Palæontological Society Bulletin

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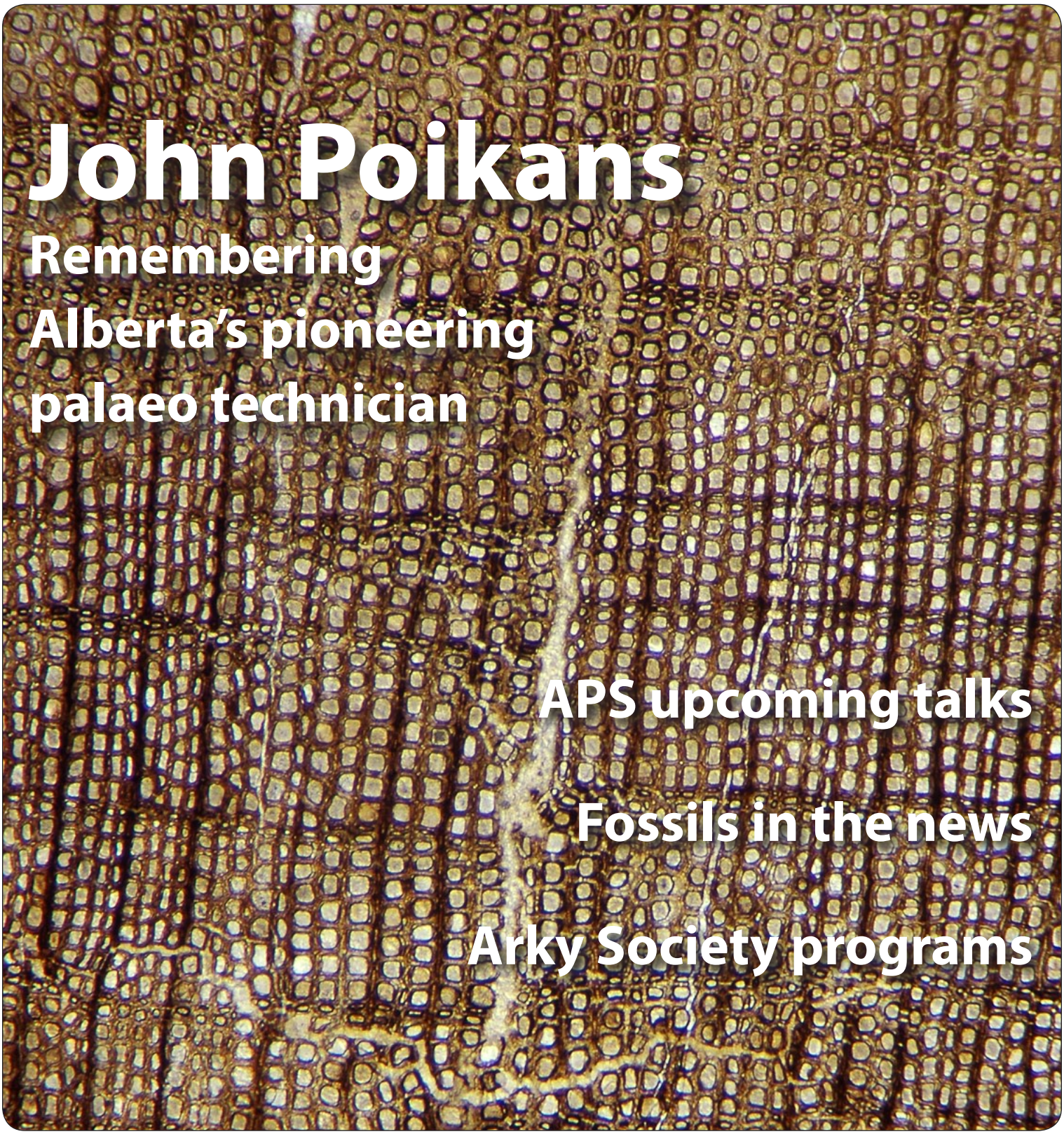

John Poikans

Remembering Alberta's pioneering palaeo technician

APS upcoming talks

Fossils in the news

Arky Society programs

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

a. Promote the science of palaeontology through study and education.

b. Make contributions to the science by:
1) Discovery 2) Collection 3) Description
4) Education of the general public
5) Preservation of material for study and the future

c. Provide information and expertise to other collectors.

d. Work with professionals at museums and universities to add to the palaeontological collections of the province (preserve Alberta's heritage).

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

Single membership $20.00 annually
Family or Institution $25.00 annually

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

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)

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, September 19, 2008—Annual Open House and Fossil Clinic (See Page 3).

Friday, October 17, 2008—(Tentative) Dr. Steven Turgeon, University of Alberta.
Global warming, global cooling, extinctions and petroleum source rocks: The volcanic connection during Oceanic Anoxic Events.

Friday, November 21, 2008—Craig Scott, Royal Tyrrell Museum.
Early Tertiary mammals in Alberta.

Friday, December 12, 2008—Christmas Social, program to be announced.

ON THE COVER: Photomicrograph of fossil conifer wood in transverse thin section. Lower Cretaceous, Kootenay Group, Tent Mountain, British Columbia. Magnified 53 times life size. Photo by Howard Allen.

Upcoming Talks

September

Alberta Palaeontological Society Open House and Fossil Clinic

Friday, September 19, 2008, 7:30 p.m.
Mount Royal College, Room B108

The Alberta Palaeontological Society welcomes APS and CSPG members, families and the general public to their Open House and Fossil Clinic. APS members and guests will have specimens on display and resident experts will be on hand to help identify fossils that are brought in to the clinic. Fossils found on the summer's field trips and expeditions will also be presented and discussed. ❑

October

Dr. Steven Turgeon

University of Alberta

Global warming, global cooling, extinctions and petroleum source rocks: the volcanic connection during Oceanic Anoxic Events

Friday, October 17, 2008, 7:30 p.m.
Mount Royal College, Room B108

Oceanic Anoxic Events (OAE) are brief episodes of marine anoxia (oxygen deficiency) during which high amounts of organic carbon were buried on the ocean floor. OAE2, which occurred about 93.5 million years ago, is the most widespread and best defined OAE of the mid-Cretaceous, a period characterised by extensive volcanic activity, warm surface temperatures, high atmospheric CO_2, and sluggish oceanic and atmospheric circulation.

In addition to a selective extinction most severely affecting deep-sea fauna, this episode of carbon sequestration led to a short-lived but significant reduction in atmospheric CO_2 and cooling of surface temperatures, making this interval of particular interest for studies of the effects of climate change. As well, petroleum source rocks from this period—many of which are associated with OAEs—account for a significant proportion of original recoverable oil and gas reserves in the world.

Although the carbon burial during OAEs can be explained either through an increase in organic matter production and/or enhanced preservation due to oxygen-deficient bottom waters, the actual "trigger" mechanism, corresponding closely with the onset of these episodes, had not been clearly identified. Under such oxygen-depleted conditions, however, several redox-sensitive or sulphide forming trace elements are enriched within the sediments and are therefore useful for reconstructing palaeo-environmental conditions. For this presentation, Dr. Turgeon will present several of these geochemical proxies and discuss their implications, including the importance of the seawater osmium isotope record. This record changes dramatically at the beginning of OAE2, and indicates that a massive and widespread magmatic pulse triggered the deposition of these large amounts of organic matter.

Biography

Steven received a B.Sc. in Physical Geography in 1991, a M.Sc. in seismostratigraphy from the Université de Sherbrooke in 1993, and a Ph.D. in 2001 from Carleton University in Ottawa. From 2001 to 2003, he lived and worked in Germany as a European Union Postdoctoral Fellow at the University of Oldenburg, studying inorganic geochemical parameters in black shales as part of an international research network. He then moved to Oak Ridge National Laboratory in Tennessee, where he was involved in mass spectrometry research from 2003 to 2005. Since 2006, he has joined Robert Creaser's group at the University of Alberta as a research associate where he has been looking at rhenium and osmium systematics in organic-rich sediments and hydrocarbons. ❑

November

Dr. Craig Scott

Royal Tyrrell Museum of Palaeontology

Early Tertiary mammals in Alberta

Friday, November 21, 2008, 7:30 p.m.
Mount Royal College, Room B108

Remember Me:

John Poikans (1919–2007)

The Alberta Government's first palaeontology technician

By Darren H. Tanke[†]

The passing of John Poikans in March, 2007 ended another little-known legacy of Alberta's vertebrate palaeontology field, in this case from the 1960s. A private man who never married, specific details of John's life are poorly known, and he was a relatively minor player in Albertan palaeontology. However, he worked on and collected a number of important fossil vertebrate specimens and without this note his contributions to Albertan palaeontology would no doubt be lost to history. Also, the Albertan palaeontological scene in the 1960s is not well known or related to in the historical sense, so any information from this decade is worthy of recording.

Poikans' contributions to Albertan palaeontology are briefly noted in only a few palaeontological publications (Storer, 1972; Spalding, 1993, p. 167; Spalding, 1999, p. 126). Information provided by John himself to the author in 2001 and from several of his friends is combined here to rough out his life story and palaeontological work.

John Poikans was born in Liepna, Latvia on December 2, 1919 (Anonymous, 2007). Details of his early life are unknown, but he must have loved nature and the outdoors as a boy because they were to play a strong role throughout his subsequent life. He had at least one brother and a sister.

Around the mid-1930s, he attended and graduated a Latvian university extension school in Wurzburg, Germany, earning a technical degree in forestry there (figure 1).

John and his brother worked as forest rangers in 1938. During WWII, he was still a forest ranger, but late in the conflict he was conscripted by the German army to fight the rapidly advancing Russian forces.

Figure 1. John Poikans (left) with his brother (name unknown) at forest ranger school near Cesis, Latvia in 1938.

† Technician II, Royal Tyrrell Museum of Palaeontology
PO Box 7500, Drumheller, AB, Canada T0J 0Y0
darren.tanke@gov.ab.ca

Title (cameo) portrait of John Poikans taken in May, 1971.

His brother was similarly snatched up, but in this case by the Russians, to fight the defending Germans.

Asked later if he killed anyone in these desperate battles, John said he had not, and had deliberately fired his rifle over the opponents' heads, knowing full well there were fellow Latvians (and his brother!) among the opposing forces.

When the war ended, his homeland had been overrun and came under communist Soviet army control. As he had just fought against the Russian army, he faced certain imprisonment in a Siberian gulag or possible execution if he returned home. Therefore, the United States government registered him as a displaced person. He and ten others were offered a railroad job in Canada, so he boarded a ship and arrived in Halifax on December 12, 1947 (figure 2). He had to work for the railroad for about one year, residing in Thunder Bay, Ontario. Once fulfilling his railroad job obligations, he headed off to western Canada looking for new work opportunities there.

Figure 2. John Poikans in an undated photograph, possibly taken soon after his 1947 arrival in Canada.

Once in western Canada, he became involved in a variety of work; notably, most of it was rugged, outdoors and remote. He was involved in gold prospecting and mining at Uranium City in northern Saskatchewan. He was a heavy-equipment operator, driving big front-end loaders and dump trucks (figure 3) and, during the winters, hauling a variety of supplies by heavy truck across the frozen lakes, rivers and tundra in Canada's remote north. Some of this work involved him living off the land (figure 4), eating wild plants, fish and some food acquired through hunting. He received Canadian citizenship on May 30, 1956.

Poikans first began working at the Provincial Museum of Alberta (PMA) early in 1965. How he ended up there is presently unknown. The first mention of him being involved in fieldwork is in Don A. Taylor's field notes for July 5, 1965 (Taylor, 1965). PMA employment records for him are unavailable, but Royal Tyrrell Museum of Palaeontology (TMP) collection records indicate he collected his first fossils for the museum in June 1965 and the last in August, 1967.

Figure 3. John at Uranium City, Saskatchewan, c. 1959. The dump truck is a 1958 or 1959 GMC model.

During this time, the museum was under construction (it did not open to the public until December 6, 1967), so the group mostly worked in another building, possibly for a time at the University of Alberta.

Poikans worked with Don A. Taylor, a professional geologist who graduated with a Master of Science degree from the University of Alberta in 1934, but had spent most of his professional career in the South American oil patch.

Taylor was hired to help build the palaeontology program at the PMA and especially to create a comparative collection of Albertan Late Cretaceous vertebrate fossils (McGillivray, 1992)[1]. Poikans ably assisted him in this endeavour, collecting material from classic field localities near Hilda, Manyberries, Onefour, Lost River and Dinosaur Provincial Park. This collection formed the nucleus of the Tyrrell Museum's current fossil vertebrate collections.

Figure 4. A wiry, but obviously happy and healthy John Poikans living in the bush.

While no immediate science resulted from the activities of Taylor and Poikans, some of their finds have been worked into a number

Figure 5. Stack of mostly *Centrosaurus* bonebed plaster jackets from near Hilda, Alberta, recently found in a crate in TMP collections. These jackets were made by Don Taylor and John Poikans in 1965. The figure "29" on one jacket looks to be of European style and was perhaps penned by Poikans. Opening the jackets revealed some interesting field experimentation. There was no glue on the bones, but instead strips of wide, tightly woven cotton fabric tape were stuck down with now long-degraded rubber cement. Thin layers of single-ply, coral pink and light sea foam green toilet paper made up the separating layer. The plaster jackets themselves were made of long strips of open-weave burlap that were zigzagged back and forth over the specimens.

of larger contemporary studies and the many fossils they collected served as an important comparative collection during the late 1960s and 1970s.[2]

Some of their fieldwork involved the first systematic excavation of *Centrosaurus* and *Styracosaurus* bonebeds, the first such work in the province since 1916. Some of the material from the first site, collected in 1965 (figure 5) was recently rediscovered, hidden away in a crate in TMP collections; hopefully it will finally be prepared.

Working in the Onefour and Manyberries, Alberta district, Taylor and Poikans found some interesting fossil microvertebrate localities. While no rare mammal material was initially seen, the pair thought the sites might have potential and reported them to Jane Danis, who was then looking for fossil mammals. Danis sampled the microsites and—sure enough—important mammal material was recovered, later described by the University of Alberta's Richard C. Fox and his colleagues (Danis, pers. comm., 2008).

John Poikans demonstrated his artistic ability when he became the lead preparator on one of the first mounted dinosaur skeletons in Alberta—certainly the first exhibited in an Alberta Government facility[3]. He had no fossil preparation experience and asked the PMA's first director, Bruce A. McCorquodale, for advice or for any books on fossil preparation. McCorquodale had none and told Poikans to "play by ear" (Poikans, 2001).

So John was largely left to his own devices when he was assigned the responsibility of getting the PMA's first dinosaur prepared and mounted. This was a rare skeleton of the crested hadrosaur *Lambeosaurus magnicristatus* (figure 6) one of only two known, collected by C.M. Sternberg and Harold D.R. Lowe from the Manyberries, Alberta district in 1937[4] (Tanke, 2008) and only recently properly described (Evans 2005; Evans and Reisz, 2007).

Though it was his first effort on something of large size, this specimen was skillfully prepared, glued, and panel-mounted by John, showing one side of the skeleton: the other side was badly eroded by rain and frost action.

John was interviewed by the newspaper media (Anonymous, 1969) and provided some details of his work on this rare piece. The specimen was received in four large plaster field jackets[5]. The animal was not open-mounted because of the erosion it had suffered and the absence of most of the vertebral column. John worked on the specimen over the winter of 1968 to 1969.

John was also involved in moulding and casting the skull (figure 7) as a cast of the skull was used in the final mount, allowing researchers to study the original at will. Before it went on public display, the *Lambeosaurus* was shown in the museum's workshop as a temporary exhibit when the museum hosted the 1969 Canadian Museums Association meetings (Anonymous, 1969). The skeleton went on exhibit at the Provincial Museum in Edmonton in 1969 ("around 1967" in Storer, 1972) where it resided until about 1982. It was moved to Drumheller and has been on display there from 1985 to the present.

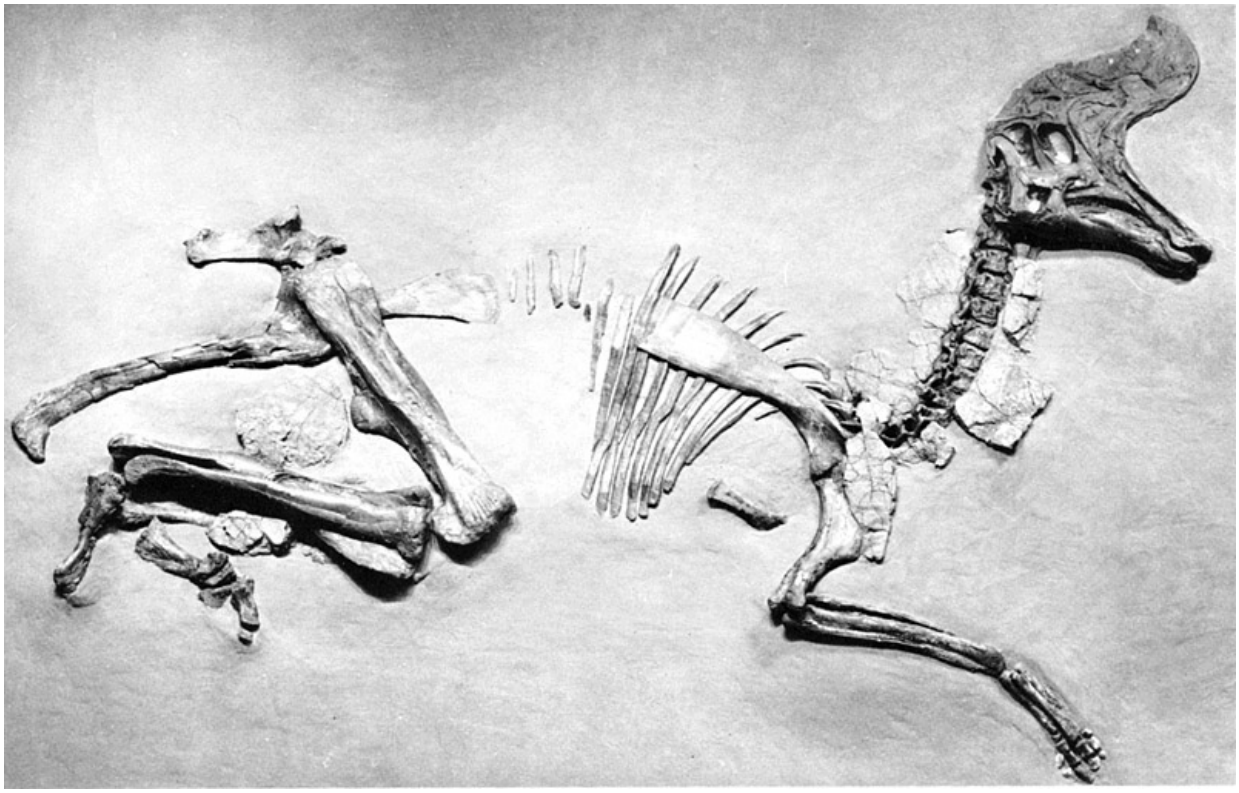

Figure 6. TMP 66.4.1; mounted skeleton of *Lambeosaurus magnicristatus* currently on display at the Royal Tyrrell Museum, Drumheller. Image from Storer, 1972.

At the PMA, Poikans developed a unique fossil vertebrate preparation style that is easily recognizable today. His plaster of Paris reconstruction work—be it on a simple hadrosaur phalanx missing one corner, or crack-filling on a nearly complete dinosaur—was superb. The plaster reconstructions are visible as a

Figure 7. John Poikans with original (right) and cast of *Lambeosaurus* skull TMP 66.4.1.

walnut-brown coloured plaster: not simply surface-painted that way, but the brown colour was mixed throughout the plaster. The lines of demarcation between the original bone and plaster were sharp, with no plaster overriding and obscuring important anatomical details. Also, his final reconstructions lacked the crude, obscuring, thick coat of glue typical of many fossil preparations of the period.

One of the feature galleries at the PMA (now named the Royal Alberta Museum) are the large animal exhibits showing native Albertan mammals and birds in a lifelike setting. John was involved in helping with the construction of the pronghorn antelope diorama, the first of sixteen Albertan mammal

Figure 8. The Pronghorn (*Antilocapra americana*) diorama exhibit at the Royal Alberta Museum, October, 2007. Photograph by the author.

Figure 9. John feeding bread scraps to Canada geese (*Branta canadensis*) and Mallard ducks (*Anas platyrhynchos*).

exhibits that would eventually be completed (figure 8). This exhibit was revealed to the public in 1969 and this and subsequent dioramas were positively considered by a late director of the museum: "The dioramas, particularly the first one, the pronghorn antelope, became a signature gallery and signature exhibit for the museum" (Stepney, 1992, p. 16).

After these activities in Edmonton, John moved to British Columbia and hoped to get related work at the museum in Victoria, but they did not have any job openings for him.

Figure 10. John stands proudly with his 1928 Chevrolet.

His work activities after this time are not well known. It is thought that he first moved to Kelowna, British Columbia around 1970 and during the winter months did handyman jobs such as house painting. With the coming of summer he would be off for seasonal work to points unknown[6]. He left Kelowna and lived in a number of places in south-central British Columbia such as Winfield, Grand Forks and Creston, at one point owning a small fruit orchard. He eventually returned and retired to Kelowna, living the rest of his life there.

John was a lover of wildlife and spent much time in his retirement years feeding deer and birds (figure 9). He was also fond of antique automobiles and owned a 1928 Chevrolet (figure 10). He was a very religious man and was a member of the Church of Jehovah's Witnesses, baptized into the faith at a convention in New York City in 1958. While never married, he was fond of children and always had an endless supply of candy for them.

Poikans was a little-known character in Albertan vertebrate palaeontology, and while his palaeontological career was fairly short, his contributions were significant. The Royal Tyrrell Museum collections records credit him with collecting or co-collecting 2,385 fossils, with thirty-three more at the Royal Alberta Museum in Edmonton! This is a significant contribution to Albertan vertebrate palaeontology and should not be overlooked.

The author remembers at the beginning of his own vertebrate palaeontology career, in 1980, going through the catalogue records at the Provincial Museum of Alberta in Edmonton and seeing how often Poikans' name appeared. At that time no one knew who he was—which the author found intriguing and a bit disturbing. Therefore it somehow seems appropriate that he should now write John's story.

John (figure 11) passed away in Kelowna, aged 87, on March 19, 2007 after a long, interesting, and productive life. He was warmly described by friends as a simple, generous, and friendly man, unencumbered by possessions. At the time of this writing he was survived by his sister Milda and niece Inara, both in Latvia; he had no family in Canada.

Text notes

1. There may have been some politics involved, too. The palaeontology department at the University of Alberta in Edmonton had also been recently created and soon there was some rivalry and disputes between the two facilities (Stepney, 1992, p. 20).

Figure 11. John in his later years in an undated photograph.

2. Their fossils still exist in TMP collections, some of which are still valuable to current researchers. TMP fossil collections have expanded enormously over the past three decades. *Styracosaurus* material from Dinosaur Provincial Park collected by Taylor and Poikans and prepared by the latter was recently described by Ryan et al., 2007.

3. The *Lambeosaurus magnicristatus* was the fourth dinosaur skeleton to be displayed within the province, but just the second to be mounted here. The first mounted skeleton was a cf. *Parasaurolophus* at the University of Alberta's Paleontology Museum (Anonymous, 1990). This was prepared and mounted by George F. Sternberg in the mid 1930s, collected by him in 1921 (UA 300; quarry 84, DPP).

In 1938 the second mount, a *Corythosaurus* skeleton (ex NMC 8532; field number CMN 1915-9; quarry 243 DPP) found its way to the Calgary Zoo. It was prepared and mounted in Ottawa, disassembled and then shipped west to Calgary and remounted at the Zoo. It was displayed there until 1990 when it ended up at the TMP on October 2 of that year, where it was disassembled October 23–30, the author assisting. Only partly protected from the elements during its half century stay at the Zoo, much of the specimen was rotted or of poor plaster of Paris reconstruction and discarded. The remaining portions were catalogued as TMP 84.121.1.

The third mount was made in 1962, a composite *Edmontosaurus*, built from two partial skeletons, prepared, mounted and shipped from the National Museum of Canada to the small fossil museum in Drumheller and reassembled (Anonymous, 1962). There it resided for about 36 years. It was disassembled by TMP staff in 1998 and stored in Drumheller. Plans for it to be remounted in the new Drumheller Hospital fell through and the crated specimen was shipped back to Ottawa in 2006.

The first (failed) attempt at a mounted dinosaur in the province was a juvenile hadrosaur collected by W.E. Cutler with assistance from the American Museum of Natural History crew in Dinosaur Provincial Park in 1913. This immature *Kritosaurus* underwent preliminary preparation in Calgary by Cutler (Anonymous, 1913) but was never mounted and was traded in 1936 to the National Museum of Canada (for TMP 84.121.1 above), becoming CMN 8784 (DPP quarry 252) and later described by Waldman (1969).

4. There is an interesting Kelowna, B.C. connection to this specimen. Harold Lowe (Tanke, 2008) helped C.M. Sternberg collect this specimen in 1937; Lowe's son Don is retired and currently lives in Kelowna. John Poikans, lead preparator of the skeleton retired to and passed away in Kelowna. Finally, the main researcher on this specimen, David C. Evans (see Evans, 2005, and Evans and Reisz, 2007) was raised in Kelowna.

5. A number of small packages individually wrapped in newspaper and tied with string were included with the specimen. A number of these remain unopened in TMP collections; one is figured in Tanke (2005; fig. 2.2).

6. A postcard (featuring the PMA *Lambeosaurus magnicristatus* panel mount) mailed to John in 1971 bore a McLeese Lake, B.C. address; this is a small town north of Williams Lake, B.C.

Acknowledgements

The author thanks John Ukranchuk (Kelowna, B.C.) for biographical information on John's work activities in later years; Jim Overbeck (Medicine Hat, Alberta) for biographical information and the loan of pictures (figures 1–4, 9–11) used in this article; Jackie Wilke (Collections, TMP) for Poikans fossil collection data; Jane Danis (Drumheller, Alberta); and Don Lowe (Kelowna, B.C.). Jim McCabe and Mark Mitchell (both TMP) provided information on the dismantling of the Drumheller Fossil Museum *Edmontosaurus*.

The author would appreciate hearing from anyone with any new information on John Poikans or his work in Albertan palaeontology.

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Did you attend any of the 2008 APS field trips?

How about writing up one of the trips for the December *Bulletin*? Photos welcome!

editor@albertapaleo.org

Fossils in the News

University of Chicago News (online)
July 9, 2008

Flatfish fossils fill in a missing link

CHICAGO—The modern—and tasty—flatfishes, including flounder, plaice, sole and halibut have caused much head-scratching among evolutionary biologists since Charles Darwin's time. The animals are peculiar in having both of their eyes on one side of their head, a condition that allows them to lie flat on the seafloor while keeping both eyes peeled for food and enemies. In infancy, these fishes have eyes on opposite sides of their head like every other fish, but one eye "migrates" to the up-facing side of the head as the fish ages toward adulthood.

This puzzle of course was ammunition to creationists, who asserted that the migrating eye could not have evolved over time, because a halfway migrated eye would be totally useless, and the fact that no intermediate fossils had been found was proof of their argument. Even Darwin admitted defeat in trying to explain the matter.

Enter Matt Friedman, graduate student at the University of Chicago. Examining fossil fishes uncovered in museum drawers all over Europe, Friedman used CT-scanning techniques on several skeletons of Eocene-aged (50 MYA) fish and discovered that some of these really did show adult specimens with asymmetrically placed eyes, proving that there really were intermediate forms in the fossil record.

Friedman's findings also refute the "hopeful monster" theory posited in the 1930s, that suggested migrating eyes appeared suddenly, as a result of a genetic mutation that caused a major deformity—which just happened to be beneficial to the fish, who passed its mutated genes on to later generations. Friedman says his discovery ". . . demonstrates that the assembly of the flatfish body plan occurred in a gradual, stepwise fashion."

Quirks and Quarks
CBC Radio One, May 24, 2008

MIssing link "frogamander" found

CALGARY—Host Bob McDonald interviewed Dr. Jason Anderson, assistant professor at the University

of Calgary's Faculty of Veterinary Medicine, about a "missing link" in the evolution of amphibians.

Gerobatrachus hottoni ("Hotton's elderly frog") was originally discovered in Texas in 1995 by a field party from the Smithsonian Institution that included the late Nicholas Hotton, for whom the fossil is named. It remained unstudied in the collections of the Smithsonian until it was "rediscovered" by Anderson's team.

The age of the fossil is Early Permian, Leonardian, about 290 million years old. *Gerobatrachus* was a small amphibian, about 12 cm in total length, resembling a salamander with a short tail. It was found fully articulated in a thin lens of fine grained sediment representing a dried-up pond.

This discovery represents an important missing link in amphibian evolution, connecting the diverse group of primitive Palaeozoic amphibians called the temnospondyls, such as the large bodied *Eryops*, with today's frogs and salamanders.

The skull, backbone and teeth of *Gerobatrachus* have a mixture of frog and salamander features. The fossil has two fused bones in the ankle, which is normally only seen in salamanders. It also has a lightly built and wide skull similar to that of a frog. Its backbone has an intermediate number of vertebrae between the modern frogs and salamanders and more primitive amphibians.

Because the fossil has characters of both frogs and salamanders, *Gerobatrachus* is thought to be near the frog–salamander split. Robert Reisz, professor at the University of Toronto, Mississauga, and second author of the paper, estimates that frogs and salamanders separated from each other sometime between 240 and 275 million years ago, much more recently than the Carboniferous date that molecular data had suggested. *–Reviewed by Vaclav Marsovsky*

BBC News (online)
July 8, 2008

Fossil feathers reveal their hues

BRAZIL—Microscopic examination of fossil feathers from Brazil and Denmark has revealed characteristics that may allow researchers to reveal the original colours of the birds that bore them.

It's a well-known fact that organic molecules—including those responsible for most colours in animals—break down after a few thousands of years at the most, obliterating any evidence for colour in most fossils. So how could colours be preserved in feathers that are many millions of years old? Scientists at Yale University announced in the journal *Nature* that microscopic examination of striped fossil feathers from Brazil revealed concentrations of flattened, spherical objects, previously assumed to be fossil bacteria that colonized the feathers during burial.

However, when the researchers examined modern bird feathers, they found the same structures—melanosomes. The melanosomes are concentrated in black coloured areas of bird feathers and absent in white areas. Furthermore, melanosomes apparently occur in distinct arrangements that vary in different coloured areas, opening up the possibility of determining original colours from the concentrations or arrangements of fossil melanosomes. The Yale team believe that they may be able to identify brown, red, buff and irridescent colours. In the (unlikely) event that fur or eyes were preserved as fossils, the technique might even be applied to these structures to determine original colour.

BBC News (online)
June 25, 2008

Fossil fills out water-land leap

LATVIA—Swedish palaeontologists are heralding the discovery of a 365 million year old (Devonian) fish that helps fill some of the gaps in our knowledge of the evolution of land-based vertebrates. *Ventastega curonica* was discovered "really well preserved" in a Latvian sand deposit. The sand matrix is soft, never having lithified into sandstone. The fossils can be extracted easily with brushes and needles, emerging from the matrix in three dimensions.

Ventastega was an odd-looking animal, combining features of a crocodile (the head and body), and a fish (finned tail and gill covers). Although the limbs were not preserved, Per Ahlberg, the lead researcher from Uppsala University, believes that it would have had legs, possibly with seven to nine digits, like those of some other transitional species (e.g. *Acanthostega*).

Ventastega was one of several animals that appeared when fishes were evolving into land-based tetrapods. The fossil *Tiktaalik*, discovered in arctic Canada in 2004, (see *Bulletin*, June 2006) was another of these. It was a "missing link" between fish and land-going animals. *Ventastega* appeared later than *Tiktaalik* and was an evolutionary dead-end, showing that evolution was creating a multitude of branches, some of which led to land vertebrates.

[*Thanks to Philip Benham, Georgia Hoffman and Vaclav Marsovsky –ed.*] ❑

Archaeological Society of Alberta 2008–2009 Speaker Series

All talks are held in the University of Calgary Earth Sciences Building, Room ES162.

September

Brian Vivian

University of Calgary

8000 years of hunting buffalo in Calgary

Wednesday, September 17, 7:30 P.M.

Archaeological studies over the last thirty years have documented more archaeological sites in Calgary than anywhere else in the province. This talk focuses on recent archaeological excavations in and around the city which have revealed a record of bison hunting going back almost 8000 years. Summarizing results of excavations undertaken by Lifeways of Canada, Brian will highlight and summarize finds at the Everblue Springs site, the Gooseberry kill site, The Safeways site and the bison kill and processing sites found around the big spring at EgPn-430.

October

Alwynne Beaudoin

Royal Alberta Museum

5600 BC: When Mazama ash covered Alberta

Wednesday, October 15, 7:30 P.M.

It is no exaggeration to describe the explosive eruption of Mount Mazama, about 7600 years ago, as "cataclysmic." Spreading a thick blanket of ash across the northern plains, the eruption must have represented a significant natural disaster for people living in the region. For archaeologists, modern analogues such as the Mount St. Helens eruption of 1980 can be used in a "thought experiment" to assess the impact of the Mazama ashfall on landscapes and especially plants, animals and other resources important to occupants at that time. Recent volcanic eruptions have been linked with short-term climate perturbations, something that likely also occurred after the Mazama ashfall. These analogues can be supplemented by information from palaeoecological studies that provide insight into the long-term effects of the Mazama event. Reconstructing the event and its aftermath provides perspective against which to consider how people may have coped with such an extraordinary experience.

November

Peter Dawson

University of Calgary

Imaging the past: How virtual reality and computer gaming technology are changing archaeology

Wednesday, November 19, 7:30 P.M.

Constructing models of ancient buildings has been used as a tool for understanding past architectural practices since the Renaissance. The 16th century Italian architect Antonio da Sangallo, for example, built a highly detailed model of Rome's St. Peters Cathedral so that he could test various construction scenarios. Today, archaeologists are exploring how techniques such as laser scanning and computer modeling can be used to construct accurate 3D models of ancient architecture, which can then be explored in virtual reality. This lecture will focus on recent research done at the University of Calgary's CAVE, a cube-shaped virtual reality room, also known as the "Research Holodeck." Using special shutter glasses, visitors to the CAVE can "walk through" several computer reconstructions of house types used by Inuit and their ancestors in the Canadian arctic, as if they were real. The computer models are being used to understand how these unique houses were were built and used by their occupants, who lived many centuries ago in Canada's northern regions. ❑