Canadian Association of Palynologists
Association Canadienne des Palynologues

NEWSLETTER

Volume 33 Number 1 May 2010

President's Message

It is my pleasure to write to you as the new President of the Canadian Association of Palynologists! I'd like to thank Elisabeth Levac—whose term as President ended in December 2009—and the rest of the CAP Executive for their work over the last couple of years. I'm looking forward to continuing to work with the executive, as well as the membership, to advance CAP's objectives of encouraging all aspects of palynology in Canada and to promote co-operation between palynologists and those engaged in related fields of study.

It is my pleasure to announce that Matt Batina, of the University of Southern Mississippi, is the winner of the 2010 CAP Student Research Award! It was a difficult decision for the award committee as there were a number of excellent applications, but Matt's work, which focuses on testing the utility of pollen from bat guano as a paleoenvironmental indicator, stood out for its innovativeness, creativity, and scientific rigor. In reviewing all the applications, it is clear that the future of palynology is in good hands, and we look forward to next year's competition (stay tuned for details)!

Also, please join us for the Joint Meeting of AASP-The Palynological Society, the GAC Paleontology Division, and the Canadian Association of Palynologists in Halifax from September 29th to October 2nd, 2010. In addition to the CAP Annual General Meeting, this promises to be an outstanding gathering of palynologists and other scientists. A number of fascinating sessions are being convened, including one by Francine McCarthy celebrating the career of Jock McAndrews, now retired from the Royal Ontario Museum. Information about the conference can be found on the CAP website at http://www.scirpus.ca/cap/cap.shtml.

As the years have gone by, CAP itself has changed and grown. We established a successful student award program, the membership is growing, and our biannual newsletter now comes in PDF form. With the support of our enthusiastic membership, we anticipate that we will continue to move forward in exciting and new directions.

Have a great summer…

Matthew Peros
CAP President, 2010-2011
mperos@uottawa.ca

CAP EXECUTIVE 2010

President: Matthew Peros
Secretary-Treasurer: Mary Vetter
Newsletter Editor: Terri Lacourse
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Councillor to IFPS: Jean Nicolas Haas

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2010 CAP Annual General Meeting

The Annual General Meeting of the Canadian Association of Paylnologists will be held in conjunction with the Joint Meeting of CAP, AASP, and the GAC Paleontology Conference, in Halifax this September 29th to October 2nd.

The exact date, time and location of the CAP AGM will be announced in early September. All CAP members are encouraged to attend the AGM. Those in the Halifax area, but not attending the conference, may also attend.

As per CAP's By-laws, candidates for executive positions will be presented at the AGM. All CAP members are eligible to be elected a director of the Society. If unopposed, the candidates put forward shall be accepted by acclamation. If balloting is necessary for any of the executive positions, ballots will be included in the ensuing issue of the Newsletter.

CAP's By-laws can be accessed at http://www.scirpus.ca/cap/tracking/by_laws.htm

Editor's Notes

Thank you to all who contributed material for this edition of the *CAP Newsletter*: Alwynne Beaudoin, Vaughn Bryant, Konrad Gajewski, Rob Fensome, Robert Mott, and Matthew Peros.

Deadline for Next CAP Newsletter

Please submit items for the next issue of the *CAP Newsletter* (Volume 33, Number 2, December 2010) by November 15, 2010. Conference reports, announcements, field trip reports, notices of new books, dissertation abstracts, book reviews, news, and essays on topics relevant to Canadian palynology are all welcome. Please send contributions to:

Terri Lacourse
CAP Newsletter Editor
tlacours@uvic.ca

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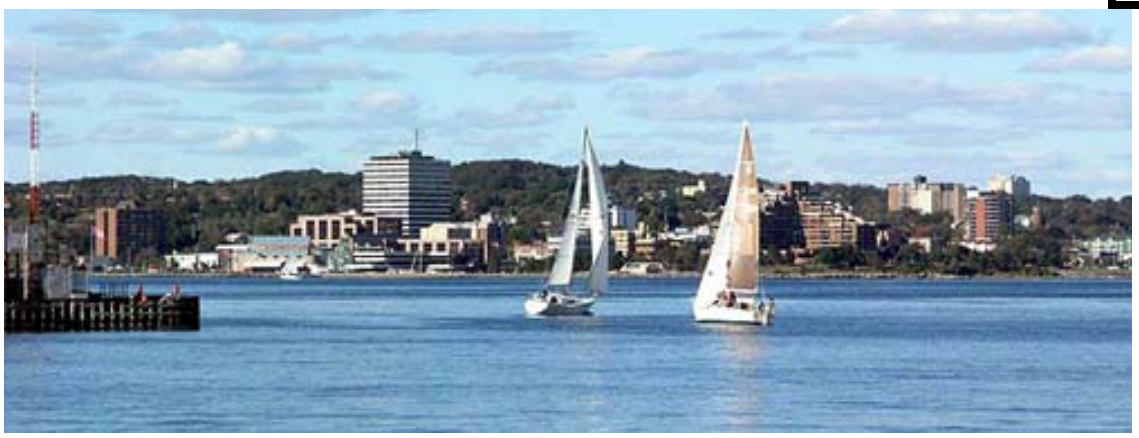

Nova Scotia 2010

Wednesday 29th September to Saturday 2nd October 2010
Harbourview Holiday Inn, Dartmouth, Nova Scotia

Joint Meeting of AASP-The Palynological Society, Geological Association of Canada Paleontology Division (as its Annual Canadian Paleontology Conference, CPC), and CAP- Canadian Association of Palynologists

Local Organizing Committee. Rob Fensome, Nelly Koziel, Peta Mudie and Graham Williams, Geological Survey of Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia

Society Representatives.
For AASP-TPS — Francine McCarthy, Brock University, St. Catharines, Ontario
For GACPD — Mike Melchin, St. Francis Xavier University, Antigonish, Nova Scotia
For CAP — Elisabeth Levac, Bishops University, Sherbrooke, Quebec.

Location. The meeting will be held at the Harbourview Holiday Inn in Dartmouth, Nova Scotia, with a modern conference centre overlooking the Halifax skyline across Halifax Harbour. The Inn is minutes away from buses and ferries that take visitors directly to historic downtown and waterfront Halifax, with its many dining venues to suit all tastes, a variety of traditional pubs (some with their own brews), and opportunities for harbour cruises. The hotel is also across the road from a sports complex, including swimming pool and gym; and close to downtown Dartmouth with its own waterfront attractions, restaurants and pubs. Dartmouth is known as the City of Lakes and is the starting point of the historic Shubenacadie Canal, a Nineteenth Century link between the Atlantic and the Bay of Fundy. Short bus rides or drives take the visitor to the seashore and attractive waterside walks. Autumn foliage should be in its early stages at the time of the meeting, and the weather is usually (but not always) fine and temperate in early fall, so participants should bring layers of clothes to adapt to changing temperatures.

Costs (all in Canadian Dollars). Pre-registration will be $190, $90 for students; on site registration will be $225 and $110 respectively. Pre-registration and field trip deadline is 27 August 2010.

The hotel rate at Harbourview Holiday Inn Hotel will be $149 plus taxes per person for single or double occupancy, with $15 for additional beds. The organizing committee will do their best to play "matchmaker" for individuals seeking to share rooms. We encourage participants to stay at the Harbourview Holiday Inn --- the more rooms we use, the better will be the price for the meeting rooms. Door-to-door airport bus transport from Halifax International Airport is about $21.

Meeting Events. The social program includes an opening night "Meet and Greet" and public lecture. Natalia Rybczynski of the Canadian Museum of Nature has agreed to give the public talk on new Cenozoic mammals from the Arctic, and the Arctic's role as an evolutionary pump. Natalia is an excellent speaker and has been involved with exciting Arctic finds, including the preserved remains of a beaver dam. A dinner is planned for GAC Paleontology Division and business lunches for CAP and AASP, accompanied by traditional Nova Scotian Town Crier, bagpipers and the Order of Good Cheer awards. Dependent on interest and availability, a mid-conference harbour cruise aboard the sternwheeler Harbour Queen will be planned.

Technical Sessions. The planned technical program will accommodate more than 60 talks (with two concurrent sessions), including keynotes. The sessions will include:

1) Paleobotany in all its aspects. Conveners, Graham Williams and John Calder. This session will highlight macro and micropaleobotany (palynology of spores and pollen) and talks on how the two subdisciplines shed new light on ancient plant communities and evolution are especially welcome. The session could include talks on classic localities such as Joggins and other North American Carboniferous localities, as well as those elsewhere. Another focus could be the impact of evolving plant cover on sedimentation. It is hoped to include some contributions relating to the K/T boundary and other work of Doug Nichols (recently deceased).

2) Canadian Paleontology. Conveners, Mike Melchin and Paul Johnston. Some of the world's most significant paleontological discoveries have been Canadian. Possible topics could include the Mistaken Point fauna, Burgess Shale, Tiktaalik, Miguasha fish, Joggins vertebrates and invertebrates, and Wasson Bluff.

3) The Amazingly Diverse World of Quaternary Palynology: A Session in Celebration of the Career of Jock McAndrews. Convener Francine McCarthy. The versatile palynological career of Jock McAndrews and his students has covered the spectrum from Holocene freshwater dinocysts and other non-pollen palynomorphs, through the archaeopalynology of mammoth skulls and varved lake sediments to volumes on modern pollen morphology and identification. In celebration, a keynote talk will be given by Roger Byrne from the University of California at Berkeley, Jock's first post-doctoral associate and co-worker at Crawford Lake in 1973. Roger is now studying wildfire records and human impacts of landscapes using varved marine sediments off California and Mexico.

4) New Frontiers in Paleobiology. Conveners, Rob Fensome and Peta Mudie. One focus of this session will be the integration of molecular and fossil data, and several potential speakers have been approached on this topic — Kazumi Matsuoka will give a keynote talk on DNA and the classification Pleistocene – Recent dinocysts. Another focus could be on the elucidation of the phylogeny of groups such as ferns and angiosperms using both molecular and fossil data.

5) General Session. Convener, Elisabeth Levac. Papers addressing industrial uses of paleontology are especially encouraged.

Field Trips. Two field trips are being planned, both on the Saturday 2nd October. At the moment, participant costs are about $100 Canadian for each trip, inclusive of lunches and museum entrance fees, based on a minimum of 20 and a maximum of 29 people per trip.

Field Trip 1 --- Bay of Fundy: Parrsboro Shore and Joggins Fossil Cliffs

We will head to the shores of the Bay of Fundy, major stops being in the Five Islands-Parrsboro area and Joggins, the latter designated a UNESCO World Heritage site in 2008 for its spectacular late Carboniferous (Pennsylvanian) succession exposed in the famous "Fossil Cliffs". The trip's coordinators will be Rob Fensome and Graham Williams, with various experts "chipping in" along the way. We will leave the hotel at 8.00 am and head to the north shore of the Minas Basin, where we will explore either the Mesozoic rocks at Five Islands or the mid Carboniferous section at East Bay, Parrsboro, the choice depending on tide constraints. The first underwater turbines for tidal power generation in North America are currently being installed in the Bay of Fundy near Parrsboro. The site has been chosen because offshore is the Minas Channel, through which more water flows during a tide change than the water flowing from all the world's estuaries during equivalent time. We will eat lunch at the Fundy Geological Museum, which highlights Canada's oldest-known dinosaurs.

In the afternoon, on the way to Joggins, we will stop at the Cobequid Fault, Nova Scotia's ancient answer to the San Andreas Fault (though no longer active). Once at Joggins, we guarantee low tide and the possibility to explore both the exciting new Joggins Fossil Centre and the cliffs. This part of the trip will be coordinated by Melissa Grey, Science and Education Coordinator at the Joggins Fossil Centre. Joggins was the haunt of Victorian geological superstars William Dawson, Charles Lyell, Abraham Gesner (discoverer of kerosene) and William Logan (first director of the GSC). The site was also mentioned in the Darwin's Origin of Species, and is associated with coal mining and Canadian confederation. All of this historical interest is in addition to the fact that it is home to the world's earliest known reptiles and land snails, and spectacular fossil tree trunks (if erosion cooperates). There is also a till section for Quaternary enthusiasts.

We will take "tea" at the Joggins Fossil Centre and thence return to Dartmouth via the Trans-Canada Highway and Veterans Memorial Highway. This will be a long day trip and participants should not plan on taking an evening flight.

Field Trip 2 --- Nova Scotia's Atlantic Shore: Quaternary and Environmental Geology

This field trip will explore Nova Scotia's Atlantic Shore, focusing on Quaternary and environmental geology. The coordinator will be Peta Mudie, and leaders at particular sites will include geologists Ralph Stea, Bob Taylor, Mike Parsons, Peter Giles and archaeologist Roger Lewis. This trip will also leave the hotel at 8 am. The first stop will be West Lawrencetown, where we will see a wave-eroded section of a drumlin with older Hartlen and younger Lawrencetown tills, and Cambrian bedrock outcrops with glaciated grooves and striations. The drive will then take us along the coastline of embayments to the Chezzetcook drumlin field and salt marsh, via Minesville abandoned gold mine, with its ongoing history of arsenic and mercury pollution from tailings. At Chezzetcook, we will view vegetation zonation and explore the history of the salt marsh.

The trip will then continue to Peggy's Cove, southwest of Halifax, where (weather permitting) we will eat lunch near Peggy's Cove lighthouse perched on glacier-scoured Devonian granite, part of the South Mountain Batholith, the largest granitic body in the Appalachian Orogen. The unique landscape of Peggy's Cove and surrounding areas was produced by the Wisconsinan glaciation. On retreat of the ice, rising sea level filled the scoured areas, forming an endless array of coves and inlets now hosting an endemic ice-age relic flora and ponds filled with bog moss, sundew and pitcher plants.

On the return trip, we will first examine exposures of Mississippian Windsor Formation shell-bearing carbonates near Glen Margaret, then explore the Quaternary geology and archaeology of eastern St. Margaret's Bay, and visit one of the last remaining Mi'kmaq shell middens on Indian Point where the coast is rapidly changing from erosion and urban development. Roger Lewis, of the Nova Scotia Museum of Natural History, will talk about the history of Mi'kmaq archaeological sites in the region before our return to Dartmouth.

Don't miss all the stimulating and fun events at Nova Scotia 2010 — registration will be available in spring 2010. Contact Rob Fensome (rfensome@nrcan.gc.ca), Peta Mudie (pmudie@nrcan.gc.ca) or Graham Williams (graham.williams@nrcan.gc.ca) for more details and updates.

Dissertation Abstracts

Joan Bunbury. 2009. *Holocene Environmental Variability Inferred from Lake Sediments, Southwest Yukon Territory, Canada.* Ph.D. Thesis. Dept. of Geography, University of Ottawa.

Supervised by Dr. Konrad Gajewski

Lake sediment cores collected from four lakes (Upper Fly Lake 61.04°N, 138.09°W, 1326 m a.s.l.; Jenny Lake 61.04°N, 138.36° W, 817 m a.s.l.; Donjek Kettle 61.69°N, 139.76°W, 732 m a.s.l.; Lake WP02 61.48° N, 139.97°W, 1463 m a.s.l.) in the southwest Yukon provide records of postglacial climatic variability in the region. A 13,000 year pollen record from Upper Fly Lake indicated that herbaceous tundra existed on the landscape from 13.6 to 11 ka, followed by birch shrub tundra until 10 ka, when *Picea* forests were established in the region. Pollen-, chironomid-, and ostracode-inferred paleoclimate reconstructions showed a long-term cooling with increasing moisture from the late glacial through the Holocene. The early and mid-Holocene were warm and dry, with cool, wet conditions after 4 ka, and warm, dry conditions over the last 100 years. Chironomid accumulation rates provide evidence of millennial-scale climate variability, and the chironomid community responded to rapid climate changes.

Late Holocene environmental variability was investigated through the analysis of paleoproduction indices (sediment loss-on-ignition, biogenic silica) and chironomid and ostracode communities. Coherent trends were revealed among the four lakes and pairs of sites located closer together showed more similarities than more distant sites located in similar environments (alpine tundra or boreal forest). Chironomid-inferred paleotemperature estimates are inconsistent with other data from the region, however certain fluctuations in paleoproduction indices and changes in abundance and composition of the chironomid and ostracode communities compare well with interpretations based on independent paleoclimate records from the region. The White River Ash event (1147 cal yrs BP and 1952 cal yrs BP) impacted three of the four aquatic ecosystems studied, with a greater impact occurring at sites with greater ash thickness. Interannual variability in the lake environment is of lesser concern when deriving inference models relating organisms to environmental variables, and the results presented here provide guarded optimism that the sampling methodology applied in paleolimnological studies is appropriate in this region.

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Rebecca Ravindra. 2009. *A High-resolution Vegetation, Fire, and Climate History from the Aishihik Region, Yukon Territory, Canada.* M.Sc. Thesis. Dept. of Geography, University of Ottawa.

Supervised by Dr. Konrad Gajewski

Paleocological studies based on the analysis of lake sediments offer the potential for high resolution and well-dated records of past environmental conditions. A 2.7 m sediment core raised from Lake WA01 (unofficial

name, 61°14'41"N, 136°55'35"W, 1000 m.a.s.l.) in the Aishihik region of the southwest Yukon Territory documents the postglacial vegetation, fire, and climate history of the region surrounding the study site. The earliest portion of the WA01 pollen record was characterized by the establishment of open birch-shrub tundra at the study site. *Picea glauca* then established ca. 9,900 cal yrs BP, and has since remained dominant on the landscape. From ca. 9,900 cal yrs BP to the present day, mean July temperatures and total annual precipitation also remained essentially constant, following a short period of low total annual precipitation from deglaciation to 9,900 cal yrs BP. The regional-scale fire regime surrounding the study site, interpreted from the micro-charcoal record, increased gradually in intensity over the course of the Holocene; this is interpreted as a result of progressively decreasing precipitation in the region over the last ca. 9,000 years (Viau *et al*. 2008). Fires in the area immediately surrounding the study lake, as interpreted from macro-charcoal remains in the sediments, decreased gradually in frequency and/or size over the course of the Holocene, though the exact cause of this remains unclear. An alternating pattern in the sediment loss-on-ignition from Lake WA01 is related to similar trends in ∂18O values from the Mount Logan oxygen isotope record. It is proposed that the positive association between sediment carbonate content in the WA01 core and enriched ∂18O values from Mount Logan represent periods of wetter and drier conditions at the study site.

Graduate Student Opportunities

I am seeking new graduate students (MSc or PhD) for paleoecological research in my lab at the University of Victoria. Ideal candidates will have previous experience in paleoecological techniques, a strong academic record, and the ability to work independently and with others. Positions start September 2010 or January 2011.

Interested students should send me an email for more information about potential research projects and attach a CV, unofficial transcripts, and the names and contact information of two references. Information on graduate studies at the University of Victoria can be found at:

http://web.uvic.ca/gradstudies/

Terri Lacourse
University of Victoria
tlacours@uvic.ca

Palynolit

Ecclesiastical Beekeeping in Rural England

John Moore (1907–1967) was born in the small market town of Tewkesbury in the west of England; a town, incidentally, that was much in the news in 2007 when it was affected by severe flooding. Moore wrote many articles and books about rural life and the countryside. The best known of these are three books known collectively as the 'Brensham Trilogy', which describe life in and around Tewkesbury (therein renamed 'Elmbury') in years between the First and Second World Wars. In *Brensham Village*, using a blend of reminiscence and storytelling (a genre now sometimes called 'docufiction'), Moore recounts his experiences growing up in the English countryside. Brensham is on the cusp of change, still predominantly preoccupied with rural and agricultural activities, but with ominous signs of transformation through a faceless Syndicate buying up decayed property for development. Nevertheless, Moore remembers his childhood as a time of sunshine, cricket, and colourful characters. In the following extract, Moore paints a word-portrait of Mr Mountjoy, a good-natured elderly clergyman, who is the lineal descendant of all those natural-history-studying vicars of Victorian fiction.

> One of his hobbies was keeping bees. He had about fifty hives in his garden, and told us that their total population was nearly four million. 'That's as many bees as there are people in a great city. What a vast kingdom I rule!' On the first spring days he would stand contentedly for hours watching the workers sally forth and come back with the yellow crocus-pollen upon them; but at high summer he would often load some of the hives in the back of his small open car and go prospecting far afield for patches of beanflower or clover or sainfoin, and then beg the owner's permission to leave a hive or two there so that his bees could gather the honey. It was a familiar sight to see the Rector driving down the lanes with half a dozen skeps occupying the back seat while a little swarm of his turbulent passengers rose from them like a thin smoke and swirled about his head.

From John Moore (1956) *Brensham Village*, Penguin Books, p. 44.

Alwynne B. Beaudoin
Edmonton, Alberta

Recent Publications — 13

Cumbaa, S., Lauriol, B., Alfonso, N., Ross, M., and *Mott, R. 2010. A new whitefish from the early Quaternary of Bluefish Basin Yukon Territory, Canada, and its paleoenvironmental implications. *Canadian Journal of Earth Sciences* 47: 221-235.

Elsik, W.C., and *Jarzen, D.M. 2009. New species of the Late Cenozoic fungal form-genus *Mediaverrunites* Jarzen & Elsik 1986 Ex Nandi & Sinha 2007. *Palynology* 33: 99-104.

Fortin, M.-C. and *Gajewski, K. 2010. Holocene climate change and its effect on lake ecosystem production in northern Victoria Island, Canadian Arctic. *Journal of Paleolimnology* 43: 219-234.

Kaufman et. al., 2009. Recent warming reverses long-term cooling. *Science* 325: 1236-1239.

*Mott, R.J., *Walker, I.R., Palmer, S.L., and Lavoie, M. 2009. A late-glacial - Holocene palaeoecological record from Pye Lake on the eastern shore of Nova Scotia, Canada. *Canadian Journal of Earth Sciences* 46: 637-650.

*Peros, M.C., and *Gajewski, K. 2009. Pollen-based reconstructions of late Holocene climate from the central and western Canadian Arctic. *Journal of Paleolimnology* 41: 161-175.

*Peros, M., *Gajewski, K., Paull, T., Ravindra, R., and Podritske, B. 2010. Multi-proxy record of postglacial environmental change of south-central Melville Island, Northwest Territories, Canada. *Quaternary Research* 73: 247-258.

Pocknall, D.T., and *Jarzen, D.M. 2009. Pollen with viscin threads from the Late Cretaceous and Paleocene, Mérida Andes, western Venezuela. *Palynology* 33: 55-61.

Rühland, K., *St. Jacques, J.-M., Beierle, B. D., Lamoureux, S.F., Dyke, A.S. and *Smol, J.P. 2009. Lateglacial and Holocene paleoenvironmental changes recorded in lake sediments, Brock Plateau (Melville Hills), Northwest Territories, Canada. *The Holocene* 19: 1005-1016.

*St Jacques, J.-M., *Cumming, B.F., and *Smol, J.P. 2009. A 900-yr diatom and chrysophyte record of spring mixing and summer stratification from varved Lake Mina, west-central Minnesota, USA. *The Holocene* 19: 537-547.

Talbot, J., *Richard, P.J.H., Roulet, N.T., and Booth, R.K. 2010. Assessing long-term hydrological and ecological responses to drainage in a raised bog using paleoecology and a hydrosequence. *Journal of Vegetation Science* 21: 143-156.

Vermaire, J.C., and *Cwynar, L.C. 2010. A revised late-Quaternary vegetation history of the unglaciated southwestern Yukon Territory, Canada, from Antifreeze and Eikland ponds. *Canadian Journal of Earth Sciences* 47: 75-88.

Vitha, S., *Bryant, V. M., Amen, Z., and Holzenburg, A. 2010. 3D Confocal imaging of pollen. *Microscopy Today* March 2010:26-28. (www.microscopy-today.com)

* denotes a CAP Member

Conference Calendar

2010

May 10-13: **GeoCanada 2010**
Calgary, Alberta

June 16-19: **4th International Workshop on Quaternary Non-Pollen Palynomorphs**
Besançon, France

June 28-July 3: **3rd International Palaeontological Congress**
London, UK
www.ipc3.org/

July 6-10: **8th European Palaeobotany - Palynology Conference**
Budapest, Hungary
www.eppc2010.org/

July 7-10: **XVII International A.P.L.E. Symposium of Palynology**
Ourense, Spain
fcou.uvigo.es/aple/en/info_general.html

Aug 23-27: **9th International Congress on Aerobiology** - "*Expanding Aerobiology*"
Buenos Aires, Argentina
www.aerobiologia.com.ar/

Aug 29-Sept 3: **21st International Diatom Symposium (IDS)**
St. Cloud State University, Minnesota, USA
web.stcloudstate.edu/phytolab/ids21/

Sept 12-16: **27th Annual Meeting of The Society for Organic Petrology (TSOP)**
Denver, Colorado, USA
www.tsop.org/2010Denver/index.htm

Sept 13-16: **CIMP General Meeting**
Warsaw, Poland
www.ing.pan.pl/CIMP-2010/index_cimp.htm

Sept 26-Oct 2: **62nd Meeting of the International Committee for Coal and Organic Petrology (ICCP)**
Belgrade, Serbia
www.iccop.org/

Sept 29-Oct 2: **AASP 43rd Annual Meeting, convened with CAP and CPC (Paleontology Division of the Geological Association of Canada)**
Halifax, Nova Scotia
www.palynology.org/meetings.html

Oct 31-Nov 3: **GSA 122nd Annual Meeting**
Denver, Colorado, USA
www.geosociety.org/meetings/2010

2011

July 20-37: **XXVIII INQUA Congress**
Bern, Switzerland
www.inqua.tcd.ie/bern2011/spc01.html

July 23-30: **XVIII International Botanical Congress**
Melbourne, Australia
www.ibc2011.com/

More information about the Canadian Association of Palynologists and other material relevant to Canadian palynology can be found on the CAP website:
www.scirpus.ca/cap/cap.shtml

CAP MEMBERSHIP FORM

Canadian Association of Palynologists / Association Canadienne des Palynologues (CAP) membership is open to all members of the palynological community in Canada and others with an interest in Canadian palynology. The Association is dedicated to the advancement and encouragement of all aspects of palynology in Canada and the promotion of co-operation between palynologists and those engaged in related fields of study. Membership dues include two issues a year of the *CAP Newsletter*, to which all members are invited to contribute. CAP is affiliated with the International Federation of Palynological Societies (IFPS) and members receive two issues of the IFPS newsletter (*PALYNOS*) each year.

CAP membership dues are $10 per year in Canadian or US funds payable at the beginning of the year. Lapsed members are removed from the mailing list after one year, following a reminder Members may, if they wish, pay for up to three years in advance. To join, please fill out the the membership form, by hand or in Adobe Reader®, and send it with a cheque (drawn on a Canadian or US bank) or money order payable to CAP to:

Dr. Mary Vetter, CAP Secretary-Treasurer, Luther College, University of Regina, Regina, Saskatchewan, S4S 0A2 CANADA

Name:_____

Affiliation:_____

Address:_____

_____

_____

Tel:_____ FAX:_____

E-mail:_____

Web page URL:_____

Research interests:_____

_____

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New membership ☐ Renewal ☐ Amount enclosed:_____

May we include your name/address/research interests in the on-line "Directory of Palynologists" in the CAP World Wide Web page? Yes ☐ No ☐