

ALBERTA PALAEOLOGICAL  
SOCIETY

***BULLETIN***

***VOLUME 4, NUMBER 3***

***SEPTEMBER 1989***

**ALBERTA PALAEOLOGICAL SOCIETY**

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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) 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

**THE 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**

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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

Welcome back, after what I hope was a busy and active summer for everyone. We certainly had a mixed bag of weather over the summer. I'm sure most of you know how frustrating it can be working during the week while the weather is great and when the weekend approaches, the black clouds roll in and spoil your plans to be out collecting. Hopefully the fall will provide us with some nice weekends to get out and check those last few localities we wanted to explore before the winter sets in and confines us indoors once again.

This fall and winter will once again see the Society holding its regular meetings at Mount Royal College in room B208. We will be following the same format for our meetings as before with a short business section followed by an interesting and informative presentation. Our first meeting will be held Friday, September 22, starting at 7:30 pm.

Your executive committee hopes to come up with some interesting projects over this next season. With a little help and involvement from you, the members, we will keep the Society interesting for us all to enjoy. One such project being spear headed by our Vice-President, Percy Strong, is a display of Mississippian Fossils and advertisement of the Society in a show case at the main library downtown in December.

If anyone has an interesting anecdote regarding a collecting trip they would like to share with the rest of the members, why not bring it up at the next regular meeting or submit it to be printed in the Bulletin. These stories can be a great learning experience for the rest of us.

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**MEETINGS**

The scheduled meeting dates of the Alberta Palaeontological Society for the upcoming Fall and Winter session are as follows:

September 22, 1989	January 19, 1990
October 20	February 16
November 17	March 16
December 15	April 20
	May 25

The meetings will be held in room B208 at Mount Royal College from 7:30 to 10:30 pm.

**REVIEWS**

Les Adler

**DIGGING DINOSAURS** by John Horner and James Gorman  
Workman Publishing Co., New York. 1988, 210 pages, about \$20

If you intent to read only one book about fossils during 1989, then this is the one I recommend. This book captures the excitement of searching for fossils and finding what you are seeking after having proposed a theory of where you should look. Jack Horner presents his autobiography in a thoroughly enjoyable exposition including his travels, work, and studies across North America and into Europe, how his studies do not match the establishment's degree requirements, occasionally how he was lucky enough to be in the right place at the right time, but later the searches were successfully planned on the basis of correct palaeontological interpretation. Eventually he hit upon square miles of Montana territory stuffed full of egg-shell fragments which gave rise to the finds in Alberta at Devil's Coulee.

The chapters are as follows: 1. Looking for Babies, 2. The First Nest, 3. The Good Mother Lizard, 4. Nesting in Colonies, 5. The Herd, 6. Egg Mountain, 7. Haute Bones, 8. Babies Everywhere. The list of personnel includes two or three participating members of the Alberta Palaeontological Society. There are illustrations of eggs, nests, babies and adults, and photographs of sites including the Camposaur Pit in a bone-bed of a herd of about 10,000 Maiasaur. Horner states that half of the full-fledged excavations for dinosaur fossils in North America take place here in Alberta funded by the Alberta government.

A chronology and a set of references is provided. As David Attenborough states: "This marvellous yet modest book sets up a new milestone in the advance of our understanding of the astounding dinosaurs".

Scientific American, June 1989, pages 74-81, **THE FOSSILS OF MONTE SAN GIORGIO** by Tony Burgin, Olivier Rieppel, P. Martin Sander, and Karl Tschanz

The authors all have Swiss Ph.D's and study Triassic period vertebrates (210 to 250 million years ago). This article works in with previous articles and reviews appearing in this Bulletin such as the article on Triassic fishes by Andy Neuman, June 1987 and Parrsboro's Fabulous Fossils, June 1988.

Monte San Giorgio rises in the southern European Alps near the Swiss Italian border near the Swiss villages of Meride and Serpiano. Exquisitely preserved fossils have been collected in the area for nearly 130 years and about 4500 specimens are stored at the Museum of the University of Zurich. The 21 illustrations or photos provided cover mostly ray-finned fishes, but also nothosaurs, reptiles, and thalattosaurs. These are part of the several major groups of terrestrial and marine vertebrates that made their debut in the Triassic period. Once the specimens have been studied and described, palaeontologists find that the relationships among the fossil fishes and reptiles are difficult to untangle. These specimens provide the data so that researchers can pose questions and then set up a meaningfull program to follow. A list of references for further reading is provided.

National Geographic, Volume 175, Number 6, June 1989, pages 660-669, cover and supplement. **"WHAT CAUSED EARTH'S GREAT DYINGS"** by Rick Gore

For lovers of fossils this is a spectacular copy. First, the cover duplicates portions of the enclosed supplement. On one side of the supplement (small poster size), John Gurche has painted a scene depicting two swift Allosaurs trying to

break through a herd of Ultrasaurs, the largest dinosaurs ever, in an attempt to capture a juvenile Ultrasaur. On the reverse side a group of 21 Pleistocene mammals and birds are depicted facing the same direction as they become extinct, probably because of Homo sapiens. This side is titled: "The March toward Extinction". The editorial refers to the article.

Each of at least five worldwide catastrophes erased millions of animal species. The catastrophes may have been caused by climatic shifts, meteorite impacts, changes of food supplies, and conflicting animals. Currently a sixth extinction is under way in which humans are playing a major part. There are many beautiful color paintings, photographs, illustrations and and extensive text. Read this thoroughly enjoyable article and make your choice(s) as to the reasons for the extinctions.

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### FIELD TRIP TO DRUMHELLER

June 24/25, 1989

Leaders: Dave Mundy, Percy Strong, Wayne Braunberger

This trip took place over two days in the Drumheller area. On Saturday the outcrops at East Coulee and Willow Creek were examined and on Sunday outcrops in the Horseshoe Canyon were examined.

Saturday looked like a washout as it was raining quite heavy in the morning, however we sat out the worst of the rain in a picnic shelter. During this time Dave Mundy gave a short talk on what would be seen in the outcrops and explained some of the stratigraphy and sedimentology. When the rain let up we started on the trip. The hills were a bit slippery at first but the sun came out and dried them off in a short time. We were then able to climb around and get a good look. The area at East Coulee and Willow Creek is known as the Horseshoe Canyon - Bearpaw Transition Zone. In this section the rocks exposed represent the edge of a delta that was prograding out into the Bearpaw Sea. In the outcrops can be seen the the evidence of the old shore lines. Dave pointed out various features that lead to the interpretation of this area as a delta. Amongst the sites were various sedimentary structures such as: ripple cross stratification, trough cross bedding, lags, trace fossils such as Ophiomorpha, Macaronichnus, Skolithos, and Teredolites, and body fossils such as oysters, and some vertebrate remains.

The most interesting stop of the day was at a mud filled channel. At this location were exposed the Teredolites borings. This is one of the few places where this trace fossil can be seen.

On Sunday we examined the upper part of the Horseshoe Canyon Formation, as well as the Battle and Whitemud Formations, and the Kneehills Tuff. During a short walk around the upper part of the Canyon the following features were seen: amber in coal, soil horizons, meandering stream deposits, vertebrate remains, and plant fossils. The second part of the trip was a walk down to the Drumheller Member (oyster bed). This is one of the better outcrops in the area. Here we were able to observe various bivalves in place. The most common fossils here were the clam Corbicula and the oyster Ostrea. Some less common forms were also noted.

Although it started out on a wet note the weather turned nice and was quite pleasant for the rest of the weekend. Sunday turned out to be quite warm. Although the trip did not concentrate on the collection of fossils it provided a good introduction to trace fossils and sedimentology.

## A SLIDE MOUNT FOR MICRO SIZED FOSSILS

Donald Sabo

My collection is comprised mainly of vertebrate fossils which can reach sizes of 30 cm or so in length. Realizing there could be a problem in storage and the rarity of large specimens, I concentrate on collecting at microvertebrate sites where the specimens range in size from a few millimetres to 7 cm in length.

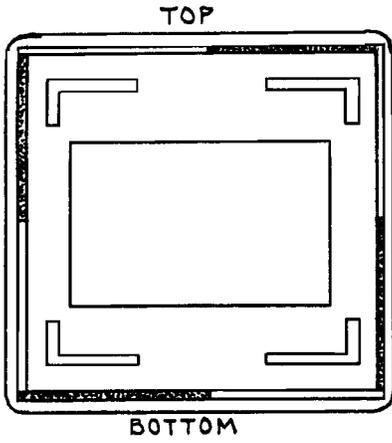
When curating and writing a registration number on these specimens, I was safe down to about 1 cm in length, but for specimens below this size I was having a difficult time of it. The specimen was either being entirely covered with a number or the size made it physically impossible to write on. You could get around this problem by putting the registration number on a card in a small box with the specimen, however it would be too easy to have the specimens put back into the wrong box with the wrong number.

One method I have developed to solve this problem which seems to work well for myself, is to use a plastic 35 mm slide mount in conjunction with a small plastic sample bag as the slide window. I use the Swedish glassless slide mount by Gepe which are 24 X 36 mm by 2 mm thick and are available in a box of 100 for about \$9.00. These or a similar variety can be purchased from most private camera stores. This method can be used for both vertebrate and invertebrate fossils.

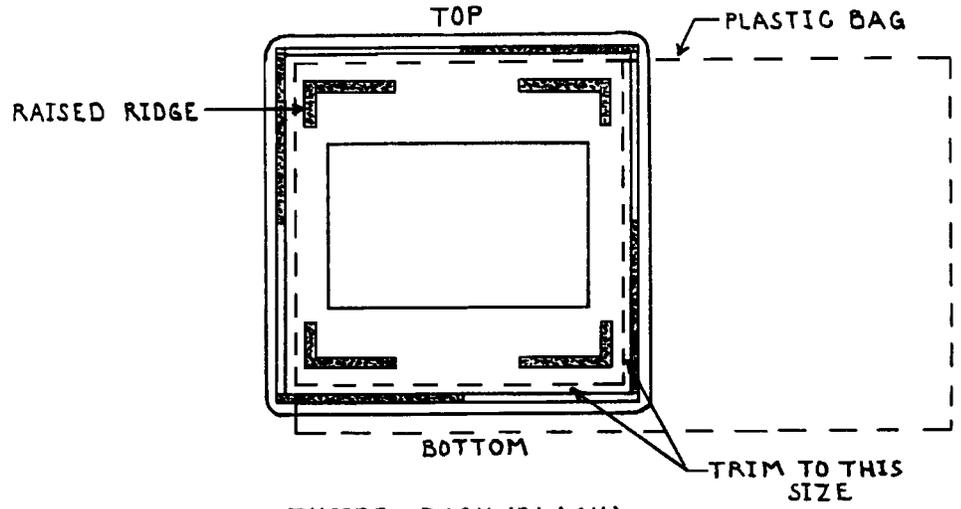
The process I use is as follows. The plastic slides come with a white front and a black back that have raised and recessed ridges so that they can snap tight into one another. This acts as frame over the plastic bag which is the window that the specimen sits inside of. First lay the back of the black half on a flat surface, and then lay a 7.5 X 5 cm plastic sample bag (available from most lapidary supply stores) over the inside of the black half of the slide and position on corner of the bag against the upper inside left corner ridge of the slide. Then mark off with your fingernail the inside right and inside bottom side of the slide on the bag (see Figure 1). Take a pair of scissors and trim the bag to the size measured. Insert your micro sized specimen with its front up into the trimmed plastic bag and lay within the ridges on the inside of the slides black back half. Now position the white front half of the slide over the corresponding raised and recessed ridges of the back and snap into place. I usually tap the edges of the slide with the handle of the scissors to make sure the interlocking edges are tight. With the white half of the slide now the front, the upper right hand corner makes a perfect spot to write on the registration number with India ink and then protect it with a clear lacquer so it will not be rubbed off (Figure 2).

You now have a finished slide on which a micro sized specimen normally too small to be labelled or even handled by hand is clearly labelled with a registration number and allows you to easily handle and view the specimen from front and back. The specimen is also easily removed from the slide for more detailed work and can be returned to the same slide. With this method you can also store dozens of micro slides vertically in a small box rather than in numerous individual specimen boxes that take up valuable drawer space.

FIGURE 1

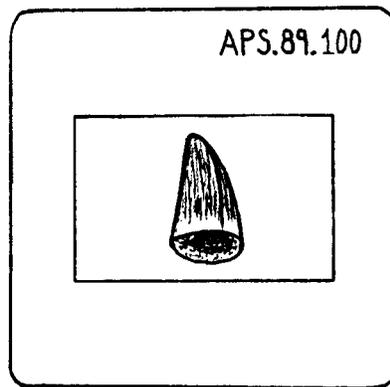


INSIDE FRONT (WHITE) COVER



INSIDE BACK (BLACK) COVER

FIGURE 2



COMPLETED SLIDE WITH SPECIMEN