

# New life for old bones

The Canadian Museum of Nature unveils a new dinosaur and reno, writes **VAL ROSS**

This is a story about two fossils come back to life, and how both said hello to the world in Ottawa yesterday. One fossil is a creature five metres long, not huge as dinosaurs go. The other is much younger, but its rebirth is no less exciting.

In the late 1990s, paleontologists were quarrelling over what was, for them, a hot issue: Did horned, upright-walking dinosaurs have straight front legs, or were their legs bent at the knees? A paleontologist at the Canadian Museum of Nature in Ottawa, Wann Langston, thought he could resolve this by taking a closer look at a specimen he had collected years before near Irvine, Alta., a *Chasmosaurus belli*. The creature had been encased in its plaster "field jacket" since 1958. Museum staff opened the plaster at what they assumed to be the legs end and discovered its skull instead, with a one-metre-long frill with its horns. They realized they'd stumbled on a species unknown to science.

*Chasmosaurus irvinensis*, named after the Alberta town of its disinterring, is on view now that the Canadian Museum of Nature has unveiled the first phase of its \$216-million renovation. It's romping along (on bent knees, which is still a matter of paleontological disagreement) with 300 other spec-

imens in the new \$5.2-million Talisman Energy Fossil Gallery. Yesterday's opening of the museum's dinosaur galleries will be followed by the bird and mammal galleries in midwinter. Over the next few weeks, visitors can see museum curators at work, putting finishing touches on the dioramas, and vacuuming and fluffing fur and feathers.

The other set of old bones getting new life is the building itself. The Victoria Memorial Museum, its refurbishing slated for completion by 2009, is one of Ottawa's most venerable and vulnerable heritage sites. When construction began in 1905 (on the original beaux arts design by David Ewart), no one understood that much of Ottawa is on Leda clay — a remnant of the Champlain Sea that once covered Central Canada — nor that if such clay soil gets either too wet or too dry, it is fundamentally unstable. Not only were Leda clay slopes in the Ottawa valley subject to catastrophic landslides; Canada's capital is on an earthquake fault line. (Odd that no one realized this: The building was commissioned by the Geological Survey of Canada.) Soon after it opened in 1912, the heavy stone Victoria Memorial Museum began to sink into the marine clay on which it was foolishly built. Within three years, the building's

gothic tower had to be lopped off.

"This building has become a construction case study, a kind of science experiment," says Maureen Dougan, COO of the Museum of Nature. Over the years it has cracked, or as she puts it, "Its spine has broken." Some of the cracks have been preserved in the basement where visitors can inspect them.

In the late 1990s, by which time more than a quarter of a million visitors, including hordes of school kids, were streaming through the museum each year, the federal government realized it could delay fixing the place up no longer. "You were kind of dealing with a carcass," says architect Bruce Kuwabara who led the design team. (Ottawa architect Barry Padolsky was responsible for the heritage restoration and project management, while the Quebec team of Gagnon, Letellier, Cyr handled the technical side.) "This building was a tragedy, in danger from the time it was built."

Kuwabara and the others came up with a plan to stabilize the building and make it earthquake-proof by putting a steel cage inside the stone shell.

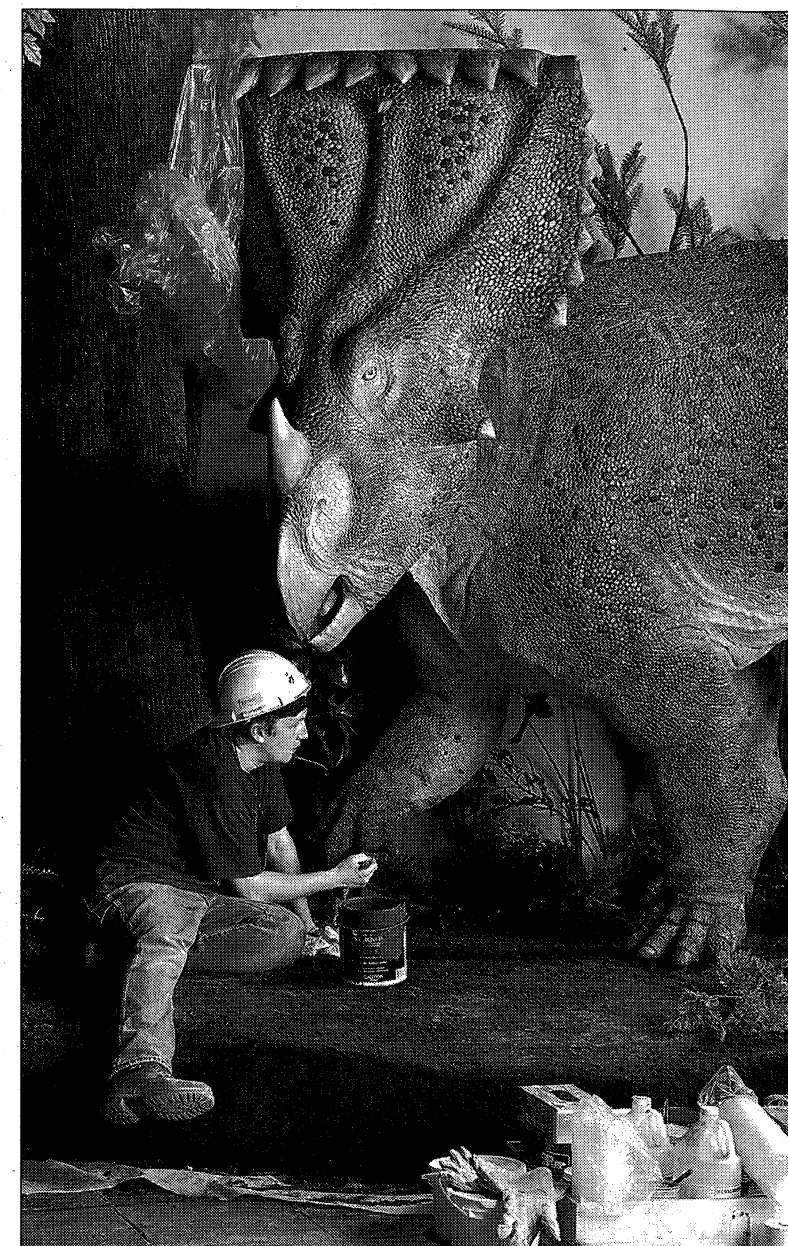
A glass structure with powerful vertical lines will stand atop the stump at the front of the building where the old tower was lopped off;

its Gothic lines will conjure up the vanished structure and contain a wide set of staircases to handle the human traffic. Huge new elevators will be able to accommodate entire classes of school children — and the skeletons of dinosaurs.

The mixture of glass and steel and stone has another purpose too: "One of my thoughts was that people can appreciate older buildings when they have a relationship to the old stone," says Kuwabara, "when they can touch it. So we wrapped our glass addition around the rugged stone walls. That's how architecture is best appreciated — when it's visceral."

And all of these changes had to take into account the difficult soil in which the building stands. The museum's president, Joanne DiCosimo, explains, "We had to ensure that the overall weight of the building didn't change, which meant we had to take out the equivalent weight of what we were adding."

Now that the first phase is complete, DiCosimo and Dougan are discussing "surprises" to keep visitors as entranced with the new facility as they are. Perhaps they will exhibit coprolites — fossilized dinosaur dung — in the public washrooms. What they and the architects are both hoping is that there will be no more surprises from the clay beneath their feet.



MARTIN LIPMAN

The star of the reopened dinosaur galleries: *Chasmosaurus irvinensis*.