



Canadian Association of Palynologists
Association Canadienne des Palynologues
NEWSLETTER

Volume 42

Number 2

December 2019

PRESIDENT'S MESSAGE

This is my last message as President of CAP; starting January 2020, our current President-elect Anna Pieńkowski will take over from me. I would like to take this tribune as an opportunity to sincerely thank the members of the executive committee who invest their time and energy in the association with professionalism, creativity and enthusiasm. Thank you Manuel Bringué (Website editor), Jessie Holst Vincent (Secretary-treasurer), Florin Pendea (Newsletter editor), Francine McCarthy (CAP councillor to IFPS), and Anna Pieńkowski (President-elect) – I am grateful to have been part of the team during the past 3 years.

Early next year, and thanks to the support of our members, we will celebrate the work

and merit of students via the CAP student award. We will accept applications from CAP member students of all levels (undergraduate and graduate) until March 1st, 2020. For more information please consult p. 2 of this issue. You can access the profiles of our previous awardees on our website: <https://capacp.wordpress.com/student-award/>

On a final note: our Secretary-treasurer Jessie Holst Vincent recently decided to step back from the executive committee after serving for more than 3 years. Jessie, in the name of the executive committee and all CAP members, I would like to express our gratitude for your contribution to the association! The executive committee will be seeking applications for a new Secretary-treasurer, as well as a new President-elect. If you are interested, please do not hesitate to reach out to us.

We wish you happy holidays!
Bon temps des fêtes à tous!

Sincerely,
Audrey Limoges,
Department of Earth Sciences,
University of New Brunswick

CAP EXECUTIVE 2019

President: Audrey Limoges
President-elect: Anna Pieńkowski
Newsletter Editor: Florin Pendea
Secretary-Treasurer: Jesse Holst Vincent
Website Editor: Manuel Bringué
IFPS Councillor: Francine McCarthy

Editor's Notes

I would like to thank all who contributed to this edition: M. Bringué, V. Bryant, K. Gajewski, T. Lacourse, A. Limoges, F. McCarthy, S. McLachlan, V. Pospelova, S. Stolze, J. Vincent.

Deadline for Next CAP Newsletter

Please submit items for the next issue of the *CAP Newsletter* (Volume 43, Number 1, May 2020) by April 15, 2020. 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

Table of Contents

President's Message	1
CAP Executive.....	1
Editor's Notes	2
CAP Student Award.....	2
New Dissertations	3
CAP Executive Position Open	3
Upcoming Events.....	4
Recent publications.....	6
Membership Form	8

CAP Student Award

The CAP student research award recognizes student contributions to palynological research. The award consists of a three-year membership to the Association and between \$200 and \$500 CAD to be used to finance anything related to the student's research (ex. analyses, participation to conference, fieldwork, etc.). We encourage all undergraduate and graduate students to apply. Applicants must be members of the association.

Application deadline and details: the deadline for the application is March 1st, 2020. The application consists of: 1) a one-page statement outlining the nature of the research project, its scientific importance, the approximate timeline for completion of the project, and the research aspects toward which the funds would be directed; (2) a CV; and, (3) a letter of support from the student's supervisor.

More information can be found on the CAP website: <https://capacp.wordpress.com/student-award/>





Dissertations

High-Resolution Record of Vegetation and Climate Change During the Holocene in Southwestern Québec

Amanda Lagacé, 2019

MSc Thesis

University of Ottawa

Supervisor: Konrad Gajewski

Abstract: A varved sediment sequence spanning the past ~11.0 ka was collected from Lac Noir (45.77N, 75.13W, 168 m a.s.l.) in southwestern Québec. A high-resolution pollen record documents the post-glacial vegetation history of the region over the course of the Holocene. The record shows an initial open spruce woodland, the establishment of the boreal and mixed conifer-hardwood forest into the area, as well as the expansion and contractions of tree populations in response to climate variability during the Holocene. The well known *Tsuga* decline at Lac Noir lasted 500 years starting at 5.5 ka and it took 1 460 years for hemlock to recover. The highest frequency of fire activity occurred during the early Holocene, and the lowest in the mid-Holocene. The late Holocene saw an increase in fire frequency,

which could be attributed to a drier climate in eastern North America during this period. The impact of climate variability, fire disturbances and possible biotic factors on the Lac Noir vegetation are examined.

CAP Secretary-Treasurer Position Open

The Canadian Association of Palynologists/ L'Association Canadienne des Palynologues is currently seeking candidates for the position of Secretary-Treasurer.

The position requires no prior experience and the former treasurer will help with the transfer of duties.

Duties include: depositing membership dues (1 trip to the bank per month), accepting e-transfers of membership fees, payment of IFPS annual dues by wire transfer, keeping regular records of financial transactions (deposits and cheques), and updating the CAP memberships list. In addition, the Secretary treasurer is tasked with sending reminders for membership dues, providing an annual financial statement for the CAP Annual General Meeting (AGM), and arranging annual informal audit of year for AGM.

If you are interested in this position, please contact Francine McCarthy, our interim Secretary-Treasurer at fmccarthy@brocku.ca

UPCOMING EVENTS



Excerpt from the First Circular

Since 2009, the world community of palynologists and palaeobotanists has met every four years to discuss the latest research and to exchange experiences. The 15th International Palynological Congress (IPCXV 2020) and the 11th International Organisation of Palaeobotany Conference (IOPC-XI 2020) are coming soon. This joint congress will be held in Prague, from the 12th to the 19th of September 2020, hosted by Czech palynologists and palaeobotanists. In 1820, a binomial nomenclature for fossil plants was used for the first time by the “Father of Palaeobotany” Caspar Maria Sternberg, when publishing *Flora der Vorwelt*. We are delighted to dedicate this meeting in honour of 200 years of Palaeobotany.

It will be an excellent opportunity for the Czech Republic (a country rich in plant fossil finds, palynological sites, and palynological and palaeobotanical history) to host the leading experts in various disciplines, and to promote scientific innovations. Joint symposia are planned to foster interaction and integration between palynologists and palaeo-

botanists, as well as plenary sessions of general interest.

The meeting is promoted by the collective efforts of the International Federation of Palynological Societies (IFPS) and the International Organisation of Palaeobotany (IOP).

Please complete the pre-registration form on our website:

<http://prague2020.cz/registration.php>

Le 88^e Congrès de l'ACFAS

tenu aux Universités de Sherbrooke et
Bishop's
Colloque 201 du Mardi 5 mai 2020

**De la fin de la période glaciaire jusqu'à
l'Anthropocène dans l'est de l'Amérique du
Nord: nouvelles méthodes, questions et
perspectives**

Responsable:
Matthew Peros
Université Bishop's

Coresponsables:
Jeannine-Marie St-Jacques
Université Concordia

Pierre J.H. Richard
Université de Montréal

Le thème de ce colloque porte sur les changements environnementaux et climatiques depuis la fin de la dernière période glaciaire jusqu'à aujourd'hui dans l'Est de l'Amérique du Nord. Outre la recherche sur les changements environnementaux, notre colloque sollicite également des contribu-

tions sur le rôle des peuples autochtones et nonautochtones dans la formation des paysages de cette région – grâce à des activités comme le défrichement et l'agriculture – et sur la façon dont ces peuples se sont adaptés au climat naturel et aux variations environnementales. Au cours des 20 000 dernières années, l'est de l'Amérique du Nord fut une région très dynamique qui a connu des changements environnementaux considérables, notamment la fonte de l'inlandsis Laurentidien, la migration des plantes et des animaux après la déglaciation, ainsi qu'une histoire longue, dense et complexe d'établissements humains et d'utilisation des terres.

Par ailleurs, cette région possède une multitude de lacs, de tourbières et d'autres archives naturelles qui foisonnent de données paléoenvironnementales de haute qualité. En adoptant une perspective à long terme et en se concentrant sur la recherche entreprise à l'aide d'une gamme d'indicateurs substitutifs (p. ex. : pollen, charbon de bois, diatomées, cernes d'arbres, etc.), nous espérons que le colloque permettra de mieux comprendre les mécanismes à l'origine des variations climatiques naturelles ainsi que les interactions humaines avec l'environnement pour plusieurs périodes et à diverses échelles. Bien que les études entreprises à l'aide de données indirectes traditionnelles soient les bienvenues, nous invitons particulièrement les exposés de recherches réalisées à l'aide de nouvelles méthodologies et approches, ainsi que les études à grande échelle au niveau régional fondées sur des bases de données paléoécologiques et archéologiques.

Date limite pour la soumission des résumés : 1er mars 2020 à 16 h. Veuillez envoyer les résumés par courriel au Dr Matthew Peros (mperos@ubishops.ca).

Les titres ne doivent pas dépasser 180 caractères et les résumés ne doivent pas dépasser 1500 caractères. En plus du programme scientifique, nous offrirons à toute personne intéressée une visite au Laboratoire de recherche sur les changements climatiques et environnementaux de l'Université Bishop's, une visite du campus de l'Université et une excursion au Parc écoforestier de Johnville le 6 mai (<http://www.naturecantonsdelest.ca/parc.html>). Le Parc est une copropriété de l'Université Bishop's et de l'Université de Sherbrooke. Les détails suivront.

PALYNFO

Quick update: Prof. Vera Pospelova and her Paleoenvironmental / Marine Palynology Laboratory at the School of Earth and Ocean Sciences (University of Victoria, Canada) have moved to the Department of Earth & Environmental Sciences at the University of Minnesota (Minneapolis, USA). Anyone who is interested in joining Vera's new group as a graduate student or postdoc, please do not hesitate to contact her at vpo-spe@umn.edu.



Recent Publications

* denotes a CAP member

- Beck, C., *Bryant, V.M., Jenkins, D. 2018. Analysis of Younger Dryas–Early Holocene pollen in sediments of Paisley Cave 2, south-central Oregon. *Palynology* 42 (2), 168–179, doi: 10.1080/01916122.2017.1319883.
- *Bringué, M., *Pospelova, V., Tappa, E.J., Thunell, R.C. 2019. Dinoflagellate cyst production in the Cariaco Basin: A 12.5 year-long sediment trap study. *Progress in Oceanography* 171, 175–211, doi: 10.1016/j.pocean.2018.12.007.
- *de Vernal, A., Eynaud, F., Henry, M., *Limoges, A., Londeix, L., Matthiessen, J., Marret, F., *Pospelova, V., Radi, T., Rochon, A., *Van Nieuwenhove, N., Zaragosi, S. 2018. Distribution and (palaeo)ecological affinities of the main *Spiniferites* taxa in the mid-high latitudes of the Northern Hemisphere. *Palynology* 42, 182–202, doi: 10.1080/01916122.2018.1465730.
- Kriesche, B., *Chaput, M., Kulik, R., *Gajewski, K., Schmidt, V. 2019. Estimation of spatio-temporal correlations of prehistoric population and vegetation in North America. *Geographical Analysis* doi:10.1111/gean.12214.
- *Lacourse, T., Adeleye, M.A., Stewart, J.R. 2019. Peatland formation, succession and carbon accumulation at a mid-elevation poor fen in Pacific Canada. *The Holocene* 29, 1694–1707. doi: 10.1177/0959683619862041
- *Lacourse, T., Beer, K.W., Craig, K.B., and Canil, D. 2019. Postglacial wetland succession, carbon accumulation and forest dynamics on the east coast of Vancouver Island, British Columbia, Canada. *Quaternary Research* 92, 232–245. doi: 10.1017/qua.2018.146.
- Lau, P., *Bryant, V.M., Ellis, J.D., Huang, Z.Y., Sullivan, J., Schmehl, D.R., Cabrera, A.R., Rangel, J. 2019. Seasonal variation of pollen collected by honey bees (*Apis mellifera*) in developed areas across four regions in the United States. *PLoS ONE* 14(6), e0217294.I., doi: 10.1371/journal.pone.0217294D.
- Lau, P., *Bryant, V.M., Rangel, J. 2018. Determining the minimum number of pollen grains needed for accurate honeybee (*Apis mellifera*) colony pollen pellet analysis. *Palynology* 42 (1), 36–42.
- *Limoges, A., Londeix, L., Mertens, K.N., Rochon, A., *Pospelova, V., Cuéllar, T., *de Vernal, A., 2018. Identification key for Pliocene and Quaternary *Spiniferites* taxa bearing intergonal processes based on observations from estuarine and coastal environments. *Palynology* 42, 72–88, doi: 10.1080/01916122.2018.1465733.
- Mathewes, R.W., *Lacourse, T., Helmer, E.F., Howarth, C.R., Fedje, D.W. 2019. Late Pleistocene vegetation and sedimentary charcoal at Kilgii Gwaay archaeological site in coastal British Columbia, Canada – with possible proxy evidence for human presence by 13,000 cal BP. *Vegetation History and Archaeobotany* doi: 10.1007/s00334-019-00743-4.
- *McLachlan, S.M.S., *Pospelova, V., Hebda, R.J. 2019 Areoligeracean dinoflagellate cysts from the upper Campanian (Upper Cretaceous) of Hornby Island, British Columbia,

Canada, *Palynology* 43 (4), 669-689, DOI:10.1080/01916122.2018.1539781.

Mertens, K.N., *Van Nieuwenhove, N., Gurdebeke, P.R., Aydin, H., Bogus, K., *Bringué, M., Dale, B., De Schepper, S., *de Vernal, A., Ellegaard, M., Grothe, A., Gu, H., *Head, M.J., Heikkilä, M., *Limoges, A., Londeix, L., Louwye, S., Marret, F., Masure, E., Matsuoka, K., Mudie, P.J., Penaud, A., *Pospelova, V., Price, A.M., Ribeiro, S., Rochon, A., Sangiorgi, F., Schreck, M., Torres, V., Uzar, S., Versteegh, G.J.M., Warny, S., Zonneveld, K., 2018. The dinoflagellate cyst genera *Achomosphaera* Evitt 1963 and *Spiniferites* Mantell 1850 in Pliocene to modern sediments: a summary of round table discussions. *Palynology* 42, 10-44, doi: 10.1080/01916122.2018.1465739.

Perrotti, A.G., Siskind, T., Bryant, M.K., *Bryant, V.M. 2018. Efficacy of sonication-assisted sieving on Quaternary pollen samples. *Palynology* 42 (4), 466-474.

*Pospelova, V., Zonneveld, K.A.F., Heikkilä, M., *Bringué, M., Price A.M., Matsuoka, K., 2018. Seasonal, annual, and inter-annual *Spiniferites* cyst production: a review of sediment trap studies. *Palynology* 42, 162-181, doi: 10.1080/01916122.2018.1465738.

Siska, P., *Bryant, V.M., Hung, I-K., Goovaerts, P. 2019. Matching the spatial distribution of upland and lowland pollen grains with the temperature and humidity in the Columbia Basin. *Athens Journal of Architecture* 6 (1), 1-18.

*Stolze, S. 2019 Archaeology and landscape history of Neolithic County Sligo. IQUA Field Guide, Irish Quaternary Association prepared for the XX INQUA congress, Dublin, Ireland 2019.

Tamo, C., *Gajewski, K. 2019. Environmental changes of the last 1,000 years on Prince of Wales Island, Nunavut, Canada.

Arctic, Antarctic and Alpine Research 51, 348-365. doi: 10.1080/15230430.2019.1640527, OPEN ACCESS.

*Van Nieuwenhove, N., Potvin, É., Heikkilä, M., *Pospelova, V., Mertens, K.N., Masure, E., Kucharska, M., Yang, E.J., Chomérat, N., Zajackowski, M., 2018. Taxonomic revision of *Spiniferites elongatus* (the resting stage of *Gonyaulax elongata*) based on morphological and molecular analyses. *Palynology* 42, 111-134, doi: 10.1080/01916122.2018.1465736.

Verostick, K.A., Teixeira-Santos, I., *Bryant, V.M., Reinhard, K.J. 2019. The Skiles Mummy: Care of a Debilitated Hunter-gatherer Evidenced by Coprolite Studies and Stable Isotopic Analysis of Hair. *International Journal of Paleopathology* 25 (June), 82-90, doi: 10.1016/j.ijpp.2018.08.004.

PALYNFO

**PaPER lab at
University of New Brunswick**

During the last 3 years, a new laboratory dedicated to **P**ast **P**rimaries Production and **E**nvironmental **R**econstructions (PaPER) has been built in the department of Earth Sciences at the University of New Brunswick, notably thanks to the support of CFI and NBIF. This laboratory is equipped with state-of-the-art equipment for microfossil sample preparation and observation.

PaPER accepts external contracts for the preparation and analysis of palynological slides, sample sieving, picking of foraminifers, imagery (light or SEM microscopy), etc. If you have any questions or are interested in the services and rates, please contact Audrey Limoges at alimoges@unb.ca

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 \$15 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 for a reduced amount of \$40. To join or renew, please fill out this membership form (by hand or in Adobe Reader®) and send your payment *via* either: a) a cheque (Canadian bank only) or money order payable to CAP along with your form, or b) an Interac e-Transfer to:

Dr. Francine McCarthy, Interim CAP Secretary-Treasurer,
Dept. of Earth Sciences, Brock University, St Catharines, ON, L2S 3A1, CANADA

Name: _____

Affiliation: _____

Address: _____

Tel: _____ Fax: _____

E-mail: _____

Research interests: _____

Do you want to make a donation towards the Annual CAP Student Research Award?

Yes

No

Amount: _____

New membership

Renewal

Total amount enclosed: _____

If you are the head of a palynology laboratory in Canada, may we include your name/address/research interests/webpage in the online "Directory of Canadian Palynology labs" on the CAP website? Yes No

Lab page URL: _____

Do you permit your name/address/email address to be included in the printed "World Directory of Palynologists" being compiled by IFPS? Yes No