

ENTERTAINMENT

Meet Paul Sereno, the Indiana Jones of paleontology. He'll be sending dispatches from his work in the Sahara Desert in the coming weeks.

By Christopher Borrelli
Chicago Tribune

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Sep 18, 2022 at 5:00 am

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Arts and entertainment |

Paul Sereno, the longtime University of Chicago professor and so-called Indiana Jones of paleontology, a finder of lost civilizations and discoverer of new dinosaurs, one of the most beautiful people in the world (*People* magazine, 1997), not to mention one of the 100 *best* people in the world (*Esquire*, 1997), can see the light at the end of the tunnel, he says. He is not retiring, not even close. But he is, right now, on the other side of the planet, on an expedition he considers a sort of culmination of decades of digging.

Many years ago, he left Naperville as a horrible student, the son of a mail carrier and an art teacher, with few prospects and even fewer expectations. But he would define the gold standard for contemporary dinosaur research, said Steve Brusatte, a paleontologist at the University of Edinburgh in Scotland who studied with Sereno. Now, in Niger, in the Sahara Desert until Thanksgiving, at a camp he calls a working oasis, Sereno will make history.

By preserving history.



Paul Sereno, a University of Chicago paleontologist, on campus with a crocodile fossil on Aug. 26, 2022. He has planned a three-month Saharan expedition to explore huge caches of dinosaur fossils as well as human remains from a "green Sahara" society of 8,000 years ago. (Terrence Antonio James / Chicago Tribune)

In 2006, while looking for new dinosaur species on one of the many expeditions Sereno has made to Niger since the early 1990s, he found an entire people, and their society, roughly 10,000 years old. He found intact skeletons, some surrounded by fossils of burial flowers, some still wearing jewelry. In fact, he found two different societies, both of which once prospered on the same land, separated by thousands of years. He discovered, in short, evidence of a once green Sahara, with trees, lakes, perch and crocodiles. The finding was seen as a bracing splash of reality, needed direly in an age of climate change: Even the most seemingly intractable environment on this planet is mutable. It was big news.

It is also, he says now, at 64, what he'll be remembered for.

That and, if all goes according to plan, the museums he plans to build soon.

Partly using the fossils he's been excavating in Niger for years (and in some cases studying at his lab in Hyde Park), Sereno is leading the charge to build two museums in the West African country — including one in the Sahara. The goal is a major repatriation of a nation's ancient heritage, in a country without adequate museums for preserving its fossil heritage.

And that's not including the two new facilities Sereno has planned for Chicago, "both joined at the hip with my Niger work," he says. One will relocate his UC fossil lab to Washington Park (the planning is in place and fairly far along); the other is a \$60 million youth-centered science center/dinosaur lab/maker space that Sereno named Scitopia Chicago. "All we need now is \$60 million from someone who wants their name on a building," he said.

Never one for understatement, Sereno called the Niger museums "the largest repatriation effort in the history of the world." Asked about Scitopia, Sereno pointed to the lack of a library branch in Washington Park. Scitopia would bring library of books into the neighborhood west of Hyde Park, he said, "and right now there isn't a book within a mile of Washington Park."

Not quite.

But then Sereno is a self-styled character, perhaps necessarily, so excited by slow, scholarly contemporary study of ancient species that his sentences and thoughts collide and jumble into a kind of exuberant wonder. He lives up to the classic image of *dashing world explorer* — at a time when we think we've already seen everything worth exploring, and the idea of collecting the world's antiquities and heritage still gives off a whiff of colonialism. He offers the attention-grabbing bluster of a scientist showman.

But a thoughtful one, who delivers.

"We like scientists to stay in their lane, be only rational, analytical," said Brusatte, "and Paul has a little car salesman in him. But not used cars, Aston Martin limited editions."

"Paul has been very earnest in what he is doing here, and he's on a mission for Nigeriens to see their heritage and be proud," said Bess Palmisciano, who lives in the Sahara and founded Rain for the Sahel and Sahara, a nonprofit educational organization for nomadic people in the Agadez region, the hub of Sereno's expedition. "And to be honest, a lot of dinosaurs and parts of dinosaurs have been found here over the decades, and some are taken out of

the country legally — probably most have been taken illegally. *No one* has ever offered to bring anything back to Niger. Paul, I think, feels a kind of debt.”

It’s the retrieving-fossils part that he’s doing right now.



Paul Sereno, a University of Chicago paleontologist, on campus with a cast of the 7,000-year-old remains of a triple burial from Niger on Aug. 26, 2022. (Terrence Antonio James / Chicago Tribune)

The conditions, to put it mildly, are hard, and a big reason his name is often linked with Indiana Jones. “For a time, before I knew him, I was an admirer,” said Zhe-Xi Luo, a UC paleontologist and Sereno’s colleague in the department of organismal biology and anatomy. “Paul is known for literally going to the ends of the Earth for explorations, and for being fearless and intrepid in some of the least accessible, difficult terrain.” To just reach the Agadez region of the Sahara, Sereno must worry about collapsing dunes, bandits, violent extremist groups that bleed in from nearby countries, not to mention, for several weeks, some of the desert’s hottest annual temperatures.

He will not be conducting office hours during this time.

There will be no real showers for about three-week stretches, just some towels and wipes. But should you need updates: Sereno will be filing a series of dispatches from the expedition for the Tribune. As usual, there will also be a film crew following him, as well as two dozen paleontologists and archaeologists and students — from both Niger and Western nations — traveling by Land Rovers. Surrounding them will be many, many guards with mounted guns on Toyota pickups.

“We look like a scene out of ‘Ben-Hur,’ ” Sereno said.

One of the primary goals of this trip to Niger is to gather what had been left unfinished. Much of the dinosaur fossils and evidence of the Green Sahara communities — named Gobero — were uncovered in 2018 and 2019, then abandoned because of the pandemic.

“So I had to invent a new way of (fossil) collecting,” Sereno said. He calls it “sewer covers.” Essentially, fossils are covered in plaster and burlap, making a protective shell. “Then we find them, uncover and carefully lift off. You end up with a clean skeleton. We left 60-foot dinosaur skeletons this way in the desert. It’ll be a predictable treasure hunt.”

But it’s on a fossil field so large it will require multiple camps set up and pulled down over a few months, an area about the size of France, covering about 1,000 miles of desert.

“We’ll be holding our breaths until we see those fossils again,” Sereno said. “There are curious nomads and bandits. The plaster can get exposed. Wind can blow the sand, uncover what we covered, attract attention ... I hope we get to it before anyone else.”

Specifically, they left 25 tons of fossils.

That includes long-necked dinosaurs, sail-backed dinosaurs, flying reptiles, scarab beetles, new species and old species. They found evidence of strange dinosaurs that evolved before continents drifted apart; they found a triple-fanged “Boar Croc” and a 40-foot long “Super Croc.” They also found, sliding into archaeology, hundreds of human remains as well as pottery, jewelry, stone tools. Famously — the image reproduced in newspapers globally — they found the skeleton of a woman with two children facing her, buried together. Among the goals of the expedition is to definitively date these communities.

They also want to uncover potential lessons for the 21st century in how groups of people 10,000 years ago reacted to the last major climate change. “Before the Holocene” — the name given to the previous 11,700 years of the planet’s history, dating to the last major ice age — “where Chicago is now had ice forming along the area of the Stevenson Expressway, which pulled back and went into Canada and then you get our modern era,” Sereno said. “During that era until right now, the largest climate change has been the desertification of the Sahara. It was green prior to that. They had seaways on land, they had wet areas where there is only Sahara now. So what we are finding at Gobero is 5,000 years of existence, but then their world fell apart. We are creating a world like that right now. Question is, do we have the means to avoid it? They didn’t. They lived a life they knew until they couldn’t.

“But if we bring these bones back to Niger with no museum, that history is destroyed.”

Niger is a poor country. According to the World Bank, in a nation of 24 million, more than 10 million live in extreme poverty. Fossil museums are not a priority. When Sereno’s expeditions would bring bones and artifacts back to the capital of Niamey, the items would sometimes sit in crates, for years, eaten away by termites.

In 2016, Sereno founded NigerHeritage, which calls itself “a Chicago-based, international organization dedicated to the preservation, study and public appreciation of the world-class paleontological, archaeological and cultural heritage of the Republic of Niger.” Meaning, the promotion of new history museums in the country and ongoing educational programs centered on field sites, all leading to an expected flood of tourism and influx of African scholars.

Sereno said he has “more confidence in finding money (for the museums) than I had in reaching this point.” Private donations, that is. Still, he expects both to be built within the next few years, and so part of the expedition will include conversations with local leaders about the museums, and part will be coming to agreements about how and when to remove the fossils, bring them back to the UC fossil lab for preparation then return them to the custody of Niger.

The country already has a rich institutional culture of preservation of its ancient texts and scholarship and cultures, said Bisa Williams, former U.S. ambassador to Niger from 2010 to 2013. But what Sereno has been working on “could change the narrative on Niger.” She said the nation has long been

“a treasure chest” of unclaimed fossils, so a museum that highlighted that history “would be filling in a lot of information about the history of the land itself, and would contribute to a sense of pride and perhaps build a different kind of connection between Niger and the rest of humanity. When people talk evolution they tend to skip over Africa, everything moves north of the equator, so a significant museum about this history, I think it could expend the connection and relevance of Niger’s place in the world.”

Until the late 1980s, Niger didn’t have laws about removing fossils. These days, it’s standard in most countries for a paleontologist to enter into an agreement to excavate (and return) a nation’s fossils. Sereno has had those agreements with the country for 30 years. William Simpson, head of geological collections at the Field Museum (who accompanied Sereno on an early dig in Niger), said those policies are different country to country, and a museum such as the Field “can’t even take possession of a fossil until we have good data” on origin and excavation. “But if you go back to the 1920s, we collected fossil mammals and got to keep what we collected. Return to those countries now, there’s a memorandum of understanding on what we study, what we make casts of, when the originals get returned.”

Brusatte said, “Before the ‘90s, this was a colonial science, with nothing to do with the local scientists where fossils were found, never mind leaving specimens there. Paul was on the vanguard of that change.”

Sereno’s unlikely fame — which arrived in the mid-1990s on the heels of his discoveries of new dinosaurs and National Geographic documentaries that featured him — coincided with a renewed push for more public engagement with hands-on science. In 1999, he cofounded the Chicago-based Project Exploration, which has been working to get STEM-based programs into South and West side schools for 23 years.

When he was young, Sereno wanted to be an artist; he planned to become a medical illustrator. “I had a neighbor who took me to a fossil collecting site when I was in fourth grade,” Sereno said. “I learned science outside of school. I learned about everything I was interested in outside of school. I was going nowhere fast in Naperville. I literally read a dictionary (to complete the application) for Northern Illinois University.” There he studied studio art and comparative anatomy. During a senior-year visit to the American Museum of Natural History in New York City, paleontology “touched a nerve that ran down my spinal cord.”

Within a decade he had a doctorate in geological science from Columbia University, then joined the University of Chicago. A year later, he was making the kind of splashy finds that occupy science journalists and museum collections. In the Patagonia region of Argentina, he found the first complete skull of a herrerasaurus, then the oldest dinosaur ever discovered. He found new species in India; a herd of dinosaurs frozen in place in the Gobi Desert; the 43-foot long skeleton of a spinosaurus in Morocco. He changed the way the genealogy and evolution of dinosaurs is discussed. In Chicago, he believes the re-imagined fossil lab and proposed science center for Washington Park are still a few years off.

But he assumes he will be best known for Gobero.

He argues that exploration is not just about what has never been seen on Earth but a better understanding of the people and things that are no longer here. He figures we will come to understand this too. “We found a woman wearing an elephant ivory bracelet, a 10-year-old wearing a hippo bracelet. Why disarticulate that and put it in a shoe box when I can remove them intact? When you can give a country part of its heritage, that fills museums and attracts people for generations? You know I once almost left this field. I couldn’t see how finding a bone or naming a species would save the planet or help anyone at all. Eventually, I realized, no, this is the discipline to make change that lasts.”

DISPATCHES FROM THE SAHARA DESERT: *Follow the progress of University of Chicago professor Paul Sereno and his team on an expedition in Niger. They will be exploring the remains of a human civilization that lived some 10,000 years ago in what is now the Sahara Desert, with a first dispatch printed next Sunday in the A+E section.*

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