Canadian Association of Palynologists
Association Canadienne des Palynologues

NEWSLETTER

Volume 35 Number 2 December 2012

President's Message

Greetings Fellow Palynologists,

As 2013 begins, I want to take this opportunity to thank you for your support and involvement in the Association over the last year. As always, palynology continues to be an important discipline at the interface of biology, geology and climate science. Sitting at the interface of multiple disciplines brings with it unique challenges, not the least of which is securing research funds.

On this note, as CAP President, I was recently contacted by NSERC to provide feedback about our society's view on how best to assess research performance in the natural sciences and engineering. NSERC is interested in hearing from CAP in order to contribute to its five-year review of the Discovery Grants (DG) program with the goal of implementing any potential changes to methodologies for budget allocation in time for the 2014 competition. NSERC is also interested in our perspective on changes to the peer review process that were introduced in 2009 and 2010. In order to provide NSERC with a representative view from our Association, I need to hear from you as members of the Canadian palynological community. How important are research trends, quality and capacity in the allocation of DG funds to different disciplines? What are the most important metrics for evaluating research performance? Are there important metrics that are not being used by NSERC to allocate funds? Should metrics such as the number of research grant applications per discipline, the number of researchers/ students per discipline, the amount/number of external research grants, the number of industry partnerships, or journal impact factors be used? In your view, how has palynology faired within the context of recent changes to NSERC's peer review process? What are the major challenges in the current funding climate for Canadian palynology? Providing NSERC with feedback about these and any other NSERC-related issues will serve Canadian palynology well. Please take some time to let me know your thoughts, so that I can respond to NSERC with our community's perspective. Alternatively, you can provide NSERC with feedback directly by visiting the Consultations page of the

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NSERC website.

I also want to draw your attention to a few upcoming meetings. The 2013 Annual Meeting of the Ecological Society of America will focus on "Learning from the Past and Shaping the Future" and Organizers have specifically identified long-term data such as fossil pollen records as providing important historical baselines for future trajectories. This meeting is scheduled for August 4-9 in Minneapolis and promises to be an excellent opportunity to emphasize the importance of palynology in the current context of global change. Later that month, the Canadian Quaternary Association is meeting in Edmonton August 18-21 and CAP will be sponsoring a Special Session on *The Paleoecology of Extreme Environments*. Most importantly, I would like to remind everyone that CAP will be meeting in San Francisco in October 2013 along with three sister organizations – AASP - The Palynological Society, the North American Micropaleontology Section of the Society for Sedimentary Geology, and DINO 10. This joint meeting will be the best opportunity in 2013 for palynologists from around the globe to present their research, discover what other palynologists are investigating, and meet new and old friends. Please consider joining us in San Francisco.

With best wishes for 2013,

Terri Lacourse, Ph.D. (tlacours@uvic.ca)
CAP President, 2012-2013

Deadline for Next CAP Newsletter

Please submit items for the next issue of the *CAP Newsletter* (Volume 36, Number 1, May 2013) by April 1, 2013. 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:

Florin Pendea *CAP Newsletter* Editor
ifpendea@lakeheadu.ca

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CALL FOR SPECIAL SESSIONS FOR THE 2013 JOINT MEETING IN SAN FRANCISCO

In October 2013, CAP will be meeting jointly with AASP-The Palynological Society, the North American Micropaleontology Section of the Society for Sedimentary Geology, and DINO 10 in San Francisco.

This is an informal call for CAP-sponsored special session ideas for this joint meeting. If you are interested in organizing a special session, please get in touch with one of the CAP Representatives on the Organizing Committee: Alwynne Beaudoin (abeaudoi@ualberta.ca) and Terri Lacourse (tlacours@uvic.ca). A formal call for abstracts will occur in early 2013.

CALL FOR NEW CAP EXECUTIVE DIRECTORS

The Canadian Association of Palynologists is looking for members to serve as Executive Directors. In particular, CAP members are needed for the President and President-Elect positions, effective January 2014.

All members of CAP are eligible to be elected a CAP Director. Elections will take place at the 2013 CAP Annual General Meeting. The location of the AGM is yet to be determined, but members do not have to attend the AGM to let their name stand for an Executive position.

If you are interested in joining the Executive, more information about positions is available on the CAP website (http://www.scirpus.ca/cap/tracking/by_laws.htm) or, contact current CAP President, Terri Lacourse (tlacours@uvic.ca).

Editor's Notes

Thank you to all who contributed material for this edition of the *CAP Newsletter*: Alwynne Beaudoin, Vaughn Bryant, Lise Durantou, Sarah Finkelstein, Konrad Gajewski, Jennifer Galloway, Simon Goring, C. Hartkopf-Fröder, Bert Van Helden, Terri Lacourse, Jock McAndrews, Kristen Miskelly, Andre Rochon, and Mary Vetter.

CANQUA 2013
Mark your calendars!

The Canadian Quaternary Association (CANQUA) will be holding its biennial meeting in Edmonton, Alberta, August 18-21, 2013. The following CAP Special Session is planned for this conference:

The Palaeoecology of Extreme Environments, Canadian Association of Palynologists special session to be held at the CANQUA 2013 Conference, Edmonton, Alberta. Session organizers Alwynne Beaudoin and Mary Vetter.

Extreme environments occur in many forms, from the cold temperatures of arctic and alpine areas, to the aridity of deserts and grasslands, to the salinity of salt marshes and saline lakes, or the desiccation and UV influx on exposed rock surfaces. They may persist for millennia or be restricted in time and space, such as newly exposed terrain around glacial margins or recent volcanic deposits.

Extreme environments can result from various stressors, including climate, biogeochemical or physical conditions, or biological factors. Such environments present challenges for biota and their associated palaeoecological records. Signals may be recorded by many proxy indicators including pollen, plant macroremains, diatoms, or dinoflagellates. We welcome contributions documenting extreme environments through single or multiple indicators, or reporting the results of studies focused on these types of localities.

Please contact either Mary or Alwynne if you are interested in this session or would like more details. More information about the CANQUA 2013 meeting itself will be posted on the conference website soon.
In the meantime, the First Circular is available here:
http://www.canqua.com/archives/287

2013 Conference Calendar

May 22-24 2013: **GAC/MAC Meeting,** Winnipeg, Manitoba, Canada. Web: http://gacmacwinnipeg2013.ca

August 4-9: **Ecological Society of America 98th Annual Meeting** Theme: *Sustainable Pathways: Learning from the Past and Shaping the Future,* Minneapolis, MN. Web: www.esa.org/minneapolis/

August 11-15 2013 : **Canadian Association of Geographers (CAG) Annual Meeting** Memorial University, St John's, Newfoundland, Canada. Web: http://www.cag-acg.ca/en/cag_annual_meeting.html

August 18-21: **CANQUA-CGRG Biannual Meeting** University of Alberta, Edmonton, AB. Web: www.canqua.com

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Editor's Notes

Thank you to all who contributed material for this edition of the *CAP Newsletter*: Alwynne Beaudoin, Vaughn Bryant, Lise Durantou, Sarah Finkelstein, Konrad Gajewski, Jennifer Galloway, Simon Goring, C. Hartkopf-Fröder, Bert Van Helden, Terri Lacourse, Jock McAndrews, Kristen Miskelly, Andre Rochon, and Mary Vetter.

Message from the IFPS councillor

I would like to extend thanks, on behalf of CAP, to Jean Nicholas Haas, who has represented CAP ably as the representative for the society to the International Federation of Palynological Societies.

My time as the CAP representative began at the meeting in Tokyo, where I was represented by Rolf Mathewes. At the 13th International Palynological Congress (IPC) in Tokyo, Japan it was decided that the next meeting, in 2016, would be held in Salvador, Brazil. There was some discussion about how voting for the congress is conducted and the Committee has agreed to discuss potential changes to the constitution with regards to the voting in the future. The International Organization of Paleobotany has also agreed to meet in Salvador, meaning the excellent tradition of holding a joint IPC/IoPC will continue. Those of you who have attended a joint meeting in the past will surely agree that the exciting research produced by each of these groups is very compatible, and, for someone like myself who spends lots of

time thinking about the Holocene, the chance to see studies about earlier time periods is always exciting. The advances in both fields have been staggering, and the next IPC/IoPC will be a great opportunity to catch up on the latest research, meet up with friends from around the world, and do it all in beautiful setting.

Other business discussed at the meeting included changing the voting procedures to allow voting by email (rather than solely by post), including the IFPS Web Master on the Committee, and expanding the scope of and interest in the IFPS. To improve the scope of the IFPS, Charles Wellman (University of Sheffield), the new President, is interested in attracting representative societies from Africa and Australasia, I'm sure he would welcome recommendations from CAP members if anyone has any suggestions. In addition, the publication date of PALYNOS will be shifted to Spring/Autumn so that it doesn't conflict with the wave of newsletters that come out from other societies. The IFPS has also agreed to provide our own Jean-Nicholas Haas and Owen Davis with funds to upgrade PALYNOS and the web site respectively, should those funds be needed.

I'd like to thank you all for allowing me to represent you as your new IFPS representative. If you have any questions or concerns, please let me know.

Simon Goring — goring@wisc.edu

2013 CAP ANNUAL STUDENT RESEARCH AWARD

The Canadian Association of Palynologists Annual Student Research Award was established in 2009 to recognize students' contributions in palynological research. The award is open to any undergraduate or graduate student who is a member, in good standing, of CAP, regardless of their nationality or country of residence. The intent of the research award is to support student research with a strong palynological component. The award consists of a three-year membership in the Association and $300 CDN, to be put toward some aspect of the student's research.

The award application should consist of: 1) a one-page statement outlining the nature of the research project, its scientific importance, the approximate timeline to completion of the project, and the aspect of the research the funds would be directed toward; (2) a CV; and, (3) a letter of support from the student's supervisor. Applications should be submitted (in French or English) by email to the CAP President by March 1st, 2013.

Only one award will be given per year and there is no limit to the number of times a student can submit an application. Applications and questions concerning the award should be sent to the CAP President,

Terri Lacourse (tlacours@uvic.ca).

2012 CAP AGM MINUTES
St John's, Newfoundland and Labrador
May 28, 2012

Attendees: Francine McCarthy, Peta Mudie, Florin Pendea (recording secretary).

CAP By-law 19 requires five members in good standing to be present for official business to be conducted at the Annual General Meeting. Since quorum not reached, no official business was transacted. The original agenda appears below with points of discussion noted.

1. Welcome, Approval of Agenda
2. Review and Acceptance of 2011 AGM minutes
3. Review and Acceptance of Reports
a) President's Report, Terri Lacourse
b) Secretary-Treasurer's Report, Mary Vetter
c) Auditor's Statement, Dennis R. Braman
d) Newsletter Editor's Report, Florin Pendea
e) Website Editor's Report, Alwynne Beaudoin.

Discussion:
-Peta expressed concern on the potential weakening of our international links, mainly because of the departure of J.N. Haas as CAP Councillor to IFPS.
-Peta proposed to start a workshop on non-pollen palynomorphs.
-Strengthening CAP's outreach – Francine proposed that CAP ask Geoscience Canada (GAC Journal) for a half-page ad featuring CAP.

4. President-Elect position
Several potential candidates were identified. The CAP Executive board will approach potential candidates in the near future to ascertain their interest.

5. Upcoming Meetings
2013 Joint Meeting of CAP-AASP-Dino 10-NAMS in San Francisco
-Attendees proposed that CAP concentrate its efforts on the 2013 San Francisco meeting. The Organizing Committee has two CAP representatives: Terri Lacourse (CAP President) and Alwynne Beaudoin (CAP Website Editor).
-Francine will bring additional details forward after the AASP meeting in Lexington, KY.
-2013 CANQUA meeting in Edmonton: CAP convened special session
-Attendees discussed the focus of the next CANQUA meeting and suggested that a CAP sponsored session could focus on the question: "What can Palynology do for other Quaternarists?"

6. Other business: No other business raised.
7. Adjournment: Meeting adjourned.

2013 Conference Calendar

August 27 to 31 2013: **International Conference on Geomorphology** Paris, France. Meeting of the International Association of Geomorphologists (IAS) http://www.geomorphology-iag-paris2013.com/en

September 2013: **9th International Symposium on the Cretaceous System** Ankara, Turkey
http://www.cretaceous2013.org/en/

October 20-24 2013: **JOINT AASP – CAP-NAMS-DINO 10 Meeting** , San Francisco, California, USA.

October 27-30: **GSA 125th Annual Meeting** Denver, Colorado, USA.
http://www.geosociety.org/calendar/

Alwynne Beaudoin and Terri Lacourse

Dissertation Abstracts

Vegetation and climate history of the Fraser Glaciation on southeastern Vancouver Island, British Columbia, Canada

Kristen Rhea Miskelly,
University of Victoria

Supervisory Committee
Dr. Richard Hebda, Co-Supervisor
(Department of Biology)
Dr. Geraldine Allen, Co-Supervisor
(Department of Biology)
Dr. Daniel Smith, Outside Member
(Department of Geography)

Pollen records from southeastern Vancouver Island, British Columbia, show changes in vegetation and climate from the late Olympia Interstade through the Fraser Glaciation. This study provides important insights into phytogeographic patterns of Pacific Northwest flora, leads to an enhanced understanding of processes affecting present-day ranges of several plant taxa, and provides a historical perspective on the origin of coastal alpine ecosystems. Evidence for a previously unrecognized glacial advance in the region at ~21,000 ^{14}C yr BP, herein called the Saanich glacier, is provided. The results reveal widespread habitat and food sources suitable for the mega fauna that lived on southern Vancouver Island during the last glaciation.

Vegetation during the Fraser Glaciation represented a mosaic of plant communities across a heterogeneous and productive landscape. Pollen spectra indicate that plant assemblages, dominated by Poaceae and Cyperaceae, were widespread. Similarities to tundra in northern Alaska and high elevation sites in British Columbia were detected. Vegetation varied geographically in the late Olympia (ca. 33,500-29,000 ^{14}C yr BP). Grassy uplands with scattered trees and local moist meadows occurred at Qualicum Beach under mesic and cool conditions, while cold and dry grass tundra prevailed at Skutz Falls. Increased non-arboreal pollen percentages at Qualicum Beach, 29,000 ^{14}C yr BP, reflect expansion of grassy meadows with diverse herbs under a cool and dry climate at the onset of the Fraser Glaciation. At Qualicum Beach between 25,160-24,190 ^{14}C yr BP, sedge wetlands were surrounded by open, dry uplands. Concurrently at Osborne Bay, *Pinus-Picea-Abies*-Poaceae parkland occurred. Dry and cold climate intensified as the Fraser Glaciation progressed after 24,000 ^{14}C yr BP and non-arboreal communities expanded. At Cordova Bay, cold and dry tundra or parkland in upland sites, and sedge wetlands on an aggrading floodplain are recorded. Sparse tree cover and grass-tundra surrounded a floodplain at Skutz Falls around 21,000 ^{14}C yr BP under cool and dry climate. Subalpine-like *Picea-Abies-Pinus* parkland and moist, species-rich grassland meadows occurred at McKenzie Bight at the same time. A sedge wetland occupied the site of deposition, and was periodically inundated as lake levels fluctuated. Upland grasslands at Cordova Bay are recorded between 21,600–19,400 ^{14}C yr BP, while local ponded areas developed on an aggrading floodplain at sea level. From 19,400-19,300 ^{14}C yr BP, parkland at Cordova Bay developed as climate moistened and warmed at the time of the Port Moody Interstade known from the Fraser Lowland. Abundant marine dinoflagellate cysts between 21,600–19,400 ^{14}C yr BP, reveal a high sea level stand and

Dissertation Abstracts

Detecting small-scale tree line fluctuations and fire events using palynological evidence from Waite Lake, Northwest Territories, Canada

Shantal Goldsmith, BSc. Honours Thesis
University of Calgary

co-supervised by
Dr. Len V. Hills and
Dr. Jennifer M. Galloway

Lake sediments from Waite Lake were analyzed to examine the natural archives of Late Holocene climate events in the Northwest Territories. Fossilized pollen and spores from these sediments were analyzed to create a profile of the vegetation at a high resolution (decadal-scale) over the past ~3500 years. Extrapolating from this palynological evidence, it was determined that four major shifts in vegetation occurred in this region during the Late Holocene. These shifts occurred at approximately 2150, 1380, 950 and 156 calendar YBP. During 2150 and 950 calendar YBP a shift to tundra conditions was observed while during 1380 and 156 calendar YBP a shift to boreal forest conditions was observed. A shift towards tundra conditions indicates a cooling climate and a shift towards boreal forest conditions indicates a warming climate. Microscopic charcoal was also analyzed to describe the fire regime in the Northwest Territories during the Late Holocene. This was done to gain a better understanding of climate-fire relationships.

Members in the News

Deconstructing Dinner

Long-time CAP member, Dr. Vaughn Bryant continues to make us proud. A new CBC documentary called "Deconstructing Dinner" features Dr. Bryant's work in the frontier field of melissopalynology. Beginning in the early 1980s, Dr. Bryant—aka the honey detective, pioneered efforts in this emerging area of pollen research. Identification of floral sources used by honeybees to produce honey, the use of pollen coefficient data to identify and verify premium grades of honey, and identification of the geographical origin of commercially-imported and exported honey are some of the key aspects of Dr. Bryant's work.
In the CBC documentary, Dr. Bryant talks about ways to keep high product standards in the honey industry. His pioneering work is already contributing to the implementation of the new US Standards of Identity for honey and honey products. In 2011, Food Safety News approached Dr. Bryant to analyze popular store-bought honeys.
"Deconstructing Dinner" will air in Canada as well as US. Recent articles on Dr. Bryant are featured in the Bee Culture magazine (October 2012) and Wired magazine (August 2012)

Florin Pendea, ifpendea@lakeheadu.ca

The Mystery Grain

Welcome back to our Mystery Grain series and thank you to those who have sent their comments on our May mystery grain. Most opinions pointed to Ranunculaceae and indeed, the grain most probably belongs to the *Aconitum* group. I am still unsure what to make out of the fact that this grain appeared briefly but abundantly during the Late Glacial-Holocene transition of a western Beringian site in Kamchatka and then disappeared completely from the pollen record.

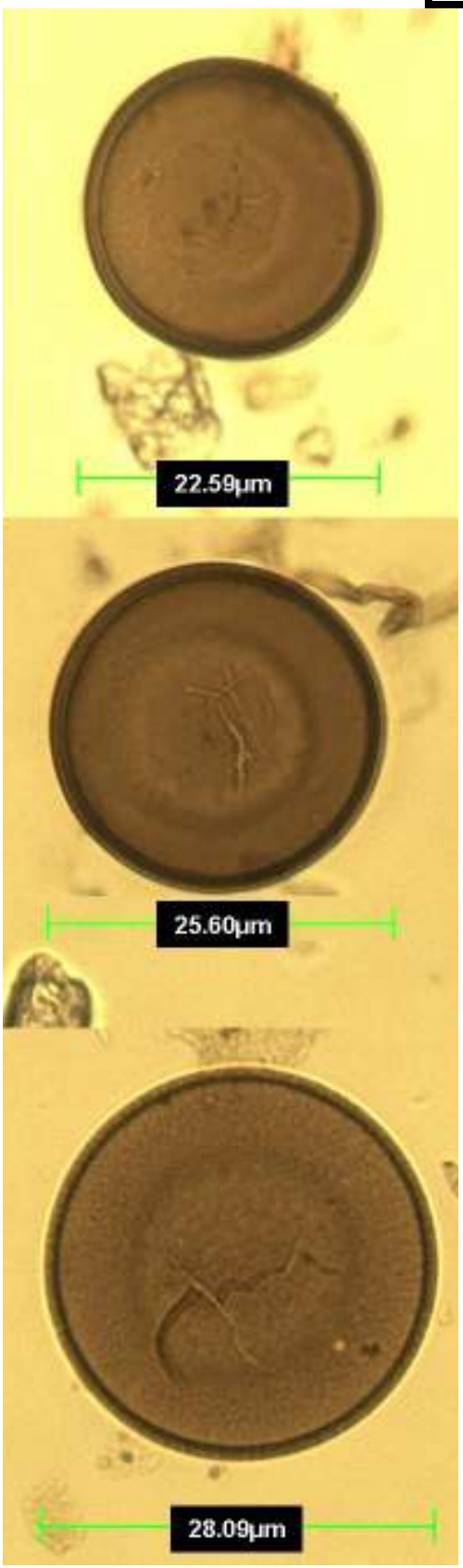
My new challenge to you relates to the wonderful but mysterious world of NPPs that load our microfossil slides, sometimes in large numbers. I am wondering sometimes, as I am sure you are too, if these NPPs are not more indicative of environments than the pollen and spores themselves.

The attached bright field photos show a NPP that I found in very large numbers on pollen slides coming from various depositional environments, from subarctic tidal marshes to tephra-disturbed peatlands. The grain is fairly non-descript: dark-brown to light brown, perfectly round, with a distinct system of slits that concentrate around the grain's center in polar view. The surface is psillate although some grains are faintly scabrate.

Please let me know what you think by email (ifpendea@lakeheadu.ca). I'll have the anonymous results published in the next issue. I hope you enjoy the exercise and don't forget to send me ***your*** mystery grain following the specifications below:

- three microphotographs (ideally bright-field) showing key morphological features;
- a short blurb with a morphological description of the grain and its geographic origin.

Palynologically yours, Florin Pendea



Featured article

Using Application Programming Interfaces in Paleoecology

Simon Goring
University of Wisconsin

A large number of web services provide interfaces to databases so that individuals can produce automated queries over the internet without having to fill in multi-page forms, or click the 'Submit' button over and over again. These Application Programming Interfaces, or APIs, can be used in research workflows, with scripts using Python, Matlab or R, or with various programming languages or specialized work flow software such as Kepler. In addition, third party websites can used these services to provide specialized displays or analyses of data. Incorporating APIs helps to ensure results remain up to date, or are quasi-reproducible when code is included as a supplement to a paper.

This is a particularly exciting time to be a paleoecologist, as data initiatives such as Neotoma are developing APIs that are directly relevant to our data needs. In a recent blog post I demonstrate how the Neotoma API can be used in an R workflow, along with a worked example. Other existing scientific APIs are being packaged into functions for R by the ROpenSci project, including links to Dryad, Mendeley, the Integrated Taxonomic Information Service and the Global Biodiversity Information Facility. The Neotoma API remains under development, so it does not have full functionality, but more and more functions are being added by Brian Bills and Michael Anderson as time goes on and the documentation is well developed.

Being able to access data directly from web services provides an opportunity to build research workflows that can take advantage of the massive improvements in paleoecoinformatics (see Brewer et al., 2012 for a review). For example, many pollen chronologies in Neotoma (originally from the North American Pollen Database) have been updated using biostratigraphic markers by Blois and others (Blois et al., 2011), and Neotoma has a number of records that are processed and waiting in the so-called 'Holding Tank'. Using APIs as part of a research workflow (such as an R script) would allow an individual to continually check Neotoma for new data (or updates to existing data) in an automated way so that analysis would reflect the most current state of the data.

For R users, my blog post provides an example of how Neotoma's API might be used, but it also points to a developing problem within paleoecology. We are losing the data from pollen records as researchers either retire or leave the field. I used the Neotoma API to show that, the Unaccquired Sites Inventory (which hasn't been updated

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Recent Publications

Bringué M. & *Rochon A. 2012. Late Holocene paleoceanography and climate variability over the Mackenzie Slope (Beaufort Sea, Canadian Arctic). *Marine Geology* 291-294: 83-96.

Bunbury J., *Finkelstein S.A., Bollmann J. 2012. A testate amoeba record of Holocene hydroclimatic change from a peat bog in the Attawapiskat River watershed, Hudson Bay Lowlands, Canada. *Quaternary Research* 78: 275-284.

Bunbury J. and *Gajewski K. 2012. Climate variability of the past 2000 years inferred from lake sediments, southwest Yukon Territory, Canada. *Quaternary Research* 77:355-367.

Casas-Monroy O., Roy S., and *Rochon A. 2012. Dinoflagellate cysts in ballast sediments: differences between Canada's east coast, west coast and the Great Lakes. In press in *Aquatic Conservation: Marine and Freshwater Ecosystems*.

*Durantou L., *Rochon A., Ledu D., Massé G., Schmidt S. and Babin M. 2012. Quantitative reconstruction of sea-surface conditions over the last ~150 yr in the Beaufort Sea based on dinoflagellate cyst assemblages: the role of large-scale atmospheric circulation patterns, *Biogeosciences Discussion* 9:7257-7289, *BioGeosciences* (accepted).

Fortin M-C., & *Gajewski K. 2012 Potential problems with the use of gridded climate data in regional quantitative paleoenvironmental studies from data-poor regions. *Journal of Paleolimnology.* doi 10.1007/s10933-012-9639-9.

*Gajewski K. 2012. The Evolution of Polar Desert and Tundra ecosystems. Pp 48-65 (Chapter 3) in: H. French and O. Slaymaker, eds. *Changing cold environments: a Canadian perspective*. Wiley-Blackwell. Chichester, UK.

*Galloway J.M., Adamczewski J., Schock D.M., Andrews T.D., MacKay G., Bowyer V., Meulendyk T., Moorman B., & Kutz, S.J. 2012. Diet and habitat of mountain woodland caribou inferred from dung preserved in 5000-year old alpine ice in the Selwyn Mountains, Northwest Territories, Canada. *Arctic* 65:59-79.

*Galloway J.M., Sweet A.R., Pugh A., Schröder-Adams C.J., Swindles G.T., Haggart J.W., & Embry A.F. 2012. Correlating mid-Cretaceous strata in the Canadian High Arctic using palynology. *Palynology* (In press).

Gao C., *McAndrews J.H., Wang X., Menzies J., Turton C.L., Wood B.D., Pei J., & Kodors, C. 2012. Glaciation of North America in the James Bay Lowland, Canada 3.5 Ma. *Geology* 40:975-978.

Gill J.L., Blois J.L., *Goring S., Marlon J.R., Bartlein P.J., Nicoll K., Scott A.C., &

Whitlock C. 2012. Paleoecological changes at Lake Cuitzeo were not consistent with an extraterrestrial impact. *Proceedings of the National Academy of Science* 109:E2243.

*Goring S., Williams J.W., Blois J.L., Jackson S., Paciorek C.J., Booth R.K., Marlon J.R., Blaauw M., & Christen JA,. 2012. Deposition times in the northeastern United States during the Holocene: establishing valid priors for Bayesian age models. *Quaternary Science Reviews* 48:54-60.

*Hartkopf-Fröder, C., Rust, J., Wappler, T., Friis, E.M., & Viehofen, A. 2012.Mid-Cretaceous charred fossil flowers reveal direct observation of arthropod feeding strategies. *Biology Letters* 8: 295-298.

Lacasse, O., *Rochon, A., Roy S. 2012. High cyst concentrations of the potentially toxic dinoflagellate *Alexandrium tamarense* species complex in Bedford Basin, Halifax, Nova Scotia, Canada. *Marine Pollution Bulletin* (in press).

*Lacourse T., & *May L. 2012. Increasing taxonomic resolution in pollen identification: Sample size, spatial sampling bias and implications for palaeoecology. *Review of Palaeobotany and Palynology* 182:55-64.

*Lacourse T., Delepine J.M., Hoffman E.H., & *Mathewes R.W. 2012. A 14,000 year vegetation history of a hypermaritime island on the outer Pacific coast of Canada based on fossil pollen, spores and conifer stomata. *Quaternary Research* 78:572-582.

*May L., & *Lacourse T. 2012. Morphological differentiation of *Alnus* (alder) pollen from western North America. *Review of Palaeobotany and Palynology* 180:15-24.

*McAndrews J.H., & Turton C.L. 2010. Fungal spores record Iroquoian and Canadian agriculture in sediment of Crawford Lake, Ontario, Canada. *Vegetation History and Archaobotany* 19:495-501.

Medeiros A.S., Friel C.E., *Finkelstein S.A., & Quinlan R. 2012. A high resolution multiproxy record of pronounced recent environmental change at Baker Lake, Nunavut. *Journal of Paleolimnology* 47:661-676.

Radi T., Bonnet S., Cormier M-A., *de Vernal A., *Durantou L., Faubert E., *Head, M.J., Henry M., *Pospelova V., *Rochon A., & Van Nieuwenhove N. 2012. Operational taxonomy and (paleo-)autecology of round, brown, spiny dinoflagellate cysts from the Quaternary of high northern latitudes. In press in *Marine Micropaleontology*.

Richerol T., *Pienitz R., & *Rochon A. 2012. Modern dinoflagellate cyst assemblages in surface sediments of Nunatsiavut fjords (Labrador, Canada). *Marine Micropaleontology* 88-89:84-54.

Scheibner C., *Hartkopf-Fröder C., Blomeier D., & Forke H. 2012.The Mississippian (Lower Carboniferous) in northeast Spitsbergen (Svalbard) and a re-evaluation of the Billefjorden Group. *Zeitschrift der deutschen Gesellschaft für Geowissenschaften* 163: 293-308.

Swindles G.T., Patterson R.T., Roe H.M. &

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Using Application Programming...cont'd

since 1998!) has an average published age that is up to four years older than the records in Neotoma, meaning these older records are already being lost. I would guess that if we were to update the Unacquired Sites database we would find that the problem persists.

I hope many of you get the opportunity to use (and submit data to) Neotoma, and the new informatic tools that are being developed for paleoecologists, but it is important to recognize the fundamental importance that data collection plays in all of these tools. None of these tools would be possible without data collection efforts that have targeted interesting sites and asked exciting questions about our shared past!

If you have any questions about submitting data to Neotoma please contact Eric Grimm (grimm@museum.state.il.us).

Detecting small-scale tree line fluctuations… cont'd

strong marine influence at Cordova Bay. Glacioisostatic depression of the crust on the east side of Vancouver Island is the most probable explanation. The presence of pollen-bearing glacio-lacustrine sediments at McKenzie Bight around 21,000 ^{14}C yr BP at ~93 m and contemporaneous isostatic crustal depression at Cordova Bay strongly suggest a major glacial body in the region at the same time as the Coquitlam advance in the Lower Mainland. Ice-free landscapes may have occurred on southern Vancouver Island through the Fraser glaciation beyond the Saanich glacier ice limits.

Recent publications cont'd

*Galloway J.M. 2012. Evaluating periodicities in peat-based climate proxy records. *Quaternary Science Reviews* 41: 94-103.

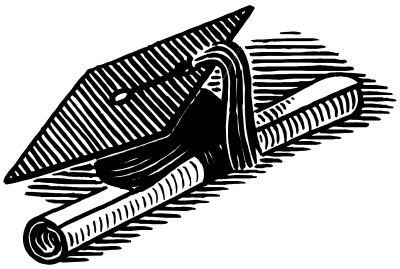
PALYNFO

MICROSCOPES FOR SALE

MICROSCOPE, RESEARCH, LEITZ
Leitz Ortholux II microscope with separate power supply. Comes with Fluorescence attachment with separate transformer, 35 mm. camera attachment (with one extra film cassette) and camera control box. Phase contrast, Interference contrast. Objectives: 10x Plan, 16x (Zeiss), 40x NPL Fluotar, 40x NPL interference, 40x NPL Fluotar phase. 12.5 mm Periplan eyepieces. Three spare Philips quartz halogen lightbulbs for transmitted light, one spare Osram mercury lightbulb for fluorescence lighting. Dustcover.
Microscope was serviced on an annual basis by Western Optitech, last serviced in 2011. All in excellent condition, unsurpassed Leitz optics.

COMPARISON MICROSCOPE SET, LEITZ
COMPARISON MICROSCOPE SET, LEITZ, useful for biological/botanical studies, consisting of two Laborlux Leitz microscopes that can be joined by a bridge, allowing to observe a specimen in one of the microscopes next to a specimen in the other microscope for comparison of colour and details. Each microscope is equipped with a 10x and a 40x objective and a built-in light source. A set of eye-pieces can be mounted onto the bridge. They consist of two 10x oculars.
The microscopes are stored in individual hard-plastic Leitz cases for safe transportation. They can also be used individually. The microscopes were last serviced in 2011. They are in excellent condition.

Contact Bert Van Helden at Ph. 403-258-2874.



Recent Theses

2012 Beck, Kristen (MSc Geography) *A Holocene Paleolimnological Record from the Turkey Lakes Watershed Long-Term Monitoring Site in Central Ontario, Canada*. Supervised by Sarah Finkelstein. University

2012 Paquette, Nathalie (MSc) *Climatic change causes abrupt shifts in forests, inferred from a high-resolution lacustrine record, Southwestern Quebec, Canada*. Supervised by Konrad Gajewski, Department of Geography, University of Ottawa

2012 Shiller, Jennifer. (MSc Geography) *Factors Affecting Holocene Carbon Accumulation in a Peatland in Southern Ontario*. Co-supervised by Sarah Finkelstein and Sharon Cowling. University of Toronto

Awards

Match made in Heaven? Art and Science

University of Quebec at Rimuski's Lise Durantou received the first prize in an unusual but amazing contest: "Researchers of Art". The contest was held this November at the Caisse Desjardin Art Gallery in Rimouski and featured works of art that represent the creative marriage of science and art.
Lise's piece (photo bellow) is entitled "Vestige d'un génie" (fr.) and shows in a whole new light the beautiful but spiky cyst of the dinoflagellate *Operculodinium centrocarpum.*

Discussion

Professor Jock McAndrews sends us a very interesting provocation. Thirsty for knowledge as always, Jock wants to relate fossil tree pollen abundances with possible MWP and LIA climate signals.
Can some learned readers please provide opinions and/or references on the time lag between when a species germinates and when a species produces abundant pollen?

CAP President's Report, 2012

I became President of the Canadian Association of Palynologists on January 1 of this year. The following consists of a brief report on CAP activities since the last Annual General Meeting, which was held August 30, 2011 in Québec City.

At the 2011 AGM, Florin Pendea and Simon Goring volunteered to fill soon-to-be vacant Executive positions, Newsletter Editor and IFPS Councillor, respectively. Many thanks to Florin and Simon for volunteering their time and effort. Florin became Newsletter Editor effective January 1, 2012. Simon will take over the IFPS Councillor position at the IPC meeting in Tokyo in August 2012. The President-Elect position remains vacant.

In December 2011, CAP was invited to meet jointly with AASP, Dino 10, and NAMS (North American Micropaleontology Section of the Society for Sedimentary Geology) in the fall of 2013 in San Francisco, for one large conference that brings together all of these groups. After thoughtful discussion, the CAP Executive agreed that this would be an excellent opportunity for palynologists in CAP to connect with others outside our Association and we accepted the invitation. Alwynne Beaudoin and I are serving on the 2012 Conference Organizing Committee, along with representatives from AASP, Dino 10 and NAMS. The details of CAP's participation in the conference program have yet to be determined. In all likelihood, the 2013 CAP Annual General Meeting will occur in San Francisco, in conjunction with this conference. The CAP Executive is also considering sponsoring or convening a special session at the 2013 CANQUA meeting in Edmonton.

Following a recommendation from those in attendance at the 2011 AGM and a review of CAP finances, the Executive decided to increase the Annual Student Research Award from $200 to $300. This year marks the fourth time CAP has awarded its Annual Student Research Award. After the March 1 deadline, an adjudication committee consisting of Alwynne Beaudoin, Jean Nicolas Haas, and myself (as Chair) evaluated the three applications we received and came to a unanimous decision. The recipient of the 2012 CAP Student Research Award is Andrea Price (School of Earth and Ocean Sciences, University of Victoria) for her M.Sc. research on "Late Quaternary climatic and oceanographic changes in the North Pacific as recorded by dinoflagellate cysts." Andrea plans to use the funds towards participation in a SEM training workshop and subsequent user fees to gather images of a new dinoflagellate cyst species found in the Gulf of California.

I would like to welcome all of the new members of who have joined the Association. Finally, I would like to thank all members of the Executive Committee for their hard work and commitment to CAP over the last year: Matthew Peros (President), Mary Vetter (Secretary-Treasurer), Florin Pendea (Newsletter Editor), Alwynne Beaudoin (Website Editor), and Jean Nicolas Haas (CAP Councillor to IFPS).

Respectfully submitted,

Terri Lacourse
CAP President, 2012-2013
May 2, 2012

CAP Secretary/Treasurer's Report, 2012

Year	Members
2003	54
2004	43
2005	36
2006	47
2007	51
2008	58
2009	66
2010	64
2011	66
2012	65

Membership Report

As of 16 May 2012, CAP has 65 members in good standing who have paid dues for 2012 or who have received a free membership as a result of winning a CAP Student Award. The chart below shows our membership over the past ten years.

I would like to extend a special welcome to our new members in 2012!
Kimberley Ball, University of Calgary
Manuel Bringué, University of Victoria
Michelle Chaput, University of Ottawa
Gail Chmura, McGill University
Lise Durantou, Université du Québec à Rimouski
Kristen Harrison, University of Victoria
Alexandre Lamarre, GEOTOP - Université du Québec à Montréal
Benjamin O'Reilly, University of Toronto
Andrea Price, University of Victoria
Thomas Rodengen, Simon Fraser University
Simon van Bellen, University of Aberdeen, UK

Financial Report

For the period ending 16 May 2012, the balance in the CAP account is $6,982.72 (compared to $6,628.78 at the 2011 AGM). Of this amount, $690 represents pre-paid memberships for future years. The 2012 IFPS dues will be paid in early June, to allow any new memberships taken out at the 2012 AGM to be counted. IFPS dues are $1.50 USD per member.

In general, membership receipts during the year balance expenditures with a modest surplus of around $200.

Recommendations: Paying the outstanding commitment of 2012 IFPS dues will still leave a healthy balance in our account. Our regular annual charges are IFPS dues ($1.50 USD per member), the annual corporation renewal fee (approximately $30), and the CAP Student Research Award ($300). CAP's financial position allows us to continue to support, in a modest way, outreach initiatives at conferences (*e.g.* coffee breaks) and sponsor sessions.

Respectfully submitted

Mary A. Vetter
CAP Secretary/Treasurer
May 16, 2012

Annual Financial Statement

Financial Statement: 1 August 2011 – 16 May 2012			
	Income	**Expenses**	**Balance**
Opening balance			**$6,628.78**
Bank interest	$0.52		
Memberships	$779.19		
2011 IFPS membership dues		$97.18	
2012 CAP Student Award		$300.00	
CAP Annual Registration Fee		$28.59	
Closing balance	Total $779.71	Total $425.77	**$6,982.72**

The closing balance includes 69 prepaid annual memberships in the amount of $690.00 for the years 2013-2016. This will affect the income from this source for the years indicated. The 2012 IFPS dues have not yet been paid, but will be approximately $100 ($97.50 USD with the present 65 members for 2012). The IFPS dues will be paid in early June, allowing for any additional memberships received at the 2012 AGM.

Respectfully submitted by

Mary A. Vetter
CAP Secretary/Treasurer
May 16, 2012

Statement by Appointed Auditor

I have reviewed the financial statements for CAP and it is my opinion that the financial statement represents a full and fair account of the financial affairs of the Canadian Association of Palynologists for the period August 1, 2011 to May 16, 2012.

Dennis R. Braman
Curator of Palynology
Royal Tyrell Museum of Paleontology
Drumheller, Alberta
May 18, 2012

CAP Newsletter Editor's Report, 2012

I started as Newsletter Editor on January 1st, 2012. For the May Newsletter issue (Vol. 35, Number 1, 2012), I sent out a call for contributions on April 4th 2012, with deadline for April 30th 2012.

The May Newsletter has 13 pages and featured a variety of articles. The President's Message, New Labs, Recent Publications, and Palynfo sections brought up-to-date information to the Canadian palynological community. The Palynolit section featured a beautiful article on Francis Brett Young's *The House under Water* by Alwynne Beaudoin entitled "A doomed valley in Spring".

A new item was introduced, "The Mystery Grain", featuring rare and/or difficult to identify pollen/palynomorph types with an invitation extended to CAP members to send their opinions on the grain's identity.

The May Newsletter was distributed to CAP members on May 20th, 2012. Past Newsletters are available on the CAP website. Contributions for the next issue of the Newsletter will be accepted until November 15, 2012.

Respectfully submitted,

Florin Pendea
CAP Newsletter Editor
May 22, 2012

CAP Website Editor's Report, 2012

I have continued as editor for the CAP website since the last AGM. The presentation is located at http://www.scirpus.ca/cap/cap.shtml, under my own domain (www.scirpus.ca). There are no costs to CAP associated with this hosting. During the past year, accesses to the presentation have usually been between 500 and 600 each month.

The presentation provides various resources and information about CAP to the palynological community. I continue to update time-sensitive sections, such as the conference listing and various announcements. Information about the CAP Student Research Award and the application process, as well as a year-to-year record of the Award recipients, is also included. Back issues of recent *CAP Newsletters* (though not the latest issue) are archived, making them available to members over the long-term. I have maintained the author listing and index to past *CAP Newsletter* issues. Other than regular maintenance, there has been little change to the presentation in the last year.

I would be happy to include more CAP-related material in the web presentation, especially more images. I would be pleased to receive suggestions or content for new components to broaden its appeal. If CAP members agree, I am prepared to serve as the Association's Website Editor for another year.

Respectfully submitted,

Alwynne B. Beaudoin
CAP Website Editor
May 2, 2012

Happy New Year!

Bonne Année !