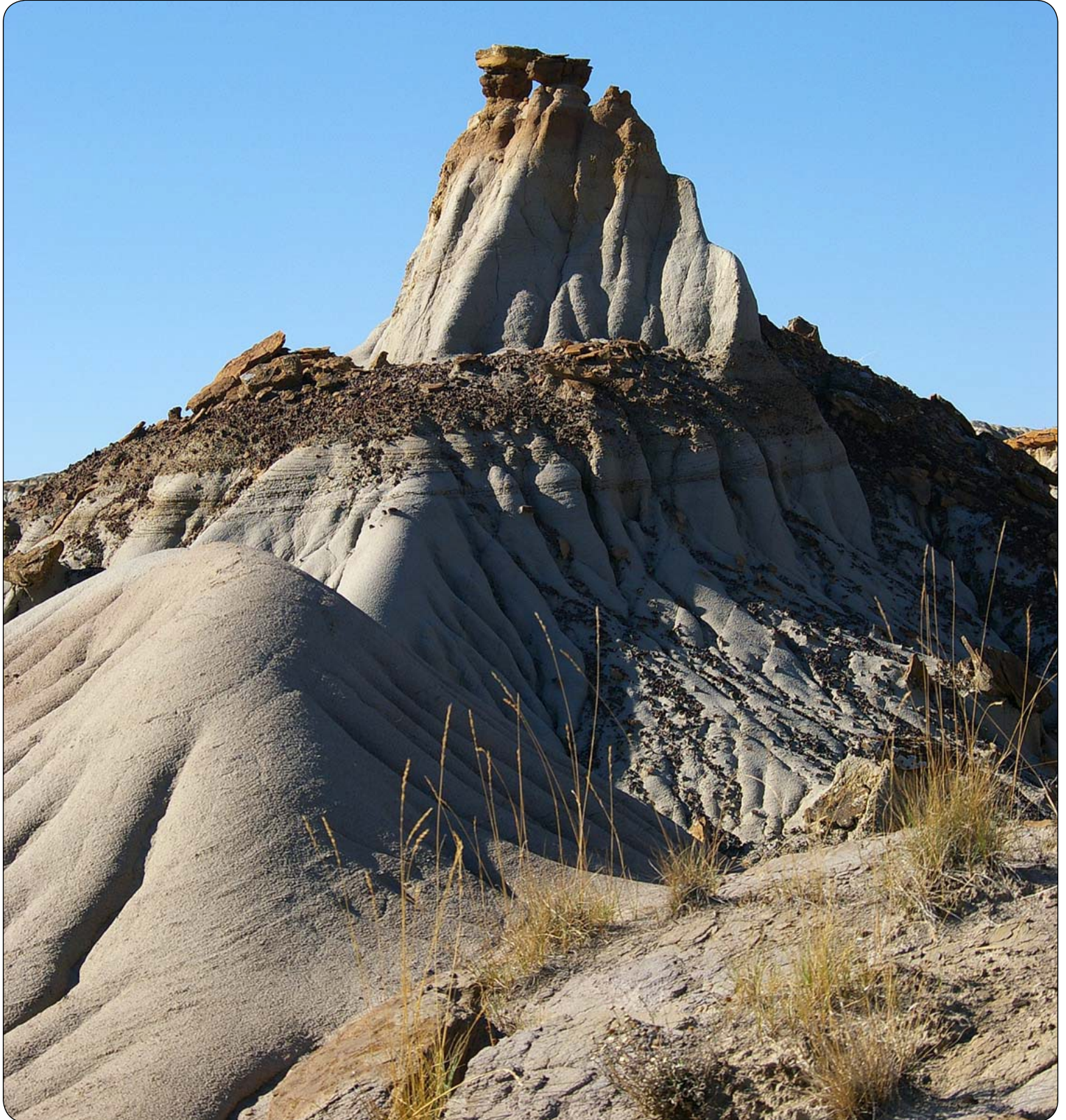


# Alberta *Palaeontological Society* *Bulletin*

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DECEMBER 2006



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**The Society was incorporated in 1986, as a non-profit organization formed to:**

- Promote the science of palaeontology through study and education.
- Make contributions to the science by:
  - Discovery
  - Collection
  - Description
  - Education of the general public
  - Preservation of material for study and the future

- Provide information and expertise to other collectors.
- Work with professionals at museums and universities to add to the palaeontological collections of the province (preserve Alberta's heritage).

**MEMBERSHIP:** Any person with a sincere interest in palaeontology is eligible to present their application for membership in the Society. (Please enclose membership dues with your request for application.)

**Single membership**      **\$20.00 annually**  
**Family or Institution**    **\$25.00 annually**

**THE BULLETIN WILL BE PUBLISHED QUARTERLY:** March, June, September and December. Deadline for submitting material for publication is the 15th of the month prior to publication.

Society Mailing Address:

**Alberta Palaeontological Society**  
**P.O. Box 35111, Sarcee Postal Outlet**  
**Calgary, Alberta, Canada T3E 7C7**  
**(Web: [www.albertapaleo.org](http://www.albertapaleo.org))**

Material for the Bulletin:

**Howard Allen, Editor, APS**  
**7828 Hunterslea Crescent, N.W.**  
**Calgary, Alberta, Canada T2K 4M2**  
**(E-mail: [editor@albertapaleo.org](mailto:editor@albertapaleo.org))**

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## UPCOMING APS MEETINGS

Meetings take place at 7:30 p.m., in Room **B108**,

**Mount Royal College:** 4825 Mount Royal Gate SW, Calgary, Alberta.

**Friday, December 15, 2006**—Christmas Social. Speaker: Cory Gross, APS.  
***Silent Movie Monsters: Sir Arthur Conan Doyle's "The Lost World" on the Silver Screen***

**Friday, January 19, 2007**—Dr. Lisa Bohach, FMA Heritage Resource Consultants, Inc.  
***Fossils of the Athabasca Oil Sands***

**Friday, February 16, 2007**—Jon Noad, Shell Canada Ltd.  
***As Clear as Mud: Exploring Ancient Mangroves and their Inhabitants***

**ON THE COVER:** Badland scenery at Dinosaur Provincial Park, Alberta, venue of the September 2006 APS field trip. See field trip review, Page 7. Photo by Ron Fortier, © 2006.

# Upcoming Talks

Friday, December 15, 2006, 7:30 P.M.

## *Silent Movie Monsters: Sir Arthur Conan Doyle's "The Lost World" on the Silver Screen*

Speaker: **Cory Gross, Alberta Palaeontological Society**

Since its release in 1925, the first screen adaptation of Sir Arthur Conan Doyle's *The Lost World* has gone down in history as the seminal dinosaur action movie. Originally planned by filmmaker William Selig, *The Lost World* was eventually produced by Watterson R. Rothacker and First National Pictures, utilizing the stop-motion techniques of special effects legend Willis O'Brien.

The total production required three years of animation with 50 models, eight weeks of principal filming, 2000 extras and \$1,000,000 to produce. Based on the paintings of pioneer palaeo-artist Charles Knight, the dinosaur models remain the most accurate ever seen in film based on what science knew at the time. Receiving much critical acclaim, *The Lost World* also became the world's first in-flight movie.

This talk will trace the history and controversy surrounding the production and include heretofore unpublished research from the archives of the Academy of Motion Picture Arts and Sciences.

The presentation will be held in conjunction with a Christmas Social, please bring a snack to be shared. All ages are welcome.

### Biography

Cory Gross began his post-secondary education studying geology, and has recently finished a degree in Museum and Heritage Studies. Cory also operates the internet's most extensive website devoted to *The Lost World* which celebrates its 10th anniversary in 2007.

Wednesday, January 10, 2007, 12:00 P.M. Room 1116, Tower #1, Calgary Place, 330-5th Avenue SW, Calgary. (If you have difficulty accessing the room please contact security at ground level).

## *Palaeoecology of Late Devonian Reefs in Western Canada—Insight from the Alexandra Reef System*

Speaker: **Alex J. MacNeil, Ph.D. Anadarko Canada**

Superbly preserved limestones (approximately 35 m thick) of the Late Devonian (Frasnian) Alexandra Reef System, exposed near Hay River in the

Northwest Territories, include an array of reef biofacies. Stromatoporoids are generally the most abundant skeletal framebuilder, with tabulate and rugose corals as accessory framebuilders. Stromatolites, calcareous algae, and different calcimicrobes are variably present, and in some cases played an important role in binding skeletal debris and lithifying the reef framework.

Detailed study of the biofacies in the Alexandra Reef System has revealed a number of interesting variations in how the different reef biota occurred and associated with each other. Whereas laminar, tabular, and anastomosing stromatoporoids are common, more exotic stromatoporoid growth forms, including whorled-plate complexes over 2 m across, concave-up growth forms of *Actinostroma*, and intricate plate-and-column associations, are also present in some areas.



**Figure 1.** A partly leached high-domal stromatoporoid ( $\approx$  40 cm high) with ragged margins in the Alexandra Reef System. This growth form indicates relatively high sedimentation rates in an otherwise stable marine environment. Photo: A. MacNeil.



**Figure 2.** Steep-sided laminar stromatoporoid bioherms are a unique feature of the Alexandra Reef System. With flanks dipping up to  $\approx 50^\circ$ , these developed in the back-reef environment in response to a regional flooding event. Sediment trapped in these mounds was probably transported by storms from shallower parts of the platform. Photo by Alex MacNeil.

Integration of the different reef biofacies with their depositional environments, supported by sedimentary evidence and sequence stratigraphy, indicates that “normal” reef growth took place around fair-weather wave base and at greater depths. *In situ* stromatoporoids lacked the ability to grow into zones of high wave energy, and did not form a wave-resistant reef margin. Indeed, the densest stromatoporoid frame-stone is found in a transgressive systems tract, and probably accumulated in water depths of 20–30 m.

Insight to the palaeoecology of Devonian reefs, gained from analysis of the reef facies in the Alexandra Reef System, suggests that conventional facies models for Devonian reef systems in western Canada are in need of revision.

### Biography :

Alex MacNeil received his B.Sc. (1998) from the University of Saskatchewan and M.Sc. (2001) from the University of Alberta. He has been working on the Alexandra Reef System in the Northwest Territories since 2001 and recently completed his Ph.D. at the University of Alberta. In addition to Devonian carbonates of western Canada, he has worked on Miocene to recent carbonates in the Caribbean and Ordovician to Devonian carbonates in the Arctic Islands. Alex joined Anadarko Canada in May 2006. □

Correction: The subject of Figure 3, Page 10 of the September *Bulletin* is not a “strump” in growth “polsition”, but rather a stump in growth position. The Editor meekly apologizes for any confusion and promises to proofread in future.

Friday, January 19, 2007, 7:30 P.M.

### Fossils of the Athabasca Oil Sands

Speaker: **Dr. Lisa Bohach, FMA Heritage Resources Consultants, Inc.**

The Athabasca Oil Sands are an enormous oil deposit estimated at 137 billion cubic metres. The oil is situated in McMurray Formation sandstones that are close enough to the surface for open pit mining north of Fort McMurray. In this area, the overlying Clearwater Formation is removed as overburden. As a result of oil sand mining, marine reptiles have been discovered in the Wabiskaw Member at the base of the Clearwater Formation. The assemblage is Lower Cretaceous (Albian) in age or about 100 million years old. Although these marine reptiles lived at the same time as the dinosaurs, they are not related, and represent two separate groups of land reptiles that returned to the ocean. The reptiles include ichthyosaurs and two types of plesiosaurs. Like marine mammals today, these marine reptiles breathed air and some gave birth to live young in the ocean. They were top predators in Cretaceous oceans.

### Biography

Lisa has a B.Sc. (Geology/Zoology) from the University of Alberta and a Ph.D. (Palaeontology) from the University of Victoria. Originally trained in Cambrian trilobite systematics and biostratigraphy, Lisa now focuses on Cretaceous to Paleocene flora and faunas. She works as a palaeontological consultant for industry providing impact assessments to ensure that oil, gas and other developments do not negatively affect palaeontological resources. □

***“Fossil hunting is by far the most fascinating of all sports. The hunter never knows what his bag will be, perhaps nothing, perhaps a creature never before seen by human eyes! The fossil hunter does not kill, he resurrects. And the result of his sport is to add to the sum of human pleasure and to the treasures of human knowledge.”***

George Gaylord Simpson (1902–1984)

Friday, February 16, 2007, 7:30 P.M.

*As Clear as Mud: Exploring Ancient Mangroves and their Inhabitants*

Speaker: **Dr. Jon Noad, Shell Canada Limited**

Despite the abundance of mangroves in tropical regions of the globe today, relatively little research has been undertaken on their fossil counterparts. In this presentation I plan to take you wading knee deep into the muddy Miocene mangroves of eastern Borneo, before sunning ourselves on Bahamas-like beaches in the Pliocene of Mallorca. We will be looking at ancient mangrove systems and their inhabitants from around the world, using data from recent mangroves as analogues.

Often the fossils provide key information in helping to identify ancient mangrove deposits. They include footprints, a wide variety of invertebrates including mangrove lobsters and gastropods, and fossil trees and other plants. Sand-dominated (clastic) and lime mud-dominated (carbonate) mangroves feature very different (and sometimes spectacular) faunas, both in ancient and modern settings.

The morphology of the mangroves depends to a large extent on the dominant sediment type, which itself relates to the climate. Channel sizes and abundance are controlled by root density, and therefore are far more common in clastic mangrove systems. Evidence will be presented showing the similarities between the morphology of mangroves in modern Florida and Miocene Borneo. Finally you will get to witness what happens when a mangrove is savaged by a hurricane, and what this can teach us about mangrove preservation.

### Biography

Jon Noad as a child was a mad keen palaeontologist, and has retained this interest while working as a mine geologist (five years in South

Africa), and a marine geologist assessing undersea cable routes. He has spent the last eight years with Shell in the Netherlands, working as a production and latterly an exploration geologist. In between times he completed an M.Sc. in sedimentology, and a Ph.D. investigating the Tertiary evolution of eastern Borneo. He has also taught half time at Delft University for the last two years, before moving to Shell Canada in June 2006. □



**Jon Noad** undertaking some stressful fieldwork on modern mangroves in the Florida Keys.

## Library Notes

By Garren Dugan, APS Librarian

Welcome back! I hope everyone had a great summer. First, I am greatly appreciative of becoming the new APS Librarian, and to start off my new position I have created the first APS library database on CD-ROM. This disc contains all the APS library books up to date.

The APS library database has five discs with all the instructions on each CD case. Each disk requires Microsoft Access™ software in order to operate.

If you would like to sign out an APS library CD-ROM, please come see me at the next meeting.

On a lighter note, the following books were donated to the library on October 20, 2006, by four generous APS Members. A big “Thanks” to all!

## Wendy Morrison

*Geology of Petroleum* by A.I. Levorson, 1967.

## Mike Clark

*Dinofest International* by Donald L. Wolberg, Edmund Stump and Gary Rosenberg, 1997.

## Sam Richter

*Fossils* by Frank H.T. Rhodes, 1962.

*The Meaning of Fossils* by Martin Rudwick, 1976.

*Raptor Red* by Robert T. Bakker, 1995.

*Tales Told by Fossils* by Carroll Lane Fenton, 1966.

## Dan Quinsey

*Backroad Mapbook* by Mussio Ventures.

*The Map that Changed the World* by Simon Winchester, 2001.

*Crossing Over: Where Art and Science Meet* by Stephen Jay Gould and Rosamond Wolff Purcell, 2000.

*Our Continent* by National Geographic Society, 1976. □

# News from the Dino Room

By Ron Fortier, APS Collection Curator

With the weather turning, I guess one should think about the curating aspect of fossil hunting.

With all the great donations from people like **Hope Johnson**, **David Patmore** and **Guy Santucci** just to mention a few, I have my work cut out for me this season. There are well over two hundred new specimens to be put into the system.

Hope Johnson alone donated such an array of Cretaceous fossils—all from the same location—that I will keep them together in their own case.

David Patmore turned over a good selection of Devonian fossils from the Hay River, Northwest Territories field trip in June.

**Mike Clark** (Mount Royal College) also submitted a nice selection of sea critters from Europe and the USA.

Along with what **Keith Mychaluk** turned over in the past years, I'm afraid the case we have been using to house the club collection is getting on the small side. We may have to build a proper case for all the great fossils we have in our care.

If you are interested in seeing the collection, all you have to do is let me know—you would agree with me that we need something just a little better to house the collection.

And I still have my own new finds to tend with—it's a good thing I like working with fossils! □



**A selection** of Upper Cretaceous vertebrate bones donated to the APS collection by Life Member Hope Johnson. Photo by Ron Fortier.

# Field Trip Review

Trip 2006-4  
September 30, 2006

## Dinosaur Provincial Park, AB

[In an embarrassment of riches, we have two write-ups on the Dinosaur Park field trip submitted for this issue. Since the two articles have substantial differences in point of view (and even trip chronology!) we present the work of both authors, for your reading pleasure—editor.]

Articles and photos by Ron Fortier and Dan Quinsey

The last field trip of the 2006 season, a day trip down to Dinosaur Provincial Park, was like going to an A.A. meeting at the local bar. Don't get me wrong; the day trip with **Dr. Donald Brinkman** as acting interpreter was a once-in-a-life time opportunity—even the weather was unbelievable for this time of the year.

On our introduction to the park at the scenic lookout, Don pointed out the formations and explained how the park was formed. There was a quick stop at the new Field Station for a quick look about and to try the new rest rooms.

Then it was everyone in the vans and off into the restricted area of the park we go. First stop was at the bivalve exposure and a talk on the contact point of

the Oldman and Dinosaur Park formations: I think I finally got the concept and know where one formation stops and the other begins.

Second stop was the bonebed. We looked and looked, and took a few pictures. If you have never been to this part of the park before I think you would be overwhelmed—as I think people like **Cory G.** and **Dan Q.** demonstrated with their show of excitement at the sight of all the fossil material just lying about on the surface. The centrosaur site was just a short walk down around the hill; there were people tripping over centrosaur vertebrae.

Stop three, I believe Don B. said was his favorite stop of the day. It must have been the turtles. Some of us even watched him put a turtle shell puzzle together. I just kept on telling myself “don't put that phalange or vertebra in my pocket...I don't need another one of those...I don't really need them...just take pictures instead!”

The hadrosaur house was the last stop in the park. I liked Don's talk a little more than the interpreter's the last time I was there. Everyone was asking him all sorts of questions



*Scenic view of the Dino Park badlands – Ron*

so I didn't get the chance to ask Don how I could stabilize the bone of the dinosaur I'm building in my garage.

The only way to top off a full day like this was to have supper at the Patricia Hotel/Bar. That was the best buffalo steak I'd had in a long time. Good food, good beer, good people.



*A nearly intact hadrosaur tibia at "Bonebed 50" – Dan*

own for a while to search for the park's treasures. Many bits of bone and teeth were found as well as an almost intact hadrosaur tibia.

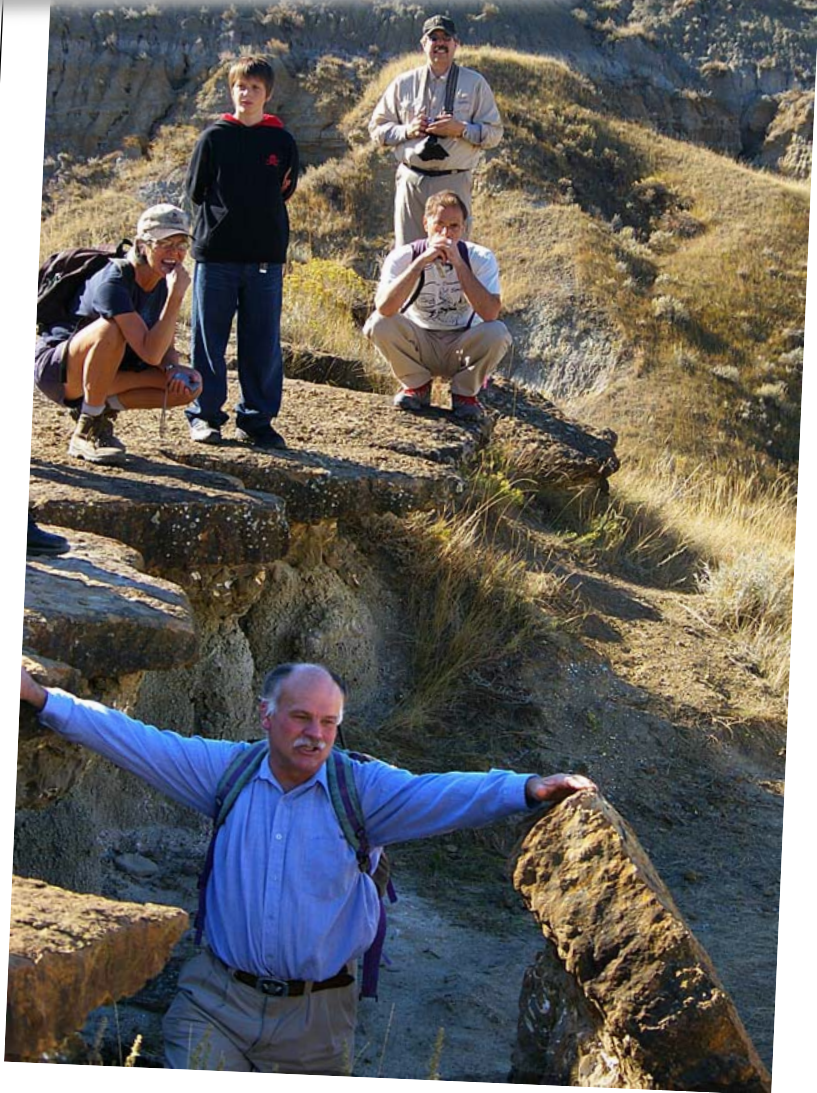
The second site was a small scramble down a hill to the *Centrosaurus* bonebed known as "Quarry #143". Excavations spanned a 10-year period from 1979 to 1989

Even on the long, dark drive back to Calgary I was thinking: how many of us have ever had the chance to drive in the back country down at DDP ?

– Ron Fortier

**D**r. Donald Brinkman of the Royal Tyrrell Museum of Palaeontology led 30 APS members on a field trip in Dinosaur Provincial Park on September 30, 2006. Everything was well planned including a sunny day, accompanied by a high of 26 degrees. We started off with a quick stop at the new field station where members were allowed time to refresh themselves and take a quick gander at the exhibits. All of the points of interest were roadside stops with little or no climbing necessary.

The first site was "Bonebed 50". Stratigraphically, the bonebed is in the middle of the Dinosaur Park Formation and includes a rich accumulation of isolated vertebrate bone and two partially articulated skeletons. One was a small section of vertebral column covered by a Plexiglas pyramid. The second is the postcranial skeleton of a hadrosaur. Members were left to venture out on their



*Dr. Brinkman explains a fossil clam bed – Ron*



and at the end of this time part of the bonebed was developed into an *in situ* exhibit.



*Bizarre badland scenery – Ron*



*Bizarre badland scenery – Dan*

area of the park is said to look just like the surface of the moon. The sights witnessed by all of our members on this sunny day were amazing. A picture is worth a thousand words but cannot begin to describe the beauty of the park.

At the end of the day, we made a pit stop at the local hotel in Princess for a steak dinner and lots of smiles. Many thanks go out to Dr. Don Brinkman and the organizers of the trip for a job very well done.

– Dan Quinsey □

During the excavations only about 25 percent of the *Centrosaurus* bonebed had been investigated. A total of fifty-seven individuals have been identified in parts of the bonebed to date and estimates suggest the total number of individuals represented in the entire bonebed may exceed two hundred. Once again, members were left to their own adventures after the short presentation by Dr. Donald Brinkman.

Our third stop was “Display House #4” where a nearly complete skeleton of the hadrosaur *Corythosaurus* is exposed. C.M. Sternberg discovered the specimen in 1965 and he supervised the excavation and preparation of the specimen.

Our last stop in the park was the “Valley of the Crescent Moon”. This



*A hadrosaur vertebra, “Bonebed 50” – Dan*

# The October 2006 Rock-n-Fossil Show

Article and photos by Dan Quinsey

The author, in his capacity as APS Public Outreach Chairperson, participated in the Rock-n-Fossil show hosted by the Calgary Science Network and the Geological Survey of Canada on October 14, 2006. The event, billed as the *Antiques Road Show* equivalent for rocks and fossils, took place at the Village Square Library in northeast Calgary and drew many kids and adults alike to view the many displays and have their special treasures identified.

The Alberta Palaeontological Society displayed fossil examples of predators and prey (these were also displayed the following Friday at the APS October Open House at MRC) from the collection of Dan Quinsey. Mother Leslie St. Germain and children Shaylene and Atlas are shown below holding a mosasaur-bitten fragment of *Placentiaceras*.

The Rock-n-Fossil event is held twice a year at libraries around the city and is worth a visit to see spectacular fossils on display such as the crinoid specimen of *Scyphocrinites* collected by Sternberg. □



**Figure 1.** One of the Geological Survey of Canada's geoscientists answers questions from the public.



**Figure 2.** Shaylene and Atlas St. Germain with mom Leslie show off an ammonite specimen.



**Figure 3.** Spectacular slab of crinoids, *Scyphocrinites* sp. (Lower Devonian), at the Geological Survey of Canada's display.

# Microfossil Sorting Project Winter 2007

By Mona Marsovsky

**W**hat treasures will we find this year? Last year, APS members found various kinds of fish teeth, fish scales, dinosaur teeth and even mammal teeth. Once again we will search for fossils in the soil samples gathered by **Dr. Donald Brinkman** of the Royal Tyrrell Museum of Palaeontology (RTMP) using the microscopes provided by Mount Royal College. Don Brinkman will take all of the fossils we find to the RTMP where he will study them for his palaeoecological research on the Late Cretaceous.

Upcoming microfossil sorting seminars are scheduled for the following Saturdays:

**December 2, 2006**

**January 6, 2007**

**January 27, 2007**

**February 10, 2007**

**February 24, 2007**

You are welcome to come for as many sessions as you like. All sessions will take place from 1:00 P.M. to 3:30 P.M. in Room B213 at Mount Royal College. If you register in advance with me (**Mona Marsovsky, (403) 547-0182, [vaclav@telusplanet.net](mailto:vaclav@telusplanet.net)**), I will be able to notify you in case we have to cancel the session unexpectedly. Please bring a pen (to label your samples) and tweezers and/or a fine-tipped paint brush to manipulate the tiny fossils. □



# Search for Feathered Dinosaurs

By Mona Marsovsky

**T**his is your chance! In 2007, the Sinofossa Institute and GSA (Geological Society of America) will lead tours that focus on the feathered dinosaurs of Liaoning Province, in northeastern China.

The tour is 10 days long. There are optional 3-day pre- and post- tours, respectively. The pre-tour includes sightseeing in Beijing, while the post-tour visits the Terra-cotta Warriors in Xi'an and the Liujianxia National Dinosaur Geopark in Lanzhou. On the first day the group will visit the main dinosaur museums in Beijing (Institute of Vertebrate Paleontology and Paleoanthropology and the newly renovated Beijing Natural History Museum).

A day drive (with a stop at the far eastern end of the Great Wall of China) will take the group to its base for the majority of the tour, at the city of Yixian in Liaoning province. Each day, the tour group will explore a different feathered dinosaur quarry, with time for the participants to use their chisels to recover specimens from the "scrap pile". The fine-grained lake sediments yield fish, insects, and perhaps even turtles, birds and dinosaurs.

All important specimens will go to the Institute of Chinese Academy of Geological Sciences (CAGS) for further study. One of the highlights of the tour will be a visit to the new museum at Sihetong, which is the site of the discovery of the first feathered dinosaur. This tour is led by Dr. Hailu You, Senior Researcher of the CAGS and President of the Sinofossa Institute. The Sinofossa Institute is a non-profit organization, based in Montreal Canada, whose purpose is to help fund dinosaur research in China. Dr. Hailu You has led several tours to Liaoning.

See **[www.sinofossa.org](http://www.sinofossa.org)** for details. □

# Summer in the Peace

## Palaeontological Society of the Peace (PSP) 2006 Field Season Report

By Katalin Ormay, Sheldon Graber and Bert Hunt. Photos by Katalin Ormay.

**T**he summer of 2006 heralded the third year of existence of the Palaeontological Society of the Peace (PSP). Our activities corresponded to the Society's objectives of:

- Revisiting known fossil locations,
- Exploring the area for new fossil discoveries,
- Collaborating with the proposed River of Death and Discovery Dinosaur Museum and Research Centre, and
- Providing information, logistics and assistance to those interested in our region's palaeontology and geology.

### Field Activities

**D**ue to our limited personal time and manpower, the Executive had few resources to actively explore for new finds. Our priority was to ensure past fossil discoveries are secure and to determine if any new finds have "surfaced" since the last visit. The weather and snow conditions of the winter of 2005/2006 were perfect. Slumping was such that fos-

sils were easy to find as opposed to being covered up with thick layers of clay. In addition, dry weather and low water levels in the rivers and creeks made summer field work easier.

### Pipestone Creek Bonebed

The future site of the proposed "River of Death and Discovery Dinosaur Centre" was frequented many times over the course of the summer. Many new, small bone fragments surfaced; however, the hill slumped over the bonebed many years ago, thus providing the protection and preservation of the bonebed site. In spite of this fact, the location has become so "famous" now, that our visitors always want to see it.

### Wapiti River Bonebed

Besides the well-known Pipestone Creek Bonebed, the existence of another—possibly pachyrhinosaurine—bonebed along the Wapiti River has been known for years (Tanke, 2004). This site is about 30 km upstream (west) and 120 m higher in section than the Pipestone Creek Bonebed. This

bonebed measures over 100 m along section and is about one metre thick. It currently is the most prolific site in the Peace region. The bones continually "bleed" from the bonebed and eventually tumble to various points down the hillside. The abundant material here indicated pachyrhinosaur, which was confirmed by a fragmented pachyrhinosaur skull collected in 2001. However, the lack of diagnostic features prevented exact description and identification of those bones (Tanke, 2004).



**Figure 1.** "Unicorn" spike found at the Wapiti River bonebed.



**Figure 2.** Bone fragments found along the Red Willow River.

This year we again collected numerous fragmented bones at the base of the outcrop. These included vertebrae, broken limb bones and ribs. The bone layer (believed to be *in situ*) higher up in the outcrop was visible again this year, and several larger bones were recovered. About one metre below this bone layer a bentonite layer was found, and samples were collected for dating.

The most important discovery this year was made at the base of the outcrop by finding a unicorn spike (Figure 1). If this bone is in fact identified as a unicorn spike, it would prove that the Wapiti River Bonebed is of pachyrhinosaur material. Considering the possibility of a rather large age difference between this site and of that of Pipestone Creek, further studies would be necessary to properly determine the relationship between the animals at these two sites.

Recognizing the importance of this discovery, we contacted **Dr. Phil Currie**. After reviewing our pictures and report about this bone, he instructed us to collect it by plaster jacketing and transporting it to Grande Prairie Regional College. This bone, together with another partial nasal boss (whose existence was known for many years and which was weathering rapidly) were both jacketed and collected.

### Red Willow River Bonebeds

Another known dinosaur fossil location is the area along the Red Willow River. This year another fresh

batch of bones was awaiting discovery. We made a few exploratory trips upstream of the falls, to a previously unexplored area. As a result of our preliminary investigation along the river we located several sites with fragmentary bones: vertebral centra and limb and rib fragments. Most bones found to date are probably from a *Parasaurolophus*—a crested hadrosaur (Figure 2).

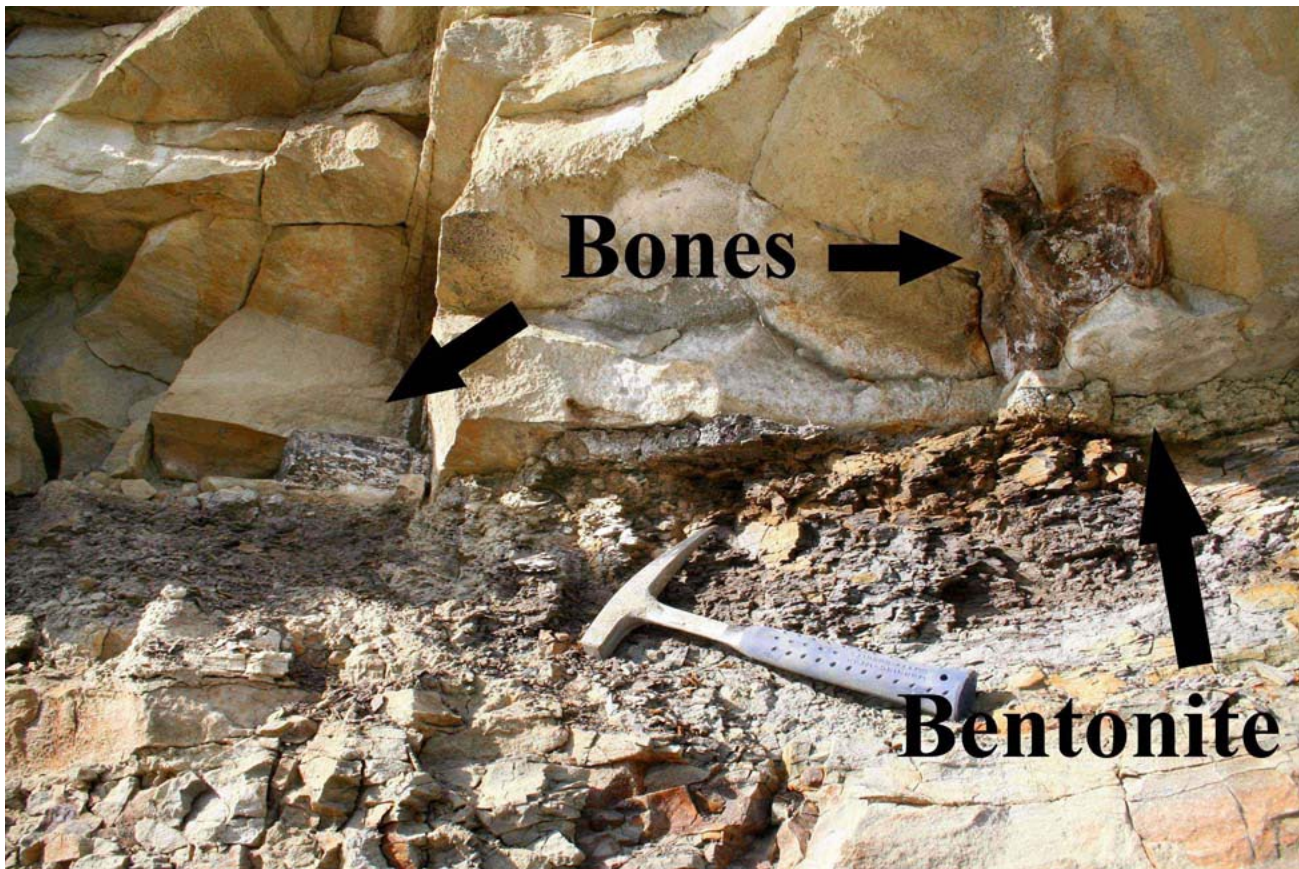
The bonebeds have not been formally mapped but appear to be laterally extensive. Numerous footprints were also noted in different slumped blocks and



**Figure 3.** Two dinosaur footprints from the Red Willow River.

boulders along the water (Figure 3). Various bentonite layers were found on the banks. About 1.8 km upstream from the falls, two *in situ* bones (probably limb bones) were noted in an outcrop, just above a bentonite layer (Figure 4).

The abundance of dinosaur finds along the Wapiti River would warrant a more concerted exploration and maybe collection effort to fully describe and understand the palaeontology of this area.



**Figure 4.** Two *in situ* dinosaur bones in sandstone, overlying a bentonite bed. Red Willow River.

## Research

The PSP was fortunate to have a few outside researchers studying the fossils and rocks of the Peace River region. This way we shared information and exchanged ideas which benefited everyone involved.

### Enbridge Environmental Assessment

According to the Province's Historical Resources Act, any new construction project needs to include an environmental assessment. Part of this process is a palaeontological investigation to describe any potential fossil resources that the project might encounter. The proposed Enbridge pipeline (connecting Prince Rupert and Edmonton) is going through the southern part of the Peace Country. Two professional palaeontologists, **Lisa Bohach** and **Emily Frampton**, from Calgary, were in our area following the route of this proposed pipeline and assessing potential fossil sites. We made contact with these researchers, which led to mutual presentations on their work and on the activities of our society.

They informed us about a petrified tree stump

along the Pinto Creek that they were unable to collect. Since it was a museum quality specimen, it was later collected by the PSP and is now in the Grande Prairie Regional College (GPRC) collection.

We learned from Lisa and Emily of a site along the Kakwa River that we later visited. We found numerous marine fossils and also some dinosaur footprints (Figure 5). This site, along with another rich fossil site about 50 km upstream, would make an interesting research project for an interested palaeontology student.

### Ph.D. Thesis Research—Federico Fanti

The PSP (together with Grande Prairie Regional College and the County of Grande Prairie) helped with the fieldwork of Federico Fanti. Northwest Alberta is fortunate to have this bright Ph.D. student from the University of Bologna, Italy, studying our area. The focus of Federico's field work and thesis is the stratigraphy of the non-marine, dinosaur-bearing Wapiti Formation. This 1500 m thick formation is largely unstudied and unmapped because it does not contain hydrocarbons! So far it lacks well identified regional horizons, and its smaller scale stratigraphy is not known. Considering that northwest Alberta's

dinosaur finds are from this formation, data on the Wapiti Formation are needed to describe its unique sedimentary sequence. Federico collected bentonite and coal samples for dating. His research will hopefully explain the stratigraphic, depositional and palaeoenvironmental setting and age of each of our dinosaur locations.

### University of Alberta Palaeontological Society Visit

The University of Alberta's Palaeontological Society visited us to further enhance their field knowledge. These palaeontology students visited the Wapiti River and the Pipestone Creek Bonebed sites. They were shown the GPRC's collections and listened to presentations on local geology.



Figure 5. Dinosaur footprint at the Kakwa River.

### Public Seminars

Three regional "Stones-N-Bones" sessions were held in Grande Prairie, Fairview and Peace River. The PSP presented an update on the "Dinosaurs of the Peace" PowerPoint™ presentation and the latest on the proposed Pipestone Creek Museum. The turnout at these presentations was exceptional, indicating a very high level of public interest. These outreach events further raised awareness of our palaeontological resources and their world-class status.

After each seminar the public were encouraged to seek information about their personal collections of stones and fossils. We believe this is an essential component of our responsibility to the local commu-

nities. It not only establishes good will with the public, but also allows us to ensure significant discoveries will be scientifically documented.

### Museum Collaboration

The River of Death and Discovery Dinosaur Centre has taken on new life throughout the last year. The following are the milestones of the last year:

- Smithsonian presentation through video and Dr. Phil Currie.
- Website completed: [www.riverofdeath.ca](http://www.riverofdeath.ca)
- 3D virtual video depicting the proposed museum building.
- Tabling of the Business, Marketing and Blueprint Museum Plans.
  - Formation of potential sub-committees, and
  - A public gala for November 2006 to present the proposed Museum to the general public.

We need to acknowledge and express our thanks for the generous help of Grande Prairie Regional College (GPRC), the Science Department of GPRC, the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA) and individual volunteers (**Terry Johnson** and **Dan Steinke**) who made our activities possible. □

### Reference

Tanke, D. H. 2004. Mosquitoes and mud: The 2003 Royal Tyrrell Museum of Palaeontology expedition to the Grande Prairie region (northwestern Alberta, Canada). *Alberta Palaeontological Society Bulletin*, v. 19, no. 2, p. 3-31.

## Field Trips 2007

By Wayne Braunberger

Tentative dates for the 2007 APS field trips are as follows:

- June 23-24: "Tolman Bridge: The Sequel"
- July 21-22: Location to be determined.
- August 18-19: Location to be determined.

Watch for details in the March 2007 *Bulletin*. □

# Fossils in the news

*ABC (Australia) Science Online, July 27, 2006.*

## **Australian sea monsters swam in desert**

COOBER PEDY, South Australia—Two newly discovered plesiosaurs—with opalized skeletons—have turned up in Lower Cretaceous rocks (115 million years old) from the Australian outback. *Umoonasaurus* (2.4 m long) and *Opallionectes* (6 m long) are both represented by apparently juvenile skeletons. Other marine reptile and fish remains were found in the same formation. Significantly, it appears from several lines of evidence that these animals lived in cool to very cold water (possibly freezing); in Early Cretaceous time, this part of Australia was near the antarctic, at a latitude between 60° and 70° south. Story at <http://www.abc.net.au/science/news/stories/2006/1698381.htm>. You can download a full-text PDF paper on this topic at <http://www.blackwell-synergy.com/doi/pdf/10.1111/j.1475-4983.2006.00569.x>

*CBC News Online, October 27, 2006.*

## **Chicxulub: the debate rages on**

PHILADELPHIA—What wiped out the dinosaurs? According to a group from Princeton University (New Jersey), led by palaeontologist Gerta Keller, it wasn't the Chicxulub meteorite impact. The Chicxulub crater in the subsurface of Mexico's Yucatan Peninsula has been the subject of hot debate ever since it was recognized in the 1980s. Keller claims to have solid sedimentological and biostratigraphic evidence [*some of which is a little dodgy in this reader's opinion -ed.*] that the Chicxulub impact happened well before the K/T extinction event. She implicates a series of impact events, of which Chicxulub was only the earliest, as well as volcanic events taking place on the other side of the world, in India. Keller presented her findings at the Geological Society of America's annual meeting. See details of Gerta Keller's investigations at <http://geoweb.princeton.edu/people/faculty/keller/chicxulub.html>

*BBC News Online, July 11, 2006.*

## **Were dinos warm blooded or cold blooded? Answer: yes**

GAINSVILLE, Florida—Palaeontologist James Gil-

looly of the University of Florida tackled this age-old question by studying growth rings in the bones of a number of different dinosaur species. By using growth rate equations that include body temperature as a variable, and that work for modern animals, he worked out the rate of growth and adult body size for each sample. Then, rearranging the equation, he was able to solve for the body temperature at different growth stages. He concluded that smaller dinosaurs were cold-blooded (ectothermic), but as they became bigger, their body volume was big enough to keep their temperatures relatively constant, so became effectively warm-blooded. This effect is called homeothermy.

Gillooly surmises that the biggest dinosaurs, like *Apatosaurus*, would have had body temperatures around 40°C, close to the maximum for sustaining life. He suggests that this was a limiting factor in the maximum possible size of dinosaurs. See story at <http://news.bbc.co.uk/1/hi/sci/tech/5166518.stm>

*BBC News Online, April 18, 2006.*

## **Dino may have been pack hunter**

PLAZA HUINCUL, Argentina—More evidence that theropod dinosaurs “may” have been pack-hunters has been found in Argentina by palaeontologist Rodolfo Coria of the Carmen Funes Museum. Hundreds of bones, representing a minimum of seven specimens of the large theropod *Mapusaurus roseae* have been uncovered in one bonebed in the Patagonian badlands.

The fact that the bones are exclusively those of *Mapusaurus* invites speculation that the animals were together in a group when they died. However, Dr. Coria and Dr. Phil Currie of the University of Alberta caution that this evidence is open to interpretation. While pack hunting is one possibility, the animals may just have “mobbed” their prey, or simply gathered around the carcass that one of them brought down. See story at <http://news.bbc.co.uk/1/hi/sci/tech/4918292.stm>

*The Globe and Mail, July 14, 2006*

## **Study charts dinosaur survival rates**

DRY ISLAND BUFFALO JUMP, Alberta—A group of researchers headed by Drs. Gregory Erickson and Phil Currie has used bone growth ring studies to determine growth and mortality rates of tyrannosaurs. Using samples from the Dry Island Buffalo Jump *Albertosaurus* quarry, containing 22 individuals of



varying sizes, the researchers plotted growth rates and ages for the albertosaurs as well as for various other types of animals. They conclude that tyrannosaurs (which includes albertosaurs) grew rapidly after birth and had a high survival rate until they reached sexual maturity at about 14 years. After that, mortality increased due to disease, increased aggression, contact with other tyrannosaurs and various stresses related to reproduction. The research is published in the July 14, 2006 issue of *Science*.

*Brightsurf.com News, November 6, 2006.*

### **Fossils from ancient sea monster found in Montana**

BOZEMAN, Montana—Retired Lutheran Pastor Ken Olson and son Garrett decided to go on a fossil hunt to celebrate the junior Olson's homecoming from a Peace Corps stint in Africa. Their hunt resulted in the discovery of the skull and neck bones of an elasmosaur, the long-necked variety of plesiosaur, a marine reptile from the Upper Cretaceous Bearpaw Formation [*the article isn't clear on how much of the skeleton was found -ed.*]. Pastor Olson, with prior experience in collecting specimens for MSU's Museum of the Rockies, excavated, jacketed and delivered the fossils himself.

Plesiosaur skulls are rare, and Montana State University palaeontologist Jack Horner says this one is a very important specimen. "This is...the first good elasmosaur skull found in Montana," says MSU marine reptile expert Patrick Druckenmiller (a U of C alum, who spoke to the APS in 2005). See [http://www.brightsurf.com/news/headlines/27337/Fossils\\_from\\_ancient\\_sea\\_monster\\_found\\_in\\_Montana.html](http://www.brightsurf.com/news/headlines/27337/Fossils_from_ancient_sea_monster_found_in_Montana.html) and also [www.museumoftherockies.org](http://www.museumoftherockies.org)

*MSNBC.com, October 25, 2006.*

### **Oldest bee fossil creates new buzz**

MYANMAR (Burma)—A 100-million-year-old fossil bee, found in amber from a Myanmar mine, is the oldest bee known to science and reinforces the idea that bees evolved from wasps. Oregon State University palaeontologist Dr. George Poinar says "it's more bee than wasp," but it has wasp-like narrow hind legs, with bee-like leg hairs for gathering pollen. Bees and flowering plants are thought to have co-evolved, allowing flowering plants to diversify and spread world-wide. See <http://msnbc.msn.com/id/15418131/?GT1=8618> for the story and pictures.

*ABC (Australia) News Online, August 17, 2006.*

### **Blue whale ancestor no gentle giant**

VICTORIA, Australia—The popular image of the gentle baleen whales belies their more ferocious ancestry. Erich Fitzgerald of Monash University, Melbourne, has revealed the skull of *Janjucetus*, a toothy, 25 million-year-old ancestor of baleen whales, named for the town of Jan Juc, Victoria, where it was discovered. The animal would have been about 3.5 m long, much smaller than most of its descendants; but it had sharp, 3 cm-long teeth and large eyes, the marks of a predator. Fitzgerald speculates that it could have hunted "large fish, perhaps sharks, maybe even other whales." See <http://www.abc.net.au/news/newsitems/200608/s1716018.htm> and <http://www.museum.vic.gov.au/hottopics/gallery.asp?ID=656&RIn=3920> for more information.

*CNN.com Science & Space, October 24, 2006.*

### **Dinosaur fossil spills its guts, out come worms**

BOULDER, Colorado—"Leonardo", the famous hadrosaur mummy is revealing more secrets. [*Brachylophosaurus to be precise; see "A visit with Leonardo" by Vaclav Marsofsky, Bulletin, Dec. 2003 -ed.*] Examining the gut contents of the exquisitely preserved dinosaur, researchers Karen Chin and Justin Tweet spotted hundreds of tiny holes riddling the dino's gut. They suspect these are the burrows of parasitic intestinal worms that infect many modern animals. Leonardo's gut contents also revealed plant fragments, presumably part of the dinosaur's last meal.

See <http://www.colorado.edu/news/releases/2006/351.html> for a more detailed story.

*The Calgary Herald, November 14, 2006*

### **Canada wins "Fossil of the Day"**

NAIROBI, Kenya—WOOHOO! We won! Is there any bad news? Er...the "Fossil of the Day" was awarded to Canada and Australia (tied for first place) at the annual United Nations conference on climate change. Environmental groups and opposition parties intent on ridiculing the federal government's policy of delayed action on reducing CO<sub>2</sub> emissions gave the backhanded distinction to Environment Minister Rona Ambrose. So—when do we get our fossil? ☐

[*Thanks to Phil Benham, Georgia Hoffman, Keith Mychaluk and Valerie Adams (for quote on Page 4).*]

# Free Stuff from the Internet

By Howard Allen

These days, anyone with a computer has spent countless hours surfing the Web. Those of us with a palaeontological bent have no doubt wasted hours gawking at museum web sites or drooling over pictures of fossils on collectors' personal web pages.

But finding really *useful* stuff is often much harder. Wouldn't it be nice if you could suck actual maps, books and scientific papers out of the ether? Stuff that you'd otherwise have to pay for, or drive to a library to use? Well, sometimes you can!

What follows is a short list of sites where you can look up and download—for free—mainstream geological and palaeontological literature and resources. As I find more of these sites, I'll periodically post them in the *Bulletin*. If you come across any on your own, please let me know and I'll include them. I want to emphasize that this isn't just a list of cool websites, no matter how entertaining or educational.

My rules for what's included in this category are:

- 1) You must be able to download the material to your own computer and use it offline, just as you would a printed scientific journal or book, or a stand-alone software application.
- 2) It must be "full text": not just abstracts, summaries, reviews or teasers, and no screen-resolution maps or material with limited usability.
- 3) It must be "mainstream" scientific literature that's otherwise available in research libraries or at cost.
- 4) It must be cross-platform: no "Windows only" stuff. Any software requirements must be Mac AND Windows at the very least. (Extra points for OSX/UB, Linux, Unix, etc.)
- 5) It has to be free and available for a reasonable length of time (no "this week only" specials).

So, with the ground rules out of the way, here's a sample of what I've found to date:

## ***Geological Survey of Canada Maps***

This is a REAL biggie—it used to drive me crazy to

visit the GSC's bookstore in Calgary only to find that 99% of all the maps the Survey has ever published are out of print. No more! Now, almost all of the GSC's geological maps can be viewed online and downloaded at high resolution from the government's MIRAGE site: [gdr.nrcan.gc.ca/mirage/index\\_e.php](http://gdr.nrcan.gc.ca/mirage/index_e.php)

It helps if you know the number of the map you're looking for, or any other information such as year, author, or NTS map code. The MIRAGE site offers a text-based search tool (fill in the blanks then click "Search"), and a "web mapping tool". The latter is much less efficient than the text search. You're confronted with a thumbnail map of Canada covered with sixteen zillion overlapping rectangles representing the boundaries of the available maps. The idea is to zoom into your region of interest with various tool buttons and narrow your search to the map you want. With so many overlapping maps, the process becomes confusing in a big hurry, but if you're persistent, you'll eventually find your map.

The maps themselves are high resolution scans of paper maps (*i.e.* MB-size files—be warned!). Some are *really* rustic, preserving creases, pencilled-in notes and other interesting artifacts. The files are available in two formats: PDF and MrSID. The latter is a map-oriented format that uses its own compression scheme. MrSID files are considerably smaller than the equivalent PDFs. Free viewer software called ExpressView is available from Lizardtech, [www.lizardtech.com](http://www.lizardtech.com). The software comes as both a browser plugin and a stand-alone application. It's a bit clunky, but gets the job done, allowing you to zoom, pan and export or print portions of the map.

## ***Canadian Journal of Earth Sciences***

Volumes 35, No. 1 (January 1998) to the current issue are available as PDF files from the National Research Council of Canada at [pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2\\_desc\\_e?cjes](http://pubs.nrc-cnrc.gc.ca/cgi-bin/rp/rp2_desc_e?cjes)

On the main page, click the "Contents" link, then browse the resulting list of links to issues and their sub-linked articles. Other journals in this series are also available, including *Canadian Journal of Botany* and *Canadian Journal of Zoology*, which rarely contain articles of palaeontological interest: click the "Journals" link on the CJES main page to see.

## ***Palaeontology***

Back issues of the journal *Palaeontology* have been converted to PDF for free downloading. Currently available are volumes 12 (1969) through 41 (1998). Earlier issues, from 1957 through 1968 are

not yet available, but are apparently in the works. More recent papers require a subscription or per-paper fee; however, a few (typically one per volume) are made available for free, if you take the time to browse the abstracts. Freebies are designated “Free Content” in green text next to the abstract title. Go to [palaeontology.palass-pubs.org/search.htm](http://palaeontology.palass-pubs.org/search.htm) and use the “Quick Links” or a search form.

### ***Geological Map of Alberta***

This 1:1,000,000 scale map can be downloaded from the Alberta Geological Survey’s site at [www.ags.gov.ab.ca/publications/ABSTRACTS/MAP\\_236.shtml](http://www.ags.gov.ab.ca/publications/ABSTRACTS/MAP_236.shtml). Click the “Download Digital Files” link. Files are enormous (up to 26 MB for the 300 ppi raster image) and come in WMF (Windows), PICT (Mac) and JPEG formats.

A few other reports can be downloaded as PDFs by clicking the “Publications” link at the top of the page; however, most of the “classic” AGS reports and bulletins of palaeontological interest are unavailable.

### ***Bulletin of Canadian Petroleum Geology***

This one stretches the “free” rule a bit, as access is limited to CSPG members; but there are many friendly CSPG members in the APS who would no doubt be willing to help out a fellow APSer with reasonable requests. This journal and its earlier incarnation, the *Journal of the Alberta Society of Petroleum Geologists*, is available from 1953 to present, in PDF format. CSPG members should go to [www.cspg.org](http://www.cspg.org), log in to the “members only” section and follow the links to the “AAPG Datapages Collection” (no, the AAPG Bulletins are NOT free). From there, a search form gets you to the papers you’re interested in.

The PDF files, especially the older issues, have been converted using optical character recognition (OCR) from scanned pages. The resulting PDFs are “layered” with a scanned image (a photo of the page) on top and an invisible text layer underneath. This means that you can run search routines or select and copy passages of text; but out of sight is out of mind and the OCR process is less than perfect—on a quick test I found the text layer to be riddled with typos—keyword searches are likely to fail, so be warned.

### ***Palaeontologia Electronica***

This is a unique resource, being a purpose-built online journal; therefore it takes advantage of all the technologies available to the online world: live links, colour illustrations, QuickTime animations, etc. As you’d expect from an online journal, its “papers” are

all relatively recent. *Palaeontologia Electronica* has only been around since 1998 and the added fact that it only has two issues a year means that there isn’t a huge storehouse of literature, yet. But the articles published to date are significant, peer-reviewed and worth a good look.

You can download (big) PDFs of the articles, though you may be just as happy to view them online, given that they were designed with that purpose in mind. Go to [palaeo-electronica.org/toc.htm](http://palaeo-electronica.org/toc.htm) □

# Last Chance for Dinosaurs of the Gobi

By Mona Marsovsky

**N**ext August 13–28, 2007 will be the last time that Dr. Philip Currie of the University of Alberta leads a public tour to the Gobi Desert. Over each of the past ten years, Dr. Currie, Dr. Eva Koppelhus and Dr. Badamgarav of the Mongolian Academy of Sciences have led a two-week expedition in late summer to excavate dinosaurs in the Gobi Desert. This tour has been available to anyone in the general public who wants to get some “hands-on” experience in prospecting and excavating fossils from the Late Cretaceous.

The trip starts in Ulaanbaatar, Mongolia’s capital city, with a tour of the palaeo lab of the Academy of Sciences. From there the group flies to the Gobi and travels overland (“extensive off-road driving”) to Nemegt Basin. The next five days are spent finding and excavating fossils, while staying in well-equipped tents. Visits to Ukhaa Tolgod, Tugrigin Shiree (site of the “Fighting Dinosaurs”) and the Flaming Cliffs (site of the first discovered nest of dinosaur eggs) and Ulaanbaatar’s other excellent museums complete the tour.

In addition to welcoming all new participants, Dr. Currie invites previous trip participants to join him for this last expedition.

For more information, contact the author (tel: (403) 547-0182) or surf to [www.nomadicexpeditions.com](http://www.nomadicexpeditions.com) and select Adventure Tours and “Dinosaurs of the Gobi”. □

# APS Eleventh Annual Symposium

## Saturday and Sunday, March 17 & 18, 2007

### The Symposium

The symposium is a two day event with lectures, poster and showcase displays on Saturday, March 17 and workshops on Sunday, March 18. Saturday programs are free and open to the general public. We plan to encourage families to bring fossils to our identification booth on the Saturday. For the kids, we have videos and an activity table. No registration is required to attend the Saturday activities. Due to limited space, Sunday workshop participants will be required to register and pay a moderate fee for workshop manuals. The main events will be centred in the lower level hall at Mount Royal College (accessible through the West or East Entrance).

### Call for posters and abstracts

The Alberta Palaeontological Society (APS) would like to invite you to present a poster at our Eleventh Annual Symposium. This symposium will have presentations from a mix of avocational and professional palaeontologists from all over Western Canada. The theme this year is "Discovering Fossils". We are interested in posters or displays associated with palaeontology or other natural sciences. Specific invitations have been given to staff and students of western universities, natural history clubs, the Geological Survey of Canada, museums and members of the petroleum industry and the artists' community. The aim is to showcase palaeontology to the general public and foster closer relations between the APS and the above groups. The event is free to all participants. There is no fee to submit a poster and abstract.

### Instructions for posters and displays

A table and stand with a 4x8-foot poster board will be supplied to each presenter. Each presenter should bring stick pins or tape for attaching posters although we will try and have some on hand for those who forget. Those who have special requirements such as electricity to operate a display or a larger display area should identify these requirements upon submission of a request for space. Presenters are requested to provide an abstract as per instructions below. We request that poster presenters be set up by 9:00 A.M. Saturday, March 17. During the day a poster session period will be specified; please be available at least during this time for discussion about your exhibit. The deadline for submission of requests for poster space is February 1, 2007.

### Symposium abstracts volume

As in past years an attractive symposium abstracts volume will be published. It will be sold at a price to cover publication costs. We request that speakers and poster presenters submit abstracts for the publication to the editor (see below). Abstracts can be 1–4 pages in length (with 1 being standard; less than 1 full page is OK). Requests for longer abstracts will be accepted. Abstract contributors are encouraged to include photos and/or diagrams although it should be noted that the abstract volume will be printed in black and white. Documents will not be edited for content but may be reformatted to fit into the volume. Snail mail address (and email address if you wish) of the author should be included for insertion in the volume. Deadline for submission of abstracts for publication is February 15, 2007. Specific instructions and examples can be downloaded from our website, [www.albertapaleo.org](http://www.albertapaleo.org) or by contacting the Editor.

### Symposium workshops

Please visit the APS website for latest updates on the workshops. Workshop abstracts will be posted as soon as they are available. All workshops will be at Mount Royal College; classroom location to be announced.

### Tentative workshop topics (topics, presenters and dates subject to change)

**Workshop #1**, Special children's workshop, cost TBA, Saturday March 17, 2007, duration 1 hour.  
Topic : *How to be a Fossil Detective*, presented by Dan Quinsey.

**Workshop #2**, Special children's workshop, cost TBA, Saturday March 17, 2007, duration 4 hours.  
Topic : *Make-a-saurus modelling workshop*, presented by Palaeo Artist Brian Cooley.

**Workshop #2**, cost TBA, Sunday March 18, 2007, duration 2–3 hrs.  
Topic : *Introduction to trilobites*, presented by Dr. Brian Chatterton, University of Alberta.

**Workshop #3**, cost TBA, Sunday March 18, 2007, duration 2–3 hrs.

Topic : *Introduction to brachiopods*, presented by Dr. Wayne Haglund, Mount Royal College.

To sign up for workshops, contact Vaclav Marsovsy at (403) 547-0182 or email [vaclav@telusplanet.net](mailto:vaclav@telusplanet.net). Sign up deadline is March 7, 2007. Cheques should be made payable to Alberta Palaeontological Society. Payment may be handed to Vaclav or mailed to the Society's mailing address at P.O. Box 35111 Sarcee Postal Outlet, Calgary, AB T3E 7C7.

#### **Contact Information**

**Posters presentation/volunteering:** Dan Quinsey (403) 247-3022, [president@albertapaleo.org](mailto:president@albertapaleo.org)

**Lecture program/general information:** Philip Benham (403) 691-3343, [programs@albertapaleo.org](mailto:programs@albertapaleo.org)

**Abstract submissions:** Howard Allen (403) 862-3330, [editor@albertapaleo.org](mailto:editor@albertapaleo.org)

Visit the APS website for confirmation of meeting times and speakers: [www.albertapaleo.org](http://www.albertapaleo.org)

# Helpful Hints for Poster Presenters

## **Definition**

A poster is a visual medium to express results of one's research work on a topic they have chosen to study or to provide an overview of a researched topic.

## **Who should do a poster?**

Anyone who has an interest in sharing the work that they have done and who likes feedback from the audience (symposium attendees) on their work should consider doing a poster.

## **What should be considered for a poster?**

Any topic that ties in with palaeontology can be considered for a poster.

## **Why posters?**

Oral or written presentations are mechanisms to convey past and recent developments in a field of study that is of interest to the investigator. An effective written presentation is a poster presentation.

## **What is a poster?**

A poster is something that you pin up on a board. The dimensions of a poster can vary. It can be anywhere from 2' x 3' to 4' x 8'. It contains text and figures relevant to your work. It follows the same pattern as any scientific article that appears in a journal.

### **A typical format:**

- Title, Author(s), Affiliation
- Summary—sum up the study in one paragraph
- Introduction—reasons behind the work
- General information, location (study area)
- Description and interpretation
- Conclusions
- References

Dedicate a box to each one of the sections listed above. Within the box, include the text and figures relevant to that section. Number the boxes in such a way that the reader can follow from one box to the other in the presenter's intended sequence. The structure of the framework will vary from topic to topic.

## **How does one make a poster?**

Today, with powerful graphics and word processing software, a poster can be made entirely using a computer. The final poster image can be printed on a large-format colour printer. But you don't need a computer to do a poster! Carefully hand-lettered or typewritten text can be combined with drawings, photos or enlarged photocopies to make an effective presentation. These days it should be easy to find someone with a computer who could print out some titles or captions to add to your text.

## **What about the visual presentation?**

Whatever the size of the poster, when one views it from one or two metres away, the type (or font) size must be large enough that the text can be easily read. Also, figures should be reasonably large. Think about when the eye doctor wants you to read off his chart of alphabets and numbers from a distance. Don't be tempted to crowd too much information onto a poster—you can overwhelm your audience. Adding colours makes a difference to the poster, and can lure viewers to your poster or even drive them away!

## **What's an abstract?**

An abstract is just a summary of your work, from introduction to conclusion, boiled down to one or a few paragraphs. We'd like to have an abstract from each of our poster presenters and speakers, to include in the Symposium Abstracts Volume. Illustrations are welcome (they will be converted to black-and-white).

*Good luck, and have fun!*

# ALBERTA PALÆONTOLOGICAL SOCIETY

## Eleventh Annual Symposium

Presented in conjunction with the C.S.P.G. Palaeontological Division  
and Mount Royal College Earth Sciences Department

**Lectures and Poster displays—Saturday, March 17, 2007, 9:30 AM to 5:00 PM**

**Workshops—Sunday, March 18, 2007, 9:00 AM to 4:00 PM**

**Saturday events are free to the public**


Sunday workshops require registration and minor fee

**Mount Royal College, 4825 Mount Royal Gate SW, Calgary, Alberta**

### SATURDAY, MARCH 17 SPEAKER SCHEDULE

ALL TALKS TO BE HELD IN JENKINS THEATRE, LOWER LEVEL OF MOUNT ROYAL COLLEGE

- 9:30 AM**     *Introduction*  
**APS President Dan Quinsey**
- 9:45 AM**     *New Research on Fossils of the Burgess Shale*  
**Kimberley Johnson, University of Calgary**
- 10:15 AM**     *New Research on Fossils of the Burgess Shale*  
**Dr. Paul Johnson, Mount Royal College**
- 10:45 AM**     Coffee Break
- 11:00 AM**     *Re-enactment of the Barnum Brown Scow Expedition, Red Deer River*  
**Darren Tanke, Royal Tyrrell Museum of Palaeontology**
- 11:30 AM**     *Spiny Trilobites Through Time*  
**Dr. Brian Chatterton, University of Alberta**
- 12:00 PM**     Lunch Break and Poster Displays
- 2:00 PM**     *Subfossil Wolves of Little Fish Lake, Alberta*  
**Patricia Ralrick, University of Calgary**
- 2:30 PM**     *Life at a 4-Million-Year-Old Beaver Pond in High Arctic Canada*  
**Dr. C.R. Harington, Canadian Museum of Man and Nature**
- 3:30 PM**     Coffee Break
- 3:45 PM**     *Canada's Fossil Heritage*  
**Dr. Godfrey Nowlan, Geological Survey of Canada**

Please turn to Page 20 

# Alberta Palaeontological Society Budget for 2007

As of Oct. 2, 2006, Mona Marsovsky, Treasurer

<b>Revenues</b>	<b>Budget 2007</b>	<b>Actual 2006 YTD</b>	<b>Budget 2006</b>	<b>Actual 2005</b>
Memberships	2765.00	2765.00	2600.00	2625.00
US\$ Exchange	0.00	0.00	0.00	9.87
T-shirts	0.00	35.00	0.00	385.00
Pins	0.00	3.00	0.00	6.00
Field Trip Guides	0.00	4.00	0.00	18.00
Old Symposium Abstracts Sales	0.00	20.00	0.00	0.00
CD ROM	0.00	0.00	0.00	20.00
Postage for Sales	0.00	0.00	0.00	0.00
Misc. sales incl. bounced cheque	0.00	3.00	0.00	39.02
Refreshments	20.00	16.31	60.00	62.62
Field Trip Fees (25x3x\$5)+(10x\$5 Paleo Rangers)	425.00	515.00	300.00	230.00
Workshop Fees (20x\$15)+(20x\$30)+(\$100 Pal. Rangers)	1000.00	325.00	450.00	650.00
Donations	0.00	5.00	0.00	141.35
Symposium Abstract Sales (39x\$8)	312.00	329.00	490.00	525.00
Symposium Donations (from 2006)	500.00	500.02	410.00	1800.00
Fund Raising	0.00	88.00	300.00	356.25
Savings for T-shirts	0.00	0.00	0.00	0.00
Savings for APS Book (Fund+2006 Year-End)	11430.00	0.00	8185.00	0.00
<b>Total Revenues</b>	<b>16452.00</b>	<b>4608.33</b>	<b>12795.00</b>	<b>6868.11</b>
<b>Expenses</b>				
Bulletin Printing	500.00	71.03	980.00	496.74
Bulletin Postage	500.00	79.63	650.00	393.30
Speaker Expenses	150.00	0.00	150.00	158.47
PO Box Rental	125.00	117.70	120.00	111.28
Membership Expenses, printing	100.00	0.00	100.00	175.29
Membership postage	100.00	15.36	50.00	223.65
Field Trip Expenses (25x3x\$5)+(10x\$5)	425.00	800.00	300.00	22.78
Workshop Expenses (22x\$15)+(20x\$30)+\$100	1000.00	82.83	320.00	0.00
Symposium Speaker	500.00	132.09	410.00	1812.10
Symposium Abstract Printing (40x\$6)	240.00	172.73	400.00	189.08
Postage for Sales	0.00	0.00	0.00	0.00
Website Fees (12 months x \$35)	420.00	383.10	420.00	384.60
Refreshment Expenses	125.00	143.08	250.00	97.77
Bank Charges	120.00	70.40	100.00	112.00
Lawyer fees	0.00	0.00	0.00	0.00
Miscellaneous (\$150)	150.00	95.07	50.00	999.38
Printing 20th Anniversary Book	11430.00	0.00	8485.00	0.00
<b>Total Expenses</b>	<b>15885.00</b>	<b>2163.02</b>	<b>12785.00</b>	<b>5176.44</b>
<b>Subtotal (Total Revenues - Total Expenses)</b>	<b>567.00</b>	<b>2445.31</b>	<b>10.00</b>	<b>1691.67</b>
Allocated for future T-shirt purchase	500.00	0.00	0.00	0.00
Allocated for future fundraising	0.00	88.00	0.00	356.25
<b>Excess of revenues over expenses (net)</b>	<b>67.00</b>	<b>2357.31</b>	<b>10.00</b>	<b>1335.42</b>

# TYRANNOSAURUS TIMES

A Newsletter just for Paleo Rangers — December 2006

Created by Dan Quinsey, Alberta Palaeontological Society

Volume 2006-4

This issue is full of palaeo fun.  
Enjoy the winter season—spring is just around the corner.



Dave and Sue sat down to watch *The Wizard of Oz* on television. Sue's pet dinosaur Rocky was in the room at the time and his eyes were glued to the movie the entire time. He cried when Miss Gulch tried to take Toto away, he laughed at the Scarecrow, and he cheered when Dorothy threw water on the Wicked Witch.

"Golly," said Dave. "I can't believe the way Rocky reacted to the movie."

"Me too," said Sue. "He hated the book."



If you like dinosaurs and fun activities, check out the website [www.enchantedlearning.com](http://www.enchantedlearning.com). Parents and kids alike can spend hundreds of hours on this wonderful educational site.



Why did the Tyrannosaurus eat his alarm clock? Answer: Because he felt like killing some time.



Hey Paleo Rangers: Try something different! See Page 11 in this Bulletin about upcoming microfossil sorting at Mount Royal College in December and January. This project is to help Dr. Donald Brinkman of the RTMP. Pictured below are two hatchling hadrosaur teeth. Scale shown is in millimetres. Photo by Dan Quinsey.



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