NEWSLETTER

Volume 4 Number 2 WINTER, 1981

1982 EXECUTIVE COMMITTEE

The 1982 C.A.P. Executive Committee is:

Richard Hebda, President
Geoff Norris, President-Elect
Jocelyne Legault, Secretary-Treasurer
Bert van Helden, Newsletter Editor

NEW NEWSLETTER EDITOR

After four years as the C.A.P. Newsletter Editor, I will be handing over my pen to Bert van Helden. I would like to take this opportunity to say how much I have enjoyed working with the Canadian palynological community in this capacity. I wish Bert van Helden every success as the new Newsletter Editor and urge the C.A.P. membership to send any news to him at Chevron Standard Ltd., 1404 108th Ave. S.W., Calgary, Alberta, T2W 0C5, telephone (403)262-0500.

Jonathan P. Bujak

SOCIETIES

AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS (A.A.S.P.)

A.A.S.P. Newsletter, Volume 14, Number 3 was circulated in July, 1981, and included details of palynological work undertaken at the Atlantic Geoscience Centre, Dartmouth, N.S.; the South Dakota School of Mines and Technology; and the University of Kansas, plus a review of Helen Tappan's book, "The Paleobiology of Plant Protists", reviewed by Stephen Jacobson.

Future A.A.S.P. Annual Meeting sites will be Dublin, Ireland (1982), San Fransisco (1983), and possibly Boston or San Antonio (1984). At the A.A.S.P mid-year meeting held in April, 1981, the A.A.S.P. Board of Directors decided against holding the 1984 Annual Meeting in conjunction with the Sixth International Palynological Conference in Calgary. They cited several reasons for this decision: "A meeting date in August instead of October as is traditional; problems associated with terms of office of the Board of Directors, which begin and end coincident with Annual Meetings in accordance with the A.A.S.P. by-laws; lack of identity of A.A.S.P. within I.P.C.; and lack of a clearly identified local committee for A.A.S.P. in Calgary".

Newsletter number 3 also listed the newly elected A.A.S.P. Editoral Staff: Ray Christopher (Journal Editor), Doug Nichols (Newsletter Editor), Evan Kidson (Editor of the Membership Directory), and Robert Clarke who keeps track of the membership.

ASSOCIATION DES PALYNOLOGUES DE LANGUE FRANCAISE (A.P.L.F.)

The July, 1981, Circular of the A.P.L.F. reported on a joint meeting of the A.P.L.F. and Arbeitskreis für Paläobotanik und Palynologie (A.P.P.) held in Strasbourg, March 27-28, 1981, and also discussed palynological research undertaken at various centres at Montpellier.

ASSOCIATION QUEBECOISE POUR L'ETUDE DU QUATERNAIRE (A.Q.Q.U.A.)

Volume 7, numbers 2 and 3 of the A.Q.Q.U.A. Bulletin were circulated in June and October 1981. The latter bulletin included details of research carried out by A.Q.Q.U.A. members in 1980.

BRITISH MICROPALAEONTOLOGICAL SOCIETY (B.M.S.)

The British Micropalaeontologist Number 15 was circulated in September, 1981. The newsletter included details of meetings held by the Ostracod Section in the Isle f Wight, and by the Microplankton Section in North Wales. The following talks were presented in North Wales:

Rex Harland, "Recent dinoflagellate cysts from the Southern Barent Sea".
Jim Fenton, "Mid-Toarcian to Early Callovian (Jurassic) Palynofloras from Northamptonshire and Lincolnshire".

Roger Morgan, "The Cookson Collection - Used and Misused Australian Microplankton".

Two books were reviewed:

"Stratigraphical Atlas of Fossil Foraminifera", edited by Jenkins, D.G. and Murray, J.W.
"The Palaeobiology of Plant Protists", by Helen Tappan.

Officers of the British Micropalaeontological Society for 1980-81 were B. Owens (Chairman), R.H. Bate (Treasurer), L.M. Sheppard (Journal Editor), A.R. Lord (Secretary), E.G. Spinner (Circulation Editor), M.J. Reynolds and R.L. Austin (Conodont Section), S. Duxbury and R. Woolam (Microplankton Section), M.J. Fisher and D.G. Smith (Palynology Section), M.B. Hart and S.S. Radford (Foraminifera Section), R.C. Whatley and J. Athersuch (Ostracod Section).

CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS, PALAEONTOLOGY DIVISION
(received from John Utting)

The Palaeontology Division of the C.S.P.G. had a number of meetings in 1981. The speakers and titles of the various talks are:

R.A. Fedoruk, "Upper Jurassic and Lower Cretaceous stratigraphy along Cache Creek, N.W.T.".
R.E. Turner, "Reworked acritarchs from the type section of the Caradoc (Ordovician), Shropshire, England".
P. Doeven, "Late Cretaceous nannofossils from offshore Eastern Canada, stratigraphy and biogeography".
T.R. Marchant, "Biostratigraphy of the Lower Carboniferous transgression in Ireland".
M.S. Barss, "The application of computers in solving biostratigraphic problems".
D.R. Braman, "Biostratigraphic palynology of the Upper Devonian and Lower Carboniferous Imperial Formation, N.W.T., Yukon".

Speakers scheduled for October and November, 1981, were:

J.H. Wall, "Jurassic-Cretaceous biostratigraphic micropalaeontology (chiefly foraminifera) of the eastern Sverdrup Basin, Axel Heiberg and Ellesmere Island".
A.C. Higgins, "The use of conodonts in determining a biostratigraphic zonation of the Carboniferous of the world and their application in recognizing the Mississippian/Pennsylvanian boundary".

In September the division held a one-day field excursion to the Fernie Formation (Jurassic) of the Ya-Hatinda and Clearwater River areas. Russel Hall led the excursion and showed participants a number of sections from which he has studied the fauna, especially ammonities, for several years.

INTERNATIONAL ASSOCIATION FOR AEROBIOLOGY (I.A.A.)

The International Aerobiology Newsletter, number 14, was circulated in June 1981. It included the following articles:

"A note on dispersal distance of organisms", D.O. Wolfenbarger.
"Pollen and spore sampling in Brazil of relevance to allergy", O.M. Barth.
"Aerobiological Research at Augangabad, India", S.T. Tilak.

INTERNATIONAL COMMISSION FOR PALYNOLOGY (I.C.P.)

Volume 4, number 1 of the I.C.P. newsletter was circulated in June 1981. It included details of newly elected Vice Presidents: Drs. Balme (Australia), Chlonova (U.S.S.R.), Hafsten (Norway), and McGregor (Canada). It also gave details of palynological research in Australia and adjacent regions, Scandanavia and Turkey, plus a book review of "Organic Maturation Studies and Fossil Fuel Exploration", edited by J. Brooks.

C.A.P.'s representative on the I.C.P. Council is John Utting, Institute of Sedimentary and Petroleum Geology, Calgary.

PALAEONTOLOGICAL ASSOCIATION

Palaeontological Association Circulars 105 and 106 were circulated in 1981. They included reports on the following meetings:

Review Seminar on Reconstructing Coal-Measure Vegetation, Manchester University, May 6, 1981, by Peter Sheldon.
International Symposium on "Concept and Method in Palaeontology", Barcelona, May 6-8, 1981.
International Meeting on Palaeontology, Venice, June 2-4, 1981, by H.B. Whittington and A. Hallam.

Reviews of several books included:

"The Paleobiology of Plant Protists", by Helen Tappan, reviewed by Rex Harland.
"The Fossil Hunters: in Search of Ancient Plants", by H.N. Andrews, reviewed by A.C. Scott.
"Palaeoecology, Concepts and Applications", by J.R. Dodd and R.J. Stanton, reviewed by D.W.J. Bosence.
"The Evolutionary Synthesis: Perspectives on the Unification of biology", by E. Mayr and W.B. Provine (Editors), reviewed by A. Hallam.
"The Philosophy of Evolution" by R. Gould, reviewed by P.W. Skelton.
"Paleobotany: An Introduction to Fossil Plant Biology", by T.N. Taylor, reviewed by W.S. Lacey.

PALYNOSCENE

NATIONAL MUSEUMS CANADA, OTTAWA
(received from D.M. Jarzen)

D.M. Jarzen has recently (September) completed a study on the palynoflora of Dinosaur Provincial Park, Alberta (Campanian). This work was undertaken with funds granted to the National Museum of Natural Sciences from Alberta Recreation and Parks, Provincial Parks Division.

Dinosaur Provincial Park, located in southeastern Alberta, is unique as a site of extensive badlands recognized as one of the world's more important localities bearing Upper Cretaceous dinosaurian assemblages. UNESCO recently designated the Park as a World Heritage Site.

The rock strata, exposed through the eroding action of the Red Deer River, rainfall and to a lesser extent wind, are primarily within a single lithostratigraphic unit, the Oldman Formation. These river sediments were deposited by meandering and braided streams about 75 million years ago (Campanian, Upper Cretaceous), and have yielded all of the fossil vertebrate remains so far collected from the Park.

Through the work of several paleontologists, much data have been collected concerning the sedimentology of quarry sites, the taxonomy and taphonomy of dinosaur remains, and the paleoecology of dinosaurian assemblages. Virtually nothing is known concerning the nature of the plants which existed during the time the Oldman Formation sediments were being deposited. The objectives of the study were to record the occurrence of the fossil pollen and spores recovered from the Oldman Formation and to assign them when possible to published form-generic taxa. A second objective was to compare the palynomorph distribution stratigraphically and areally with the known distribution of articulated remains of fossil vertebrates, to determine what significance may exist between faunal and floral composition and distribution. A comparison of some of the fossil palynomorphs with extant palynomorphs was made in order to understand what kinds of plants are represented in the fossil assemblages. With sufficient comparisons of this sort, certain conclusions could be made concerning the paleoenvironment and paleoecology of the Park during the mid-Upper Campanian.

The published results of this study will be available in early Spring 1982 in the National Museum of Natural Sciences' series *Syllogeus*.

The modern (extant) pollen reference collection of the National Museum of Natural Sciences continues to grow, largely through the efforts of our exchange programme. The collection now numbering 9,000 species has been developed over the past eight years on the premise that one preparation of an extant pollen taxon could provide several (usually 3 or 4) species through an exchange effort. This has proven true, and over the years several large exchanges have been made with palynological laboratories throughout the United States and Canada, and from France, Argenta, Hungary, Zambia, Austrialia, Sweden, The Netherlands, Belgium, Malaysia and India.

An updated exchange list is currently in preparation and should be available for distribution early in 1982. D.M. Jarzen would appreciate hearing from persons interested in establishing an exchange programme with the National Museum of Natural Sciences.

NEWS FROM CALGARY

Silvana de Gasparis recently completed work on her Ph.D. thesis at the University of Toronto and took up a position with Petro Canada's Geological Research and Services Department in Calgary. She will be working mainly on Mesozoic and Tertiary material from offshore wells in eastern Canada.

Hatice Kutluk, a palynologist with the Turkish Petroleum Company in Ankara, Turkey, has spent almost six months at the University of Calgary where she has been a visiting scientist supported by a scholarship from the United Nations Development Program. She has been studying palynological reference material at the University from various parts of the geological column, and has attended some lectures. She has visited other organizations in Calgary and observed different preparation techniques and held discussions with a number of palynologists. At the Institute of Sedimentary and Petroleum Geology and Imperial Oil, Hatice has spent some time being introduced to vitrinite reflectance and organic matter studies.

John Utting, while cycling to work, fell off his bike and broke his collarbone.

CALENDAR OF EVENTS

1982

May 17-19: Joint Annual Meeting of the Geological Association of Canada and Mineralogical Association of Canada, The University of Manitoba, Winnipeg. Details from GAC/MAC Winnipeg '82, c/o Residence and Conference Services, 26 MacLean Crescent, University of Manitoba, Winnipeg, Manitoba, R3T 2N1.

July 21-26: Fourth Colloquium on Paleobotany and Palynology, Mexico City. Details from Eloy Salas, Inst. Mexicano del Petroleo, Av. Cien Metros #152, Apartado Postal 14-805, Mexico 14, D.F.

August 1-9: XI International Quaternary Association (I.N.Q.U.A.) Congress, Moscow. Details from Dr. Ismail P. Kartashov, Secretary-General of the XI INQUA Congress, Geological Institute, U.S.S.R. Academy of Sciences, Pyzhevsky 7, Moscow 109017, U.S.S.R.

August 4-6: Second International Conference on Aerobiology, Seattle. Details from Dr. R.L. Edmonds, college of Forest Resources, Univesity of Washington, Seattle, Washington 98195, U.S.A.

August 5-11: Third North American Paleontological Convention (NAPC-III), Montreal. Details from Colin Stearn, Department of Geological Sciences, McGill University, 3450 University Street, Montreal, H3A 2A7.

August 8-14: First International Phycological Congress, St. John's, Newfoundland. Details from Dr. G. Robin South, Department of Biology, Memorial University of Newfoundland, St. John's, Newfoundland, A1B 3X9.

September 13-15: Meeting on the "Palynology of the North Atlantic Margin", at Trinity College, Dublin. This meeting, which will be jointly organized by the American Association of Stratigraphic Palynologists and the Commission Internationale de Microflore du Paléozoique, will include three days of technical meetings followed by one to two days of excursions to the Paleozoic rocks of Eire. Details from either Geoff Clayton or Ken Higgs, Trinity College, Dublin, Eire.

September 23-24: Fossils and Climate. A joint Palaeontological Association and Liverpool Society Symposium, Glasgow University. Details from Dr. G. Newell, Department of Geology, University, Liverpool, L69 3BX, England.

1983

July 18-23: First International Congress on Palaeoecology, Lyon, France. Details from: Secrétariat Général du 1 Congrès International de Paléoecologie, Université Claude Bernard-Lyon 1, Département des Sciences de la Terre, 27-43 Boulevard du 11 Novembre, F-69622 Villeurbanne Cedex, France.

October 26-28: American Association of Stratigraphic Palynologists (A.A.S.P.) Annual Meeting, Airport Hilton, San Francisco. Details from Virgil Wiggins, Chevron U.S.A. Inc., P.O. Box 3862, San Francisco, California, 94119, U.S.A.

1984

August 26-31: Sixth International Palynological Conference (VI IPC), Calgary, Alberta. Details from Len Hills, Department of Geology, University of Calgary, Calgary, Alberta, T2N 1N4, or Jan Jansonius, Esso Resources Canada, 339-50th Avenue S.E., Calgary, Alberta, T2G 2B3.

Autumn: 5e Congrès de l'Association Québécoise pour l'Etude du Quaternaire, Sherbrooke. Details from Bernard Lauriol, Dept. de géographie, Université de Sherbrooke, Sherbrooke, J1K 2R1.

27th International Geological Congress, Moscow.

GEOLOGICAL HOWLERS

Never build your house on a perched water table, because your well is likely to dry up in summer. The difficulty is now disappearing since most modern houses have taps.

Geological Howlers, T.N.G.

MEETINGS

PALAEONTOLOGICAL ASSOCIATION SYMPOSIUM: FOSSILS AND CLIMATE

A joint Palaeontological Association and Liverpool Geological Society symposium, "Fossils and Climate", will be held at the Geological Societies of Great Britain Meeting at Glasgow University, September 23-24, 1982.

The Symposium will outline the climatic controls of organism distribution and discuss whether climatic change has affected the course of evolution.

Sessions (and leaders) include:

"Climate and evolution" (Professor J.W. Valentine);
"Palaeoclimatology" (Dr.N.J. Shackleton);
"Uniformitarianism and palaeoclimates" (Professor A.M. Ziegler);
"Ancient biogeography and climate" (Professor C.B. Cox, Professor A. Hallam);
"Recent biogeography" (to be announced).

The proceedings of the Symposium will be published. Titles of manuscripts should be sent to Dr. G. Newell, Department of Geology, University, Liverpool, L69 3BX, telephone: 051-709-6022, from whom further details can be obtained.

PALYNOLOGY SYMPOSIA AT NAPC III

The American Association of Palynologists and the Canadian Association of Palynologists are sponsoring two half-day Symposia at the Third North American Paleontological Convention (NAPC III), to be held in Montreal, August 5-7, 1982. A morning session entitled "Palynology: The State of the Art" is being chaired by Jocelyne Legault, University of Waterloo. An afternoon session entitled, "Palynology: The Latest Environmental Impact Statement" is being chaired by Sarah Damassa, 3 Ridge Street, Winchester, Mass., 01890. Both sessions will feature invited speakers. For additional information, please write to the session chairmen. Anyone wishing to contribute a paper to the general sessions at NAPC III should write to Colin Stearn, Department of Geological Sciences, McGill University, Montreal, Qeubec, H3A 2A7.

MEETING OF THE BRITISH MICROPALAEONTOLOGICAL SOCIETY, MICROPLANKTON SECTION, ENTITLED: THE COOKSON COLLECTION - USED AND MISUSED AUSTRALIAN MICROPLANKTON

(The following report on a British Micropalaeontological Society meeting by Roger Morgan (B.N.O.C., Glasgow) is reprinted from the British Micropalaeontologist, Number 15)

The life and work of Isabel Cookson were discussed. Selected dinocysts, principally pseudoceratioid taxa, were illustrated and differences in various morphotypes and their stratigraphic ranges were compared and contrasted between Australia and N.W. Euorpe.

Dr. Morgan kindly made available his extensive transparency collection for members to peruse at leisure following his talk, and has submitted a short biography of Isabel Cookson, which will be of interest to members:

"Dr. Isabel Clifton Cookson was born on Christmas Day 1893 and died July 1, 1973, just six months short of 80 years. She had a long and full life, including half a century of active research. Hers was an extremely valuable, if unspectacular career, and she died largely unacknowledged by her university department, and the palaeontological fraternity.

Her interests in life developed early. She played tennis at top level for both her school and university. Music was a continuing source of relaxation, and the piano her chosen instrument. At Melbourne University, her undergraduate biology soon crystallized into botany, and she persued Botany at Melbourne University throughout her professional career.

The first fifteen years of her research career (1915-1930) were spent in the Biology Department with twin interests of commercial mycology and plant megafossils. Useful studies of fungal diseases in walnut trees and in cotton led to improved yields of these crops. Early Devonian land plants were her other major interest, and led to her D.Sc. degree.

The creation of a separate Botany Department in 1930 led to a fifteen year period (1930-1945) occupied largely by lecturing duties and continued early Palaeozoic land plant research. Palynology became her research interest in 1945 when she was appointed to lead the newly created Pollen Research Unit, aiding exploitation of Victoria's vast brown coal reserves. During this ten year period (1945-1955) she worked mostly on Tertiary pollen.

It was not until 1953, at the age of 60 years, that she first published on the fossil dinoflagellates preserved in her preparations. The following twenty years contained her entire published microplankton contribution, as well as a continuing series of spore and pollen publication. She retired from the University in 1959 and devoted her time to travel and publishing. The ten years 1958 to 1968 (aged 65 to 75 years) produced thirty-two papers and the majority of her microplankton work. How many of us will be able to make this claim?

In total she had eighty-five publications, of which she was sole author of thirty-five. They were published in twenty-six different journals, of which 31% were overseas journals. Prizes and honours? Her life was littered with them.

In short, a remarkable woman scientist! Palynologists in general do not appreciate that she was a pioneer throughout her life, establishing a reputation first in one new field, and then in another. Nor do they appreciate that fossil microplankton represent such a small fraction of her research life, or that she did that work at an age when most of us will be happily idle, or in our graves.

It is a pity that, like so many scientists, she did not live to see her pioneering work develop through the seventies into a mature and precise exploration tool. But for Isabel Cookson, and the Cookson and Eisenack partnership, Geology, and particularly the oil industry, might still be struggling to discover the potential of fossil microplankton."

Thanks go to all participants who helped in making the meeting an enjoyable one. Many thanks to Robertson Research for their hospitality. A special thank you to Jim Fenton, who acted as local secretary.

NEW PUBLICATIONS

AN INTEGRATED SYSTEM OF CLASSIFICATION OF FLOWERING PLANTS
by Arthur Cronquist, The New York Botanical Garden, 1981, 1152 pp., Koeltz Scientific Books, P.O. Box 1360, D-6240 Koenigstein, West Germany. Cost DM325.

CLIMATIC CHANGE IN CANADA
C.R. Harington (editor) 1980. *Syllogeus* No. 26, National Museum of Natural Sciences, Ottawa; 246 pp.

In this first of two volumes published to date, Harington has brought together eight authors who collectively represent the National Museum of Natural Sciences Project on Climatic Change in Canada. The first paper by Harington himself, summarizes the documented effects of climatic change on the people in Canada. One example of this climatic impact concerns the dry period which affected the Canadian prairies from 1928 to 1937. The effects and the nearly legendary "dust bowl" conditions led to severe economic depression for many prairie farmers. During this period of severe drought, many farmers moved out of the prairies to greener pastures. Some estimates place the migrations out of the three prairie provinces as high as 121,000 people. Two papers cover the historical evidence of climatic change in western and northern Canada (Catchpole) and eastern Canada (Hillaire-Marcel, Occhietti and Prichonnet).

The final two papers of the volume are of special interest to C.A.P. Newsletter readers. The first, which covers 151 pages of the 246 total pages, is a review by L.V. Hills and E.V. Sangster of paleobotanical studies dealing with the last 20,000 years in Alaska, Canada and Greenland. Within this geographical area, 366 sites are considered under the following topics: author and date of publication, location of each site examined, core length, C^{14} dates (y. B.P.), laboratory numbers, zonation and comments. The information is presented in tabular form. The final paper by J.G. Ogden examines Late Quaternary paleoenvironments of eastern Canada. He comments that paleoclimatic inferences and reconstructions are becoming more accurate and sophisticated. Reasons for this improved state of affairs can be attributed to the development during the past 30 years of three major developments: (1) radiocarbon dating, (2) digital computers, and (3) multivariate statistics.

Of tremendous value to Quaternary palynologists is the virtually complete (and free of typographical errors) listing of 366 references included in the Hills and Sangster paper.

Harington is meticulous in his editing of this volume and having worked in the same building with Dick during the preparation of the volume, I can attest to his care, diligence and love for this work.

CLIMATIC CHANGE IN CANADA 2
C.R. Harington (editor) 1981. *Syllogeus* No. 33, National Museum of Natural Sciences, Ottawa; 220 pp.

The second volume of this series contains in addition to a preface by G.D. Hobson (Director, Polar Continental Shelf Project) and introduction (Harington), eight papers covering topics on historical evidence of climatic change (Catchpole and Ball), recent changes in temperatures in Canada (Berry and Hillaire-Marcel, Ochietti, Marchand and Rajewicz) as well as a study of the impact of climatic variation on boreal forest biomass production (Powell).

Unlike the first volume, this volume does not contain papers devoted specifically to palynological studies.

The papers of both volumes are the published results of research carried out by the authors covering the period 1977-78 (vol.1), 1978-80 (vol.2). Both volumes are available free, by mail, from the National Museum of Natural Sciences, Information Centre, 291 Argyle Avenue, Ottawa, Ontario, K1A 0M8.

D.M. Jarzen,
National Museums Canada

FOSSIL POLLEN RECORDS OF EXTANT ANGIOSPERMS
by Dr. Jan Muller, Botanical Review 47(1), July, 1981; Price (including postage and handling fee) U.S. orders $8.75, non-U.S. orders $9.50 (please make payment in U.S. currency drawn on a U.S. bank).

This compilation represents an updated and expanded version of an earlier paper by the same author (Biol. Rev., 1970) and contains a discussion of records for 185 families, of which 139 are accepted as reliable. The results are summarized on two charts, one in stratigraphic, the other in taxonomic order.

Reprints may be obtained from: Publications Office, The New York Botanical Garden, Bronx, N.Y., 10458, U.S.A.

LENTIN & WILLIAMS, INDEX OF FOSSIL DINOFLAGELLATES: 1981 EDITION

"Fossil Dinoflagellates: Index to Genera and Species, 1981 Edition", by J.K. Lentin and G.L. Williams; Bedford Institute of Oceanography Report Series/BI-R-81-12/August 1981, 351 pp.

This index is now available, free of charge, from the Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, N.S. Please make your requests, "attention of the librarian".

The Abstract of the index is reprinted below with the permission of the authors.

ABSTRACT

The Index alphabetically lists all dinoflagellate cyst taxa at and below the generic rank, and known to the authors as of April 1, 1981: it includes 414 genera, 2210 species, 230 subspecies, and 2 varietates. Also listed are 73 generic names no longer considered legitimate. One hundred and seventeen new combinations are proposed, as well as 12 new names for junior homonyms and 9 changes of rank. New combinations are cross-referenced to the basionym and other combinations. All papers referenced in the text are included in the bibliography.

NEW MONOGRAPH SERIES

Palaeontographica Canadiana is the title for a new series of Paleontological Monographs to be published in Canada. Debate on the desirability and feasibility of such a series has been going on for several years, and a recent agreement between the Geological Association of Canada and the Canadian Society of Petroleum Geologists resulted in the formation of a Joint Committee on Paleontological Monographs (J.C.P.M.). This committee, comprising paleontologists and editors from both societies, met recently and appointed Rolf Ludvigsen (University of Toronto) as the first editor of the series. He will be aided in his task by seven associate editors who together represent a broad variety of paleontological subdisciplines. The day-to-day affairs of the series will be handled by the members of J.C.P.M. and they are currently seeking funds to sustain the project as well as discussing format and production. Some money will be raised from pledges by individual paleontologists and the remainder will be raised from corporate, institutional, and government sources. The editorial committee is preparing a set of guidelines for authors, and as soon as this is prepared, the series will be in a position to consider manuscripts for the first monograph. Each monograph is to be a substantial paleontological contribution, dominantly systematic in content, which is pertinent to Canada. The series will maintain the highest international standards of content and production, and it is hoped that the first volume will appear in 1982. For many years major works on Canadian paleontology have been published in European or American monograph series; the advent of Palaeontographica Canadiana provides a long-overdue medium for the publication of monographs of Canadian content or interest in Canada.

PUBLICATIONS ON NEW ZEALAND PALYNOLOGY AVAILABLE

The New Zealand Geological Survey has a number of Palaeontological Bulletins available for sale at NZ$2.50 each plus postage, or on exchange. They include:

R.A. Couper, 1953, "Upper Mesozoic and Cainozoic spores and pollen grains from New Zealand", N.Z. Geological Survey Palaeontological Bulletin 22, 77 p.

R.A. Couper, 1960, "New Zealand Mesozoic and Cainozoic Plant Microfossils", N.Z. Geological Survey Palaeontological Bulletin 32, 87 p.

Anyone wishing to purchase these should contact: Publications Officer, N.Z. Geological Survey, P.O. Box 30368, Lower Hutt, New Zealand. Scientists wishing to obtain these bulletins on exchange should contact D.C. Mildenhall at the same address.

SPECIAL PAPERS IN PALAEONTOLOGY 27
"Late Devonian Acritarchs from the Carnarvon Basin, Western Australia",
by Geoffrey Playford and Roger S. Dring; 78 pp, 19 pl. 10 text-figures; Published February 1981; cover price £5 or US $38.

Organic-walled remains of marine microphytoplankton (acritarchs) are the predominant palynofloral elements of sub-surface sediments belonging to the Gneudna Formation in the Carnarvon Basin of Western Australia. This study is based upon cored sections of the lower part of the formation as developed typically in the Merlinleigh Sub-basin of the eastern Carnarvon Basin. The acritarch palynoflora is abundant, diverse, and well-preserved; there are fifty-six species, only a small proportion of which are identifiable with previously described species. These latter suggest a Frasnian age for the Gneudna Formation, in agreement with the consolidated faunal evidence. The acritarch species are distributed among thirty-six genera, seven of which are newly instituted herein, viz. *Alocomurus*, *Deltotosoma*, *Gneudnaella*, *Histopalla*, *Lomatolopas*, *Papulogabata*, and *Somphophragma*. The following species are formally described and named as new: *Alocomurus compactus* (type species), *Cymatiosphaera spicigera*, *C. subtrita*, *Deltotosoma intonsum* (type species), *Dictyotidium confragum*, *D. Granulatum*, *D. prolatum*, *D. porosum*, *Elektoriskos tenuis*, *Evittia geometrica*, *Florisphaeridium micidum*, *Gneudnaella psilata* (type species), *Gorgonisphaeridium abstrusum*, *G. carnarvonense*, *G. condensum*, *G. discissum*, *G. vesculum*, *Helosphaeridium guttatum*, *H. microclavatum*, *Histopalla capillosa* (type species), *Lomatolopas cellulosa* (type species), *Lophosphaeridium deminutum*, *L. segregum*, *Melikeriopalla venulosa*, *Navifusa exilis*, *Papulogabata annulata* (type species), *Pugaletes vietus*, *Saharidia lusca*, *Solisphaeridium inaffectum*, *Somphophragma miscellum* (type species), *Synsphaeridium catenarium*, *Tunisphaeridium flaccidum*, and *Veryhachium colemanii*. (From the abstract.)

Available from: B.H. Blackwell Ltd., (Periodicals Division), P.O. Box 40, Hythe Bridge Street, OXFORD, OX1 2EU, United Kingdom.

THE PALEOBIOLOGY OF PLANT PROTISTS
by Helen Tappan, University of California, Los Angeles, 1981, 1028 pp, 570 illustrations, board, 0-7167-1109-5, 49.00.

The purpose of the present volume is to compile and summarize the available knowledge concerning the fossil and living plant protistans, the procaryotes and eucaryotic algae, to indicate their probable evolutionary relationships, as well as their value for biostratigraphy, to show their fluctuations in diversity and abundance through geologic time, and their changing marine, freshwater and/or terrestrial distribution in response to differing environmental conditions, as a basis for interpreting the nature of the paleoenvironments. Although thus intended to serve the needs of the micropaleontologist, it is hoped that a summary of the paleontologic information will also be useful for biologists and geologists, and provide a basis for additional cross-disciplinary studies that will further advance our knowledge of the microscopic biosphere.

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IN MEMORIAM

HUON SEWARD WALTON
1920-1981

Friends of Huon S. Walton will be saddened to learn of his death which occurred on November 17, 1981. An employee of Chevron Standard Limited, Calgary, he is survived by his wife Ruth, daughter Francesca and son Mark.

BILLINGS MEDAL
1982

The Billings Medal is a biennial award made by the Paleontology Division of the Geologicl Association of Canada to recognize distinction in research and publication in Canadian Paleontology. The medal is named in honour of Elkanah Billings (1820-1876), the first Canadian paleontologist.

A medal committee consisting of three members of the Division, is elected in odd numbered years (1981) and is responsible for the solicitation of nominations and deciding on the recipient of the Medal to be awarded in the following year (1982).

The medal committee solicits nominations for the 1982 Billings Medal from the membership of the Paleontology Division and from the general community of Canadian Paleontologists.

Nominations should be signed by at least two scientists, should describe succinctly the achievement for which the nomination is made and should be accompanied by relevant data on the scientific career of the nominee or nominees.

Nominations should be forwarded to reach the Secretary-Treasurer of the Paleontology Division no later than February 15th, 1982 to be considered for the 1982 award. The Medal, if awarded, will be presented at the 1982 G.A.C. Annual Meeting in Winnipeg.

The Secretary-Treasurer for 1981-82 is: Dr. Russell Hall, Department of Geology and Geophysics, University of Calgary, Calgary, Alberta, T2N 1N4. Members of the Medal Committee are:- Dr. W.E.G. Caldwell, Department of Geological Sciences, University of Saskatchewan, Saskatoon, Sask., S7N 0W0; Dr. Rolf Ludvigsen, Department of Geology, University of Toronto, Toronto, Ont., M5S 1A1; and Dr. G.L. Williams, Atlantic Geoscience Centre, Bedford Institute of Oceanography, Dartmouth, N.S., B2Y 4A2.

BOOK REVIEW

MICROFOSSILS
by M.D. Brasier, George Allen and Unwin, 193 p., 1980, Cloth $27.50, paper $14.95. Reviewed by L.E. Fåhraeus, Department of Geology, Memorial University, St. John's, Newfoundland, A1B 3X5.

Generally speaking I came away with a good impression of this new addition to the slowing growing field of textbooks on micropaleontology. The book is well written with clear and lucid prose, technical where necessary, but blissfully free from unnecessary technical jargon. It is prolifically illustrated with generally good and instructive line drawings. There are no photos.

The book is divided into two parts dealing respectively with the procaryotes and the eucaryotes. The procaryote part deals with the blue-green algae (7 pages) and the bacteria (3). The eucaryote part includes dinoflagellates and ebridians (9), acritarchs (5), silicoflagellates and chrysomonads (4), diatoms (6), coccoliths (6), green and red algae (7), spores and pollen (20), tintinnids and calpionellids (3), radiolarians and heliozoans (9), foraminifera (32), ostracodes (25), chitinozoans (3) and the conodontophorids (12).

The chapters on spores and pollen, ostracodes and, in particular, the foraminifera, stand out as being the most comprehensive and instructive. The general and technical information about these groups is far superior to that of the other groups. In the chapters on diatoms and coccoliths we find several interesting references but examples and discussions are lacking. But at least Dr. Brasier did write (p.42) that "Few groups rival diatoms for breadth of the potential application" - entirely my sentiment; a pity that they and some of the other groups did not receive more space in the book. With the conodontophorids, my own group of speciality, the section on classification is out of date. Dr. Brasier acknowledges the existence of multi-element taxonomy but gives the reader the by now totally out-dated classification of Hass et al. (1962) in the Treatise on Invertebrate Paleontology. A major drawback is the almost total lack of charts showing examples of biozonations for each of the groups dealt with.

Each chapter dealing with the organisms includes, where applicable, sections on anatomy and morphology, very broadly outlined by phylogeny, geologic application, suggestions for further reading and "hints for collection and study".

The book includes a very useful appendix on preparation of different types of samples - from collecting in the field to the slide ready for study. A 10 page long bibliography and two indexes, one systematic and one general, end the book.

The book is generally very well edited and proofread, with very few errors and inconsistencies, but there are some. In the table of contents some of the page references for foraminifera and most of those for the ostracodes are one page number too low. In the bibliography the use of italics is somewhat inconsistent. On page 97 we read both planktonic and benthic. This dual usage of the "-onic" and "-ic" endings also occurs elsewhere in the book. For someone who has always argued for the shorter, and linguistically correct ending this is a bit annoying, particularly so when in the bibliography Barnes and Fåhraeus (1975) are credited with having written a paper on the ".... nekto-benthonic habit of Ordovician conodontophorids", which we have not done; we write on their nektobenthic habit.

The strong points of the book are the easy-going lucid language, the numerous generally very good illustrations and the sections on foraminifera, pollen and spores, ostracodes and the appendix and bibliography. The weak points are the short-changing of some of the other groups and the lack of charts showing stratigaphic distribution of some of the major taxa in each group.

I certainly recommend the book to the interested amateur, the appendix on preparation methods being particularly useful, and to the non-specialist paleontologist who wishes to have a ready source for his survey lectures on microfossils. I also recommend the book for undergraduate teaching. At the graduate level it will probably serve best as a good complement to the more advanced and, unfortunately, more expensive "Introduction to Marine Micropaleontology" edited by B.U. Haq and A. Boersma (Elsevier, 1978).

(Reprinted from Geoscience Canada, volume 8, number 3)

PALYNOPUZZLE

The following puzzle was compiled by D.M. Jarzen, National Museums Canada, Ottawa. The solution to the puzzle is given at the bottom of the page.

P O S T E R S P E A K E R

T O Y R T E M O I B O L D

R P R S Y M P O S I U M P

I E C T P L A N T S E E D

P N E A E A L M E C N T N

S P B B S C M O E I E H A

A F E S I I O E E T V O L

N U U O P G N C R Y N D E

D N Q E P O T M O I O S P

D G O M A L R C A L C O O

R I H I S O E E E R I A C

I L N T T T A S S A O T N

H A N O R N L U T G G F H

T S D E S O E E G H O L O

A R A A L E N V A U G B A

L A O C N L A G N R S I A

K R S E G A O S A O N T S

S R E P A P C P Y Y C A P

SOLUTION 12 LETTERS (1 word)

— — — — — — — — — — — — —

All the words in the list below, which refer to the NAPC III meeting in Montreal 1982, are to be found in the adjacent puzzle. Locate the words (horizontal, vertical, diagonal) circling each letter. **Some letters are used in more than one word. The remaining letters will spell a word indicating a topic of discussion at NAPC III.** Please note that one word, Coccolith, is spelled with only one 'c'.

AASP
AGES
ALGAE
AMERICAN
AUGUST

BARS
BIG
BIOMETRY
BOGS
BOLD

CANADA
CAP
CASH
CITY
COAL
COCOLITH
COPELAND
CONVENE
CONVENTION

DINOS

EASY

FORAM
FUNGI

LEARN

MAMET
METHODS
MONTREAL

NORTH

OPEN

PALEONTOLOGICAL
PAPERS
PAST
PEOPLE
PLANTS
POLLEN
PORT
POSTERS

QUEBEC

RAP

SAND
SIGHTS
SPEAKERS
SPORES
SYMPOSIUM

TALKS
THIRD
TIME
TRIPS
TYPES

SOLUTION: PALEOECOLOGY

Here is another palynopuzzle compiled by Dave Jarzen. Good luck.

THEME: NOW IS THE TIME FOR ALL GOOD PEOPLE TO COME TO THE AID OF THEIR PROFESSION!

S S O R C A N D I L I E R S

N I L S S O N E O P M E R K

S O N O O I X T K I S L E R

Y I S G H H A T T I V E T E

T B R U H C M M Y H R P N N

N S R R G I I A K A L I I N

E V C A O R M N B A D A P E

E O O H K N E N Y R J C C R

R M E S U S U F A E E U A B

G I N U E D O J A M L V B L

N L W H A R Y T G E T Y O A

R A G V D A L E N D G D O D

E U E R O R E L L U M R R D

H Y V A R I N E N S P Y I E

SOLUTION 15 LETTERS (3 WORDS)

— — — — — — — — — — — — — — —

All of the palynologists listed below are to be found in the above puzzle, in a horizontal, vertical and diagonal direction. Some letters are used in more than one name. Find the names and circle each letter individually. **When complete, the remaining letters will form 3 words suggested by the hint provided.**

ADO
ALIMOV
BRENNER
BUJAK
CANDILIER
COEN
CROSS
DALE
DAVEY
DETTMANN
DOVER
DOYLE
DUNBAR
ERDTMAN
ELSIK
EVITT
FAEGRI
FERGUSON
HERNGREEN
HSU
HUGHES
HYVARINEN
JAIN
JARDINE
KREMP
LOTA
MAY
MEDUS
MULLER
NORRIS
NICHOLS
NILSSON
PLAYFORD
PUNT
SINGH
SKARBY
SOHMA
TSCHUDY
WU

SOLUTION: SIXTH IPC CALGARY