

BY LYNETTE LOBBAN



HALL OF NATURAL WONDERS

*Surprises lurk everywhere the visitor turns
as Oklahoma's varied ecosystems come to life
in a unique museum setting.*





It is a glorious spring day on the great plains of central Oklahoma. Under an azure sky, bison graze in a field of prairie grass while monarchs sip from butterfly milkweed. Loggerhead shrikes provide background music, singing to their usual audience of jackrabbits and prairie dogs. Although your eyes and ears tell you that you are in Comanche County, carpet and artificial lighting are tip-offs that this is strictly an inside job.

Through its carefully constructed dioramas, the Noble Drilling Corporation Hall of Natural Wonders realistically represents each of Oklahoma's ecosystems in extraordinary depth and detail, right down to the stripes on a five-lined skink. The result for visitors is a virtual walking tour through the state's unique geographical regions from the Mixed Grass Prairie described above to the Gypsum Buttes of Beckham County.

"Traditionally, museums of natural history have featured one theme at a time, like a hall of birds, or a hall of mammals, and then they show a little microcosm of the region where the species lived," explains Dianna Horning, who was the exhibit developer for the Hall of Natural Wonders. "But here, the museum staff took a different approach. We wanted to illustrate the life sciences through the complexity of Oklahoma's ecosystems."

"People are always surprised to find out how many types of ecosystems are represented in this state," adds Peter Tirrell, the museum's associate director. "By using Oklahoma as the model, we can incorporate the discipline of life sciences within one hall."

Just as in nature, each of the dioramas has its secrets to share. The skillful observer will take advantage of clues hidden by museum staff to penetrate nature's camouflage. Stationery binoculars help neophyte bird-watchers discover warblers perched in their leafy homes. A peek into a hollow log will net a wily raccoon while a tug on a discovery drawer will reveal the inner workings of a yellow jacket community.

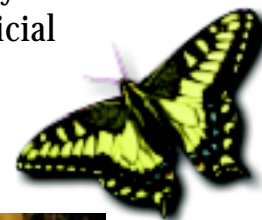
Exhibit designers even have included scenes that usually would be off limits to the human eye. Walk behind any of the freestanding dioramas and you will find a cross section of life underground, from coyote pups asleep in their den to ants busily transporting supplies through elaborate tunnel systems.

One of the most amazing revelations for visitors is that nearly everything in the hall is a flagrant imposter. Due to strict air quality control, nothing organic is allowed in the galleries. Instead, all of Oklahoma's natural wonders, from the intricate petals of the blooming gaillardia to the whispery legs of a dragonfly, are created by hand. In order to accomplish this successful mimicry, the museum hired the artists of Chase Studio. Headquartered in Cedar creek, Missouri, the studio is world renowned for its ability to fabricate any environmental niche, past or present.

Especially popular with young museum goers are the discovery drawers, which give observers a close-up view of the hall's natural wonders. At left, the "Skunks Eat Yellow Jackets" drawer reveals a protective nest built underground by yellow jackets (*vespula*). Unfortunately for the yellow jackets, the nest is not protected from the striped skunks (*Mephitis mephitis*) that can dig into the nests with their strong front claws and eat both adults and young.



Sanford Mauldin



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LEFT: Docents Jim and Carmelita Garrison mastered a plethora of information to field questions from visitors to the Hall of Natural Wonders. The Oklahoma flora and fauna have been meticulously reproduced in the hall's exhibits.

BELOW: Docent Shirley Perry finds a lot of takers for the interactive exhibits in the Hall of Natural Wonders, where animal skins are available for modeling, an offer no kid could resist.

Robert Taylor



Founder Terry Chase, a modern-day Renaissance man with degrees in geology, biology, and art, relies on his staff of 70 to bring about this miracle. “What sets us apart from other exhibit companies is our specialization in the natural sciences,” says Chase. “We have paleontologists, taxidermists, botanists, and zoologists on staff and an in-house reference library of 15,000 volumes.”

Still, the largest resource for the exhibit fabricators is the world around them. For the Hall of Natural Wonders, Chase’s crew traveled extensively throughout Oklahoma with the museum’s scientific staff and exhibit designers, collecting “everything that was blooming” according to Chase.

Rumors of his meticulousness abound. When asked if it was true that when visiting the Mixed Grass Prairie, he counted blades of grass per square inch, Chase replied, “I don’t know about *that*, but I could tell you how many leaves are on a black oak tree.” He may or may not be joking. To accurately represent the wide range of trees in the Oak-Hickory Forest, Chase and staff first collected dozens of leaves, using them as templates. From these molds, thousands of “copy-cat” leaves were produced, each one painted carefully by hand, front and back.

To re-create a trunk, the staff paints a live tree with several layers of latex and wraps it in a blanket of burlap, aluminum foil, and fiberglass. When the latex hardens, the cast is split in two,

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leaving the tree unharmed. The artists then use the cast to produce a trunk virtually indistinguishable from a product of the forest. Using tools from brushes to Q-tips and Popsicle sticks, artists then apply the finishing touches, adding appropriate spots and color gradations to the bark. It may not be nice to fool Mother Nature, but Chase and Company come as close as they possibly can.

To give Chase a sampling of Oklahoma's diverse wildlife population, the museum's scientific staff caught fish from streams and insects in midair, while capturing the more elusive species on film. The sleeping coyote pups, Chase points out, were sculpted from a photograph, while other specimens, like the bison, were products of the taxidermist. Most of the other creatures, from the dung beetles to the narrow-mouth toad, have been handcrafted by Chase's staff.

Even with prior knowledge of Chase Studio's handiwork, it is easy for visitors to be caught up in the full sensory experience of the dioramas. In the Upland Stream exhibit, sounds of rushing water and teeming wildlife provide the perfect soundtrack for a trip along the banks of an Ozark Highland creek. Some visitors find this diorama a little *toof* lifelike. "Whenever the black bear growls, children ask me if he's real," one docent recalls. "What they really want to know is if he's *alive*."

The stream, which is crafted from Plexiglas, begins as a shallow pool, and deepens as it progresses into the gallery. Along the way, visitors can observe wildlife both on the banks and below the surface. Because some of the stream's inhabitants are nearly too small to be seen with the naked eye, the museum staff has incorporated areas of magnification to enhance viewing the little guys, like the black fly larvae and the Neosho mucket. "Since all species contribute to the well-being of the ecosystem," explains Horning, "we didn't want anyone overlooked."

In front of each exhibit are plaques detailing the stories of these often-unheralded creatures. "They're pretty amazing," says education officer Laura Vaughn. "Take the Neosho mucket. Nature has given this little mussel a lure that looks like a minnow. When bass come down to eat the minnow, the mucket releases its larvae, which stick in the gills of the fish. The larvae hitch a ride and feed on what comes through the gills. When they're big enough, they fall off without ever harming the fish."

Vaughn hopes that the hall gives visitors a new respect for Oklahoma's wildlife and the delicate role each plays within its ecosystem. Coming attractions include dioramas of the Ouachita Highlands, the South Central Plains, and a limestone cave from the Ozark Highlands. When the cave is finished, it will feature bats, blind cave fish and colorless crayfish, specimens rarely seen during the average nature walk.

In addition to the main dioramas, there are "mini" exhibits featuring habitat diversity within each ecosystem. These highlight species like the endangered birds of the Salt Lake Plains region or Shinnery Oak's northern grasshopper mouse, a fierce little predator that pounces on its prey and howls like a wolf.

Recently, Chase Studios surprised visitors with two new additions to the Mixed Grass Prairie—a "rattling" rattlesnake and animated butterflies. Horning insists that the hall will always be "a work in progress."

Our goal is to make each visit to the Hall of Natural Wonders just like a walk in nature," she says. "Each time you visit, we hope you will see something new."



After 26 years of service, Peter B. Tirrell at last can say that the SNOMNH truly is fulfilling its mission.

"For the first time, we're able to protect our collections in the proper way and to interpret the collections in a way that makes it possible for people to learn," says Tirrell, associate director of the SNOMNH.

Tirrell is second in command at the museum. During the past quarter century, he has played a key role in the museum's growth and change. In particular, Tirrell has overseen the expansion of operations and public programs, ranging from traveling trunk shows to lecture series that benefit the people of Oklahoma.

"Public programs are included in our mission," he says, adding that the museum actually is mandated by the Oklahoma State Legislature to provide education and service to the state's citizens.

Tirrell, whose academic background is in zoology, says that a vital yet frequently invisible part of that service is field research. Most people think of museum research in light of uncovering the past, but work conducted by SNOMNH researchers can yield information that is important to Oklahomans today.

"For instance, research findings can be a barometer of the health of our environment, how pesticides and other chemicals are affecting animals and the plants around them," Tirrell says. "The museum is a great and exciting place for people to come. It's important that the public understands what the museum does, whether they are coming to us for inspiration or an understanding of the natural world."

—Anne Barajas

Robert Taylor

