AASP NEWSLETTER

D. J. NICHOLS, EDITOR ISSN 0192-7299

VOLUME 13, NUMBER 4 OCTOBER 1980

AASP BOARD ELECTED

RESULTS OF THE ELECTION OF OFFICERS OF THE AASP BOARD OF DIRECTORS ARE AS FOLLOWS.

PRESIDENT: LEWIS E. STOVER

SECRETARY-TREASURER: JOHN A. CLENDENING

MANAGING EDITOR: VAUGHN M. BRYANT, JR.

DIRECTORS AT LARGE: CAROL A. CHMURA
DAVID J. MCINTYRE

IN ADDITION TO THE PEOPLE LISTED ABOVE, THREE OTHER AASP MEMBERS WILL SERVE ON THE BOARD IN THE COMING YEAR. JOHN E. BENNETT WILL BE THE NEW PRESIDENT, AND SARAH PIERCE DAMASSA AND CHARLES J. FELIX WILL BE COMPLETING THEIR TWO-YEAR TERMS AS DIRECTORS AT LARGE. THE NEW MEMBERS OF THE BOARD WILL TAKE OFFICE AT THE ANNUAL MEETING AT KEYSTONE, COLORADO, IN OCTOBER.

A TOTAL OF 581 BALLOTS WERE DISTRIBUTED, TO THE INDIVIDUAL MEMBERS, AND 280 VALID BALLOTS WERE RETURNED IN TIME FOR THE OFFICIAL COUNT ON 20 AUGUST 1980. APPROXIMATELY 50% OF THE MEMBERSHIP VOTED, ALTHOUGH SOME BALLOTS WERE RETURNED TOO LATE TO BE COUNTED.

THE GEOGRAPHIC DISTRIBUTION OF VOTING MEMBERS WAS: U.S.A. 180, CANADA 42, EUROPE 28, AUSTRALIA AND NEW ZEALAND 12, ASIA 11, AFRICA 3, MEXICO 2, AND SOUTH AMERICA 2.

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CONSULTANT AVAILABLE

DR. SARAH PIERCE DAMASSA IS AVAILABLE FOR EMPLOYMENT AS A PALYNOLOGICAL CONSULTANT. SHE HAS A ZEISS PHOTOSCOPE I, EQUIPPED WITH BRIGHTFIELD OBJECTIVES OF 10, 40, AND 100X, AND IS WILLING TO WORK WITH DINOFLAGELLATES AND OTHER PALYNOMORPHS OF ANY GEOLOGIC AGE. BIOSTRATIGRAPHIC PROBLEMS AS WELL AS OTHER TYPES OF PROJECTS WOULD BE WELCOME. ALTHOUGH AT PRESENT SHE HAS NO LABORATORY FACILITIES, LIBRARIES AND SERVICES SUCH AS DRAFTING, PHOTOGRAPHY, AND TYPING ARE AVAILABLE IN THE BOSTON AREA. PLEASE DIRECT INQUIRIES TO: DR. SARAH PIERCE DAMASSA, 3 CHARLES ROAD, WINCHESTER, MA 01890; TELEPHONE (617) 729-5297.

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AASP NEWSLETTER IS PUBLISHED QUARTERLY BY AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS, INC.

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REPORT ON THE 5TH IPC, CAMBRIDGE

BY JAMES E. CANRIGHT

THE FIFTH INTERNATIONAL PALYNOLOGICAL CONFERENCE MET IN CAMBRIDGE, ENGLAND, FROM 29 JUNE TO 6 JULY 1980 UNDER THE AUSPICES OF THE INTERNATIONAL COMMISSION FOR PALYNOLOGY, A FEDERATION OF 20 NATIONAL, LINGUISTIC, OR SPECIALIST PALYNOLOGICAL SOCIETIES. APPROXIMATELY 650 PERSONS REGISTERED FOR THESE MEETINGS, MORE THAN THREE TIMES THE NUMBER THAT ATTENDED THE 4TH IPC IN LUCKNOW, INDIA IN 1976-77, A TESTAMENT TO THE TREMENDOUS GROWTH OF THE FIELD OF PALYNOLOGY IN RECENT YEARS.

DR. NORMAN F. HUGHES OF THE DEPARTMENT OF GEOLOGY, CAMBRIDGE UNIVERSITY, WAS THE VERY CAPABLE CHAIRMAN OF THE ORGANIZING COMMITTEE; REDOUBTABLE ASSISTANCE WAS GIVEN BY MRS. G. E. DREWRY (SECRETARY) AND DR. M. A. BUTTERWORTH (TREASURER), AS WELL AS BY 11 OTHER BRITISH SCIENTISTS ON THE ORGANIZING COMMITTEE.

THE CONFERENCE OPENING PLENARY SESSION WAS HELD ON THE MORNING OF 30 JUNE. DR. HUGHES INTRODUCED THE DIGNITARIES ON THE PLATFORM, INCLUDING DR. ALFRED TRAVERSE, PRESIDENT OF ICP, WHO IN TURN INTRODUCED SIR HARRY GODWIN (BOTANY SCHOOL, CAMBRIDGE), WHO WELCOMED THE DELEGATES AND FORMALLY OPENED THE CONFERENCE. PROFESSOR P. K. K. NAIR (LUCKNOW) THEN PRESENTED THE 1977 GUNNAR ERDTMAN INTERNATIONAL MEDAL FOR PALYNOLOGY TO SIR HARRY GODWIN. AN ILLUMINATING LECTURE ENTITLED "THE CHALLENGE OF DIVERSITY" BY DR. JAN MULLER (LEIDEN) BROUGHT THIS PLENARY SESSION TO A CLOSE.

THE FORMAL PAPER SESSIONS WERE ORGANIZED UNDER 28 TOPICAL HEADINGS, RANGING FROM PREPARATION PROCEDURES TO POLLINATION ECOLOGY. SINCE 3 TO 6 PAPER SESSIONS RAN CONCURRENTLY THROUGHOUT THE WEEK OF THE MEETINGS, THE PROXIMITY OF THE LECTURE HALLS IN THE SCIENCE BUILDING COMPLEX ON DOWNING STREET WAS APPRECIATED BY THE DELEGATES WHO HAD MULTIPLE INTERESTS IN PALYNOLOGY. IN ADDITION, NUMEROUS POSTER SESSIONS AND DEMONSTRATIONS WERE CONVENIENTLY DISPLAYED IN THE SAME SCIENCE BUILDING COMPLEX.

SPECIAL EVENTS SCHEDULED DURING THE EVENING HOURS OF THE CONFERENCE WEEK INCLUDED AN ICP WINE RECEPTION, A LECTURE BY PROFESSOR W. G. CHALONER (UNIVERSITY OF LONDON), A CAMBRIDGE CITY CIVIC RECEPTION IN THE GUILDHALL, AND A CONFERENCE BUFFET DINNER AT QUEENS' COLLEGE.

DESPITE THE FULL PROGRAM, MOST OF THE DELEGATES FOUND TIME FOR SIGHTSEEING AROUND CAMBRIDGE (FOUNDED IN THE EARLY 13TH CENTURY) AND THE NUMEROUS MEDIEVAL COLLEGES AFFILIATED WITH THE UNIVERSITY. THE VARIOUS LOCAL PUBS ALSO ATTRACTED A GOODLY NUMBER OF DELEGATES, WHILE A FEW OF THE LESS-INHIBITED AASP MEMBERS WERE EVEN OBSERVED PARTAKING OF THE ESOTERIC ACTIVITY OF PUNTING ON THE RIVER CAM. (CONTINUED ON P. 2)

At the Closing Plenary Session on 5 July the newly-elected President of ICP was introduced—Dr. Claude Caratini (Centre d'Etude de Géographie Tropicale, Bordeaux). He, in turn, introduced the new Secretary-Treasurer of ICP, Dr. Roger Jan du Chene (Esso Production Research, Begles, France). The ICP Council voted unanimously and enthusiastically to accept Calgary's bid (offered by a group chaired by Dr. Jan Jansonius) to host the 6th IPC in August of 1984.

Two scientific excursions were run the week prior to the Cambridge meetings: A1, led by Dr. M. C. Boulter to Cretaceous and Tertiary exposures in the south of England, and A7, led by Dr. W. Pennington to study the Quaternary vegetational history of the Lake District. Three excursions took place immediately following the Cambridge sessions, as follows: C8 - Quaternary vegetational history of west Scotland (leader, Dr. H. J. B. Birks); C9 - Quaternary vegetational history of western Ireland (leader, Prof. W. A. Watts); and C11 - the Quaternary of East Anglia, led by Dr. C. Turner and Prof. R. G. West.

The writer and your NEWSLETTER editor were among the 40 persons who participated in Excursion A1 to the south of England and the Isle of Wight. Attesting to the increasing international aspect of the AASP membership is the fact that 22 of these 40 participants are currently AASP members and they reside in 11 different countries, as follows: Lynn Allen (U.K.), David Batten (U.K.), Mike Boulter (U.K.), Jim Canright (U.S.A.), Aureal Cross (U.S.A.), Jim Doyle (U.S.A.), John Filatoff (Venezuela), G. F. Herngreen (Netherlands), Harry Leffingwell (U.S.A.), Jens Lund (West Germany), Enrique Martinez-Hernandez (Mexico), Jan Muller (Netherlands), Doug Nichols (U.S.A.), Judy Patricelli (U.S.A.), Kaj Pedersen (Denmark), F. Schaarschmidt (West Germany), Monique Schuler (France), Annie Skarby (Sweden), Satish Srivastava (U.S.A.), Lavinia Trevisan (Italy), Elizabeth Kemp Truswell (Australia), and Barbara Whitney (U.S.A).

Start making plans now to attend the 6th IPC in Calgary in 1984—you will like it!

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INTERNATIONAL PALYNOLOGICAL STATISTICS

A survey of the Abstracts volume published for the Fifth International Palynological Conference has produced the following possibly interesting, probably worthless, statistics.

450 abstracts submitted, divided into 28 topic categories.

Topic with the most contributors: Quaternary palynology (93 titles, subdivided into 6 subtopics).

Runner-up topics: Stratigraphical organization of palynomorph data (34 titles), Pollen and spore characters as elements of plant taxonomy (33 titles), and Palynology in stratigraphic boundary problems (33 titles).

Maximum length of abstracts was limited, but not minimum length. Shortest abstract (21 words): "The indentification of airborne fungal spores" by U. Allitt.

Length of titles varied, too. Shortest title (2 compact words): "Precambrian microphytofossils" by B. Timofeev. Longest title (29 words): "Evaluation of the diagnostic significance of morphological characters in fossil pollen and spores and their application to the delimitation of taxa, with examples from the Tertiary and Upper Cretaceous" by A. Skarby.

Abstract with the most authors (15, and that's counting the compound and hyphenated names as only one each): "Relationships between sporophyte and gametophyte: tapetum and pollen—by SEM and TEM" by Cerceau-Larrival, Abadie, Albertini, Audran, Cornu, Cousin, Dan Dicko, Duc, Ferguson, Hideux, Hul Thol, Nilsson, Picard, Roland-Heydacker, and Souvre.

Author with the most abstracts: W. Punt (5 titles, on techniques, taxonomy, and pollen morphology).

Most unusual abstract: "Un test palynologique de la classification de Cronquist-Takhtajan" by M. Van Campo. The "abstract" consists of a full-page labeled diagram, without text.

Most anticlimactic abstract: "Application of ultraviolet fluorescence microphotometry for elucidation of maturation questions in the Beaufort Sea" by J. Lentin. Why anticlimactic? Because the text reads: "Abstract not yet available."

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AASP'S CAREERS BROCHURE

The brochure describing careers in palynology has been published. It presents a brief overview of the discipline and invites the reader to write for more information on academic programs that emphasize particular aspects of palynology. Copies can be obtained from: Vaughn Bryant, Jr., AASP Managing Editor, Dept. Anthropology, Texas A&M University, College Station, TX 77843.

In the July issue of AASP NEWSLETTER, Vaughn solicited information on academic programs that is to be compiled and made available on request to interested people. He extends his appreciation to those who responded, and he wishes to remind others who have not yet sent their data to do so as soon as possible. Vaughn will have the information retyped and incorporated in packets for distribution. An outline of the academic program or a brief summary stating the research emphasis is what is needed, although minimally Vaughn would like to have permission to list names of faculty members, their areas of palynological expertise, and the addresses of the institutions. It is anticipated that the Careers brochure and information packet will help direct students to degree programs that specialize in their particular interest within the diverse field of palynology. This is an opportunity for faculty members to advertise their programs and attract students.

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PALYNOLOGY OF THE NORTH ATLANTIC MARGINS

THE SECOND JOINT MEETING OF THE COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOIQUE AND AASP IS TO BE HELD IN DUBLIN FROM 13 TO 15 SEPTEMBER 1982, HOSTED JOINTLY BY TRINITY COLLEGE AND THE GEOLOGICAL SURVEY OF IRELAND. ALL SESSIONS WILL BE HELD IN TRINITY COLLEGE, DUBLIN.

PAPERS AND DEMONSTRATIONS ON THE THEME "THE PALYNOLOGY OF THE NORTH ATLANTIC MARGINS" WILL BE GIVEN PREFERENCE FOR INCLUSION IN THE PROGRAM, BUT CONTRIBUTIONS ON OTHER TOPICS WILL ALSO BE WELCOMED. SEVERAL WORKING GROUPS WILL HOLD MEETINGS DURING THE CONFERENCE, AND SOME OF THESE WILL PRESENT PROGRESS REPORTS. IT IS ANTICIPATED THAT PAPERS DEALING WITH PALYNOMORPHS OF ALL AGES FROM PRECAMBRIAN TO QUATERNARY WILL BE INCLUDED IN THE PROGRAM.

REGISTRATION WILL BEGIN ON SUNDAY, 12 SEPTEMBER. LECTURES, DEMONSTRATIONS, AND WORKING GROUP MEETINGS WILL TAKE PLACE ON 13 TO 15 SEPTEMBER, INCLUSIVE. TWO FIELD EXCURSIONS WILL BE HELD IMMEDIATELY AFTER THE MEETING, ONE LOWER PALEOZOIC AND THE OTHER UPPER PALEOZOIC. THESE WILL EACH BE FOR EITHER ONE OR THREE DAYS, DEPENDING ON THE PREFERENCE OF PARTICIPANTS. THE CONFERENCE LANGUAGES WILL BE ENGLISH AND FRENCH. ABSTRACTS OF PAPERS PRESENTED WILL BE PRINTED AND DISTRIBUTED BEFORE THE MEETING. PAPERS READ AT THE MEETING WILL BE CONSIDERED FOR PUBLICATION IN PALYNOLOGY SUBJECT TO THE NORMAL AASP PUBLICATION PROCEDURES.

IT IS ESTIMATED THAT THE REGISTRATION FEE WILL NOT EXCEED 20 POUNDS FOR PROFESSIONAL MEMBERS. A SUBSTANTIALLY REDUCED RATE IS PLANNED FOR STUDENTS. LIMITED ACCOMMODATION WILL BE AVAILABLE IN TRINITY COLLEGE. ACCOMMODATION WILL ALSO BE AVAILABLE IN NUMEROUS HOTELS OF VARYING STANDARDS CLOSE TO THE COLLEGE.

THE FIRST CIRCULAR WAS CIRCULATED IN MID-1980. ADDITIONAL ENQUIRIES AND REQUESTS FOR FURTHER INFORMATION SHOULD BE ADDRESSED TO EITHER OF THE TWO LOCAL SECRETARIES: GEOFF CLAYTON, DEPT. GEOLOGY, TRINITY COLLEGE, DUBLIN 2, OR KEN HIGGS, GEOLOGICAL SURVEY OF IRELAND, 14 HUME STREET, DUBLIN 2, IRELAND.

(FROM CIMP NEWSLETTER 23)

BULLETIN BOARD

II CONGRESSO LATINO-AMERICANO DE PALEONTOLOGIA, PORTO ALEGRE, BRAZIL, 26-30 APRIL 1981; (AV. OSWALDO ARANHA, 218, 90.000 PORTO ALEGRE, RS, BRAZIL).

THIRTEENTH INTERNATIONAL BOTANICAL CONGRESS (XIII.IBC), SYDNEY, AUSTRALIA, 21-28 AUGUST 1981; (AUSTRALIAN ACAD. SCIENCE, P.O. BOX 783, CANBERRA CITY 2601, AUSTRALIA).

HEXROSE CONFERENCE ON MODERN AND FOSSIL DINOFLAGELLATES, TÜBINGEN, GERMANY, SEPTEMBER 1981; (DR. HANS GOCHT, INST. U. MUSEUM FÜR GEOL. U. PALÄONT., SIGWARTSTRASSE 10, D-7400 TÜBINGEN 1, WEST GERMANY).

FOURTEENTH ANNUAL MEETING, AASP, NEW ORLEANS, LOUISIANA, 7-10 OCTOBER 1981; (DON BENSON, AMOCO PROD. CO., P.O. BOX 50879, NEW ORLEANS, LA 70150).

THIRD NORTH AMERICAN PALEONTOLOGICAL CONVENTION (III.NAPC), MONTREAL, CANADA, 5-11 AUGUST 1982; (COLIN STEARN, DEPT. GEOL. SCI., MCGILL UNIV., 3450 UNIVERSITY ST., MONTREAL, QUEBEC H3A 2A7, CANADA).

COMMISSION INTERNATIONALE DE MICROFLORE DU PALÉOZOIQUE (CIMP) JOINT MEETING WITH AASP, DUBLIN, IRELAND, 13-15 SEPTEMBER 1982; (GEOFF CLAYTON, DEPT. GEOL., TRINITY COLLEGE, DUBLIN 2, EIRE).

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PALYNOLITERATURE

ARTZNER, D., ET AL., 1979, SYSTEMATIC ILLUSTRATED GUIDE TO FOSSIL ORGANIC-WALLED DINOFLAGELLATE GENERA: ROYAL ONTARIO MUSEUM, LIFE SCIENCES MISCELLANEOUS PUBLICATIONS, 119 P., $6.00; R. O. M., 100 QUEEN'S PARK, TORONTO, ONTARIO M5S 2C6.

BRASIER, M. D., 1980, MICROFOSSILS: GEORGE ALLEN & UNWIN, LONDON, 193 P., ISBN 0 04 562001 6 (HARDBACK, £12.00), ISBN 0 04 562002 4 (PAPERBACK, £6.50); GEORGE ALLEN & UNWIN LTD., 40 MUSEUM ST., LONDON WC1A 1LU.

DÖRHÖFER, G., AND DAVIES, E. H., 1980, EVOLUTION OF ARCHEOPYLE AND TABULATION IN RHAETOGONYAULACINEAN DINOFLAGELLATE CYSTS: ROYAL ONTARIO MUSEUM, LIFE SCIENCES MISCELLANEOUS PUBLICATIONS, 91 P., $5.50; R. O. M. (ADDRESS ABOVE).

GRAY, J., AND BOUCOT, A. J., 1979, HISTORICAL BIOGEOGRAPHY, PLATE TECTONICS, AND THE CHANGING ENVIRONMENT: OREGON STATE UNIVERSITY PRESS, 512 P., ISBN 0 87071 176 8, $59.75; OREGON STATE UNIV. PRESS, 101 WALDO HALL, CORVALLIS, OR 97331.

THUSU, B., ED., 1978, DISTRIBUTION OF BIOSTRATIGRAPHICALLY DIAGNOSTIC DINOFLAGELLATE CYSTS AND MIOSPORES FROM THE NORTHWEST EUROPEAN CONTINENTAL SHELF AND ADJACENT AREAS: CONTINENTAL SHELF INSTITUTE, PUBL. NO. 100, 107 P., N.KR. 100; CONTINENTAL SHELF INST., LIBRARY, POSTBOKS 1883, N-7001 TRONDHEIM, NORWAY.

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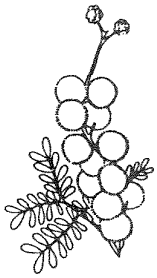

XIII INTERNATIONAL BOTANICAL CONGRESS

The Executive Secretary of this congress, W. J. Cram, has asked potential participants to send their names and addresses together with the sections and field trips of interest to: 13th IBC, Australian Academy of Science, P.O. Box 783, Canberra A.C.T. 2601, Australia. If this information is sent, it will not be necessary to return a preliminary reply form, and the names will be added to the list of those who will receive the second circular.

The following symposia are planned for Section 11 on Historical Botany; names of convenors of the symposia are included.

Advances in Paleobotany and Palynology (D. Christophel)

Applications of Tree Ring Studies to Ecology and Climatology (J. Ogden)

Development of Regional Vegetation Types in Pre-Quaternary Time (E. Truswell)

Development of the Plant Geographical Pattern of Australasia (J. M. B. Smith)

Gymnosperms: Paleozoic and Mesozoic (Taylor & Delevoryas)

History and Ecology of Crops and Cropping Systems in the Americas (I. Farrington)

Man's Influences on the Ranges of Plants (N. M. Wace)

Origins and Evolution of Angiosperms (Dilcher & Crepet)

Persistence and Change in Vegetation (Walker & Anderson)

Physiological Problems in Evolution (J. A. Raven)

Plant Geographical Results of Changing Cenozoic Barriers (P. Raven)

(from IOP NEWSLETTER 12)

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AUSTRALIAN MESOZOIC DINOFLAGELLATES

A catalog of 287 high quality 35 mm color transparencies is now available. The catalog contains photographs of all the extant holotypes and (or) paratypes of Mesozoic dinoflagellates and acritarch species described by Isabel C. Cookson and her coauthors Alfred Eisenack and Georges Deflandre between 1955 and 1974. In addition a few species described more recently by Roger Morgan and John Filatoff are included.

This catalog was prepared by Robin J. Helby and Alan D. Partridge to provide high quality reproductions of the original types described in the pioneering studies of Cookson. This was done to enable modern workers to review Cookson's work in the light of recent advances in the understanding of dinoflagellate cysts, to show those morphological features which are now considered important for identification and classification, and to provide a ready tool for palynologists to gain a better appreciation of the species involved.

The 35 mm transparencies contained in this collection represent hours of painstaking restoration of the original palynological slides, many of which are deteriorating, and multiple photography of each specimen to obtain the best possible reproduction.

The Earth Resources Foundation within the University of Sydney is considering printing a second edition of the catalog and is seeking orders from interested parties. The first edition of 30 sets has been sold out to universities, petroleum exploration companies, and consultants, both in Australia and internationally. Any person or organization wishing to obtain a copy can do so by sending a check for US $225 or Australian $200, made payable to the University of Sydney, to: The Secretary, Earth Resources Foundation, Dept. Geology & Geophysics, University of Sydney, N.S.W. 2006, Australia.

Delivery will take from 6 to 10 weeks from date of receipt of the order, as reproduction has to be done commercially.

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CORRECTION

Dr. Tseng-Chieng Huang has been an AASP member continuously since 1977, and is not a "reinstated member" as was stated in the last AASP NEWSLETTER.

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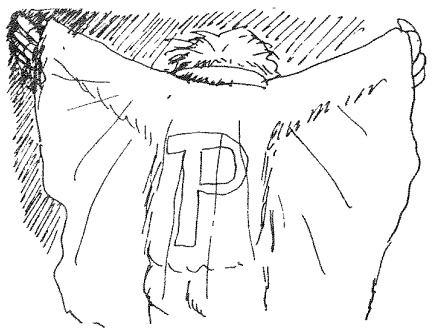

"POLLENMAN"

Coming soon to a newsletter near you! (to the next issue of AASP NEWSLETTER, in fact). The exciting adventures of that legendary folk-hero, iconoclast, and man-about-bogs, Pollenman! Watch for "The Expurgated Adventures of Pollenman" beginning in the January, 1981, issue!

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FOCUS

PENNSYLVANIA STATE UNIVERSITY

Our research endeavors at the present are in the following areas:

1. Cretaceous-Paleogene Palynology

Deborah Delfel completed, in fall, 1979, her M.Sc. thesis, "Palynostratigraphy and paleoecology of the La Ventana Formation, Cretaceous (Maestrichtian), San Juan Basin, New Mexico," a study we did in collaboration with Dr. John W. Parker of Albion College.

Duck K. Choi is now working on a Ph.D. dissertation on Late Cretaceous to early Paleogene sediments from Ellesmere Island, Canadian Arctic. This project is in collaboration with Dr. Leo J. Hickey, U.S. National Museum, who is doing the megafossil plants.

Examples of past work in this field have been J. W. Bebout's and D. J. Nichols' Ph.D. theses and F. E. May's M.Sc. thesis. NSF grants have supported some of this work in the past.

Several small projects in this part of the stratigraphic column are also underway.

2. Neogene Studies; Black Sea and other sediments

This work is connected with Traverse's research as on-board scientist on Glomar Challenger DSDP Leg 42B in the Black Sea. Studies are related to the sedimentary and paleoclimatological history of the Black Sea drainage. This work has been supported by NSF grants.

Beginning in late fall, 1980, Traverse will spend two terms at E.T.H., Zürich, Geologisches Institut, applying "Black Sea techniques" to deep cores of the sediments of the Lake of Zürich.

A D.Ed. thesis by Lynn Brant (1980) on the palynological interpretation of post-glacial lakes in Montana is another example of research in this part of the column.

3. Since 1966 our laboratory has been constantly involved in Triassic-Jurassic palynology of North America, supported by several NSF grants. The R. E. Dunay and B. W. Cornet Ph.D. theses and other publications that resulted from this work are well known. At present, Ronald J. Litwin is working with Traverse on a joint project with Dr. Sidney R. Ash on Chinle and other Triassic-Jurassic floras, coupling megafossil and microfossil approaches to the same sediments. Also, Eleanora T. Robbins is working on a Ph.D. thesis on paleobiochemistry and palynology of the Dan River-Danville Basin, North Carolina.

4. We have a continuing series of studies of Paleozoic rocks of Pennsylvania, with two particular emphases.

Devonian stratigraphy—the Warg and Traverse and Streel and Traverse contributions are best known, but there are other, as yet unpublished studies, for example the Ph.D. dissertation of John Stolar, Jr. on megaspore-based stratigraphy of the Devonian-Mississippian transition in central Pennsylvania. Virginia Mutti, a part-time graduate student, is at present working on Middle Devonian palynostratigraphy of this area.

Silurian studies: origin of land flora—Paul K. Strother and Traverse have been working on Tuscarora Formation (Llandoverian) and Clinton? strata (Wenlockian) for evidence of the first land plants. This exciting work continues, by us and by some undergraduate students.

From time to time we work on other, smaller projects, too—for example, acritarchs of Ordovician rocks near our home base!

Alfred Traverse

TEXAS A&M UNIVERSITY

The palynology program at Texas A&M University concentrates mainly on research and academic training in the field of Quaternary palynology. Students coming to Texas A&M may elect to major in anthropology or botany at the M.A. level and botany at the Ph.D. level while pursuing their palynological studies.

The Texas A&M Palynology Laboratory is supported by two faculty menbers (Vaughn M. Bryant, Jr. and Glendon H. Weir), employs three part-time or full-time graduate research assistants (Robert Murry, James Caldwell, and Thomas Stearns) and provides research facilities for a number of M.A. and Ph.D. graduate students. The facility consists of two labs complete with fume hoods, centrifuges, and microscopes. In addition, several other nearby rooms are devoted to the storage of modern and fossil pollen reference specimens, seed collections, wood specimens, charcoal collections, and the Eric O. Callen coprolite reference collection. A Delta DH-5 sonicator and a wide variety of microscopes round out the facilities of the pollen labs. Other nearby facilities include the Electron Microscope Center where our faculty and graduate students have access to eight transmission and two scanning electron microscopes. An on-campus Data Computer Center supplies the research needs of the faculty and students.

Since the laboratory's creation in 1972, the palynology facility has trained two Ph.D.'s, three M.A.'s, and is the current home of three Ph.D. and six M.A. candidates. The main emphasis of the Texas A&M palynology program is placed on all phases of archeological palynology including the use of fossil pollen to reconstruct prehistoric vegetation and human dietary records.

Present research projects underway include work in areas of three continents. Dr. Weir is completing his third year of work in the area of coastal Peru while Dr. Bryant is finishing his research from areas of the Andean region of Peru. Robert Murry is working on projects in Louisiana,

(continued on p. 6)

THE SOUTHEASTERN U.S., AND THE FOUR CORNERS REGION OF THE AMERICAN SOUTHWEST. JAMES CALDWELL HAS RECENTLY RETURNED FROM FOUR MONTHS OF FIELD RESEARCH IN BELIZE AND IS NOW WORKING ON THOSE MATERIALS FOR HIS THESIS. TOM STEARNS IS WORKING ON PALYNOLOGICAL PROBLEMS IN TEXAS, PERU, AND THE AMERICAN SOUTHWEST. GRADUATE STUDENT RICHARD HOLLOWAY IS IN THE PROCESS OF COMPLETING HIS DOCTORAL STUDY ON POLLEN DEGRADATION AND HAS COMPLETED HIS SEPARATE STUDY OF QUATERNARY VEGETATIONAL RECORDS IN ALBERTA, CANADA, AND SOUTHEAST ALASKA. KATHY VOLMAN IS CURRENTLY WORKING ON PROBLEMS OF MODERN AND FOSSIL POLLEN RAINS IN SOUTH AFRICA WHILE DONNA LANNIE IS ACTIVELY INVOLVED IN POLLEN STUDIES OF TEXAS SEDIMENTS. JANET STOCK, ONE OF OUR MOST RECENT GRADUATE STUDENTS, IS BEGINNING A STUDY OF PREHISTORIC DIETS FROM COPROLITE SPECIMENS COLLECTED IN THE PECOS RIVER AREA OF SOUTHWEST TEXAS.

OTHER PROJECTS ON THE HORIZON FOR FUTURE ANALYSIS INCLUDE A STUDY OF MORE HUMAN FECAL SAMPLES FROM CAVES IN KENTUCKY, AN ANALYSIS OF A NEWLY DISCOVERED PEAT BOG IN CENTRAL TEXAS WITH A 16,000 - 20,000 YEAR-OLD RECORD, AND FURTHER STUDIES OF PREHISTORIC DIETS AND PALEOENVIRONMENTAL RECORDS FROM CHILE AND EQUADOR IN SOUTH AMERICA.

REPRINTS OF PAST RESEARCH AND ADDITONAL INFORMATION ABOUT OUR ON-GOING ACADEMIC AND RESEARCH PROGRAMS CAN BE OBTAINED BY WRITING TO US AT TEXAS A&M UNIVERSITY.

VAUGHN M. BRYANT, JR.

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"FOCUS" NEEDS ITEMS

NEWS OF RESEARCH ACTIVITIES IN NORTH AMERICAN PALYNOLOGICAL RESEARCH INSTITUTIONS IS NEEDED FOR THE COLUMN, "FOCUS." SEND A PROFILE OF YOUR ORGANIZATION AND WORD OF ON-GOING OR RECENTLY COMPLETED WORK OF INTEREST TO YOUR COLLEAGUES TO THE AASP NEWSLETTER EDITOR. ITEMS WILL BE PUBLISHED IN THE ORDER IN WHICH THEY ARE RECEIVED.

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ENGLISH LANGUAGE ARTICLES FROM CHINA

ENGLISH LANGUAGE TEXTS WERE SPECIALLY WRITTEN FOR 14 PAPERS PRESENTED AT THE CAMBRIDGE OR READING MEETINGS IN JULY, 1980. EACH IS AVAILABLE AS A SEPARATELY BOUND REPRINT AND CAN BE OBTAINED FROM THE PUBLISHER AT THE PRICE OF $2.00 EACH. WRITE TO: PROF. LI XING-XUE, INSTITUTE OF GEOLOGY & PALEONTOLOGY, ACADEMIA SINICA, NANKING, CHINA. THE PAPERS ARE:

"AN OUTLINE OF RECENT RESEARCHES ON THE CATHAYSIA FLORA" (LI XINGXUE & YAO ZHAOQI)

"NOTES ON THE ECOLOGICAL SIGNIFICANCE OF SOME CATHAYSIA FLORAL ELEMENTS" (ZHANG SHANZEN)

"EARLY LIASSIC PLANTS FROM SOUTHWEST HUNAN, CHINA" (ZHOU ZHIYAN)

"SUCCESSION OF JURASSIC PLANT ASSEMBLAGES AND STRATIGRAPHIC CORRELATION OF CHINA" (YE MEINA & LI BAOXIAN)

"MICROFLORAL AREAS OF EARLY CRETACEOUS IN CHINA" (LI WEN-BEN)

"MIDDLE - LATE EARLY CRETACEOUS FLORA FROM JILIN, N.E. CHINA" (LI XINGXUE & YE MEINA)

"CRETACEOUS - TERTIARY SPORO POLLEN ASSEMBLAGES OF NORTHERN JIANGSU" (SONG ZHI-CHEN ET AL.)

"GENERAL ASPECTS OF THE FLORISTIC REGIONS OF LATE CRETACEOUS AND EARLY TERTIARY OF CHINA" (SONG ZHI-CHEN)

"LATE CRETACEOUS AND EOCENE FLORAL PROVINCES" (GUO SHUANG-XING)

"SPORES AND POLLEN GRAINS FROM THE FUSHUN GROUP" (SONG ZHI-CHEN & CAO LIU)

"EOCENE SPORES AND POLLEN ASSEMBLAGE FROM NORTHEASTERN ZHEJING" (LI MANYING)

"TERTIARY SPORE-POLLEN ASSEMBLAGES IN NORTHERN SHANDONG" (ZHOU HEYI)

"SOME FOSSIL CATKINS AND A MALE CONE WITH THEIR POLLEN IN SITU FROM SHANWANG FLORA" (LI HAOMIN & ZHENG YAHUI)

"POLLEN ANALYSIS OF THE NIHEWAN FORMATION" (LIU JINGLING & TANG LINGYU)

(REPRINTED FROM IOP NEWSLETTER 12)

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PALYNOLOGISTS WIDEN INTERESTS

PALYNOLOGY IS NOT ALL PLANT MICROFOSSILS, IT SEEMS. SOME AASP MEMBERS HAVE WIDER RESEARCH INTERESTS, JUDGING FROM REPORTS THAT HAVE APPEARED IN THE POPULAR PRESS RECENTLY.

THE NEW YORK TIMES CARRIED AN ITEM IN JUNE THAT DISCUSSED DEWEY MCLEAN'S THEORY EXPLAINING PLEISTOCENE EXTINCTIONS. DEWEY HAS BEEN STUDYING THE EFFECTS OF HEAT ON THE REPRODUCTIVE SYSTEMS OF LARGE MAMMALS. WARMING OF THE ENVIRONMENT REDUCES THE FERTILITY OF CATTLE, OBSERVES DEWEY, AND OTHER LARGE ANIMALS COULD HAVE BEEN SERIOUSLY AFFECTED IN A SIMILAR WAY IN THE PAST. HE PROPOSED THAT PERHAPS THE WORLD WARMED UP TOO FAST AFTER THE ICE AGES, WITH A DEVASTATING EFFECT ON REPRODUCTION IN ENTIRE SPECIES OF BIG BEASTS. INTERESTING STUFF, THIS, AND A FAR CRY FROM DINOFLAGELLATES.

A RECENT ISSUE OF THE READER'S DIGEST REPORTED ON VAUGHN BRYANT'S INTRODUCTORY ANTHROPOLOGY COURSE AT TEXAS A&M, WHICH INCLUDES A LECTURE ON THE ORIGIN OF KISSING. VAUGHN SAYS IT ALL BEGAN ABOUT 4000 YEARS AGO, IN INDIA. PRESSING NOSES TOGETHER WAS THE BEGINNING, BUT PROGRESS WAS RAPID ONCE SOMEONE SLIPPED AND LIPS WERE DISCOVERED. THE ROMANS ARE GIVEN CREDIT FOR THE RAPID GEOGRAPHIC DISPERSAL OF THE NEW ACTIVITY. THE NOTE IN READER'S DIGEST DOES NOT MENTION IF THERE IS A LAB WITH VAUGHN'S COURSE.

REPRODUCTION IN LARGE MAMMALS... THE ORIGIN AND EVOLUTION OF KISSING... PERHAPS THERE IS SOME UNIFYING THEME HERE, EVEN IF IT IS NOT PALYNOLOGY. MORE IMPORTANT, PERHAPS, THE REST OF THE MEMBERS OF AASP ARE MISSING SOMETHING, CONCENTRATING THEIR RESEARCH ON PLANT MICROFOSSILS.

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REVIEWS

A SYSTEMATIC ILLUSTRATED GUIDE TO FOSSIL ORGANIC-WALLED DINOFLAGELLATE GENERA, BY D. ARTZNER, E. H. DAVIES, G. DÖRHÖFER, A. FASOLA, G. NORRIS, AND S. POPLAWSKI; ROYAL ONTARIO MUSEUM; 1979, 119 P., $6.00.

THIS 119-PAGE PUBLICATION COMPRISES 100 PAGES OF PLATES AND PLATE EXPLANATIONS TOGETHER WITH 19 PAGES OF INTRODUCTORY INFORMATION AND REFERENCES. THE INTRODUCTION EXPLAINS HOW THE GUIDE CAME TO BE ASSEMBLED AND CLAIMS THAT IT "... FACILITATES THE USE OF EXISTING [DINOFLAGELLATE] CATALOGS AND INDICES AND IMPROVES UNDERSTANDING OF THE CLASS DINOPHYCEAE...." (P. 5). THE EXTENT TO WHICH THE GUIDE IS ACCEPTED AND USED WILL LARGELY DETERMINE THE ACCURACY OF THE AUTHORS' ASSERTION.

IN THE SECTION HEADED ABBREVIATIONS AND LOGOGRAMS, A FEW NEW TERMS ARE INTRODUCED AND AN ATTEMPT IS MADE TO CLARIFY UNCERTAINTIES, AMBIGUITIES, AND CONFUSION CONCERNING SEVERAL PREVIOUSLY DEFINED TERMS. THE SECTION ALSO LISTS AND DEFINES ABBREVIATIONS FOR THE CONSTRUCTION OF LOGOGRAMS. USE OF LOGOGRAMS OR OTHER CRYPTOGRAPHIC METHODS AS SUBSTITUTES FOR PROSE OR EVEN TELEGRAPHIC-STYLE DESCRIPTIONS IS NOT NEW TO PALYNOLOGY. ABOUT 50 YEARS AGO ARMBRUSTER AND OENIKE (1929) AND R. POTONIÉ (1931), USING SYMBOLS IN COMBINATION WITH LETTERS AND NUMBERS, PRESENTED LOGOGRAMS FOR SPORE-POLLEN TAXA. THIS DATA PRESENTATION METHOD WAS NOT ADOPTED BY LATER AUTHORS AND IT MIGHT BE INTERESTING TO SPECULATE ABOUT WHETHER OR NOT THE APPLICATION OF LOGOGRAMS TO DINOFLAGELLATES WILL EXPERIENCE A SIMILAR FATE. LOGOGRAMS HAVE AN OBVIOUS ATTRACTION TO THOSE INTERESTED IN TRANSLATING MORPHOLOGIC INFORMATION INTO A COMPUTER-ACCEPTABLE MODE. HOWEVER, THE NEOPHYTE OR THE INDIVIDUAL WITH A CASUAL BUT SINCERE INTEREST IN DINOFLAGELLATES MAY FIND LOGOGRAMS A SOURCE OF FRUSTRATION, WHILE THE SERIOUS INVESTIGATOR WILL PROBABLY FIND THEM EXASPERATING.

WITH SLIGHT MODIFICATIONS THE ARRANGEMENT OF THE ILLUSTRATIONS FOLLOWS THE FAMILY CLASSIFICATION OF NORRIS (1978). WHETHER OR NOT ONE IS A PROPONENT OF THIS CLASSIFICATION, THE USER OF THE GUIDE WILL SOON DISCOVER THE ALPHABETICAL LIST OF GENERA A MORE CONVENIENT AND QUICKER REFERENCE FOR LOCATING DRAWINGS OF PARTICULAR GENERA. THE ILLUSTRATIONS, WHICH ARE LINE DRAWINGS THAT DEMONSTRATE A VARIETY OF ARTISTIC TECHNIQUES AND TALENTS, VARY FROM SOPHISTICATED, EXCELLENTLY EXECUTED, FAITHFULLY PORTRAYED EXAMPLES TO NEARLY JUVENILE, HIGHLY SUSPECT ILLUSTRATIONS. FOR THE MOST PART, THE ILLUSTRATIONS DEPICT THE SALIENT FEATURES FOR THE MAJORITY OF GENERA. STILL ONE MIGHT ASK IF THE AUTHORS TOOK FULL ADVANTAGE OF AVAILABLE INFORMATION. FOR EXAMPLE, ONE COULD JUSTIFIABLY QUESTION THE SELECTION OF FIGURE 143 TO ILLUSTRATE LITOSPHAERIDIUM WHEN MUCH SUPERIOR DRAWINGS (FIG. 16 IN DAVEY ET AL., 1966) WERE READILY AVAILABLE. THE USER WILL HAVE DIFFICULTY RELATING THE ILLUSTRATIONS TO THEIR SOURCES OWING TO THE BREVITY OF THE PLATE EXPLANATIONS AS WELL AS THE LACK OF DOCUMENTATION AND CREDITATION. THREE EXAMPLES WILL ILLUSTRATE THE PROBLEM. THE EXPLANATION FOR FIGURE 28 (WHICH IS ACTUALLY 3 FIGURES: 28A, 28B, AND 28C) READS, "APTEA POLYMORPHA EISENACK, 1958..," BUT NONE OF THE ILLUSTRATIONS APPEARS IN EISENACK (1958). THE EXPLANATION FOR FIGURE 48 READS, "HESLERTONIA HESLERTONENSIS (NEALE AND SARJEANT) SARJEANT, 1966...." IN THIS CASE IS THE SINGLE ILLUSTRATION FROM NEALE AND SARJEANT (DATE OMITTED), FROM SARJEANT (1966), OR POSSIBLY FROM ELSEWHERE? THE FINAL EXAMPLE IS FIGURE 112, WHOSE EXPLANATION READS, "SILICISPHAERA FEROX (DEFLANDRE) DAVEY AND VERDIER, 1976...." ACTUALLY, THE ORIGINAL DRAWING IS FROM NEITHER DEFLANDRE NOR DAVEY AND VERDIER, BUT FROM EVITT (1967, PL. 8, FIG. 4). MOREOVER, THE AUTHORS OF THE GUIDE PROVIDE NO CLUE THAT FIGURE 112 WAS INITIALLY FOR "HYSTRICHOSPHAERIDIUM" FEROX RATHER THAN SILICISPHAERA FEROX. THE DRAWING OF S. FEROX SERVES TO ILLUSTRATE ANOTHER UNEXPLAINED PROCEDURE, NAMELY, THE OMISSION OF PARTS OF THE DRAWINGS ON SOME ILLUSTRATIONS BUT NOT ON OTHERS. IN THE ORIGINAL PUBLICATION, EVITT SHOWS TWO DRAWINGS, ONE OF THE DORSAL SURFACE AND ONE OF THE VENTRAL SURFACE, EACH LABELED WITH KOFOIDEAN DESIGNATES. WHY THEN, DID THE AUTHORS CHOOSE TO EXCLUDE THE SECOND DRAWING AND THE KOFOIDEAN SYMBOLS IN THIS CASE, BUT INCLUDE TWO VIEWS AND COMPLETELY LABELED DRAWINGS FOR OTHERS? FINALLY, THE INCLUSION OF A SCALE ON ALL PLATES, RATHER THAN ON ONLY THE FIRST PLATE, WOULD HAVE ENHANCED THE GUIDE'S UTILITY.

DESPITE ITS SHORTCOMINGS, PERSONS INTERESTED IN FOSSIL DINOFLAGELLATES WILL FIND THE GUIDE A USEFUL PUBLICATION. IT PROVIDES APPROXIMATELY 350 SYSTEMATICALLY ORGANIZED ILLUSTRATIONS UNDER A SINGLE COVER FOR HANDY REFERENCE. HOWEVER, THE WIDE VARIABILITY IN THE QUALITY OF THE ILLUSTRATIONS AND THE PAUCITY OF INFORMATION ABOUT SOURCES SEVERELY DETRACTS FROM ITS USEFULNESS. WHETHER THE GUIDE FULFILLS ITS CLAIMS TO FACILITATE THE USE OF OTHER CATALOGS, IMPROVE THE UNDERSTANDING OF THE DINOPHYCEAE AND HELP IN ASSIGNING SPECIES TO THEIR APPROPRIATE GENERIC AND HIGHER GROUPS REMAINS TO BE DEMONSTRATED. BY ITS VERY ORGANIZATION, IT IS INEXTRICABLY LINKED TO A SINGLE CLASSIFICATION AND TAXONOMY. IT IS PERHAPS HEREIN THAT THE TRUE MERIT OF THE GUIDE LIES.

LEWIS E. STOVER

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POTONIÉ, R. 1931, ZUR MIKROSKOPIE DER BRAUNKOHLEN: BRAUNKOHLE, V. 16, P. 325-333.

(REVIEWS CONTINUED ON P. 8)

EVOLUTION OF ARCHEOPYLE AND TABULATION IN RHAETOGONYAULACINEAN DINOFLAGELLATE CYSTS, BY G. DÖRHÖFER AND E. H. DAVIES; ROYAL ONTARIO MUSEUM; 1980, 91 P., 40 FIGS., $5.50.

THOSE WHO VENTURE INTO THE BUSINESS OF DISSIPATING THE MURKY FOGS OF EVOLUTIONARY LINEAGES ARE BRAVE SOULS INDEED. NOTHING BRINGS DOWN THE SLINGS AND ARROWS OF OTHER WORKERS IN THE FIELD AS DOES SUCH AN EXCURSION AND NOTHING AT TIMES CAN BE SO UNREWARDING AN ENDEAVOR. THUS I MUST PREFACE MY REMARKS BY EXTENDING MY ADMIRATION TO DRS. DÖRHÖFER AND DAVIES FOR THEIR COURAGE.

THIS IS AN IMPORTANT PAPER AND NEEDS TO BE READ CAREFULLY AND DIGESTED THOROUGHLY. IT CONTAINS A VARIETY OF IDEAS AND A WEALTH OF HYPOTHESES SUCH THAT CAREFUL EVALUATION IS NECESSARY TO OBTAIN SOME PERSPECTIVE ON ITS ULTIMATE SIGNIFICANCE FOR THE DISCIPLINE OF DINOFLAGELLATE CYST STUDIES.

THE PAPER INTRODUCES OR AMPLIFIES SEVERAL IMPORTANT NEW CONCEPTS IN THE INTERPRETATION OF THE EVOLUTION OF DINOFLAGELLATE CYSTS. ONE OF THE MORE IMPORTANT OF THESE IS THE CONCEPT OF AN EVOLUTIONARY LINEAGE LINKING PRIMITIVE SEUSSIOID CYSTS THROUGH PAREODINIACEAN FORMS TO PSEUDOCERATIOID GENERA. IT ATTEMPTS TO SYNTHESIZE SOME OF THE MORE RECENT CONCEPTS IN DINOCYST STUDIES SUCH AS PLATE IMBRICATION AND THE KEYSTONE THEORY AND APPLY THEM TO EVOLUTIONARY LINEAGES. IT INTRODUCES A NUMBER OF NOMENCLATURAL CHANGES AND NEW CIRCUMSCRIPTIONS OF GENERA, THE APPROPRIATENESS OF WHICH WILL DEMAND MUCH THOUGHT ON THE PART OF THE READER. THE PAPER ALSO INTRODUCES THREE NEW GENERA AND FIVE NEW SPECIES OF JURASSIC AGE. LAST BUT NOT LEAST, IT IS A PAPER THAT WILL ENGENDER CONSIDERABLE CONTROVERSY CONCERNING ITS MAIN CONTENTIONS.

SOME OF THE ITEMS THAT ARE LIKELY TO FOMENT DISCUSSION AND GAIN VARYING DEGREES OF ACCEPTANCE INCLUDE THE FOLLOWING: (1) THE INTERPRETATION OF THE HORN POSITIONS IN IMBATODINIUM EMEND. AND SIMILAR GENERA THAT ALLOW THEM TO BE CONSIDERED AS PSEUDOCERATIACEAN GENERA. (2) THE EXPLANATION OF AN EVOLUTIONARY SEQUENCE IN PART AS BEING INFLUENCED BY WATER TEMPERATURE AND LATITUDINAL POSITION—AN HYPOTHESIS EXPLAINED IN A FORTHCOMING PAPER BY ONE OF THE AUTHORS THAT, ITSELF, PROMISES TO BE HIGHLY CONTROVERSIAL. (3) THE HYPOTHESIS THAT TRIASSIC SEUSSIOID FORMS DEVELOPED FROM MICRHYSTRIDIUM-LIKE ACRITARCHS, AS BEING IN PART A RESPONSE TO BOREAL CONDITIONS. (4) THE OCCASIONAL DIFFICULTY OF RECONCILING TABULATIONS SHOWN ON DRAFTED FIGURES WITH THOSE ILLUSTRATED ON SPECIMENS PHOTOGRAPHED UNDER THE LIGHT MICROSCOPE AND THE SEM—FOR EXAMPLE, THOSE OF DODEKOVIA SYZYGIA GEN. ET SP. NOV.

THERE ARE SOME MINOR DETAILS OF OMISSION OR COMMISSION THAT HAVE COME TO THIS REVIEWER'S ATTENTION. NO TABLE OF FORMATIONS IS PROVIDED FOR THE READER UNFAMILIAR WITH CANADIAN ARCTIC STRATIGRAPHIC NOMENCLATURE. NEITHER IS THERE INDEPENDENT EVIDENCE GIVEN FOR THE AGES OF THE VARIOUS HORIZONS THAT HAVE YIELDED HOLOTYPES OR KEY SPECIMENS. REFERENCE IS MADE TO SEVERAL SPECIES IMPORTANT TO THE GENERAL ARGUMENT OF THE PAPER BUT NO INDICATION IS GIVEN THAT THE AUTHORS REEXAMINED THE HOLOTYPE OF THE TAXON, ALTHOUGH THE TAXON IS EMENDED IN ACCORDANCE WITH THE INTERPRETATIONS MADE IN THE PAPER. THE OCCASIONAL ERROR IN THE TEXT MAKES IT DIFFICULT FOR THE READER TO FOLLOW THE ARGUMENTS OF THE AUTHORS. FOR EXAMPLE, IMBATODINIUM KONDRAJEVI IS SUPPOSEDLY ILLUSTRATED (P. 13) ON FIGS. 27D, E, 28A, 29B, C, BUT IS ACTUALLY FIGURED ON FIGS. 30A-E, 31A-F, AND 34C, E. FINALLY IT MUST BE NOTED THAT, IN A PAPER WHICH DEALS LARGELY WITH EVOLUTIONARY LINEAGES IN A SOMEWHAT REVOLUTIONARY SENSE, NO REFERENCE IS MADE TO A PAPER THAT DEALS EXTENSIVELY WITH THAT TOPIC: WALL AND DALE (1968).

TO CLOSE MAY I REITERATE THAT THE AUTHORS ARE TO BE CONGRATULATED FOR DARING TO VENTURE INTO UNCHARTED AND TREACHEROUS WATERS. MAY I ALSO SAY THAT THE ROYAL ONTARIO MUSEUM IS TO BE LAUDED FOR PRODUCING THIS SCIENTIFIC PUBLICATION ON GOOD QUALITY GLOSSY PAPER IN A CLEAR AND READABLE FORMAT AND WITH PROFUSE ILLUSTRATION WHICH INCLUDES 22 PLATES OF EXCELLENT PHOTOGRAPHS.

WAYNE W. BRIDEAUX

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DISTRIBUTION OF BIOSTRATIGRAPHICALLY DIAGNOSTIC DINOFLAGELLATE CYSTS AND MIOSPORES FROM THE NORTHWEST EUROPEAN CONTINENTAL SHELF AND ADJACENT AREAS, BINDRA THUSU, ED.; CONTINENTAL SHELF INSTITUTE, PUBL. NO. 100; 1978, 107 P., N.KR. 100.

THIS PUBLICATION HAS 107 PAGES OF WHICH 25 ARE HIGH QUALITY PHOTO PLATES. IT CONTAINS 6 PAPERS, AND IN PART REPRESENTS THE PROCEEDINGS OF A SYMPOSIUM HELD DURING THE INTERNATIONAL PALYNOLOGICAL COLLOQUIUM (LEON, SPAIN, 1977).

THE FORMAT OF EACH PAPER IS THE SAME: A BRIEF INTRODUCTION—ACTUALLY AN EXPANDED ABSTRACT OF THE ORIGINAL PAPER—FOLLOWED BY SELECTED REFERENCES AND DETAILED STRATIGRAPHIC RANGE CHARTS, WHICH INCLUDE ALL SPECIES ILLUSTRATED IN THE PLATES THAT FOLLOW THE TEXT. THE PLATES THEMSELVES CONTAIN THOSE FORMS THAT HAVE PROVED THEMSELVES (TO THE AUTHORS, OR THE WIDER GROUP OF PARTICIPANTS IN THE SYMPOSIUM, SUPPORTED BY SELECTED PUBLISHED REPORTS) TO BE OF BIOSTRATIGRAPHIC VALUE. IN PARTICULAR THE PAPER BY THUSU CONTAINS MANY ORIGINAL DATA, WHICH ARE GIVEN IN TABULATED FORM. BATTEN'S PAPER HAS THE MOST RUNNING TEXT, BUT NO PLATES OR RANGE CHARTS. THE PUBLICATION ENDS WITH AN INTERGRATED CHECKLIST OF SPECIES AND UNNAMED FORMS INCLUDED, AND A SUMMARY RANGE CHART.

I HAVE LEARNED TO APPRECIATE PUBLICATION NO. 100 AS AN INVALUABLE AID TO PRACTICAL PALYNOLOGY; IT ENABLES ONE INEXPERIENCED IN MESOZOIC ASSEMBLAGES TO HAVE THE SATISFACTION OF PRODUCING CREDIBLE RESULTS ON SHORT NOTICE. ONE MINOR OBJECTION IS THAT THE FIGURES IN THUSU'S PAPER HAVE BEEN BLOCKED, OR MATTED, SO AS TO ELIMINATE BACKGROUND IMPURITIES. HOWEVER, THIS TECHNIQUE DOES AFFECT THE OPTICAL OUTLINE OF THE SPECIMEN, WHICH FACT IS NOT ALWAYS IMMEDIATELY APPRECIATED BECAUSE THE PHOTOS ARE PRINTED ON SIMILAR GREY SQUARES AS ARE USED IN THE (UNMATTED) PHOTOGRAPHS OF THE OTHER PAPERS. ANOTHER MINOR OBJECTION IS THAT ON P. 21 THE RANGE OF HESLERTONIA HAS BEEN PRINTED PRECISELY ONE STAGE TOO HIGH. I WANT TO STRONGLY RECOMMEND THIS PUBLICATION AS A USEFUL BASIC REFERENCE, AND A GOOD BUY AT THE PRICE.

(CONTINUED ON P. 9)

THE TITLES OF THE 6 PAPERS INCLUDED ARE: (1) "QUATERNARY AND NEOGENE DINOFLAGELLATE CYSTS" BY R. HARLAND, (2) "EARLY CRETACEOUS DINOFLAGELLATE CYSTS" BY S. DUXBURY, (3) "LATE AND MIDDLE JURASSIC DINOFLAGELLATE CYSTS" BY R. J. DAVEY AND L. A. RILEY, (4) "EARLY JURASSIC TO LATE TRIASSIC DINOFLAGELLATE CYSTS AND MIOSPORES" BY S. J. MORBEY AND R. E. DUNAY, (5) "APTIAN TO TOARCIAN DINOFLAGELLATE CYSTS IN ARCTIC NORWAY" BY B. THUSU, (6) "EARLY CRETACEOUS TO MIDDLE JURASSIC MIOSPORES AND PALYNOFACIES OF THE NORTHWEST CONTINENTAL SHELF" BY D. J. BATTEN.

JAN JANSONIUS

BIOLOGICAL MEMOIRS, PALAEOPALYNOLOGY SERIES 1 TO 4, INTERNATIONAL PUBLISHERS, LUCKNOW; REPRINTED FROM VOL. 1, NOS. 1 & 2, DECEMBER 1976, 120 P., $12.00.

VOLUME 1, NOS. 1 & 2, ALSO CONTAIN BRYOLOGY SERIES - 1 AND LICHENOLOGY SERIES 1; THE ISSUE REVIEWED HERE COLLECTS 4 PAPERS ON A VARIETY OF SUBJECTS MORE OR LESS CLOSELY RELATED TO PALYNOLOGY.

P. J. TAUGOURDEAU, "THE SCOLECODONTS"

THE AUTHOR IS ONE OF RELATIVELY FEW WHO DEVOTED CONSIDERABLE TIME TO FOSSIL WORM JAWS. HERE HE TOUCHES ON MOST ASPECTS OF THEIR STUDY: SCOLECODONTS ARE DEFINED AND A HISTORIC ACCOUNT OF EARLY STUDIES IS GIVEN, FOLLOWED BY A CHAPTER OF DESCRIPTIVE AND MORPHOLOGICAL TERMINOLOGY WHICH STARTS WITH A DISCUSSION OF THE 4 GROUPS PLACOGNATHA, CTENOGNATHA, LABIDOGNATHA, AND PRIONOGNATHA DEFINED BY KIELAN-JAWOROWSKA. A CHAPTER ON DENTAL FORMULAS PROVES TO ME THAT THEY MAY NOT BE WORTH THE BOTHER; AS IN THE PAPER BY JANSONIUS AND CRAIG (1971), HERE ALSO THE TYPOGRAPHY OF THE VARIOUS DEVICES USED BECOMES TOO COMPLICATED FOR THE TYPE-SETTER AND EDITOR, WHO MUTILATED THEM BEYOND RECOGNITION.

A CHAPTER ON PREPARATION TECHNIQUES IS UNDULY DETAILED, AS IS THE DISCUSSION ON METHODS OF STUDY. A USEFUL CONTRIBUTION APPEARS TO BE THE DICHOTOMOUS KEY LEADING TO THE GENERA USED FOR DISPERSED SCOLECODONTS. IT IS FOLLOWED BY A DISCUSSION OF NOMENCLATURAL DETAILS; I DECLINE TO COMMENT ON TAUGOURDEAU'S CONCLUSIONS HERE, BECAUSE ZOOLOGICAL RULES OF NOMENCLATURE CAN VARY DRASTICALLY FROM THE BOTANICAL ONES AND I AM NO LONGER SANGUINE THAT MY OWN INTERPRETATIONS OF ZOOLOGICAL NOMENCLATURE ARE UNASSAILABLE. THE PAPER ENDS WITH STATISTICS OF UNCERTAIN RELEVANCE ON GEOGRAPHICAL AND STRATIGRAPHIC DISTRIBUTION OF JAWS DESCRIBED IN THE LITERATURE, AND A LIST OF REFERENCES.

TAUGOURDEAU'S ARTICLE IS WRITTEN IN ENGLISH, BUT THE AUTHOR DOES NOT MASTER THAT LANGUAGE SUFFICIENTLY TO BE ABLE TO INSTRUCT A SCIENTIFIC MATTER CLEARLY. CLUMSY CONSTRUCTIONS ASIDE, THE CUSTOMARY ENGLISH MORPHOLOGICAL TERMS (TABULATED IN A CHART THAT IS MISLEADINGLY INCOMPLETE) ARE NOT UTILIZED IN THE TEXT. THE ORGANIZATION OF THE ARTICLE IS HAPHAZARD, AND OF SMALL HELP TO A READER NOT ALREADY FAMILIAR WITH THE SUBJECT. IN THE ILLUSTRATIONS FROM VARIOUS SOURCES, THE ORIGINAL FRENCH AND GERMAN TEXTS ARE TOO DISPARATE TO ALLOW A NOVICE TO CORRELATE THE EQUIVALENT TERMS IN THESE LANGUAGES. PART OF THESE UNFORTUNATE ASPECTS OF THE ARTICLE MUST BE BLAMED ON THE AUTHOR, BUT NOT A LESSER SHARE OF GUILT MUST BE SHOULDERED BY THE CHIEF EDITOR, D. C. BHARADWAJ, AND THE EDITOR OF THE PALAEOPALYNOLOGY SERIES, R. S. TIWARI, WHO HAVE DONE LITTLE TO EARN THEIR HONORIFIC POSITIONS ON THE MASTHEAD.

D. C. BHARADWAJ, "A REVISED FIT FOR GONDWANALAND"

A SUMMARY REVIEW IS GIVEN OF GEOLOGICAL AND GEOPHYSICAL ARGUMENTS, AT VARIOUS TIMES APPLIED TO THE REFITTING OF GONDWANALAND; I AM NOT COMPETENT TO EVALUATE THIS AS TO BIAS AND COMPLETENESS. IT SETS THE STAGE FOR TESTING SOME MAIN HYPOTHESES AGAINST THE DISTRIBUTIONIN TIME AND SPACE OF FOSSIL POLLEN AND SPORE ASSEMBLAGES AND SPECIES. BHARADWAJ HAS EXTRACTED SEVERAL INTERESTING OBSERVATIONS FROM THE PUBLISHED LITERATURE THAT SEEM TO MERIT FURTHER EVALUATION. ADDITIONAL WORK ALONG THIS LINE MAY ADDUCE VALID ARGUMENTS ON THE HYPOTHESES ON GONDWANALAND, ESPECIALLY WHEN SUPPORTED BY MORE DETAILED AND CRITICAL TAXONOMIC CONSIDERATION.

D. C. BHARADWAJ, R. K. KAR, AND G. K. B. NAVALE, "PALYNOSTRATIGRAPHY OF LOWER GONDWANA DEPOSITS IN PARANÁ AND MARANHAO BASINS, BRAZIL"

CONCLUSIONS IN THIS PAPER WERE USED IN THE PREVIOUS ONE. OVERALL THIS PAPER RESEMBLES MANY SIMILAR ONES IN THE PALAEOBOTANIST, WITH THE LARGER NUMBER OF PAGES USED FOR SYSTEMATIC DESCRIPTIONS (INCLUDING 10 NEW SPECIES AND THE NEW GENUS IMUCOGOSPORIS). THE LEGENDS OF TEXT-FIGURES 1 AND 2 ARE REVERSED; THIS ERROR APPARENTLY CONTINUED IN TABLES 3 AND 4 (THESE TABLES CONTAIN, IN PERCENTAGES, THE SAME SET OF DATA GIVEN AS HISTOGRAMS IN TEXT-FIGURES 1 AND 2). THE ASSEMBLAGES ARE ASSIGNED TO 6 GROUPS OF MIOFLORAL SEQUENCES, WHICH IN TURN ARE COMPARED WITH MIOSPORE ZONES FROM AFRICA, AUSTRALIA, AND INDIA.

K. A. PIROZYNSKI, "FUNGAL SPORES IN FOSSIL RECORD"

THIS ARTICLE IS BASED IN PART ON THE INVITED PAPER READ BY PIROZYNSKI AT THE ANNUAL MEETING OF AASP IN CALGARY IN 1974, HOWEVER, SOME OF THE GENERAL REMARKS THAT I FOUND VERY INTERESTING AT THAT OCCASION HAVE BEEN DELETED. PIROZYNSKI SETS OUT TO FIND A FOUNDATION FOR HIS, IN MY OPINION PREMATURE, CONVICTION THAT FUNGAL SPORES ARE VERY CONSERVATIVE, AND FOR THAT REASON SHOULD BE USEFUL FOR RECONSTRUCTING EARLIER ENVIRONMENTS RATHER THAN FOR BIOSTRATIGRAPHIC AGE DETERMINATIONS. THIS PAPER, HOWEVER, BETTER BE READ BY ALL PALYNOLOGISTS WHO WANT TO BECOME COMPETENT IN THE BIOSTRATIGRAPHIC APPLICATION OF FUNGAL SPORES. A GENEROUS BIBLIOGRAPHY PROVIDES TITLES OF OTHER BASIC READING.

CONCLUSIONS. THE RAISON D'ETRE FOR THE JOURNAL BIOLOGICAL MEMOIRS HAS NOT BECOME CLEAR BY THE CONTENTS OF THIS VOLUME; THE 4 PAPERS COULD EQUALLY HAVE BEEN PUBLISHED IN THE PALAEOBOTANIST OR GEOPHYTOLOGY, PERIODICALS ESTABLISHED EARLIER IN LUCKNOW BY THE SAME EDITOR-IN-CHIEF, AND LATELY NOT APPEARING ON SCHEDULE, PRESUMABLY BECAUSE A LIMITED SUPPLY OF MANUSCRIPTS IS BEING SPREAD TOO THINLY.

PREPAYMENT OF US $12.00 (AS DRAFT ON STATE BANK OF INDIA, PAYABLE TO "INTERNATIONAL PUBLISHERS, LUCKNOW") MUST ACCOMPANY ORDERS SENT TO INTERNATIONAL PUBLISHERS, C-131, SECTOR A4, MAHANAGAR, LUCKNOW, INDIA.

JAN JANSONIUS

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