By Jeff Mathoney
The Spectator

THERE ARE no skeletons in Peter May's closet.
They wouldn't fit. Not unless he hangs his
clothes in a grain silo.
No, Peter keeps all his bones at work, in a 560-
square-metre (6,000-square-foot) barn-size
workshop — and even that's not always big
enough.
Old barosaurus, for instance. When the whole
great fuselage of her spine, from tip of tail to
top of neck, was assembled, mounted and artic-
ulated in the posture of a rearing horse, it
reached the height of a five-storey-tall building.
Not something you can squeeze into the trophy
room — even with cathedral ceilings.
When Peter and his crew built their skeleton
of the mother barosaurus, fending off an
allosaurus's attack on her baby, it was so tall
they had to do the final assembly outside, in the
back lot of their Oakville facility.
It is one of those happy congruences of a per-
fectedly ordered universe that the dinosaurs pre-
dated the first height zoning by-law officers by
several million years. Their coexistence would
have presented an insoluble evolutionary stand-
off.
The barosaurus display — featuring the huge
mother, her baby cowering behind her and a
carnivorous allosaur lunging toward them — is
now showing in the enormous rotunda of the
famous American Museum of Natural History
in New York City.
The representation of the giant, upright
barosaurus is the tallest free-standing dinosaur
mount in the world.
Made right here in Halton.
But for all we know about them, the colossal
skeletons, practically spilling out of the cargo
bays at Research Casting International in
Oakville, might as well be in closets.
Peter May and the eight technicians who help
him build dinosaurs (they have created some
fully fleshed behemoths, though most of the
work is skeletal models) toil away in happy
discursivity in their facility on Invicta Drive,
tucked off in an industrial park.
Like the villagers in a Frankenstein movie,
Oakville's lumbering townfolk little suspect
that, in their very midst, the great monsters
who held dominion over this planet almost 200
million years ago are quietly multiplying just
off the North Service Road, their massive
shapes looming up like some primordial mirage
out of the dust and dinness in the workshop's
cavernous hangar area.
Giant rib cages curl out from spinal columns
like the stripped hulls of sunken galleons. And
the fantastic skulls of the great carnivores grin
menacingly from shelves, their terrible jaws
meshing like the toothed shovels of an excava-
tor.

Above, Laslo Eger installs a toe on the foot of an
Albertosaurus hind leg.
Left, Tibor Eger shows how the skull and
mandible of the Albertosaurus fits together.

Seems like old times. Real old times.
Peter shows me one of the fossils in his storage
area. It's a vertebra from which a maid was
made for the barosaurus skeleton. The bone is
from the Jurassic Period of the Mesozoic Era.
Things have changed.

"Things have changed for Peter May also. When he came to Canada from England at age 8, he scarcely knew or cared what a dinosaur was."

"I seem to have missed dinosaurs completely," he says, amused at the irony.

Thad early obliviousness to dinosaurs persisted throughout his adolescence in Hamilton and his studies as a sculptor at the University of Guelph.

After getting his degree, he went to work for Stelco at Nanticoke. But shortly after, in 1969, Peter saw an ad in the paper, for a job as junior technician at the ROM's paleontology department.

"I looked up dinosaurs in the Encyclopedia Britannica the night before my job interview," Peter recalls. "I fell asleep after one paragraph.

But during the interview he discovered the ROM wasn't looking for a dinosaur expert so much as someone who could mold and cast (Peter's strengths in his sculpture studies) and who knew something about small motors, camping trips, and driving a 4x4. Nothing could have suited him better. He might have known nothing about dinosaurs but he sure liked the outdoors and tinkering with machines.

His main duty was to cast simulacrum of dinosaur bones out of clay-like materials and assemble them into skeletons. This enabled museums to fill in missing bones. And they could display completely artificial dinosaur skeletons if they have no bones or if the actual bones are needed for study rather than display.

But another aspect of his work was (and still is) making field trips to find and study new dinosaur bones. That's where the camping, the all-terrain vehicles and the small motor expert came in.

His first expedition of this kind was in Kansas, where there is a rich vein of dinosaur fossils. "I got down there and set up our tent and got heat stroke," Peter recalls.

"That was the year of the big heat wave in the northern Illinois and southern U.S. Temperatures got up to 48C (120F).

"We would go to the quarry and hammer down. But we could only work from 6 a.m. to noon. It got too hot in the afternoon. You didn't get any work done. It was like you wore sweat that would evaporate right on your skin, so you'd be covered in salt.

It was a pitless introduction to field work. But it was more than made up for by the joy of finding specimens. "Stumbling out of the quarry a bone finds millions of years old, clues to what life was like when the rulers of the earth had brains that could scarcely accommodate an acorn (maybe things haven't changed so much after all).

In 1982, Peter left the ROM to help set up the Peruvian Museum in Santa Barbara. In 1986 he returned to the ROM as a research assistant in paleontology. The next year he started Research Casting International as a sideline.

But the "sideline" very quickly overtook his to the thriving new business. Peter has been getting orders from universities and museums all over the world — the U.S., Britain, Australia, Japan.

Research Casting International is one of only two companies in the world that Peter knows of which do dinosaur skeleton construction. The other is in Utah.

His work, though largely unknown by the lay community in his own backyard, has been featured on American PBS, Good Morning America, and in National Geographic Magazine.

Right now he and his team are working on a large project for the British Museum of Natural History, making skeletons of an albertosaurus, a large camarasaur, and several other smaller dinosaurs, all of which will be suspended from wires in a kind of makeshift display.

Whenever the company wins a contract from a museum, the museum has to lend it some bones for use in making molds, and Research Casting International voluntarily pays royalties for the bones, as a way of pumping money back into often cash-strapped institutions.

Peter has also been invited to an excavation in Africa by a scientist who is trying to mount a display for the famous Field Museum in Chicago. The display will be bigger than the one in New York.

But Peter hasn't been doing so much field work in the years since he began his young family.

The monumental New York display is still sending ripples through the world of paleontology.

Several critics have tried to discredit the display as a distortion, saying a creature the size of a barosaurus — over 25,000 kilograms (25 tons) in weight, 17 metres (55 feet) tall standing, and more than 24 metres (70 feet) long — could not have reared up on its hind legs like a horse.

It could not have supported its erect body on so few legs, its heart couldn't have pumped enough blood that far up before the animal passed out, and the bones of its forelimbs probably would have shattered when they came crashing down again, the doubters say.

But Peter and other scientists who defend the display, while admitting the pose was chosen for its dramatic visual impact, point out that the very specialized bones of the barosaurus's tail could have been designed to support its whole weight so it could rear up.

In any case, says Peter, we know so little for certain about how dinosaurs looked and behaved that most depictions of them are calculated guesses at best.

"We're not even sure whether dinosaurs were warm- or cold-blooded," says Peter. And they weren't technically lizards, as most of us were brought up to believe, but archosaurs, a related and distinct type.

Research Casting International owner Peter May looks at a miniature skeleton of an Albertosaurus in his company produced.

bones made from molds of fossils rather than the creature's real bones, 80 per cent of which the museum has.

But, says Peter, if the museum were to erect the real bones, especially in the rearing stance, it would have to reinforce the floor, because the localized weight would be too great. And if any of the real bones, or parts of them, were to fall away from the skeleton for any reason, someone could be seriously hurt.

While a real bone might weigh as much as 80 kilograms (179 pounds), the equivalent fabricated bone would weigh only 4.5 kilograms (10 pounds). Peter and his crew make the bones with a mixture of water and polyester called weg.

For a skeleton like that of the barosaurus, a relatively small base must support a large structure. They make the upper bones out of lighter material, usually an expanding foam, so the skeleton doesn't get too heavy.

Peter is now working on a book with Pat Eliazi on paleontological techniques, in which his approach to casting bones is discussed.

For someone who not so long ago couldn't tell a tyrannosaurus from a therapsid, Peter has immersed himself in the world of the dinosaur.

The walls of his office are filled with geological charts and dinosaur family trees and postcards from the Cretaceous, and there are small sculpted dinosaur dramas being mounted on his desk.

He has even dreamt of dinosaurs at night, he confesses.

"It was after we'd finished the barosaurus display in the American Museum of Natural History. I had a dream it fell over. There was a war and it got hit by a bomb and everything.

And, of course, he has his own ideas about that great paleontological mystery — why the dinosaurs became extinct.

"The one theory I like, though it's probably not true, is the nemesis theory. It says there is a major extinction every 260 million years, that there is an asteroid that the earth comes in contact with that often, so we've probably got another 10 million years before the next one.

Peter's children have yet to pick up on his love of dinosaurs. "I bring them in here now and then, but they're pretty jaded. It's not the same."

Not Peter. He says there may be planets out in some distant galaxy on which dinosaur-like creatures are roaming even today.

"I know a lot of people who'd give anything to be there with them, to see what they look like, how they behave."

From that glint in his eye, you can bet he'd be there himself, "if only they could get me in that time machine."

Lilly Meyer vends the ribs for a life size Albertosaurus Photos by John Rennison