

table, showing where there would have been huge flight feathers on the creature's slight, clawed wrists, and huge tailfeathers.

"It's sort of a triumph, a test of John's ideas," he said of this exhibit. "It's as when Darwin wrote 'The Origin of Species.' Crocodiles and birds don't look the same, but we've found intermediates. It's a triumph of predictive science."

And the ever-shifting theories of evolution lead us back, as they usually do at some point, to the egg.

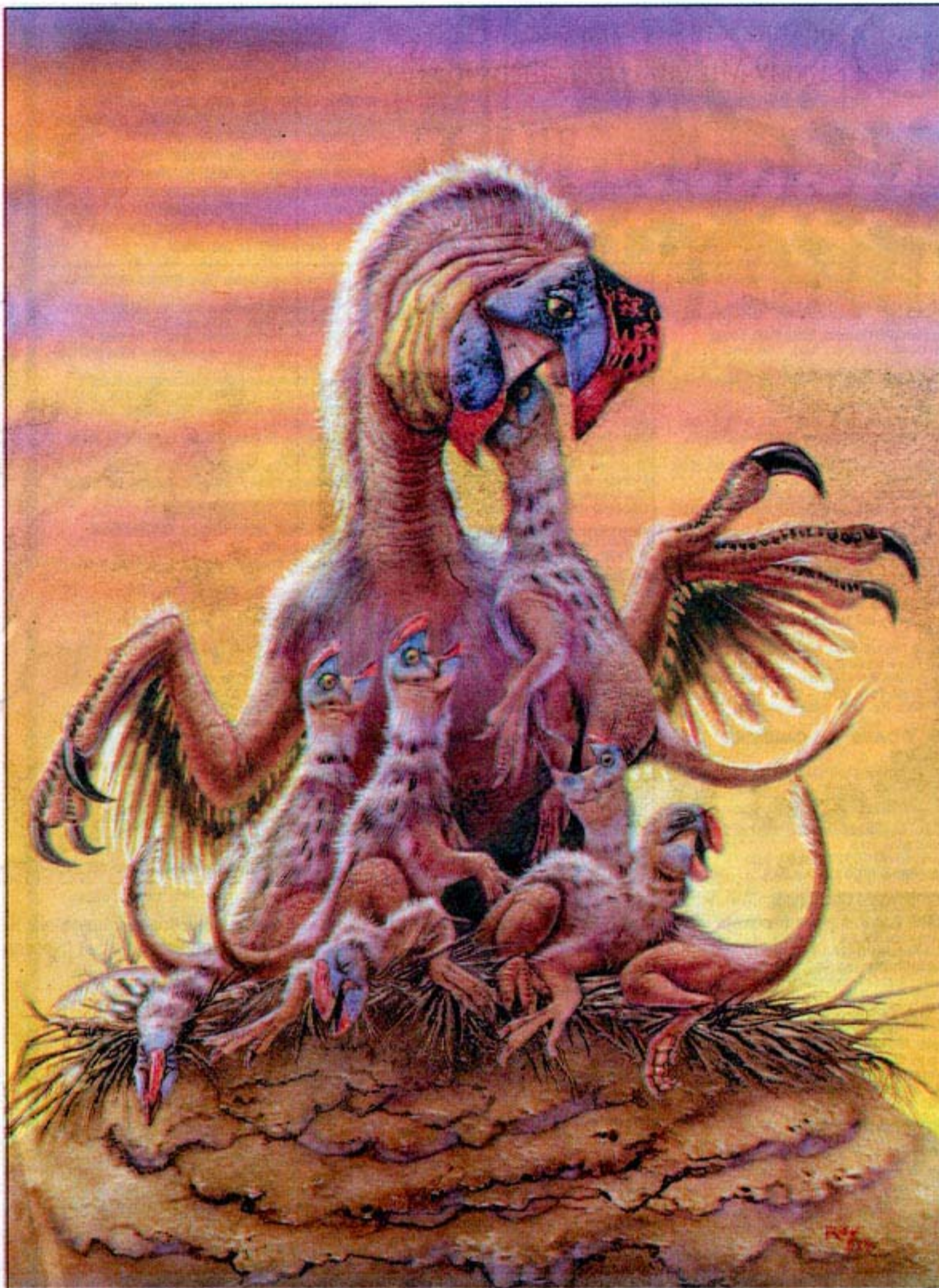
To that effect, the new exhibit will include eggs from the dinosaurs to the present, and will not only include reptiles, but mammals as well — the platypus and the spiny echidna, the last two surviving representatives of an egg-laying group of mammals called monotremes.

The exhibit will include a flock of baby protoceratops; a life-sized, 8-foot model of a dinosaur nest; an array of nests and eggs from the fossil-fertile nesting grounds of Argentina and Montana's "Egg Mountain"; recent paintings of dinosaurs; and a DVD presentation of the story of "Baby Louie," a dinosaur embryo from a new, giant species of oviraptor.

Oviraptors present more food for thought. One of the items is a clutch of 11 large, oval, troodon eggs semi-encased in dried mud, neatly laid out in two layers. The orderly egg-laying patterns of this type of dinosaur, combined with previous fossils of oviraptors sitting atop eggs, strengthen the theoretical bonds between dinosaur and bird. How different was an oviraptor from a flightless bird such as an ostrich, for example? This small piece of the exhibit is as much about what scientists don't know as what they do.

"You get oviraptors on top of eggs — is it the mom or the dad?" Gauthier asked. "They lay an egg or two at a time. They don't sit on them till they lay all their eggs. The embryos are in arrested development. They all hatch at the same time.

"I noticed the sauropod dinosaur eggs. They'd land in haphazard pattern — dig a hole and dump everything. Oviraptors would lay one or two at a time over



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How closely related were dinosaurs and birds? In "Pecking Order," a painting by Luis Rey for this exhibit, a carnivorous oviraptor of 80 million years ago feeds its nestlings. Paleontologists working in Mongolia have discovered fossils of eggs and embryos, as well as adult oviraptors sitting atop their nests of eggs. This evidence suggests that oviraptors tended their eggs and perhaps their young as well. Paleontologists do not know whether oviraptors had feathers, too, but other aspects of their anatomy and behavior suggest these creatures were related to birds.



Jerry Domian

A clutch of troodon eggs, about 80 million years old. These dinosaurs, manipulated their eggs and probably brooded, behavior more associated with birds.

several days. Another thing is that birds roll their eggs. Reptiles, if they roll their eggs, the

embryo drowns. Look at these eggs, upright. That's the kind of game we're playing. We're getting evidence of behavior, and it's striking."

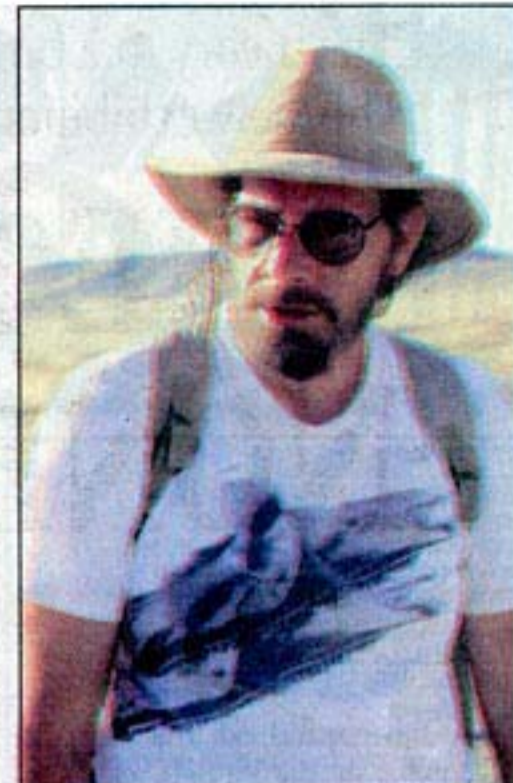
Of all the items, though, culled from the Peabody's 40,000-egg collection for this show, perhaps the most fascinating from a visual standpoint is the egg of a bird — probably a *presbyornis* — from the Eocene period, about 50 million years ago.

It was discovered in Wyoming around 1930 and will be shown open, along with a

cast of the intact egg.

"When it was opened, (they discovered) it had turned into a geode," said Marilyn Fox, preparator of the exhibit. She showed the crystallized inner lining of the eggshell, which had been broken nearly down the middle; embedded on one end, looking like strewn, withered, brown matchsticks, were the embryonic bird's bones.

But that wasn't all there was to be seen: "We also got the remains of the pupal cases of the flies feeding on the embryo," she said, pointing to a



Renowned paleontologist Jack Horner will give a talk at 3 p.m. Saturday, the opening day of the exhibit.

## A nest of events

There will be quite a few events surrounding the opening weekend of "Hatching the Past: Dinosaur Eggs, Nests and Young":

■ The big event will be the appearance of famed paleontologist Jack Horner at 3 p.m. Saturday. Horner, who achieved fame by discovering dinosaur eggs and the bones of adults and hatchlings at Montana's "Egg Mountain," was Steven Spielberg's model for Dr. Alan Grant, Sam Neill's character in the "Jurassic Park" films. He'll give a talk, "Dinosaur Behavior: A Geological Perspective."

■ Lowell Dingus, research associate in paleontology at the American Museum of Natural History and a dinosaur evolution expert, will give a talk for all ages, "The Tiniest Giants: Sauropod Eggs and Embryos From Patagonia," at 1 p.m. Saturday.

■ For the kids, puppeteer Betty Baisden will present "Roxi Fox and the Baby Dinosaurs" at 11 a.m. Saturday and 1 p.m. Sunday.

■ Also for the kids, Topsy, the Baby Triceratops will appear from noon to 5 p.m. Sunday.

cluster of tiny, dark bumps on the egg's surface.

In a nutshell — or an eggshell, if you wish — is that if you come to this exhibit, then come back around in 10 years, prepare yourself for an entirely different experience.

"We just want to get the science out there, tell people what we're learning about right now," said Gauthier. "We're not done."

Fran Fried can be reached at (203) 789-5678 or [ffried@nhregister.com](mailto:ffried@nhregister.com).