



ALBERTA

**PALAEOONTOLOGICAL**

SOCIETY

BULLETIN

VOLUME 4, NUMBER 2

JUNE 1989

**ALBERTA PALAEOLOGICAL SOCIETY**

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	Director at Large	Dr. David Mundy	281-3668

The Society was incorporated in 1986, 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) Preserve 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

Single Membership	\$10.00 annually
Family or Institution	\$15.00 annually

**OUR BULLETIN WILL BE PUBLISHED QUARTERLY:** March 1, June 1, September 1, and December 1 annually

**DEADLINE FOR SUBMITTING MATERIAL FOR PUBLICATION IS THE 15TH OF THE MONTH PRIOR TO PUBLICATION**

**Mailing Address:** Alberta Palaeontological Society  
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**BULLETIN BACK ISSUES:** Back issues of the Bulletin are available at \$2.00 per copy. A limited number are available.

**NOTICE:** Readers are advised that opinions expressed in the articles are those of the author and do not necessarily reflect the viewpoint of the Society.

**PRESIDENT'S MESSAGE**

Donald Sabo

Summer at last! After spending a long cold winter curating and preparing last field season's material I'm sure everyone is eager to be out hiking and collecting. As always, take detailed field notes on the localities you collect at with emphasis on directions to the locality and reference to any landmarks and include the legal land description from a topographic map. If at all possible take photographs of your localities as well. All this information will help next winter while you curate your specimens, as well as possible aid to anyone that may be involved with scientific research in an area you may have collected at.

There has been a further change in the law regarding fossil collecting that you should be aware of. This is the introduction of a collecting permit required to surface collect any ammonites in the Province of Alberta. The permit costs \$30.00, is valid for a five year time period and are available from Alberta Energy. The permit entitles you to lawfully collect an exposed ammonite by any means other than mechanical as long as you have the landowners permission and it is not on an Ammonite Mineral Lease.

There have been no further changes to the Historical Resources Act or Bill 11. You may surface collect a fossil as long as you do not use any instrument (pick, chisel, hammer, etc.) to excavate or pry it loose from the matrix rock if it is in its original depositional position. However, if the specimen is from a talus or drift material you are within the law to collect it (except in provincial or national parks). After collecting the specimen you are not the owner of it, but designated as the temporary custodian for the Crown. If the fossil is one on the Control List you may apply for a disposition certificate from Alberta Culture to claim ownership of the fossils. You can still collect all the fossils you want as long as its done in the proper manner, also no one is going to take your fossils away from you.

This summer looks to be an active one for A.P.S., with three field trips once again being offered. The areas to be visited and the varied emphasis of each trip should cover most people's interests.

I wish everyone success in their collecting endeavors over the summer, and hope to see most of you out on the field trips.

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**COURSE REVIEW**

Heather Whitehead

**Digging Into Dinosaurs (University of Calgary Continuing Education)  
Instructor: Dr. Phil Currie, Tyrrell Museum of Palaeontology**

This six week course was offered for the first time in April and May, 1989. The 35-40 class members were a diverse group, brought together by their common fascination with dinosaurs.

The course included field trips to the Tyrrell Museum and to Dinosaur Provincial Park, both led by Dr. Currie. The Tyrrell trip included a guided walk along the badlands trails, a tour of the preparation and collection areas

(including a chance to see original Devil's Coulee egg specimens), and a visit to the offices and library. The Dinosaur Provincial Park trip is scheduled to include a guided tour of areas normally off-limits to the public, and a wind-up dinner at the Patricia Hotel.

Dr. Currie began the class with a survey of southern Alberta Cretaceous paleogeography, and the history of vertebrate paleontology in the region. Next, he introduced the dinosaurs: what they were, what they weren't, and their evolutionary tree. The major types of dinosaurs were covered, including their origins, diversification, any soft tissue characteristics, and behavioral inferences. Dr. Paul Johnston, also of the Tyrrell, gave a guest lecture on dinosaur physiology, with evidence on both sides of the hot/cold blooded argument. The last class focussed on Dr. Currie's current research interests: bone beds and their clues to dinosaur behavior; China, with its similar, but different Cretaceous fauna; dinosaur eggs and embryos, and their clues to behavior and growth; the origin of birds, and evidence that they are dinosaurs.

The course showed how much has been learned in the last 20 years, and gave glimpses into what present research will teach us in the next 20. The roles of the early researchers, the dedicated amateur, and today's "dinosaur renaissance" scientists were all discussed, and the importance of a little bit of luck was frequently mentioned. Slides, stories, and bits of unpublished knowledge brought the field and the lab into the classroom, and easily transformed "old bones" into exciting science.

A vote was held during the last class, with a unanimous YES to requesting "Dinos Part Two" next spring. There is a possibility that "Dinos One" will be repeated in Fall '89. If so, for those who have an interest in dinosaurs, the chance to take a course taught by one of the world's experts should not be missed!

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**NEW MEMBERS**

**Names and contact information removed  
to protect members' privacy.**

**FIELD TRIPS FOR 1989**

Harvey Negrich

Our field trip season will soon be here and again we plan three trips. These will be in June, July, and August.

If rained out we may cancel our planned trip and it will be tried later, not necessarily on the next weekend. We plan on going on these trips even if there is a lack of interest shown. I feel that the trip should go even if only the resource person is going.

Bring along a lunch and drinks as some of our ventures do not allow us to break away at noon. Staying together helps us keep a better contact with our group. Dress accordingly, as we can at times find cool spots.

**TRIP 89-1:** June 24-25, 1989. Drumheller Area, Alberta  
Resource People: Dr. Dave Mundy (403) 281-3668  
Percy Strong (403) 242-4735  
Wayne Braunberger (403) 278-5154

We will be looking at depositional environments and stratigraphy with associated fauna at several stops. These stops will start with the Bearpaw Formation in the East Coulee area and progress upwards to the Kneehills Tuff west of Drumheller

**TRIP 89-2:** July 22, 1989. Canyon Creek Area, Alberta  
Resource Person: Dr. Dave Mundy (403) 281-3668, and assistants

This trip will attempt to explain the steps taken to measure a section and study the stratigraphy of the Lower Carboniferous sedimentary rocks in the vicinity of the Ice Caves. We plan on identifying the fauna collected from this trip and ask that participants consider this as a group effort. If one wishes to collect only, he may come along and we will offer advice as to where to collect.

**TRIP 89-3,** August 19-20, 1989. Medicine Hat Area, Alberta  
Resource Person: Hope Johnson (403) 548-6450

This trip is more for the pleasure of looking in a different area than most of us have been familiar with. The locations will be Cretaceous, starting with the Milk River Formation if we get that far south. We may also get into the Oligocene Cypress Hills Formation.

If you are interested in any of our trips and wish to register you may do so by contacting Harvey Negrich (403) 249-4497 or anyone on the executive. We will have a list at our regular meeting and anyone there will be able to signify their interest at that time. A few days prior to each trip someone will attempt to contact all those registered to pass along any last minute details or changes and the meeting locality in the area. This last minute contact will be important, as changes may be made to plans. Do not attend a field trip without first checking for any such changes.

Again our motto is keep in touch.

**The 1989 Calgary Rock and Lapidary Club Show:  
Minerals, Rocks, and Fossils**

Les Adler

As in previous years the show was held at the West Hillhurst Arena, 19th Street, N.W. Calgary during the first weekend in May. There were 17 dealers placed around the perimeter while exhibitors filled 100 show cases in the central area. In another section a silent auction and fish pond ran continually as did an identification and education section.

Special displays were presented by the Friends of the Tyrrell Museum and Lawrence Halmrast. The Friends of the Tyrrell showed juvenile and adult hadrosaur bones and photos of the field station at Dinosaur Provincial Park. They also had a cast of an Albertosaurus skull rotating above their display. A computer with games kept many of the youngsters occupied. Mr. and Mrs. Halmrast of Southern Alberta have recently joined the Society. They have a major collection of Southern Alberta dinosaur bones and other local fossils. They set up a display 20 feet in length of specimens personally collected and prepared. There were large hadrosaur femurs, humeri, ulnas, metatarsals, jawbones, vertebrae, and teeth. As well they also presented a slide show on collecting in Southern Alberta.

Our Society contributes each year by providing personnel to man the Identification Booth. Mostly members of the executive along with Lyle Harwig. Our members fill several cases with fossils, enter into competition and provide judges when asked.

When a member has won frequently they are asked to move their display into a special section where winners display so as to give others a chance to win a prize. Consequently Wayne Braunberger's exhibit: "Etching Solitary Rugose Corals of the Mount Head Formation" along with Jean Wallace's collection of ammonites appeared in this special section. Harvey and Steffie Negrich displayed two cases of invertebrate fossils from the United States in this section as well. This display had won the Show Chairman's award last year.

Other displays included Emmette Wallace's collection of dinosaur pieces from Utan, painted agate sections and dinosaur models. Jean Wallace also entered a case in competition. This case included specimens of protozoa, porifera, echinodermata and arthropoda. Don Sabo presented "Disease in Fossil Reptiles, Pathologic Examples from the Upper Cretaceous (campanian) Judith River Formation". The display pointed out with examples using diseased bones and disease-free bones how a palaeopathologist would infer what had happened to the animal millions of years ago. Les Adler displayed two cases of fossils, one from Alberta and one from outside Alberta. The Alberta case contained actual specimens representing several classes of reptiles. The other case was mixed and contained specimens from the United States, Australia, and Morocco.

There were numerous other displays by members of the Rock and Lapidary Club. As well many of the dealers had fossils on display. Some of the more notable displays were: The Peach Collection Fossils. This display included fossil plants, ammonites and corals from various areas of Canada and United States. This case was given a special award. The L.C. Dwyer collection of 23 arthropods, trilobites, crabs, and crayfish was also on display. The University of Calgary presented a case demonstrating educational objectives which included an Ogygopsis trilobite and a set of Pentremites godoni blastoids illustrating ontogenetic growth.

As you can see there were plenty of fossils to be seen at this annual show.

**THE ALBERTA PALAEOLOGICAL ADVISORY COMMITTEE**

Wayne F. Braunberger

The Alberta Palaeontological Advisory Committee (APAC) is composed of six members. They represent the following organizations: University of Calgary, University of Alberta, Geological Survey of Canada, Canadian Society of Petroleum Geologists, amateur palaeontologists, and the Tyrrell Museum. The member from the Museum is ex officio and cannot vote. The Committee generally meets twice a year: March and November.

The Committee's function is to advise the Minister of Culture on various items of concern to palaeontologists. These duties are to advise on all collection permits, dispositions, and other requests concerning the collection or disposition of palaeontological resources. As well the Committee advises and comments on proposed legislation or existing legislation.

It should be stressed that the Committee can only advise the Minister of Culture. Whether this advice is followed is at the discretion of the Minister. The Committee does not create new legislation or set government policy.

As the representative of amateur palaeontologists on the committee I would be pleased to hear from you if you have concerns regarding the Historical Resources Act or any aspect of the regulations concerning fossil collecting. If any individuals have specific proposals I would be pleased to present them to the Committee on your behalf.

**CHANGES TO AMMONITE COLLECTING REGULATIONS**

With the continued interest in the commercial exploitation of ammonites changes have been made to accommodate this activity. In order to do this, changes have been made to the Mines and Minerals Act. A new regulation called the Ammonite Shell Regulation was brought in. This regulation took effect in March 1989. Under this regulation in order to collect ammonites you must be the holder of a valid "agreement" or "permit". An agreement is required if you wish to excavate non-exposed ammonites. A permit is required if you wish to surface collect ammonites. You are still required to apply for a disposition certificate from Alberta Culture before ammonite material is legally yours.

For further information you are advised to read the Ammonite Shell Regulation, Mines and Minerals Act or to contact the Department of Energy or Anna Curtis at the Tyrrell Museum.

Amateur Palaeontologists representative: Wayne F. Braunberger  
544 Quennsland Place S.E.  
Calgary, Alberta  
T2J 4T3

**PRECAMBRIAN TO PLEISTOCENE  
ADVENTURES ACROSS THE PACIFIC**

Les Adler

About thirty years ago I used to be a Grade 7 science teacher. In those days we used a comprehensive textbook and the collecting of geological and botanical specimens was encouraged. I set up my own collection to have specimens available for examination and discussion. After the syllabus was changed a number of times I continued to collect. When the Province of Alberta was economically vibrant it appeared possible that Mount Royal College might establish a Museum of Geological Education and some of my specimens would go on loan, but this did not happen.

In Alberta my collecting is confined to the Devonian, Carboniferous, and Cretaceous Periods and to the Palaeocene Epoch because the locations I use are easy to access and are legal. In British Columbia I collect legally on Precambrian, Cambrian, Ordovician, and Triassic sites. For other geological periods such as Jurassic, Silurian, Permian and Cenozoic, I have collected in England, Portugal, Morocco, Greece, the United States, and Australia.

As I have two brothers engaged in business activities at Melbourne Australia, I combine social visits with the collecting of seashells and fossils. As I have worked as a Meteorological Assistant with the Australian Commonwealth Meteorological Bureau based at Melbourne, I sensed that the winter at Calgary just passed was likely to be severe so I left in January. I took in a niece's wedding, contacted two rock clubs, also Mr. Frank Holmes, Secretary of the Australasian Fossil Collector's Association and met Dr. Pat Rich of Monash University and Dr. Tom Rich of the Museum of Victoria. I was also in touch with the Museum of Victoria; re: mineral collecting. In Victoria, Australia, I use two books: "Geology of Victoria" and "Victorian Geology Excursion Guide" .

Frank Holmes took me in his van to his house in an eastern suburb of Melbourne (population about 3 million) showed me his library and prize fossils such as Silurian starfish and trilobites. He photocopied maps that I requested and arranged later to take me to an excellent Lower Ordovician graptolite location. We went to Bullengarook, a small town 40 kilometers west of Melbourne and then 8 kilometers west through the hills to a slate quarry across a creek which was passable at this stage. Close to the quarry we sifted through many slate pieces on a 3 meter thick section along a 30 meter slope. After about two hours of collecting we brought back to Melbourne a large bag full of specimens which I culled and mailed to Calgary. Most of the specimens were two dimensional white beautifully preserved impressions on black slate with the majority of the specimens being isograptid. Several three dimensional black phyllocarid crustaceans were also collected. The pieces may also contain conodonts but I have not looked for these so far.

Brother Alan took me to Kinglake West, 40 kilometers north of Melbourne high up in the hills to a town garbage dump. Bulldozers dig out holes so that garbage and crushed cars can be tossed in and later covered. One breaks open many pieces of mudstone and when you are lucky complete Devonian trilobites may be found if you look in the right spot. Alan found me the right spot and I came out with a nice collection of trilobites. The temperature was over 90 degrees fahrenheit on this day.

The third and fourth locations were Miocene sands and marls. The sediments are soft and a screwdriver will poke out the specimens. Echinoids, gastropods, and bryozoans were quickly found. I left before a tropical electrical storm developed which flooded the main street of Melbourne 15 centimeters deep in water and put the transport system into chaos.

With Brother Rodney providing transport we met members of the Frankston and Peninsula Lapidary Club at Fyansford, 80 kilometers southwest of Melbourne to collect shark's teeth, echinoids, brachiopods and bivalves. Rodney obtained two Miocene echinoids 10 centimeters across for me.

At Lillydale, 28 kilometers east of Melbourne, the administrators of the Major Mitchell Estate allowed us to drive the station wagon right down into the quarry and select a load of limestone to cull at a later stage. This Devonian location produced fossil corals and gastropods

Rodney agreed to drive me to Dinosaur Cove, 240 kilometers, southwest of Melbourne on the Victorian Coastline. Dr. Pat Rich, a co-author of the revised fossil book of the Fentons, and co-author of several other books is senior lecturer in Vertebrate Palaeontology at Monash University and provided me with papers and plaster casts of dinosaur pieces, also maps and directions to Dinosaur Cove. We found the camp with Dr. Tom Rich of the Museum of Victoria in charge and went to a lookout. We decided against going any further as we were attempting to get a lot done this day. We talked with fossil collectors from the United States who had paid about \$1,000 to Earthwatch to participate in excavating this site. They had been to other locations which I missed out on. It has taken five years, much explosive and hundreds of thousands of dollars to obtain a large box of dinosaur pieces. However the pieces are important as it is possible to define genera and species and with the combination of other fossil types in conjunction with various plant fossils to deduce climatic conditions in Lower Cretaceous times at this location and also state that the dinosaurs here were in a cold climate and spent part of the year in darkness. As well as photographing Dinosaur cove I was able to obtain gorgeous pictures (pun intended) of the coastal rock stacks such as "London Bridge" and the "Twelve Apostles". Later that day we inspected an Australian aboriginal archaeological camp site and then collected Oligocene echinoids and brachiopods at a limestone cape.

With a favorable deal from QANTAS I flew Melbourne-Sydney-Adelaide. Four days were spent in the Adelaide area, collecting shells at Glenelg, including two days taking in the zoo, the botanical gardens and the South Australian Museum. This Museum has a fossil gallery 75 meters in length with mostly local fossils arranged in chronological sequence from Precambrian to Pleistocene. The piece de resistance is the display of the Ediacara Fauna from about 650 million years old. These fossils are in a reddish sandstone and beautifully preserved. What took me by surprise was the size of the fossil sea pens - 30 centimeters in length. The museum has an educational section with many printed pamphlets for sale and draws of fossils available so that amateurs may identify their specimens. I was allowed to inspect and handle Ediacarian specimens.

Two days were spent around Mannum, 90 kilometers east of Adelaide collecting Miocene echinoids, bryozoans and bivalves. As I did not have a vehicle at my disposal conditions became disastrous as I was risking sunstroke and dehydration due to continuing temperatures of 105 degrees Fahrenheit. I returned to Melbourne by Deluxe Coachlines bus service. At Melbourne one fossil trip was cancelled as we decided that strong north winds, temperatures of 100 degrees Fahrenheit and the danger of snakes made the collection of further graptolites foolhardy.

The return journey to Calgary was by way of Sydney, Nandi-Fiji, Honolulu, Los Angeles and Salt Lake City. At Sydney the plane was delayed about two hours due to an extremely severe tropical storm which put the complete airport out of action for an hour. At this stage a tropical cyclone (hurricane) was developing to the northeast.

Staying at Waikiki I visited the zoo, took a bus halfway along the west coast of Oahu, (about 60 kilometers) to photograph a coral reef fossil corals in it and carried on with further photography of hopefully dormant volcanoes, an aircraft carrier and monuments at Pearl Harbour and people enjoying themselves on the beach at Waikiki. Then on to Los Angeles to take in Hollywood (where I stay), Disneyland and Hancock Park. As well as seeing Michael Jackson as Captain Eo (in 3-D) I took the Disneyland train ride through the prehistoric area to view Apatasauruses, Stegosauruses and other sundry dinosaurs enjoying themselves in the swamps and then running into difficulties with lava and volcanic eruptions.

Hancock Park is located on Wiltshire Boulevard, in a Los Angeles suburb adjacent to a major art gallery and sculpture garden. You reach the Page Museum of Paleontology here by two buses from the Los Angeles International Airport. Several of the ideas at the Tyrrell Museum come from the Page Museum. When conditions permit visitors may watch excavations of the tar-pits. On one occasion I stood in some tar, then walked away so that I can claim that I have escaped from the La Brea tar-pits. Thousands of mammals and birds were trapped in tar seepages about 40,000 years ago and thousands of animals were preserved because of infiltration by hydrocarbons. There are life-size models inside and out of mastodons, sabre-tooth cats, lions, wolves, giant sloths, and huge carnivorous birds. I bought casts of sabre-tooth canines for my collection.

The slides have been sorted and I am now sorting specimens and proceeding with the identification and the labelling.

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#### **BRACHIOPOD CONGRESS**

Emmette Wallace

The 2nd Annual Brachiopod Congress will meet on February 5-9,1990 at the University of Otago, Dundein, New Zealand. In addition to seven half day scientific sessions there will be the following field trips:

##### Precongress

- A-1 Late Carboniferous-Permian of Tasmania
- A-2 Marine Tertiary of Victoria
- NZ-1 Beginning scuba diving course

Intra congress half-day excursion (included in the fee for the congress)

##### Postcongress

- NZ-2 Fiordland diving trip
- NZ-3 Mid-Tertiary of Northern Otago
- NZ-4 Permian-Jurassic of Southland

Accommodations are available: 1) on campus, 2) motels: 10 minute walk 3) hotels. If you are interested contact:

J.D. Campbell and D.E. Lee  
2nd International Brachiopod Congress  
Geology Department, University of Otago  
P.O. Box 56  
Dundein, New Zealand

ALBERTA PALAENTOLOGICAL SOCIETY, CALGARY, ALBERTA.

BALANCE SHEET

Bank Balance Dec. 31/88	\$ 209.46	Unearned Revenue 1989	\$ 160.00
Inventory of Pins at Cost	153.43	Members' Equity	584.09
Incorporation Expense	78.00		
Typewriter \$ 379.00			
less Dep. <u>75.80</u>			
	<u>303.20</u>		
TOTALS	<u>\$ 744.09</u>		<u>\$ 744.09</u>

OPERATING STATEMENT FOR 1988

<u>REVENUES</u>		<u>EXPENDITURES</u>	
Dues	\$ 597.00	Bank Charges	\$ 15.00
Raffle Revenue	102.00	Postage	135.10
Pin Sales	189.00	Pins Purchased	129.29
U. S. Exchange	2.27	Coffee Expense	27.83
Coffee Revenues	112.85	General Expense	43.25
		Office Expense	16.49
		P.O.Box Rental	26.20
		Printing & Copying	428.21
		T-Shirt Refund	8.00
		Depreciation Expense	<u>75.80</u>
Sub Total			905.17
Excess of Revenues Over <u>Expenditures</u> for 1988			<u>97.95</u>
GRAND TOTALS	<u>\$ 1,003.12</u>		<u>\$ 1,003.12</u>

We have examined the books and records of the above named Society and have received satisfactory answers to all queries. The above statements represent a true and fair presentation of the affairs of this Society.



(L. B. Kidner) Auditor  
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