

BULLETIN

VOLUME 9 NUMBER 3

SEPTEMBER 1994



DROMATEOSAURUS

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) 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.

Single membership	\$10.00 annually
Family or Institution	\$15.00 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.

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Requests for missing issues of the *Bulletin* should be addressed to the editor.

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

†APAC is the Alberta Palaeontological Advisory Committee

UPCOMING APS MEETINGS

Meetings take place at **7:30 p.m.**, in Room **B108**,
Mount Royal College: 4825 Richard Way SW, Calgary, Alberta

- Friday, September 16**—Dr. Fazal Muhammad, Mount Royal College: The Evolution of Plants
Friday, October 21—Gordon Holland, Calgary geologist, will present the second part of his talk on the geology of the Rocky Mountains, this time focussing on the role of continental drift.
Friday, November 18—DINOTOUR update (tentative)
Friday, December 16—Les Adler, APS president: Dinosaur Classification (tentative)

ON THE COVER: In this issue we premiere the work of yet another remarkable paleo-artist in our midst—APS member Cory Gross. Depicted is a colony of the coelurosaur *Dromaeosaurus*, from the Upper Cretaceous of North America. ©1994, reproduced by permission.

From the Editor...

by Howard Allen

Once again, the results are in from the annual Gem and Mineral Federation of Canada (GMFC) Club Newsletter Contest. Once again, the *APS Bulletin* won a “level 3 certificate of achievement award.” Hooray! Some of the comments made by the anonymous judge:

- “This newsletter should be in a class by itself! It’s a very professional and technical publication. Good and easy reading and very informative.”
- “Very good book reviews.”
- “Really like your covers.”
- “Keep up the good work...”

Apparently, we tied with two other newsletters in the “large (5 pages or more), non-GMFC clubs” division; however, we were beat out by two entrants who won “level 2” awards (there were no “level 1” awards this year). What can we do to boost our marks for next year? Let’s look at a breakdown of the marks:

The three issues judged (September, December ‘93; March ‘94) all received full marks in four of the six main categories: *First impression; Format, design, layout; Vital information; and Articles*. As was the case last year, however, our Achilles’ heel seems to be *Club news*, in particular “major activity or business of last meeting” and “personal news of members.” Lots of goose eggs in these categories. The “major activity” subcategory could be fixed by including minutes of the general and executive meetings. Is this something you, the readers would like to see? Perhaps it’s a good idea, since at present only attendees know all the nuts-and-bolts stuff that goes on behind the scenes. Maybe the society is starting to look like a closed, “old boys club.” (It’s kind of tough to shake this image with no “old girls” on the executive!) Let me know what you think about printing the minutes in future issues.

As for the “personal news of members,” this item is being worked on with the Membership Updates column I try to place in each issue. (The judge’s marking seems a bit mysterious in this regard, since the December ‘93 issue, which received a “0” had nearly as much member news—including Alex Harich’s dinosaur find—as the March ‘94 issue, which got 5 out of 5! No part marks, I guess.)

The “extended information (provincial, national, international news, including show dates & activities)” category is another weak point. Every issue contains news items, so I guess we need to shape up in the “show dates & activities” department. If you send ‘em in, I’ll print ‘em.

The final category for which we garnered all goose eggs and which, I suspect, was the reason there were no “level 1” awards is the inscrutable category: *Outstanding features not previously considered*, which is worth 5 points! Any ideas?

Before I wind this up, I’d like to extend special thanks to Trudy Martin and the anonymous judges for including our bulletin in the GMFC contest. Trudy generously continues to send in material for the *Bulletin*.

By the way: Trudy is coming up on her *twenty first year* of editing the Calgary Lapidary Journal! Yikes! Congratulations (or should I say sincerest sympathies?) Write on, Trudy! □

Membership Updates

Wayne Braunberger has completed his Master’s degree in geology, and will suit-up in his robes and goofy hat at the University of Calgary’s fall convocation. The subject of Wayne’s thesis was biostratigraphy of the Upper Cretaceous Cardium Formation. On a related note, Wayne has appeared in publication as co-author of a recent scientific paper:

Hills, L.V., Braunberger, W.F., Núñez-Betelu, L.K., and Hall, R.L., 1994. *Paleogeographic significance of Scaphites depressus in the Kanguk Formation (Upper Cretaceous), Axel Heiberg Island, Canadian Arctic*. Canadian Journal of Earth Sciences, Vol. 31, pp. 733–736.

Congratulations on both counts, Wayne!

Holger Hartmaier, our program director, has won a Gem and Mineral Federation of Canada “first level” award for his article *Seismographs* in the Calgary Lapidary Journal. Not only that, he also nabbed a “second level” award for another article, *Colour in Minerals*, in the same Journal.

Gadzooks! **Peter Meyer**, our very own vice-president, won a “second-level” award, also in the GMFC contest, for his Calgary Lapidary Journal article *Care of Opals*. Way to go, guys! [*I’ll be looking forward to some of that award-winning writing in future issues of the Bulletin! –ed.*]

Roving reporter **Heather Whitehead**, the Society’s New York correspondent (how’s that for a classy tag, Heather?), writes: “...looking forward to attending the [Society of Vertebrate Paleontologists conference] in Seattle, in October, and already planning next summer’s holidays. (Wish my time and budget were as extensive as my plans!)...”

“...and please say hi to the gang at the APS from me.”

Hi yourself, Heather! □

1994 Field Trip Report

by Howard Allen

Ram Falls, Alberta (June 18)

More than a dozen participants showed up at the Ram Falls Campground parking lot on a beautiful Saturday morning which promised—and delivered—a nearly cloudless sky, warm temperatures and *no mosquitoes!*

Field trip leader Wayne Braunberger first led the group to the brink of a yawning precipice, the Ram River canyon, which, besides providing a breathtaking view of the falls and canyon walls, exposes a thick succession of Upper Cretaceous shales and sandstones of the Cardium and Wapiabi Formations. Wayne pointed out the various beds, and discussed their relative ages, sedimentary and structural features, and some of the fossils to be found in them.

Our contingent then proceeded to the collecting locality, a tributary canyon whose steep, V-shaped walls of dark grey Wapiabi shale are completely devoid of any plant life, offering a huge, continuous exposure of fossiliferous rocks.

Numerous fragments and some nearly complete specimens of scaphitoid ammonites were collected, along with occasional large inoceramid clams. Later in the day, several people found more of the same fossils in the ditches and road cuts on either side of the forestry trunk road above the Ram River bridge. Proving once again that fossils are where you find them, Cory Gross picked from the ditch an articulated, concentrically ribbed clam, *Pleuromya* sp.—a Jurassic fossil nowhere near any Jurassic outcrops! The specimen likely came from the road aggregate, or the glacial deposits that overly much of the local bedrock.

Monarch, Alberta (July 16)

Once again, near-perfect conditions greeted the participants on our second field trip. A sunny, hot prairie day was already in the making as about a dozen members gathered at the Oldman River bridge west of Monarch. Under the leadership of Wayne Braunberger, the group set off on a hike of about a mile along the river bank, which involved some minor bushwhacking, but which did not (to everyone's delight) involve mosquito-slapping!

Upon reaching the collecting locality—a high, sweeping cutbank along the river—Wayne and I explained to the rest of the group the geological and paleoecological conditions displayed at the locality.

This outcrop of the Upper Cretaceous St. Mary River Formation is remarkable in revealing a number of thrust faults that have pushed the rock layers into near-vertical position, most of the strata being repeated several times by the faulting.

Though a common sight in the mountains and foothills, this evidence of strong earth-movement, dubbed the Monarch Fault Zone, is situated well within the normally flat-lying plains area, more than 80 km. east of the Rocky Mountain foothills.

Scattering along the river bank, members soon began collecting an abundance of astonishingly well-preserved clams, oysters and gastropods, evidence of the brackish-water, lagoonal deposits represented in the exposed rocks. Loose specimens of the clam *Corbula perangulata*, many looking as fresh as entrées in a seafood buffet, were so abundant that excellent specimens were soon being discarded in favour of perfect ones. At the end of the day, many hundreds of museum-quality specimens were left lying in plain view by our group, who had the luxury of choosing only the very best. Less common and more fragile were the beautifully ornamented, high-spined gastropods "*Melania*" *wyomingensis*, of which many fine examples were also collected.

After this successful foray, field-trippers headed back to their vehicles, where the group broke up, some returning home and about half proceeding to the Scabby Butte vertebrate locality about 20 minute's drive to the northeast. Here Les Fazekas directed members to the richer spots in the Scabby Butte badlands, site of a previous APS field trip. As usual, a good collection of microvertebrate fossils was made—in particular, teeth of the Late Cretaceous ray, *Myledaphus bipartitus*, as well as other fish teeth, scales, crocodile teeth and fragments of dinosaur bone.

[*Peter Meyer will report on the August field trip to Genessee in the December issue –ed.*] □

No More Excuses!

Material for the *Bulletin* can now be submitted in any of the following word-processing formats:

Macintosh

ClarisWorks
Framemaker (MIF)
MacWrite
Nisus
RTF
MS Word
MS Works
Text
WordPerfect
WriteNow

Also:

AppleWorks (Apple II)
SunWrite (SUN)
WriteNow (NeXT)

IBM PC

Ami Pro
ClarisWorks (Windows)
DCA-RFT
Framemaker (MIF)
MS Works (DOS/Windows)
MultiMate
OfficeWriter
Professional Write
RTF
Text (ASCII)
MS Word (DOS)
MS Word for Windows
WordPerfect (DOS/Windows)
WordStar
XYWrite

3.5" floppy disks only please (any density).
As always, typed and handwritten material is more than welcome! – ed. □

Fossils in the News

The Calgary Herald, June 10, 1994:

Ancient skeleton excites experts

Alberta Report, June, 1994:

Out of an ancient sea

The Calgary Herald, June 18, 1994:

Museum confirms fossil is ichthyosaur

FORT McMURRAY, Alberta—Several articles appeared earlier this summer documenting the discovery of an ichthyosaur skeleton at the Syncrude Canada Ltd. oil sands quarry near Fort McMurray in northeastern Alberta.

Working the graveyard shift—at 3 AM—heavy equipment operator Greg Fisher miraculously spotted what appeared to be bone fragments in the black tar sand ore rocks. Gingerly lifting aside the three blocks of rock (which totalled more than 20 tonnes) with his excavator, Fisher notified mine officials who in turn contacted the Royal Tyrrell Museum in Drumheller.

Tyrrell technicians determined that the fossil consisted of 17 exposed tail vertebrae and part of the pelvis of a 100-million-year old ichthyosaur. The rocks were trimmed and hauled back to Drumheller, where initial preparation has revealed part of a skull in one of the blocks. If the skull is preserved, it will be the first discovered in Alberta. A few ichthyosaur bones were found at the tar sands plant in 1992, but this appears to be the most complete specimen so far.

The Calgary Herald, June 30, 1994:

Rare intact T-rex found

REGINA (CP)—What is believed to be one of the largest complete *T. rex* skeletons has been found near Eastend, in southwest Saskatchewan.

The skeleton could be 15 metres long and 5.5 metres tall. "...this looks bigger than the average *Tyrannosaurus*," according to John Storer, curator of the Saskatchewan Museum of Natural History in Regina. Excavation has so far revealed the upper portion of the skeleton, including vertebrae, part of the upper jaw and teeth. When excavation is complete, the fossil will be removed to Regina for preparation and study.

The Calgary Herald, July 15, 1994:

Prehistoric horse still one of a kind

DAWSON CITY, Yukon (CP)—Excavation of the remains of an ice-age horse has been completed at a placer gold claim in the Yukon permafrost. The partial remains of the 26,000 year-old horse, *Equus lambei*, included fragments of the animal's pelt, the first time such remains have been found.

The Calgary Herald, July 16, 1994:

Small dinosaur is big news

BROOKS, Alberta—Only two days into the 1994 summer field season, Dr. Philip Currie of the Royal Tyrrell Museum of Palaeontology looked down and saw a claw protruding from the sandstone of Dinosaur Provincial Park. The claw was attached to the nearly complete skeleton of an *Ornithomimus*, a lithe, toothless "bird-mimic" dinosaur.

The find, one of four *Ornithomimus* found in the park to date, was probably missing its skull, but the articulated foot bones were well-preserved and of particular interest to Currie.

Said Currie of the skeleton: "They are rare enough that when we do find one that's well preserved, like this one, we get pretty excited."

The Calgary Herald, September 4, 1994:

Gaspé delights pre-date dinosaurs

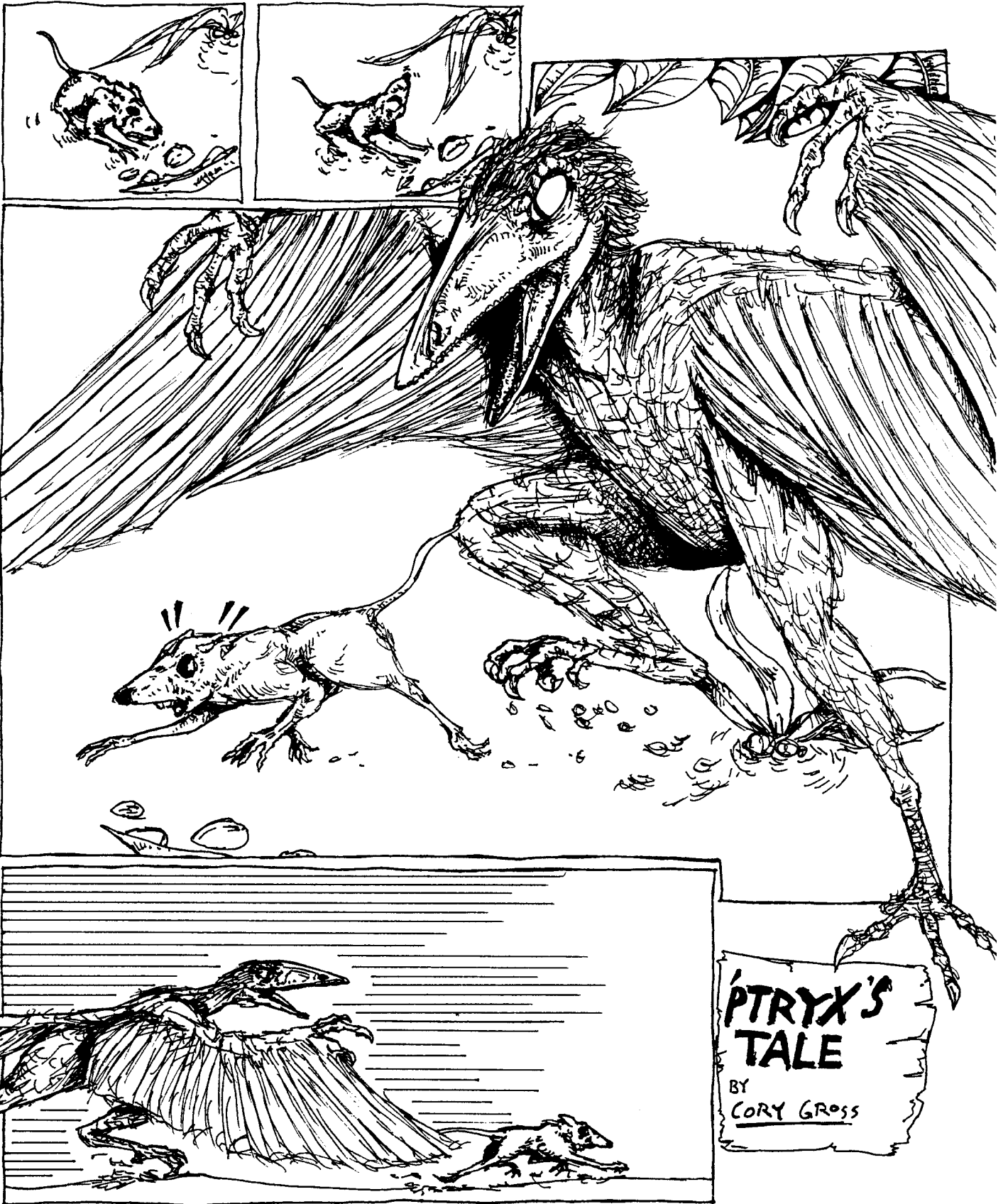
MIGUASHA PARK, Quebec—This feature article [*appearing in the Sunday Herald's "Quirky Corner," showing once again that non-dinosaur fossils are the Rodney Dangerfields of the media's palaeontology coverage -ed.*] documents the rich Devonian fossil beds on the Bay of Chaleur, in Quebec's Gaspé Peninsula.

Miguasha Park was created by the Quebec government in 1976 to protect the fossil cliffs where "for decades, collectors carted thousands of irreplaceable specimens away..."

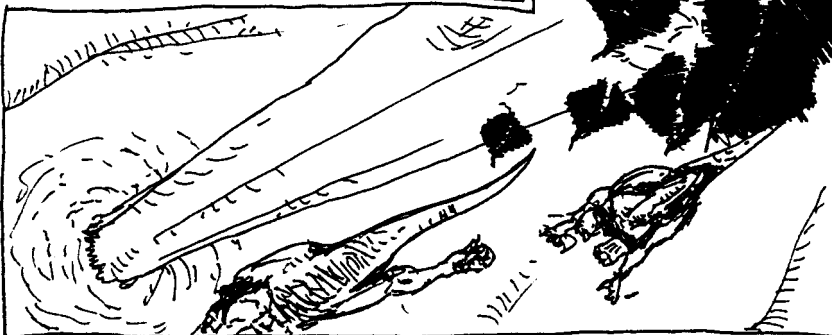
One park highlight is a fossil of the bony fish *Eusthenopteron*, "a fearsome predator fish with eyes on the top of its head and a mouthful of conical teeth." Twenty three fossil fish species have been identified from the locality, along with "three types of invertebrates like lobsters and scorpions," [*presumably eurypterids? -ed.*] as well as various Devonian plant fossils and spores. The rocks have been interpreted as the sediments of a saltwater estuary of a large river.

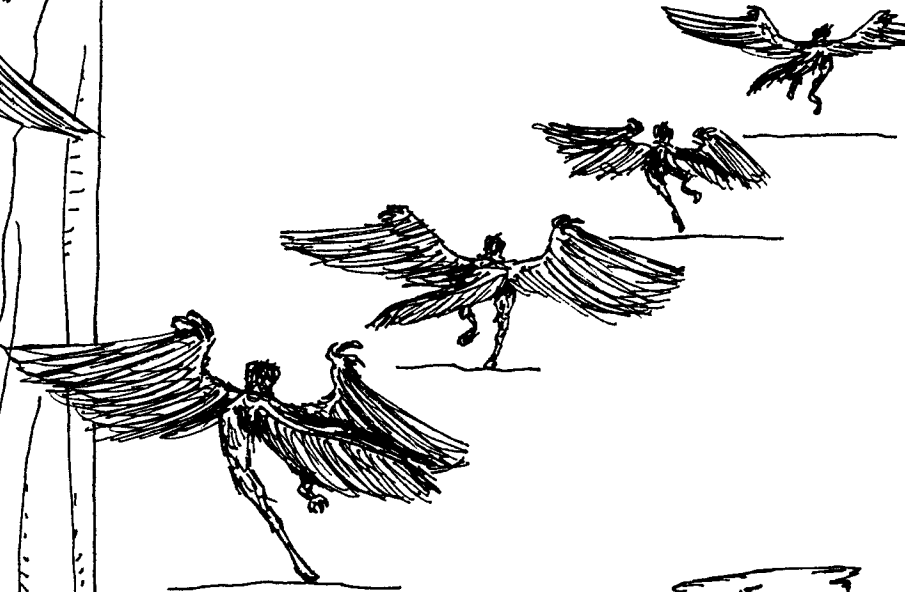
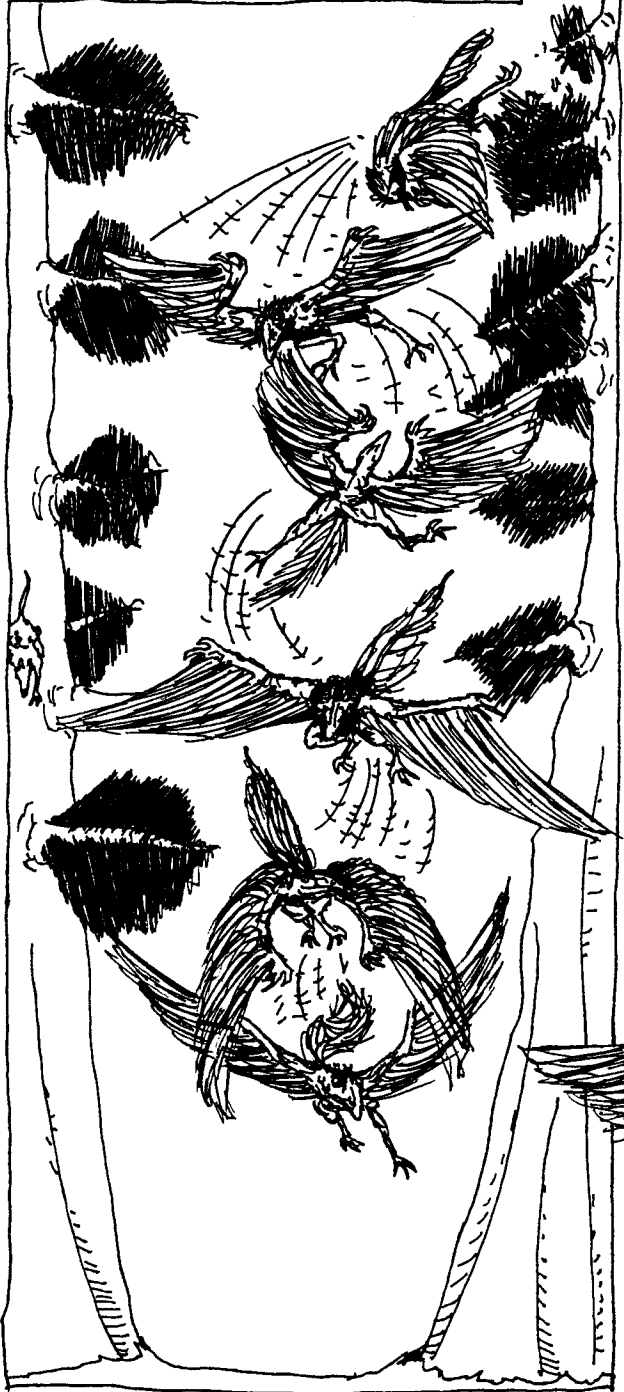
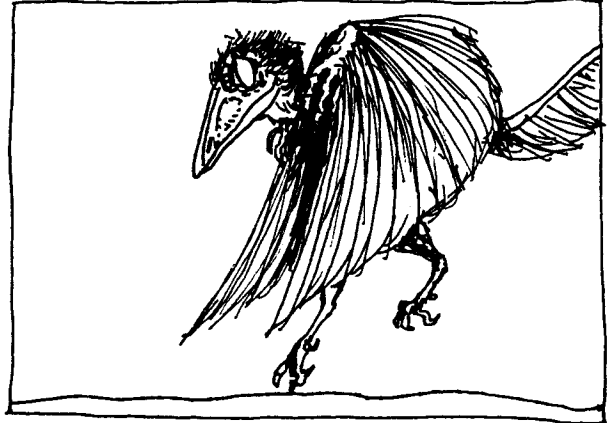
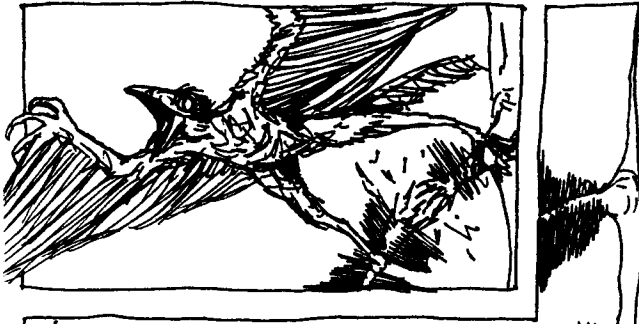
Miguasha park, with its interpretive displays and preparation laboratory are becoming quite famous, appearing in a recent Japanese television documentary, and winning an award for excellence by the Smithsonian Institution in Washington, D.C.

[Thanks to Brian Allen, Doreen Allen, Leona Busch, Holger Hartmaier, Trudy Martin and Evelyn Wotherspoon for submitting news clippings - ed.] □



**PTRYX'S
TALE**
BY
CORY GROSS





THE
END

Reviews

The Terror Birds of South America by Larry G. Marshall, *Scientific American*, February 1994, pp. 90–95.

Larry Marshall studies the evolutionary history of South American land mammals. He has been on 22 expeditions to many Central and South American fossil localities. He is employed by the Institute of Human Origins, in California, to document the connection between the rise of the Andes Mountains and the concurrent changes in continental faunas. He is knowledgeable also in the evolutionary history of South American birds.

Larry describes the habits of the South American “terror birds” which lived from 62 million to 2.5 million years ago, based on the fossil remains and by studying members of these families of birds which have survived in several areas today. The terror birds, members of the phorusrhacoid group, were the most spectacular and formidable group of flightless, flesh-eating birds that ever lived, engines of destruction and awesome eating machines. Today they are placed in the order Gruiformes with cranes, rails and the present-day South American seriema birds. Their hunting technique was focussed and deadly; living on the pampas of South America, the bird could stay hidden in the grass until it had drawn close to its prey. Then it would dash toward its victim at speeds close to 70 kilometres per hour, seize the catch in its beak and render it unconscious by beating it against the ground. It often ate its catch whole. Having no natural predators it could then feed at leisure before returning to its nest.

The phorusrhacoids came in three families and ranged from one to three metres in height. They took part in an evolutionary relay by following coelurosaur dinosaurs as the dominating fleet-footed carnivores in South America; their body forms were quite similar: trim, elongated; long powerful hind limbs; long necks, large heads; killing and processing prey primarily with their hind limbs and mouths.

These birds or similar ones are known from North America, Europe, Asia and Antarctica. Marshall describes the coming and going of land bridges during the Cenozoic Era. These large birds rose to the top of the food pyramid in South America and lost their position to relatively short-legged terrestrial marsupials and placentals. These mammals probably had greater intelligence, more speed and agility, or the ability to prey on the terror birds’ eggs and hatchlings.

The article is accompanied by sketches, photographs and references.

– reviewed by Les Adler

Seismosaurus: The Earth Shaker by David D. Gillette, with illustrations by Mark Hallett. Columbia University Press, New York, 205 p. ISBN 0-231-07874-9. US\$39.93.

Seismosaurus: The Earth Shaker begins as the story of the discovery and excavation of the giant sauropod nicknamed “Sam.” Written by the chief palaeontologist responsible for the excavation, description, and naming of the new dinosaur, the book’s first-person point of view captures the excitement, the tedium, the dedication, and the wonder of field excavation.

Articulated, well preserved tail vertebrae on a hillside led to the discovery of Sam. Skeletal remains recovered include the vertebral column from the base of the neck to the middle of the tail (almost continuously articulated), chevrons, sacrum, pelvic bones, some ribs, and three or four neck bones. Also recovered were more than 240 stones from within the skeleton—documented proof of gastroliths, for at least this dinosaur specimen. The vertebral anatomy did not match that of any known sauropod, and Sam was officially named *Seismosaurus hallorum*, a new genus and a new species. Compared to other giant sauropods, Sam is the longest (at 120 to 170 feet) and among the heaviest (at 100 tons by Gillette’s reckoning).

Sam’s burial place in New Mexico became a testing ground for techniques that may some day take over from the manual labour and educated guesswork that dominate today’s field excavations. Scientists from Los Alamos, Oak Ridge, and Sandia National Laboratories used high technology methods to try to map the extent and location of the skeleton before excavation, with varying degrees of success. This unique partnership between palaeontology and other sciences continues, resulting in studies of the chemistry of fossilization, the preservation of organic matter such as proteins in Sam’s bones, and further work on the gastroliths found within Sam’s skeleton.

The book is produced on high quality paper and is well written. It has a topical bibliography, and an extensive index. Photos are colourful and illustrative. The artwork by Mark Hallett is exceptional. The cover painting of 6 individuals in a herd of *Seismosaurus* captures the size and majesty of these huge animals—not as overgrown sluggards, but as living, plausible, and rather appealing creatures.

This book is written for the non-specialist, with lucid descriptions of the technical topics and some provoking new insights into the process of fossilization. A few typos detract from the overall high quality, and there is an annoying lack of consistency in the use of italics for genus and

species names. But these are minor complaints—I enjoyed the book, and recommend it as a “good read” and as good science.

– reviewed by Heather Whitehead

Flora of the Ravenscrag Formation (Paleocene), Southwestern Saskatchewan, Canada by Elisabeth E. McIver and James F. Basinger. *Palaeontographica Canadiana*, No. 10. Canadian Society of Petroleum Geologists and the Geological Association of Canada, 167 pp. ISBN 0-920230-84-9. CDN\$47.00.

Ever since Dr. Elisabeth McIver gave her illustrated presentation to the APS (November, 1991) on the Ravenscrag flora, this volume has been much anticipated by APS members, especially in light of our 1992 field trip to Ravenscrag Butte, the study area for this important addition to the literature on North American palaeobotany. It is important because the Ravenscrag flora is one of the most diverse for its age, certainly in Canada, and some of the taxa described within are carryovers or close relatives of forms from the Late Cretaceous and Paleocene formations found at many localities in western Canada, including Alberta.

By comparison with the Ravenscrag’s more than 60 identified species, other well-known localities such as Genessee (19 species) and Smoky Tower (9 and 5 species, from two different horizons) have relatively poor diversities despite their abundance of specimens.

Flora of the Ravenscrag begins with an introductory note on previous palaeobotanical work in the area, followed by four pages on the geology of the Ravenscrag Formation and associated deposits. The next ten pages are devoted to an analysis of the Ravenscrag flora, including discussions of palaeoecology and palaeoclimatic inferences.

It appears that the Ravenscrag flora represents a multi-layered forest community including tall, broad leaved and coniferous trees, an understory of small trees and shrubs, and a low-lying, marshy pond habitat. During Paleocene time, southern Saskatchewan was covered by a broad, forested alluvial plain with meandering rivers and local swamps, streams and ponds. The climate was mild and relatively rainy, with no dry season. Winters were probably similar to those in Vancouver today: damp and cool, but frost was probably rare.

McIver and Basinger conclude that the closest modern analogue to the plant communities and overall climate reflected by the Ravenscrag flora can be found in areas of southeastern China.

The remaining pages are devoted to technical, taxonomic descriptions and illustrations of the

various plant species studied. Five new species are described, including three new genera. As well, the authors have erected seven new genera to accommodate reclassifications.

The book, in 8.5 x 11" softcover format, is printed on quality glossy paper. The bibliography is very thorough, with more than five pages of references. The fifty pages of black-and-white photographic plates are sharp, with good contrast. Photographs of modern leaves are occasionally included for comparison, a nice touch when dealing with imperfect fossil specimens or questionable identifications. One minor irritation is the lack of cross-referencing between the plates and their relevant pages in the text. This problem is compounded by the lack of an index. A brief reference on each plate, (e.g. “see text, pg. 43” would have obviated a lot of page-flipping to find the appropriate passages (there is a detailed table of contents at the front listing all species, but it is arranged taxonomically, not alphabetically).

A word of warning: this book is not a popular field guide for amateurs; it is a scientific treatise, and as such it is necessarily full of highly technical jargon. Unless you are comfortable with phrases such as: “venation pinnate, semicraspedodromous, rarely craspedodromous,” you had better have a textbook or dictionary of botanical terms close at hand.

Is this book worth \$50.29 (including GST)? That depends: as I have already implied, *Flora of the Ravenscrag Formation* stands as a (perhaps *the*) major, up-to-date work on Paleocene plant fossils of Western Canada. As such, it will no doubt remain a classic volume, and probably the most important single reference for identifying plants of this age in our part of the world. If your interest in plant fossils is minimal, or your book budget restricted, perhaps you should leave it for the libraries. For the beginner wishing to learn more about plant fossils, a better bet would be William D. Tidwell’s *Common Fossil Plants of Western North America* (1975, Brigham Young University Press). For the serious student of Canadian palaeobotany, and those wishing to maintain a good fossil reference library, *Flora of the Ravenscrag Formation* will be hard to do without.

– reviewed by Howard Allen ◻

Flora of the Ravenscrag Formation may be purchased in person or by mail from:

Canadian Society of Petroleum Geologists,
#505, 206 7th Avenue, SW
Calgary, Alberta, Canada
T2P 0W7

Highlights from Exchange Bulletins...

The APS receives several bulletins and newsletters from other societies and clubs on a regular basis. Members are encouraged to examine copies of these, which are filed in the APS library. —ed.

The Earth Science News—Earth Science Club of Northern Illinois (ESCONI)

April 1994

- Clippings from the Chicago Tribune of January 25, documenting University of Chicago palaeontologist Paul Sereno's latest expedition to find dinosaur fossils in northern Africa.
- *World's largest carnivorous dinosaur discovered* by Allen A. Debus (article to be read April 1, 1994).
- *Safety tips for rockhounds* reprinted from a pamphlet by the North Carolina Dept. of Labor; some good points to consider for all collectors.

May 1994

- *Mazon Creek area of Northern Illinois* by Jim Konecny—Palaeontological and cultural (mining) history of a world-famous fossil locality.
- *Tyrant Queen: T. rex as a Cultural Phenomenon* by Allen A. Debus—the remarkable Mr. Debus strikes again, this time with an analysis of the public's love affair with the most popular saurian.

June 1994

- *Fossil Legislation* by John Boland—the long-running battle over the proposed Baucus bill continues unabated.
- *Plate Tectonics* by Jean Reynolds—a brief article on plate tectonics as an explanation for the distribution of some fossils on different continents.

July/August 1994

- *Killer trees?* by Andrew A. Hay—a University of Cincinnati professor claims that trees were responsible for the extinction of many Devonian reef communities, and the decline of trilobites, brachiopods, crinoids and cephalopods!

September 1994

- *Othenio Abel—Artistic founder of Paleobiology* by Allen A. Debus—an examination of the career of a little known but important Austrian pioneer in palaeobiology and palaeo art.

M.A.P.S. Digest—Mid America Paleontology Society

March 1994

- *A strange "snail"* by B.L. Stinchcomb—illustrated article on some Lower Paleozoic fossils from Missouri.

Paleo Newsletter—Austin Paleontological Society, Austin, Texas

March 1994

- reprints of several articles, including the discovery of a fossil hoax in London's Natural History Museum; "What is a Fossil?"—a pamphlet from the Black Hills Institute; an article on the Mazon Creek, Illinois fossils; and amber.

Ontario Paleontology Association Newsletter, Sudbury, Ontario

December 1993

- *Ottawa area nodules* by Chris Clute—Quaternary age clay nodules found in the Leda Clay Formation in the Ottawa Valley often contain the remains of fish, small animals, plants and insects. Also a "hot" method for splitting the nodules.

British Columbia Paleontological Alliance Newsletter—Courtenay, B.C. (Formerly the Vancouver Island Paleontological Society Newsletter, now allied with The Vancouver Paleontological Society.)

Spring 1994

- *Discovery of the Year (so far)* by Rolf Ludvigsen—illustrated note on a bony fin from the barracuda-like fish *Protosphyraena* from the Upper Cretaceous of Vancouver Island.
- *Great Grizzly Adventure* by Mike Trask and Dan Bowen—a travelogue on a summer expedition through B.C. and Alberta.
- Many other notes and articles of interest to fossil collectors, especially those in British Columbia.

T-SHIRTS!

We still have a few of our Best-Selling,
FULL COLOUR, Centrosaurus T-Shirts
by Paleo Artist **MIKE SKREPNIK**

at only \$15.00 (+ \$3.00 shipping)

A TERRIFIC BARGAIN!!

These shirts look great, and all proceeds
are in support of the Society

GET YOURS NOW!

Contact **Wayne Braunberger** for sizes
and details, at **403-278-5154**

Membership Dues for 1995

Dear Member:

This is a first reminder that 1995 membership dues should be paid. Dues are now payable by the January, 1995 general meeting. We appreciate your prompt remittance, so that our programs can be properly funded.

Vaclav Marsovsky,
Membership Director

Please make your cheque or money order payable to: **Alberta Palaeontological Society**
P.O. Box 35111, Sarcee Postal Outlet
Calgary, Alberta, Canada
T3E 7C7



Membership Renewal Form for 1995

Name _____

Address _____

City _____ Province/State _____

Postal/Zip Code _____ Telephone () _____

Cheque or Money Order \$ _____ Single \$10.00

Enclosed \$ _____ Family \$15.00

(Please do **not** send cash through the mail) \$ _____ Institution \$15.00



Application Form for New Members

Name (please print) _____

Address _____

City _____ Province/State _____

Postal/Zip Code _____ Telephone () _____

Do you hold membership in any clubs, groups or professional societies related to geology or palaeontology? Yes No If yes, please list: _____

What are your interests? _____

What do you wish to learn more about? _____

Membership dues are \$10 per single member, \$15 for a family or institution. Dues cover the calendar year from January 1 to December 31. The appropriate dues should accompany application.

The undersigned hereby applies for membership in the Society and, if elected to membership, agrees to abide by the by-laws and regulations of the Society.

Signature _____ Date _____