations in geoscience, through the work of people like Jan Zalasiewicz, with whom she worked at the University of Leicester. Jamie works on issues related to the scientific mastery of nature, systems sciences like ecology, and the distance and intimacies between “pure” and “applied” science.

Their discussion started on a walk, continued on a bus trip, and proceeded through online calls, messaging, and email, including during a pandemic and its lockdowns, for quite a long time—almost three years of intermittent check-ins paying witness to changing perspectives, sometimes difficult realizations, and the generative magic of discussion between people with rather different perspectives.





The vast of model of the Mississippi River structure engraved in polymer at Louisiana State University's Center for River Studies, which Catherine first encountered during a trip to LSU in February 2019. *Photograph by Catherine Russell*

This discussion began on a walk—an in-person, “real-life” encounter during the collective field site visits they made along with others, in New Orleans, in 2019—was part of the *Mississippi. An Anthropocene River* project. What we even presume to be “real life” has changed a lot since then, both because a pandemic has happened (and continues to happen) and because the growing litany and ongoing amplification of planetary disequilibria, injustices, and hopes continuously give us all more active and explicit experiences of, and parts to play in, the Anthropocene. When the *Anthropocene River* group witnessed the changes taking place along the Mississippi River, it was already clear that we are in a period in which the world will increasingly expect, need, and rely on “answers” from people like Catherine—geologists, geoscientists, geographers, and the like. That is, those we hope can help us make sense of “the Earth,” and perhaps how to better be Earthlings.

Jamie Allen: Discussions of the Anthropocene have now put sciences related to or under the moniker of “geology,” some would say, *back* into people’s minds, bringing them to the fore of contemporary discourse. This

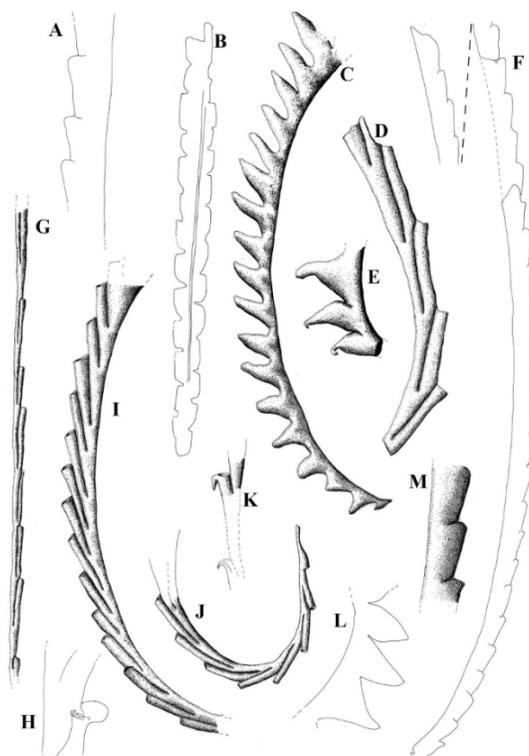
makes me want to ask, in a general sense: How did you wind up being an Earth scientist, a geoscientist, a geologist, a sedimentologist at this moment? Was it coincidence or chance that saw you become concerned, in some way, in tracing and participating in the definition of a “new geological era”? And how does your understanding of sedimentology, your chosen specialization, in particular play a role in this?

Catherine Russell: Today, living in the Anthropocene, we find humans to have undeniably altered the Earth system, hence pushing individuals and communities to an uncertain future, which can feel overwhelming. It is my goal to use my geological skills to reduce these uncertainties where possible through undertaking multidisciplinary collaborative research.

I began pursuing a career as a geologist at school whilst studying my A levels (2007–09). I distinctly remember our teacher telling us that, as geologists, we would never struggle for work because the world *needed us*. We were told and believed that we were training to be part of the critical interface between humans and Earth and we had the secrets of how to get minerals and other things that humanity *needed*. I felt like I was becoming a warrior for the betterment and sustenance of humans and their development. In my late teens, I was still yet to travel farther than France from my home in the UK, so I had very limited experience of the world. We didn't have the internet at home, so my interactions with the world outside were minimal, as when I could get internet time at school I played games or did my homework. At home, I did my homework from a paper-printed, book-based encyclopedia series.

My first research focus in geology was to understand ancient landscapes and ocean chemistries through the intricate knowledge of long-dead fossils, in this case graptolites (fossils of small, extinct, planktonic creatures). This was part of an extracurricular project, funded by the Nuffield Foundation, that I organized and executed through the UK CREST Award scheme. I had the privilege to work at the British Geological Survey headquarters in Nottingham and to be affiliated with the University of Leicester through the work. This project, with its broader scope, opened a

whole new world to me, in which I could appreciate nature for its ability to thrive in difficult conditions. I acquired new skills, and worked with amazing professionals as passionate about the Earth and its geology as I am. I learned to reconstruct entire past environments by reading the rocks to unearth their secrets, and found research to be my outlet for creativity and curiosity. There is no returning to seeing the world as you did before once you learn geology. My imagination continues to be constantly inspired to draw out stories from the world around us—it's like a secret conversation between a geologist and a rock to find out about its lost landscapes.



A collection of drawings of graptolites, small plankton now long extinct. Their shapes are used to unravel mysteries about stratigraphy and ancient ocean currents. For scale, B, C, F, G, I, and J are all to the same scale and B is 13 mm long. A, D, E, H, K, L, and M are all twice the scale. *Drawing by Catherine Russell*

Throughout my undergraduate and master's study at the University of Leicester, I continued with graptolite research, and I did a lot of volunteering, and some paid work, for environmental projects. In my third year, I became the first student to set up and lead a Green Impact team—this was an initiative undertaken by many departments and teams at dozens of universities nationally, aimed at improving the sustainability practices of staff and students at universities. At Leicester, our team in the Geology Department won several awards, including the Gold Award for the best team in the university, in my fourth year. The Geology Department also awarded me with a Leadership and Initiative Award, and, at the end of my degree, I was presented with the Dennis Field Award for displaying qualities of scholarship, enthusiasm, determination, and integrity throughout the course. I felt like I knew all I needed to know about my motives and love of the world through its geology. I love nature and the environment, and want to learn more about it through research. It's still this simple, but it's naive to think of it as straightforward!

So, then, what next after I finished the degree? I decided that I wanted to pursue a PhD because I love research and making discoveries about our natural world, but I needed to choose a specialism. Over the final part of my degree program, I found that I had both a particular interest in, and tenacity for, sedimentology. I was drawn to sedimentology because it encompasses the surface dynamics of our landscapes; it provides connections between the past and the present, as all sedimentary rocks originate on the surface as the grains are moved and collected, before being buried to form rocks. Of all the topics, to me sedimentology was the epitome of connecting with nature.

My PhD project at the University of Leeds was on developing models to predict how sand and mud will deposit around meander bends. I loved this work, and still do, as meandering rivers are some of the most dynamic and beautiful natural systems on Earth. Studying modern meandering rivers helped me to answer questions on their historical transformations from the perspectives of many disciplines, including geography, maths,

and physics, all of which enhanced the geological study that I was undertaking. As such, I increasingly began to turn to modern sedimentary environments for further insights into the ground under our feet. There were many questions that geology could not answer on its own, and so my appreciation for, and knowledge of, other disciplines extended. Once I started looking towards other disciplines and modern surface processes, encountering the Anthropocene became inevitable.

Jamie: One of the things that this notion of disciplinary perspective brings up is how the Anthropocene is expressed in its “good” and “bad” forms. That is, the concept expresses the material history of human beings on this planet, but this can be an expression of this history’s hubris, a confirmation of exhaustion, or an aggrandization of human achievement, amongst other interpretations. The Anthropocene—as a geological concept, but also in the ways that it has found its way into other areas of culture—can point to the unsuitability, unsustainability, and dangers of twentieth-century and current industrial and capital-driven practices of planetary change, while being also in some ways a framework for underlining how much power human beings have to alter geological, ecological, and biological conditions on Earth. There are those who even somehow “blame” geology for creating the conditions that geology is now defining with this new stratigraphic layer. The presumed, and normative, good of geological knowledge is also brought into question when we start to look at the ways that it historically has mostly been supported by industries of extraction and exploitation. Have these dynamics or tensions—between “pure” and “applied” science—been a factor in the kind of work you do? Does it concern you that there are such historical and ongoing links between geological research and industries like mining and petrochemistry?

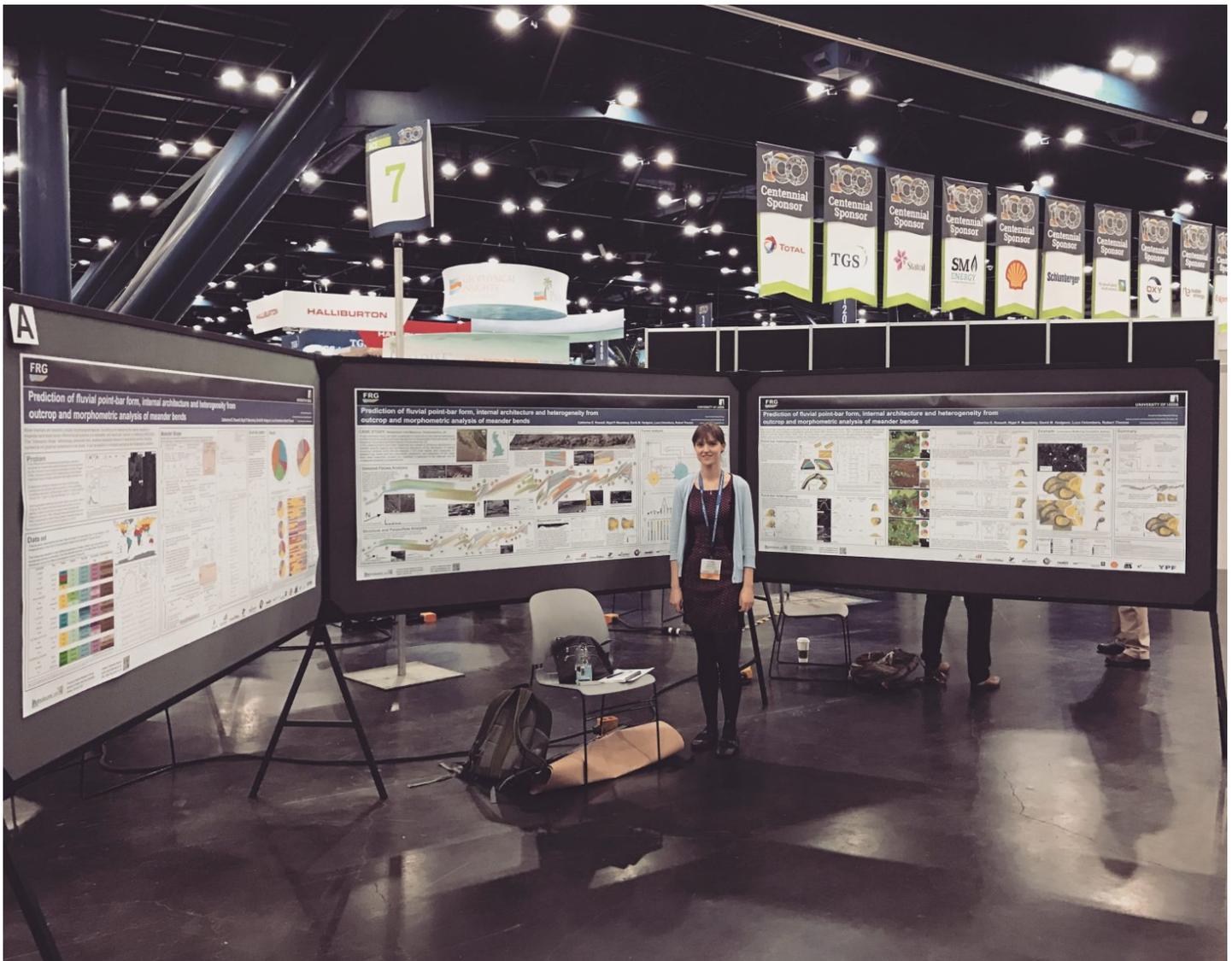
Catherine: I remember the first time I wrote an abstract for my PhD research. It was for a conference, and I needed to outline my research rationale. My initial draft was about how rivers make for an interesting and dynamic study. However, when looking to the wider and more financially

applicable context, the deeper rationale was to understand the complexities of meandering rivers so that the information could be used to build models of preserved ancient river systems in the subsurface to aid with efficiency of petroleum extraction. More specifically, by understanding the intricacies of the rocks better, we could help reservoir engineers, for both existing and prospective sites, to most effectively manage resources. That way, not as much money and carbon need to be spent in search of new sites.

In total, this felt like a very environmentally framed PhD project that suited me well, and I regularly partook in many environmentally minded activities, including being the Green Representative for my first-year PhD accommodation. However, in my third year, a campaign for the university to divest from petroleum income and to sell its shares became prevalent. This was framed as stage one, with the ultimate goal being to remove petroleum research from the university. Personally, I found it hard to understand why they were so against what I viewed as being clearly helpful, as these are resources we need and researchers help with understanding how to extract them in a more environmentally friendly way. A debate was organized and they didn't find anyone to be pro-petroleum, so there was one speaker and no chair. A few research colleagues and I went along and carefully improvised an argument to be discussed; someone had brought eggs to their front-row seat. I used to say that if you wear socks, then there needs to be a sock factory; therefore, if you use electricity or consume petroleum-derived products, then there needs to be a production route for that too. I presented a session to the student union at Leeds University on the importance of building bridges between petroleum industries and environmental campaigns, but found that perhaps I was representing what I really hoped would be a helpful and shared middle ground, rather than a more realistic view of the deep ideological and practical stakes of these positions.

In tandem with all this was the crash of the petroleum market that began soon after I started my PhD in 2013. Many of my doctoral colleagues had

spent years building relationships with companies through internships and conference networking, now suddenly finding that the email address they had been relaying through ceased to exist. Many people were laid off in all the major petroleum companies (this is still ongoing in many places), which then had trickle-down impacts to service companies, whose employees bore their own consequences. For students like me, suddenly far more limited prospects existed among industry jobs. I distinctly remember a large conference in Calgary, Alberta, Canada, in 2016 (the American Association for Petroleum Geoscience, or AAPG), where this huge conference hall was only sparsely occupied. It was a great conference for me to meet academics and exchange ideas, but people were joking about tumbleweed, as it was very quiet. The companies at the AAPG had very limited opportunities to offer, which affected students like me in finding internships and service companies in having customers, and the corridor of prospects in which national flags hung hopefully was a small quiet area in which people made polite conversation. Even the city of Calgary itself, which is largely built around the petroleum industry and from its profits, seemed very quiet and dotted with large office spaces that were completely unoccupied. I remember looking out from my hotel room window and seeing into an office space across the street. The office was full of geological maps over a table, and they didn't move the whole week I was there; the light was on, too. I'm sure someone was working with these maps at some point, but it made me wonder how long it had been since they did. The statistics for the number of people who were now out of work because of the oil crash were up for debate at the time, because traditionally only direct redundancies from these industries are counted; however, there were also entire service companies that went bankrupt because of it. In short, the prospects for geologists finding jobs in petroleum were bleak, though many of my talented colleagues did and do find work in these areas, and enjoy their posts.



Catherine presents her PhD research findings at the American Association for Petroleum Geoscience in Houston, Texas, 2017. *Photograph by Catherine Russell*

I have never been stoically for or against working in industry, and whilst it is something that I haven't experienced myself, I still view these activities as core parts of how society presently works. I have also seen some of the negativity that the divisive nature of this "for" and "against" argumentation can bring, and it rarely seems to help two-way conversations. I'm all for building collaborative bridges between industries and academic disciplines, because the biggest view is a planetary one, and we ultimately all have the same goal of the long-term survival and flourishing of the human race.

Along with petroleum, there was a crash of the mining market around

2013, and so geology as a discipline was affected from a few angles. That's the thing about geology: because geologists are so close to the ground, the industries many geologists work for are the material source for pretty much *everything*. These jobs and sciences are quite sensitive to changes in the market. The knock-on effect of these crashes was also that the demand for geology graduates went down, which has since seen whole geology courses folding, up and down the UK and elsewhere. Additionally, because of the heavy industry connotations, many students are not interested in geology degrees, because they are not seen as eco-friendly, even though most of us work on projects that support the [UN Sustainable Development Goals](#). Over the course of my PhD, opportunities in industry and academia shrank in number, so viable routes for staying involved in research in the area were fractured somewhat. I began reflecting on the promise made to me by my A level teacher: that geologists have a skill set so valuable to understanding the interface between humans and the planet that we would never be out of work.

However, if not industry, then what does a geologist ultimately do? Many people finishing their PhDs at the time had similar qualms and questions, and without an immediate answer, there is some sense of not belonging. The things that had drawn me into my PhD research were the ways in which the natural world looks and works, and how we can seek to understand and characterize its variability, particularly as regards present-day landscapes (rather than the preserved and interpreted geological ones). This was exciting to me, mostly because of the accessibility of modern landscapes and the number of questions that we still clearly have about how dynamic the world is. For sedimentology, it all begins on the surface. So, surely, contemporary geographies would be the best place to get clarity about geological journeys. During this time, the UK, especially England, became increasingly affected by large-scale flooding, which has and continues to impact many communities that build their homes on floodplains. Conversations with people outside of academia, such as my family, highlighted how they wanted to know how my studies of rivers could help people living by rivers to avoid disasters.

All of this motivated me to think more broadly.

After my PhD, I struggled to find a sense of belonging and purpose, or a niche that seemed to suit my broader motives and interests in sedimentology. What I knew with certainty was that I wanted to do research and I had many ideas to get on with. I understood the importance of the work, but an X factor was missing—I didn't know what I needed to know to succeed. I know this sounds a bit abstract, but I couldn't have explained it at the time. It's like I was trying to find direction and momentum for a journey but was not managing to move onwards. I applied for positions with Equinor (née Statoil), and ExxonMobil, as well as for a teaching fellowship at the University of Leicester. In the one industry job that I did reach interview stage for, I was not a good fit for them, and so I was very glad that I was successful for the teaching fellowship role.

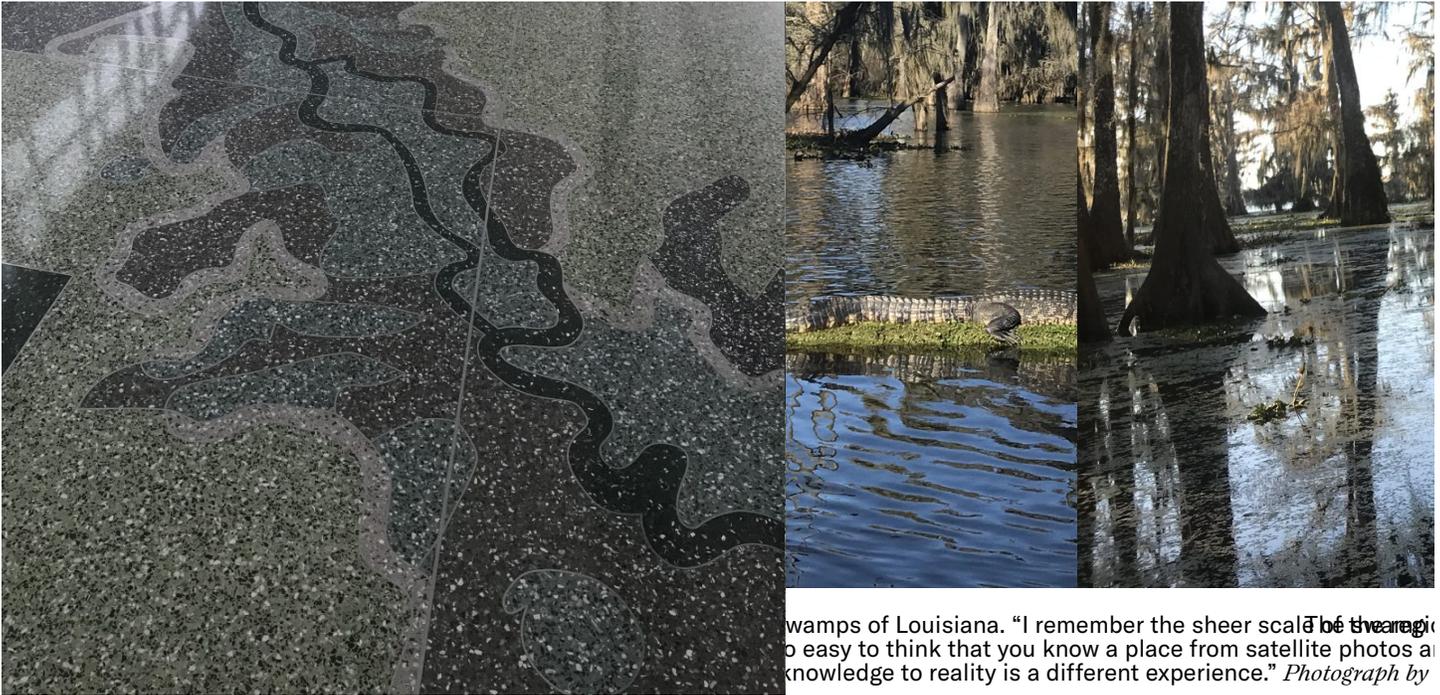
During my fellowship, I rapidly learned new skills for pedagogy, and research became a secondary priority for me by necessity. But away from the immediacy of research requirements and under the mentorship of valued colleagues, I found that, in fact, the pause in my research life allowed me the bandwidth to absorb information from the world: news stories, papers, and experiences. I could plot the directions of my future work in a more experimental way with a bit of time to think. The realizations that came from this were transformative because it meant I could merge my passions about human effects in geological processes into an important, necessary, and exciting research area that could ultimately contribute to alleviating future anxieties of living conditions in a time in which change is present and pending. However, knowing where to go and actually knowing how to get there are rather separate things.

Jamie: Thank you for that, Catherine. That is quite a journey, and it gives a really beautiful and honest portrayal of the experience and contradictions that come with being involved in any modern science, I think. It can be quite a difficult thing for people who are more abstractly involved in natural science, or even ecological activism, to understand how hard it can be to carve a path in which personal histories, ethics, institutional

support, and world circumstances align as much as possible. The issues you bring up, regarding negotiating traditional industry pathways and your own motives around environmental concerns, are particularly salient for geologists, as geology has such a rich tradition and networks between industry and academia. But these concerns are also relevant in terms of how geology is perceived, vis-à-vis other natural and applied sciences, as quite “old school,” meaning field-based and close to the matter at hand. Indeed, how did you find your way to your current research work, and to calling yourself an “Anthropocene sedimentologist”? Have you found support through communities or institutions that better fit the way you think about your responsibility as a scientist, or maybe just as a human being?

Catherine: The story that ushered me into my current work now to me seems to be a kind of trilogy of visits to the Delta region of Louisiana. I met a professor from Louisiana State University (LSU) at a conference in 2018, and we established a collaboration, so when I went to Baton Rouge in February 2019 to present a talk, we began working together on a paper. My first impression of Louisiana was the Dallas/Fort Worth airport, which is in Texas, but it has this giant mosaic on the terminal floor that depicts the meanders and landscape of the Mississippi River. The pride in, and importance of, the river is something that I became ever more aware of, and I remember pressing my face to the airplane window during my connecting flight to Baton Rouge, awaiting my first glimpse of the mighty Mississippi. It was dark when I flew over, so she was only visible through the absence of light. I had to wait to really see her.





swamps of Louisiana. “I remember the sheer scale of the swamp. It’s so easy to think that you know a place from satellite photos and that knowledge to reality is a different experience.” *Photograph by*

Mississippi River adorns the floor of the terminal building at Dallas/Fort Worth International Airport

I was later able to experience the swamps and all its alligators, turtles, nutria, and many birds, including pink spoonbills. Every one of the birds and animals were creatures I had never seen before, and it was like being in a storybook with a whole world of new things alive around you. Simultaneously, I was aware of the familiar and dynamic meanders portrayed in [the Fisk maps](#), but I couldn’t connect that familiar feeling to my surroundings—the complexity and sense of scale that I got from existing in the swamps is something I’d never felt from a map. The LSU professor and I visited the field site for the paper we were working on, focusing on a meander loop that had become abandoned by the main river. We went to look at the sites, and in one you could see the gentle undulations of the ground where the phases and history of the river had been recorded by the sediment. The project was to inspect the stratigraphy to find out more about the ways that different sediments interlayer in these large river systems; the results would also be given to Imperial Oil to guide their exploration of the Alberta oil sands.

I was also treated to my first Mardi Gras experience in Baton Rouge, which was incredible. I loved the artistry and imagination that was brought to the

floats, and the atmosphere of the parade, where bead necklaces are thrown from the floats as prizes for the spectators, was one I had never experienced. My new friends at LSU showed me the ways of the parade and it was a lot of fun. The first parade we attended was in the dark, with creative and artistic lights on the floats, but the next morning we went to a second event, and seeing the litter on the streets from dropped and abandoned beads after the floats had been through was astonishing to me. Vehicles had driven over some, shattering them into microplastics. The beads lose their luck if they hit the ground, so people just leave them there. The cleanup crew walked behind accompanied by a truck and an industrial loader picking up the beads in the prongs of its scoop. The unintended consequences of the celebration struck me, and I didn't know what to say or precisely what to do about that. Such moments leave one with lots of questions, and not so many answers.

Over the week, I caught glimpses of the river as we went over its bridges, but that was it. I found it surprising that the Mississippi isn't visitable in the way that most rivers I've met are. Even the Thames in London—you can look down upon and watch the eddies. The scale of the Mississippi River is phenomenal, and the landscape entirely awe inspiring. Yet to see the river you have to climb a levee; the natural landscape of the area is so rich, and its human-activity landscape is equally so. I visited the LSU Center for River Studies, which has this huge model of the Mississippi River structure engraved in polymer. I learned about the US Army Corps of Engineers and how, in short, it is intentionally hard for us to access the river in order to ensure that she can't easily access us, either. The Mississippi is a river with a huge potential for, and history of, destruction, and so river management is needed to keep people safe. The challenge of the Mississippi seems to be that she is a beast who cannot be tamed, and so more alterations and constructions are needed to manage her. With this escalating control comes escalating isolation, and changes to how she would naturally behave.

On returning to Leicester, I began to become more interested in human

impacts on rivers, and in particular of the Mardi Gras bead litter on the river and the streets. As a geologist, I didn't know how to incorporate this kind of experience into what I do, even though there was clearly a geological impact. The effects of Mardi Gras beads, for example, will certainly find their way into our geological record. I was frequently directed to geography, engineering, and other subjects, but I didn't have the experience or language to helpfully access or translate my own puzzles. That summer, I began incorporating Mardi Gras beads into laboratory experiments to see what would happen; I found that even fundamental processes common to sedimentology were disrupted by the beads' presence. The scope and breadth of questions about the present world began to increase for me in a new way and a new direction. But it was not easy to see what to do next and it was clear I needed to collaborate with other disciplines.



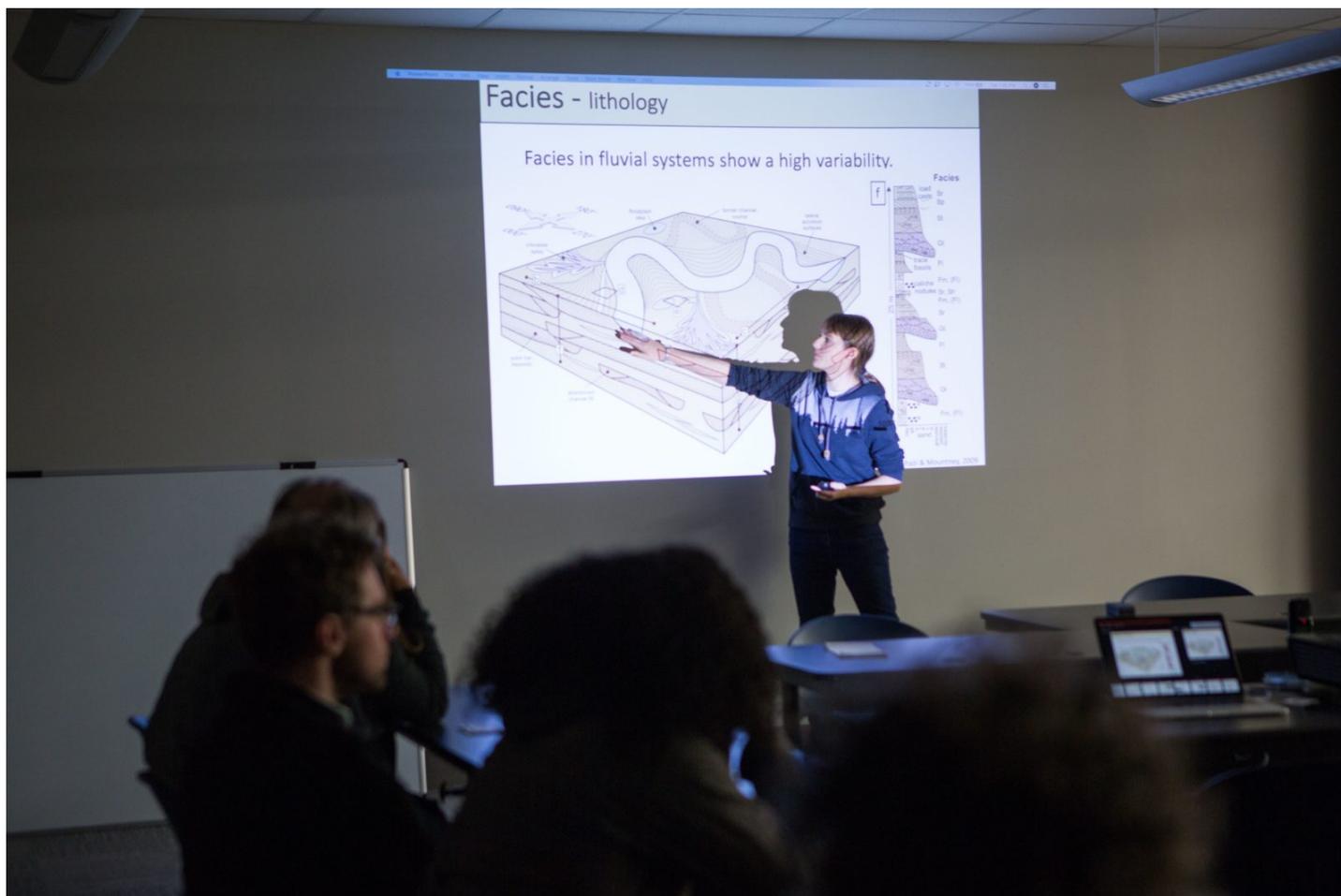
...m Mardi Gras parade floats into the



Through networking and discussing my proposed research ideas with potential collaborators, I was invited to conceptualize and lead a seminar organized by the *Anthropocene Curriculum* (itself led by the Haus der Kulturen der Welt and the Max Planck Institute for the History of Science, both in Berlin). It was called “Clashing Temporalities” and held as part of the *Anthropocene River Campus* in November 2019. I was there to present the history of the land and the river in how meanders form and some of the mechanics of sedimentology, as well as an overview of the engineering of the landscape. I delivered this material, but what I did not expect from the experience was to learn so much through a series of experiences and conversations that would change how I relate to the world. It was an experience that helped me develop as a multidisciplinary scientist and global citizen.

The sort of scientific conferences that I’m used to attending focus on sharing information around knowledge deficits that themselves share common themes. The people at these kinds of conferences typically belong to a niche subject or specialism, such as sedimentology, and even at larger conferences, the multidisciplinary nature of events leads to many parallel sessions, and so it is hard to overlap thoughts and have enough time for reflection and to truly mix ideas and learn beyond personal boundaries of comfort and intellectual norms. I didn’t really think about all these things before attending the “Clashing Temporalities” event, and it’s not to speak against classic conference settings—I’m just expressing the difference in setup from my experiences at the time. The *Anthropocene Curriculum* people I met were amazing and open minded about ideas and beliefs, and they were inclusive beyond anything I’d experienced. As such, I found that I could readily express my feelings as well as my thoughts regarding finding my sense of belonging in geology and how to engage with other disciplines. The things that were most important to others from what I shared was very interesting to me, because it sometimes meant

that the intention of what I was sharing was interpreted differently to what I had always experienced up until then. All of this led to some deep and fascinating conversations. Some of these conversations were quite emotional, too.



Dr. Catherine Russell presents to the Clashing Temporalities. “My topics was was in river sediment,” recalls Catherine, “so it was mostly focused on the logic of the layers and the scientific reasoning of the natural environment, but I quickly learned that there was far more to this landscape and environment than these backgrounds.” *Photograph by Sarrah Danziger*

I distinctly remember a group discussion about how different forces meet on the Mississippi Delta, and it came down to funding and the impact of petroleum. These impacts include petroleum extraction enhancing land loss on the Delta, increased carbon dioxide causing sea-level rise that threatens communities on low land, chemicals from petrochemical factories leading to higher rates of disease in places along the river and beyond, and many other repercussions. Petroleum industries encroach on

the ways of life and land of many people, so the depth of feeling and emotion in these conversations was understandable.

As one of two geologists in the room, and the geologist co-leading the seminar, these emotions were in certain moments directed through me. At the time, it felt like they were directed *at* me, rather than *through* me, because I was trying to respond, reassure, and help. But the thing is that I can't represent the entire petroleum industry or all of geology, because I frankly don't know enough. Nor do I alone have the power to change things. I also realized that, in the same way that I didn't have experience connecting meaningfully with other disciplines, perhaps some people at the seminar hadn't had the opportunity to access platforms in which they could directly talk with petroleum companies or geologists. Maybe we were all finding out how to build that bridge of understanding together. I don't have the answers, and I can't solve the larger questions and issues, but I can provide layers to the story and listen to learn from the others as well. Additionally, I can bring these diverse opinions and information to others who might be able to make a difference, and more personally act through the hope that we are all just doing our best. What I furthermore can do is recognize that, to others, maybe I represent the traditional, negative effects of geological science, and maybe this is part of my role in these vastly multidisciplinary conversations, as well as to listen and facilitate the honest and powerful dialogues that result.

As such, one of the main things that stuck with me after the “Clashing Temporalities” event was the integration of more creative processes in all I do. It's not good enough to include other disciplines as a means of disseminating findings; they need to be worked with from the beginning, such that they are truly collaborative ventures. I made myself a creative station in my office where I could sit with no screen and hash out ideas and do my wider thinking each day—not just at the beginning and end of a project. This is something that, years later, I still do, and enjoy.

However, beyond the immediate practical and practice changes, there is still a lot more to do. I have reflected on this experience a lot over the past

few years, and I've found some footing and similar-minded people to work alongside. In learning about how everyone views Earth today in this moment of global change, it has become deeply evident to me that geology is not the only meaningful interface between humans and Earth. Rather, it is one of many, and they all need to nest into one another to allow for understandings of our ever more complicated Anthropocene landscapes. Social sciences, cultural history, art, and literature all play critical roles in our understandings and communications, which ultimately help us to become more connected and responsible as a species.

So what is the role of the geologist? The answer to this is complex, and every time I think I'm understanding it more, I learn something else and the answer changes. After years of thinking, discovery, self-discovery, and learning, I've decided that maybe I don't need to have an exact answer, if the intent is instead the integration of knowledges, cultures, and ideas to present challenges. A geologist understands deep times and futures, sees the world in an ever changing and dynamic way, and understands the variations in deposited materials. I'm also a firm believer that every one of the skills we learn as geologists will continue to be helpful in the future. The amount of materials humankind needs, how we have to understand our landscapes, how we are going to integrate our present and future thinking—geologists need to be at the table. I still don't have the solutions, but I know that geology has a direction and place in finding them.

I have maintained many connections with people and groups that I met at the *Anthropocene Curriculum* event at Tulane University in New Orleans, and have since found many others around the world with an interest in bringing geology forward in ways that address issues of the Anthropocene. I have certainly experienced a sense of uncertainty and self-doubt in finding my feet and bravery in doing something different from traditional geology, and in taking on initiatives and steering my research projects towards my own values.

In August 2020, I set up the Anthropocene Sediment Network (ASN) with the goal of bringing together a multidisciplinary network and integrating

this combined knowledge into contemporary concerns of water and sediment observation management. Our network works on scientific advancement, integration of knowledge from other disciplines, and education, so that the research we do can have maximum impact. We have been successful in obtaining funding from the UNESCO International Geoscience Programme (IGCP) call for a project with the acronym and title: “LANGUAGE,” or **L**essons in **A**nthropogenic Impact: A Knowledge **N**etwork of **G**eological Signals to **U**nite and **A**ssess **G**lobal **E**vidence of the Anthropocene, on which I am a co-principal investigator. While the IGCP project finds its feet, the ASN is working on a number of other projects, including an article on the expanses of human-made strata as well as recommendations for altering and updating geology curricula in both schools and universities to be more relevant to present and future challenges. I am so excited about the prospects of the ASN and am really looking forward to seeing what we can build!



The logo for the Anthropocene Sediment Network, which Catherine established in 2020. *Image courtesy of Catherine Russell*

As part of my continued efforts to understand my place in the geological

discipline , I have also been applying for opportunities following the end of my teaching fellowship contract at the University of Leicester. I will be a Fulbright-Lloyd's Visiting Scholar at the University of New Orleans in the coming academic year (2022–23), and I'm so excited to learn more about human impacts on river systems and begin to really unpick the geology of the present and the future landscapes we have had a hand in building. I will be looking at the systems that affect the sedimentology of the Mississippi River and the pollution therein.

It's anyone's guess what I may learn. I have yet to spend any significant time in the US. As such, I'm really excited to learn more about new perspectives and cultures, and to learn from the inhabitants and students in the wonderful and culturally vibrant city of New Orleans. It saddens me that this fragile and fiercely protected land will, it seems, tragically someday be underwater. I have visited many places worldwide that are living under threat, in the shadows of active volcanoes or at risk of other natural disasters, and while I understand how to manage threat from the perspective of the geophysical landscape, I lack an understanding of how the threat might be managed in more personal and human contexts. I look forward to respectfully understanding better what it means to live in a community under threat of flooding, such that I can better empathize and understand this critical moment directly through personal experience. I hope it will help me become a more well-rounded and informed academic and global citizen.

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