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Society
Bulletin

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THE SOCIETY WAS INCORPORATED IN 1986 as a non-profit volunteer organization formed to:

- Promote the science of palaeontology through study and education.
- Contribute to the science by: discovery; responsible collection; curation and display; education of the general public; preservation of palaeontological material for study and future generations.
- Work with the professional and academic communities to aid in the preservation and understanding of 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**

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Back issues are available at **albertapaleo.org/resources/bulletinarchives/**

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

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, January 17, 2025—Mona Trick, APS (short talk).
Royal Ontario Museum: Early Life Exhibit
and **Dr. Jon Noad**, Stantec Consulting and University of Adelaide (main speaker).
Dinosaurs going postal!

Friday, February 21, 2025—Dr. Chris Jass, Royal Alberta Museum.
Research at the mammoth site of Hot Springs, South Dakota.

Saturday and Sunday, March 15 & 16, 2025—*Paleo 2025* (See Page 33 and **Circular**).

Check the APS website for updates! albertapaleo.org/events/monthlymeetings

ON THE COVER: Specimen APS 2013.05, from an undisclosed locality in Montana, USA, donated by former member **Judith Aldama**. Initially thought to be a hadrosaur caudal (tail) vertebra, **Darren Tanke** reports that it is in fact a *Thescelosaurus* caudal vertebra. Distinctive features include the very elongate neural arch remnants (top image) and the horizontal ridge on the side of the vertebra (middle left image). Darren adds that the ungual phalanx (toe tip bone) figured on Page 10 of the June 2013 *Bulletin* is probably also from *Thescelosaurus*. Thanks, Darren! APS file photo.

Changes coming to the *Bulletin*

By Howard Allen, Editor

When I volunteered in September 1991 to take over the *Bulletin* editorship from **Heather Whitehead**, little did I expect that I'd still be doing it 34 years later. As I am now almost 66 years old, that means, by time I finally relinquish my grip on the position in September of 2025, I will have been Editor for more than half of my life. I think that's probably long enough.

As a result—and assuming a new Editor steps up to the plate—readers will see major changes beginning with the December 2025 issue. I am happy to report that a member has tentatively volunteered to take my place, but since nothing will be finalized until the May 2025 AGM elections, I won't jump the gun by naming a successor. If anyone else thinks they'd like to have a go at it, I'd encourage them to run for the position, next May.

I intend to encourage the new Editor to take free rein and steer the *Bulletin* in any direction they think best, so you will certainly see a new look, which is probably long overdue.

A very few of our members will also likely see a change to the format in which they currently receive the *Bulletin*. When the *Bulletin* went full colour and digital back in December of 2003 (that's 21 years ago!) a small number of long-time members were, as a courtesy, "grandfathered" in to receive their *Bulletins* in the old, black-and-white, paper version. All new members since that time have received the colour, PDF version only.

Producing the black-and-white paper copies is, frankly, an expensive nuisance. The colour master must be converted to black-and-white (including each photo, call-out boxes, coloured text, etc.). The Editor drives to a print shop, pays for printed copies, folds them if necessary, drives to the stationery store to buy envelopes and address labels, stuffs, seals and labels the envelopes, drives to the post office, buys stamps, applies them to the envelopes, etc., etc. All this in the face of rising prices and postal rates (and fuel costs, which have *never* been reimbursed). I wouldn't inflict this procedure on a new Editor, whose job will be busy enough. The emailed colour PDF files can be taken to any print shop and printed—in colour—by the user, if a paper copy is necessary.

I plan to continue contributing to the *Bulletin* in whatever form it takes in the future and I encourage all of our membership to do the same. We all want to see good content and the more of you who are willing to write up your field trip experiences or new fossil finds, or book reviews, the better. Let's give our new Editor all the help we can!

And while I'm up on my soap box, we sure need volunteers for many positions on the APS Board! APS was founded back in 1986 as a *volunteer* society, not a fee-for-service organization. Most of my fellow Board volunteers have been serving the APS for years—some for *decades*. If no new blood is willing to help out, the Society will only fade as long-time volunteers gradually burn out.

Happy New Year! ❑

2025 Elections

By Wayne Braunberger, Past President

At the Annual General Meeting (AGM) of the Society, scheduled for Friday, May 9, elections for Officers and Directors will be held.

Officers up for election this year are:

President	**Secretary**
Vice-President	**Treasurer**

Officer positions are one-year terms commencing September 1, 2025 and ending August 31, 2026.

Director positions up for elections this year are:

Field Trip Co-ordinator	**Membership**
Program Co-ordinator	**Editor**

Director positions are two-year terms commencing September 1, 2025 and ending August 31, 2027.

Keith Mychaluk will **NOT** be standing for re-election as **Field Trip Co-ordinator** and we are actively searching for a replacement. Keith will assist the new co-ordinator with the handover so you will be able to transition smoothly into the position. If you would

Visit our website for talk abstracts and updates when they are made available.

albertapaleo.org

like more information please contact Keith by email: **kmychaluk@gmail.com** or phone (403) 809-3211.

Howard Allen, *Bulletin* **Editor**, has indicated he would like to retire at the end of 2025. Howard has also served as **Membership Director** for more than two decades. If you are interested in either position please contact Howard, **h2allen@telusplanet.net**, (403) 274-1858.

If you are interested in any of the positions please contact Past President **Wayne Braunberger** at (403) 278-5154 or by email **pastpres@albertapaleo.org** or any member of the Board (see directory on Page 2).

Program Summary

October

Cory Gross

President, Alberta Palaeontological Society

The history and prehistory of the North American bison

Atharva Roy

Alberta Palaeontological Society

3D scanning of fossils

[*Thanks to Cory and Atharva for pinch-hitting their presentations on short notice! Atharva's 15-minute presentation preceded our main speaker, Cory Gross.*]

November

Tako Koning

Professional Geologist, Senior Geologist/Consultant

The Great Sands Hills, southwest Saskatchewan: among the largest active sand dunes in Canada

[*This 15-minute presentation, prepared in collaboration with* ***Dr. Dale Leckie****, Ph.D., P. Geol., preceded our main speaker,* ***Dr. Sally Hurst****.*]

The Great Sand Hills in southwestern Saskatchewan cover an area of approximately 1,900 km^2 (730 mi^2). The aeolian landforms originated from sediments deposited by glacial meltwaters during the retreat of the Laurentide Ice Sheet beginning approximately 13,000 years ago. The subsequent modification and reworking of these sand deposits by strong winds created a landscape of rolling topography with open sand dunes and unique dune complexes. The Great Sand Hills is an area of contrasts with open sand dunes, stabilized sand dunes, grasslands, juniper and shrub land, saline lakes and wetlands, pebble plains and cottonwood groves and aspen bluffs.

While the name "Great Sand Hills" conjures up an image of great relief and topography, few individual dunes rise more than 15 m (50 ft) above the surrounding plain. The ruggedness of the topography is the result of steeply sloping dunes located close together.

The sparse ground cover has limited organic material and has low moisture holding capacity of the soil which is coupled with broken topography. This has created a situation of great sensitivity to any kind of disturbance. Accordingly, the thin and fragile soils are extremely susceptible to wind erosion which exposes the underlying sands. Presently, less than one percent of the area (19 km^2 or 7 mi^2) is exposed sand in active sand dunes.

The Great Sand Hills are among the largest active sand dunes in Canada. These dunes are the second largest in Saskathewan after the Athabasca Sand Dunes in northwest Saskatchewan, located along the southern shore of Lake Athabasca. The above-mentioned information is provided at the Interpretation Centre (Tourism Saskatchewan) in Great Sands Provincial Park. This area is located approximately 20 km south of the village of Sceptre and was visited by the senior author in October, 2021.

Dr Sally Hurst

Macquarie University, Sydney, New South Wales, Australia

Human-fossil interactions in ancient and modern contexts

Friday, November 15, 2024, 7:30 P.M.
Talk was presented online, via Zoom.

Palaeontology and archaeology are often treated as entirely distinct fields. However, the interactions

Your Society needs Volunteers!

Please THINK about volunteering for APS!

and crossovers between them can provide us with insights into the perceptions of humans, both ancient and modern, concerning fossils and their protection.

Within this talk, Sally Hurst discussed her work at the intersection of these two fields, delving into the inspiration for her research, known as the *Found a Fossil* project. The presentation touched on fossil legislation in Australia and drew comparisons with Alberta, discussed the value of First Nations knowledge of and connection to fossil sites and provided a brief overview of her current fieldwork and research being undertaken in Dinosaur Provincial Park. ❑

What's in your backyard?

Investigating your understanding of fossil legislation in western Canada

By Mollie Black, University of Saskatchewan

What would you do if you found a fossil? As I'm writing this article for a palaeontological society, I'm sure that the proper protocol for reporting and documenting is well known within this crowd. However, as I'm finding in the early stages of data collection of my research, this is largely not the case across Western Canada.

My undergraduate research project, "Investigating Public Understanding of Fossil Legislation in Western Canada" seeks to answer questions similar to **Sally Hurst's** *Found a Fossil* Project in Australia (Page 4, herein).

There are two main goals of my project; the first is to see what people know about fossil resource management within their province. The second is to see what sorts of communication mediums people turn to and trust to get information. By understanding to what extent people know about fossil legislation and how they like to learn, strides can be made to make palaeontology more accessible for everyone.

To participate in the survey, you can scan the QR code in the poster (next column) or go to the link **https://www.surveymonkey.ca/r/7CRY8N7**. Please consider sharing this with friends or family to further aid in this research. ❑

Mike Clark Memorial Scholarship

Help make it a reality

By Mona Trick

Following the late **Mike Clark**'s wishes, his family, friends and Mount Royal University are raising funds to create an endowment for the Mike Clark Memorial Scholarship. Once the $30,000 endowment is raised, this fund will join the larger Mount Royal University Endowment fund and recapitalize annually to exist and disburse in perpetuity. Before his untimely death (*Bulletin*, March 2024), Mike requested a scholarship award in his name for a deserving Mount Royal University geology student who excels in field geology. So far over $13,000 of the required $30,000 has been raised.

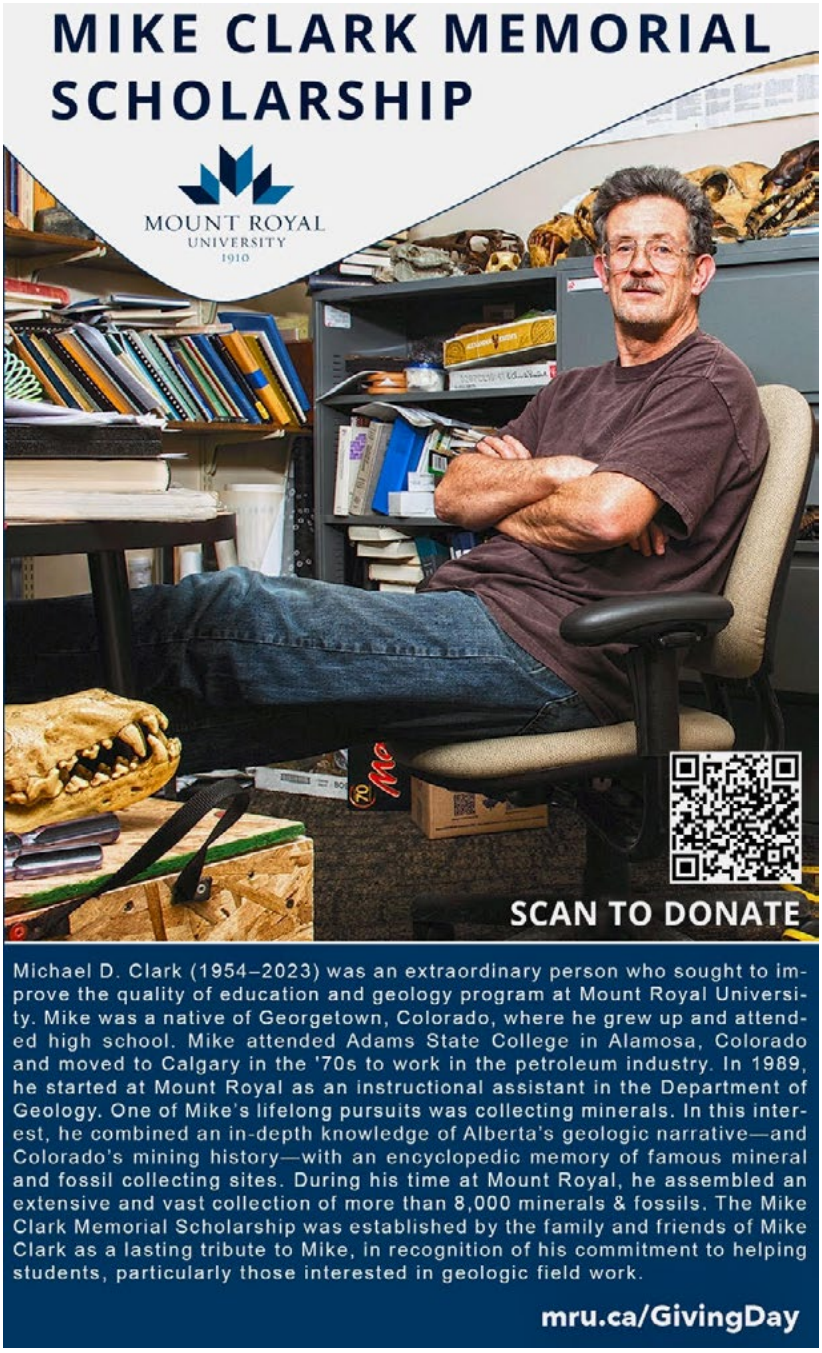
continues . . .

Any size donation makes a difference. To donate, visit **https://foundation.mru.ca/mike-clark-memorial-scholarship**

You can donate using a credit card. Your donation will be quickly acknowledged via e-mail and a link to download your Canadian tax receipt will be e-mailed to you shortly afterward.

Mike Clark was our APS contact at Mount Royal University for many years until he retired. He faithfully reserved the rooms and equipment and provided the computer login information we required for general meetings, microfossil sorting sessions and the symposium talks and workshops. For the annual APS symposium, he was always on duty at 8:00 A.M. to set up the tables, chairs and poster stands. He stayed for the whole day of the symposium, to make sure everything went well, then he worked with us to put everything away. Mike Clark was essential to APS activities.

Contributing to this memorial scholarship is one way we can say "Thank you" to Mike Clark for his valuable assistance over the years. ❑



Microfossil sorting January to March 2025

By Mona Trick

Search for tiny fossils to aid the research of **Dr. Jessica Theodor** and **Dr. Alex Dutchak** of the University of Calgary. Join us as we use microscopes to search the matrix (loose sediment) from the Cypress Hills Formation of Saskatchewan (Middle Eocene, about 50 million years old) to find teeth, scales, skull elements and other fossils from mammals, reptiles and amphibians.

We will be using microscopes in Room B140 in the Main Building of **Mount Royal University** from **1:00 until 3:30 P.M.** on the following **Sundays**:

January 12, 2025
January 26
February 2
March 2

Registration is not required, but if you contact

Mona Trick (587) 578-4579 or **giftshop@albertapaleo.org**) and let me know that you are planning to attend, then I can inform you if we need to cancel a session due to weather or other issues. No experience is required. Due to the delicate nature of this work, **only those 12 years and older** are allowed to participate. Bring tweezers (with pointed ends) or a small paint brush to pick the tiny fossils from the matrix and a pen to label your finds. All of the fossils found will be turned over to Dr. Jessica Theodor and Dr. Alex Dutchak for their research. We want to thank Mount Royal University for allowing us to use their microscopes and lab. ❑

3D scans of the APS fossil collection are up on our website!

By Atharva Roy

Three-dimensional images of select specimens from the APS fossil collection (45 images at the time of this writing) can be viewed on the *Fossil Collection* page, accessed from the *Resources* tab.

When you scroll down, you will see a table with all the scans, and some general information about each specimen. To view a scan, click the "Open" button. This opens another screen, where you can interact with the scan. To zoom in and out you can scroll forward and backwards on your mouse's scroll wheel. To change the viewing angle, left-click and drag the cursor in any direction. Additionally, you can move the entire scan around by right-clicking and dragging your cursor. To exit the view of the scan, press Escape on your keyboard or click the X in the upper right corner of the viewer, if you are viewing them with a tablet or phone. I also made a short video tutorial on how to view the 3D scans; it is linked on the *Fossil Collection* page to the APS YouTube channel. The scans can also be viewed on the PolyCam™ website, **https://poly.cam** in the *Explore* tab. By entering "APS" in the search bar, a couple of the scans will show up and from those scans, you can go to the APS account by clicking the profile. In the account profile, all of the scans can viewed and downloaded! On PolyCam, you can interact with the scans the same way you do on the APS website.

I made the scans using an app called PolyCam. It is a very impressive app that can be used on a smart phone to make 3D models of real life objects. I learned about the app after my older brother sent me a surprisingly high quality 3D scan that he made. I was very impressed with the level of details captured by the scan and I immediately thought this could be great for making scans of fossils.

After having success with scans of my own fossils, I proposed the idea to APS. PolyCam can make gaussian splats, LiDar, and photogrammetry scans. While the gaussian splatting and LiDar are very interesting and useful ways to make 3D scans, photogrammetry scans work the best for making a detailed scan of a single object.

Many specimens in the APS fossil collection are too small to scan or are fossils preserved on flat pieces of shale, so with the help of **Howard Allen**, I was able to narrow down a list of thirty-six accessioned fossils I thought would be suitable to scan. There are thirty-two other accessioned fossils that I could have scanned, but the majority of them were duplicates or verging on being too small to scan.

To make the photogrammetry scans, I 3D printed a 10 cm tall cone, with a base width of 8 cm and put some plasticine on the tip. This allowed me to prop up the specimen, to show as many faces of the fossil as possible. After making the scans, I downloaded them to my computer and sent them to **Eric Campbell**, who put them up on the APS website. My final "real" contribution to this project was compiling the specimen information for each scan on a spreadsheet and sending it to Eric, who deserves all the credit for putting the scans on the website and creating the user interface to view and interact with the scans.

This idea would never have become a reality without the help of **Mona Trick**, Howard Allen and Eric Campbell. This project was very fun to work on. I had never done anything like it before. It has inspired me to co-present a workshop for the March, 2025 Symposium, with **Dr. Emily Bamforth** and **Jackson Sweder** of the **Philip J. Currie Dinosaur Museum**. If you are interested in 3D scanning fossils, there is information about the workshop and how to sign-up on the *Symposium* page of the APS website, **https://albertapaleo.org/events/symposium/**. I am very grateful have been able to contribute this project to the APS and I hope everyone enjoys the scans as much as I enjoyed making them! ❑

Dinotour 2025 Southern Alberta

Hiking in Dinosaur Provincial Park. Photo by Mona Trick.

By Mona Trick

Have you ever dreamed of exploring and discovering a dinosaur fossil with some of the world's greatest dinosaur hunters? This is your opportunity to register for **Dinotour 2025 Southern Alberta** to be held July 4 to July 7, inclusive, 2025. During this four-day, family-oriented event you will:

- Learn about the dinosaurs of southern Alberta from world-renowned scientists **Dr. Philip Currie**, **Dr. Eva Koppelhus** and **Dr. Caleb Brown** and your tour coordinator, **Mona Trick**.
- Tour the **Royal Tyrrell Museum of Palaeontology** galleries, and the labs and backrooms.
- Hike to "**Dinosite**."
- Hike to the *Albertosaurus* dinosaur quarry in **Dry Island Provincial Park**.
- Explore **Dinosaur Provincial Park** with hikes and a bus tour.

The tour includes

- Guided tour including bus transportation to and from Calgary, Alberta.
- Three nights accommodation (double occupancy).
- All meals over the four days of the tour.
- Admission to the activities at the Royal Tyrrell Museum and Dinosaur Provincial Park.
- Guidebook and T-shirt.
- Canadian charitable tax donation receipt for a significant portion of the fees.

Cost of the tour

CDN $2,495.00 per person (double occupancy). **Minimum age: 14 years old as of July 4, 2025**.

Optional extras:
Single supplement: CDN $328.80
Calgary hotel room July 3: CDN $216.91
Calgary hotel room July 7: CDN $216.91

Proceeds generated from this tour support the work of the **Dinosaur Research Institute**, a non-profit charitable organization that finances western Canadian dinosaur research.

To get your registration form, email Mona Trick, **dinotour@DinosaurResearch.com** or visit **https://www.dinosaurresearch.com/images/Dinotour2025RegistrationForm.pdf**. Your spot will be reserved once we receive your deposit of CDN$500 for each person (by cheque, money order, Visa or MasterCard or INTERAC e-transfer to **info@dinosaurresearch.com**). The balance of the tour cost and signed waiver form is due by **May 31, 2025**. Dinotour 2025 is limited to 24 participants, only 12 spots are still available.

For details contact Mona Trick, **dinotour@DinosaurResearch.com**, phone/text (587) 578-4579. ❑

Dorothy area, southeastern Alberta

Review of Field Trip 2024-1, June 22

Article and photos by Eric Campbell

Figure 1. Steve Kary (second from right) explaining the palaeontology of the area and describing the search for the sea urchin locality.

The summer field trip schedule wouldn't be complete without a trip to the badlands! On June 22, 2024, members of the Alberta Palaeontological Society gathered at the historic Atlas Coal Mine near East Coulee, Alberta, for a field trip led by palaeontologist **Steve Kary**.

The day began with a brief talk from Steve, who described his long-running quest to find a fossil sea urchin locality nearby. He explained the challenges of finding fossils in this site and displayed some interesting specimens he had collected. Steve has been a vocal proponent of the APS, and his presentation from 2023 on the palaeontology of Irvine, Alberta is available on our YouTube channel, **www.youtube.com/@albertapaleo.**

After the introduction we set out for the first stop of the day—a hadrosaur bonebed. However, there was a minor mix-up involving access to the site, possibly related to exactly who needed to grant permission and complicated by the fact that there was some time-sensitive agricultural work which needed to be done. This required some deft negotiation by Steve, but eventually we were able to access the site. This delay highlighted an often-overlooked aspect of fieldwork—soft skills, such as landowner relations, which Steve emphasized are as essential as the scientific skills taught in palaeontology programs. Thankfully, the issue was resolved, and we were soon on our way.

After parking the cars, we had a short walk to the bonebed located near the base of the Horseshoe Canyon Formation. Luckily it had rained the night before, which turned what could have been a miserable slog in the heat into a very pleasant walk. Our timing turned out to be excellent—apparently later in the season, with temperatures in the high 30s and a full complement of mosquitoes, the walk is sub-

Figure 2. The descent into the coulee to see the hadrosaur bonebed.

stantially worse! Along with the striking badlands landscape around us, there were many natural treasures to be found, including a plethora of modern bones, each of which was of course first mistaken for a dinosaur bone.

Upon reaching the site we found many hadrosaur bones scattered throughout the bonebed. While the bonebed has yielded remains from other species in the past, our group primarily encountered hadrosaur material during this visit. The bonebed is significant because it represents a relatively understudied portion of the formation.

Our second stop was a short drive and a shorter walk away. This site probably represented a near-shore marine environment and is found either at the top of the Bearpaw Formation or the bottom of the Horseshoe Canyon Formation.

In contrast to other locations, where you really have to hunt for the fossils, here they were so thick on the ground that they presented a slipping hazard! The main fossil to be found there is *Ophiomorpha*, a fossil trace of ancient crustacean burrows. Due to the nature of the fossilization, the burrows had in many cases eroded completely from the surrounding matrix and the various twists, turns, and branchings were all clearly visible. Another nice thing about this site is that many sedimentary features, such as hoodoos and cross-bedded sandstone, were visible.

Having had our fill of fossils (ha!) for the day, we headed home. Thanks to Steve for an excellent trip and to **Keith Mychaluk** for organizing everything. ❑

Figure 3. A hadrosaur bone eroding from the side of the coulee.

Figure 4. Discussing the geology of the area and searching for more bones.

Figure 5. *Ophiomorpha* burrow casts with clearly visible branching pattern.

Figure 6. Hoodoos and the incredible view across the Red Deer River..

Jason Phipps Ranch Jordan, Montana, USA

Review of Field Trip 2024-3, July 27–29

Article and photos by Keith Mychaluk

On occasion, the APS travels outside our fossil-rich boundaries to explore and study the prehistory of our neighbours. This past July we traveled south and visited the fourth largest state in America—Montana. This was the Society's third excursion to the "Treasure State" with this trip's focus on the Upper Cretaceous (Maastrichtian) Hell Creek Formation, world-famous for yielding iconic dinosaurs like *Tyrannosaurus rex*, *Triceratops horridus* and the enigmatic *Nanotyrannus*.

Figure 1. Our host, Montana rancher **Jason Phipps** with a plaster-jacketed dinosaur sacrum.

On Friday July 27, nine members made the journey from Alberta and met on a lonely stretch of highway near Edwards, Montana. Edwards appears as a "town" on Google Maps but is really a collection of mailboxes on a very lonely stretch of State Highway 200. Happily, everyone found the meeting location without a problem—quite a feat considering it is 850 km from Calgary and hours from the nearest population centre.

From Edwards we caravanned for about 20 minutes to **Jason Phipps**' ranch (Sand Creek Cattle Company). Jason (Figure 1) is the older brother of **Clayton Phipps**, who many will recognize from the TV show *Dino Hunters* that aired on Discovery Channel a few years ago.

Jason's family operates a cattle ranch, which happens to be located amid outcrops of the Hell Creek Formation. While the badlands are exciting for those of us interested in palaeontology, the arid landscape makes raising livestock very challenging. During our visit Jason confirmed that no rain had fallen since May and there are no creeks or rivers in this part of Montana. "Fossil tourism" has added an important secondary source of income for Jason and his family and he offers visitors a chance to excavate at a large microvertebrate deposit on his land for a fee.

After an orientation by Jason, we consolidated ourselves into a few of the more rugged vehicles and traveled along Jeep trails to the microvertebrate site. We were able to park immediately above the site and walk a short distance down into the quarry. The quarry width is perhaps 25 m and exposes loosely consolidated sandstone resting upon a mudstone that forms the quarry floor. The bottom 2 m of the sandstone is slightly coarser-grained and contains the largest concentration of fossil material (Figure 2).

Jason noted that the largest fossilized elements are found at the very bottom of the quarry, on top of the mudstone, and showed us a fossilized sacrum to illustrate the point (Jason later spent the afternoon

Figure 2. The APS crew searches for Late Cretaceous microvertebrate fossils under the famous Montana "Big Sky."

fully excavating and then wrapping the fossil in plaster).

After this introduction we spread out and slowly began excavating the sediment before us. The sand was loose and slightly damp (odd, given the lack of precipitation) and was very easy to dig with flat-bladed tools like a hunting knife or trowel. Jason had several sifters (Figure 4) and screens for us to use. People quickly began finding small vertebrate remains (Figures 3, 5). Luckily, the sun was at our backs and the temperature was a tolerable 30° to 32° C, slightly cooler than the previous week's inferno.

Figure 3. A small theropod dinosaur tooth recovered from the diggings.

After a full day of playing in the sand we returned to Jason's ranch house and caravanned to Jordan, Montana—the largest town in the region. After checking into the Sportsmen Motel and cleaning up, we all gathered at the Hell Creek Bar, where we had a terrific meal and enjoyed socializing (Figure 7).

On Saturday we returned to Jason's ranch and continued excavating in the quarry although a few intrepid souls went exploring with Jason's son in the adjacent badlands. At the end of the day we gathered around and shared our discoveries. The vast majority of finds were a mix of tiny limb bones, gar scales, fish vertebrae (Figure 5), broken hadrosaur teeth and shed ceratopsian teeth (the latter called "spitters" by the Phipps family). However, a few people collected small theropod teeth (Figure 3), including one *Troodon* tooth, a few worn ankylosaur teeth and fragments of mammal teeth and jaws. Larger theropod teeth, including true *T. rex* teeth, can be found here but they eluded us on this trip.

After settling our fees with Jason, we presented him with a copy of our Society's book, *Guide to common vertebrate fossils from the Cretaceous of Alberta* and a year's membership as a thank-you for his amazing hospitality.

On the return drive to Jordan, member **Arnold Ingelson**'s car experienced a flat tire, forcing us to the side of the highway. With a collection of APS supervisors watching, **Les Wingerter** changed Arnold's

Figure 4. Les wields the shovel while Esther screens the sandy matrix for microvertebrate fossils.

tire faster than a Formula One race team! Truly impressive! Soon we were all back on the road to Jordan where we all enjoyed another great meal at the Hell Creek Bar (I recommend the fried chicken!).

Sunday was officially a travel day home to Alberta and some of our group did that. However, about half of our crew decided to keep exploring the region. We worked our way south along a very lonely stretch of gravel road towards Ingomar, Montana. Along this road we discovered vast outcrops of the Cretaceous Pierre Shale on public lands. Hiking the low hills yielded incomplete ammonite (Figure 6) and baculite fragments along with an assortment of gypsum and calcite crystals.

One friendly rancher stopped to say "hello." Otherwise the only other car I recall seeing was driven by a young lady, with British Columbia license plates, which was a bit of a surprise! We all enjoyed the endless vistas in this part of Montana, which truly earns its "Big Sky Country" nickname.

With the afternoon ending, our group separated once again, some heading back north to Jordan before the long journey back to Alberta. A few of us headed further south to hunt for agates on the Yellowstone River but that is a story for another day. This trip was a lot of fun to organize and I really enjoyed Jason's ranch and his welcoming family. If you are interested in visiting Jason's quarry, please see **https://www.cowboydinodigs.com** for more information. ❑

Figure 5. A spool-shaped fish vertebra is exposed in the sandy maxtrix of the Hell Creek Formation at the Phipps quarry. Chisel tip for scale is about 2 cm wide.

Figure 6. A nice scaphitoid ammonite collected from the Upper Cretaceous Pierre Shale in Montana.

Figure 7. The team relaxes at the "Hell Creek Bar" in Jordan, Montana, after a day of fossil hunting in the badlands.

Fossils in the News

Calgary Herald via newspapers.com

Calgary Herald
Friday, October 22, 1965, p. 56

Blast from the past—60 years ago!

Thanks to **Darren Tanke**, who found this human-interest story about our late Life Member, **Les Adler** (1927–2020; *Bulletin*, March 2021). The story, titled "Fossil Collection Includes 100-Million-Year-Old Items" describes Les' immigration to Canada in 1957 and his subsequent collection of "thousands of specimens" from all over the world. At the time the article was published, Les was a "specialist teacher of botany and geology" at Vincent Massey Junior High School in Calgary. The accompanying photo shows him holding a mastodon tusk, with a display of bovine skulls and bones in the background.

The Canadian Encylopedia
February 6, 2024

Tiktaalik

This article, by APS member **Dr. Jason Anderson**, is more description than news. The "newsy" part is that the type (and only) specimen of *Tiktaalik roseae* has recently been repatriated to Canada from the United States, where it was under study since its discovery in Nunavut in 2004. It is now housed at the Canadian Museum of Nature in Ottawa. The article includes a link to a YouTube video documenting the repatriation to the museum. **https://www.thecanadianencyclopedia.ca/en/article/tiktaalik**

[*Thanks to Vaclav Marsovsky —ed.*]

CBC News online
January 2, 2025

"Dinosaur highway" offers window into Jurassic Period

Britain's biggest dinosaur trackway site has been uncovered on the floor of an Oxfordshire limestone quarry. Around 200 footprints of Jurassic-aged dinosaurs of various kinds are being studied by scientists from the University of Birmingham. **https://www.cbc.ca/player/play/video/9.6603879** ❑

Grande Prairie and Grande Cache, Alberta

Review of Field Trip 2024-4, August 24–26

By Mona Trick and Vaclav Marsovsky

The weather co-operated for our APS field trip to Grande Prairie and Grande Cache.

On Saturday, August 24, at 1:00 P.M. **Dr. Emily Bamforth** (curator of the Philip J. Currie Dinosaur Museum and APS Vice President) guided the three APS members who had signed up as "Diggers" on an excellent gallery and laboratory tour of the **Philip J. Currie Dinosaur Museum** in Wembley.

On Sunday at 9:00 A.M. Emily met the three "Diggers" and the four "Preparators" in the lobby of the Museum. Emily led the "Diggers" on the 15-minute drive to the Pipestone Creek Day Use Area. From there they hiked twenty minutes to the Pipestone Creek Bonebed. A steady rain the previous day made the trail muddy. The museum staff had wisely covered the bonebed with tarps, which meant the bonebed was dry except in some corners.

Figure 1. In the lab at the Philip J. Currie Dinosaur Museum, Les Wingerter and Ethan Ross clean fossils excavated from the Pipestone Creek Bonebed. Photo by Mona Trick.

The bonebed is located in "Unit 3" of the Upper Cretaceous (Campanian) Wapiti Formation. Volcanic ash collected from this formation yielded an age of 73.27 million years old (Fanti and Catuneanu, 2009 and 2010). The high concentration of organic materials indicated deposition in meander bends of rivers and oxbow lakes. This was deposited at about the same time that the Bearpaw Formation was being formed in southern Alberta. This bonebed is one of the densest in North America. It extends at least one kilometre and contains fossils from hundreds of individuals. Nearly all of the fossils are of *Pachyrhinosurus lakustai*, a ceratopsian (horned dinosaur).

Meanwhile, **Jason Chappus** gave the four "Preparators" an excellent laboratory tour and then set up the equipment so that we could prepare fossils for the rest of the morning. **Vaclav Marsovsky** found a nice fish tooth in the matrix from the "DC Bonebed" while using the lab microscope. Meanwhile **Mona Trick** and **Ethan Ross** cleaned partial ribs and **Les Wingerter** prepared a vertebra, all from the Pipestone Creek Bonebed. After lunch on our own, Jason Chappus provided a one hour gallery tour of the museum to the "Preparators." Afterwards,

Figure 2. Overview of the Pipestone Creek Bonebed. Photo by Vaclav Marsovsky.

Les Wingerter decided to continue fossil preparation while Mona Trick led the rest of the preparators (Vaclav Marsovsky and Ethan Ross) to the Pipestone Creek Day Use Area and Pipestone Creek Bonebed. Emily described the Pipestone Creek Bonebed to us as we watched **David George**, **Eric Campbell** and **Walter DiMattia** excavate fossils. We observed Eric applying a plaster jacket to one fossil. We got to see "Big Sam" *in situ*, the large *Pachyrhinosaurus* skull that was excavated on September 25, 2024 (see **https://everythinggp.com/2024/09/25/philip-j-currie-dinosaur-museum-extracting-big-sam-2/**). The "Preparators" left the bonebed at 3:30 P.M. while the "Diggers" continued their labours until 4:00, at which time they packed up and followed us back to the Pipestone Creek Day Use Area. From the Day Use Area, we drove the two hours south on Highway 40 to Grande Cache, where most of us stayed in the same hotel.

Twelve APS members assembled at the Grande Cache Tourism and Interpretive Centre at 8:00 A.M. on Monday, August 26. **Ryan Gow** of CST Coal presented the orientation, safety talk and agreement forms for each of us to sign. CST Coal kindly lent us hard hats, high-visibility vests and safety glasses. We then boarded the bus I had chartered from Diversified Transportation Ltd. Ryan Gow and **Zach Robinchavich** from CST Coal, in their company vehicle, led the bus for the half-hour drive from Grand Cache to the CST Coal Gates. Ryan Gow attached a radio to the bus and provided another form for each of us to sign. The CST Coal company truck led the bus for the half-hour trip via winding gravel roads, past herds of mountain sheep and up the mountain to the "W3 Mine" of the Grande Cache Dinosaur Tracksite Provincial Historic Resource, located at kilometre 23 on the "Main Haul Road." Part way up the mountain road, **Mason Ehrenholz** replaced Ryan Gow, who had to leave for other duties.

Dr. Emily Bamforth led us on the short walk to the "W3 Mine" exposures. The tracks are in the Grande Cache Member of the Gates Formation (middle Albian of the Early Cretaceous), underneath the "Number 4" coal seam. The tracks are in sandstones deposited in shallow water in a coastal plain or deltaic environment (Langenberg *et al*., 1987).

Emily pointed out the tracks on the cliff face from the quadrupedal dinosaurs (thought to be nodosaurid ankylosaurs), bipedal dinosaurs (theropods and ornithopods?), crocodiles and invertebrate burrows. She also showed us slabs that had fallen off the cliff which contained small tracks. The debris at the base of the cliff also included fallen rock showing impressions of plant remains ("plant hash").

When we returned to the bus at 11:30 A.M., Vaclav and **Jake Jakielaszek** showed the rest of us a few pieces of fossil leaves (probably conifer) they had found near the parked bus.

Another short drive took us to the "W1 Mine" site where we viewed nodosaurid ankylosaur tracks across the steeply dipping beds. As we were looking at these tracks, a lone male bighorn sheep with big, curled horns ran across just above the tracks.

We left the site at noon and arrived at the Grande Cache Tourism and Interpretive Centre at about 1:00. Several of our group departed for the trip back home, while the rest of us drove to the Sulphur Gates Provincial Recreation Area, just west of Grande Cache. We walked to several very scenic overlooks where the Sulphur River merges with the Smoky River, to see the conglomerate cliffs of the Cadomin Formation, standing on end, 80 m high.

Figure 3. Dr. Emily Bamforth points out the dinosaur tracks on a big bedding surface, to APS members at the W3 mine site at the Grande Cache Dinosaur Tracksite Provincial Historic Resource. Photo by Vaclav Marsovsky.

At this point, several more APS members (including myself) left for the trip home. Emily Bamforth led Walter DiMattia and Eric Campbell on a drive and hike to Muskeg Falls.

Figure 4. Eric Campbell photographs the dinosaur tracks at the W3 Mine. Photo by Vaclav Marsovsky.

We want to convey a special thank-you to the following:

- **CST Coal**, especially **Mitch Clegg** (for making all of the arrangements including lending us hard hats, high visibility vests and safety glasses) and Ryan Gow, Zach Robinchavich and Mason Ehrenholz (for escorting us through the CST Coal operations to the dinosaur tracksite).
- Staff (including Jason Chappus) of the Philip J. Currie Dinosaur Museum for the excellent museum and lab tours and guidance and support during the bonebed excavation.
- **Dr. Dan Spivak** of the Royal Tyrrell Museum of Palaeontology for providing permission for us to visit the Grande Cache Dinosaur Tracksite Provincial Historic Resource.
- **Jenny Daubert** of the Municipal District of Greenview, for providing the contact information for CST Coal.
- Dr. Emily Bamforth, for organizing the trip to the Philip J. Currie Dinosaur Museum, leading the Pipestone Creek excavation and leading the Grande Cache dinosaur trackway tour.

- **Diversified Transportation Ltd.**, for providing the bus and driver to expertly navigate the winding mountain roads leading to the Grande Cache Dinosaur Tracksite. ❑

References

Fanti, F. and Catuneanu, O. 2009. Stratigraphy of the Upper Cretaceous Wapiti Formation, west-central Alberta, Canada. Canadian Journal of Earth Sciences, **46**: 263–286.

Fanti, F. and Catuneanu, O. 2010. Fluvial sequence stratigraphy: the Wapiti Formation, west-central Alberta, Canada. Journal of Sedimentary Research, **80**: 320–338.

Langenberg, C.W., Kalkreuth, W., and Wrightson, C.B. 1987. Deformed Lower Cretaceous coal-bearing strata of the Grande Cache area, Alberta. Geological Survey Department, Alberta Research Council, Bulletin 56, pp. 1–56. **https://ags.aer.ca/publication/bul-056**

Figure 5. Vertically dipping conglomerate beds of the Lower Cretaceous Cadomin Formation at Sulphur Gates, near Grande Cache. Photo by Mona Trick.

We need a new Field Trip Coordinator!

Our current Events Coordinator, **Keith Mychaluk**, will be stepping down this year, so this will be a great opportunity to **volunteer for your Society!**

Keith will assist the new coordinator with the hand-over, so you will be able to make a smooth transition into the job! If you're willing to give it a shot, please contact Keith by email: **kmychaluk@gmail.com** or phone, **(403) 809-3211**. You can also contact any member of the APS Executive (see contact information on Page 2). **Thank you!** ❑

And we need a new Membership Director!

Our current Membership Director, **Howard Allen**, will be stepping down in 2025 after serving in the position for the past 25 years.

The Membership Director maintains a database of members, welcomes new applicants (email greeting with information on the Society), coordinates with the Editor for distribution of the *Bulletin* and annual renewal notices and meets monthly (using Zoom and email) with the Executive.

For more information, contact Howard by email: **membership@albertapaleo.org**, by phone: **(403) 274-1858** or talk to me at a meeting. **Thank you!** ❑

Tyndall building stone walking tour, Inner-City Calgary

Review of Field Trip 2024-5, September 14

By Tako Koning, P.Geol.

On Saturday afternoon, September 14, a small group of members from the Alberta Palaeontological Society (APS) had the opportunity to learn more about the amazing fossils which occur in the Late Ordovician-age Tyndall Stone. Although the group was small it was certainly energetic and inquisitive. I have led this field trip the past four years for the APS and also for the Canadian Energy Geoscience Association (CEGA) and the Alberta Wilderness Association (AWA). The size of the groups are typically ten to fifteen people, which is an ideal group size for studying fossils.

Though the weather was cool and rainy, it did not dampen the enthusiasm of the attendees who were determined not to let a bit of rain slow down our field trip.

The trip began at 1:00 P.M. at the Safeway store in Kensington, inner-city Calgary, 10 Street & 3 Avenue, NW, where ten blocks of Tyndall Stone are located in

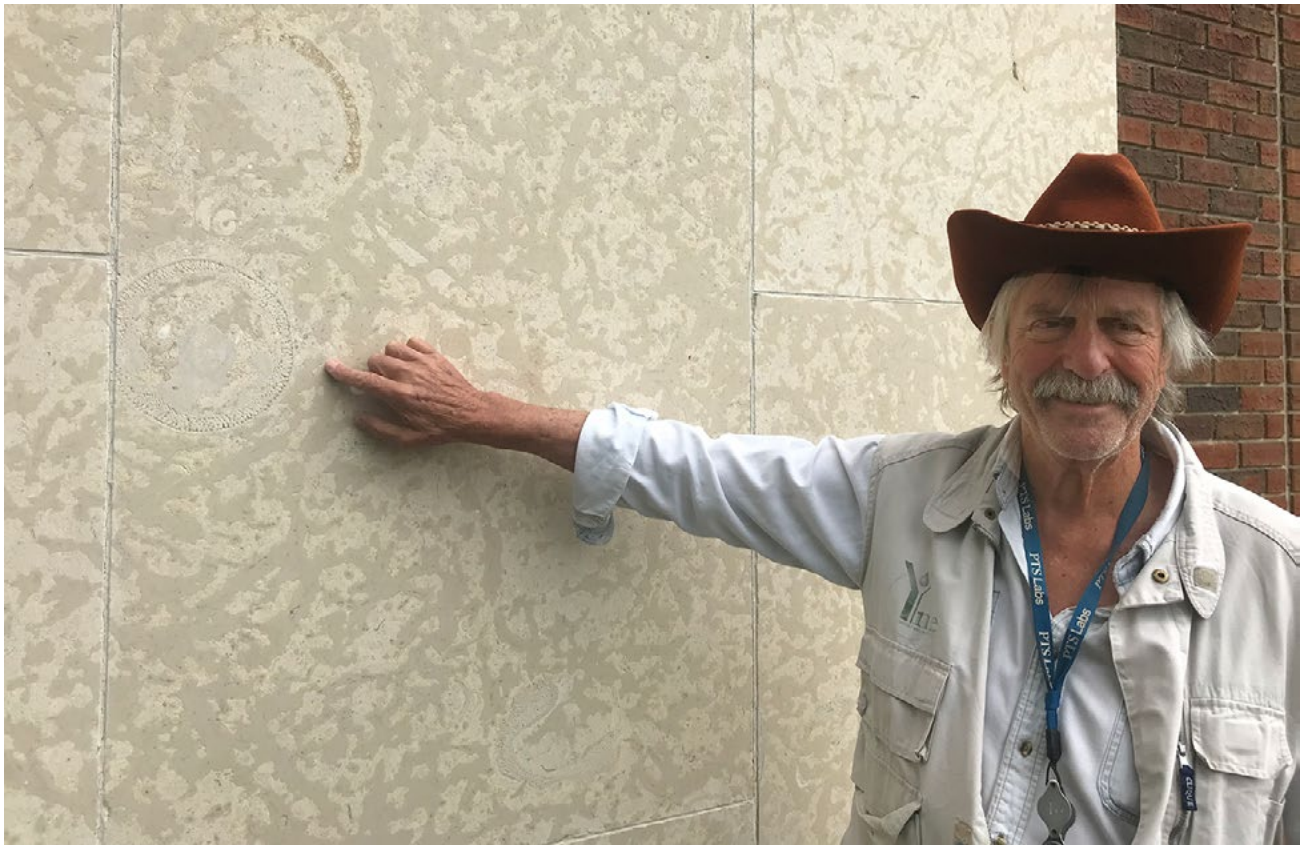


Figure 1. Field trip leader Tako points out a receptaculitid fossil, *Fisherites*, on a Tyndall-clad wall at SAIT. Mottling of the limestone is *Planolites* burrows. Bystander photo, courtesy of Tako Koning.

Figure 2. *Aulocopella* sponge on Tyndall block at the Kensington Safeway. Loonie for scale. Photo by Tako Koning.

front of the store. These blocks of Tyndall Stone are randomly placed on the plaza for use as benches.

A brief review was provided about the Tyndall Formation in terms its depositional history, lithology and the fossils that were to be studied. The Tyndall has been age-dated as Late Ordovician, 450 million years old. The attendees learned that the Tyndall limestone was deposited in a tropical, shallow marine environment. The Tyndall is fine grained and cream coloured with pervasive mottling of darker dolomitic limestone. The highly distinctive mottled appearance is due to trace fossil burrows, formerly referred to *Thalassinoides*, but more recently classified as *Planolites* (Pratt and Young, 2023) which are fossilized burrows left behind by organisms, possibly worms and crustaceans such as mole shrimp, that burrowed through the soft lime mud during or just after its deposition. The organisms were soft-bodied, leaving no fossilized remains for palaeontologists to study.

The top dimensions of the blocks at Safeway are approximately 1.0 m by 1.0 m and have a depth of about 0.5 m. The blocks allow the observer to study the fossils in three dimensions (top, front, sides and back). For a palaeontologist or anyone interested in fossils, these blocks provide a unique opportunity since, by standing beside them and looking down, you can imagine yourself snorkeling on the surface of the water and looking down through shallow, clear and warm water on a variety of organisms which lived on or above the Late Ordovician sea floor.

The Tyndall is highly fossiliferous in these blocks. The fossils which were viewed and identified included *Planolites* which are pervasive throughout the blocks. We observed various species of fossils including nautiloids, gastropods (*Maclurina*), brachiopods, stromatoporoids, corals and a large—up to 25 cm di-

Figure 3. Happy field trippers, undeterred by a little rain, pose with a Tyndall Stone block at the Kensington Safeway. Photo by Tako Koning.

Figure 4. A young fossil enthusiast points out an orthocone nautiloid fossil on a wall at SAIT. Photo by Tako Koning.

ameter—circular receptaculitid (*Fisherites*) which is informally called "sunflower coral" even though it is not a coral but is thought to be a complex calcareous alga. We also viewed a remarkably well-preserved large sponge, *Aulocopella*, shown in Figure 2.

For the past five years, I have been keeping my eyes open on the Tyndall in various places throughout Western Canada. But I have never seen another *Aulocopella* sponge. Similarly, **Dr. Brian Pratt**, professor of geology at the University of Saskatchewan, Saskatoon, who is a well-known authority on the Tyndall Stone, has never seen a sponge in the Tyndall apart from the Safeway specimen, which I showed him two years ago. Accordingly, seeing the *Aulocopella* at Safeway can be regarded as a once-in-a-lifetime opportunity to view a Late Ordovician fossilized sponge.

From Safeway we continued the tour to the Southern Alberta Institute of Technology (SAIT) where the Senator Patrick Burns building is extensively clad by Tyndall Stone. Unquestionably the best location in Calgary to view Tyndall Stone fossils is at SAIT. The Burns building was built in 1967. Despite the Tyndall having been exposed to weathering for 57 years, the exterior is still remarkably unaltered and the fossils are exquisitely preserved. There is almost 1.0 km of continuous, accessible Tyndall exposed along the four sides of the Burns building.

At SAIT we saw all the same fossils as we had seen at Safeway (with the exception of the *Aulocopella* sponge). However, at SAIT there are many more fossils including gastropods *Hormotoma*, "honeycomb" tabulate corals, and single and double chain tabulate corals. The nautiloids include large orthocone nautiloids, thin straight nautiloids, and semi-circular nautiloids which are likely to belong to the genus *Winnipegoceras*. The receptaculitid *Fisherites* is found everywhere at SAIT with some having diameters of over 20 cm. Several beautifully preserved *Maclurina* gastropods are also on display at SAIT.

At the end of the tour, the attendees said that this was a good learning experience in terms of seeing a natural environment, albeit one which occurred 450 million years ago. Needless to say, this was an environment totally untouched by mankind. Everyone agreed that this was a pleasant way to spend a Saturday afternoon. The field trip leader plans to lead this tour again in 2025 for the Alberta Palaeontological Society. ❑

References

Koning, T. 2020. Tyndall Stone: Hunting Ordovician fossils in downtown and inner-city Calgary. Alberta Palaeontological Society, Bulletin **35**(4), December 2020, pp. 27–37. **https://albertapaleo.org/bulletinArchives/bulletin354.pdf**

Pratt, B.R. and Young, G.A. 2023. Heritage Stone 9. Tyndall Stone, Canada's first Global Heritage Stone Resource: Geology, paleontology, ichnology and architecture. Geoscience Canada, **50**(2): 17–51. **https://doi.org/10.12789/geocanj.2023.50.196**

Young, G.A., Elias, R., Wong, S. and Dobrzanski, E.P. 2008. Upper Ordovician rocks and fossils in southern Manitoba. Canadian Paleontology Conference (CPC-2008, Winnipeg, The Manitoba Museum, 19–21 September, 2008), Field Trip Guidebook No. 13. **https://www.researchgate.net/publication/339512846_Upper_Ordovician_rocks_and_fossils_in_southern_Manitoba**

Back issues of the *Bulletin* are available on our website!

https://albertapaleo.org/resources/bulletinarchives/

On the Rocks and Plastered

My memoirs, in brief

By Gilles Danis, B.A. (Bonehead)

Figure 1. "Gilles is perpetrating violence on the sediments." Photo by Donna Sloan.

Author's note

This is not an autobiography. It is a memoir. It relates some adventures and anecdotes that I remember as amusing or interesting. Many people with whom I had close professional relationships are not mentioned here. I apologize to them if they feel left out. It is not that they mattered less, but somehow they did not feature in my zany peregrinations. Who knows? In a few years, I might remember other factoids and review my memoirs.

Acknowledgements

I wish to thank **Dr. Philip J. Currie** for the support and comments he gave me while writing my memoirs. The good times we had live on in memories.

I also wish to mention the stimulating interactions I had with the late **Dr. Dale A. Russell** (1937–2019), who introduced me to the world of palaeontology.

Chapter 1

SUSSEX & GEORGE

I got into palaeontology because of an unexpected pregnancy. But I am getting ahead of myself.

In 1967 I was at the Université de Montréal, studying organic chemistry. I was getting disillusioned as I found that organic chemistry is basically washing dishes. I had applied for a summer job with the federal government in Ottawa and—lo and behold—I was invited for a job interview for a position in biochemistry. I thought it was close enough to what I had been studying, so I said "sure." A short time later I got a letter (no internet in 1967) inviting me to an interview in biophysics. Well—that was not exactly what I had expected, but I went anyway.

I arrived, and there were **Dale Russell**, **Hank Shearman** and a former teacher of mine who was wearing another hat as arbiter in the interview. Regarding the "biophysics," Dale told me that the government had no way to describe palaeontology, so they labelled it whatever they wanted. Nevertheless, it was a preparator's position at the palaeontology lab. My jaw dropped because as a kid my dad had taken me to see the *Gorgosaurus* skeleton at the National Museum. Ever since then I was fascinated by the giant beasts, never thinking I would ever have anything to do with them.

"I got into palaeontology because of an unexpected pregnancy."

Apparently I had impressed the panel. A few days later a letter came, offering me the job.

July 5, 1967 I arrived at Sussex and George (yes, the legendary palaeontology lab at the corner of Sussex Drive and George Street in downtown Ottawa) dressed in a three-piece, charcoal grey suit. My new employers brought in a big piece of plaster and burlap and said "open this . . . like this . . . and start scraping the dirt carefully—there is a marine reptile called a mosasaur in this thing."

That was the last day in my 40-plus-year career that I wore a business suit to work. I had joined an illustrious crew. **Dale Russell**, the boss; **Dick Harington**, the Quaternary zoologist; **Hank Shearman**, the head preparator—who had worked with **Charlie Sternberg**, **Loris Russell** and **Wann Langston Jr.**; and the other preparators, **Gerry Fitzgerald**, **Peter Dodson** (yes, him) and a lady named **Mrs. Malone**. I had been under the impression that this was to be a summer job but to my surprise I learned that Mrs. Malone, who was in her late 40s (she had a son starting university that year) had gotten pregnant and was due to leave her "retirement job" (as she called it). I had been hired to replace her full time, and BANG!—I became a Palaeo. Hence, I owe my life's work to an unexpected pregnancy.

Hank Shearman (c. 1922–1974), the chief preparator, had been hired by **Charlie Sternberg** at the NMC (National Museum of Canada—by 1956 the National Museum of Natural Sciences; eventually to become the Canadian Museum of Nature in 1990). Hank had served in World War II and one day, when he and his buddies from the war were drunk, they went to the Jackson building in Ottawa to fill out some job applications, just for something to do—and guess what?

Hank had many funny stories but my favorite is the one about his dislocated arm. Hank went to England early in the war and was given the assignment of motorcycle dispatch. While in England, he would ride from base camp to base camp delivering messages that were too sensitive to send by phone or wire. One day he was riding his motorcycle along

a small country lane (there *are* some of those in England) when he saw ahead of him a young lady riding a bicycle. He thought it would be cute to give her a pat as he rode by. Unfortunately, he underestimated his speed. As he approached the young lady, he stretched out his arm and contacted her posterior, which lifted her off her bicycle and sent her flying ahead of him to land on the other side of a ditch in what Hank hoped was soft vegetation. But Hank suffered a dislocated shoulder in the process. When he arrived at the infirmary, none of his explanations for the nature of his injury were convincing and he eventually had to come clean on the subject. As a result, he was treated "vigorously" by medical staff (his words).

Figure 2. The mob of 1967. Left to right: Dale A. Russell, Gilles Danis, Wann Langston Jr., Peter Dodson. Photo by Donna Sloan at the Royal Tyrrell Museum in Drumheller, September, 2005.

When Charlie (**Charles Mortram Sternberg**, 1885–1981) retired, **Loris Shano Russell** (1904–1998) became the Museum Palaeontologist. Loris' wife **Grace** did not see eye-to-eye with Hank. One day they were at a country hotel during a field trip. Hank had been drinking in the bar. Loris came down and informed him that "Mrs. Russell thinks you have had enough to drink." Hank responded that when Loris wore the pants in the family, he would obey him. Relations were strained after that.

When **Loris Russell** was promoted to Director of the Museum, **Wann Langston Jr.** (1921–2013) took over the lab and became Hank's boss.

Years later, Wann told me (in his Texas drawl), "*Hank would trah the pyshance of an ayngel.*" In those days the higher up the echelon you were, the better your means of transportation would be. "*So ah would flah to Calgary and Hank would tyke the trayn, drinkin' his way west. One day ah went to the stayshun to mop him up. Ah had to stop at a pharmacy to get a prescription, and when ah got out, Hank was in the middle of the street, pissin' on the cars as they drove bah.*"

Hank loved his practical jokes. At one field camp, in lieu of an outhouse, they had this little tent-like frame with a tarp around it, serving as a latrine. Hank had set up camp and when Wann went to relieve himself, Hank snuck behind the biffy, pulled a string and the tarp fell to the ground leaving Wann exposed to the elements in the middle of the prairie.

But let us get back to 1967. The crew was having a good time, preparing specimens and pulling stupid stunts like throwing grapes at the fan that was supposed to keep us cool. This was Centennial year in Canada and the summer of love in the USA.

One day, Hank was out to lunch when a quiet man in a cowboy hat came into the lab and silently walked through and into the collections area. We did not know how to handle this. He was not doing anything wrong and obviously knew where he was, but where did he come from? Just then Hank returned, spotted the stranger and exclaimed "*WANN!*" **Peter Dodson** just about fainted—"that is **Wann Langston**!" he told me in a tone of total disbelief.

We had a great summer with Wann. He was studying *Pachyrhinosaurus* among other things. We got

used to the idea that greatness wafted through this old building. When Wann left, we found that he had a funny habit. We found tiny plasticine men all over the place: *Albertosaurus* sported them on its teeth, they were on the ends of ceratopsian horns, etc.

To this day, the summer of 1967 remains the best summer I ever had.

At the end of the summer a new character arrived at the lab. I knew of him but had never met him. He was **Dick Harington** (1933–1921). He had been in the Yukon working on the Porcupine River in the Old Crow Basin. He was the Quaternary Zoologist. I have seldom met a more dedicated and conscientious man.

He had gathered a large number of bones from the permafrost and spent most of the winter cleaning and studying them. One day **Gerry Fitzgerald** (another preparator) and I went down to see what Dick was doing. He was cleaning the skull of a *Bison priscus*. He was totally absorbed in his work and as Gerry and I glanced into the bin that collected the sediment he was cleaning from the specimen, we were astounded to see the glitter of gold dust! "Do you realize that you have a dust bin full of gold?" He looked down and said "Oh yeah, look at that!" Then went right back to his work.

In late October of 1967 Dick said he was going on a holiday to London, England for a few weeks. In late November he returned to the lab as bronzed as Coco Chanel. I exclaimed, "Wow! Was London that sunny in late fall?" He replied, "Actually, I met a friend in London and we decided to hop on a plane and go climb Mount Kilimanjaro." Must be nice.

In the early spring of 1969 Dick injured his back and for a while he had a hard time walking. In late May, OXFAM held its annual benefit walk for famine relief. At the time, the walk was 40 miles (64 km). I had gotten his name as a sponsor for my own participation. This started Dick thinking and without saying anything to anyone, he entered the walk himself and went the whole 40 miles with a sore back—so quit your whining!

Dick was a very charming and friendly guy. People in the Yukon revered him. He would go visit the placer miners and chat with them, all the while paying no attention to the jars full of gold on the shelves of their shacks. He was only interested in the bones they had stacked up for him during his absence.

Dick always made a point of complimenting anybody, even for the smallest things. One miner in particular apparently made very good pancakes (not that this is an art or anything) but Dick always stopped there for pancakes and a chat. One day, in the middle of winter in Ottawa, a parcel arrived from the Yukon for Dick. He opened it thinking it might be some rare specimen that could not wait for him to come pick up. It turned out to be a plate full of pancakes complete with butter and maple syrup that had made its way from Whitehorse to Ottawa on Her Majesty's Postal Service. It was a mess, but we had a good laugh.

One specimen Dick received from the Yukon was a partial horse skeleton from the permafrost, *Equus lambei*. The species was well known from the Yukon—in fact, it was not all that rare. What *was* rare, however, was *Equus lambei* with some flesh and skin on it. Yessir, 10,000 year-old flesh permafrosted for freshness and flavour. The miner who found it in the Yukon was so excited that he kept it in a freezer until Dick came to collect it. But meanwhile he sent Dick a sample of the flesh—again, through the mail. Now, there are things that should not be sent by mail. The mail system duly delivered it anyway. If we laughed at the pancakes, we puked at the flesh.

This happened about 1971. In 1998, when I was operating a company called Prehistoric Animal Structures, we mounted two casts of the skeleton of *Equus lambei*. They are now on display in Whitehorse, Yukon at the Beringia Interpretive Centre, along with some of the flesh.

[Just as an aside—for those who reconstruct an animal starting from the skeleton. *Equus lambei* looks like a small pony, maybe the size of the Canadian horse, or just a touch bigger than a Greyhound dog. When we came to mount the skeleton we had the skull and the forelimbs, some cervical vertebrae, some hindlimb bones and maybe a caudal or two, as well as the sacrum. I went to the University of Calgary to see if I could find a skeleton of a similar sized modern horse to make moulds for our mount. I looked at ponies, small horses and eventually, the skeleton that matched *Equus lambei* best was a full-sized adult zebra. Remember this next time you are making a reconstruction of a fleshed-out animal

based only on a skeleton: size may be deceptive.]

Dale Russell's wife **Janice** was determined to marry Dick off to some wonderful young lady but he escaped unharmed every time. She and Dale would have soirées to which Dick was invited and there was always a charming, capable and available young woman there. Dick would entertain them all with his erudition; he was the embodiment of the Renaissance Gentleman, the man who knows a lot about everything but does not specialize in anything (except for Quaternary Zoology). He would dazzle them with his stimulating conversation—then at some point he would spring up, put his coat on, bid everyone goodnight and make his escape. Nobody ever doubted that Dick was NOT the marrying kind.

For many years the Palaeobiology division at the Museum was blessed with the most efficient, kind and charming secretary by the name of **Gail Rice**. We all got along really well; she was family. She was married and they had a little girl whom they named Patty, not realizing that when the girl went to school, her name would be transformed into "Rice Patty." A few years after I left the NMC in 1979 Gail's husband died of cancer. The most amazing thing happened after that: Dick proposed to her and she became **Mrs. Dick Harington**! Dick always had exquisite taste and knew what he wanted.

"there in the box was the entire foot of a coelurosaur … Dale's jaw dropped."

Though I had meant to return to my studies, I was told in late September that in 1968 we would be going out west to do field work. I postponed my academic endeavours and decided to stay for one year because I wanted to go in the field.

The summer of 1968 started in mid-May as I left for the west with **Dale Russell**. This was a lot of firsts for me—my first time west of Toronto, my first time in an airplane and my first time hunting fossils. My mother wrote all that down in my baby book (I was 23 at the time).

After spending a few weeks in the Peace River region and the Dunvegan Formation, we had planned to go down to Dinosaur Provincial Park. We arrived there on Bastille Day—July 14—1968. Like everyone else, I was amazed by the first view of the badlands there. That feeling of awe has never left me. It is always just as breathtaking as ever.

Dale's plan was to look for small coelurosaurs like *Dromaeosaurus* and other animals related to *Deinonychus*. We had with us illustrations of *Deinonychus* for reference. Was it not just beginner's luck? On my very first day out in the badlands I found a sickle claw—the race was on! We found all sorts of individual bones but no articulated specimens until **Hope Johnson**[1], an amateur palaeontologist from Medicine Hat, came for a visit. When we showed her the illustrations of *Deinonychus*, she said "I know a woman who has found one of those." We took this with a grain of salt but she said she would bring her friend to see us later and we said "sure."

The following week, Hope came back with **Irene Vanderloh**[2], a local farmer's wife. Irene had brought a shoe box. When she opened it, there in the box was the entire foot of a coelurosaur, from the metatarsals on down. Dale's jaw dropped and he immediately made an appointment to go meet Irene at her home so she could take us to the site where she had found the specimen.

We got there early one morning and Irene said, "I haven't been there for ten years, but I think I can find it again." After bouncing over the prairie for half an hour, she pronounced that "this" was the site. We walked down into the badlands and there, indeed, was the site. The overburden was only about 10 cm thick, in rather soft sand. Who could ask for more?

We collected all the bones we could find in a day and carried the jackets on our backs up to the truck. I returned to the site many times after that and nothing more ever washed out. In the end we had recovered limb bones, a few ribs, some manus elements and the skull cap with the top of the orbits.

Dale studied the skeleton and identified it as *Stenonychosaurus inequalis*, a dinosaur that **C.M. Sternberg** had named in 1932. My understanding

1. See Tanke, 2019.
2. See Tanke, 2010.

is that the specimen is now generally considered to be *Troodon*. But don't forget *Stenonychosaurus*—it comes back later in the story.

Many people in palaeontology are familiar with the address, Sussex and George, but few have actually been there. Perhaps it would be appropriate to relate some of its history. As Arlo Guthrie would have said, "*Now, it all started . . .*" in 1776 when the American states held a party which sent the British packing and they became the United States of America. The British were concerned about this because they had acquired New France in 1763 and the Canadas (Upper and Lower) might get the independence bug and join the States.

A considerable military presence was dispatched to the Canadas but there was a weak link in the system. The main means of transportation for travel and trade was by river and the St. Lawrence was the main artery for this. The St. Lawrence is the demarcation line between the Canadas and the States for over 400 km. All the Americans would have to do to invade was throw some row boats in the river, row across and cause mayhem. The British went to the records left by Samuel de Champlain in the early 1600s and they read that at the western tip of Montreal Island is a lake called Lac de Deux Montagnes (Lake of Two Mountains). A number of rivers flow into this lake. The St. Lawrence comes in from the southwest, and the River of the Outaouais comes in from the west after flowing from the north around the arched southern boundary of the now province of Quebec. If the British could find a river that took them from the Outaouais to the Great Lakes, they would solve the problem of the St. Lawrence.

Samuel de Champlain noted that at one point, about 60 miles from Lac de Deux Montagnes, there were two rivers that flowed into the Outaouais: the Gatineau, coming from the north and on the other side of the Outaouais, from the south, comes a river that ends in a waterfall over an escarpment, which Champlain called *Quel beau rideau d'eau* ("What a beautiful curtain of water"). The name Rideau stuck.

Not even a mile west of the waterfall was a ravine that could be the location of some locks. Then a canal could be dug to circumvent Hog's Back Falls, just south of there and the river could be used to canoe south, join the Rideau lakes, and with a few well-placed short canals and locks, go over the divide and flow down the other side toward Kingston and Lake Ontario, via what would become Peterborough.

Colonel By, a British army engineer, was given the task of building what we now know as the Rideau Canal. He established his headquarters near the ravine where the work began and called the settlement "Bytown." The canal was a success and, as we saw in 1812, it was instrumental in preventing the Americans from invading and annexing the Canadas. At the battle of Chrysler Farm the Canadians prevailed.

In 1867 Queen Victoria suggested that Bytown be the site of the national capital and the city was renamed Ottawa.

Colonel By built his headquarters near the start of the Rideau Canal at a spot that now has the address of Sussex and George. There were offices, some barracks and the armory. The building has had many uses over the years (today it is a restaurant). During the First World War two reprobate departments were relegated there. On the outside of the courtyard was the all-new income tax department and inside the courtyard, the palaeontology department. The palaeontology department left that location in 1968 to be moved to an unassuming industrial area on Woodward Drive.

At Sussex and George there were pock-marks on the stone wall, which I was told were bullet holes resulting from some executions. It is interesting to note that this location is about a block away from the Byward Market, where local farmers come every day to sell their produce and other things during the summer.

The year was 1968. Luckily I was in the field with **Dale Russell** when this next story happened. Earlier in the summer a Geological Survey of Canada team had been in the Arctic doing field work when they were attacked by a polar bear. Somebody pulled out a gun and shot the bear. Even at that time, polar bears were considered endangered and both the Government and the general public took a dim view of the affair.

Rather than give the unlucky bear to the Inuit, the Government decided to bring the carcass to Ottawa to have it flensed and the skeleton kept in the comparative collection of the National Museum. At that

time the dermestid beetle colony, known as "The Bug Room," which is used to clean the bones after the flesh has been removed, was located on the ground floor of Sussex and George, under the palaeo lab. The palaeontology collection of unprepared specimens had been moved to a larger location when it outgrew this space.

The polar bear carcass was flown from the Arctic and arrived in Ottawa. Somebody missed a step and rather than sending the carcass to be flensed, they sent it directly to The Bug Room at Sussex and George. It arrived there late on a Friday night and everybody was already gone for the weekend. The beast was unceremoniously dumped on the ground outside. This also turned out to be the long weekend in July. The carcass lay there for three days, rotting in the hot sun, one block away from the Byward Market. Need I say more?

But the story does not quite end there. When people returned to work on the Tuesday and saw this oozing carcass in the middle of their parking lot, they immediately called the city to send the sanitation department to collect the thing and dispose of it. The garbage men arrived, took one look and said, "this is not our jurisdiction, it is the NCC's." The NCC, the National Capital Commission, is a special group run by the Federal Government. It takes care of all the Federal properties in the Ottawa area—the parks, the buildings, the parking lots, the tulip festival, etc. They did not quite understand what they were getting into and when they saw the scope of the problem, they declared that the only garbage they were able to pick up was the garbage cans in the parks and they did not have the equipment to collect that carcass. This went on until the end of the week when a contractor was hired to remove the offending item—for a fee. He retired soon after that, I understand.

So, if you are in Ottawa one day and you pick up the whiff of an awful stench, don't automatically go blaming the House of Commons.

Charles Mortram Sternberg ("Charlie") was a frequent visitor to Sussex and George. He was Emeritus and still had a desk downstairs. He came and looked at things. He was never able to pronounce my name so he called me "The Young Man." His memory was like a steel trap, nonetheless. I was preparing specimens that had been collected some fifty years previously. I read the field notes to see what to expect and when Charlie came to visit I would ask questions about the specimen—he would quote his notes verbatim, from memory. He would comment on the weather at the time (which was all in the notes); the problems they had with supplies, like the time they had only potatoes to eat, etc.

In the old days they would use newspapers to wrap the small bits of bones (what we sometimes call "grot") associated with quarries. Along with a *Centrosaurus* (horned dinosaur) skull I was working on there were a number of associated paper packages. The news printed on the scraps of wrapping paper reported on the Bertha gun that was shelling Paris and the Allies having not yet located the gun—*we are talking WWI here!*

In 1968 when I told Charlie that I was going out to the field, he sat down with me and showed me how to collect a dinosaur. It all made sense and I never forgot what he told me. It has served me well over the years. I never had to refer to my notes; I don't even know where they are.

It is not my intention to make fun of **Dale Russell**. I revere him to this day, but he had an uncanny ability to get involved in ridiculous events even if they were not his fault. In fact, Dale was so far ahead of the curve that reality sometimes tripped him up as he raced along. He reminded me of those inventors who were too far ahead of their time and their inventions failed because the world wasn't ready for them, only to see their inventions take wing decades later. I sometimes think of Dick Tracy, the comic book character, who sported a wristwatch video-telephone. How we laughed at that silly idea then. Today, I must be the last nerd who does not have a smart phone.

Dale saw global warming almost twenty years before it became a concept, even if he called it "the greenhouse effect."

As this narrative progresses, you will read some stories that I wrote for *New Mesozoic Research inspired by the life and work of Dale A. Russell,* edited by **Jordan Mallon**, **Philip J. Currie** and **Kathlyn M. Stewart** (Cumbaa *et al*., 2021; Mallon *et al.*, 2021).

Peter Dodson once said that the milk of human kindness flowed through **Dale Russell**'s veins by the quart. However, as I have noted earlier, he was naturally inept.

Dale was unusually inept with his hands or just about anything not on an intellectual level. On our first field trip we were in the Peace River country and we needed to do some laundry. We went to a laundromat and Dale threw everything into the washer, regardless of colour or condition. His brand-new red pajamas went in with the rest, including his white underwear. The result was that he spent the rest of summer sporting sexy pink underpants.

Over the years the technicians at the lab followed Dale around, checking to see what he had broken. The only thing he had no success with was an ankylosaur tail club. But then again, maybe it was too heavy to lift in the first place.

His most famous feat of destruction was not even his fault. By January 1969 the elements of the skeleton of *Stenonychosaurus* had been prepared and were ready for study. Dale was quite convinced that this specimen was related to *Dromaeosaurus*. We wanted to put it on display when the ongoing museum renovations were completed, but he wanted a skull to study, as well. We only had a skull cap—the top of the braincase—so he borrowed the type specimen of *Dromaeosaurus* from the American Museum of Natural History (ANMH) in New York. In those days, people were somewhat casual about these things. Sure enough, the AMNH sent the specimen—*by mail*, no less!

> *"the skull fell apart in two pieces, right in front of Dale's nose."*

Wann Langston described the weather in Ottawa as "nine months of winter and three months of hell." We were in the middle of an invigorating cold snap when the skull arrived. **Gerry Fitzgerald** and I carefully opened the box, made a little nest with soft but firm cheesecloth and wood shavings (no ethafoam in those days). It was like disarming a bomb.

When we had the skull ready to see, we called Dale and told him—in no uncertain terms—that this was not your ordinary item and he was *not* to touch it at any time—especially without telling us that he intended to do so. Dale came in all bouncy and looked reverently at the specimen. By now the skull was warming up and the old glue which had probably denatured in transit and weakened, gave way and the skull fell apart in two pieces, right in front of Dale's nose—he had not even breathed on it, let alone touched it! The look of horror and dismay on Dale's face should have been preserved for posterity but nobody had a camera on hand.

Once, I was preparing the skeleton of an *Aspideretes* turtle. In those days we had some of those old-school folding gym chairs—those metal, clattering things that were the epitome of discomfort.

As I was working on the tiny foot bones and skull, I had my face to a microscope. When you do that, your world becomes microscopic too, like the Sixties movie, *Fantastic Voyage*. Dale came scurrying through the lab on his way to the collections area. Somehow, he managed to get his feet tangled up in the legs of one of those metal chairs, resulting in a crash that seemed like nuclear Armageddon when my mind was lost in a microscopic world.

The Russians are Laughing, The Russians are Laughing

In late 1967 Dale went on a trip to the U.S.S.R. to visit **Dr. Anatoly Rozhdestvensky** (1920–1983)at the Moscow Museum. He packed his satchel (it looked like an old doctor's home visiting bag) with the maps of famous quarries and various locations. As it turns out those locations were all near where the Sino/Soviet border incidents of the early 1960s had taken place.

His plane first landed in East Berlin where he was to go through the customs screening and then onto Moscow. As Dale stood in line with a few people ahead of him, the person at the front of the line was asked if he had anything to declare. He replied that he had a few rubles from a previous trip. The guy was immediately whisked away by two burly guards and was not seen again. Witnessing this, Dale began to think if *he* had anything to declare—then he realized he had a number of maps with locations clearly marked in some extremely sensitive territory—he could be mistaken for a spy or an activist or worse.

He finally stepped up to the customs officer who asked what he had to declare. Dale said he had nothing to declare—but he was asked to open his satchel.

He was so nervous he forgot to unlatch the locking strap and wrenched the satchel open—ripping the strap.

He made it through customs unharmed and breathing a sigh of relief; then he spent time looking around for some string to tie his satchel shut.

His flight to Moscow finally took off and he felt very much reassured. Dale was one of those people who, when a plane lands, no matter where he's seated on the plane, he was probably the first person out. He would just teleport himself to the front of the exit line. Unfortunately, in Russia, things are a little less precise than in America. When they rolled the staircase up to the plane, it was not quite adjusted to the level of the floor of the plane. Dale rushed out of the plane and snagged the sole of his shoe under the highest step of the staircase, ripping the sole away from the front of his shoe.

He flapped down the staircase and knelt on the tarmac, pulling out his string to tie his shoe together. As he walked into the terminal, Dr. Rozhdestvensky, without so much as a smile, remarked: "Fine American invention, the string."

Stenonychosaurus

Remember *Stenonychosaurus*? Here it comes again. Dale never ceased to be fascinated by this animal. He put it aside to do the K/T boundary project (more on this later) but returned to it especially when a great gift was bestowed upon him in the form of **Ron Séguin**, a fine sculptor who was hired at the museum.

Ron understood Dale very well: they were both on the same page. Dale asked him to make a life-size sculpture of *Stenonychosaurus* and pose it in a very relaxed, casual pose, much like a person just walking along—no histrionics, no excessively aggressive behaviour. Ron made exactly what Dale had asked and produced an excellent sculpture of the beast.

Dale admired it from every angle and when he came to the front to look at it dead on—nose to nose—something jumped at him. When you look at it this way, the nose appears to be foreshortened; the tail is not visible; the animal almost appears to be standing upright and the long hands seem to have prehensile fingers—in other words, it looks almost like a humanoid.

Dale saw the future flash before his very eyes. He conjectured that if the dinosaurs had *not* become extinct, this animal could very well have evolved into a sentient being. Back came Ron Séguin and the two of them created a theoretical animal representing the evolutionary result of *Stenonychosaurus* millions of years into the future. At his wife's suggestion, Dale called it the "dinosauroid" (I would have called it "androsaur," but it wasn't my call). Somehow, it was published and gave rise to much jeering and guffaws, but the scientific community was just not ready for such forward thinking.

The story, however, does not end there. Dale proceeded one step further. He thought: "What if, on this small rock, spinning around an insignificant star in an immense galaxy . . . what if—not once, but *twice*, sentient life had emerged?" The first time, the process was interrupted by an unfortunate extinction; but the second time it was *not* and the result is *Homo sapiens* ("man the sap"). Would it not stand to reason that somewhere in this gigantic universe, there are some other planets where sentient life may have evolved? The probability is almost 100%—and what if those sentient beings were way more advanced than us; what if they had mastered cryogenic preservation, time warp travel, etc., etc.? Is it not possible that there may be some grain of truth in the UFO sightings we hear of all the time?

Dale got totally wrapped up in studying the reports of UFO sightings and trying to make sense out of them. It happens that down the street from Dale's house in Ottawa lived Gord, a UFO nut. Note that there is a difference between a UFO scientist who is seeking to explain the phenomena in a logical way and a UFO *nut* who is into this for the sensationalism.

The following anecdotal event happened after I had left the NMC, but it was related to me by two different people in much the same way, so I have to believe it, since it is so *Dale-ian*.

One cold February night Dale was asleep when the phone rang at 2:00 A.M. He picked it up and it was Gord: "*Dale, there are UFOs all over town—go out and look!*" Dale jumped out of bed, put on his bathrobe and slippers and raced to the front stoop to look up. A car pulled up—it was Gord. "Jump in! We'll drive to the park, it's dark there and we can see better." Dale did not hesitate. He ran to the car in his

pajamas, bathrobe and slippers in knee-deep snow, the temperature –25°C and off they sped to the park.

The park in Kanata, where this took place, is a lover's lane and there were a number of cars hidden in the bushes with steamed-up windows. As soon as they got there, Dale hopped out of the car in his pajamas, bathrobe, etc. and started to stomp around, looking up at the sky. Considering the location, people got nervous and someone called the police, who arrived promptly. They found this strange guy in his bed clothes, wandering around in knee-deep snow. "*HEY! BUDDY! WHAT ARE YOU DOING THERE?*" Naturally, he replied, "*I'M LOOKING FOR UFOS!*"

My understanding is that when they arrived at the police station, the person at the front desk was a palaeontology enthusiast and he immediately recognized one of his heroes. A logical explanation was provided and a stimulating discussion ensued. Doughnuts were produced, reprehensible coffee was brewed and eventually Dale was brought back home in an appropriately decorated vehicle. He dashed out of the police car and into the house in his pajamas, bathrobe and slippers. The neighbours, who were by now busily scraping the frost off their windshields, just shrugged and thought, "meh—that's Dale."

"He dashed out of the police car and into the house in his pajamas"

Dale Russell had a habit of being a prankster during the field season.

In 1968 **Peter** and **Dawn Dodson**, in their car, and Dale and I in our truck were out on the south side of Sandhill Creek in Dinosaur Provincial Park. We had parked right along the barbed wire fence, near the Princess pumping station. After a long day in the hot sun we usually had a few five-gallon containers of water that we would prop up, either on the tailgate of the truck or the roof of Peter's car and pour water over our heads to cool off. Just as Peter had his head down and water was running down his back, Dale leaned on the truck horn and Peter jumped straight up in fright. I turned to look at Dale and he was sitting in the truck laughing his fool head off, "I hate myself, I hate myself." It's a good thing that Peter did not jump forward or he would have been tangled up in a barbed wire fence, like Steve McQueen in *The Great Escape*.

Another time, in southern Saskatchewan, we were looking over the Wood Mountain area. Dale had found the remains of what would have been a very young—not even a yearling—hypsilophodont, possibly *Thescelosaurus*. The vertebrae were barely the size of niblets corn kernels. There were foot bones the size of shelled sunflower seeds and a few other limb bones, but no skull or pelvic bones. We collected the specimen, encased in a jacket that was barely larger that an LP record (for you old fogies), about 8 cm thick. It was heavy but carriable. (Later, at the airport, they had weighed it in at 80 lbs—note that this was still before the metric system).

Dale instructed me, "You start carrying it. I'll wait for you around the hill and we'll switch; then you go ahead and wait for me behind the next hill," and so on.

So I got going, lugging this thing which must have weighed 80 lbs (I just told you that!). I came around the corner of the hill and there was no Dale. I went around the next hill and *still* no Dale. I got around the final corner and there—all the way back at the car (a VW Beetle no less) on the road, was Dale, taking pictures of me lugging this crazy jacket and laughing, "I hate myself, I hate myself."

Incidentally, I understand that while studying this skeleton recently, a PhD student—**Bryan Moore**—discovered that it is arguably the most complete skeleton of a pachycephalosaur. As I write this, Bryan is preparing a paper for publication—stay tuned. ❑

[*Part 2 of Gilles Danis' memoir will appear in the March 2025* Bulletin —*Editor.*]

Further reading for Chapter 1

Tanke, D.H. 2010. Remember me: Irene Vanderloh (1917–2009), Alberta's first woman amateur vertebrate palaeontologist. Alberta Palaeontological Society, Bulletin **25** (1): 10–18.

Tanke, D.H. 2019. Now there was a lady! Hope Johnson, LL.D., 1916–2010. Alberta Palaeontological Society, Calgary, 281 pp.

APS Paleo 2025

Mount Royal University

4825 Mount Royal Gate SW, Calgary, Alberta

Presented in conjunction with the Canadian Energy Geoscientists Association, Palaeontological Division and Mount Royal University Department of Earth and Environmental Sciences

Lectures and poster displays—**Saturday, March 15, 2025, 9:00 AM to 4:30 PM**

Events are free to the public

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Saturday, March 15 speaker schedule

All talks will be held in Jenkins Theatre, lower level of main building, Mount Royal University

9:00 AM	*Opening statement by* **APS President Cory Gross** *and symposium instructions by* **APS Symposium Chair, Mona Trick**
9:15 AM	*Squid Games: Challenges in ammonite palaeoecology..* **Dr. Cam Tsujita, Western University, London, Ontario**
10:15 AM	Coffee Break.
10:30 AM	*Changes in dinosaur diversity in response to continental fragmentation.* **Dr. Matthew J. Vavrek, Cutbank Palaeontological Consulting**
11:00 AM	*Overview and update on the Kaskie Hadrosaur Project in Dinosaur Provincial Park.* **Darren H. Tanke, Royal Tyrrell Museum of Palaeontology, Drumheller**
12:00 PM	Lunch Break and Poster Displays.
1:00 PM	*Utilizing sedimentology to reconstruct dinosaurian environments.* **Dr. Jon Noad, Stantec Consulting and University of Adelaide**
2:00 PM	Posters and Displays Breakout Session and coffee break. *Poster presenters are requested to be with their posters.*
3:00 PM	*New insights into amphibian anatomy, evolution and ecology from the Palaeozic of Atlantic Canada.* **Dr. Hillary Maddin, Carleton University, Ottawa**
3:30 PM	*Tyrant lizard kings and queens: A tale of Canadian* T. rexes. **Dr. Emily Bamforth, Philip J. Currie Dinosaur Museum**
4:30 PM	*Closing remarks for Paleo 2025.* **Mona Trick, APS Symposium Chair**

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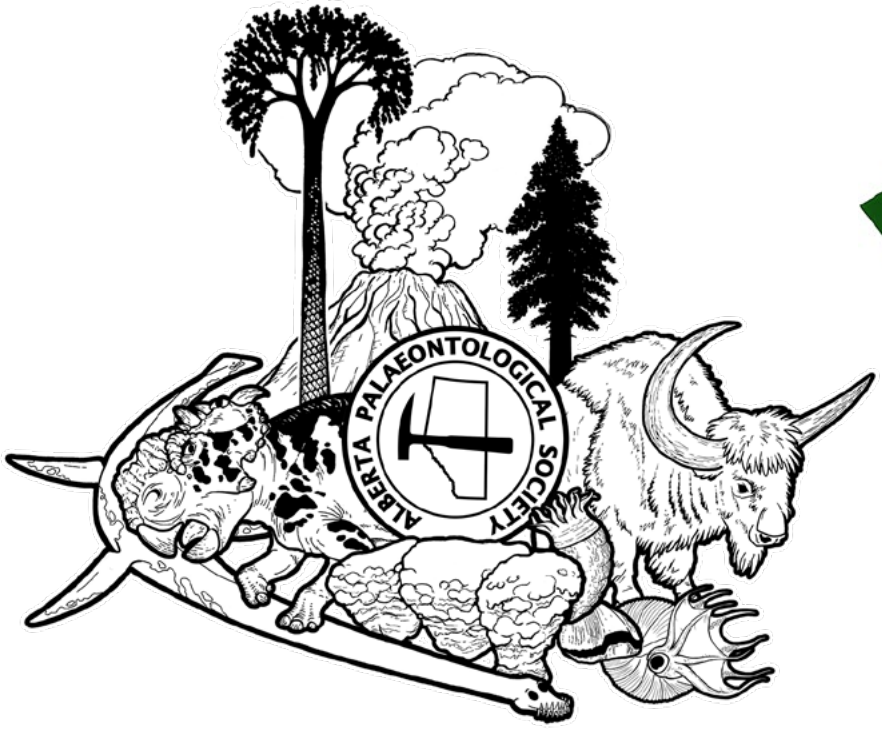

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