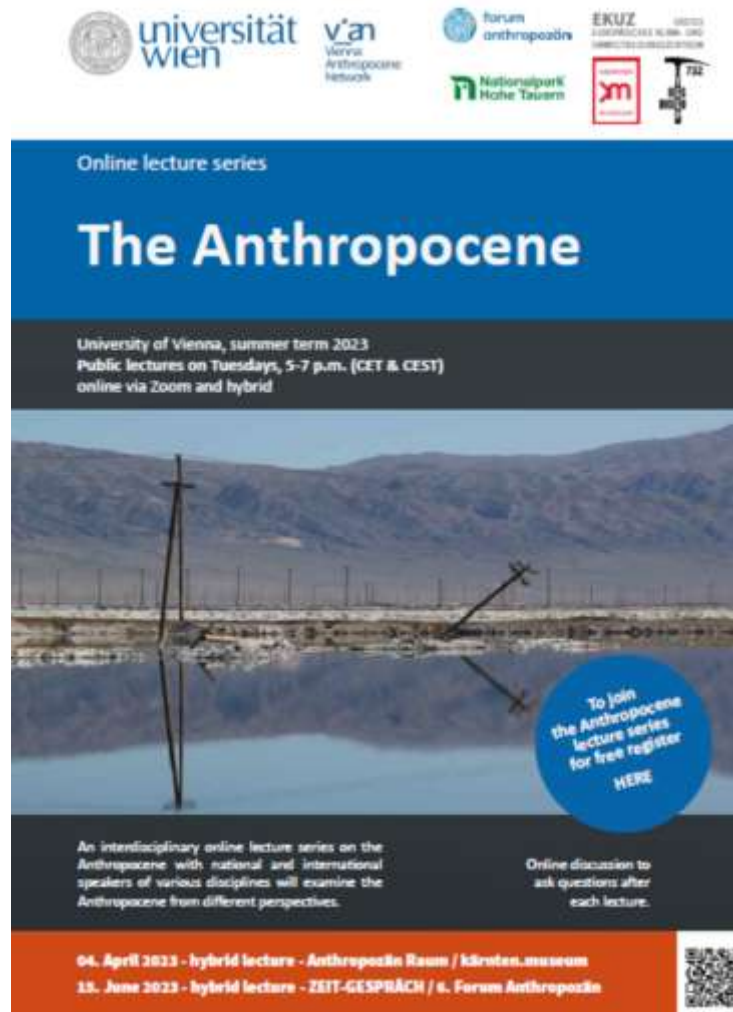


A Native American's Indigenous Perspective on the Anthropocene Lecture by Randy Kritkauský at the University of Vienna, June 11, 2024

Prof. Dr. Michael Wagreich, University of Vienna: This lecture today is the last one in the formal series of the online lecture series, "Welcome to the Anthropocene" of the University of Vienna, together with Nationalpark, Anthropocene Forum, UNESCO IUGS Project on the Anthropocene. Randy Kritkauský today will give a presentation on the Native American's Indigenous Perspective on the Anthropocene.



University of Vienna online lecture series¹

Randy is an enrolled member of the Citizen Potawatomi Nation, a Native American tribe that originally inhabited the Great Lakes region of the Upper Midwest of the United States. And he's trained as a sociologist and historian from the University of Pennsylvania and Binghamton University, and has been a

¹ file:///C:/Users/Owner/Downloads/Folder_RV2024_english.pdf

Homepage <https://www.forum-anthropozoen.com/de/kooperationen/van-universitaet-wien-2024>

Research Scholar in Environmental Studies at the Middlebury College at Vermont, where he is also living as far as I know, and previously a Visiting Scholar in Corporate Social Responsibility and Sustainability at the Monterey Institute of International Studies in California. He was also professor at Keystone College in Pennsylvania, and Erasmus Mundus Scholar at the Central European University, formerly in Budapest, now in Vienna and at Lund University in Sweden.

He's a co-founder of ECOLOGIA, an international environmental organization that has worked on a lot of ecological issues: desertification, industrial pollution, Chernobyl nuclear power plant accident, and of course climate change issues. His book, *Without Reservation, Awakening to Native American Spirituality and the Ways of our Ancestors*, documents his journey discovering the value and wonder of an Indigenous worldview that challenges western culture and science, and we know the Anthropocene is a Western science product. So we are very interested, very keen, to hear this lecture. And with that, I stop my screen sharing and give over to Randy.

Randy Kritkausky: Michael, thank you for the invitation and for making this possible. As you just noted, I'm coming from a perspective that is in many ways challenging many of the deeper assumptions behind the whole Anthropocene discussion, which I have found absolutely fascinating. And I will be trying to clarify my position on questions I have about the work of the Anthropocene Working Group, but more generally about the assumptions that lie behind the very word "anthropos". And in so doing, as you noted, I may use a term or misuse a term, and if someone wants to post a quick comment in chat where appropriate, I will try to keep an eye on it with my help of my able companion here, and respond in context where possible. Otherwise, I'm looking forward to a vigorous discussion at the end.

So in a sense, what I'm doing is, I'm trying to invite you to look at multiple new perspectives concerning some of the facts and analysis associated with making Crawford Lake a "Golden Spike" marking the advent of the Anthropocene. And secondly, I'm asking the listeners today, viewers today, to reflect on a western scientific, empirically grounded worldview, and it's typically unspoken and unexamined assumptions. And this part of the journey I expect may be the most challenging to some of our listeners.

But if I'm successful, I hope that this brief journey into my world might be stimulating, rewarding and constructive, and add to the value of what the Anthropocene Working Group and other people working even more broadly on this notion are trying to accomplish.

Before I proceed, I want to thank Robert Braun, who previously appeared in this lecture series and raised questions about the limitations of western science and ontologies and phenomenology, particularly the Anthropocene as a cultural

artifact. I'll be returning to that notion frequently and to some degree building on his lecture, which I was deeply grateful to see that you all hosted.

First, what I want to do is I want to illustrate literally how challenging it is to simultaneously see and experience the world while embracing and participating in two distinct world views that have different notions of what reality is. And we have a slide here that I think if we can find it: "Alice."



Statue of Alice Through the Looking Glass²

So as I was saying, I'm trying to find a way of visually representing to people in the presentation today how extraordinarily challenging it has been for me to live in two worlds. I'm a university trained sociologist. I did everything except for completing my dissertation for my PhD in history. And I have been immersed for most of my adult life in a world where hard data, hard evidence, is just absolutely demanded by the world around me.

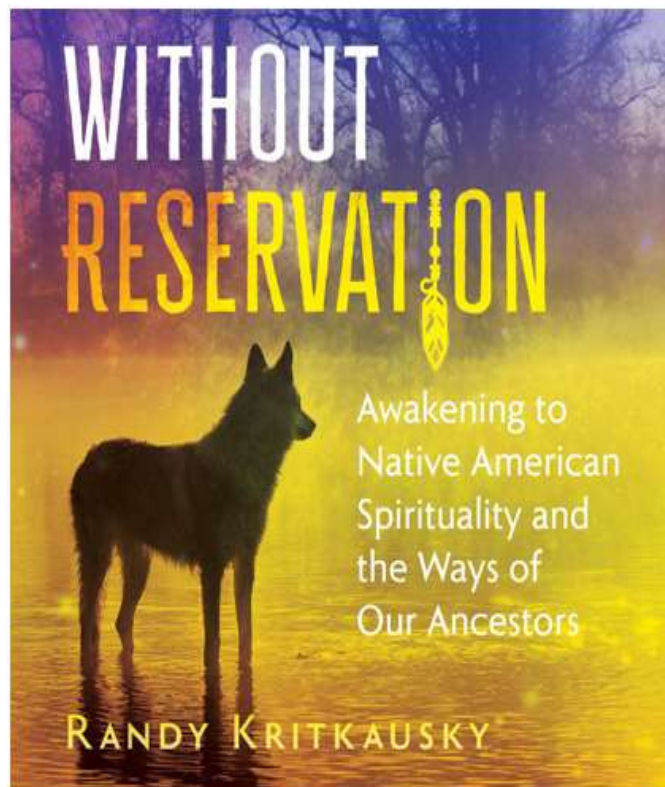
And then a decade or so ago, my Native American consciousness kind of erupted and drew me into another world view. And this must be like the experience that Alice experienced in this statue. She's a bronze image in a piece of plexiglass, and it refers to this very famous children's story called *Alice Through the Looking*

² Alice_Looking_Glass_Guildford.jpg from Wikimedia Commons, the free media repository
The Statue of Alice Through the Looking Glass in the ground of Guildford Castle
Created in 1990 by Jeanne Argent. Taken on 9 Nov 2016, Own work by original uploader
Author: Jack1956 Creative Commons CC0 1.0 Universal Public Domain Dedication

Glass, an 1871 book by Lewis Carroll that came after his even more famous *Alice in Wonderland* book. So in this book, Alice enters into a fantastical world on the other side of a mirror where everything is reversed as in a mirror; logic, the meaning of words, and even what is real is turned upside down. So in this sculpture, Alice is caught halfway.

And I have felt on a daily basis for many years now as if I inhabit two worlds. Sometimes I step all the way through Alice's looking glass and I live in my Indigenous consciousness. Sometimes I'm drawn back and I look at that world through the lens of my empirical training, and I'm even skeptical of what I may have just experienced. So I, in a sense, am asking you to have the imagination during this presentation to try to look at the work of the Anthropocene, both from the point of view of scientists, but also try to imagine breaking free and looking at it as I have been looking at it for the last year, from the point of view of someone who is Indigenous and has some skepticism.

So as I have moved out of my totally empiricist dominated mentality and into the world of indigeneity, I ended up writing a book about it. And this book is called *Without Reservation*. And as the title says, it's about my awakening to Native American spirituality and the ways of our ancestors. I never intended to write a book; I started keeping a journal about remarkable things that were happening in and around the house where we live here, and in Vermont. I'll discuss some of those with you. But it became a book by accident.



Without Reservation *book cover*³

³ *Without Reservation*, by Randy Kritkauský. Simon & Schuster / Bear and Company, 2020.

So as I keep saying, this awakening has been both wondrous and perplexing. The title of the book *Without Reservation* is a bit of a play on words. I've never lived on a reservation. Most foreigners, I think imagine Native Americans living on a reservation. Seventy percent of us don't. I have spent little time in a reservation; I do not speak for people who live in reservations and know that as their primary reality. So that is my "without" as opposed to "within" reservation. But the other part of the title is I've come to accept this new awakening and consciousness without hesitation, without reservation, hence the title of my book.

So as my first experience with what drew me into that world is experience that we have had here living in the forest. And it was in frequent moments when I would pass through that mirror that is illustrated in Alice's statue. And this would typically happen in the middle of the night when we would be visited by Coy Wolves, which I'll explain in a moment, is a particular breed of a wolf-coyote that inhabits our region. Owls, fireflies, frogs on the wetlands near our home, birds that sing during the night and wake us up in the morning.

So this happens because here in our house we sleep on a screened in porch, it's a wire mesh to keep the mosquitoes out, but for six months a year, we're basically outdoors for the entire night, which is an experience that I don't think most people in the industrial world have. So at two o'clock in the morning, my experience typically is that I'm motivated to get up and write, and that's how I wrote this book. I took notes of what was in my mind or what I felt sometimes were messages that my other than human kin were bringing to me.

So I want to make an important point, and it hearkens back to Robert Braun's presentation, which is I came to experience these moments of living in Indigenous consciousness as a direct experience, a lived experience, unmediated to the degree that it is humanly possible by any conceptual framework, by any preconceptions. And that, I think, is what I'm trying to offer here today by reexamining what Crawford Lake and the Anthropocene is about.

So let me just review ever so quickly for a few of you who may be attending, who are unfamiliar with what the Anthropocene Working Group is, where it came from and how it came about. This will be very brief for those of you who know the story well. Nobel Laureate Paul Crutzen made a comment at a scientific conference in the year 2000 suggesting that it is time to declare an entirely new geological period due to, and I quote him "major and still growing impacts of human activities on earth and atmosphere." That set the ball rolling.

He and others then wrote a paper shortly thereafter in which they declared, quote "It seems to us more than appropriate to emphasize the **central** role" - I emphasize that phrase - "the central role of mankind in geology and ecology" by proposing to use the term Anthropocene for the current geological epoch. So that's how the term was born.

In 2009, the Anthropocene Working Group was constituted as part of an international body of geologists and others whose work focuses on identifying and naming geologic epochs in the Earth's history. So the question before the Anthropocene Working Group for more than a decade has been whether or not the human footprint on the planet is of such a magnitude that it can be considered, to use Crutzen's word, "central" in shaping the very geology of the planet. That's a pretty big order to fill. So as part of this work, the Anthropocene Working Group began a global search for a location that would represent the central role that humans have played in placing their footprint.

They focused on Crawford Lake in Canada's Ontario province because of its unique capacity of preserving discrete layers of settlement, excuse me, sediment, in the bottom of the lake, more or less in the kind of clarity that you see in tree rings that demonstrate different levels of nutrition and water in the forest at times.

So again, I'm focusing on this notion of what is the human footprint, okay? This [slide] is a human footprint in sand.



Human Footprint in Sand⁴

Believing that they had the ideal location for making the Anthropocene and its human footprint, they determined that Crawford Lake, to be more specific, a few precise layers of sediment in the lake, would be a place where they could identify the exact demarcation line between the most recent geologic epoch the Holocene, which came after the glacial period, and this new proposed epoch, which would be the Anthropocene.

⁴ https://commons.wikimedia.org/wiki/File:Foot_Print_On_Sand.jpg



Canada's Crawford Lake chosen as 'golden spike' to mark proposed new epoch⁵

So I found it absolutely startling when I first saw this photograph, an aerial photograph of Crawford Lake, and I was shocked, here it is. It's a footprint! in the forest! This comes from a CBC news article that was posted online.

So I immediately asked myself, what is evident in this photo and what is missing? And what struck me as missing has to do with what is not in this photo, which is the museum, which exhibits and explains the Indigenous presence on the shores of this lake prior to the European colonial invasion or whatever term you want to use to describe it. There's quite a marvelous museum there. And as the people investigating the sediments in this lake have discovered there's evidence in the lake such as pollen from plants that Native Americans grew, mainly corn, which documents that they were there for hundreds of years living in a kind of harmony with nature long, long before the Europeans came.

So I now, when I see this footprint, I see another footprint, which you probably don't see, and that other footprint is the invisible, gentle, moccasin footprint of Indigenous people who lived there and left no trace - kind of like campers who throughout the world go into the forest with the ethic of "leave no trace, do no harm."

⁵ <https://www.cbc.ca/news/science/crawford-lake-anthropocene-1.6902999> CBC online, July 11, 2023.

But I want to discuss, and I will discuss repeatedly, the implications of that alternative missing footprint in the discussions about Crawford Lake and designating it as the poster child for the Anthropocene.



Wendat reconstructed 15thC longhouse; photo credit Jelen Iesni⁶

This is the inside of the longhouse that has been reconstructed at the museum on the shores of Crawford Lake, and I believe that's corn hanging in the roof of the longhouse, the very same kind of food which is made in evidence of pollen in the bottom of the lake.

So this Indigenous presence prompted me to write an open letter to the Anthropocene Working Group last July explaining my concerns about the Anthropocene designation. I understood at the time that there's cooperation between the Anthropocene Working Group and the museum, but my concern was - and this is not criticizing the Anthropocene Working Group, it's just the way science is represented in the press today. My concern was that the news about an impending declaration of “the Anthropocene is real” was drowning out - in fact, I think I used the word “erasing” - the message that the lake was trying to deliver.

Because the lake has actually two messages to deliver. One is, we may be the place that epitomizes the human footprint, but we are also the place that represents humans' ability to live sustainably on the planet. And because of the

⁶ Photo by Jelen Iesni: Wendat reconstructed 15thC longhouse exterior - Crawford Lake Conservation Area, Halton Region, Ontario. Pinterest - <https://www.pinterest.com/pin/7810999331029979/>

way things work out in the media, and people like dramatic language, and we seem to have a fixation in the modern press with a kind of doom scrolling news, the Anthropocene message was getting the press, and the Indigenous sustainability, humans able to live on the planet sustainably message, was virtually drowned out.

So what I am concerned about and am still concerned about is that telling only a Eurocentric post-colonial story is not only inaccurate, it's really not good science. So in a sense, I'm continuing to ask the Anthropocene Working Group to consider how, as it continues its work and I think it should, it can go forward including more voice from Indigenous people and more evidence from the lake and the surround about the possibility that what we have before us at Crawford Lake is not an image of the cliff that we're all about to fall off of; it is an image of a choice before us. Are we going to focus on the radionuclides that they found in the lake and the other forms of pollution and contamination that are part of industrial society? Or could we possibly balance that with focusing on the question of why did we depart from what Native Americans did on those shores? What can we learn from that and how can we apply it?

So again, to repeat, I'm hoping that the Anthropocene Working Group and all of us working on these issues can begin to tell both sides of the story. And this may require a concerted effort by people who are geologists and not necessarily living in the world of history and sociology and anthropology, to say, "Gee, maybe we have a responsibility to back up and to try to amplify and make more nuanced our story." So there are some people I think from Crawford Lake who are attending the lecture today and they can maybe amplify on this during the question and answering.

I do want to say something that I just found - absolutely made my day, made me ecstatic - which is Crawford Lake, which is obviously not the name that existed prior to Colonial contact, has something to do with people who at one point owned the land surrounding the lake, -but it has been renamed by indigenous people, particularly the Wendat, who have given it a new Indigenous name. And I'm going to mispronounce it, hopefully it will be fixed in our questions and answers, the Indigenous name is something along ***Kionywarihwaen*** which translates as "where we have a story to tell."

So Indigenous people are obviously sensitive to the fact that the story has - excuse me, the lake - has a story, really two stories, multiple stories I would argue, to offer up to the world. And I think all of these stories are incredibly important.

So I am going to shift focus here for a moment and talk about Indigenous resilience, which is what I think is exhibited in the museum on the shore. And it's also my attempt to help balance the darker message of the Anthropocene. So you might be asking, how can I make that shift? And I'm going to speak in terms that are both personal and historical.

So as an Indigenous person, I can tell you that our homeland, my tribe's homeland, which was on the shores of Chicago - we were originally inhabiting the shores of Lake Michigan, and we literally lived where Chicago currently is. In fact, the word Chicago comes from a Potawatomi word for the smell of wild onions.



Removal of the Potawatomi Nation⁷

So what happened as has happened to so many Native American tribes, as this map shows you, we were driven literally at gunpoint out of our homeland in, I think it's 1838, into Kansas. And a very significant number of people died on that miserable journey. It's like the Cherokee famous Trail of Tears. We ended up in Kansas, the prairie, and then we moved on to Indian Territory, again under some duress a generation later, where we currently are living as a tribe on lands that we have some control over.

Now, I want to make a really important point here, and it's a rather shocking point, which is we [*the Potawatomi people before 1838 forced relocation*] were in a forest on a lake where there were rivers and wetlands and wild rice in an enormously biodiverse environment and then suddenly awakened in a prairie,

⁷ <https://americanindian.si.edu/nk360/removal-six-nations/potawatomi/map>

very few trees, totally different environment, and then within a generation on the arid lands of Oklahoma.

So what we did is we experienced the kind of radical climate change that people are talking about happening in the future for much of humanity. We've been there, done that, lived through that. But we're still here.

Now, the story is in many ways a horrific story. Anyone who knows anything about Native American and colonial history knows that 90% of the Indigenous population died. Much of it was from disease, much of it was famine, some of it was just from absolutely horrific violent conflict. But we survived.

So the first point I want to make is that even as we teeter on the brink of going into the Anthropocene, which for many people is the end of nature as we know it, I want to say that we need to be careful to look at a broad view of human history, not just a European view of history, and ask an incredibly important question, which is: are there other people who've gone down this route before and survived, and how, and held onto the values of their culture?

And the answer is yes, you're looking at someone who is a descendant of people who did that, and I think we have much to teach the world. And I think that's the story that the museum on Lake Crawford is trying to tell us.

So again, I'm trying to counterbalance what is sometimes the dark and intimidating and disempowering message that the Anthropocene can bear. It's not the message that the Anthropocene Working Group is trying to put out there, but it is the message that is being tacked onto it. And we'll talk about how that Anthropocene Working Group message has been appropriated by others who have exaggerated the imminent threat level for their own reasons.

But I am trying to establish a point right now, which is that even if you look at the extreme views of what the Anthropocene may mean, life on the planet is surviving. It's bizarre, in many ways it's shocking and depressing to have to say that, but there's a growing movement out there on the face of the earth that is embracing the notion that we are on the verge of total self annihilation, that we are all on the verge of extinction.

And there are even people, philosophers famously in England, who are basically declaring "it's game over, and humans have done it. We deserve to go extinct and we should voluntarily go extinct."



“Game Over”⁸

So again, I'm not saying that this is the message of the Anthropocene Working Group. I'm saying that the Anthropocene Working Group, I think has been a little bit oblivious to the degree to which its message has been, if you want to say it, hijacked, appropriated and is being used in a way that supports other philosophical and political and social and cultural agendas which are absolutely harmful, and which will in a sense make the Anthropocene become a self-fulfilling prophecy because people feel helpless and hopeless and then we cease to take the actions that we need to take from tipping over the edge into the Anthropocene.

So let me digress or step back for a moment now from these rather dark messages and talk about what Coy Wolf has taught me here in Vermont. I'm going to do what Native Americans do, which is tell a story, and the story is a parable. And hopefully in the parable there is a lesson to be learned. One of the chapters in my book is called “What Coy Wolf Taught Me.”

So I'm going to preface this because I may seem to some of you unduly optimistic or even naively hopeful. I just want to say that before we moved here to Vermont and had the experiences, one of which I'm about to describe, we worked, as Michael said in the introduction, on desertification in China, advancing dust storms - if you've ever been caught in one, it's absolutely a shattering, mind boggling experience. Dust storms are so serious, they almost shut down the Olympics in 2008. We and our staff have worked on the Chernobyl nuclear power plant accident, we've worked on the disappearing Aral Sea, we've worked

⁸ Illustration credit: Observer Design, by Courtesy of Guardian News & Media Ltd.
<https://www.theguardian.com/books/2023/jul/22/pro-extinctionis-longtermim-effective-altruism-human-extinction-emile-torres>

on climate change. So we're by no means naive about the problems that are out there.

And that's what I think makes the next story so remarkable: that our other than human kin have brought us messages - quite literally to our doorstep here in Vermont - saying it's not all about destruction, it's also about resilience. Let me explain about my encounter with Coy Wolf. Probably many of you know about coyotes in the southwest. They're kind of emblematic and often used in indigenous art and stories. And everyone knows about wolves, they're a source of great intrigue across the face of the earth.

Well, in the United States, something really remarkable happened. As colonial settlers killed off virtually all of the wolves in the Northeast - it was a requirement of early settlers that they kill wolves - they created an ecological niche which was unoccupied. And slowly but surely, Coy Wolves, excuse me, coyotes from the southwest began to move northward into that vacated niche. But when they got north near where my homelands were, they encountered a climate that was not hospitable. Coyotes eat insects, fruits and vegetables. They're not really big carnivores; they might eat small rodents, but they don't take down deer.

But as they approached the north and got across what is today the Canadian border into Ontario province, we now know, based on DNA analysis, that they interbred at the beginning of the 20th century with Canadian wolves. And they produced offspring that were half coyote and half wolf, hence the term Coy Wolf. These Coy Wolves migrated across North America into New England. They now are seen in New York City, in Central Park, in parking lots in urban backyards up and down the East Coast, and they're considered amongst the most adaptable mammals on the face of the earth.

The reason is they retained the ability of the coyote to eat insects and fruits and vegetables, scrounge in waste bins if necessary, but they also inherited the powerful jaws of the wolf so that when deer are around, they can become carnivores. It's an enormously, enormously successful story of adaptation to change in the modern world. Well, Coy Wolf became my absolute fascination when I was watching a video one night about Native Americans disappearing, and the professor said, well, you know actually, they [*Native Americans*] are very resilient and they're reviving their culture. And it just didn't ring true for me; I was quite depressed wondering if my own culture had disappeared at that point in time. And Carolyn and I came downstairs to where I'm sitting right now to play cards to kind of get away from the tension of this existential question.

And all of a sudden in the middle of the winter with the place tight as a drum, the doors and windows closed, we heard outside [*Randy gives a howl*] all around the house. And I looked at Carolyn and I said, "My gosh, Coy Wolves don't usually come close to a human dwelling." And it went on and on and on. And it really shook me because I instantly intuited that Coy Wolf was trying to tell me

something. I didn't know what it was. I went to sleep and woke up in the middle of the night and I suddenly got it.

Coy Wolf was saying to me, "Randy, you're a hybrid. You're a product of a French Canadian voyageur and a Potawatomi woman that he married, and you ended up looking like this. Not very Indian, but like a hybrid - European features. But Randy, you are a survivor. And because you are a hybrid able to look at the world through two eyes or on two footprints, you are able to understand things in a more complex way than people who can only see the world through one set of eyes or by standing on one footprint." So Coy Wolf has become my totem, my personal totem in a sense. I identify with Coy Wolf. And by the way, almost every single night when we sleep on our screened in porch, Coy Wolf comes and serenades us. It's just a glorious messaging that goes over and over again.

But there's a ripple in this story. In Vermont, biologists, wildlife experts and advocates don't like to use the term Coy Wolf. They like to talk about "Eastern Coyotes". And I went to a lecture and I asked the person, well, why do you do this? And she said, well, it's only 40% coyote according to DNA analysis, and - excuse me, it's only 40% wolf and it's 60% coyote. And then I realized that wildlife experts were renaming this wonderful living being something innocuous and less threatening, so that when Coy Wolves turn up in the backyards of urban and suburban dwellers, they don't hear and talk about there's a Coy **Wolf** in the backyard, there's a coyote in the backyard, and it's really just kind of a variation on a dog, don't worry.

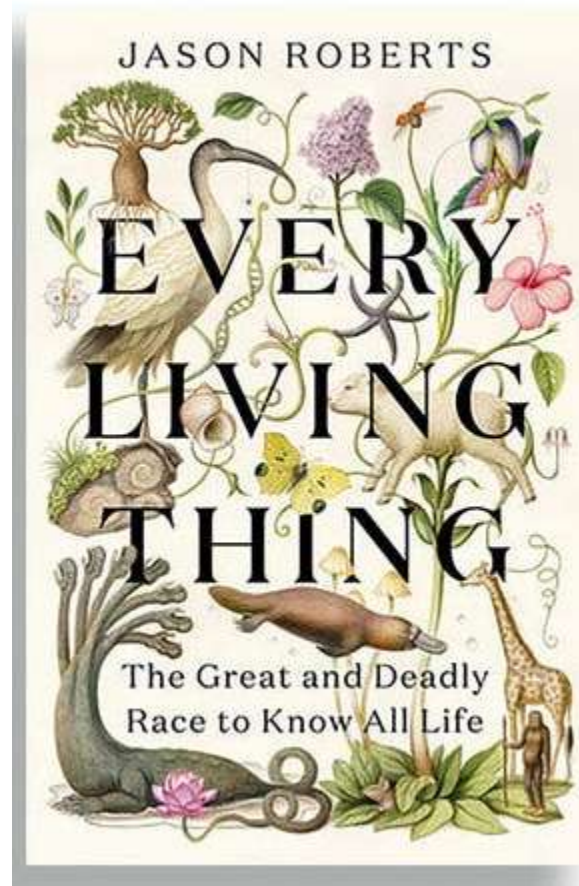
There's another reason. Coy Wolves, if they're hybrids, are not protected under our Endangered Species Act. Our Endangered Species Act thinks in very rigid categories, which we'll talk about in a moment, categories that we inherited from the enlightenment thinking and the Linnaean categorization. And that Endangered Species Act says that we don't protect hybrids, we only protect purebreds. Familiar term for people like me; we're not very protected when we're hybridized. In fact, colonial governments would wish that we would just kind of dissolve into hybridization to the point where they no longer have obligations for us.

So what I began to experience here in the forest of Vermont is a lovely awakening to other than human kin. And I could tell you stories for hours about what they are reinforcing to us on a daily and weekly basis. Just one quick snippet of an example: we tried to cut down some trees around our house. Here we have photovoltaics on the roof for our electric car, but the trees were beginning to shade out the garden and the photovoltaics, and we thought, ah, got to cut some trees down.

The day before we tried to cut the mother tree - the great maple tree in our forest down, I'm embarrassed to say - an owl appeared in broad daylight in the neighboring tree, perched there and stared us down. The message was clearly, "Don't you dare cut down Mother Tree. Don't you dare cut down our home." The

tree stands. We got the message. My point is that if you know how to listen and you know how to interpret what other than human kin are trying to tell us, there is much to be learned about the natural world.

So that brings me to the topic of Linnaeus. There's a book that just came out that Carolyn and I have read with utter fascination with a most wonderfully revealing title - by Jason Roberts - called *Every Living Thing, the Great and Deadly Race To Know All Life*.



Every Living Thing *book cover*⁹

You have to dwell on the title for a moment. It sounds preposterous. How could anyone know all life? Well, it's about basically the struggle between two people, naturalists, if you want to call them that, in the 18th century who tried to do that, one of them was Linnaeus who won in this struggle. And Linnaeus in his more arrogant moments, declared that he was going to name every living thing on Earth. That by naming it, we would know all life. Because naming and categorizing it is knowing it. And what he did is he began to collect specimens and apply Greco-Roman, anthropocentric names to these specimens and these creatures.

⁹ *Every Living Thing* by Jason Roberts (Random House, 2024)

And he was adamant, vehement, rabid, about getting rid of all of those Indigenous names. Even though the indigenous names carried important information. So Linnaeus' taxonomy employed Aristotelian logic, which I explain in my book is very, very, very rigid. You can't have things between categories. It's either a rose or a tulip. It can't be a rose and a tulip or something in between. He was very, very rigid about that. And he basically forced specimens into his preconceived notions.

And here I'm going to harken back to something that Robert Braun taught us, told us, several lectures ago, and that is that sometimes science and human conceptual frameworks don't describe reality. They inscribe on reality what is a human assumption, an erroneous human assumption and invention, so that we begin to experience the world not as direct experience, as I do with CoyWolf and Owl, but we experience the world through such a distorting lens that we only begin to see it as the conceptual framework that we brought to the problem.

So I raise the question for the Anthropocene Working Group: is there some risk, is there some danger, that by declaring that we are in the Anthropocene and that Crawford Lake is the poster child for the Anthropocene, that we're imposing like Linnaeus did with his terminology, "Anthropocene" on this lake, when it has actually a more nuanced and complex and partly Indigenous message to bring to us? My answer is obviously, I think so. I'm concerned.

The problem is fixable, and I think it's fixable if the Anthropocene Working Group as it goes forward can involve more Indigenous voices and more Indigenous sensitivity in what it's doing.

So I have gotten to the point where when I look at the world around me now here in Vermont, which is, I must admit, it is not Chernobyl. It is not the dust storms in China. It's not the disappearing Aral Sea. It's not the rising seas in Jakarta and in the Maldives. These are places on earth that are experiencing enormous threatening, immediate threatening dislocation. I have the benefit of living in a forest in Vermont, which by the way is part of the greatest reforestation that happened spontaneously on the face of the earth. This was clear cut territory in the 19th century. It's now 70% forest; it happened spontaneously when people stopped sheep farming.

So I live in an unusual environment. But the message of that unusual environment, the message of Coy Wolf, the message of the Indigenous settlement on Crawford Lake is, hesitate before we declare that all of the Earth has been dominated now by human presence. Or to use Crutzen's word, that we are now the central player in natural systems on earth.

I think a degree of humility is called for in making that kind of statement, or in allowing that kind of statement to be made in the name of the Anthropocene. So I have such strong feelings about that, that I did something that much to my wonderful surprise, Robert Brown did in his lecture at the end, he put up a

playful slide of a little wooden peg and a beef steak, and he said, well, this is my stake, and this is my way of kind of pushing back on the golden spike.

I'm questioning about whether the Anthropocene as an accomplished fact is happening everywhere. I'm suggesting that maybe the Anthropocene is more of a cultural artifact, or at least largely a cultural artifact. So I created the following wooden post and put it up at the boundary of our property as my personal statement about where the Anthropocene ends, here in Vermont on our land. As you can see, it says Anthropocene Boundary.



*Anthropocene Boundary*¹⁰

Now, this is playful. Of course, I understand that the impacts of global warming are taking effect. There are trees dying in my forest; last year we suffered terribly from Canadian wildfires. So I'm not taking this absolutely, literally as if you go down to the end of our driveway by our mailbox, you're going back into that dirty, polluted world, but inside of it, everything is hunky dory perfect. No.

I'm putting it there to provoke a discussion like we're having today, which is, is the Anthropocene indeed at this moment in time, equally and evenly distributed, distributed over the face of the earth, in its evidence of humans being central to dominating the way ecosystems and natural law actually operate? Have we actually tipped over the edge so that we are, as Crutzen said, **central** to the geologic processes and natural processes on the earth? Inside of my

¹⁰ Photo credit: Carolyn Schmidt

Anthropocene boundary, visual evidence, direct experience says, No, wait. Don't go too far, too fast.

So my takeaway, my kind of final message here is before we declare the Anthropocene an accomplished fact, let's consider another option, and it's the option that the Bulletin of Atomic Scientists followed during the Cold War. Some of us are old enough to remember "duck and cover" and the threat of nuclear war. Well, the Bulletin of Atomic Scientists were really hard nosed scientists, and they wanted to do something to stop the descent toward nuclear destruction. So they created a clock and they started changing the hands on the clock with things like treaties, which reduced the threat or the moment of Armageddon, which for them was midnight. And then when things went bad, like treaties get violated, or we have the Cuban Missile Crisis, they would move the hands closer to midnight. What they were doing is saying there is a real threat out there. It's an existential threat, to use the term that is popular now. But we are in control of whether we move closer to that apocalyptic moment or whether we move away from it. And I think that is the story that Crawford Lake has to tell. It's not a done deal. It's not game over. It's a question mark.

And I think the Anthropocene Working Group should continue its work and can amplify its message by telling the world that we are teetering on the edge, but that we have the ability to pull back and not fall off the precipice. That is my dream for what the Anthropocene Working Group will do. And I want to repeat that when I say they have – they, the Anthropocene Working Group - has participated unwittingly in amplifying the message of the doomsayers, it has not been the intent, although some of the statements in interviews by Anthropocene Working Group members do slide over the edge of doom saying, one person, actually, I won't mention the person's name, actually said that nature is no longer following its rules!

It's easy in the times in which we live to be overwhelmed by panic and fear. But let's use this moment, this place, Crawford Lake, as a warning and like the Bulletin of Atomic Scientists as a place we can watch and monitor and remind ourselves that we have other options.

So that's the message I bring today. Thank you for your time and your patience, and I look forward to your questions, and ask the hard ones.

Michael Wagreich: Yes, thank you. Thank you, Randy, for your lecture.