

Driving into Prehistory – meeting the PEI *Dimetrodon*.

By William Beckett

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After two days of hard driving along 1,400 kilometres of transcontinental blacktop, I finally held the 290-million-year-old PEI *Dimetrodon* skull fragment in my hands. This tiny facial remnant of an approximately 2-meter-long carnivorous beast – older than the very first dinosaurs – remained locked inside two distinctive red chunks of Island sandstone not much larger than two softballs. Running my hand over the smooth, protective lacquer that joined teeth-to-stone, I felt a kinship with this ancient Islander that stretched across the eons; we'd both travelled a long way to find ourselves together in the heart of a busy American city.

Three years earlier, I'd stood in the New London field where, in 1845, farmer Donald McLeod uncovered a tooth-filled rock – generally not a common occurrence in that, or any other, year. McLeod gave the fossil to a regional geologist, Sir John William Dawson, who, in turn, sold it to pioneering American paleontologist, Joseph Leidy. Since the mid 1850's, it'd sat in storage at Philadelphia's Academy of Natural Sciences: home to over 22,000 fossil specimens, including former U.S. president Thomas Jefferson's fossil collection.

I'd heard little about the PEI *Dimetrodon* before late 2012. By then, I'd lived on PEI for over 13 years, never fully understanding how any sort of fossil – let alone a piece of *Dimetrodon* face – could turn up in our crumbly, eroding little province. Boredom, a long autumn evening and a random online search brought me to a digital copy of geologist John DeGrace's article about the PEI *Dimetrodon* (aka. *Bathynathus borealis* Leidy) in the Fall/Winter 1992 issue *The Island* magazine. The scarcity of information about this, or any other, PEI fossil eventually convinced me to pick up a video camera and share my journey of discovery in the form of a documentary, entitled *Prehistoric PEI*.

My compulsion to film the actual PEI *Dimetrodon* fossil felt as much like a personal quest as a professional one. I could've easily saved time, money and effort by filming one of the many replica skull fragments housed at the New Brunswick Museum or the University of Prince Edward Island. However, a replica wouldn't let me hold the past in my hands; a tangible experience that I could visually express if I trusted my skills behind the camera. Furthermore, making the long pilgrimage to see the real thing also meant that I could properly convey a sense of distance while gathering specialized knowledge from the very scientists who dedicate their lives to its study and preservation – important elements that would give my little low-budget documentary extra value as an educational piece for children and families.

I began my trip on Labour Day – early on what a 17th century nursery rhyme might've called “one misty moisty morning.” My past experiences as a journalist and photographer gave me confidence that I could shoot this tiger like a paid professional, even if my filmmaking budget skirted the edge of infinitesimal. Yet, I couldn't capture the unreal sensation of stalking this ancient, long-extinct, sail-backed critter across two Canadian provinces, and seven U.S. states, merely to collect some video footage and a few still photos. Our Ice Age ancestors probably felt a similar thrill as they stalked bison and American mastodons across the very ground over which my little car now sped.

I'd been anxious the night before, but slept well enough to make the jaunt to Boston, Massachusetts in a single 13-hour stretch. Upon arrival, my childhood and early middle-age collided when I stayed with a childhood acquaintance from my Nova Scotian home town. I hadn't seen this man since 1982 when my seven-year-old self played with toy dinosaurs (including *Dimetrodons*) on his parents' living room

floor. Fitting, then, that my journey to see a real *Dimetrodon* skull had brought us together for a long-delayed reunion.

Excitement, and anticipation, plagued me with a distinct lack of sleep that I battled during my travels the following day. Memories of the hazy New York City skyline, the frantic New Jersey Turnpike and my final triumphant charge across the Ben Franklin Bridge into Philadelphia itself form the highlights of my long, lonely solo trek across the Canadian / U.S. northeastern seaboard. Getting lost in West Bronx traffic, on the other hand, makes me wish I'd taken the opportunity to see the complete *Dimetrodon* skeleton at the American Museum of Natural History just a few kilometres further down the Henry Hudson Parkway. Alas, my hotel's check-in time beckoned me onward.

Taking up temporary residence in Philadelphia's bustling Chinatown gave me a sense of place that I badly needed in order to ground myself for the next day's filming. I spent that first evening breathing deep of the rich, heady garbage-and-cooking smells of a thriving community filled with thousands of people packed within a few city blocks. I hauled out my faithful Nikon and tripod, and discovered that Philadelphians seemingly respect photographers. Passerby gave me a wide berth, and smiles, as I shot my walk down Arch Street to watch the lights of Love Park and Logan Circle brighten amidst the fading dusk. I paced restlessly outside the nearby Academy of Natural Sciences itself, wherein lay my quarry, and spent the remainder of that night planning my tomorrow.

Early the next morning, I met Dr. Ted Daeschler: a man whose impressive list of titles includes Associate Curator of Vertebrate Zoology for the Academy of Natural Sciences of Drexel University. As gatekeeper and guide for my visit, I'd consulted with him long before I'd secured crowdfunding money for my trip. Finally meeting face-to-face, I took the measure of the man who safeguarded the PEI *Dimetrodon* and noted a kindness and intelligence in his manner that denoted an experienced professional accustomed to dealing with journalists. Certainly, his patience with me is commendable; exhaustion, and long hours behind the wheel, made me less than tack-sharp in the brains department during our hour-long, on-camera interview.

During the course of an eight-hour day, I enjoyed unfettered access to the Academy's fossil collections. With total freedom to film whatever I wanted, I experimented with camera angles and scenes to give my viewers a sense of visiting this venerable, 200-year-old institution. I filmed many scenes inside the remarkable Dinosaur Hall, with its eleven massive specimens (including a full-sized *Tyrannosaurus Rex* skeleton), before entering the climate-controlled storeroom containing the object of my visit.

Previous photos of the PEI *Dimetrodon* usually traded beauty for scientific accuracy. Left alone with the skull fragment for several hours, I used a combination of coloured cardboard and a single halogen light to get exactly the kinds of shots I'd always wanted to see of this historic fossil – the second vertebrate fossil ever found in Canada, I'm told. Across an ivory surface of mineralized bone, I saw the ruts and cracks left by both time and this creature's hard life amidst the drylands and green belts of an inland stretch that would one day form the coastline of Atlantic Canada.

Later, upon my return to PEI, I shared my observations with Dr. John Calder, the senior geologist for the province of Nova Scotia. Together, we concluded that our *Dimetrodon* probably died quite young – perhaps as the result of an accident, or as prey for another of its species. As with many such prehistoric mysteries, we may never fully know the truth. In the absence of facts, only educated guesswork can fill the gaps that exist in the vast hinterland between science and imagination.

The time for my departure came with the onset of early evening. On my way out the door, Dr. Daeschler and I paused to take photos of each other next to the fossil cast of an ancient fish he'd helped discover in the Canadian Arctic just a few years earlier. His *Tiktaalik roseae* lived long before the PEI *Dimetrodon*, but its boned fins and defined neck make it part of the family tree that our local fossil shares with humans and other modern mammals.

As I headed out the lobby doors to film some beauty shots of the neighbouring Swann Memorial Fountain, I reflected on the various questions other Islanders had asked me in the weeks before I'd left. Why doesn't PEI buy the fossil back, and why can't we see it here? The answer is, of course, quite simple: we don't yet have a provincial museum facility. Until that changes, or until a private concern steps up to the plate, we won't see *Bathygnathus borealis* or any of its Island-born ilk return to our shores anytime soon.

My visit, and all of the research and interviews I've poured into my documentary project over the years, assures me that the Island fossils currently held in Philadelphia and elsewhere are well cared for and accessible, even if they're not on-display. Until the day when we see a proper provincial museum built on Prince Edward Island, I remain convinced that our *Dimetrodon* couldn't rest in safer hands.