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During one of my travels in Germany a slab of fossilized fish, identified only as "from Wyoming," caught my eye. It was displayed in a smallish museum of gems and precious stones, in a hamlet near the town of Regensburg. Friends had taken me to visit Regensburg; on the way to the town, we stopped at the museum.

After my return to Wyoming, wanting to find where the state's far-flung fossil had come from, I discovered these details on an information card. Prepared by the Kemmerer Chamber of Commerce, it had been commissioned by the Fossil Basin Promotion Board.

Fifty million years ago, southwest Wyoming was a freshwater lake estimated to have been approximately 930 square miles. Today around 500 square miles of sediment remind us of the lake's former glory, which contained geologic features like deltas, beaches, springs, and rocks.

In that era another lake existed nearby, Lake Goslute, which left a few fossil records also, but nowhere near the riches of Fossil Lake. More fossil beds may lie buried, but for now, we only have what's exposed on the surface.

Unlike modern Wyoming, the climate back then was subtropical, which encouraged forests of palms, figs, and cypress. On the slopes of mountains that rose near the water flourished willows, beeches, oaks, maples, and giant ferns. The warm lake waters supported 25 kinds of fish and stingrays. Additionally, snakes and turtles, bats and birds, even crocodiles left evidence of their sojourn during that era, along with the first primates and dog-sized horses and rhinos.

The 230 miles across the center of that long-ago lakebed is now a world-famous fossil site called Fossil Lake. It came into being thanks to the lake's unusual chemistry.

When the animals died, many settled at the bottom of the lake. Calcium carbonate also dropped to the bottom also, where it covered the organisms in millimeter-thin layer after layer of fine grains. Without air, the organic layers did not rot. The mud thickened and pushed down on the organic material with increasing pressure, while the temperature of the organic material increased due to other processes on Earth. Mud sediment was buried by more sediment. Sediment changed to rock as temperature and pressure increased. The resulting limestone contains the highest concentration of fossil fish and aquatic organisms in the world; still, the richest fossil beds only cover about 15 square miles of Fossil Lake.

Since its discovery in the 1870s, more than one million perfectly preserved fossil fish have been discovered in the laminated limestone; in fact, a complete ancient aquatic ecosystem came to light of cyanobacteria, plants, insects, shrimp and crayfish, along with amphibians like frogs and salamanders. An arboreal insectivore existed then and was preserved in the limestone, along with a primitive carnivore.

The Kemmerer card shows twelve tiny reproductions of the fossil fish and provides their Latinized identities. *Knightia eocaena* is the most common fish in Fossil Lake and “may be the most common articulated vertebrate fossil in the world. It is Wyoming’s state fossil.” Until I found the Kemmerer information, I didn’t know Wyoming had a state fossil.

In their lifetimes, many of the fish depicted were no larger than five or six inches, but the larger ones were 20 inches, with the biggest one pictured 24 inches long. The small fish scavenged for insects or crustaceans; the larger ones, equipped with teeth, preyed on the small fish; in fact, several of them had small ones in their guts when they died; one was preserved with a small fish in its mouth.

A mass death of one of the smaller species suggests that they formed schools “much like modern bluegill or crappie.” Another six-inch fish, commonly known as trout-perch, “is neither trout nor perch. Its relatives today are restricted to near-shore fresh-water environments of North America.”

The card isn’t big enough to picture frogs or turtles, let alone land-dwelling animals. These we must picture in our imagination, but it’s amazing that such finds exist in Wyoming. It must be satisfying to discover records of life from long ago and previously unknown. I imagine it’s tempting for scientists to keep searching.

A Fossil Gallery exists in Kemmerer. A little north of the town, off Highway 30 going west, lies Fossil Bute National Monument. During the summer Fossil Bute offers a fossil quarry program. Now there’s an opportunity for a budding paleontologist or archeologist! If you have one in your family, why not plan a visit?

A young acquaintance told me recently she’s taking summer classes online but changing her major,

“What degree are you after?” I asked.

“I’m changing from botany to archeology,” she said.

“Have you heard about Wyoming’s Fossil Lake?” I asked.

She had, so I mentioned Fossil Bute National Monument. “It’s not far from here,” I said. “Going towards Green River.” She agreed it was a doable excursion.