

FIRST DRAFT

# Riggs put valley dinosaurs on the map 120 years ago

In August of 1900, two Grand Junction men who visited Elmer Riggs' dinosaur dig on the Redlands were impressed. Riggs and his crew from the Field Museum in Chicago were excavating a fossil that promised to be "one of the largest" ever exhibited, the men declared.

Newspapers in the Midwest and East didn't limit themselves to such understated language when they learned of Riggs' discovery.



BOB SILBERNAGEL

It was called "the largest land animal that ever lived" in a Chicago paper, and "the Monster of All Ages" in Boston.

Riggs himself later called it a "jim-dandy" and "a record breaker for its time." For decades, it was considered the largest dinosaur on record.

The fossil of that Brachiosaurus — which Riggs named — was unearthed at what's now known as Riggs Hill. Its bones were shipped back to the Field Museum for preparation and eventual display.

But before the 1900 excavation season had ended, Riggs and his team made another important discovery — an Apatosaurus at what's now called Dinosaur Hill near Fruita.

That Apatosaurus skeleton has been on continuous display at the Field Museum, in several different exhibition halls, since 1908.

Riggs was always disappointed, however, that he and his team hadn't found a more complete skeleton of the Brachiosaurus, and that it wasn't displayed along with the Apatosaurus.

A plaster cast of what the Brachiosaurus skeleton may have looked like is on display outside the Field Museum. But it is believed to be a composite, using casts of bones from other dinosaurs as well as Riggs' Brachiosaurus to produce a replica of a full skeleton.

Still, there's no question Riggs had found the bones of a very large dinosaur. And, at the turn of the last century, there was intense competition to find new dinosaur fossils — the bigger the better.

Competition had become so rough and tumble between two nationally known paleontologists in the late 1800s that it became known as the "Bone Wars."

As The Daily Sentinel put it when it first reported on Riggs' discovery, "The museums of the country are ambitious to get the largest and best remains of all animal life, especially the larger varieties extinct."

To accomplish their goals, the Sentinel said, museums and academic institutions "send their emissaries into the country" where fossilized remains have been discovered. "And they spare no expense whatever to secure them."

Riggs, who in 1900 was assistant curator of paleontology at what was then known as the Field Columbian Museum in Chicago, had previously excavated in South Dakota and Wyoming with some success.

Even so, he was looking for new locations to explore, and he sent letters to small towns along railroad routes across the West, asking community leaders about fossils in their areas.

One man who responded was Dr. S.M. Bradbury, a Grand Junction dentist and president of the Western Colorado Academy of Science, who sought to convince Riggs that there were dinosaur fossils in Mesa County.

Riggs had already dismissed the Grand Valley because he'd read a U.S. Geological Survey report that said it was "nonfossiliferous."

Bradbury wrote to Riggs,



H.W. Menke, left, and Elmer Riggs at the Field Museum preparing dinosaur bones they recovered near Fruita.



CHICAGO FIELD MUSEUM

Elmer S. Riggs as he appeared later in his career.

telling him the report was inaccurate.

"Dinosaur bones have been known locally since 1885 and have been collected largely as 'curios' by local ranchers," he told Riggs.

Based on Bradbury's advice, Riggs decided to visit the Grand Valley. He arrived in the late spring of 1900 with a small crew and limited funds.

On his first full day in Grand Junction, he and Bradbury rode horseback southwest of Grand Junction.

Riggs recalled that he found enough bone fragments that day to convince him there were, indeed, significant dinosaur fossils in Mesa County.

He and his crew set up camp near the mouth of No Thoroughfare Canyon, which is now within Colorado National Monument.

They spent several months there and uncovered the shoulder and foreleg of a large, plant-eating Camarasaurus. Soon after that, Riggs decided to move to a new location — to what's now appropriately called "Riggs Hill," just off South Broadway near South Camp Road.

It was at this location, on July 4, 1900, that the first of the Brachiosaurus bones were discovered, possibly by Riggs' assistant H.W. Menke.

Eventually, the crew recovered the shoulder, ribs, vertebrae and leg bones of the dinosaur. But that took time, and by early August, they were still working to excavate the bones and prepare them for shipment to Chicago.

Riggs knew he not only had the partial remains of a very large dinosaur, but that it appeared to be an entirely new species. In 1903, in a scientific paper describing the discovery, Riggs created the genus Brachiosaurus for his fossil. The name means "arm lizard," because its long humerus made its front legs longer than its back ones.

It was estimated to be 60 to 70 feet long and, with its long



CHICAGO FIELD MUSEUM

The nearly complete skeleton of the Apatosaurus that Elmer Riggs discovered near Fruita, as it appeared at the Field Museum in 1909.

neck, may have been as much as 40 feet tall. Unlike other famous plant-eating sauropods such as the Brontosaurus and Apatosaurus, the Brachiosaurus stood more upright and is believed to have browsed for food in the high branches of trees, much like a giraffe today.

It was late in the season when Riggs, Menke and their team completed work on the Brachiosaurus. Even so, Riggs was reluctant to leave the Grand Valley immediately.

He decided to travel farther west, to a site south of the Colorado River near Fruita, now called Dinosaur Hill.

"I said to the boys, 'This seems to be a prosperous region ... We'd do well to prospect here for about three days,'" he recalled years later.

The plan was to mark any discoveries and excavate them the following year.

It proved to be a sound plan. In late 1900, they found the partially exposed skeleton of the Apatosaurus, the same one that has been displayed at the Field Museum since 1908.

They returned in 1901 to excavate the Apatosaurus, building their own ferry and cable system to carry the fossils across the Colorado River to the railroad at Fruita.

As the excavation was nearing completion, advertisements in the Sentinel showed Riggs was divesting of his equipment.

"For Sale at a Bargain," the ad read. "Team, wagon, harness and saddle horse. Enquire of E.S. Riggs at Fletcher's Feed Store."

He and his team returned to Chicago and spent the next few winters preparing their fossils for display.

The following summer, Riggs explored in Wyoming again. Later, the Field Museum sent him to South America. He didn't return to Grand Junction



Riggs' assistant H.W. Menke with leg bone from Brachiosaurus recovered at Riggs Hill on the Redlands.

until 1938, when he participated in ceremonies commemorating his earlier work.

Over the ensuing years, many more discoveries have been made in Mesa County, of dinosaurs large and small, plant eaters and carnivores. Examples of well-known species such as Stegosaurus have been found, as well as a number of entirely new species.

But it was Elmer S. Riggs and his Field Museum team who, in 1900 and 1901, demonstrated conclusively that there were important dinosaur fossils to be found here.

Sources: The Daily Sentinel at newspapers.com; Elmer Riggs taped interview, 1938, from The Museums of Western Colorado; "Dinosaur Stalkers," by Bob Silbernagel; The Field Museum, Chicago, Ill.

Bob Silbernagel's email is bobsilbernagel@gmail.com.

## Pine Gulch Fire still at 19% containment

By SENTINEL STAFF

The Pine Gulch Fire north of Grand Junction increased by a little more than 3,000 acres since Saturday's report with containment holding at 19%.

The Rocky Mountain Incident Management team handling the fire reported Sunday that the fire was up to 129,715 acres. On Saturday, the fire was reported at 126,613.

Staffing on the fire, which is the second largest in Colorado history, has increased to 952 people. Crews expect more hot weather with the potential for some rain in the coming week.

Meanwhile, the Grizzly Creek Fire burning in Glenwood Canyon eclipsed 30,000 acres overnight, but containment rose to 30%, up from 22% the day before.

Interstate 70 remains closed and crews are expecting another active fire day with hot and dry conditions.

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