

Alberta

Palaeontological Society Bulletin

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ALBERTA PALAEOLOGICAL SOCIETY

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Social	Dan Quinsey	(403) 247-3022
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The Society was incorporated in 1986, as a non-profit organization formed to:

- Promote the science of palaeontology through study and education.
- Make contributions to the science by:
 - Discovery
 - Collection
 - Description
 - Education of the general public
 - Preservation of material for study and the future
- Provide information and expertise to other collectors.
- 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.

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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 credit is given.

Upcoming APS Meetings

Meetings take place at 7:30 P.M. in **Room B108,**
Mount Royal University, 4825 Mount Royal Gate SW, Calgary, Alberta.

Friday, April 19, 2013—Sarda Sahney, University of Bristol.

Separating Science from Spin:

How a Laboratory Discovery Becomes a Media Sensation (See Page 4).

Friday, May 24, 2013—Alycia Wilson, Mount Royal University.

*The Cretaceous Guitarfish, *Myledaphus bipartitus*: Age and Growth.*

June, July, August, 2013—Field Trips, no General Meetings (See Page 5).

ON THE COVER: Tabulate coral, *Syringopora* sp., Lower Carboniferous, Mount Head Formation, Alberta. APS collection specimen number APS.1986.21. Scale bar = 1 cm. Photo by Howard Allen.

APS Annual General Meeting May 24

By Dan Quinsey, Past-President

This Notice of Motion is submitted to the Alberta Palaeontological Society (APS) membership for consideration in compliance with Sections 4.1 *Annual General Meeting* and 4.4 *Notice of the Alberta Palaeontological Society Bylaws*.

The APS Annual General Meeting will be held on Friday, May 24, 2013 at 7:30 P.M. in Room B108, Mount Royal University, 425 Mount Royal Gate SW, Calgary, Alberta.

Proposed actions on the Agenda will include the election of Officers and Directors and a Motion to donate \$1000.00 towards the proposed Mount Royal University East Gate Entrance Fossil Display: *The Cretaceous Sea in Western North America*. **All eligible voting Members are requested to attend!**

Elections

Members are encouraged to review the APS Bylaws regarding voting, elections and the positions of Officers and Directors for more details. Updated Bylaws have been provided separately with this issue of the *Bulletin*.

If you would like to chat about the possibility of serving on the Alberta Palaeontological Society Board of Directors, nominate a Member or be nominated for any of the open positions, please contact Past-President **Dan Quinsey** at (403) 247-3022 or by e-mail: pastpres@albertapaleo.org. All inquiries will be held confidential.

Up for election are the following positions:

Position	Term
President	1 Year
Vice President	1 Year
Secretary	1 Year
Treasurer	1 Year
Field Trip Co-ordinator	2 Years
Program Co-ordinator	2 Years

The following positions are *not* up for election:
Editor: **Howard Allen** (2nd of 2 year term);

Membership Director: **Vaclav Marsovsky** (2nd of 2 year term).

Committee Chairperson positions are not up for election but are appointed by the Board. Current committees are:

Committee	Current Chairperson	Term
Fossil Collection	Howard Allen	Unlimited
Library	Reg Spratley	Unlimited
Logo Design	Cory Gross	Limited
Public Outreach	Cory Gross	Unlimited
Social	Dan Quinsey	Unlimited
Symposium	Vaclav Marsovsky	Unlimited
Website	Vaclav Marsovsky	Unlimited

If you would like more information about Board positions or are interested in chairing or participating on a committee, please contact Past President **Dan Quinsey** at (403) 247-3022 evenings and weekends or by e-mail: pastpres@albertapaleo.org.

All inquiries will be kept confidential if requested.

Motion

MRU East Gate Entrance Fossil Display: The Cretaceous Sea in Western North America

The proposal—Changing the Face of Education: A Campaign for Mount Royal University.

It is the intent of the display to provide students and the general public the opportunity to view life sized reconstructions of extinct marine vertebrate animals that swam in the Cretaceous seas of western North America.

The variety of types of marine reptiles and fish will provide viewers the opportunity to see the variations in skeletal arrangements and the relationships they have with each other. The East Gate entrance is the primary entry into the main building on campus. Most people coming to Mount Royal University pass through this area every day as they go to classes, the bookstore, food services, the library and most administrative offices. The display will be viewed daily by thousands of people.

The display will consist of the large plesiosaur *Elasmosaurus* sp. dominating the area at the East Gate entrance of the main building. It will be suspended at the height of the second level to permit the upper portion to be viewed from the second level balcony and the underside of the specimen to be viewed at the main level.

A small turtle (*Protostega* sp.) will serve as the prey of the plesiosaur and will be mounted several metres

away from the jaws of *Elasmosaurus* on the east wall. Watching the action will be a flying reptile (*Pteranodon* sp.) suspended from the ceiling. In addition, two large fish (*Xiphactinus* sp. and *Pachyrhizodus* sp.) will be mounted on the west wall in the entrance. *Xiphactinus* is the predator and *Pachyrhizodus* the prey. At a later date, a male *Pteranodon* and Cretaceous marine invertebrates will be added.

The goal of the project is to initially raise \$100,000 through private and corporate donations to fund Phase 1 of the display. Additional funds will be required to add Phases 2, 3 and 4. Total cost of the project is estimated at \$200,000. Currently, an anonymous donor has agreed to match donations up to \$50,000 for Phase 1.

The Alberta Palaeontological Society is sincerely grateful to Mount Royal University for providing a venue and equipment for our Board Meetings, General Meetings, Annual General Meeting, Annual Symposium (including workshops) and Micro-sorting events. We would like to show our appreciation by contributing \$1000.00 towards the East Gate Entrance Fossil Display. This donation will be matched as indicated above. To read more about the Mount Royal University project, visit the APS website: www.albertapaleo.org.

The Alberta Palaeontological Society Board of Directors voted unanimously during the Executive Board Meeting held February 6, 2013 to bring the following motion to the Membership during the May 24, 2013 Annual General Meeting:

Motion: To donate \$1000.00 from Alberta Palaeontological Society excess revenues accumulated during the 2012 year to Mount Royal University to be used towards the proposed East Gate Entrance Fossil Display.

(See updated Bylaws included with this issue.) □

Fossil Prep & Collections Symposium April 20–22 at Royal Tyrrell Museum

The 6th Annual Fossil Preparation and Collections Symposium will be held at the Museum in Drumheller. Registration is \$150 online or by phone (403) 823-7707. For information see www.tyrrellmuseum.com/research/fpcsymposium.htm.

Thanks to Brandon Strilisky, Head of Collections Management, RTMP. □

Upcoming Events

April

Sarda Sahney

University of Bristol

Separating Science from Spin: How a Laboratory Discovery Becomes a Media Sensation

Friday, April 19, 2013, 7:30 P.M.

Mount Royal University, Room B108

In the last few decades public consumption of science stories has increased dramatically. Perhaps this is because of improving science education in schools or a greater accessibility to information due to recent advances in communications; regardless of the reason, people are reading fiction and non-fiction science stories more widely. Science-related stories are featured by all major news outlets, in the form of health news, environmental realizations, technological advances and occasionally pure science stories.

How does a scientific discovery become news? A scientist must take many steps to create a story which is palatable to the public, a course of action in which researchers take guidance from communications experts. Often this means stripping down the science and increasing the amount of contextual information to allow a layman to fully understand the implications of the work. A specific aspect of the story may be exaggerated to make the science seem more “sexy” and this may be used as a “hook” to create a personal connection between the reader and the story.

After a story is processed in this manner it may be hard to distinguish the science from the spin. A greater understanding of the process of how scientific exploration, discovery, and invention becomes news enables readers to more critically analyze content distributed through news agencies and be better able to separate reported research from the hype that surrounds it.

Biography

Sarda Sahney is a Ph.D. candidate and researcher at the University of Bristol studying macroevolution,

with a focus on the evolution of vertebrate communities. She studies the biodiversity of tetrapods, from the perspective of biodiversity, expansion and extinction in the fossil record. In particular she has written about the early diversification of tetrapod ecosystems, the effects of the Permo-Triassic mass extinction and large scale influences on the shape of biodiversity.

May

Alycia Wilson

Mount Royal University

The Cretaceous Guitarfish Myledaphus bipartitus: Age and Growth

Friday, May 24, 2013, 7:30 P.M.

Mount Royal University, Room B108 □

Looking for a New Logo

Since the formation of the Alberta Palaeontological Society in 1986, we have been identified with our venerable “rock hammer” logo. This logo—adorning pins, t-shirts, *Bulletin* covers and Public Outreach stand-ups—has served its time well. As the Society moves into its next quarter-century, perhaps the time has come for a fresher look.

For that purpose the Executive has struck a committee to investigate and propose a new logo for the Society. This project is in its very early stages, so we are not sure exactly what shape the selection process will take. We are, however, interested in voluntary submissions (from our artistic members) and recommendations (from our members who may have good ideas but no way to realize them). Our guiding principles for the new logo are that it should convey the subject of palaeontology and the province of Alberta, be clear, of professional quality and scalable as a graphic.

If you have any questions, comments, ideas or submissions, please forward them to **Cory Gross** by e-mail at corywgross@gmail.com or in person at the General Meetings. □

2013 Field Trips

By Wayne Braunberger

READ THIS: A proposal to form a field trip committee has been put forth. If you have an interest in serving on this committee please contact Wayne Braunberger (president1@albertapaleo.org) or any member of the board of directors.

Planning is well underway for this year's trips. For more information please contact **Wayne Braunberger** at (403) 278-5154 or by email, president@albertapaleo.org.

A field trip registration form is included with this issue of the *Bulletin* and is also available on the APS website, www.albertapaleo.org. Information will also be available at the monthly meetings.

Please note that all fees are due at the time of registration. Fees for trips are \$10.00. This is to cover increased costs as guides will be featuring more colour photographs and diagrams. Unfortunately guides are only produced in small numbers, so volume printing discounts are not available.

Non-members and unaccompanied minors will **NOT** be allowed to attend field trips. **All participants are required to have their membership in good standing. Any membership applications received after May 1, 2013 will not be reviewed and voted on by the Board of Directors until September, 2013. Therefore, if you are a non-member or late-renewing former member and would like to join, be sure your application is received prior to May 1, 2013.** All participants will be required to read and sign a release form (waiver). Detailed information will be provided to all those registered shortly after the registration deadline. **After the registration deadline no refunds will be given; however, you will receive the field guide for the trip. No late registrations will be accepted.** Registrations are accepted on a first-come-first-served basis. Sign up early to avoid disappointment.

For the 2013 field trips I will be sending you the waiver and medical forms along with the trip information. This information will be sent to you via e-mail or Canada Post. Please ensure that your addresses are correct and legible when sending in registration forms.

When you arrive at the meeting place please have the forms completed. **All participants are required**

to have fully completed all waiver and medical forms in order to attend the trip. There will be no exceptions. All personal information is held in confidence and ultimately destroyed.

Trip Participant Responsibilities

It is understood that risk is inherent to some degree in outdoor activities. Before registering for a trip please ensure you understand the risks involved and are prepared to accept them.

- As a participant you are responsible for your own safety and equipment at all times.
- Inform the trip leader of any medical conditions they should be aware of in an emergency.
- Ensure that your previous experience, ability and fitness level are adequate for the trip.

Trip 2013-1, July 20 & 21, 2013 Alexo area, Alberta

A trip focusing on Paleocene plant fossils is being organized; plans have not been finalized. Watch for further details in the June *Bulletin* and on the APS website.

Registration deadline is July 5, 2013.

Trip 2013-2, August 16–18, 2013 Swan Hills area, Alberta

We are making another attempt to run this trip, cancelled previous years due to poor weather and forest fire hazards. Hopefully conditions will be better this August.

This is a three day exploratory trip (including travel time) to the Swan Hills area, northwest of Edmonton. Reports from the 1960s indicated the presence of both vertebrate and invertebrate fossils from rocks straddling the Cretaceous-Tertiary boundary in the Swan Hills. These early discoveries were made when the massive Swan Hills oil pool was being developed in the subsurface. Drilling sites, roads and oil pipelines were the source of exposures from which the fossils were located. Decades of inactivity have seen vegetation reclaim much of these earlier localities. However today there is a resurgence of drilling in the Swan Hills and we hope to evaluate new sites in this underexplored and isolated region of Alberta. This is a purely exploratory trip so be prepared not to find anything but keep in mind this is also “virgin” ground.

Accommodation, gasoline and a restaurant are available in the town of Swan Hills as well as in Whitecourt, about an hour’s drive south of Swan Hills. There are plenty of campgrounds in the Swan Hills. Members are welcome to participate for all or part of the trip. Note that Swan Hills is approximately 500 km from Calgary and will take 6–7 hours to drive.

The registration deadline is August 2, 2013.

Trip 2013-3, September 21 & 22, 2013 Sundre area, Alberta

An exploratory trip to locations along the Red Deer River near Sundre, Alberta. Further details will be available in the June *Bulletin* and on the APS website.

The registration deadline is September 6, 2013.

Royal Tyrrell Museum 2013 Speaker Series

“The Museum’s Speaker Series brings world-renowned scientists and researchers to the Museum and offers them a platform to discuss hot topics in palaeontology or to share results of their current research with the public.” All talks start at the strangely inconvenient time of 11:00 A.M. Thursdays, in the Royal Tyrrell Museum Auditorium. If, like most people, you find it difficult to attend these lectures, most of them are available for viewing online at the Museum’s YouTube channel: www.youtube.com/playlist?list=PLE5C051E20D553713&feature=plcp

April 11, Sarah Gibson, University of Kansas—*Exploring the Diversity of Fishes in the Upper Triassic Chinle Formation, southern Utah.*

April 18, Greg Wilson, University of Washington, Seattle—*Mammals Inherit the Earth: How the K/Pg Extinction Killed Off Dinosaurs and Opened the Way for Mammals.*

April 25, Tom Lipka, Arundel Project and Geobiological Research, MD—*Palaeontological Notes from the Urban Jungle: Conducting Field Palaeontology in spite of Sprawling Holocene Overburden that is the Baltimore-Washington-Philadelphia Megalopolis.*

For more information, call toll free in Alberta: 310-0000 then (403) 823-7707; toll free in North America (outside Alberta): 1-888-440-4240; e-mail: tyrrell.info@gov.ab.ca or visit the Museum's web page, www.tyrrellmuseum.com/speaker_series.htm.

Fossils in the News

Edited by Howard Allen

Calgary Herald

March 14, 2013

Burgess Shale worm provides important missing link

TORONTO—Jean-Bernard Caron, of the Royal Ontario Museum, with colleagues from University of Cambridge and Université de Montreal describe a worm fossil found in old Burgess Shale collections at the Smithsonian Institution in Washington, D.C.

The fossil, named *Spartobranchus tenuis*, has been identified as an acorn worm (Phylum Hemichordata), a group whose previously oldest known fossil representative was from rocks some 200 million years younger. Despite being similar in anatomy to modern acorn worms, *Spartobranchus* differs in having a fibrous tube in which it lived. This, the researchers say, connects it to later relatives, especially graptolites, which became very important animals in the Palaeozoic seas. An abstract of the research can be read at www.nature.com/nature/journal/v495/n7442/full/nature12017.html.

CBC News, Edmonton

December 10, 2012

Northern Alberta dinosaur museum gets thumbs up

GRANDE PRAIRIE—Supporters of the much-anticipated Philip J. Currie Dinosaur Museum have raised enough funds to give the museum the go-ahead for an April 2013 sod-turning. As of December 2012, pledges had reached \$19.5 million, enough to get the project started. Another \$7 million is expected to be raised through ongoing efforts.

The museum will cover 3,800 m² (41,000 ft²) in the town of Wembley, just west of Grande Prairie. If

all goes well, its opening date is projected to be in June of 2014. For more background, see information in earlier issues of the *Bulletin*: Dec. 2012, p. 11; June 2011, p. 10; March 2011, p. 6; Sept. 2009, p. 7.

Calgary Herald

March 5, 2013

Ancient high arctic camel offers climate change clues

OTTAWA—Fossils of a 3.4 million-year-old (mid-Pliocene) camel turned up on the now frozen Ellesmere Island in Nunavut are being heralded as important evidence for a North American origin of all modern camels. Some thirty bone fragments were recovered by Natalia Rybczynski of the Canadian Museum of Nature in Ottawa. The bones were unmineralized, meaning that collagen “fingerprinting” could be performed to identify the relationship of these bones to modern camel and other fossil bones, which have been found previously in the Yukon. The analysis showed that the Ellesmere camel was most closely related to modern dromedary camels, indicating that the lineage originated in North America and spread to Asia and Africa across the Bering Land Bridge. The oldest known camel fossils are North American, from the Eocene epoch.

The Ellesmere camel was a giant, estimated to be 30% bigger than modern animals. It lived in a boreal forest environment along with bears, horses, deer, badgers and frogs.

The Climate Change angle in the title is mostly value-added spin from the news media, which can't seem to justify publishing any science story these days without it. The actual research (full text with excellent figures) can be read at www.nature.com/ncomms/journal/v4/n3/full/ncomms2516.html.

BBC Nature News

February 27, 2013

Spiral-toothed fossil mystery solved

POCATELLO, Idaho—An exceptionally well-preserved specimen of the bizarre spiral-toothed shark, *Helicoprion*, has finally enabled palaeontologists to get a good handle on the correct anatomy of this animal, which has puzzled researchers for more than a century. Fossils of *Helicoprion* usually consist of a flat, spiral whorl of sharp teeth—and nothing else. Specimens are known from Permian rocks, 270 million years old, in many localities around the world (including Alberta).

The breakthrough specimen was found in Idaho and included remnants of the tooth-whorl's cartilaginous support structure embedded in the rock matrix. This was CT-scanned to produce a 3-D picture of its anatomy and articulation to the animal's skeleton, as well as an idea of its place in the family tree of sharks. The resulting reconstructions show a ratfish-like shark with the tooth spiral mounted vertically in and partly protruding from the front of the lower jaw, in the place of a tongue. The tooth whorl was connected in such a way that the teeth spun backward into the mouth as the jaw closed, producing a slicing, circular-saw effect.

The tooth spiral would have grown along with the animal, with the biggest teeth—on the outside of the spiral—being active, the smaller teeth on the inside of the spiral being worn-out, no-longer used “baby teeth”. Unlike other sharks, *Helicoprion* did not shed its teeth, but retained them through life. The article includes a photo of the specimen and reconstructions of the living animal: www.bbc.co.uk/nature/21589719.

[Thanks to Phil Benham and Vaclav Marsovsky for links-ed.] □

Scientific Journals for Sale

A very generous donation of scientific journals was made to the Society by University of Calgary graduate student **Ben Borkovic** at the January General Meeting. The donation comprises a large number of journals and a few books. As the collection was deemed to be too large for storage and management in the APS library, the Board has decided that the collection should be sold with all proceeds going to the Society.

At this time we are entertaining offers to purchase all or parts of the collection. The items are mostly in very good to excellent used condition, with some minor scuffing and small dog-ears, occasional pen marks (previous owner's name, etc.) and a few other minor flaws. Many are “as new”. None of the journal titles are available in complete runs (some numbers are missing) and there are a few duplicates. An inventory is listed in the following tables. Digits indicate the number of copies available, greyed-out cells indicate no copies available. Preference will be given

to those wishing to purchase larger sets, but all offers will be considered. There is a reserve price of \$1.00 per copy. The deadline for offers is April 30, 2013. Unsold material will be disposed of by other means (silent auctions at General Meetings, etc.). Contact **Howard Allen** at editor2@albertapaleo.org.

Miscellaneous Items

Canadian Palaeobiology (Newsletter): Issues 1, 2, 6, 7, 8 (1999–2002).

Canadian Journal of Earth Sciences: 1996, Vol. 33, No. 4 (special issue on dinosaurs; 2 copies available).

Nature: June 25, 1998, Vol. 393, No. 6687. (Magazine, includes articles on Chinese feathered dinosaurs and a Jurassic ankylosaur skull from Wyoming).

Kidwell, S.M. and Behrensmeyer, A.K. (eds.). 1993.

Taphonomic approaches to time resolution in fossil assemblages. *Paleontological Society Short Courses in Paleontology*, No. 6, 302 pp. (soft cover, minor water damage).

Parrish, J.T. and Barron, E.J. 1986. Paleoclimates and economic geology. Lecture notes for SEPM Short Course #18, 162 pp. (Soft cover).

Wilson, J.A. and Sereno, P.C. 1998. Early evolution and higher-level phylogeny of sauropod dinosaurs. *Society of Vertebrate Paleontology, Memoir 5*, supplement to *Journal of Vertebrate Paleontology*, Vol. 18, no. 2., 68 pp. (soft cover, signed by the senior author). □

<i>Journal of Vertebrate Paleontology</i>					
Year	Vol.	Number			
		1	2	3	4
1981	1	1	1	1	1
1982	2	1	1	1	1
1983	3	1	1	1	2
...	...				
1990	10	1	1	1	1
1991	11	1		1	1
1992	12	2	1	1+sup.	1
1993	13		1	1+sup.	1
1994	14	1	1	1	1
1995	15	1	1	2	
1996	16	1		1	1
1997	17	1	1	1+sup.	1
1998	18	1+sup.	1+sup.		1
1999	19	1	1	1+sup.	1
2000	20	1	1	1+sup.	1
2001	21	1	1	1+sup.	1
2002	22		1		

Note: “sup.” = supplement

News from the APS collection

By Howard Allen, Curator

It's been a long time since there was any update to members about the APS fossil collection. It may even be that some of our newer members don't know we have a collection.

The collection was started by founding members in 1984, before the Society itself was incorporated, and has been under the custodianship of several different curators since then. My tenure began in 2007, when I was the only Board member imprudent enough to admit to having space in my basement for the large steel cabinet and several oversize specimens that comprise the collection.

Since then the collection has been inventoried, and the previously handwritten catalogue, kept in loose-leaf binders, has been converted to a fully searchable digital database. A large backlog of donated specimens has been "highgraded" and accessioned into the collection. This included affixing identification numbers to the specimens where required, and trimming excess matrix from some specimens to reduce storage space.

Making the collection accessible to APS Members has been a long-standing challenge. Being housed in the basements and garages of various curators' homes has made it less than convenient for display purposes. As a result, the collection only appears in public when specimens are picked out for display at the annual CRLC rock show, or other rare events.

Partly in response to this issue, I've recently begun a project to digitally photograph each specimen in the collection (currently numbering 530 catalogued specimens). Obviously this is a long-term project, but it will allow the specimens to have a wider "virtual" exposure. Photos can be used here in the *Bulletin*, and perhaps eventually a web-based photo database can be developed to allow anyone to examine the collection online. Other uses could include submitting photos to the Alberta government when registering custodianship (disposition) of specimens, general education, providing quick assessment of specimens for potential use by researchers, security documentation, etc. An example photo is the subject of this issue's front cover. □

<i>Journal of Paleontology</i>							
Year	Vol.	Number					
		1	2	3	4	5	6
1991	65	1	1	1	1		1
1992	66	1	1	1			1
1993	67	1	1		1		
1994	68	1	1	1	1	2	1
1995	69						
1996	70	1	1	2	1	1	2
1997	71	1	1	1	1	1	1
1998	72	1	1	1	1	1	1
1999	73	1	1	1	1		1
2000	74	1	1	1	1	1	1
2001	75	1	1	1	1	1	1
2002	76	2	1	1		1	1
2003	77		1				

<i>Paleobiology</i>					
Year	Vol.	Number			
		1	2	3	4
1976	2	1	1	1	1
1977	3	1	1	1	1
1978	4	1	1	1	1
1979	5		1	1	1
1980	6	1	1	1	1
1981	7	1	1	1	1
1982	8	1	1	1	1
1983	9	1	1	1	1
1984	10	1	1	1	
1985	11	1	1	1	1
1986	12	1	1	1	1
...	...				
2000	26	1	1	1	
2001	27	1	1+sup.	1	1
2002	28	1	1+sup.		1

Note: "sup." = supplement

<i>Palaios</i>							
Year	Vol.	Number					
		1	2	3	4	5	6
1994	9	1	1	1	1	1	1
1995	10	1	1	1	1	1	1
1996	11	1	1	1	1	1	1
1997	12	1		1	1	1	1
1998	13	1	1	1		1	1
1999	14	1	1	1	1	1	1
2000	15	1	1	1	1	1	1
2001	16	1	1	1	1	1	1
2002	17	1	1	1	1	1	1

The Calgary Rock and Lapidary Club
celebrates our 2013 - 53rd Annual

GEM, MINERAL & FOSSIL SHOW

Saturday May 4th 9 am - 6 pm
Sunday May 5th 10 am - 5 pm

NEW VENUE Cardel Place - East Arena **NEW VENUE**
Back Entrance off of Country Village Rd. NE

THIS YEAR'S THEME

THE WORLD OF TURQUOISE



Crystals, Gemstones, Mineral & Fossil Specimens,
Beads and Beading Supplies, Books,
Equipment & Tools, Gift Items,
Rough Rock and Rocks Slices,
Jewellery, Rings, Necklaces and Jewellery Findings

- * DISPLAYS * DEMONSTRATIONS
- * 10 NEW DEALERS & ALL YOUR FAVOURITES
- * SILENT AUCTIONS * HOURLY DOOR PRIZES
- * ACTIVITIES FOR CHILDREN
- * NEW THIS YEAR "GOLD PANNING" FOR ALL AGES
- * TONS OF "FREE" PARKING * ATM MACHINE
- * FOOD CONCESSIONS



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SENIORS \$3.00, CHILDREN 6 AND UNDER "FREE"
IF ACCOMPANIED BY AN ADULT