

Fantastic Fossils

By Lee Farren

Outside: Oregon's high desert country is marked by steep, mountainous terrain, eroded ravines and spectacular rock formations. Juniper and sage thrive in limited water and summer temperatures reach 105 degrees. Antelope, coyotes and rattlesnakes lurk. And there are fossils.

Inside: Visitors step back millennia to a moist, warm world of semi-tropical forest and swampy lakes. Birds call from the leafy trees and insects buzz. Somewhere something very large squishes through the mud, coming closer. Crocodiles, tiny horses—an entire zoo of strange-looking beasts. And there are fossils.

The Thomas Condon Paleontology Center at the Sheep Rock Unit of the John Day Fossil Beds National Monument opened in the fall of 2005. With exhibits, interpretive programs and audiovisual presentations on fossils, geology and paleontology, the center gives visitors a sense of how important this area is to understanding the past.

"Essentially, you can walk backward through time," says superintendent Jim Hammett.

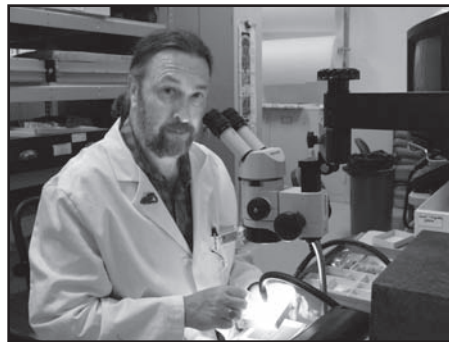
During the time of the dinosaurs, the area that became the John Day Basin lay beneath the Pacific Ocean.

The fossil history begins about 50 million years ago, in a tropical environment of swamps and palm trees, when giant mammals dominated the landscape.

The center's main exhibit leads visitors in a circle through the ensuing changes in climate, plants and wildlife. Fossils from each era rest in glass cases in front of wall murals depicting the landscapes and creatures of the time. Animals growl, snarl and bark, while rain patters gently and the wind shushes through the trees.

Paleontologist Ted Fremd, project coordinator for the center, helped

The Thomas Condon Paleontology Center exhibits fossils, geology and more



Paleontologist Ted Fremd at work in the fossil laboratory at the Thomas Condon Paleontology Center.

design the exhibits. He is especially pleased with the sounds.

"For each mural, we identified what the animals would be doing," he says. "I went to a production studio in Portland and started to play."

Ted and the sound technicians started with recordings of contemporary animal calls, grunts and footsteps. They morphed and mixed, combining German shepherd barks, for instance, with wolf howls to give voice to a bear dog from millions of years ago.

Visitors hear 120 animal sounds in the main exhibit. The background sounds segue slowly from moist rainfall to windy grasslands, tracking the climatic changes as the air slowly dried up over the millennia.

Next to the main exhibit, a glassed-in wall displays the fossil laboratory, where visitors can watch staff paleontologists clean and identify fossils. New specimens are continually added from eroded deposits in the national monument.

Since Ted joined the staff in 1984, more than 24 completely new spe-

cies have been discovered.

"I thought I'd be here for two years and then I'd move on," Ted says. "But I'm still here because the science keeps expanding."

Following a tour of the center, visitors can hike along a number of trails to see the fossil beds for themselves. The trails vary in difficulty and length, with some accessible to wheelchairs.

Before white settlement, the John Day Basin was inhabited by Umatilla Indians and the tribes that now comprise the Confederated Tribes of the Warm Springs Indian Reservation.

Fossils have been uncovered at archaeological sites, suggesting Native Americans knew about them and found them intriguing.

Most of the lands that eventually became part of the national monument were so barren no one claimed them for homesteading.

Thomas Condon, a minister in The Dalles, was the first to realize the significance of the fossils in the area. In 1865 he began collecting fossils and shipping samples to universities on the East Coast.

Paleontologists traveled to Oregon to hunt fossils. The John Day fossil beds became known as a spot with numerous very old fossils.

In 1926 the federal government deeded the heart of what became the national monument to the state of Oregon, which operated the properties as state parks until 1974, when Congress authorized establishment of a John Day Fossil Beds National Monument.

"Becoming a national monument recognized the significance of this place to the nation as a whole, not just to the region or the state of Oregon," Jim says. "As a state park it was a recreational experience to find fossils and put them in your garden. Now we have a strong preservation mandate."

For 30 years the park service dis-



Paleobotanist Regan Dunn collect leaf fossils from the 33-million-year-old Bridge Creek Shale at the John Day Fossil Beds National Monument. Photo courtesy of the John Day Fossil Beds National Monument.

played fossils and interpreted the area in the historic Cant Ranch house, which also is part of the national monument.

Rangers, fossils and items from the Cant Ranch crowded into the bedrooms and kitchen of the two-story building. In 2000, work began on the interpretive center Congress intended when it created the national monument.

The new facility serves as both a focus for visitors and an active research center. Three staff paleontologists continue to excavate fossils and coordinate their research with more than two dozen universities.

“What a paleontologist wants to know is how a species changed through time and its relationship with things like climate and other plants,” Jim says. “This place provides the opportunity to do that.”

The John Day fossil beds are unique in both the length and continuity of their fossil record. Paleontologists can trace species and climate changes through 45 million years.

Because they can be so accurately

dated from the context, specimens from the fossil beds have become scientific benchmark for other species discovered around the globe.

“We’re in a constant mode of learning about the past,” Jim says. “Right now one of our big priorities is to understand climate change.

As we approach and experience climate change it’s important for us to look back in the fossil records and see how climate has changed and the response of speciation and extinction rates. We are trying to understand what we may face in the future by looking at the past.” ■

If You Go:

The John Day Fossil Beds National Monument includes three units.

The Sheep Rock Unit features the Thomas Condon Paleontology Center, located on Highway 19 between Dayville and Kimberly.

The Clarno Unit is 20 miles west of Fossil on Highway 218.

The Painted Hills Unit is nine miles northwest of Mitchell.

The Thomas Condon Paleontology Center is open daily, 9 a.m. to 4 p.m., year-round. From March 1 to October 31, it is open until 5 p.m. From Memorial day through Labor day, it is open until 5:30 p.m.

The museum is closed on all federal holidays between Thanksgiving and Presidents Day. Staff are available to answer questions and give tours. Admission to all activities is free.

Digging for fossils is not allowed within the monument, but fossil collecting is available to the public in the nearby town of Fossil, behind the high school.

Learn more about the John Day Fossil Beds National Monument at www.nps.gov/joda. ■