



Canadian Association of Palynologists  
Association Canadienne des Palynologues  
**NEWSLETTER**

Volume 32

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## President's Message

The joint meeting of AASP, CAP and CPC (Canadian Paleontology Conference), scheduled for September 29 – October 2 of next year, now has an official name: Nova Scotia 2010. All are warmly invited to attend this meeting, which promises to be very interesting both for its program and for its location, in the Harbourview Holiday Inn overlooking downtown Halifax across the harbour. Proposed sessions include: Paleontology of the Arctic; New Approaches to Palynology; Canadian Paleontology: where are the exciting new finds?; Palynology Applied to Archaeological and Paleoecological problems; Fossils and Molecules: can they be reconciled?; Palynology: Applications to Petroleum Geology.

Nova Scotia provides such a wealth of geological sites, there will be something to spark everyone's interest. One field trip will take fossil lovers to the Parrsboro Shore and

to Joggins Fossil Cliffs UNESCO World Heritage Site, where the world's earliest reptiles and some spectacular fossil tree trunks can be seen, as well as a 3-till Quaternary section. Another field trip will focus on Quaternary and environmental geology along Nova Scotia's Atlantic coast. This trip will possibly include the Chezzetcook Drumlin Field, Peggy's Cove lighthouse, granite of the South Mountain Batholith and metamorphosed Cambrian sedimentary rocks, which are witnesses to the formidable collisions that created the Appalachian Mountains.

As this is probably the busiest time of the year for everyone, with the end of term exams, conference presentations to prepare and the field season to organize, I will be brief. I want to praise the CAP Executive for their enthusiasm and dedication: Mary Vetter, Alwynne Beaudoin, Terri Lacourse, and Jean Nicholas Haas, and Matthew Peros, who worked hard to set up the new CAP Student Research Award.

CAP membership is slowly growing. Thanks to Terri Lacourse's initiative, some former members decided to re-join our association and new members have also joined us. Welcome or welcome back to all members.

Sincerely yours,

**Elisabeth Levac**  
CAP President, 2008-2009  
[elevac@ubishops.ca](mailto:elevac@ubishops.ca)

### CAP EXECUTIVE 2009

*President:* Elisabeth Levac  
*President-Elect:* Matthew Peros  
*Secretary-Treasurer:* Mary Vetter  
*Newsletter Editor:* Terri Lacourse  
*Website Editor:* Alwynne Beaudoin  
*Councillor to IFPS:* Jean Nicolas Haas

## CAP STUDENT RESEARCH AWARD

The CAP Student Research Award was established in 2009 to help support student research in palynology. The award consists of \$200 in research funds and a three-year membership in CAP. The deadline for the inaugural award was March 1, 2009. Applications were received from both MSc and PhD students, from Canada and Europe. CAP thanks all students that applied.

A committee of three CAP Executive members was struck to adjudicate the award and a decision was reached in mid-April 2009.

The winner of the inaugural CAP Student Research Award will be announced at the 2010 CAP Annual General Meeting, which is being held in May at Simon Fraser University (Burnaby, BC) in conjunction with the 2010 CANQUA meeting. The next CAP Newsletter will feature a short article on the 2009 award winner.

Questions concerning the award should be sent to the CAP President-elect, Matthew Peros ([mperos@uottawa.ca](mailto:mperos@uottawa.ca)).



## Editor's Notes

Thank you to all who contributed material for this edition of the *CAP Newsletter*: Alwynne Beaudoin, Vaughn Bryant, Konrad Gajewski, Jennifer Galloway, Simon Goring, Petra Mudie, and Reed Wicander.

## Deadline for Next CAP Newsletter

Please submit items for the next issue of the *CAP Newsletter* (Volume 32, Number 2, December 2009) by November 15, 2009. 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](mailto:tlacours@uvic.ca)

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## CAN CAP MEMBERS CONTRIBUTE TO WIKI-PALYNOLOGY?

Wikipedia is the seventh most visited site on the internet, ahead of Facebook and just behind MySpace. The subject of at least 50 articles in scientific journals, including both *Nature* and *Science*, and a much publicized head-to-head battle with the Encyclopaedia Britannica (*Nature* 438, 900-901), the online encyclopaedia has grown in size and complexity in the seven years since its inception.

My first encounter with Wikipedia was last year, when I expanded the palynology article ([www.wikipedia.org/wiki/palynology](http://www.wikipedia.org/wiki/palynology)). This allowed me to learn more about the early history of palynology, find interesting biographical information about Lennart von Post ([www.wikipedia.org/wiki/Lennart\\_von\\_post](http://www.wikipedia.org/wiki/Lennart_von_post)), and discover some of the effects of World War II on palynological research in North America and Europe ([http://en.wikipedia.org/wiki/Pollen\\_Analysis\\_Circular](http://en.wikipedia.org/wiki/Pollen_Analysis_Circular)). It also broadened my interest in palynology by giving me some insight into the personalities that fill the literature.

Obviously Wikipedia should never be considered a primary resource for research, but it is worthwhile to note that many students use Wikipedia when doing preliminary work on their papers. Because of this I would like to suggest that many of the articles (e.g., [http://en.wikipedia.org/wiki/Pollen\\_core](http://en.wikipedia.org/wiki/Pollen_core)) could use the knowledge of CAP members to improve the breadth and scope of information about palynology that is available online. Wikipedia will not replace peer reviewed journals or textbooks as the primary source of citations for student papers, but if we can point aspiring paly-

nologists in the right direction perhaps they will realize early on, as we all have, how exciting palynology can be.

Editing Wikipedia articles is relatively simple. For those of us with experience using mark-up languages such as HTML or LaTeX, much of the notation should be fairly intuitive. For others, an online style guide is available ([http://en.wikipedia.org/wiki/Wikipedia:How\\_to\\_edit\\_a\\_page](http://en.wikipedia.org/wiki/Wikipedia:How_to_edit_a_page)) to help make editing articles simpler. I began editing the Palynology page because I noticed it lacked a significant amount of detail, but as I continued I found that contributing to this interactive online community became an enjoyable activity in itself. Since my first edit I have contributed to articles about a local elementary school, Rolf Harris, the band Funkadelic, and the Indian Armed Forces among others. Having detailed knowledge about a subject is not necessarily a requirement - simple grammar edits are often required.

Students can get involved as well. Student assignments that involve editing a Wikipedia page would require some basic research to identify gaps in the existing Wikipedia knowledge base and research to fill those gaps. It would also increase the utility of Wikipedia as a resource for students in the future and improve its reliability.

I would like to encourage anyone reading this article to take some time to look at the palynology related articles on Wikipedia and to revise, edit or add to anything that piques their interest. Perhaps you'll run across something new and interesting, or you'll find a mistake that I made. . . Happy editing!

**Simon Goring**  
Rolf Mathewes Lab  
Biological Sciences  
Simon Fraser University

**2010 AASP-CAP-CPC  
Joint Meeting  
Halifax, Nova Scotia  
Sept 29-Oct 2, 2010**

Please mark your calendars and plan to attend the joint AASP-CAP-CPC meeting in Halifax, Nova Scotia, September 29-October 2, 2010. The meeting will be held at the Harbourview Holiday Inn, just minutes from the ferry terminal and with spectacular views of the Halifax Harbour. Rob Fensome, Peta Mudie, and Graham Williams are the Local Organizing Committee.

Exciting field trips, including one to Joggins Fossil Cliffs UNESCO World Heritage site where you can see some of the most spectacular fossil tree trunks and the world's earliest reptiles, are planned. Other field trips will possibly include locations such as the Paleoindian site in Debert, the Cobequid-Chedabucto fault, the North Mountain Basalt, Arisaig, and the unique Windsor gypsum cliffs at St Croix. Impressive drumlin fields and glacial deposits are found throughout Nova Scotia, especially around Old Town Lunenburg, another UNESCO World Heritage Site. And let's not forget that the Bay of Fundy has the largest tides in the world!

Hope to see you all in Halifax!

**ATLAS POLLINIQUE  
DES ARBRES ET DE  
QUELQUES ARBUSTES  
INDIGÈNES DU QUÉBEC**

*par Pierre Richard*



Tirés à part du "Naturaliste canadien"

Dr. Pierre's Richard's classic (1970) *Atlas Pollinique* (Le naturaliste Canadien, vol. 97) is now available as a PDF that can be downloaded from the CAP website:

[www.scirpus.ca/cap/library.htm](http://www.scirpus.ca/cap/library.htm)



## Dissertation Abstracts

**Courtney-Mustaphi, Colin. 2009.**

*Analysis of laminated sediments from Lake DV09, northern Devon Island, Nunavut, Canada. M.Sc. Thesis. Dept. of Geography, University of Ottawa.*

*Supervised by Dr. Konrad Gajewski*

A 147 cm sediment core from Lake DV09, northern Devon Island, Nunavut, Canada contains annually-laminated (varved) sediments, providing a 1600 year record of climate variability. A minerogenic lamina deposited during the annual thaw period and a thin deposit of organic matter deposited during the summer and through the winter, together form a clastic-organic couplet each year. The thinnest varves occur from AD800-1050, and the thickest from AD1100-1300, during the Medieval Warm Period. The relative sediment density is also highest during this period suggesting increased sediment transport energy. The coldest period of the Little Ice Age appears to be during the AD1600s. Varve widths over the past century indicate climate warming in the region.

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**Paull, Tara. 2008. *Diatom biodiversity and production in the Arctic*. M.Sc. Thesis. Dept. of Geography, University of Ottawa.**

*Supervised by Dr. Konrad Gajewski*

Diatom biodiversity and production in Arctic lakes were investigated using multivariate

analyses, a paleoenvironmental study and data synthesis. A study of multivariate analysis of morphological features was able to distinguish between taxa using few valve characters. Small benthic fragilarioid diatoms (Bacillariophyceae) are dominant taxa in circumpolar Arctic lakes and ponds and are often difficult to identify under light microscopy. Analysis of morphological characters measured from SEM photos of four important morphotypes showed that these taxa may be distinguished using a small number of valve characters. Specimens from the circumpolar Arctic region identified as *Staurosirella pinnata* can be distinguished from *Staurosira venter sensu lato* using valve width and areola length (at margin), both visible under LM. Application of these numerical criteria allows for a high success rate in identification of specimens to either *S. venter* (including morphotypes) or *S. pinnata*.

A diatom-based analysis of the climate variations at Lake RS29 on Somerset Island, at a higher resolution than previously attained in this region, showed that changes in diatom community structure correspond with broad-scale variations in the melt record from the Agassiz Ice Core. Diatoms were poorly preserved in the early Holocene although preservation improves after 4800 cal BP, and autecological inferences suggest that diatoms are responding to progressive lake acidification over the Holocene. Increases in planktonic forms and diatom production occur during cool periods, contrary to expected diatom community responses to changes in climate. These results suggest that individual species and diatom production may be responding to environmental processes that are not directly related to temperature, although the overall community response does relate to broad-scale climatic variability.

Variability in diatom is an important indicator of climatic and environmental change, although the mechanisms that control diatom production over the Holocene are not completely understood. A summary of available diatom paleoproduction data for the Canadian Arctic was compiled. Comparison of variability in diatom production at 31 sites revealed that the direction of change in response to warming temperatures is not consistent at centennial and millennial scales. While diatom production increases in response to warming and decreases in response to centen-

nial scale cooling events, the converse is observed at millennial scales. These data suggest that different forcing mechanisms are responsible for controlling diatom production at centennial and millennial scales. Dissolution may be an explanatory factor, though the importance of dissolution in the Arctic is not known. A larger network of sites that include quantitative production estimates would be necessary to gain a better understanding of the causes of spatiotemporal variability in diatom production.

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**CIMP Faro'09**

II Joint Meeting of Spores/Pollen and Acritarch Subcommissions

***Devonian to Carboniferous Palynology: Contributions to Palaeogeography, Palaeoceanography, and Geotectonics of the Euramerica – Gondwana Collision***

The second joint meeting of the spore/pollen and acritarch subcommissions will take place in Faro, Portugal, September 20-24 at the University of the Algarve. A two-day technical session is planned, followed by a two-day fieldtrip to the key outcrops of the Upper Devonian to Carboniferous Southwest Sector of the South Portuguese Zone.

This meeting follows the highly successful first spore and acritarch meeting in Lisbon, Portugal in 2007, and promises to be just as exciting and worthwhile as the first joint meeting. The web page with all the information for this meeting is up and running and can be accessed at:

<http://cima.ualg.pt/eventos/cimpfaro09/home.html>

We look forward to seeing many of our colleagues in Faro this September.

The Organizing Committee,

Paulo Fernandes, Zélia Pereira, Tomás Oliveira, Geoff Clayton, and Reed Wicander





## Announcements from the Laboratory for Paleoclimatology and Climatology at the University of Ottawa

Andre Viau and Konrad Gajewski from the Laboratory for Paleoclimatology and Climatology at the University of Ottawa have created new regional paleoclimate time series reconstructions (January & July temperature and annual precipitation) for boreal Canada for the past 12,000 years with a resolution of 100 years. These are based on the North American Pollen Database (NAPD: [www.ncdc.noaa.gov/paleo](http://www.ncdc.noaa.gov/paleo)) and the North American Modern Pollen Database (Whitmore et al. 2005. Modern Pollen Data from North America and Greenland for Multi-scale Paleoenvironmental Applications. *Quaternary Science Reviews* 24: 1828-1848) using the modern analogue technique. The regions are Labrador, Quebec, Central Canada and western Canada/MacKenzie Delta. These time series can be used, for example, in impact studies or as inputs for vegetation-climate modeling. The results are explained in Viau and Gajewski (2009. Reconstructing millennial-scale, regional paleoclimates of boreal Canada during the Holocene. *Journal of Climate* 22: 316-330) and data are available on the LPC website ([www.lpc.uottawa.ca](http://www.lpc.uottawa.ca)). Similar reconstructions are available for the Beringian region (see Viau et al., 2008. Low- and high-frequency climate variability in Beringia during the past 25,000 years. *Canadian Journal of Earth Sciences* 45: 1435-1453), also available on the website.

The North American Modern Pollen Database has undergone several updates. This database contains thousands of modern pollen data from across North America in an easy to access Excel file. The file is available for download at [www.lpc.uottawa.ca](http://www.lpc.uottawa.ca), and also at the website of Jack Williams at the University of Wisconsin Geography Department ([www.geography.wisc.edu/faculty/williams/web/index.htm](http://www.geography.wisc.edu/faculty/williams/web/index.htm)).

Since the late 1980s, palynologists have been submitting data from their studies to the global pollen database project ([www.ncdc.noaa.gov/paleo/paleo.html](http://www.ncdc.noaa.gov/paleo/paleo.html)). In North America, Eric Grimm and his associates at the Illinois Museum and staff at the NGDC in Boulder have tirelessly worked to keep it updated. How these data have been used in the literature was recently reviewed by K. Gajewski (Gajewski, 2008. The global pollen database in biogeographical and paleoclimatic studies. *Progress in Physical Geography* 32: 379-402). This paper reviews a number of topics that have been studied by persons using the database including large-scale reconstructions of the climate, studies of plant migrations, testing ecological hypotheses, estimation of carbon storage in peatlands through time and other uses. The article may give you ideas of the potential of this database for future study. Reprints are available on the *PPG* website, or from the author. Students interested in working on the kind of questions discussed in the paper are encouraged to contact K. Gajewski ([gajewski@uottawa.ca](mailto:gajewski@uottawa.ca)) about potential thesis projects.

**Konrad Gajewski**  
University of Ottawa



## Palynolit

### Dust Storms Demystified

Paul B. Sears (1891-1990) was a pioneering and influential ecologist and palaeoecologist. He was instrumental in incubating and encouraging the application of pollen analysis in North America, probably being best associated with the publication of the *Pollen Analysis Circular*. This informal bulletin, designed to encourage communication among practitioners of the nascent science, could be considered an ancestor of the *CAP Newsletter*! In one of the early issues, Sears included a suggestion by Hyde and Williams for using the word “palynology” to describe this new discipline, likely the first use of the term in North America. Sears was widely known and respected for his interdisciplinary approach to ecology and environmental studies. His concern for the environment and his desire to communicate that concern is evident throughout *Deserts on the March*. This book, written for a non-specialist audience, was designed to explain the ecological underpinnings of the Dust Bowl crisis. It calls for a new land ethic, a less destructive approach to land use. Today, we would probably brand this “sustainability”. It remains an eminently readable book and much of what Sears says there is as applicable to the environmental situation today as it was when written more 70 years ago. Here he examines the complex composition of dust. Far from being the frightening symbol of disaster, the way it likely appeared to those people suffering through the fearsome dust storms of the 1930s, Sears contextualizes dust as part of the cycle of life.

Dust itself is nothing new. Like the circle, it is a symbol of eternal time.

Long before the days of the microscope and the chemical balance, it was understood that dust is the beginning and the end of all things. Dust is always in the air we breathe, an invisible world of tiny, buoyant particles, infinitely rich in its variety, and with laws of its own. While most people think of it as being only minute bits of earth stirred up by strong air currents, it contains a host of living organisms, bacteria, molds, pollen, animals, as well as fragments of material from larger plants and animals. Except perhaps in air newly washed by rain, these particles float about perpetually sustained by gentle drifts in the atmosphere of which the human senses are scarcely aware. Even such a giant citizen of the world of dust as the plumed dandelion fruit can remain afloat indefinitely in a breeze of not more than three miles an hour. The microscopic grains of pollen and fungus spores, capable of ascent to the stratosphere, have their own curious globular symmetry, often richly marked, but with neither right nor left, top nor bottom, as fitted to the ocean of air as the fish, the fly, the elephant may be to the respective worlds in which they live. With the rising and falling of the currents, the particles of dust, living and dead, are perpetually settling out. The world of dust is never at rest....

From Paul B. Sears (1935) *Deserts on the March*, pp. 134-135. University of Oklahoma Press, Fourth Edition, 1980.

**Alwynne B. Beaudoin**  
Edmonton, Alberta



## POST-DOCTORAL RESEARCH OPPORTUNITY IN FORENSIC PALYNOLOGY

### *Texas A&M University*

A postdoctoral position is available in the Palynology Research Laboratory, Department of Anthropology, at Texas A&M University to investigate pollen data as it relates directly to techniques in forensic palynology. The position will begin as soon as a qualified applicant is found. The position is available for a period of one year, with some possibility of it being extended.

**Qualifications:** Applicants must have a Ph.D. in plant ecology, botany, biology, plant science, or a closely related field; must have significant knowledge and experience in plant ecology and/or plant geography, and training in modern or Quaternary palynology. The individual must be an American citizen and want to train for a future career in forensic palynology. Most of the current tasks related to forensic palynology are carried out by our palynology facility, and future research related to this postdoctoral position is sponsored by various federal agencies. Applicants are expected to have excellent organizational skills, strong data analysis abilities, and good writing skills. The individual selected for this position will have access to LM, SEM, TEM, and Confocal equipment and will be expected to use these techniques when needed. Preference will be given to applicants who have prior experience with some or all of these types of microscopes, but in-house training at the Texas A&M Imaging Center would be available if needed. An ideal candidate for this position would also have experience with digital mapping systems such as GIS. Alternatively, the individual chosen for this position should be willing to learn such systems.

**To Apply:** Send curriculum vitae, statement of interest and qualifications, names and contact information for three references, and up to three relevant publications either in hard copy or pdf files to Dr. Vaughn M. Bryant ([vbryant@neo.tamu.edu](mailto:vbryant@neo.tamu.edu)), Director, Palynology Research Laboratory, Department of Anthropology, Texas A&M University, 4352 – TAMU, College Station, Texas USA 77843-4352. Applications will continue to be received and reviewed until a suitable applicant is found and appointed.

Texas A&M University is an equal opportunity, affirmative action employer committed to diversity.



## Recent Publications — 23

Bunbury, J., and \*Gajewski, K. 2009. Post-glacial climates inferred from a lake at treeline, southwest Yukon Territory, Canada. *Quaternary Science Reviews* 28: 354-369.

Cordova, C.E., Harrison, S.P., Ortiz, N., \*Mudie, P.J., Simakova, A.N., Riehl, S., and Leroy, S.A.G. 2009. Pollen, plant macrofossil and charcoal records for paleovegetation reconstruction in the Black Sea-Mediterranean Corridor since the last glacial maximum. *Quaternary International* 197: 12-26.

Dormoy, I., Peyron, O., Combourieu-Nebout, N., \*Goring, S., Kotthoff, U., Magny, M., and Pross, J. 2009. Terrestrial climate variability and seasonality changes in the Mediterranean region between 15000 and 4000 years BP deduced from marine pollen records. *Climate of the Past Discussion* 5: 735-770.

Fréchette, B., \*de Vernal, A., and \*Richard P.J.H. 2008. Holocene and Last Interglacial cloudiness in eastern Baffin Island, Arctic Canada. *Canadian Journal of Earth Sciences* 45: 1221-1234.

\*Gajewski, K. 2008. The global pollen database in biogeographical and paleoclimatic studies. *Progress in Physical Geography* 32: 379-402. doi: 10.1177/0309133308096029.

\*Gajewski, K. 2008. Review of "Paleopalynology", 2<sup>nd</sup> edition; Topics in Geobiology Series, Volume 28. *Eos Trans-*

*actions, American Geophysical Union* 89: 11, doi:10.1029/2008EO110010.

Gajewski\*, K., \*Peros, M., \*Finkelstein, S. and Fortin, M. 2009. Holocene paleoclimate of the Canadian Arctic Islands: The ACVAST project. *PAGES News* 17(1):11-13.

\*Galloway, J.M., Doherty, C.T., Patterson, R.T., and Roe, H.M. 2008. Postglacial vegetation and climate dynamics in the Seymour-Belize Inlet Complex, central coastal British Columbia, Canada: palynological evidence from Tiny Lake. *Journal of Quaternary Science* 24: 322-335.

Ginn, B.K., Grace, L.C., \*Cumming, B.F., and \*Smol, J.P. 2008. Tracking anthropogenic- and climatic-related environmental changes in the remaining habitat lakes of the endangered Atlantic whitefish (*Coregonus huntsmani*) using palaeolimnological techniques. *Aquatic Conservation - Marine and Freshwater Ecosystems* 18: 1217-1226.

\*Goring, S., \*Pellatt, M.G., \*Lacourse, T., \*Walker, I.R., and \*Mathewes, R.W. 2008. A new methodology for reconstructing climate and vegetation from modern pollen assemblages: an example from British Columbia. *Journal of Biogeography* 36: 593-611. doi: 10.1111/j.1365-2699.2008.02021.x

Keatley, B.E., Douglas, M.S.V., Blais, J. M., Mallory, M.L., and \*Smol, J.P. 2009. Impacts of seabird-derived nutrients on water quality and diatom assemblages from Cape Vera, Devon Island, Canadian High Arctic. *Hydrobiologia* 621: 191-205.

Kholeif, S.E.A., and \*Mudie, P.J. 2009. Palynological records of climate and oceanic conditions in the late Pleistocene and Holocene of the Nile Cone, southeastern Mediter-

ranean, Egypt. *Palynology* 33.

Ledu, D., \*Rochon, A., \*de Vernal, A., and St-Onge, G. 2008. Palynological evidence of Holocene climate change in the eastern Arctic: a possible shift in the Arctic oscillation at the millennial time scale. *Canadian Journal of Earth Sciences* 45: 1363-1375.

MacDonald, G.M., Porinchu, D.F., Rolland, N., Kremenetsky, K.V., and Kaufman, D.S. 2009. Paleolimnological evidence of the response of the central Canadian treeline zone to radiative forcing and hemispheric patterns of temperature change over the past 2000 years. *Journal of Paleolimnology* 41: 29-141.

McKay, J.L., \*de Vernal, A., Hillaire-Marcel, C., Not, C., Polyak, L., and Darby, D. 2008. Holocene fluctuations in Arctic sea-ice cover: dinocyst-based reconstructions for the eastern Chukchi Sea. *Canadian Journal of Earth Sciences* 45: 1377-1397.

\*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.

Richerol, T., \*Rochon, A., Blasco, S., Scott, D.B., Schell, T.M., and Bennett, R.J. 2008. Distribution of dinoflagellate cysts in surface sediments of the Mackenzie Shelf and Amundsen Gulf, Beaufort Sea (Canada). *Journal of Marine Systems* 74: 825-839.

Schell, T.M., Scott, D.B., \*Rochon, A., and Blasco, S. 2008. Late Quaternary paleoceanography and paleo-sea ice conditions in the Mackenzie Trough and Canyon, Beaufort Sea. *Canadian Journal of Earth Sciences* 45: 1399-1415.

Scott, D.B., Schell, T., \*Rochon, A. and Blasco, S. 2008. Benthic foraminifera in the surface sediments of the Beaufort Shelf and slope, Beaufort Sea, Canada: Applications and implications for past sea-ice conditions. *Journal of Marine Systems* 74: 840-863.

Stuchlik, L. (ed). 2009. *Atlas of Pollen and Spores of the Polish Neogene*. Vol. 3: Angiosperms. Kraków: W. Szafer Institute of Botany, Polish Academy of Sciences. ISBN: 978-83-89648-74-7.

van Hengstum, P. 2008. *Paleoenvironmental analysis using thecamoebians and foraminifera in Mexican phreatic anchialine caves: a focus on Carwash (Actun Ha) Cave System, Mexico*. Unpublished MSc thesis. School of Geography & Earth Sciences, McMaster University.

Veres, D.S., Lallier-Verges, E., Wohlfarth, B.W., \*Lacourse, T., Keravis, D., Bjork, S., Preusser, F., Andrieu-Ponel, V., and Ampel, L. 2008. Climate-driven changes in lake conditions during MIS 3 and 2: a high resolution geochemical record from Les Echets, France. *Boreas* 38: 230-243. doi: 10.1111/j.1502-3885.2008.00066.x

Viau, A.E., \*Gajewski, K., Sawada, M.C., and Bunbury, J. 2008. Low- and high-frequency climate variability in eastern Beringia during the past 25 000 years. *Canadian Journal of Earth Sciences* 45: 1435-1453. doi:10.1139/E08-036

\* denotes a CAP Member

# Conference Calendar

## 2009

May 3-8: **CANQUA 2009**

Simon Fraser University  
Burnaby, British Columbia  
[www.mun.ca/canqua/sfu.html](http://www.mun.ca/canqua/sfu.html)

May 24-27: **GAC/MAC Meeting**

Toronto, Ontario  
[www.jointassembly2009.ca/](http://www.jointassembly2009.ca/)

May 26-30: **Canadian Association of Geographers (CAG) Annual Meeting**

Carleton University, Ottawa, ON  
[www.cag-acg.ca/en/cag\\_annual\\_meeting.html](http://www.cag-acg.ca/en/cag_annual_meeting.html)

June 7-10: **AAPG Annual Convention and Exhibition**

Denver, Colorado, USA  
[www.aapg.org/denver/index.cfm](http://www.aapg.org/denver/index.cfm)

June 21-26: **9th North American Paleontological Convention**

University of Cincinnati  
Cincinnati, Ohio, USA  
[www.napc2009.org/](http://www.napc2009.org/)

June 23-26: **11th International Paleolimnology Symposium**

Gaudalajara, Jalisco, Mexico  
[www.geofisica.unam.mx/paleolimnologia/](http://www.geofisica.unam.mx/paleolimnologia/)

Sept 19-26: International Committee for Coal and Organic Petrology (ICCP) and the Society for Organic Petrology (TSOP), Joint Annual Meeting

Gramado / Porto Alegre, Brazil  
[www.ufrgs.br/ICCP\\_TSOP\\_2009](http://www.ufrgs.br/ICCP_TSOP_2009)

Sept 20-24: **CIMP Faro'09**

*Devonian to Carboniferous Palynology:*

*Contributions to Palaeogeography, Palaeoceanography, and Geotectonics of the Euramerica – Gondwana Collision*

University of the Algarve

Faro, Portugal

[www.cimp.ulg.ac.be/Spores.html](http://www.cimp.ulg.ac.be/Spores.html)

Sept 27-30: **AASP 42nd Annual Meeting**

Meadowview Convention Center  
Kingsport, Tennessee, USA  
[www.palynology.org/meetings.html](http://www.palynology.org/meetings.html)

October 18-21: **GSA 121st Annual Meeting**

Portland, Oregon, USA  
Special Session: *Quaternary Paleoenvironments and Geoarchaeology*, organized by Kathleen Nicholls and Catherine Yansa (yansa@msu.edu)  
[www.geosociety.org/meetings/2009](http://www.geosociety.org/meetings/2009)

## 2010

April 18-21: **AAPG Annual Convention and Exhibition**

New Orleans, Louisiana, USA  
[www.aapg.org/meetings](http://www.aapg.org/meetings)

May 10-13: **GeoCanada 2010**

Calgary, Alberta

Sep 29-Oct 2: **CAP-AASP-CPC Joint Meeting**

Halifax, Nova Scotia

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](http://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 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: \_\_\_\_\_

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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





## INVITATION

### MEETING

Devonian to Carboniferous Palynology: Contributions to Palaeogeography, Palaeoceanography, and Geotectonics of the Euramerica – Gondwana Collision

**Venue:** University of the Algarve, Faro, Portugal

**Date:** 20 to 24 September 2009

The Spore / Pollen and Acritarch Subcommissions of the CIMP warmly invite you to attend the CIMP Faro 09 meeting on Devonian to Carboniferous Palynology: Contributions to Palaeogeography, Palaeoceanography, and Geotectonics of the Euramerica – Gondwana Collision.

This reunion builds on the general CIMP meeting held in 2007 in Lisbon and will bring together palynologists and other geoscientists with the aim of stimulating discussion regarding the utility of palynomorphs in the reconstruction of the Euramerica – Gondwana collision. We are seeking presentations in which palynomorphs contribute significantly to palaeogeographic, palaeoceanographic, and geotectonic models. Studies that integrate palynology with stratigraphy, sedimentology or other disciplines, are also welcome.

A two-day technical session will be followed by a two-day fieldtrip to the key outcrops of the Upper Devonian to Carboniferous Southwest Sector of the South Portuguese Zone. Due to difficulties relating to safe access of the outcrops, the fieldtrip will be limited to the first 25 participants. However, the technical sessions will not have any restrictions as to the number of participants.

We will very soon be including on the CIMP web page a link with all the information regarding this meeting.

Hope to see you all in Faro.

The organising committee,

Paulo Fernandes, Zélia Pereira, Tomás Oliveira, Geoff Clayton, and Reed Wicander