



Canadian Association of Palynologists
Association Canadienne des Palynologues

NEWSLETTER

Volume 31

Number 1

May 2008

President's Message

I was observing a bee collecting pollen out of my crocuses this morning: a sign of spring for most people, *entomophilous pollination* for palynologists! The bee was buzzing in and around flowers, clumsily. A bee-in-training, just like the resident-in-training that I am. CAP and I are lucky to be able to count on an enthusiastic Executive: Mary Vetter, Alwynne Beaudoin, Terri Lacourse, Matthew Peros, and Jean Nicolas Haas. I really thank them all for their tremendous help, and their input. Advice from long-serving members are greatly acknowledged!

I have to thank Konrad Gajewski and Sarah Finkelstein, our previous President, for nominating me. They wished to create more links between French- and English-speaking members of CAP. I studied at the Université du Québec à Montréal, Louisiana State and Dalhousie University. Over the past few years, my research has focused on

the Holocene paleoceanography and paleoclimatology of the Eastern Canadian Margin, and I work with pollen and dinoflagellate cysts. I also worked briefly as a biostratigrapher in Dallas and Calgary. I also hope to create more links between Quaternary palynologists and those more stratigraphy-oriented. A first step towards this will be the palynology session at this year's GAC/MAC in Québec City. This special session proposed by Sarah is to honour Pierre Richard's remarkable contributions to palynology. It promises to be exciting: with talks about James Bay peat bogs, Holocene paleovegetation of southern Quebec, late Holocene climate records from the Arctic and from British Columbia fjords, as well as dinoflagellate cysts from the Late Cretaceous. Our AGM will be held in Québec City on May 26th. Matthew Peros will officially present a proposal for the CAP Student Research Award and a vote will take place.

Our own Francine McCarthy announced the AASP has voted unanimously to hold the 2010 meeting in Halifax. The joint AASP-CAP-CPC meeting is planned for September 29-October 1st 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 and they are inviting input from CAP members. I am also in contact with the organizers of GeoCanada 2010 in Calgary to ensure that CAP has a presence there.

CAP EXECUTIVE 2008

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

I hope to meet many CAP members in Québec City or further meetings. In the meantime, I wish you all a great summer!

Elisabeth Levac
CAP President, 2008-2010
elevac@ubishops.ca

2008 CAP ANNUAL GENERAL MEETING

The next Annual General Meeting of the Canadian Association of Palynologists will be held in conjunction with the Geological Association of Canada meeting in Québec City on May 26, 2008 in the Centre des Congrès de Québec (Room 303A) at 5:30pm. There are two major items on the agenda at the moment, among other things:

1- Members will have to vote on the CAP Student Research Award proposal prepared by President-Elect Matthew Peros.

2- A CAP-Councillor to the International Federation of Palynological Societies needs to be elected before the September 2008 Bonn Meeting. Jean Nicolas Haas has expressed interest in continuing to serve CAP in this role. Other interested members should contact CAP President Elisabeth Levac (elevac@ubishops.ca).

All CAP members are encouraged to attend the AGM. Those in the Québec City area, but not attending the GAC meeting, may also attend.

Editor's Notes

Thank you to all who contributed material for this edition of the *CAP Newsletter*: Muhammad Arshad, Alwynne Beaudoin, Vaughn Bryant, Konrad Gajewski, Rolf Mathewes, Arnie Miller, Petra Mudie, John Smol, and Susann Stolze.

Deadline for Next CAP Newsletter

Please submit items for the next issue of the *CAP Newsletter* (Volume 31, Number 2, December 2008) by November 15, 2008. Conference reports, announcements, field trip reports, notices of new books, book reviews, news, and essays on topics relevant to Canadian palynology are all welcome. Please send contributions as a text file to:

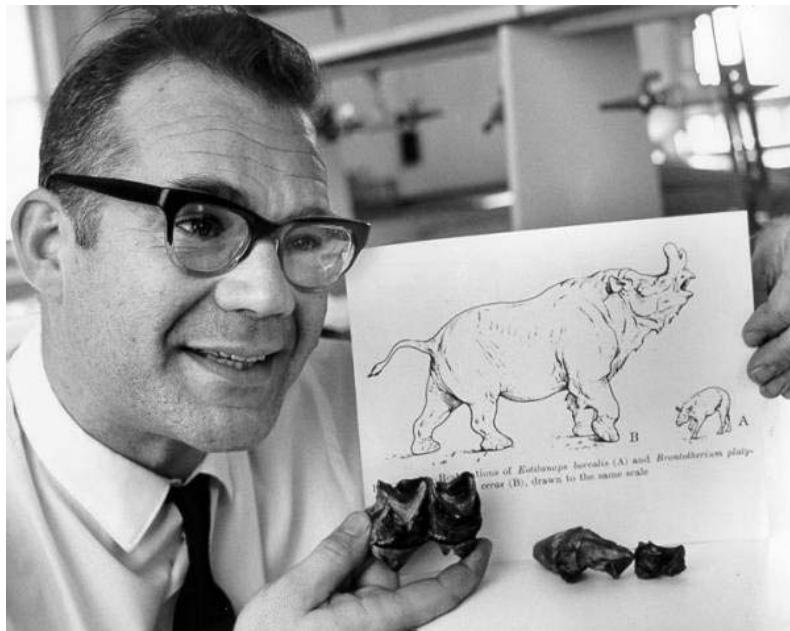
Terri Lacourse
CAP Newsletter Editor
tlacours@uvic.ca

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Glenn E. Rouse

1928-2007



Glenn Rouse with titanotherere teeth from Quesnel, BC—
University of British Columbia (UBC 41.1/2119).

Following a prolonged battle with Parkinson's disease, Glenn passed away at Arbutus Care Centre in Vancouver on December 9, 2007 at the age of 79. He was a pioneering palynologist and paleobotanist in Canada who left a significant imprint as a researcher, teacher, and colleague at the University of British Columbia, where he held a joint appointment in the Departments of Botany and Geology.

Glenn Everett Rouse was born in Hamilton, Ontario in 1928 and ultimately graduated with a PhD from hometown McMaster University under the tutelage of Norman Radforth, following a brief interlude at Ohio State University. I would later hear many stories of his thesis research travels to British Columbia and Alberta, where he sampled Jurassic and Cretaceous rocks after occasionally "riding the rails" in the Rockies with various colourful characters for company. No doubt his weaving of relevant adventure stories into his well-organized lec-

tures played some part in his popularity as an undergraduate instructor.

Glenn and his wife Carol came to Vancouver in 1956, and he took up an assistant professor position at UBC in 1957. He began a variety of innovative research projects in the Vancouver area (stratigraphy and palynology of the Burrard and Kitsilano formations), and also worked on various projects in the Interior of B.C. and in Northern Canada, as well as Alberta. Besides his main focus on Mesozoic and Cenozoic paleobotany, he also had an early interest in the Devonian, and co-authored a paper in *Science* (1962) on Devonian plants and another on *Perifosporites* from the Late Devonian of Quebec.

I met Dr. Rouse while doing a senior undergraduate project at Simon Fraser University in 1969. He was generous with advice and the loan of hard-to-find publications so I could try to identify plant megafossils I had collected at Quilchena, BC that summer. Af-



Aquilapollenites, Peel River, Yukon—
R.W. Mathewes

ter I wrote my paper, Glenn asked me what I planned to do, and after some discussion, he persuaded me to begin a graduate program with him in Botany at UBC. Although my project was on plant megafossils, I was somewhat surprised when he told me that the future was in pollen analysis, especially for someone with a more biological rather than geological background. I knew his own specialty was in paleopalynology of Mesozoic to Cenozoic strata, so it surprised me when he convinced me to do Quaternary palynology. Like most of his advice to me, it turned out to be well-reasoned and has served me well then, and after.

Another Quaternary palynologist that came later from Glenn's lab is Richard Hebda, who worked on the history of Burns Bog and is now based at the Royal British Columbia Museum in Victoria. Pre-Quaternary research predominated, of course, and names like Steve Hopkins, Ken Piel, Satish Srivastava, Eileen Williams, Helene Martin, Gerhard Bihl, and others were frequently mentioned.

Soon after starting at UBC, I learned that Glenn, his wife, and son Clay were headed to Sasebo Japan, a suburb of Nagasaki, for a sabbatical stint with palynologist M. Takahashi. This interlude had a lasting influence on him, since upon his return, his standard lunch came in a Bento box, and was washed

down with Japanese tea (with puffed rice) which I also learned to enjoy. His international connections were many, and he worked at maintaining a facility with French, German, Russian, Japanese, and probably other languages as well. His bountiful correspondence typically rested in stratigraphic piles on his desk, and as usual, he let me keep stamps and reprint request cards when he had fulfilled the orders. He corresponded with many notable palynologists and paleobotanists – and as I peruse a stack of request and thank you cards (I bemoan their disappearance), names like Harlan Banks, Jim Canright, David Dilcher, (Sir) Harry Godwin, Kirchheimer, Kuprianova, Geoff Playford, Olaf Selling, Toshimasa Tanai, S. Van Zinderen Bakker, and L.R. Wilson, among many others, jump out at me.

Not surprisingly, Glenn also collaborated closely with colleagues in Botany and Geology at UBC, notably geologist W.H. Mathews who provided stratigraphy and geochronology to supplement Glenn's palynological analyses of many Interior B.C. localities. He is also well-known as a co-author of the well-reviewed textbook "An Evolutionary Survey of the Plant Kingdom" (Scagel, Bandoni, Rouse, Schofield, Stein, and Taylor, 1969), which was translated into several languages and went through several revisions and editions at Wadsworth.

Among palynologists, I would venture that Glenn Rouse's best known claim to fame is his naming of the important and now extinct angiosperm taxon *Aquilapollenites*. This distinctive pollen type was discovered in the Upper Cretaceous Brazeau Formation of Alberta and formally described in 1957. The "*Aquilapollenites* province" is a widely recognized biogeographic region of occurrence in western North America and adjacent Asia, but it is less well known that this pollen type is immortalized in stone in the span-

drels of the House of Commons Chamber in Ottawa. David Jarzen arranged to have “Eagle-pollen” and other pollen types included in the limestone sculptural elements of the capital along with representations of trilobites, a Devonian fish and other vertebrates (see “*Aquilapollenites*: Carved in Stone!” on the Canadian Association of Palynologists web site). A fitting tribute to Glenn’s memory.

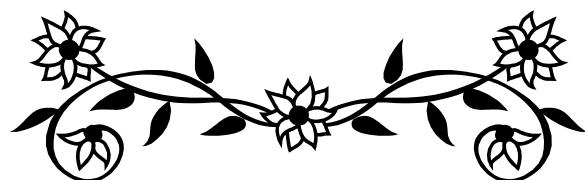
Besides strictly academic pursuits of teaching and publishing, Glenn always had strong inclinations to use his palynological skills to solve practical problems of coal and oil exploration, geological correlation, and even dating of placer gold deposits. I enjoyed trying to interpret palynological range charts and stratigraphic sections that were often tacked up on the walls of his laboratory in Hut 02. While Killam fellow Satish Srivastava worked in the lab with me, I was often tempted to venture into pre-Quaternary palynology, based on beautiful images of Maastrichtian palynomorphs that were always on display around me. Satish and Glenn published 3 papers that were among the first to combine SEM and light images of fossil pollen. Satish also created the genus *Rousea* in Glenn’s honour in 1969, following on the 1962 creation of *Rouseisporites* by Stanley Pocock.

Also in evidence on the lab wall during my years was a poster that summarized Glenn’s philosophy, which was “Lead, follow, or get out of the way”. I learned recently from Glenn’s son Clay that I was the source of some frustration at times. My excuse is that I was dating my wife-to-be Donna during my 3rd PhD year, playing soccer, and fishing on occasion. I got the message and finished up quickly (3 years total), and Glenn was happy. We both liked fly-fishing before it became a national craze, and we had some fun outings on the Vedder and Squamish rivers, where I caught my first

steelhead on a fly I tied myself. Glenn was impressed, and understood why I was not always in the lab!

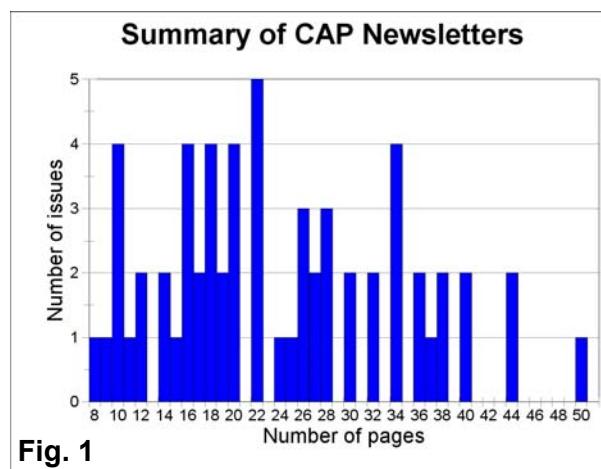
Glenn Rouse was a dedicated palynologist who contributed much to our discipline, and a generous colleague and friend. I miss his humour, his stories, and his advice, and I am sure that others who knew him well will feel the same way.

Rolf W. Mathewes
(PhD, UBC Botany, 1973)
Department of Biological Sciences
& Associate Dean of Science
Simon Fraser University, BC



A Conspectus of the “CAP Newsletter”

Because Canadian palynologists are scattered across such a vast country, the Canadian Association of Palynologists has always relied on its *Newsletter* as a central element of its activities. Through the last 30 years, the *Newsletter* has helped to maintain ties between scholars and practitioners in different regions of the country and served as a vehicle for discussion and communication. Moreover, a substantial number of CAP members are outside Canada, and so the *Newsletter* has also helped with international co-operation and the exchange of ideas. Between 1978 and 2006, the *Newsletter* was printed and distributed by mail in hard copy. In 2007, the *Newsletter* went digital, and began distribution in PDF format. And 2008 marks the 31st year of publication. So it seems timely to take stock of the *Newsletter* and the role it has played in our Association.

**Fig. 1**

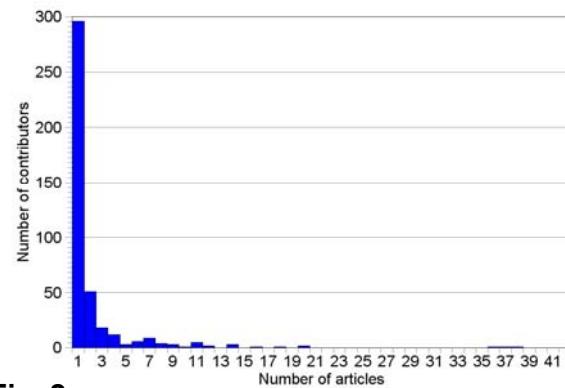
Since the information world is now mainly digital, I decided to offer more about the *Newsletter* in CAP's web presentation. To do so, of course, I needed a complete set of past issues, an objective that was only achieved with the help of CAP members David Jarzen and Art Sweet, who were able to provide me with copies of CAP newsletters from the early years. In recent weeks, I have created an index to past issues, which can be viewed at www.scirpus.ca/cap/library/back_issues.htm. I have also compiled an Author Index to past issues, which can be downloaded, in PDF form, from www.scirpus.ca/cap/library/nl_pdfs/cap_authors.pdf. In order to do this project, I have of course been looking through all the issues and reading many of the articles again. I thought perhaps CAP members might be interested in some statistics on this publication. After all, as palyologists, numbers and statistics are part of our world!

CAP Newsletter production (Fig. 1):

- since 1978, 61 issues of the *CAP Newsletter* have been produced
- in most years, 2 issues of the *CAP Newsletter* were produced
- 3 *CAP Newsletter* issues were produced in 1995, the extra one was a Special Issue for the AASP-CAP Joint Meeting in Ottawa

- past issues total 1461 pages, equivalent to a stack of paper almost 6" high
- the average number of pages per issue is 24
- the largest *CAP Newsletter*, which appeared in 2000, comprised 50 pages
- the *CAP Newsletter* has had seven Editors

CAP Newsletter: contributors summary

**Fig. 2**

Newsletter contributors (Fig. 2):

- 423 people can be identified as *Newsletter* contributors
- 296 people or 70% of contributors have contributed only one article
- 403 people or 95% of contributors have contributed 10 articles or less
- just 8 people or about 2% of contributors have contributed 20 or more articles
- 2 people have contributed more than 50 articles each

Newsletter articles:

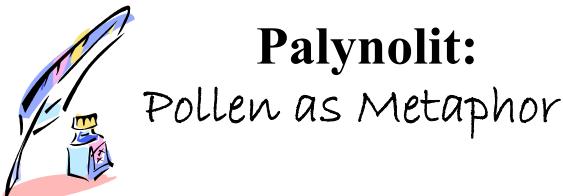
- 1109 articles can be identified with a specific contributor or contributors
- 1014 or 91% of articles have one author
- the greatest number of contributors identified with a single article is 6
- the members of CAP's Executive (33 people during the span of the Association) have contributed 543 or about 54% of *Newsletter* articles

- 4 media releases have been included
- 407 unattributed articles or announcements have been included
- 34 lists of recent publications have appeared in the *Newsletter*
- 57 meeting or conference calendar lists have been compiled
- 24 sets of Minutes of the Annual General Meetings have been reported
- 1635 articles have been included in the *CAP Newsletter* in total

I have started another project to scan and add past newsletters to the CAP website. This will probably take a while but do keep an eye on the Index page (see URL above) and browse past issues as they appear. It is quite fascinating to trace how some themes, like the decline in the number of palynologists, recur in articles through the years! Certain types of articles, such as book reviews, conference reports, and laboratory news, have also been prominent since the earliest issues, showing that research activities and new ideas are always of interest. Probably the most profound change that readers will notice is the increasing impact of computers, the Internet, and digital technology, culminating in the recent transition to a digital edition of the *CAP Newsletter*.

Alwynne B. Beaudoin
Edmonton, Alberta

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Palynolit:

Pollen as Metaphor

Nowadays, Sigrid Undset is not a well-known writer, even though she was awarded the Nobel Prize in Literature in 1928. Her literary reputation was based largely on her magisterial three-volume historical novel,

Kristin Lavransdatter, set in Norway in the 14th century. Her reputation was consolidated by another multivolume historical novel, *The Master of Hestviken*, also set in Norway, though somewhat earlier, in the late 13th and early 14th century. Each novel essentially concentrates on the life-story of one character, and provides an evocative and richly-detailed panorama of medieval life and society. In *The Master of Hestviken*, the central character is Olav Audunsson, a warrior and landowner. As a young man, Olav kills another man, Teit, who had seduced his fiancée, Ingunn. Although he was able to conceal the body and hide the murder, this act haunts Olav all his life, even though he knows that the law would say the killing was justified. In the following scene, during a trading voyage to London, he has a moment of revelation during a church service and makes up his mind to confess his sin and make himself right with the world. Here, pollen is used as a metaphor for the corrosive and constantly renewed effect of guilt.

He had pretended to be careless of the storm—but he had been so young; in secret he trembled with weariness. And he had not come through unsoiled: his heart was surely as turbid as the tarn north in the woods, when on the melting of the snows all the grey and rapid streams had emptied themselves into it. And no sooner had it cleared a little after the flood than the spruce forest round its banks came out and powdered the brown bog-water with yellow. But here at the foot of the altar he felt the Spirit of God as a cleansing wind—the mawkish pollen blown away: once more his life would be bright and open as the tarn, reflecting the sheer blue and the sun and the clouds on their passage across the sky.

From *The Master of Hestviken* by Sigrid Undset, New American Library Edition, 1978, p. 550.

Alwynne B. Beaudoin
Edmonton, Alberta

2007 Reprinting of
 R.O. Kapp's
 "How to Know
 Pollen and Spores"

During the 1960s, there were few pollen atlases available. For those of us who were working in the Quaternary, one often referred to the 1935 edition of R.P. Woodhouse's book *Pollen Grains*, which had a limited number of drawings of pollen grains. There were also drawings of pollen grains in G. Erdtman's three volumes of *Pollen Morphology and Plant Taxonomy* (angiosperms in 1952, gymnospermae and bryophyte 1957, and the text portion in 1965). The Fægri and Iversen 1964 edition of *Textbook of Pollen Analysis* had a pollen key, but no drawings.

Into this void came another very useful book first printed in 1969 and called *How to Know Pollen and Spores* by Ronald O. Kapp. It was inexpensive, handy, and included drawings of about 150 taxa of pollen and spores, most drawn by the skilled artist, Rick Hall. That first edition, published by the William C. Brown Company, was sold as a hardback that retailed for \$9.75 and as a spiral-bound paperback costing \$6.75. There was a limited market for such a book, but most palynologists of that time period bought one. By the mid to late 1970s, however, the initial printing had been sold out and because of slow retail sales the publisher did not want to print a second edition.

In 1984, the original publisher, W.C. Brown, transferred copyright to Ron and his heirs, and Ron and AASP Member Jim King began working on a revision. After Ron Kapp's death in 1990, his wife Phyllis transferred all

of the artwork and other documents relating to the book to Jim King. Later, Owen Davis, then Editor of *Palynology*, scanned the original artwork, typed much of the book's text, and made several formatting changes. Rick Hall and his students contributed several new illustrations. The formatting changes included a consistent description format for each pollen and spore type.

The first AASP edition was printed by photocopying pages printed by Davis on a laser printer. The first printing of the AASP edition of Kapp met with great success and sales of the book were brisk. However, for the purists, the reproduction process was not ideal and some of the finer details of pollen grain ornamentation and morphology on the drawings were not as clear as they were in the originally printed 1969 version. Because of the finer quality of the drawings of the first edition, old copies of the original 1969 edition were selling on eBay for as high as \$49.00.

In 2007, AASP reprinted their original 2000 version of the Kapp pollen atlas, but used a PDF process to capture all of the details of the original drawings. The increase in the size of the pollen and spore drawings, from their original, small size in the 1969 printed edition, aided by the superb capture of all of the finest drawing details of ornamentation and morphology make the latest version of the Kapp pollen atlas far superior to even the original 1969 edition printed by the W.C. Brown Company. The current cost of \$25 for the latest printed version of the Kapp pollen atlas is well worth the investment. However, it is ruining the ability of booksellers to peddle the older versions of the book for high prices on eBay!

Vaughn M. Bryant
 Department of Anthropology
 Texas A&M University College



Dissertation Abstracts

Stolze, Susann. 2004. *A Record of Late Quaternary Vegetation and Climate Change from Woods Lake, Seymour Inlet, coastal British Columbia, Canada. M.Sc. Thesis. Dept. of Earth Sciences, Carleton University and Ottawa-Carleton Geoscience Center, 77p.*

Supervised by Dr. R. Timothy Patterson

Late Quaternary vegetation and environmental history were studied from a lake basin infill in an unexplored area of Seymour Inlet, central coastal British Columbia. *Pinus* dominated the vegetation of the early late glacial, with a cool and moist climate, which terminated by $11,820 \pm 90$ ^{14}C years BP. The late late glacial, characterised by a mixed coniferous forest, showed slightly warmer but still cool conditions and increased moisture, interrupted by a warmer and drier interval. *Alnus*, *Picea* and *Pteridium aquilinum* dominated the vegetation of the early Holocene. Warmer and drier conditions prevailed in this phase, which was interrupted by an interval of cool and moist conditions. Increased moisture and decreased temperatures characterised the mid-Holocene, during which time Cupressaceae, *Alnus*, *Tsuga heterophylla* and *Picea* achieved dominance in regional forests. This represented a transitional stage to the late-Holocene Cupressaceae-*Tsuga heterophylla*-(*Alnus*) phase when modern climate under cool and moist conditions became established. The lithological and microfossil records indicate two marine inundations of the basin in the early late glacial and the late Holocene due to changes in relative sea level.

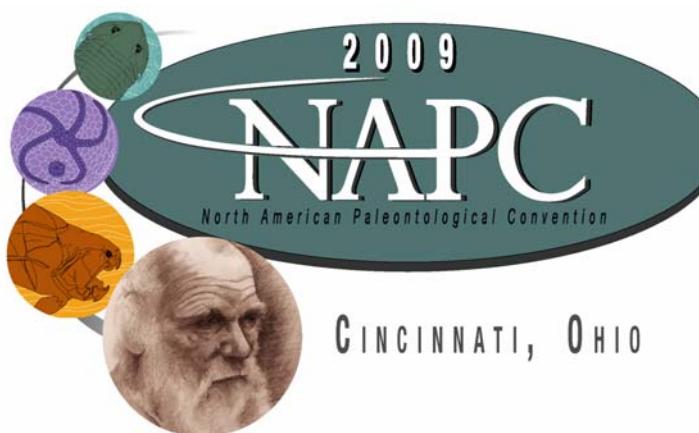
Arshad, Muhammad. 2008. *Miospore assemblages from Dandot Formation (Permian), Eastern Salt Range, Punjab, Pakistan. Ph.D. Thesis. University of the Punjab, Lahore, Pakistan.*

Supervised by Dr. Akhlaq Ahmad Bhutta (Late) and Dr. Rass Masood Khan

Samples from 3 sites of Dandot Formation (Nilawahan Group) of Eastern Salt Range, Punjab were palynologically studied. 102 species belonging to 54 genera of spores, monosaccites and diasaccites were described and their percentage at each 10' level was calculated. At first 10' level, from base, disseminate grains were in low % and gradually increased toward the upper strata. Index fossils for Karhabari Stage (Lower Gondwana) were frequently found in the studied formations.

A GAC/MAC 2008 Special Session in Honour of Dr. Pierre Richard

CAP is sponsoring a special session in honour of Pierre Richard at the May 2008 GAC/MAC meeting (quebec2008.net/) in Québec City. To showcase the range of palynological work done in Canada and elsewhere, this special session (SS10) will address the application of pollen and other palynomorphs to both stratigraphic and paleoenvironmental problems. Organizers are Michelle Garneau (garneau.michelle@uqam.ca) at Université du Québec à Montréal and Elisabeth Levac (elevac@ubishops.ca) at Bishop's University.



The 9th North American Paleontological Convention, will be held on the campus of the University of Cincinnati (Cincinnati, OH), June 21-26, 2009. The centrally-located Cincinnati region is world renowned for its Upper Ordovician fossils and strata, and has a long-established heritage of paleontological research and teaching.

NAPC provides an opportunity to bring together an unusually wide range of scientists with a common interest in the history of life, and the organizing committee is planning a slate of activities to provide a memorable experience for all participants. There will be a variety of regional field trips; a plenary session commemorating the bicentennial of the birth of Charles Darwin and the sesquicentennial of the publication of *The Origin of Species*; workshops on the creationism/evolution controversy and other topics; an evening banquet at the Cincinnati Museum Center; a special social event for students and postdocs; and numerous other social and educational activities. Pending procurement of funding, the organizing committee expects to be able to offer deep discounts for students. A conference website has been established www.napc2009.org/ where preliminary details can be found, including information about on-campus facilities and housing. The website will continue to evolve as additional plans for the meeting are developed.

The organizing committee is currently soliciting proposals for symposia. The deadline for proposal submission is **September 15, 2008**. Please note:

--Symposium organizers must identify a minimum of eight invitees who have agreed to participate in the proposed session.

--All talks at the meeting, except for plenary-session presentations, will be fifteen minutes in duration.

--When abstracts of talks are submitted beginning in Fall 2008, authors will have the opportunity to volunteer their submissions to symposium sessions that are not already fully subscribed with invitees (16 presentations for a half-day session).

--Symposium organizers will have the option of sponsoring an accompanying poster session.

If symposium proposers have any questions they should feel free to contact Dr. Arnold I. Miller (arnold.miller@uc.edu), Chair of the NAPC Organizing Committee. Upon submission of a proposal, an e-mail should also be sent to Dr. Miller to ensure that the submission is viewed promptly. Submission of abstracts of presentations will commence during Fall 2008, with a deadline of February 12, 2009.

In addition, the organizers are soliciting proposals for field trips, to take place immediately before or after the meeting, or on the planned mid-week "break" day on June 24. Interested parties should contact Dr. Carl Brett (brettce@email.uc.edu), who will be organizing field trips.

We hope to see you in Cincinnati for NAPC!

NEW TEXTBOOK ON PALEOLIMNOLOGY

Smol, J.P. 2008. *Pollution of Lakes and Rivers: A Paleoenvironmental Perspective.* 2nd Edition. Blackwell, Oxford. 383 pp.

Paperback • 396 pages • released Jan 2008
ISBN: 978-1-40515-913-5

\$59.95

Now in its second edition, *Pollution of Lakes and Rivers* addresses many of our present-day water quality problems from an international perspective, covering critical issues such as acidification, eutrophication, land-use changes, pollution by metals and other contaminants, climatic change, and biodiversity losses. It demonstrates how paleolimnological approaches can be used to interpret the physical, chemical, and biological information stored in lake and river sediments, and how this information is integral to identifying key environmental stressors and setting targets for mitigation purposes.

The expanded second edition includes over 250 additional references and a new chapter on recent climatic change and its effects on water quality and quantity. This comprehensive, up-to-date volume provides essential insights into the multi-disciplinary science of paleolimnology aimed at tackling some of the most urgent environmental problems of modern times.

John P. Smol
Queen's University, Canada
smolj@queensu.ca

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or directly to: www.wiley.com

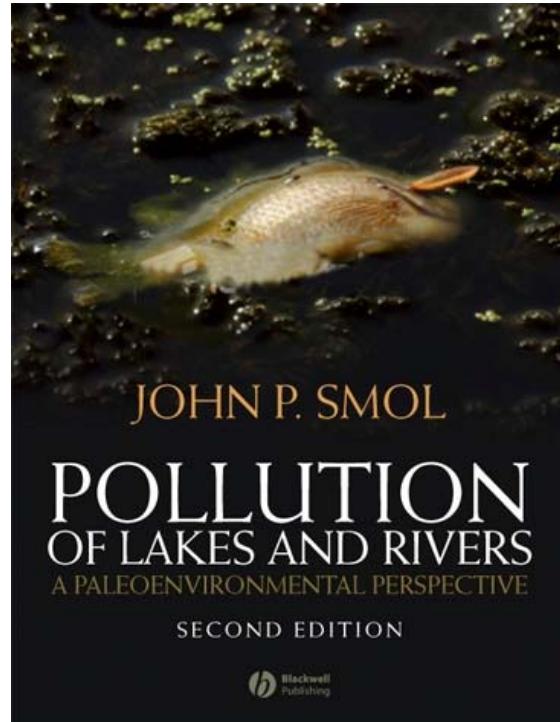
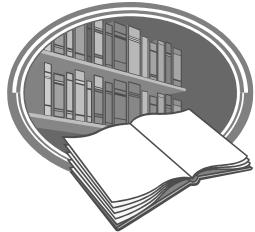


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- 2 How long is long?
- 3 Sediments: an ecosystem's memory.
- 4 Retrieving the sedimentary archive and establishing the geochronological clock: collecting and dating sediment cores.
- 5 Reading the records stored in sediments: the present is a key to the past.
- 6 The paleolimnologist's Rosetta Stone: calibrating indicators to environmental variables using surface-sediment training sets.
- 7 Acidification: finding the "smoking gun".
- 8 Metals, technological development, and the environment.
- 9 Persistent organic pollutants: industrially synthesized chemicals "hopping" across the planet.
- 10 Mercury – "the metal that slipped away".
- 11 Eutrophication: the environmental consequences of over-fertilization.
- 12 Erosion: tracking the accelerated movement of material from land to water.
- 13 Species invasions, biomanipulations, and extirpations.
- 14 Greenhouse gas emissions and a changing atmosphere: tracking the effects of climatic change on water resources.
- 15 Ozone depletion, acid rain, and climatic warming: the problems of multiple stressors.
- 16 New problems, new challenges.
- 17 Paleolimnology: a window on the past, a key to our future
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Recent Publications — 28

Anderson, T.W., *Levac, E., and Lewis, C.F.M. 2007. Cooling in the Gulf of St. Lawrence and estuary region at 9.7 to 7.2 14C ka (11.2-8.0 cal ka): Palynological response to the PBO and 8.2 cal ka cold events, Laurentide Ice Sheet air-mass circulation and enhanced freshwater runoff. *Palaeogeography, Palaeoclimatology, Palaeoecology* 246: 75-100.

*Arshad, M. 2008. *Miospore assemblages from Danadot Formation (Permian), Eastern Salt Range, Punjab, Pakistan*. Ph.D. Dissertation. University of the Punjab, Lahore, Pakistan.

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* denotes a CAP Member



96-MILLION-YEAR-OLD FOSSIL POLLEN SHEDS LIGHT ON EARLY POLLINATORS

For more on this research conducted by CAP member David Jarzen, go to:

[www.sciencedaily.com/
releases/2008/01/080117181233.htm](http://www.sciencedaily.com/releases/2008/01/080117181233.htm)

TSOP Graduate Student Grant Program The Spackman Award

The Society for Organic Petrology (TSOP) invites applications for graduate student research grants, the Spackman Award. The purpose of the grants is to foster research in organic petrology (which includes coal petrology, kerogen petrology, organic geochemistry and related disciplines) by providing support to graduate students from around the world, who demonstrate the application of organic petrology concepts to research problems.

Monetary awards up to a maximum of \$1,000.00 US will be granted. TSOP will also provide Merit Awards, in the form of certificates redeemable for TSOP publications, to top-ranking applicants not receiving grants. The program awards a maximum of two grants each year. All applicants are invited to enjoy a year's free student membership in TSOP.

Grants are to be applied to expenses directly related to the student's thesis work, such as summer fieldwork, laboratory analyses, etc. A portion of the funds may be used to attend TSOP Annual Meetings.

TSOP Spackman Award application deadline is May 15, 2008. Grants will be awarded in September 2008. Detailed information and an application form is on the TSOP web site www.tsop.org/grants.htm or applications may be obtained from Suzanne J. Russell, 2218 McDuffie St. Houston, TX 77019-6526 U.S.A. e-mail: sjruess@sbcglobal.net.

Conference Calendar

2008

May 4-10: **DINO8: Eighth International Conference on Modern and Fossil Dinoflagellates**
 Montréal, Québec
www.dino8.uqam.ca/

May 20-24: **Canadian Association of Geographers (CAG) Annual Meeting**
 Québec City, Québec
www.cagquebec2008.org/

May 26-28: **GAC/MAC Meeting**
 Québec City, Québec
<http://quebec2008.net/>

June 5-7: **AMQUA Biennial Meeting**
 Theme: Quaternary Ice Sheet-Ocean Interactions and Landscape Responses
 Pennsylvania, PA
www.amqua.org/news/meetings/

August 6-14: **33rd International Geological Congress (IGC)**
 Oslo, Norway
www.33igc.org/

August 12-16: **4th European Symposium on Aerobiology**
 Turku, Finland
www.sci.utu.fi/projects/biologia/aerobiologia/4ESA2008/

August 30-Sept. 5: **XII International Palynological Congress (IPC)**
 Bonn, Germany
www.paleontology.uni-bonn.de/congress08/index.htm

August 30-Sept. 5: **AASP 41st Annual Meeting** Bonn, Germany
www.palynology.org/meetings.html

Sep. 21-27: **International Committee for Coal and Organic Petrology (ICCP) and The Society for Organic Petrology (TSOP) Joint Annual Meeting**
 Oviedo, Spain
www.incar.csic.es/iccp_tsop

Oct. 5-9: **GSA 120th Annual Meeting**
 Houston, Texas, USA
www.acsmeetings.org/2008/

2009

May 24-27: **GAC/MAC Meeting**
 Toronto, Ontario
www.gac.ca/activities/

June 21-26: **9th North American Paleontological Convention**
 University of Cincinnati
 Cincinnati, Ohio, USA
www.napc2009.org

July 26-30: **Botany 2008**
 Joint Meeting of Canadian Botanical Association, American Fern Society, American Society of Plant Taxonomists, Botanical Society of America
 University of British Columbia
 Vancouver, BC
www.botanyconference.org/

October 18-21: **GSA 121st Annual Meeting**
 Portland, Oregon, USA
www.geosociety.org/meetings/

Date TBA: **CANQUA 2009**
 Simon Fraser University, Burnaby, BC
www.mun.ca/canqua/

Date TBA: **Canadian Association of Geographers (CAG) Annual Meeting**
 Ottawa, ON
www.cag-acg.ca/en/cag_annual_meeting.html

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 or money order payable to CAP to:

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

Name: _____

Affiliation: _____

Address: _____

Tel: _____ FAX: _____

E-mail: _____

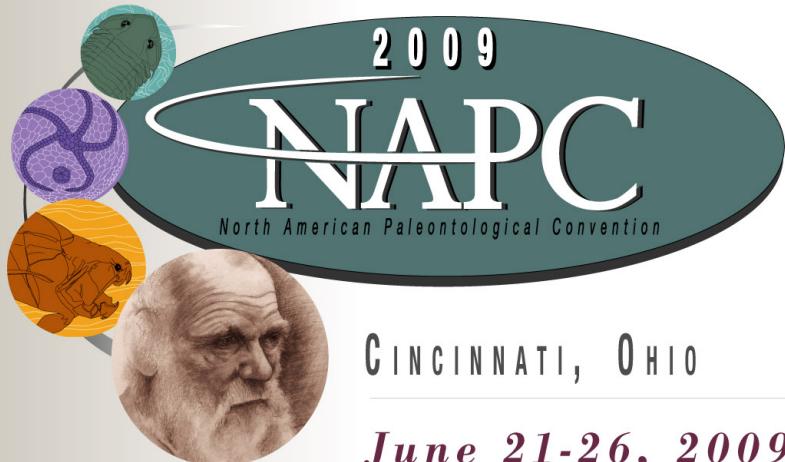
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May we include your name/address/research interests in the on-line "Directory of Palynologists" in the CAP World Wide Web page? Yes No

North American Paleontological Convention



First Circular

CINCINNATI, OHIO

June 21-26, 2009

<http://www.napc2009.org/>

The 9th North American Paleontological Convention (NAPC) will be held on the campus of the University of Cincinnati. The centrally-located Cincinnati region is world renowned for its Upper Ordovician fossils and strata, and has a long-established heritage of paleontological research and teaching.

SYMPOSIUM PROPOSALS

Proposals for symposia, which will form the backbone of the meeting, are now being accepted at our web site. The deadline for proposal submission is September 15, 2008, and we encourage members of all ANAPS organizations to consider organizing symposia.

ACCOMMODATIONS & AMENITIES

Comfortable and inexpensive state-of-the-art dormitory, dining, and recreational facilities will be available on campus, as will rooms in nearby hotels.

SPECIAL ACTIVITIES

The organizing committee is planning a wide range of activities, including a plenary session commemorating the bicentennial of the birth of Charles Darwin and the sesquicentennial of the publication of The Origin of Species; workshops on the creationism/evolution controversy; a banquet at the Cincinnati Museum Center; and a full slate of regional field trips.

For additional information, including contact information for members of the organizing committee and instructions for submission of proposals go to:

<http://www.napc2009.org/>