

# Alberta

*Palaeontological Society Bulletin*

VOLUME 27 • NUMBER 1

[www.albertapaleo.org](http://www.albertapaleo.org)

MARCH 2012



# ALBERTA PALAEOLOGICAL SOCIETY

## OFFICERS

|                |                   |          |
|----------------|-------------------|----------|
| President      | Wayne Braunberger | 278-5154 |
| Vice-President | Harold Whittaker  | 286-0349 |
| Treasurer      | Mona Marsovsky    | 547-0182 |
| Secretary      | Cory Gross        | 617-2079 |
| Past-President | Dan Quinsey       | 247-3022 |

## DIRECTORS

|                        |                   |          |
|------------------------|-------------------|----------|
| Editor                 | Howard Allen      | 274-1858 |
| Membership             | Vaclav Marsovsky  | 547-0182 |
| Program Coordinator    | Harold Whittaker  | 286-0349 |
| Field Trip Coordinator | Wayne Braunberger | 278-5154 |

## COMMITTEES

|                   |                  |          |
|-------------------|------------------|----------|
| Fossil Collection | Howard Allen     | 274-1858 |
| Library           | Reg Spratley     | 263-0556 |
| Public Outreach   | Cory Gross       | 617-2079 |
| Social            | Dan Quinsey      | 247-3022 |
| Symposium         | Vaclav Marsovsky | 547-0182 |
| Website           | Vaclav Marsovsky | 547-0182 |

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

- a. Promote the science of palaeontology through study and education.
- b. Make contributions to the science by:
  - 1) Discovery
  - 2) Collection
  - 3) Description
  - 4) Education of the general public
  - 5) Preservation of material for study and the future
- c. Provide information and expertise to other collectors.
- d. 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.

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## Upcoming APS Meetings

Meetings take place at 7:30 P.M. in **Room B108,**  
**Mount Royal University,** 4825 Mount Royal Gate SW, Calgary, Alberta.

**Friday, April 20, 2012**—Dr. Don Henderson, Royal Tyrrell Museum of Palaeontology.  
*Adrift at Sea in the Early Cretaceous—The Fort McMurray Armoured Dinosaur* (see Page 7).

**Friday, May 25, 2012**—Sarda Sahney, University of Bristol.  
*Competition, Opportunism and the Evolution of Vertebrates on Land* (see Page 7).

**June, July, August, 2012**—No monthly meetings. Summer field trips (see Page 8).

**Friday, September 21, 2012**—Dr. Alan Ingelson, University of Calgary.  
*Palaeontological Resources Law.*

**ON THE COVER:** An exceptionally well preserved Alberta trilobite, *Piltonia* sp., Lower Carboniferous, Banff Formation. Length of specimen is 45 mm. Photo courtesy of APS Member Geoffrey Barrett.

## NOTICE!

The May Annual General Meeting  
will take place on **May 25**

## Estwing™ Geological Rock Chipping Hammer Draw

Voting Members who attend the Alberta Palaeontological Society 2012 Annual General Meeting **prior to final quorum call** will automatically be entered in a draw for an Estwing™ geological rock chipping hammer. The first call for quorum will be at 7:30 P.M. If quorum is met, eligibility to enter the draw ends. If quorum is not met, you can still be eligible to enter the draw if you arrive prior to the second call for quorum at 8:00 P.M. The draw will take place after the meeting.



Estwing's geological rock chipping hammer, E3-wc, is designed with a pick on one end of the head, useful for extracting small minerals, fossils, *etc.* and on the other end a chisel for chipping or splitting rock. Like other Estwing products, the hammer is cast in a single piece of steel, and has an anti-shock reduction rubber grip handle.

## APS 2012 Annual General Meeting

By Dan Quinsey, Past President

The Alberta Palaeontological Society (APS) Annual General Meeting will be held on May 25, 2012 at 7:30 P.M. in Room B108, Mount Royal University, 425 Mount Royal Gate SW, Calgary, Alberta.

Proposed actions on the Agenda will include the election of Officers and Directors, Bylaw amendments and a Motion to create a *Large Donation Contingency Fund*. **All eligible voting Members are requested to attend!**

### Elections

Any eligible Member (Membership dues must be paid in full prior to the May Executive Meeting) may be nominated for any Officer or Director position. The positions open to nominations this year are: **President; Vice-President; Treasurer; Secretary; Editor; Membership Director; and Field Trip Co-ordinator**. The position of Field Trip Co-ordinator was not filled last year and **Wayne Braunberger** took on the position in the interim for one year. **Harold Whittaker** currently holds the position of Program Co-ordinator and is serving the second year of a two-year term making this position ineligible for nominations. Committee Chairperson positions are appointed by the Board and are not usually discussed during the AGM.

Members are encouraged to review the APS Bylaws regarding voting, elections and the positions of Officers and Directors for more details. Related Bylaw Articles have been provided in this article.

If you would like to chat about the possibility of serving on the Alberta Palaeontological Society Board of Directors, nominate a Member or be nominated for any of the open positions, please contact Past-President **Dan Quinsey** at (403) 247-3022 or by e-mail: **pastpres@albertapaleo.org**. All inquiries will be held confidential.

Volunteering is the best work of life!

### Related Bylaw Articles

#### 2.2 Voting

Each Voting Member\* 18 years of age or older shall be entitled to one vote at any General Meeting, Annual General Meeting, or Special Meeting of the Society. Voting for the election of the Board shall be done by secret ballot for each position of Officer or Director where more than one Member is nominated; otherwise, all Members nominated shall be elected by acclamation. All other voting shall be done by show of hands, unless a secret ballot is requested by any five Members. Such votes must be made in person and not by proxy or otherwise. The Chairperson shall cast a vote only in the event of a tie.

\* *Single Memberships (an individual person 18 years of age or older) of which the Member has only one vote; and Family Memberships (offered to a group of people living in one household consisting of no more than two adults 18 years of age or older and their dependants (if any) under the age of 18) of which each adult Member has one vote.*

#### 5.7 Nomination and Election of Officers and Directors

Nominations for Officers and Directors, and the offices associated with each such office, shall be made by the Past-President or by a Nominating Committee composed of a Chairperson, appointed by the Board at a Properly Constituted Board Meeting, and at least one Member selected by such Chairperson with the advice and consent of the Board. The Past-President or Nominating Committee shall present a slate of nominees to the

floor at the Annual General Meeting after which one final call for nominations shall be made. A professional palaeontologist may be nominated for the office of President only if an amateur palaeontologist is not nominated. All seconded nominations shall be voted upon with those nominated by the Past-President or Nominating Committee. Voting shall be done in accordance with Article 2.2. A motion to ratify the election results must be approved by the Voting Members in attendance at the Annual General Meeting to ratify the election process.

#### **5.8 Eligibility**

No Member shall be eligible to hold the office of an Officer or Director unless they have been a Member in good standing for at least one year, or by an affirmative vote of the Board at a Properly Constituted Board Meeting. Members who earn a living from the sale, trade, or barter of palaeontological resources shall not be eligible to hold the office of an Officer or Director.

#### **5.9 Term Commencement**

Term commencement of elected Officers and Directors shall be September 1 of the calendar year.

#### **6.1 General**

The Officers and Directors of the Society shall provide regular and timely reports to the Board respecting the affairs, policies, programs, and activities of the Society.

#### **6.2 Positions**

Under the provisions of Articles 5.7 and 5.8, the Society shall elect the following Officers: President, Vice-President, Secretary, and Treasurer; and the following Directors: Membership Director, Editor, Program Co-ordinator, Field Trip Co-ordinator, and (if created by the Society as described in Article 6.13) Director at Large. The position of Past-President is automatically filled by the exiting President of the Board. Directorships other than the ones listed above may be added or removed from time to time in accordance with Articles 5.1 and 6.13 by an affirmative vote of three-quarters of the Society Members present at any properly Constituted Annual General Meeting or Special Meeting.

#### **6.3 Term**

Officers shall be elected for a term of one year. Directors shall be elected for a term of two years. The term of the Past-President ends when a new President is elected. There shall be no restriction on the number of terms an Officer or Director may serve.

#### **6.4 President**

The President shall chair all Board and General Meetings of the Society. The President shall be an ex-officio member of all Committees of the Society. The President shall act as the spokesperson for the Society. The President shall approve all records of the Society. The President shall also perform all duties assigned to this office by the Board. In the absence of the President, the Vice-President shall preside in their place. In the absence of both the President and Vice-President, a Chairperson may be elected to preside by a majority show of hands of the Voting Members present at any General Meeting.

#### **6.5 Vice-President**

In the absence of the President, the Vice-President shall chair all Board and General Meetings of the Society and perform all duties of President. The Vice-President shall also perform all duties assigned to this office by the Board.

#### **6.6 Secretary**

The Secretary shall keep the minutes of all Board Meetings, General Meetings, Special Meetings, and the Annual General

Meeting of the Society. The Secretary shall make sure all notices of such meetings are sent. The Secretary shall have custody of the Official Seal of the Society. The Secretary is the only Officer who has permission to use the Official Seal of the Society. In the absence of the Secretary, the Board shall appoint an Officer or Director to perform such duties. The Secretary shall have charge of all correspondence, records, and the Official Seal of the Society. The Secretary shall also perform all duties assigned to this office by the Board.

#### **6.7 Treasurer**

The Treasurer shall receive all monies paid to the Society and shall be responsible for the deposit of same in a financial institution as directed by the Board. The Treasurer shall present a detailed account of receipts and disbursements to the Board whenever requested. The Treasurer shall prepare for submission to the Annual General Meeting a statement of the Society's financial position detailing the Revenues, Expenses, and Inventory of the Society; and submit an audited copy of same to the Secretary for the records of the Society. The Treasurer shall file the annual return, changes in the Officers and Directors of the Society, amendments to the Bylaws and other incorporating documents with the Corporate Registry of Alberta as required by the Bylaws, the Act, or any other applicable statute. The Treasurer shall also perform all duties assigned to this office by the Board.

#### **6.8 Past-President**

The Past-President shall be responsible for the nomination of Officers and Directors at the Annual General Meeting. The Past-President shall also perform all duties assigned to this office by the Board.

#### **6.9 Membership Director**

The Membership Director shall maintain the Register of Members, and collect the annual fees or assessments levied by the Society. All such monies shall be promptly turned over to the Treasurer for deposit. The Membership Director shall also perform all duties assigned to this office by the Board.

#### **6.10 Editor**

The Editor shall be responsible for the publication and distribution of the Society newsletter. The Editor shall also perform all duties assigned to this office by the Board.

#### **6.11 Program Co-ordinator**

The Program Co-ordinator shall be responsible for arrangement and announcement of presentations at General Meetings. The Program Co-ordinator shall also perform all duties assigned to this office by the Board.

#### **6.12 Field Trip Co-ordinator**

The Field Trip Co-ordinator shall be responsible for arrangement and announcement of field trips. The Field Trip Co-ordinator shall also perform all duties assigned to this office by the Board.

#### **6.13 Director at Large**

Any additional Directorship created by the Society shall be called the Director at Large. The Director at Large shall perform all duties assigned to this office by the Board.

### **Notice of Motions**

The first Notice of Motion is submitted to the Alberta Palaeontological Society membership for consideration in compliance with Sections 4.1 and 8.2 of the Alberta Palaeontological Society Bylaws.

**Motion: To create a *Large Donation Contingency Fund* of \$5,000.00 from past years' surplus funds for extraordinary expenses related to the handling of large gifts to the Society.**

The intention of this motion is to allocate \$5,000.00 to a *Large Donation Contingency Fund* to make monies available in a timely manner if needed to administer costs related to the handling of large gifts to the Society. Examples of such costs may be: Transportation and Storage, Government registration fees, Legal fees and Liquidation to name a few.

Example: If a person or institution donates property (vehicle, large library of books or collection of fossils) or land to the Society, it may be necessary to transport and store such items, pay government registration fees, obtain legal assistance or pay fees to liquidate such a gift.

Our Bylaws require that extraordinary expenditures (items other than normal operating expenses, budgeted projects, and items supported by designated grants or donations) in the amount of \$100.00 or more must be prior approved by the Voting Members at a Properly Constituted General Meeting. The Society usually handles such motions during the Annual General Meeting held in May. This is fine for situations such as purchases exceeding \$100.00 that can be put on hold until the AGM. However, the Board feels this is not enough time to act on situations such as the example described above.

It is the responsibility of the Board to analyze (any) expenditures while keeping the objectives of the Society in mind. The *Large Donation Contingency Fund* would simply ensure the Board is ready and able to act quickly and efficiently in the event they choose to accept a Large Donation made to the Society.

## **Related Bylaw Articles**

### **4.1 Annual General Meeting**

The Annual General Meeting of the Society shall be held during the month of May in each calendar year. This meeting shall be held for the election of Officers and Directors; the modification of Bylaws; and for such other business as may be placed before the Society by the Board.

### **8.2 Spending**

Extraordinary expenditures in the amount of \$100.00 or more must be prior approved by the Voting Members at a properly Constituted General Meeting. Extraordinary expenditures are expenditures for items other than normal operating expenses, budgeted projects, and items supported by designated grants or donations.

The second Notice of Motion is submitted to the Alberta Palaeontological Society membership for consideration in compliance with Sections 4.1 and 9.1 of the Alberta Palaeontological Society Bylaws.

**Motion: To amend the Alberta Palaeontological Society Bylaws (filed by Alberta Corporate Registries May 15, 2009) to add the definition of Privileges, insert a description of Privileges under the heading of Membership, and modify Sections 2.5, 2.6 and 3.5 detailing Member privileges.**

### **1.3 Definitions**

Add...

**Privileges mean particular benefits, advantages or immunities enjoyed by a Member or class of Members that is not shared with others.**

## **II. MEMBERSHIP**

*Insert between 2.2 Voting and 2.3 Termination...*

### **Privileges**

**Privileges enjoyed by a Member or class of Members of the Society include the right to:**

- a) **Vote.**
- b) **Hold office.**
- c) **Sit on Committees.**
- d) **Make motions.**
- e) **Receive the Society newsletter.**
- f) **Take part in field trips.**
- g) **Take part in Members-only events.**
- h) **Receive benefits, advantages, or immunities as determined by the Board at a properly Constituted Board Meeting.**

*Strike out and replace with highlighted...*

### **2.5 Award Memberships**

The Following Award memberships may be bestowed upon qualified persons, groups, or institutions upon the affirmative vote of all Members of the Board present at a properly Constituted Board Meeting:

a) Life Member: any past or present Member providing exceptional or meritorious service to the Society. ~~A Life Member is entitled to the same membership privileges and powers in the Society as a regular Member of the Society.~~ **Life Members are entitled to all membership Privileges.** This membership is in effect for the lifetime of the recipient.

b) Honorary Member: any person providing an outstanding contribution to the study of palaeontology. ~~An Honorary Member may not vote, hold office, or make motions.~~ **Honorary Members are**

entitled to membership Privileges with the exception of: voting, holding office, sitting on committees or making motions. This membership is in effect for the lifetime of the recipient.

c) Friend of the Society: any person, group, or institution which has rendered outstanding service to the Society. ~~A Friend of the Society may not vote, hold office, or make motions.~~ **Friend of the Society (any person) Members are entitled to membership Privileges with the exception of: voting, holding office, sitting on committees or making motions. Friend of the Society (group or institution) Members are not entitled to membership Privileges with the exception of: receiving the Society newsletter which may be redistributed among the group or institution's individual members only.** This membership is in effect for the lifetime of the recipient.

*Strike out and replace with highlighted...*

## **2.6 General Memberships**

a) Single Membership: offered to ~~an individual any~~ person 18 years of age or older. ~~Single Members have only one vote.~~ **Single Members are entitled to all membership Privileges.**

b) Family Membership: offered to a group of people living in one household consisting of no more than two adults 18 years of age or older and their dependants (if any) under the age of 18. ~~Each adult Member has one vote.~~ **Adult family Members are entitled to all membership Privileges. Dependant family Members are entitled to membership Privileges with the exception of: voting, holding office, sitting on committees or making motions.** A dependant turning 18 during the Family Membership term:

- i. Shall remain a dependant Member within this membership category until the end of the membership term, ~~without voting privileges~~ **entitled to membership Privileges with the exception of: voting, holding office, sitting on committees or making motions;** or,
- ii. May notify the Board in writing of their wish to be classified as an adult ~~with voting privileges~~ **family Member with all membership Privileges;** or,
- iii. May notify the Board in writing of their wish to be removed from this membership category at which time they may opt to purchase a Single Membership in accordance with Articles 2.1 and 2.6a.

c) Institutional Membership: offered to any organization. ~~Institutional Members may not vote, hold office or make motions.~~ **Institutional Members**

are not entitled to membership Privileges with the exception of: receiving the Society newsletter which may be redistributed among the institution's individual members only.

*Strike out and replace with highlighted...*

## **3.5 Restrictions**

~~An Affiliated Society does not have voting rights in the Alberta Palaeontological Society.~~ **Affiliated Societies are not entitled to membership Privileges with the exception of: receiving the Alberta Palaeontological Society newsletter which may be redistributed among the institution's individual members only.** An Affiliated Society may not use the name, logo, or other mark of the Alberta Palaeontological Society without the express written permission of the Alberta Palaeontological Society.

The third Notice of Motion is submitted to the Alberta Palaeontological Society membership for consideration in compliance with Sections 4.1 and 9.1 of the Alberta Palaeontological Society Bylaws.

**Motion: To amend the Alberta Palaeontological Society Bylaws (filed by Alberta Corporate Registries May 15, 2009) to modify Section 4.5 to add the word "voting" in seven locations.**

*Add highlighted wording for clarification...*

## **4.5 Quorum**

Fifteen percent of the **voting** Members or twenty **voting** Members, whichever is smaller, shall constitute a quorum to transact business at any Annual General Meeting or Special Meeting. Ten percent of the **voting** Members or fifteen **voting** Members, whichever is smaller, shall constitute a quorum to transact business at a General Meeting. If a quorum is not present within one-half hour after the set time of any Annual General Meeting or Special Meeting, the President shall adjourn the meeting and reschedule it for one week later at the same time and place. The Board shall provide notice of the rescheduled meeting. If a quorum is not present within one-half hour after the set time of the rescheduled Annual General Meeting or Special Meeting, the meeting shall proceed with a minimum quorum of five **voting** Members. If the minimum quorum of five **voting** Members cannot be met, the President shall adjourn the meeting and reschedule it for the next scheduled General Meeting at which a minimum quorum of five **voting** Members can be met. The Board shall provide notice of the rescheduled meeting.

The fourth Notice of Motion is submitted to the Alberta Palaeontological Society membership for consideration in compliance with Sections 4.1 and 9.1 of the Alberta Palaeontological Society Bylaws.

**Motion: To amend the Alberta Palaeontological Society Bylaws (filed with Alberta Corporate Registries May 15, 2009) to modify Section numbers and correct the Table of Contents throughout the document to incorporate Bylaw amendments approved by the Membership May 25, 2012 during the Annual General Meeting.**

A full copy of the APS Bylaws is available online ([www.albertapaleo.org/guide3web.html](http://www.albertapaleo.org/guide3web.html)) in the Member's Information Handbook. If you do not have a copy or the means to view the Member's information Handbook online, contact the APS using the information on Page 2 of this *Bulletin* to receive a copy. □

## Upcoming Events

April

### Dr. Donald Henderson

Royal Tyrrell Museum of Palaeontology

#### *Adrift at sea in the Early Cretaceous: The Fort McMurray armoured dinosaur*

**Friday, April 20, 2012, 7:30 P.M.**

Mount Royal University, Room B108

In March of 2011 a giant excavating machine in the Athabasca tars sands of northern Alberta exposed the rear half of what turned out to be a nearly complete ankylosaur with only the tail missing. The specimen is hosted in the Wabiskaw Member of the Clearwater Formation and is dated as late Aptian (113 Ma). The specimen was excavated over a three week period in April 2011 with the assistance of heavy equipment and staff from the Suncor Millennium Mine.

The find is significant for many reasons. It is the oldest known complete dinosaur from Alberta. It

is the first ankylosaur from the Early Cretaceous of Alberta, in contrast to the more typical latest Cretaceous forms from the province. It is the first dinosaur from the marine Clearwater Formation (better known for its ichthyosaurs and plesiosaurs), and represents a terrestrial animal that became entombed in a sea floor approximately 200 km from the nearest known palaeo-shoreline.

It experienced no post-mortem disruption, with all the bones, including phalanges, in three-dimensional articulation. All the dermal armour appears to be undisturbed and present. There are large areas with impressions of scales of alternating diamond and hexagon shapes in close association with the osteoderms on the dorsal surface. There is a large cluster of unusual, pisolith-like bodies (up to 2 cm in diameter) in the gut region, and these may represent stomach contents. Unfortunately, the bone is much softer than the concretion containing the specimen, and careful and responsible preparation will take several years.

### Biography

Donald Henderson is the Curator of Dinosaurs at the Royal Tyrrell Museum of Palaeontology in Drumheller. He dabbles in a range of fossil organisms including dinosaurs, marine reptiles, and pterosaurs, as well as studies of living forms such as crocodylians, elephants and giraffes. His main research interests are biomechanics and palaeoecology, but has recently begun to do descriptive palaeontology as well. He has a B.Sc. in Geology and Physics from the University of Toronto, and a Ph.D. in Vertebrate Palaeontology and Biomechanics from the University of Bristol in England.

May

### Sarda Sahney

University of Bristol, United Kingdom

#### *Competition, opportunism and the evolution of vertebrates on land*

**Friday, May 25, 2012, 7:30 P.M.**

Mount Royal University, Room B108

Life on Earth today is diverse. Though tetrapods (amphibians, reptiles, mammals and birds) make up a small fraction of the planet's biomass, there are

currently some 30,000 species occupying a broad range of ecosystems. This great diversity has presumably grown from a single species that crept onto land in the Devonian, likely a large amphibian that preyed on fish and lived in a waterside habitat.

Many researchers are investigating how this growth from one species to many tens of thousands occurred by examining the fossil record. Approaches to quantifying and uncovering patterns of diversity are explored taking into consideration the advantages and disadvantages of various strategies as well as the use of independent lines of evidence. Diversity is most commonly assessed by tallying taxa on a global scale but can also be considered from an ecological, morphological or genetic perspective. Our ability to understand the complex relationships among these types of diversity is constantly improving, allowing us to draw correlations and better define the history of life on Earth.

We focus on investigating the link between tetrapod taxonomic and ecological diversity of tetrapods on a global scale to determine the degree to which competition and opportunism have driven the evolution of vertebrates on land.

Opportunism is represented by the expansion of tetrapods into new habitats as they moved from the waterside to exploit new sectors of Earth's surface, such as forests, plains and deserts whereas competition occurred within a more-or-less constant habitat, leading to specialization within communities so that each of the increasing number of species exploited an ever-narrower range of resources.

The patterns of global taxonomic and ecological diversity of tetrapods are closely correlated, essentially exponential, with setbacks at times of major extinction events. Diversity changes correlate closely with the dominant classes of tetrapods (amphibians in the Palaeozoic, reptiles in the Mesozoic, birds and mammals in the Cenozoic). These groups have driven ecological diversity opportunistically, by expansion and contraction of occupied ecospace, rather than by direct competition within existing ecospace and each group has used ecospace at a greater rate than their predecessors.

## Biography

Sarda Sahney is a researcher at the University of Bristol studying macroevolution, with a focus on the evolution of vertebrate communities. She studies the biodiversity of tetrapods, from the perspective of biodiversity, expansion and extinction in the fossil record. In particular she has written about the early

diversification of tetrapod ecosystems, the effects of the Permo-Triassic mass extinction and large scale influences on the shape of biodiversity. □

# 2012 Field Trips

By Wayne Braunberger

Planning is well underway for this year's trips. For more information please contact **Wayne Braunberger** at (403) 278-5154 or by email, [fieldtrips@albertapaleo.org](mailto:fieldtrips@albertapaleo.org). Information will also be available at the monthly meetings and on the APS website ([www.albertapaleo.org](http://www.albertapaleo.org)). A field trip registration form is included with this issue of the *Bulletin* or can be downloaded from the website.

**Please note that all fees are due at the time of registration.** Fees for trips are \$10.00. This is to cover increased costs as guides will be featuring more colour photographs and diagrams. Unfortunately guides are only produced in small numbers and volume discounts are not available.

Non-members and unaccompanied minors will not be allowed to attend field trips. **All participants are required to have their membership in good standing. Any membership applications received after May 1, 2012 will not be reviewed and voted on by the Board of Directors until September, 2012. Therefore, if you are a non-member and would like to join be sure your application is received prior to May 1, 2012.** All participants will be required to read and sign a release form (waiver). Details will be provided to all those registered shortly after the registration deadline. **After the registration deadline no refunds will be given; however, you will receive the guide for the trip. No late registrations will be accepted.** Registrations are accepted on a first-come-first-served basis. Sign up early to avoid disappointment.

For the 2012 field trips I will be sending you the waiver and medical forms along with the trip information. This information will be sent to you via e-mail or Canada Post. Please ensure that your addresses are correct and legible when sending in registration forms.

When you arrive at the meeting place please be sure to have the forms completed. **All participants are required to have fully completed all waiver and medical forms in order to attend the trip. There**



**will be no exceptions.** All personal information is held in confidence and ultimately destroyed.

### Trip Participant Responsibilities

It is understood that risk is inherent to some degree in outdoor activities. Before registering for a trip please ensure that you understand the risks involved and are prepared to accept them.

- As a participant you are responsible for your own safety and equipment at all times.
- Inform the trip leader of any medical conditions they should be aware of in an emergency.
- Ensure that your previous experience, ability and fitness level are adequate for the trip.

### Trip 2012-1, June 23 & 24, 2012 Location to be announced

A trip focusing on vertebrate palaeontology is being organized; however plans have not been finalized. If you are interested in this trip please send an email to [fieldtrips@albertapaleo.org](mailto:fieldtrips@albertapaleo.org) and you will be kept up to date as information becomes available or indicate your interest on the registration form.

**Registration deadline is June 8, 2012.**

### Trip 2012-2, July 21 & 22, 2012 Swan Hills area, Alberta

This is a three day exploratory trip (including travel time) to the Swan Hills, northwest of Edmonton. Reports from the 1960s indicated the presence of both vertebrate and invertebrate fossils from rocks straddling the Cretaceous-Tertiary boundary in the Swan Hills. These early discoveries were made when the massive Swan Hills oil pool was being developed in the subsurface. Drilling sites, roads and oil pipelines were the source of exposures from which the fossils were located. Decades of inactivity have seen vegetation reclaim much of these earlier localities.

Today there is a resurgence of drilling in the Swan Hills and we hope to evaluate new sites in this highly underexplored and isolated region of Alberta. This is a purely exploratory trip so be prepared not to find anything but keep in mind this is also “virgin” ground.

Accommodation, gasoline and a restaurant are available in the town of Swan Hills as well as in Whitecourt, about an hour’s drive south of Swan Hills. There are plenty of campgrounds in the Swan Hills area. Members are welcome to participate for

all or part of the trip. Note that Swan Hills is approximately 500 km from Calgary and will require 6–7 hours to drive.

**The registration deadline is July 6, 2012.**

### Trip 2012-3, August 18 & 19, 2012 Cardium Formation biostratigraphy

Two day trips from Calgary will be taken to sections of the Cardium Formation along the Bow, Kananaskis, Sheep, and Highwood rivers. Day 1 will start at the classic Cardium outcrop below Kananaskis Dam at Seebe. If possible we will make travel eastward into the basin to sections downstream from Seebe and along Jumping Pound Creek. Besides the outcrop, subsurface stratigraphy and the relationship between surface and subsurface will be reviewed.

Day 2 will be spent on the Sheep and Highwood rivers. This will give participants an opportunity to view Cardium sections that are not normally visited on most field trips. By completing both transects changes both basinward and along strike can be observed, compared and contrasted.

**Access to the sections along the Sheep River involves a strenuous climb on unmarked trails.**

**The registration deadline is August 3, 2012. □**

## 2012 GEM, MINERAL & FOSSIL SHOW

“AGATES OF THE WORLD”

### Calgary Rock and Lapidary Club

**May 5 & 6, 2012**

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# Book Review

By Clive Coy

***Dino Gangs: Dr Philip J. Currie's New Science of Dinosaurs.* By Josh Young\***

**Harper Collins Publishers, London, 2011. Price CDN\$34.99. Hardback, 320 pages. ISBN 978-0-00-741339-3. Also available in eBook format.**

**D**espite continued predictions that paper and ink books are facing imminent extinction, books about dinosaurs continue to be wildly popular. In general they fall into two categories: colourful books for children, and dense tomes aimed at professional palaeontologists and sophisticated amateurs.

Fortunately, every now and then, a book like *Dino Gangs* by Josh Young is published that deftly bridges the yawning chasm between childhood wonder and shrouded academia. Aimed at readers of average dino-knowledge, *Dino Gangs* is an approachable book for lay people that centres on the work of renowned dinosaur palaeontologist Dr. Philip J. Currie of the University of Alberta.

With a mercifully brief but useful introduction to what dinosaurs are, how they have been viewed through time, and their current place in the popular imagination, the author takes us on a journey into the field and laboratory with Phil Currie and the international team of researchers that Currie collaborates with, including Dr. Eva Koppelhus, a noted palaeobotanist.

From the Cretaceous fossil rich badlands of Alberta, Canada and wind swept dunes of Outer Mongolia, to the Kalahari of South Africa and lush islands of Indonesia, we follow Currie as he and his colleagues dig up the remains of meat-eating dinosaurs, dissect ostrich cadavers, follow lioness dominated hunting groups and—as Currie observes in

\* Some websites—even that of the publisher, Harper Collins Canada—wrongly credit Philip J. Currie as a co-author of this book. Josh Young is the sole author.

awe—a group of Komodo Dragons in a frenzied orgy of gluttonous eating.

With data carefully collected in the field, Currie turns his attention to data being gleaned from the fragile fossils themselves. Months and sometimes years after being brought out of the field to laboratories dotted around the world, highly skilled technicians have been labouring to uncover and preserve the precious finds. Students and scientists have been using the latest technologies to scan and generate 3-D computer models that allow researchers to probe the digital likeness of a dino brain, or to see the animal walk again.

Working with experts from other fields such as sedimentology, palaeobotany, and related disciplines, Phil Currie has spent the past few decades gathering evidence that strongly suggests that many groups of dinosaurs spent portions, if not all of their lives, together in communal groups.

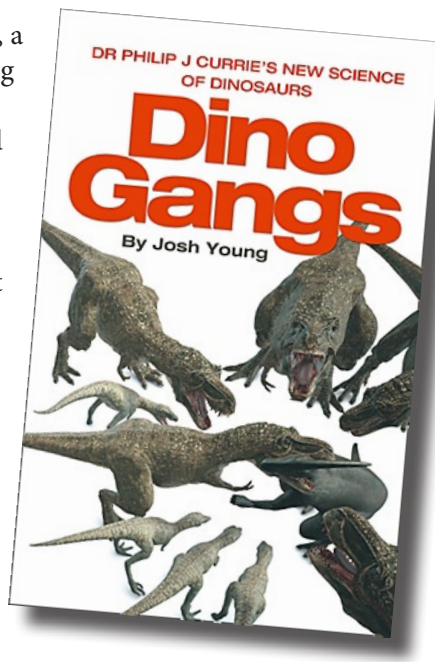
Based on evidence gathered from sites such as bone beds (mass burials where remains of multiple individuals are present) it also appears that the top predatory animals like *Albertosaurus*, *Tarbosaurus* and *Tyrannosaurus rex*, traditionally seen as solitary hunters, were also moving and—most surprisingly—hunting in groups.

Until relatively recent times dinosaurs were not credited with this level of sophisticated behaviour and social interaction. Phil Currie is in the vanguard of these new ideas about dinosaur behaviour, viewing them more as real animals living in real time, and not as the semi-mythological dragons that were once

displayed in museums more as amusing distractions unworthy of serious contemplation.

*Dino Gangs* gives a clear and easy to read look into the inner workings of modern dinosaur research, what scientists are up to, what they are thinking and how they derive the information that fuels current debates about the lives and habits of dinosaurs.

While *Dino Gangs* does contain “science,” potential readers need not fear being overwhelmed by jargon. Award winning science writer Josh Young has done an admirable job of weaving a narrative that flows easily from continent to continent, from laboratory to office, all the while retaining the human



character of the personalities involved with leading edge dinosaur research and its greater significance to our modern world.

While enthusiastic about the contents of *Dino Gangs*, I am less impressed by other aspects of this book, starting with the title, through the poor quality of production, down to the photocopier-like images used throughout.

In thirty-two plus years of working with Phil Currie I have never once heard him utter the phrase

“dino gangs” and it should be clearly understood that this title was used to tie the book to a video production of the same name. I, for one, do not have visions of large theropods wandering the Cretaceous landscapes in leather biker jackets sporting mullet haircuts. □

*Clive Coy works in Dinosaur Palaeobiology at the “Dino Lab,” Department of Biological Sciences, University of Alberta.*

# Dinotour 2012 offers unique peek at Alberta dinosaur sites

By Guy McLaughlin and Mona Marsovsky

**A** once-in-a-lifetime family adventure is being offered in summer 2012 by the Dinosaur Research Institute (DRI). The four-day expedition will take guests to more than a dozen dinosaur museums and fossil sites throughout southern Alberta. The trip will be led by **Dr. Philip Currie**, one of the world’s leading dinosaur palaeontologists, his palynologist wife **Dr. Eva Koppelhus**, and **Dr. David Evans** of the Royal Ontario Museum, who will show their current exploration sites to participants.

The four-day expedition, June 29 to July 2, 2012, will be restricted to one small group, ensuring plenty of time for questions and discussions with Dr. Currie and his colleagues. Presentations will be made while travelling on-bus between sites, as well as at each site being visited.

## **Expedition participants will:**

- Learn about the dinosaurs of Alberta.
- Explore a dinosaur quarry.
- Hike and tour various sites in Dinosaur Provincial Park and Drumheller areas.
- Tour the Royal Tyrrell Museum and the Field Station at Dinosaur Provincial Park.
- Tour Head-Smashed-In Buffalo Jump.

Additional fossil sites near Medicine Hat and Lethbridge may be added as summer exploration plans are confirmed.

## **The tour includes:**

- Guided tour including bus transportation to-and-from Calgary.
- Three nights accommodation (double occupancy) and all meals.
- Admission to the Royal Tyrrell Museum and Dinosaur Provincial Park Field Station as well as Head-Smashed-In Buffalo Jump.
- Guidebook, DRI hat and “goodie” bag
- Charitable tax donation receipt for a portion of the fees.

Proceeds generated from this tour will support the work of the Dinosaur Research Institute, a non-profit charitable organization that finances dinosaur research in Alberta and around the globe.

The cost of Dinotour 2012 is \$1295 for adults and \$895 for children of which a portion is tax deductible. This includes all transportation, entry fees, accommodation and meals—a very reasonable cost for four days exploration of dinosaur sites in southern Alberta with leading palaeontologists.

**Dr. Philip Currie** is a professor in Biological Sciences (Dinosaur Palaeobiology) at the University of Alberta. He was formerly curator of dinosaurs at the Royal Tyrrell Museum for over 20 years. Dr. Currie was awarded the Michael Smith award in the fall of 2004 in recognition of his contribution to science promotion. His work has been published in *National Geographic*, featured on the Discovery Channel and many scientific journals throughout the world.



**Learning about** a dinosaur bone bed at Dinosaur Provincial Park. Photo by Al Rasmuson.

**Dr. Eva Koppelhus** is a research associate in the Department of Biological Sciences at the University of Alberta. She was formerly a post-doctoral fellow and an adjunct research scientist at the Royal Tyrrell Museum. Dr. Koppelhus, educated at the University of Copenhagen, worked for more than a decade at the Geological Survey of Denmark and Greenland where her research focused on floras of the Triassic, Jurassic and Cretaceous geological periods.

Drs. Currie and Koppelhus have written papers and children's books and participated in many expeditions to remote corners of Antarctica, China, Mongolia and Patagonia.

**For more information, contact:**

**Al Rasmuson**, President, Dinosaur Research Institute

Phone (403) 861-0532

E-mail: [al.bearpaw@shaw.ca](mailto:al.bearpaw@shaw.ca) □

**[www.albertapaleo.org](http://www.albertapaleo.org)**

## 2012 Royal Tyrrell Museum Speaker Series

The Royal Tyrrell Museum's annual Speaker Series brings world-renowned scientists and researchers to the Museum and offers them a platform to discuss hot topics in palaeontology or to share results of their current research with the public.

Presentations are FREE and begin at 11:00 A.M. in the Museum auditorium. Although the January, February and March talks are (ancient) history, the following lists the topics for April and May, 2012.

Many of the talks have been recorded and uploaded to the Museum's YouTube channel, available for viewing online: [www.youtube.com/user/RoyalTyrrellMuseum/videos?view=0](http://www.youtube.com/user/RoyalTyrrellMuseum/videos?view=0)

**Thursday, April 12**

Rhian Russell, Royal Tyrrell Museum  
*Palaeoconservation: An emerging field.*

**Thursday, April 19**

Mike Newbrey, Royal Tyrrell Museum  
*The mysterious Myledaphus, a freshwater ray from the Late Cretaceous of Alberta.*

**Thursday, April 26**

Lara Shychoski, University of Alberta  
*Study of theropod feeding behaviour using finite-element analysis.*

**Thursday, May 3**

Tom Lipka, Arundel Project and Geobiological Research, MD.  
*Dinosaurs in D.C.? Palaeontology of the East Coast of North America.* □

## McAbee fossil site gets Heritage designation

By Howard Allen

A BC Government news release, dated February 25, 2012, announced the government's intention to designate the well-known McAbee fossil site a protected area. Depending on your point of view, this

may be good news or bad news—or both.

The site, 13 km east of Cache Creek, just off the Trans-Canada Highway, has produced an abundance of Eocene-aged fossils (approximately 50 mya), including many species of plants, insects, fishes and at least one bird fossil, from ancient lake bed deposits.

Heritage designation will almost certainly put the locality off-limits to amateur collecting. It was the venue for an Alberta Palaeontological Society field trip in 1995. In the years following the APS visit, legal and personal squabbles among a number of competing interests—land owners, leaseholders, private and commercial collectors, industrial mineral speculators and academics—have left McAbee in a state of limbo and government intervention was probably inevitable. The news release can be viewed here: [www.newsroom.gov.bc.ca/2012/02/mcabee-fossil-site-to-receive-heritage-designation.html](http://www.newsroom.gov.bc.ca/2012/02/mcabee-fossil-site-to-receive-heritage-designation.html)

A site assessment report by Dr. M.V.H. Wilson (2008) is available here: [www.for.gov.bc.ca/land\\_tenures/documents/fossils/mcabee/mcabee\\_fossil\\_site\\_assessment\\_report.pdf](http://www.for.gov.bc.ca/land_tenures/documents/fossils/mcabee/mcabee_fossil_site_assessment_report.pdf)

A thorough geological and palaeontological report by Drs. Read and Hebda (2009) is here: [www.for.gov.bc.ca/land\\_tenures/documents/fossils/mcabee/mcabee\\_report\\_dec\\_2009\\_-\\_final.pdf](http://www.for.gov.bc.ca/land_tenures/documents/fossils/mcabee/mcabee_report_dec_2009_-_final.pdf)

Thanks to **Phil Benham** for the heads-up. □



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## Palaeontology Field School

Grande Prairie Regional College, Science Department

PALE 400 A University of Alberta Transfer Course (UT)

Students will learn the techniques of collection, curation and the analysis of dinosaur fossils primarily from the Pipestone Creek Pachyrhinosaurus Bonebed, located near Grande Prairie in Northwestern Alberta, Canada. The field component of this course will take place during the summer, off campus, at the field location. Each student will complete assignments in the field and will prepare a written report based on data acquired and methods learned during the field component.

June 4 - 22, 2012

Instructor: Dr. Philip Currie, Canada Research Chair of Dinosaur Palaeobiology, University of Alberta

Application fee: \$ 60.00

Tuition: \$339.18

Auxiliary fees: \$ 24.73

Registration deadline: May 15, 2012

International students please call for more information on course fees.  
Accommodation can be arranged at the GPRC Student Residences.

To register, call 780-539-2911

For more information, contact:

[paleo@gprc.ab.ca](mailto:paleo@gprc.ab.ca)

780-539-2087

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# Moose Mountain, Alberta

## Exploring the Natural History of Canyon Creek and Area



By Dan Quinsey

Foreword by Dr. John Cox and Dr. Jeff Pollock

The Upper and Lower Foothill regions of southwest Alberta are home not only to some of the most interesting species in the province, they also contain within them evidence of ancient times.

Aside from the descriptions of flora and fauna, this complex guidebook offers amateur and professional naturalists an opportunity to explore the Carboniferous and Jurassic formations along Canyon Creek, Moose Mountain, where many geological and palaeontological wonders await to be experienced and discovered.

This book is a necessity for naturalists, students of geology or anyone fascinated with the mountains of Alberta.

Contents include: History, Regional Geology, Common Trees and Wildflowers, Common Wildlife, 27 Geological and Palaeontological Points of Interest, Collecting Regulations, Trip Planning, Directions, Glossary and more.

*"This book will be of great assistance to first-time visitors to the region and will encourage them to return for further visits to further explore the geological and biological features of this captivating locale."*

*Dr. John Cox and Dr. Jeff Pollock  
Department of Earth Sciences,  
Mount Royal University*

**Moose Mountain, Alberta  
Exploring the Natural History of  
Canyon Creek and Area**

By Dan Quinsey

Spiral Bound, 116 pages  
174 photographs and diagrams  
ISBN: 978-0-9877066-0-7  
Price: \$20.00.

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