

Digging ancient history

Monday, July 2, 2007

By Bryce Petersen Jr. Standard-Examiner staff
'... Nobody's seen these fossils but you and God'

KEMMERER, Wyo. -- **Evan Day** drove right past one of Wyoming's great trout fisheries -- the Hams Fork River -- to a dusty, waterless plateau high above the river. But his recent fishing trip went just fine. "A lot of people go fishing and come home with 8 pounds of fish. My dad comes home with 800 pounds of fish," said **Michelle Ernsberger**, of Brigham City. He catches them all with railroad spikes, butter knives and a hammer. He preserves them with cheap hair spray and cleans them with a glorified dental pick. These fish are roughly 65 million years old, encased in oil shale and found in ancient lake beds that extend from about Flaming Gorge to Fontenelle Reservoir in southwestern Wyoming. The shale is stacked in a series of thin layers. Fossil hunters softly tap a chisel -- Day often substitutes a small railroad tie or a cheap butter knife -- around the edge of a block of shale, splitting it into thin layers. Often, a 3-foot-by-2-foot plank will split cleanly into layers less than an inch thick. **Joan Day**, Evan's wife, has a different take on the fishing metaphor. "When you split open the first rock and you see a fish, you're hooked," she said. "You don't hook the fish. They hook you." When a layer opens, it's common to see three or four people leaning in, hoping to catch a glimpse of something amazing. "Oh my gosh!" shouted Judith Brigham, of Ogden, after finding her first fish. "Yeah!" It's like being the first to turn a page from an enormous, ancient stone book. "The thing I love is, nobody's seen these fossils but you and God," said Joan Day. The Green River Formation, as the rock is known, was once home to a system of lakes that evolved over about 15 million years, beginning about 65 million years ago. Sometimes, the lakes held fresh water; other times, the water was as salty as the ocean. The variety made the lakes suitable to a wide variety of species. Leaves, nuts, palm stems, crocodiles, stingrays, bats, bugs, little fish, big fish -- even big fish in the act of eating little fish -- have all been found by fossil hunters. "You can see the whole ecosystem," Day said. Day and his family have been visiting the Green River Formation for more than 30 years, since not long after Fossil Butte National Monument's 1972 creation. The monument showcases characteristic and unique fossils from the area and offers tours, hiking trails and visits to a scientific quarry each Saturday and Sunday throughout summer. But the park does not allow fossil collection. Visitors who want to take home their own fossil fish can visit one of several private or privately leased quarries in the area. On his recent trip, Day led a group from Ogden-based **Golden Spike Gem and Mineral Society** to state lands leased by Warfield Fossils. The commercial fossil-extraction company charges visitors to search for fossil fish and allows them to keep all common species they find. Rare species, such as birds and gars, stay with the quarry. With a group of 19, Day spent much of the trip responding to the shouts of his excited guests.

"Evan!"

"Mr. Day!"

"Grandpa!"

"Dad!"

To Day, the constant paging just meant things were going well. "It's fun to share my hobby," he said. "I just want everybody to have a good time." Everyone found a few fish worth taking home, and several people pried apart layers with multiple fish exposed. **Rob Hyde**, of Richfield, found four fish between one layer in his first rock. The fish are plentiful. Typically, most people find the fish they want in the first two hours of digging. More persistent diggers may be rewarded with larger or more unusual finds. Learn more **The Golden Spike Gem and Mineral Society** meets monthly in the Dumke Room at Union Station, 25th Street and Wall Avenue, Ogden. The group takes frequent field trips to search for gems and fossils throughout the region. If you go ... * Stop first at Fossil Butte National Monument, nine miles west of Kemmerer, Wyo., on U.S. 30. A visitor center displays fossils and information on the area's geology. Visitors can hike or, on Saturday and Sunday, help with a scientific fossil dig. No fossils can be removed from the site. www.nps.gov/fobu. * Warfield Fossils is one of several private companies extracting fossils from layers of the Green River Formation. Visitors can dig for fossil fish for \$25 an hour, \$50 for four hours or \$75 for a full day. Children younger than 12 can dig for half those prices. The quarry is about 10 miles northwest of Kemmerer on Bureau of Land Management dirt roads. See www.fossilsafari.com for directions and more information.