

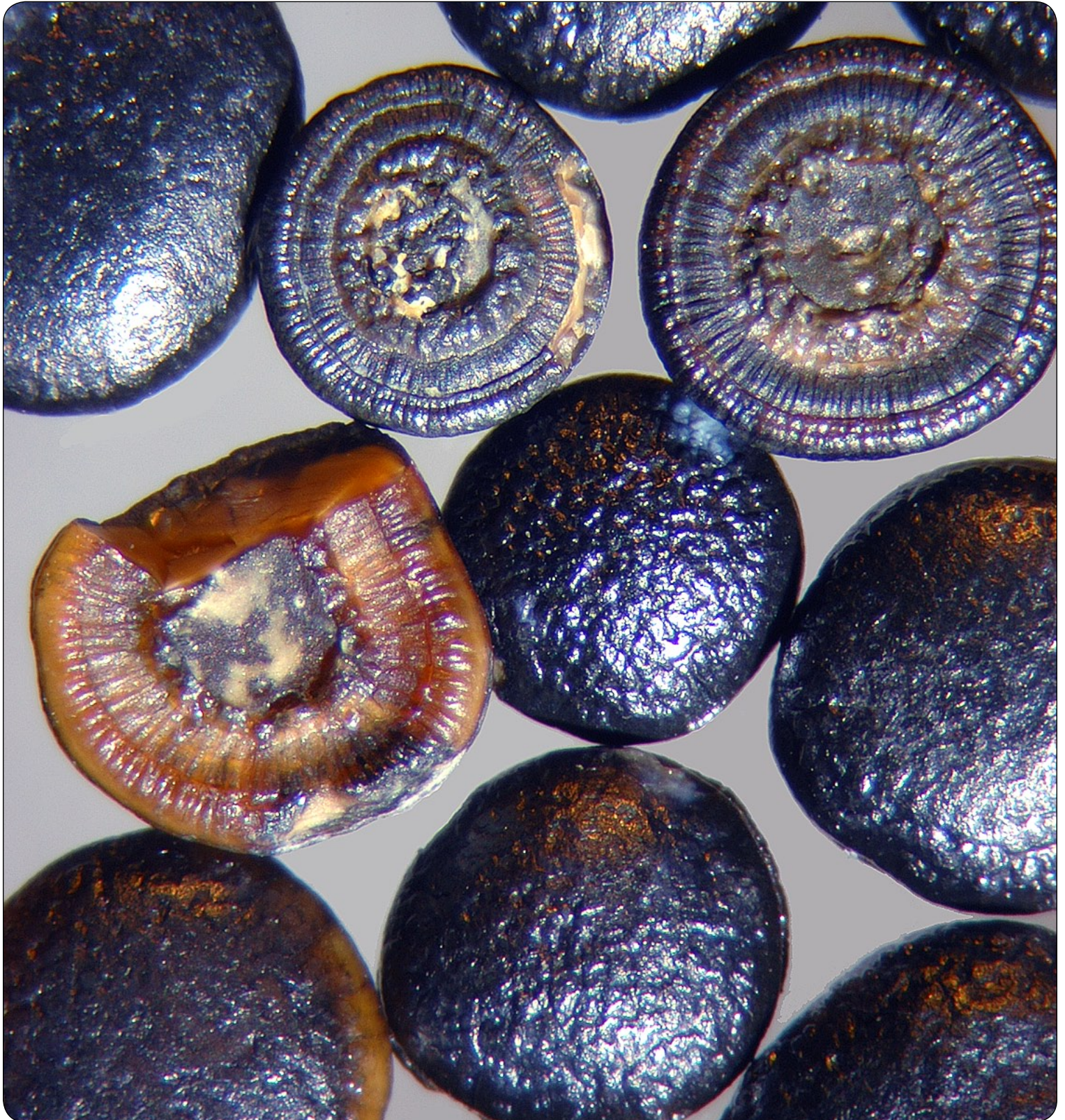
Alberta

Palaeontological Society Bulletin

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ALBERTA PALAEOLOGICAL SOCIETY

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† Alberta Palaeontological Advisory Committee

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)

Material for the Bulletin:

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

NOTICE: Readers are advised that opinions expressed in the articles are those of the author and do not necessarily reflect the viewpoint of the Society. Except for articles marked "Copyright ©," reprinting of articles by exchange bulletins is permitted, as long as credit is given.

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 14, 2007—*Christmas Social and Palaeo Photo Contest.*

Friday, January 18, 2008—Speaker: Dr. François Therrien, Royal Tyrrell Museum.

Lean, mean killing machines: The feeding behaviours and bite force of meat-eating dinosaurs.

Friday, February 15, 2008—Dr. Jennifer Mather, University of Lethbridge.

Octopus intelligence: A mind emerging from the mollusks.

See details, Pages 3–5.

ON THE COVER: Alberta fossils. Teeth of the bony fish *Paralbula casei* Estes, St. Mary River Formation (Upper Cretaceous: Maastrichtian), Scabby Butte, Alberta. *Paralbula* used its button-like teeth to crush molluscs and crustaceans. Magnified 25x (average tooth diameter is 3–4 mm). Photo by Howard Allen. Copyright © 2007.

From the Desk of the President

By Dan Quinsey



I would like to wish all of our members and their families a safe and joyous holiday season.

I would like to thank all those members who have already renewed their memberships early and at this time remind everyone else who has not renewed to please renew on time. Our membership has been steadily growing and is currently over the 200 mark in head count.

The Board would like to thank **Ron Fortier** for all his past efforts as Curator Chairperson. Ron vacated this position recently and we are looking for an individual to take on this Committee. The person we are looking for should have a good knowledge of fossils and cataloguing but if you are interested and feel you are capable of taking on this exciting task, we are certainly willing to train. Contact **Dan Quinsey** or **Vaclav Marsovsky** if you would like to be considered for Curator Chairperson.

The APS Book project is chugging along. As you can imagine, when a scientific publication of this magnitude is put together, there are hundreds of hours of work necessary to compile data, text, illustrations, and to painstakingly edit and verify the information offered. More updates will be forthcoming. In the meantime, if you are interested in securing a copy of this book, let us know so we can anticipate our first run of copies.

Our symposium, **Paleo 2008** will be approaching soon (see Page 12) and I would like to encourage all APS members (in town and out of town) to submit a poster for this event. Contact **Roslyn Osztian** at (403) 256-6648 for more information.

Thank you to everyone who is doing their all for the Society. I know it is said often but I also believe it can never be said enough. Volunteers are the engine of the Society. There is much to gain by getting involved, much to learn, much to experience. Volunteering is the best work of life. But remember,

you can only get out of the experience what you are willing to put into it.

Happy Holidays,

Dan Quinsey ☐

Upcoming Talks

December

APS Christmas Social and Palaeo Photo Contest!

Friday, December 14, 7:30 P.M.

Mount Royal College, Room B108

Our December 14 session will consist of a potluck dinner at 7:30 P.M. sharp, followed by a palaeo slide show contest with prizes for the winners.

The contest categories

- Prepared specimens
- Fossils in the field
- Scenic shots
- Palaeo-humour

Submission rules

- Deadline is **December 10, 2007**—last day for receipt of pictures.
- Entries will be limited to 10 per member.
- Files should be in JPEG, GIF or TIFF format and can be e-mailed to **philip.benham@shell.com**

If you don't have prints in digital format I can scan them for projection onto the screen.

Please mail prints to

Philip Benham
276 Rundlemere Rd NE
Calgary, AB T1Y 3P7

Each photo should be documented with

- **Your name** (you must be an APS or CSPG member)
- **Contest category**
- **Picture title**
- **Photo location** (if relevant)
- **Geological information** (optional)

As each slide comes up the contributor may stand and give a brief comment on their photo with the understanding that the palaeo-humour may take slightly longer to set the stage.

The APS requests the privilege of using the winning entries to generate a fund raising product.

We are also looking for volunteers for a panel of "celebrity judges." Please contact me if you are interested.

Prizes are to be determined.

APS Social Director **Paul Dugan (403) 934-9599** will be coordinating the potluck portion of the evening. Any questions regarding the contest can be directed to me by phone or email.

APS Program Director

Philip Benham

Phone (403) 691-3343

E-mail: philip.benham@shell.com □

January—2008

Dr. François Therrien

Royal Tyrrell Museum of Palaeontology

Lean, mean killing machines: The feeding behaviours and bite force of meat-eating dinosaurs

Friday, January 18, 7:30 P.M.

Mount Royal College, Room B108

Meat-eating dinosaurs, the theropods, are often pictured as ambush predators attacking their prey with a slashing bite, a strategy similar to that of Komodo dragons. However, given the great diversity of theropod dinosaurs, various species would likely have adopted different hunting techniques to capture different prey, like modern mammalian predators do. To test this idea, a biomechanical approach (beam theory) was used to model the mandibles of theropods and compare them to those of modern predators, such as the Komodo dragon and crocodilians, to infer their killing strategies and bite force.

Theropods exhibit a high diversity of feeding behaviors, where five feeding categories are recognized: 1) "*Antrodemus*"; *Majungatholus* and *Carnotaurus* share the mandibular properties of Komodo dragons, suggesting that they delivered slashing bites; 2) dromaeosaurids have mandibular properties remi-

niscient of Komodo dragons for slashing bites, but differences between dromaeosaurines and velociraptorines indicate that the former had a stronger bite than the latter and probably relied on it to capture and kill prey; 3) *Suchomimus* and *Dilophosaurus* both exhibit mandibular adaptations related to the capture of prey relatively smaller than themselves, the former probably practicing a bite-and-hold strategy whereas the latter finished its prey with slashing bites; 4) *Ceratosaurus*, *Allosaurus*, *Acrocanthosaurus* and *Giganotosaurus* demonstrate adaptations of the anterior extremity of the mandible for prey capture and delivering powerful bites in order to bring down prey or deliver the final blow; and 5) tyrannosaurids, unlike any other theropod, exhibit mandibular adaptations to resist high torsional stresses at the anterior extremity of the mandible, related to prey capture and/or bone crushing capabilities. Bite force estimates also reveal that *Tyrannosaurus rex* had a bite 3 times more powerful than that of *Giganotosaurus*, approximately 16 times that of a modern alligator!

Biography:

François Therrien earned a B.Sc. in Geology at the Université de Montréal in 1997. He then moved to the U.S. and obtained his M.Sc. in Geosciences from the University of Rhode Island in 1999 for his study on the paleoenvironments of Late Triassic theropods from the American southwest. Subsequently, François moved to Baltimore to pursue his Ph.D. at the Johns Hopkins University School of Medicine. Although he studied the latest Cretaceous dinosaur-bearing deposits of Transylvania for his dissertation, he also learned to apply biomechanical principles to the study of dinosaur behavior. After obtaining his Ph.D. in 2004, François came to the Royal Tyrrell Museum and University of Calgary on an NSERC postdoctoral fellowship. In 2006, he was appointed Curator of Dinosaur Palaeoecology at the Royal Tyrrell Museum.

February

Dr. Jennifer Mather

University of Lethbridge

Octopus intelligence: A mind emerging from the mollusks

Friday, February 15, 7:30 P.M.

Mount Royal College, Room B108

Library Notes

By Garren Dugan, APS Librarian

Wow, another year has gone by! You know what that means? Books are one year older! It also means that there were more donations made to the APS library. The following items were donated:

September 12, 2007

A total of forty-six issues of the APS *Bulletin* were donated by **Cory Gross**. These copies are in mint condition. Therefore, I went through the current APS binder containing copies of the *Bulletin* and switched the bad with the good. Thank you Cory!

September 23, 2007

Mona Marsovsky donated the *Abstract and Program guide* from the RTMP Ceratopsian Symposium held on September 22–23, 2007. Thanks Mona!

October 7, 2007

There was another large contribution to the APS library. This time twenty-one APS *Bulletins*, six new dinosaur related CD-ROMs, three palaeo-related articles and one dinosaur music CD! I'd like to thank the member who donated them.

In other news, your Librarian has put together a database of all the loose articles kept in the library file folders. The database is arranged by topics, and a copy is kept with the library. Contact me for an electronic file or paper copy: fossilfreak23@hotmail.com or (403) 934-9599. □

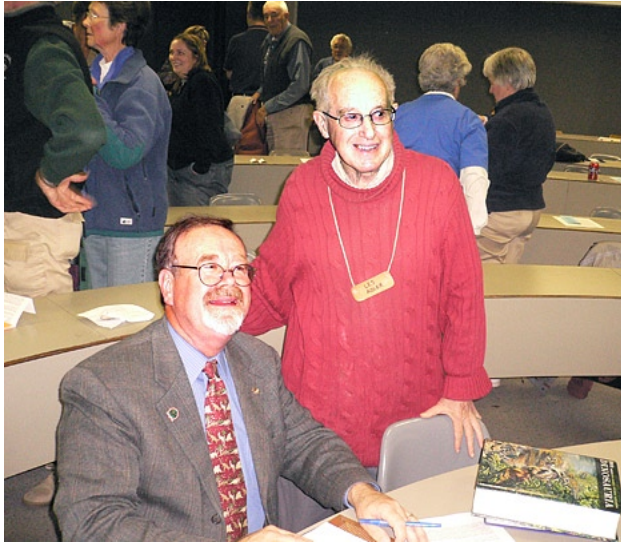
Paleo 2008

Mount Royal College

Our 12th Annual Symposium

Saturday & Sunday, March 22–23, 2008.

See Page 12 for details! □



Les Adler (right) poses with Dr. Peter Dodson at a book signing session after the September 20 special talk (see the June 2007 *Bulletin* for details. Photo courtesy of Vaclav Marsovsky.

APS Promotes Palaeo to Boy Scout Troop

By Dan Quinsey

The Silver Springs 159th Scouts were treated to a presentation by the APS on the evening of November 15, 2007. There were two Scout leaders and thirteen kids in attendance. The program consisted of a brief introduction to geology and then palaeontology. The Scouts were given several activities to try including a race on all-fours trying out the different kinds of dinosaur stances as well as a homework experiment building a dinosaur gizzard to test various types of food to determine what the dinosaurs probably ate.

Everyone went home full of information and smiles. □



Silver Springs 159th Scout Troop. Photo by Dan Quinsey.

Correction

In the September 2007 *Library Notes* (Page 5), the April 20, 2007 donation of books was wrongly attributed to Wayne Braunberger. The books were actually donated by **Philip Benham**. Thanks to Phil for the donation and sorry for the goof!

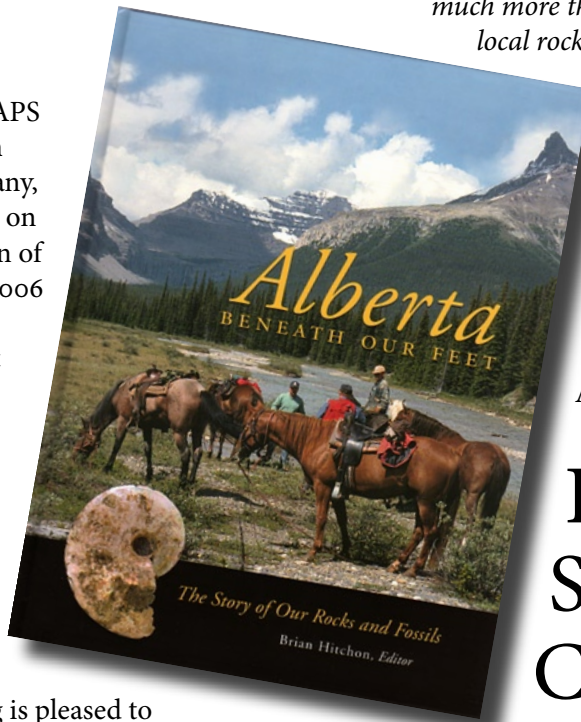
Alberta Beneath Our Feet wins “Outstanding Publication” Award

Congratulations to APS member **Dr. Brian Hitchon** and his company, Geoscience Publishing, on winning the Association of Earth Science Editors 2006 Award for Outstanding Publication in the print category. Brian's spectacular book includes illustrations of fossils from APS and member collections, and has been on sale in bookstores for over a year.

From a company press release:

“Geoscience Publishing is pleased to announce that our latest title *Alberta Beneath Our Feet: The story of our rocks and fossils* was the winner of the Association of Earth Science Editors 2006 Award for Outstanding Publication in the print category. Dr. Hitchon received the award certificate at the recent annual meeting of the association in Calgary.

“*Alberta Beneath Our Feet* describes Alberta's story, from the Big Bang to the present. Follow Alberta as it wanders from the equator to its present position over the past 750 million years. Alberta's geological



legacy has a major impact on our daily lives, from oil and gas, humble sand and gravel, and life-giving groundwater. And diamonds may yet be added to the semi-precious stone, ammolite, currently produced in the province. But this book is more than a record of Alberta's fascinating past. It is a guide to where you can see some of the geological features mentioned in nine urban areas (Edmonton, Fort McMurray, Peace River, Grande Prairie, Athabasca, Red Deer, Calgary, Lethbridge, and Medicine Hat). There is a glossary of technical terms, a list of further reading, and a comprehensive index.

“This book could equally well serve as a coffee table centerpiece as an introductory lesson in geology. Overall, Alberta Beneath Our Feet is a well-written, very well illustrated text that, due to the use of non-technical language, is suited to a wide range of audiences, from amateur to academic. Best of all, the authors show us that the study of geology really is interesting and includes much more than deciphering the stratigraphy of local rock outcrops. This is a great book: an

essential reference for anyone with a general interest in Alberta or a specific interest in geology.”

—Nature Alberta Magazine

Alberta Beneath Our Feet is available from bookstores, or the publisher at Box 79088, Sherwood Park, Alberta. □

Hans Larsson Speaks at the Calgary Zoo

By Vaclav Marsovsky

Dr. Hans Larsson presented a travelogue picture show on his recent expeditions to Saharan Africa and the Canadian High Arctic. The November 5, 2007 talk was held at the Calgary Zoo's Conservatory building with the title “Searching for fossils in the Arctic and Africa.” The talk was co-sponsored by the Arctic Institute of North America and the Zoo. Attendees were temporarily able to escape the Calgary

winter in the tropical atmosphere of the Conservatory building.

Dr. Hans Larsson was born in Edmonton, received his Masters and Ph.D. at the University of Chicago under Paul Sereno and is Assistant Professor at McGill University and the Redpath Museum in Montreal. His primary research goal is to learn more about global climate change and how climate has changed in the past and may change in the future. The expeditions to the High Arctic were in search of new fossil bearing localities.

Dr Larsson opened his talk by discussing the relative positions of the continents through the Mesozoic. The first half of the talk provided information on his expeditions into Niger in Northern Africa with Paul Sereno. Pictures showed a flat, barren, sandy desert landscape. The sites are hundreds of miles from any paved road so everything had to be carried with the expedition team. Because there was no refrigeration, live goats were brought along and slaughtered as needed. Water was acquired at local wells and had to be treated and purified. There were the usual stories about the trucks constantly breaking down—because that's what trucks must do when you go into remote areas like this. The expedition was under the protection of a fully armed militia to protect the expedition from bandits. The areas are very remote and mostly unexplored. Fossils were found lying exposed on the surface in all their glory, beautifully preserved.

The fossils represent a diverse ecosystem. Unlike in today's ecosystem, there were several genera of crocodiles that co-existed. There were small species with adult skulls only 10 cm long, and the "super-croc" *Sarcosuchus* which had a skull length of 1.8 m. The environment during the Cretaceous would have been wet marshland with mangroves. During a recent expedition the crew found a perfectly preserved thumb claw of *Suchomimus*; the most complete skull of *Carcharodontosaurus* ever found; a square-mouthed sauropod, yet to be described, and more remains of the sauropod named *Jobaria*.

The second half of the talk concerned his explorations of Canada's most northerly islands. Canada's Arctic offers opportunities to study life and how it changed through the Mesozoic as the continent remained in high latitudes. The area is even more remote than Niger; the field season is limited to a few weeks in July and even then it can snow at any time—and it did!

The study of palaeontology in the Arctic is part of the Polar Continental Shelf project. Logistic support

is through Resolute on Cornwallis Island. Like the African expedition, the focus was on prospecting and collecting. Transportation is by Twin Otter airplane and helicopter to sites where rocks of the "right" age occur. Large areas were explored by walking up to 25 km per day. Unlike the African terrain, which was quite flat, exploration on the Arctic islands involved scaling 45-degree slopes. One intriguing picture showed hoodoos—what are they doing in the Arctic? Another picture showed their Twin Otter airplane sinking into the permafrost and the clever tactics employed to get unstuck.

Many of the fossils discovered were of marine origin and included shark teeth, bivalves and vertebrae from long- and short-necked plesiosaurs. Plant remains were abundantly found as leaf impressions and seed cones. Triassic plants were dominated by ferns; the Cretaceous flora was dominated by conifers. Fossils of terrestrial vertebrates have been scarce: some scraps of duckbilled dinosaurs and of a medium sized theropod were found. Material is not of display quality but it is significant because it is so rare.

There is lots of exploring yet to be done. Dr. Larsson is planning on continuing his explorations to the Arctic next year if funding comes through. □

Dinotour set for July 4–7, 2008

By Mona Marsovsky

Dinotour is a unique opportunity to discover Alberta's palaeontological treasures with world renowned scientists **Dr. Philip Currie** and **Dr. Eva Koppelhus** of the University of Alberta and **Darren Tanke** of the Royal Tyrrell Museum of Palaeontology.

Highlights of this four day family-orientated tour:

- A unique opportunity to learn about the dinosaurs of Alberta
- Explore a dinosaur quarry with Philip, Eva and Darren in the *Albertosaurus* bonebed in Dry Island Provincial Park
- Tour the Royal Tyrrell Museum.
- Hike and explore in Dinosaur Provincial Park and Drumheller areas.

(continues)



Phil Currie (right) speaks to the participants of a previous *Dinotour* in Dinosaur Provincial Park. Photo by Corliss Moore.

The tour includes:

- Guided tour including deluxe bus transportation to and from Calgary.
- Three nights accommodation (double occupancy) and all meals.
- Admission to the Royal Tyrrell Museum and the Dinosaur Provincial Park Field Station.
- Guidebook, T-shirt and goodie bag.
- Charitable tax receipt for a portion of the fees.

The cost per person, double occupancy:

CAN\$ 1495 Adult
 CAN\$ 1295 Youth, 13 years to 17 years
 CAN\$ 1095 Child, under 13

Single supplement: \$300

Early bird discount: \$100 (for registrations received before March 31, 2008).

Deadline for registration is May 15, 2008.

Dinotour supports the work of the Dinosaur Research Institute, a non-profit charitable organization that finances dinosaur research.

To register or for more information contact:

corliss.moore@inglewoodgrove.com. See also www.dinosaurresearch.com for information, photos from previous trips and testimonials. □

Microfossil Sorting Project Winter 2008

By Mona Marsovsky

This winter, APS members can take an active role in research by searching for fossils in the matrix samples gathered by **Dr. Donald Brinkman** and **Craig Scott** of the Royal Tyrrell Museum of Palaeontology (RTMP). We will be using the microscopes kindly provided by Mount Royal College. Don Brinkman and Craig Scott will take all of the fossils we find to the RTMP for further study.

Upcoming microfossil sorting seminars are scheduled for the following Saturdays:

January 12, 2008

January 26

February 9

February 23

You are welcome to come for as many sessions as you like. All sessions will take place from 1:00 P.M. to 3:00 P.M. in room B213 at Mount Royal College. If you register in advance with me (**Mona Marsovsky, 403-547-0182, monahome@telus.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 artist's paint brush to manipulate the tiny fossils. □

2008 Field Trips

By Wayne Braunberger

Plans are underway for the 2008 field trip season. Trips and dates are tentative at this time. Further updates will be posted on the website and published in the March and June issues of the *Bulletin*.

Field Trip 2008-1

June 21-22, 2008, central Alberta foothills. This will be a two day trip with stops at Ram Falls and Bighorn Dam as well as a number of roadside stops. The overnight stop will be at Ram Falls.

Field Trip 2008-2

July 19-20, 2008, Flathead Valley, southeast British Columbia. A two day loop through the Flathead Valley visiting a number of palaeontological sites is planned.

Field Trip 2008-3

August 16-17, 2008, southeast Alberta/southwest Saskatchewan. On the first day we will visit the Ravenscrag Butte-Eastend area of Saskatchewan. Day two will include stops in southeastern Alberta. □

Book Review

By Dan Quinsey

***In Search of Ancient British Columbia: Volume I.* By Barbara Huck with Heidi Henderson and Philip Torrens. Heartland Associates, 2006, ISBN 978-1-896150-05-5. CAD\$29.95**

This is a very informative book written about the geology, palaeontology and archaeology of southern British Columbia. Specifically, the book takes a good look at the Kootenays; Thompson-Okanagan; Fraser Canyon; Fraser Valley; Lower Mainland; Gulf Islands and Vancouver Island.

It is very well written with colourful pages filled with hundreds of illustrations, photographs, charts, and artwork not to mention fantastic drawings by

Leah Pipe. Each chapter begins with an

introduction followed by a

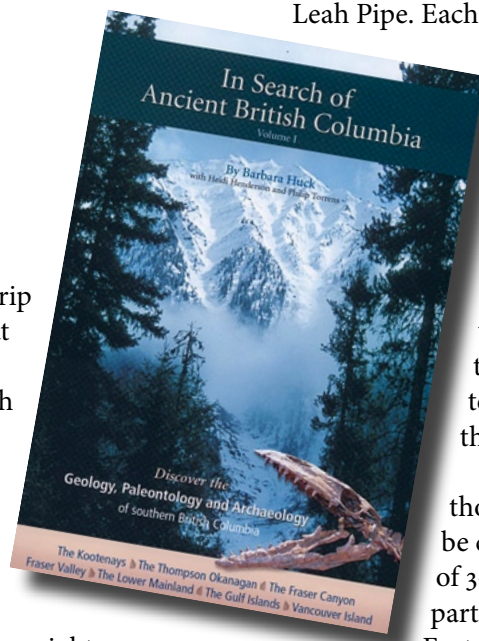
scenic tour of the geology, palaeontology, and archaeology of the area as well as scenic attractions.

As you travel from page to page, you feel as if you are travelling the province, visiting and experiencing the sites yourself, a great testament to the writing of the book.

Although the book appears thorough, not everything can be captured in the short space of 304 pages. One omission in particular is the trilobites near Fort Steele. I also took note of an

illustration of the Burgess Shale fauna showing poor old *Hallucigenia* once again turned upside down. I was disappointed to find the text lacking an index which would have been very helpful in this type of publication. I do, however, appreciate the magnitude of information needed to make such a volume complete—and even then there would always be something missing.

In all, I found the publication to be informative and enjoyable. At a cost of \$29.95 it is worth having in your library and certainly worth reading before your next excursion into the province of British Columbia. □



Fossils in the News

Discovery Channel News (online)

September 20, 2007

Velociraptor had feathers

MONGOLIA—A close examination of the forearm bone of a Mongolian specimen of *Velociraptor* has revealed the presence of a row of small bumps, corresponding to the quill knobs found on modern bird wing bones. The quill knobs are sites of attachment for the quills, or major feathers on a bird's wing. This means that *Velociraptor*—a dinosaur about 1 m tall, much smaller than the exaggerated version created for the *Jurassic Park* movie—“definitely had feathers,” according to Alan Turner of the American Museum of Natural History. Turner is lead author of a research paper published in the September 21 issue of *Science*.

Discovery Channel News (online)

October 19, 2007

Pregnant teens common among dinosaurs

AUSTIN, Texas—Speaking at the annual SVP conference, researchers Andrew Lee and Sarah Werning of Ohio University reported on dinosaur bone samples that suggest many dinosaurs were producing offspring before they had reached full maturity. Three bone samples, taken from specimens of *Tyrannosaurus*, *Allosaurus* and *Tenontosaurus* (the latter is a primitive iguanodont—a herbivore) all showed the presence of “medullary tissue” which, in modern birds, is present in females prior to egg-laying and is necessary for producing calcium, a major component of egg shells. All three specimens were also determined to be relatively young animals when they died. According the Lee and Werning, early production of offspring is a strategy to maximize reproductive success in animals whose adult years were often short.

ScienceDaily (online)

September 1, 2007

When bivalves ruled the world

MILWAUKEE—In this story [which your editor found to be littered with questionable facts and *non sequiturs*: it's hard to tell if the science is bad or just the reporting], University of Wisconsin Milwaukee

earth scientist Margaret Fraiser opines that a runaway greenhouse effect, created by CO₂ expelled in Siberian volcanic eruptions, was the culprit in the Permian-Triassic mass extinction event. According to Dr. Fraiser, CO₂ dissolved in the oceans created a toxic soup that killed off up to 95% of marine species, including brachiopods, which were replaced by hardier bivalve molluscs as the dominant marine shelled organisms in the subsequent Mesozoic Era. See the article at <http://www.sciencedaily.com/releases/2007/08/070831171556.htm>

ChinaDaily (online)

October 22, 2007

China builds giant dam to protect dinosaur fossils

HARBIN—Construction workers have been labouring for the past three years on a dam project meant to protect a mountain of dinosaur bones from being eroded and destroyed by the Heilongjiang River. “Dinosaur Mountain,” in Dinosaur National Geologic Park, in China's northern Heilongjiang Province, has already produced bones amounting to thirteen dinosaur skeletons. Archaeologists [*sic*] estimate that “at least 100 more” skeletons await unearthing. Erosion by the river had been destroying fossils on an annual basis, prompting the government to build a 1.4 km long earth-fill dam to divert the river.

Saginaw News (online)

October 23, 2007

Corporate naming hits new low with dinosaur disgrace

SAGINAW, Michigan—Staff writer Jason Schneider, tongue firmly in cheek, editorializes against the naming of a newly discovered Argentine giant sauro-pod—*Futalognkosaurus dukei*—for the Duke Energy Corporation, which funded the excavation. Archaeologists [*sic*, again!] excavated the bones in Nequén province in 2000*. The monster dino, described and named earlier this year, was estimated to be 32 to 34 m in length when it lived in the Late Cretaceous. Its genus name means “giant chief” in a local aboriginal language.

Schneider wonders if the next dinosaur unearthed might be named “Del Monte Mixedfruitasaurus.” [**Supplementary information from Wikipedia –ed.*]

Discovery Channel News (online)

September 20, 2007

The Hobbit: Not human?

FLORES, Indonesia—A new examination of the wrist bones of the so-called “Hobbit,” an 18,000 year-old dwarf human-like creature [see *Bulletin*, Dec. 2004 and June 2006] scientifically dubbed *Homo floresiensis*, supports the contention that the fossil represents a different species of human and not just a pathologically dwarfed *Homo sapiens*.

Matthew Tocheri of the Smithsonian Museum leads a research team that reported its findings in the September 21 issue of *Science*. According to Tocheri, the wrist bone evidence “seals the deal.” He says the wrist bones are nearly identical to those of an African ape or early hominin, completely different from the construction of a modern human wrist. The nay-sayers, however, are unimpressed. Robert Martin of Chicago’s Field Museum is one who still believes the bones are those of a modern human who suffered from a genetic defect.

Reuters News (online)

September 16, 2007

Mammoth dung, prehistoric goo may speed warming

DUVANNY YAR, Russia—In what seems like a flashback to an old Cheech and Chong comedy routine, this story begins with Russian scientist Sergei Zimov stooping down on the Siberian tundra, grabbing a handful of brown goo, and sniffing it: “Smells like mammoth dung.”

Dr. Zimov is worried that global warming and its resulting meltdown of the Arctic permafrost is going to release untold tracts of frozen mammoth manure and other organic matter which, when attacked by bacteria and fungi, will in turn release CO₂ and methane (which is an even worse greenhouse gas than CO₂). Zimov estimates that 500 billion tonnes of carbon are locked up in such permafrost deposits.

Geological Society of America (online)

News release, October 29, 2007

Ancient amphibians left full-body imprints

READING, Pennsylvania—Rummaging through drawers in the Reading Public Museum, geology

student David Fillmore happened upon a stunning sight: 3-dimensional body casts of long-extinct amphibians standing on a slab of reddish brown sandstone. The casts show the body form of three amphibians, along with obvious heads, tails, legs and four-toed feet.

The slab had been collected many years ago from a locality near Pottsville in eastern Pennsylvania, but had lain forgotten in the drawer, along with other specimens of vertebrate footprints. The rocks are from the Carboniferous (Lower Mississippian) Mauch Chunk Formation, approximately 330 million years old.

“Body impressions like this are wholly unheard of,” according to Spencer Lucas, of the New Mexico Museum of Natural History and Science, who studied and reported the fossils at the Geological Society of America’s annual meeting. A photo and artist’s reconstruction of the find can be seen at <http://www.geosociety.org/news/pr/07-60.htm>

BBC News (online)

November 21, 2007

Giant sea scorpion claw unearthed

PRUM, Germany—The enormous claw of a 390 million-year-old marine arthropod (eurypterid or sea scorpion) has been recovered from rocks in a western German rock quarry. The claw is 46 cm long, indicating that, at the same scale, the entire animal would have been as much as 2.5 m long. *Jaekelopterus rhenaniae*, as the species has been named, was discovered by palaeontologist Markus Poschmann who was splitting slabs of rock in the quarry with a hammer and chisel. It is by far the largest fossil arthropod ever found.

Simon Braddy of the University of Bristol, lead author of a paper in the journal *Biology Letters* describing the fossil, credits the creature’s giant size to a lack of vertebrate predators in the sea scorpion’s Middle Devonian ecosystem of presumed rivers or swamps. It is thought that atmospheric oxygen levels were much higher at that time, another possible factor in the development of giant arthropods.

[Thanks to Georgia Hoffman and Phil Benham for sending links to news stories. –ed.]

www.albertapaleo.org

Paleo 2008

APS Twelfth Annual Symposium
Saturday and Sunday, March 15 & 16, 2008

The Symposium

Paleo 2008 is a two day event with lectures, posters and showcase displays on Saturday, March 15 and workshops on Sunday, March 16. Saturday programs are free and open to the general public. We will encourage families to bring fossils to our identification booth on Saturday. For kids, we have videos and an activity table. No registration is required to attend Saturday activities. 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. Lectures will be held in the Jenkins Theatre.

Call for posters and abstracts

The Alberta Palaeontological Society (APS) invites you to present a poster at Paleo 2008. This symposium will have presentations from a mix of avocational and professional palaeontologists from all over western Canada. We are interested in posters or displays associated with palaeontology or other natural sciences. Specific invitations have been sent to staff and students of 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, but we will try to have some on hand for those who forget. Those with 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 15. 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, 2008.

Paleo 2008 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 (one page being standard; less than a full page is OK). Requests for longer abstracts will be accepted. Abstract contributors are encouraged to include photos and/or diagrams, but it should be noted that the abstracts 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. Deadline for submission of abstracts is February 15, 2008. Specific instructions and examples can be downloaded from our website, www.albertapaleo.org or by contacting the Editor.

Workshops

Two workshops are offered in 2008. Both will be held at Mount Royal College, Room B108.

Sunday, March 16, 2008, 9:00 A.M. to 12:00 P.M. Cost: \$15.00 per person. Topic: *Sleuthing ancient "menu mysteries"* presented by **Dr. Karen Chin**, University of Colorado. Participants will learn how coprolites can be used to decipher diet.

Sunday, March 16, 2008, 1:00 P.M. to 4:00 P.M. Cost is \$15.00 per person. Topic: *Introduction to fossil vertebrate track identification and field techniques*, presented by **Rich McCrea**, **Lisa Buckley** and **Tammy Pigeon**, Peace Region Palaeontology Research Centre. Participants will learn the basics of recognizing fossil tracks and the kinds of data and records that are useful when reporting discoveries to a museum or palaeontologist. You will be given a short lesson on the different types of footprints and what animals potentially made them. Participants will make their own replica cast of a dinosaur footprint to take home.

To register for workshops, contact Mona Marsovsy at (403) 547-0182 or email monahome@telus.net. Registration deadline is February 29, 2008. Cheques should be made payable to Alberta Palaeontological Society. Payment may be handed to Mona or mailed to the Society's mailing address at P.O. Box 35111 Sarcee Postal Outlet, Calgary, AB T3E 7C7.

Contact Information

Paleo 2008 committee chairperson: Dan Quinsey (403) 247-3022, president@albertapaleo.org

Posters & displays: Wayne Braunberger (403) 278-5154, events@albertapaleo.org

Poster & showcase organization for APS members: Roslyn Osztian (403) 256-6648.

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

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

Visit the APS website for confirmation of lecture and workshop times and speakers: 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 PALAEOLOGICAL SOCIETY

Paleo 2008

Presented in conjunction with the CSPG Palaeontological Division
and Mount Royal College Earth Sciences Department

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

Lectures and poster displays—Saturday, March 15, 2008, 9:30 AM to 5:00 PM

Workshops—Sunday, March 16, 2008, 9:00 AM to 4:00 PM

Saturday events are free to the public

Sunday workshops require registration and minor fee

Saturday, March 15 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** *Seeds and shells from soft sediment: Macrofossil analysis at some late Quaternary sites in Alberta.* **Alwynne Beaudoin, Royal Alberta Museum**
- 10:15 AM** *Heterospory and you: The heterosporous ferns of the Horseshoe Canyon Formation.* **Kevin Aulenback**
- 11:00 AM** Coffee Break.
- 11:15 AM** *Determining ontogenetic and individual variation in *Coelophysis bauri* teeth.* **Lisa Buckley, Peace Region Palaeontology Research Centre**
- 11:45 AM** *Raptors x 10,000: Continuities of carnivorous dinosaur feeding across their size range.* **Eric Snively, University of Alberta**
- 12:15 PM** Lunch Break and Poster Displays.
- 2:00 PM** *Fossil vertebrate tracks from the Gorman Creek Formation, northeastern British Columbia.* **Richard McCrea, Peace Region Palaeontology Research Centre**
- 2:30 PM** *Reproductive traits in non-avian dinosaurs: A comparison with birds and crocodiles.* **Darla Zelenitsky, University of Calgary**
- 3:00 PM** *Erosion rates and loss of fossils in Dinosaur Provincial Park.* **Darren Tanke and Donald Henderson, Royal Tyrrell Museum of Palaeontology**
- 3:30 PM** Coffee Break.
- 3:45 PM** **Keynote talk—***Coprolites and dinosaur biology.* **Karen Chin, University of Colorado**

For more info, see Page 12 