



Exhibit at the Prehistoric Museum in Price, Utah: "The Old Castle Country Track Team"

Dinosaurs and coal mines

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Utah - In this blue-collar mining town, the past meets the future in a 100 million-year-old layer of rock.

For the last century, central Utah has staked its fortune on coal mining. But buried within the coal are fossils - dinosaur tracks, fish, bone fragments - that could be the building blocks for a thriving tourism industry.

Without the mines these fossils would have gone undiscovered. But the same machines that uncover the fossils with one stroke can destroy them with the next.

That has led groups that want to protect the fossils to pursue a delicate truce with the coal companies and their miners.



Natural casts of dinosaur tracks from Utah coal mines

"Think how powerful the energy industry is. There is no way they are going to stop a coal mine for a dinosaur bone," said Pam Miller, assistant director at Price's Prehistoric Museum. "I've never heard anyone speak out for preservation in coal mines. It's a can of worms no one wants to get involved in."

Mayor Joe Piccolo said he doesn't see any conflict between paleontologists chasing disappearing dinosaur remains and the lucrative and established coal industry, valued at \$469 million.

Piccolo acknowledges coal's importance for Price's economy but said attempts at diversification could make tourism a significant piece of the town's future. Tourists spent \$4.15 billion in Utah last year alone.

"The [coal] market is strong now, and there is quite a resource still under-

ground here, but it's no longer the easy coal," Piccolo said. "I see a strong future for tourism in this area. The dinosaurs found here are not found anywhere else in the world."

Price, population 8 200, is nestled in the Wasatch Mountains on windy US 6, between Provo and Moab. Coal's influence can be seen everywhere, from the trains that rumble through town around the clock to miner motifs that adorn the College of Eastern Utah and the Carbon County courthouse.

Other old mining towns don't have to deal with any tension between fossils and coal. Throughout most of the rest of the world, the rock that contains coal is older or younger than dinosaurs, usually by millions of years. But in Utah and Colorado, dinosaurs lived and died directly on top of marshy bogs that nature hardened into coal about 100 million years ago.

"We have a problem in the west that doesn't exist anywhere else - not the east, not in England," said Don Burge, who for 40 years has been director of the museum.



Removing a track cast from a coal mine roof

Through patience and co-operation, Burge has built about 10 percent of the museum around dinosaur tracks found in the roofs of coal mines. The footprints end up on top of coal seams because the dinosaurs walked on land that became the coal.

While dinosaur bones are still the museum's main draw, scientists say tracks are important because they show how prehistoric creatures moved. Could they run? Did their tails drag on the ground?

When Burge wants a rare dinosaur track, say a four- or five-toed giant, he puts an ad in the newspaper, appealing to coal miners who may have dug them out of the mine's roofs to display in the back yard as mementos.

Burge said he'd like to see more attention paid to the dinosaur's history in the area, but he's realistic about his chances.

"Yes, they should be protected, but it's a logistical problem. How do you inspect it? What agency wants to watch a coal mine?" Burge said while standing beside a skeleton of a *Utahraptor*, a dinosaur genus he discovered in 1991.

“My question is, what happens if a Tyrannosaurus rex is found in one of these coal mines?” he said. “I think even if it was found on federal property they still wouldn’t stop.”

So far the relationship between preservationists and the mines has been amicable. Burge said applying pressure wouldn’t get him anywhere. He’s worked hard to establish a positive rapport, and in turn the mines’ employees call him if they find something baffling or potentially important.

“You have to pay your dues,” Burge said.

Jack Hatch, a safety engineer for a mine owned by Canyon Fuel, said seeing remains or footprints is so frequent it’s usually not even worth noting.

“Honestly, from day to day we see so many of these things we just continue mining coal. It’s so ordinary that people don’t pay a lot of attention to it,” he said.

That lack of attention hasn’t been a problem so far, according to Laurie Bryant, the regional paleontologist for the federal government.

“We are aware of the tracks in coal mines, and there are probably a large number of them, but honestly we haven’t gotten any requests to study them in place or to open up an old mine,” she said. “Our understanding is that so far there hasn’t been a lot of interest.”

Bryant and others said the area is practically a graveyard of prehistoric creatures, so paleontologists never go wanting for fossils to study.

However, many scientists don’t know what they’re missing in coal mines because they aren’t down there, said Joanna Wright, assistant professor specialising in dinosaur tracks at the University of Colorado in Denver.

“It would be hard to have paleontologists on site because they couldn’t be everywhere at once,” she said. “The coal miners will make sure you never know what’s there. You have to work with them. If you don’t, they’ll never tell you anything.” - Sapa/AP