ON NEBRASKA’S NORTHERN border, the Missouri River rhythmically drains the Great Plains as it has for uncountable eons. But even this ancient prairie river is a relative newcomer on the geologic landscape compared to the treasures sequestered in the high hills ringing this broad river valley.

Long before the ceremonial drums of the Santee Sioux echoed from this land, this area was the floor of an ancient inland sea that stretched from the Gulf of Mexico to Canada. Strange creatures such as ammonites, giant clams, plesiosaurs and huge filter-feeding fish inhabited the depths. Sharks that made their brethren of today look like minnows hunted here. But even those toothy prehistoric predators were on the seafood menu for other aquatic giants.

Fast forward 75 million years to a road in modern-day Knox County on land owned by the Santee Nation. Passing through the community of Santee, we drive along the south bank of the Missouri and then turn south at the 1884 Gothic-style Church of Our Most Merciful Savior. The unmerciful drought coupled with a road-construction project conspire to form the miles-long dusty plume we trail in our wake. We pull over at the crest of the Missouri’s valley and when the dust cloud settles, we can still see north to her flowing ribbon of blue.

To the south, bright yellow backhoes and bulldozers billow black clouds as a trio of men wearing grins as wide as children on Christmas morning brush away dust and dirt from what is as precious a gift from the ground. This paleontologist’s present was wrapped for millions of years, protectively packed in the surrounding soil, until a road grader’s hardened steel blade opened it while sculpting the ditch.

Knowing that whenever highway construction disrupts the earth’s surface there is a possibility fossils will be uncovered, Nebraska State Highway paleontologist Shane Tucker was on site when machines peeled back the layers of time.

When a shiny black tooth was revealed to the sunlight for the first time in millions of years, the machinery jogged down the road a bit to work while Tucker dug deeper, hopeful that other remains, well, remained. Soon, time’s treasure chest opened just far enough to reveal a tantalizing trove of more than just teeth.

Realizing the immense value of Nebraska’s ancient treasures, in 1959, the Unicameral bolstered protections enacted by the Antiquities Act of 1906 and allowed the Nebraska Department of Roads to work with the Nebraska State Historical Society and the University of Nebraska State Museum for the protection of paleontological remains and archaeological artifacts found during road projects. Nebraska was the first state in the nation to create such a program.

Creatures we would consider to be monsters today were common in the inland sea that once covered much of what is now North America. Fossil hunters like Mike Voorhees, left, dig into the past to reveal glimpses of this lost world.

SANTEE’S MESOZOIC MYSTERY

STORY & PHOTOGRAPHS BY ALAN J. BARTELS
ILLUSTRATION BY MARK MARCUSSEN

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Tucker’s troops include fossil hunter Mike Voorhies, who discovered the now world-renowned Ashfall Fossil Beds site near Royal, and the minder of millions of bones, George Corner, manager of the University of Nebraska State Museum’s collections.

As the Nebraska wind swirls the reservation’s dirt as if trying to reclaim the find, the trio carefully pick the matrix from around teeth and bone, brushing away the past from the skull of a savage marine predator, the mosasaur.

With dozens of 3-inch-long, flesh-chopping teeth arming its 3-feet-long skull, the lizardlike mosasaur reigned as the top link in the inland sea’s prehistoric food chain.

With some found that were 30 feet long on the fin, the mosasaur was a true giant of a beast. But stumbling upon a creature even as large as this can be like finding a fossilized pine needle in a Mesozoic haystack.

“It’s difficult for crews up in those machines to see this kind of stuff,” Voorhies said. “You hear some legends that once road crews find bones, entire projects are stopped. That’s not true. Once they’ve seen it, it’s easy to swing around a little thing like this. They have their job and Shane has his.”

With no delay in construction, and in only three days, the bone collectors have isolated the skull and applied a protective plaster cast. Before being exhumed from its ancient grave, a Santee delegation led by a tribal elder arrive to meet the paleontologists and stake claim to the ancient treasure. Then, the treasured youth of the next generation, 110 in all from Santee Community School, arrive to take advantage of the unique educational opportunity.

“The Highway Paleontology Program has collected more than 200,000 specimens, including several species that are new to science,” said Tucker while handing fossil ammonites and shark’s teeth among the students.

“Each fossil is a piece of a puzzle and the more pieces we have to study, the better, clearer picture we have of Nebraska’s prehistoric past. Each day leads to new discoveries that stimulate curiosity and inspire students of all ages to learn more about our state’s rich natural heritage.”

After taking in the ancient treasure of the Santee, and asking Tucker a hundred questions he’s answered thousands of times, the children reluctantly gather in the buses.

“How many students can say one of their most cherished memories was going to a fossil site and watching a huge, multimillion year-old fossil being dug out of the ground?” said Santee High School social studies teacher, Sheri Plumtree.

Dust devils erased the children’s footprints as the buses pulled away, and we strained to hear the pulse of ancient drums along the Missouri.

“We truly live in a unique and mysterious part of the world.”

Near the Church of Our Most Merciful Savior, Missouri River cliffs show layers from a time long before the establishment of this reservation.