AASP NEWSLETTER

N. O. FREDERIKSEN, EDITOR ISSN 0732-6041

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HELP WANTED FOR AASP

Our organization always needs volunteers to help out with various jobs and activities. One thing many of our members can do is act as reviewers for papers submitted to Palynology. At the back of this issue of the Newsletter is a blank that members can fill out which the Journal Editor will keep on file; he does not want to always use the same people as reviewers, so please let him know your field of expertise if you would like to be a reviewer.

A second job that needs a volunteer is that of Newsletter Editor. Norm Frederiksen will be stepping down from this position at the end of 1983 to have more time to spend preparing for the 1984 Annual Meeting in Washington. We must have a new Newsletter Editor beginning at the latest with the January 1984 issue. If you are interested in information about this exciting and worthwhile job, please contact Norm or one of the past Newsletter Editors (Vaughn Bryant, Doug Nichols) for details.

MANUSCRIPTS WANTED

Doug Nichols, our Journal Editor, reports that there is still space for additional papers in Volume 7 of Palynology. Manuscripts can be submitted at any time, but the deadline for this particular volume is the end of February, 1983.

MIDYEAR BOARD OF DIRECTORS MEETING

The midyear meeting of the AASP Board of Directors will take place April 21-22, 1983, in New York City at the Hilton Hotel at JFK Airport. If you would like to attend, you can get an agenda by writing Ken Piel.

ADDRESS CHANGE RELATIVE TO 1983 ANNUAL AASP MEETING

Ordinarily, the Newsletter doesn't print changes of address of members because there are too many of them. However, the fact that Virgil Wiggins' address change did not get into the latest AASP Directory is troublesome, because correspondence and abstract proposals will be sent to him for the 1983 Annual Meeting in San Francisco. Please send mail to his new address, which is given on the abstract form in the October 1982 Newsletter: Chevron U.S.A., Inc., P.O. Box 8100, Concord, CA 94524. His new phone is: (415) 680-3221.

COMMITTEE APPOINTMENTS

At the Board of Directors meeting in Dublin in September, President Nichols appointed the following members to committees:

Awards Committee:

Harry Leffingwell, Chairperson, and several members appointed by Leffingwell.

Ballot Committee:

Raymond A. Christopher, Chairperson
Kathleen Mae Heide, Member
John Bennett, Member

Nominating Committee:

Barbara L. Whitney, Chairperson
Frederick H. Wingate, Member
Stephen R. Jacobson, Member
Fredrick J. Rich, Member
Edward H. Davies, Member

Public Relations Committee:

Lewis E. Stover, Chairperson
Raymond A. Christopher, Member
Vaughn M. Bryant, Jr., Member
Vacancy to be filled later

A new Ad Hoc Committee, the Chair-in-Palynology Committee, was also created by the Board, and President Nichols appointed Harry Leffingwell to chair the committee and name the members of it. This committee is the outgrowth of an idea that has been discussed for several years informally and also at Board meetings: to investigate the possiblity of establishing one or more endowed university professorships to insure that quality students in palynology are produced by the university or universities concerned. Funds to create the endowments would presumably come from oil companies that presently employ many of our members and that have a stake in the competence of the people they hire.

AASP Newsletter is published quarterly by American Association of Stratigraphic Palynologists, Inc.

POSITION OFFERED

The Geological Survey of Canada, Atlantic Geoscience Centre, Bedford Institute of Oceanography in Dartmouth, Nova Scotia, is seeking a Research Scientist to carry out independent and team research on spores, pollen, acritarchs and dinoflagellates from the Mesozoic and Cenozoic rocks of the Eastern Canadian Offshore region. The successful candidate will be required to refine the biostratigraphic and chronostratigraphic framework, reconstruct paleo-ecologic conditions and determine source rock potential from the type and thermal maturation of dispersed organic matter in sediments.

A doctorate degree is required from a recognized university as well as demonstrated knowledge of Mesozoic and Cenozoic biostratigraphic zonations based on palynology and subsurface mapping techniques. A lesser degree with research experience as a palynologist and productivity equivalent to that of a doctorate degree would be acceptable. Knowledge of English is essential. The salary is $31,435-47,088.

Send your application form and/or resume to: Rachel Boisvert, National Capital Region Staffing Office, Public Service Commission of Canada, 300 Laurier Avenue West, Ottawa, Ontario, Canada K1A 0M7. Tel.: (613) 593-5331, ext. 485. Closing date: February 28, 1983. Please quote the applicable reference number at all times, which is: 82-NCRSO-EMR-15 (4035).

POSSIBLE POSITION IN PALYNOLOGY

A position in Mesozoic palynology may become open this year at the U.S. Geological Survey's National Center in Reston, Virginia. An important part of the position would involve work on the Triassic-Jurassic basins of the East Coast; however, research on other Mesozoic projects in addition would also be possible. If you are interested, send information on your background and interests, including a detailed vitae, to: Dr. William Sliter, Chief, Branch of Paleontology and Stratigraphy, U.S. Geological Survey, 960 National Center, Reston, VA 22092.

POSITION WANTED

Dennis Braman is currently searching for a position as palynologist. He recently graduated from the University of Calgary with a Ph.D. in geology specializing in palynology. His dissertation was entitled "Upper Devonian-Lower Carboniferous Miospore Biostratigraphy of the Imperial Formation, District of Mackenzie and Yukon". It dealt with assemblages dating from Early Frasnian to Early Tournaisian from a thick virtually unfossiliferous (in respect to invertebrates) clastic sequence from northern Canada. Areas of study included paleoenvironments, biostratigraphy, palynomorph maturation, and taxonomy.

Dr. Braman also has some experience with Cenozoic and Mesozoic miospores and megaspores and Mesozoic dinoflagellates. His interests are broad and include most aspects of biostratigraphy, taxonomy and paleoecology as applied to most palynomorph groups. He has taught both college and university level courses and has a strong geological background especially in the areas of sedimentology and stratigraphy. A resume is available which will willingly be sent to anyone who may be interested. Please write to D.R. Braman, 3213 28th St. S.W., Calgary, Alberta, Canada, T3E 2J4, or phone (403) 284-5848.

PUBLIC RELATIONS COMMITTEE REPORT

The AASP Public Relations Committee has been very active during the past year and gave its final report to the Board of Directors at the Dublin meeting. Following are extracts from this report; those wishing details may obtain the full report by asking Ken Piel for a copy. Members of the Committee were: Raymond A. Christopher, Chairperson; and Vaughn M. Bryant, Jr., Charles F. Upshaw, and Reed Wicander, Members.

I. Publicity Received

Through the sole efforts of Vaughn Bryant, the science of palynology has received significant attention by the popular media. The National Geographic Society has tentatively scheduled publication of an article on palynology in an upcoming issue of National Geographic Magazine. Although initially designed to address the relationship between pollen and allergies, Vaughn has persuaded Ms. Cathy Newman (staff writer for National Geographic) that an article on the application of palynology to oil exploration, archeology, evolution, historical geology, etc., would be of greater reader interest. Vaughn provided Ms. Newman with a list of palynologists whom she will be contacting during the coming year to obtain material for her article. Hopefully, publication of this article will provide the general public with a basic understanding of palynology and its application to the solution of practical problems.

In addition to the possible National Geographic article, palynology was mentioned in the "At Work" column of Changing Times Magazine (September, 1981, p. 18).

II. Industrial/Academic Questionnaire

For the past few years there has been a growing concern among industrial palynologists that the present academic training of students of palynology does not properly prepare those students for industrial employment. This concern prompted the 1981-1982 Board of Directors to charge the Public Relations Committee with the responsibility of accumulating and presenting data on 1) the academic training preferred by industry, and 2) the actual training received at universities. To this end, the Public Relations Committee distributed letters to twenty oil companies asking them to outline the qualifications they prefer in a candidate for employment and questionnaires to 88 universities asking them to outline their palynology program.

A summary of the data obtained by the Committee is as follows:

1. Industry prefers a candidate with a strong background in geology, whose formal palynologic training and thesis topic include a variety of palynomorph groups that cover a wide stratigraphic interval, perferably one who has developed both communication and statistical/computer skills, and who is willing and able to assume responsibilities outside the field of palynology;

2. The majority of academic palynology programs offer only one course in palynology. The course more than likely emphasizes spores and pollen; if other palynomorph groups are discussed, they receive only cursory coverage;

3. More palynologists are employed by industry than any other field; approximately equal numbers of palynologists with M.S. and with Ph.D. degrees are industrially employed. The number of academically employed palynologists with a Ph.D. degree is slightly less than the number of industrial palynologists with the same degree;

4. The majority of current thesis topics deal with Quaternary studies and Cretaceous-Tertiary boundary problems;

5. The major problems faced by academic palynology programs are lack of financial support, inadequate laboratory facilities, and lack of interested students.

The Public Relations Committee recommended that the Board of Directors assess alternatives to alleviating the major problems faced by the academic community, specifically, the lack of financial support and inadequate facilities.

PLATE REPRODUCTIONS AVAILABLE

Plates reproduced in Volume 6 of Palynology for the article by Gordon Wood and John Clendening, "Acritarchs from the Lower Cambrian Murray Shale, Chilhowee Group, of Tennessee, U.S.A." were very dark. Therefore, Gordon Wood informed us that he is going to have the plates rerun and can send the reproductions to anyone who requests them.

NAPC III

The Third North American Paleontological Convention was held in Montréal, Québec, August 5-7, 1982. The three days of technical sessions were organized into symposia considering a variety of specific topics in paleontology; additional sessions were available for general papers on paleobotany, paleoecology, and paleontology. The Canadian Association of Palynologists and the AASP were well represented by a full-day symposium on palynology. The sessions were titled "Palynology - The State of the Art" and "Palynology - The Latest Environmental Impact Statement," and were chaired by Jocelyne Legault and Graham Williams, and Sarah Damassa, respectively. Attendance at the symposia was approximately 80 persons, including many non-palynologists. Thanks are also due to Evan Kidson and Geoff Norris for their help during the organizing stages.

Speakers included G. D. Wood, R. Wicander, G. L. Williams, D. M. Jarzen, W. C. Elsik, S. W. Wise, R. W. Scott, D. Habib, M. A. Miller, N. O. Frederiksen, G. T. Brenner, E. H. Davies, and P. C. Reid. Additional papers on palynology were presented by K. M. Piel; J. P. Bujak and E. H. Davies; G. L. Williams and E. H. Davies; and W. C. Cornell.

Copies of the Proceedings (2 volumes) may be ordered from: Business and Economic Service Ltd., Suite 509, 111 Peter Street, Toronto, Ontario, Canada, M5V 2H1 c/o Project NAPC III. Cost: $40.00 Canadian; make remittance payable to: Business and Economic Service Ltd./Project NAPC III. (See Journal of Paleontology, v. 56, no. 4, for order form.)

Sarah Damassa

COLLOQUIUM ON PALEOBOTANY AND PALYNOLOGY

The 5th Coloquio sobre Paleobotanica y Palinologia will be held in Mexico City on 25-29 July, 1983. The following themes are planned:

1. Flora del Precambrico y Paleozoico
2. Paleobotanica y palinologia del Mesozoico
3. Palinologia del terciario
4. Palinologia del cuaternario
5. Diatomeas y cocolitoforidos
6. Taxonomia y morfologia de polen y esporas
7. Melisopalynologia
8. Otros

For information, write: V Coloquio sobre Paleobotanica y Palinologia, Nieve 232, Col. Jardines del Pedregal, Deleg. Alvaro Obregon, 01900 Mexico, D.F.

FRENCH SYMPOSIUM

The Association des Palynologues de Langue Française will hold their 8th Symposium on 10-12 October, 1983, on the subject "Palynology as a Tool for Correlation between the Continental and Marine Domains" at the Université P. et M. Curie and the Museum National d'Histoire Naturelle à Paris. For information, write: Laboratoire de Micropaléontologie, "Symposium A.P.L.F. Paris 1983," Tour 15, 4è étage, 4, pl. Jussieu, 75230 Paris Cedex 05.

ETHNOBIOLOGY CONFERENCE

The Sixth Annual Ethnobiology Conference will take place March 18-19, 1983, at the University of Oklahoma, sponsored by the Department of Anthropology, Department of Botany and Microbiology, Stovall Museum, and the Oklahoma Archeological Survey. Papers will be presented in morning and afternoon sessions on March 18 and 19, with a reception the evening of March 17. A banquet will be held on the evening of March 18, featuring Native American foods of the Southern Plains. Further information may be obtained from: Dr. Paul Minnis, Department of Anthropology, University of Oklahoma, Norman, OK 73019.

INTERNATIONAL ASSOCIATION FOR AEROBIOLOGY (IAA)

The IAA was founded in 1974 to promote communication among individuals working in diverse areas but all concerned with atmospheric dispersal of materials of biological origin. At present the IAA has about 400 members from 41 countries; many are palynologists. The IAA holds an international conference every 4 years and will sponsor a North American symposium concurrent with the International Palynology Conference in Calgary, Alberta, in August 1984. The IAA Newsletter is issued twice a year and contains news of international interest concerning developments in aerobiology as well as announcements of meetings, new books, an aerobiology bibliography, and reports on the on-going activities at members' laboratories.

If you would like additional information about the IAA or a membership application, please write to Stephen A. Hall, Department of Geography, North Texas State University, Denton, Texas 76203. Membership in the IAA is $10.00 (U.S.) or $12.00 (Canadian) a year.

ANOTHER QUESTION ABOUT GLYCERINE JELLY MOUNTS

If anyone has ideas how to re-prepare glycerine jelly mounts, PLEASE share it with the members. This is a particular problem for Quaternary palynologists. Probably 20 percent of my reference collection is now useless, and while I have replaced these slides with new ones in silicone oil, the older mounts represent a lot of time and frequently require collecting localities that no longer exist.

James E. King

RESEARCH ON BEE POLLEN

CC Pollen Company, which recently joined AASP, would like to correspond with anyone interested in bee pollen for human consumption and for feeding to animals. They are sponsoring the First International Bee Pollen and Bee Propolis Symposium and Convention, to be held in Paradise Valley, Arizona, from June 3 to 10, 1984. For further information, write: CC Pollen Company, 7000 E. Camelback Road, Suite 33, Scottsdale, AZ 85251.

NEW JOURNAL

The Journal of Micropalaeontology is a new journal of the British Micropalaeontological Society specializing in short articles covering the entire field of micropalaeontological research. New taxonomic studies, systematic reviews, ecological and environmental studies, techniques and concepts are all catered for and in particular biostratigraphic correlations based on microfossils.

The Journal is free to members of the B.M.S.; individual memberships are 5 Pounds per year (3 Pounds for Europeans); institutional memberships are 15 Pounds. For additional information, contact Dr. R.H. Bate, Department of Palaeontology, British Museum (Natural History), Cromwell Road, London SW7 5BD.

NEW PH.D. PROGRAM IN EARTH AND ENVIRONMENTAL SCIENCES

After years of continual graduate study available at the master's level at the campuses of the City University of New York, the opportunity will soon exist (September, 1983) for study leading to the Ph.D. in Earth and Environmental Sciences. This new program will concentrate studies in the areas of general geology, energy and other resources, and environmental geology and geochemistry. The goal is to educate students in these areas of study, and also to include training in other areas such as resource policy and management and environmental policy and regulation. The curriculum will provide the professional geologist with the scientific tools to evaluate the data obtained and to assess the potential impact on the environment.

The program will be located at the Graduate School and University Center. Research is conducted in a wide range of specialties and is supported by a well-established faculty and modern instrumentation. Research opportunities are available in faculty research laboratories at the major campuses, at the City University's Institute of Marine and Atmospheric Sciences and Mt. Sinai School of Medicine, and through faculty affiliation with the American Museum of Natural History and Lamont-Doherty Geological Observatory.

It is intended that all students accepted to the program will be provided financial assistence. For application forms and further information, please write to Professor Daniel Habib, Executive Officer, Ph.D. Program in Earth & Environmental Sciences, The Graduate School and University Center, The City University of New York, 33 West 42 Street, New York, New York 10036.

SUMMER TROPICAL FIELD COURSE

Alan Graham, Professor of Biological Sciences and Geology, will lead Kent State University's 8th Biological Field Studies in Mexico course, June 13-July 16, 1983. The course involves a 5 week camping trip through the major biotas of Mexico, and includes visits to the desert areas of San Luis Potosi, the Pacific coastal environments from Mazatlan to Manzanillo, the high-altitude paramo at Popocatepetl (17,887 feet), and the tropical rain forest at Catemaco (Veracruz). Archeological sites include the pyramids at Teoteohuacan and Mitla and Monte Alban in Oaxaca. Other faculty from Kent State are Dr. Benjamin Foote (entomology) and Mr. David Waller (ornithology), while in Mexico lectures and field trips will be given by Dr. Fernando Medellin (arid-land ecology, San Luis Potosi) and Dr. Marcus Winter (archeology, Mitla and Monte Alban). The course carries 6 credit hours at either undergraduate or graduate level. Total costs are $975 (in-state; add $300 for out-of-state) and includes tuition, food, lodging, transportation, and participation in all ticketed events. For further information contact Dr. Alan Graham, Department of Biological Sciences, Kent State University, Kent, Ohio 44242 (216-672-7888).

POLLEN AND SPORE TERMINOLOGY

The following letter was addressed to the Editor of Palynology from Stephen Blackmore, Palynology Section, Department of Botany, British Museum (Natural History):

"I am writing to you as editor of Palynology on behalf of the International Commission for Palynology Working Group on Pollen and Spore Terminology. In response to a recent questionnaire, the members of this Working Group indicated that they would like to request that editors of palynological journals recommend to contributors the use of terms and definitions agreed by the Working Group in their "instructions to authors". To date all such terms and definitions have been published in Grana (Nilsson and Muller, 1978, Grana 17:55-58). It is hoped that further groups of terms will be published in the future with the aim in mind of making palynological terminology more precise and consistent in usage.

"I would be very grateful if you could let me have your reaction, and that of other editors of Palynology, to this suggestion so that I can inform the members of the Working Group of editorial opinions on the proposal."

Do our members have comments on this request? Please send them to Doug Nichols, with a copy to the Newsletter Editor (Norm Frederiksen) for inclusion in the Forum section of the Newsletter.

ENGLISH TRANSLATIONS AVAILABLE

For many years, the Geological Survey of Canada has translated articles on palynology, mainly from Russian but also from other languages, and has made these translations available to the public. Following is the latest list of translations, provided by Colin McGregor. Copies of these translations may be obtained by writing to the Librarian, Geological Survey of Canada, 601 Booth Street, Ottawa, Canada, K1A 0E8. You will receive an invoice for prepayment of your order. The cost, 20 cents per translation page, plus handling and postal charges if applicable, is subject to change.

ANGISHEVA, F.P. and SHESHEGOVA, L.I., 1974. On methods of extraction of microfossils from rocks using acid treatment. In: VOZZHENNIKOVA, T.F., TIMOFEEV, B.V. and SHESHEGOVA, L.I. (eds.), Microfossils of the USSR, "Nauka", Siberian Branch, Novosibirsk: 94-97. Translation #2399.

ARKHANGELSKAYA, A.D., 1972. Palynological characteristics of lower horizons of the Middle Devonian in the eastern part of the Russian Platform. Trudy VNIGNI No. 83, Paleontological Collection 4: 124-133, 202. Translation #885.

ARKHANGELSKAYA, A.D., 1980. On the establishment of the Retusotriletes clandestinus Zone in the lower part of the Devonian of the south-eastern districts of the Orenburg Oblast. In: BYVSHEVA, T.V. (ed.), Palynological research in the Proterozoic and Phanerozoic of oil and gas bearing regions of the USSR. Ministry of Geology of USSR, Trudy VNIGNI, No. 217, Moscow: 47-52. Translation #2476.

ARKHANGELSKAYA, A.D., 1980. Plant spores from some Lower Devonian sections of the western regions of the Russian Plate. In: BYVSHEVA, T.V. (ed.), Palynological research in the Proterozoic and Phanerozoic of oil and gas bearing regions of the USSR. Ministry of Geology of USSR, Trudy VNIGNI, No. 217, Moscow: 26-47. Translation #2488.

BUROVA, M.I., 1978. Lower Devonian microphytofossil assemblages of the Lvov Paleozoic sag. Paleontologicheskiy Sbornik, 1978(15): 67-72. Translation #2495.

CORNA, O., 1969. Bemerkungen zur Verbreitung palynologischer Mikrofossilien vom Praekambrium bis zum Unterkarbon. Geol. Sbor., Geologica Carpathica, 20(2): 399-416. Translation #2480.

DIBNER, A.F., 1977. Palynostratigraphic concepts, their classification, and methods of establishing palynozones with examples from the Carboniferous and Permian of middle Siberia. In: BODAREV, V.I. and LAZARENKO, N.P. (eds.), Precambrian and Paleozoic stratigraphy and paleontology of Northern Siberia. USSR Ministry of Geology, Scientific Research Inst. of Arctic Geology, Leningrad: 33-50. Translation #2467.

GOLUBTSOV, V.K. (editor), 1978. Plant microfossils. In: Stratigraphical and paleontological research in Byelorussia. Byelorussian Sci. Res. Geol. Exploration Institute , Minsk, "Nauka i Tekhnika": 3-4, 85-111, 128-133, 246-247. Translation #2459.

KAISER, H. & ASHRAF, R., 1974. Gewinnung und Praeparation fossiler Sporen and Pollen sowie anderer Palynomorphae unter besonderer Betonung der Siebmethode. Geol. Jahrbuch 25:85-114. Translation #889.

KEDO, G.I. & AVKHIMOVICH, V.I., 1969. Some data on the palynological characteristics of deposits of the Frasnian Stage of the Upper Devonian in the Rechitsa Platform. In: Geol. & Oil-Bearing Territory of Byelorussia & Adjacent Regions; Minsk: 212-240. Translation #2333.

LOMAYEVA, Ye. T., 1976. Microphytofossil assemblages of the Early Devonian from a core of the Kamensko-Bugskaya No. 4 borehole. In: Acad. Sci. Ukr. SSR, Inst. Geol. Sci., Palynol. Research Sedim. Depos. Ukrain. and Adjacent Regions: 27-33. Translation #2127.

LU LICHANG, 1980. On the occurrence of Archaeoperisaccus in E. Yunnan. Acta Palaeontologica Sinica, 19(6): 500-502. Translation #2482.

LU LICHANG, 1980. Devonian miospores from the Longhuashan section in Zhanyi of Yunnan and their stratigraphic significance. Memoirs of Nanjing Institute of Geology and Palaeontology, Academia Sinica, No. 14: 1-62. Translation #2487.

MEDIANIK, S.I., 1980. Spores of the genera Archaeoperisaccus Naumova and Archaeomonoletes gen. n. and their stratigraphic meaning in the Timan-Pechora provinces. Vestnik Moskovskogo Universiteta, Geology, 1980(5): 93-96. Translation #2461.

MEDIANIK, S.I., 1981. Spores from sporangia of Late Devonian Archaeopteris from southern Timan. Doklady of Academy of Sciences of USSR, 258(5): 1209-1211. Translation #2504.

MEDIANIK, S.I., and YATSKEVICH, B.A., 1981. The boundary between the Kynovsky and the Sargayevo Beds within the sections of south and central Timan according to palynological data. In: Izvestiya Academy of Sciences of USSR, Geological Series, No. 8: 132-136. Translation #2503.

NADLER, Yu.S., 1975. Application of manual punch-cards for study of Devonian miospores. Yakut. State Univ., Use of Diagnostic Information-Searching Systems for Studying Paleoz. Miospores, Yakut: 81-89. Translation #1015.

NADLER, Yu.S. and KUZNETSOVA, V.G., 1980. Palynological characteristics of Famennian deposits of Sayan-Altai mountain region. In: SACHS, V.N., VOLKOVA, V.S. and CHLONOVA, A.F. (eds.) Paleopalynology of Siberia; Papers of the Soviet Palynologists to the 5th International Conference on Palynology (Cambridge, England, 1980), "Nauka" Moscow: 12-17, 133-135. Translation #2493.

OZOLIN'A, V.R., 1961. Spore-pollen spectrum of deposits of the Frasnian Stage in the Alanda well. Transactions of the Institute of Geology, Academy of Sciences of Latvian SSR, 7: 127-139. Translation #1080.

PANSHINA, L.N., 1971. New species of spores from the lower part of the Frasnian Stage in the Volga-Ural Oblast. In: Palynology and Stratigraphy of Paleozoic, Mesozoic and Paleogene deposits of the European Part of the USSR and Central Asia, Trudy VNIGNI NO. 106: 90-96. Translation #1081.

PARTYKA, I.I., 1971. Vegetative microfossils of the Tiverian stage of the south-western margin of the Russian Platform. Paleontologicheskii Sbornik, 7(2): 52-55. Translation #2201.

PAVLOV, V.V., 1959. Some questions on the dependence of spore-pollen assemblages on lithological composition. In: Collected papers of Paleontology and Biostratigraphy, USSR Scientific Research Institute of Arctic Geology, 16: 94-105. Translation #904.

PYKHOVA, N.G., 1960. Concerning the presence, in the section of the terrigenous productive Devonian of the Tuimazy Petroleum-bearing area, of beds characterized by the Mosolovskii and Morsovskii assemblages of spores. Trudy (Proceedings) of VNII (the All-Union Petroleum-and-Gas Scientific Research Institute), Issue 23: 31-36. Translation #2453.

PYCHOVA, N.G., 1960. Spore-pollen assemblages of the terrigenous part of the productive Devonian in the Tatar ASSR and their significance for stratigraphy. In: The Geology of Oil Deposits, Trudy VNII, No. 23: 37-48. Translation #2449.

PYCHOVA, N.G., 1965. On the possibility of the use of the method of palynological analysis for detailed correlation of the Pashia Formation of south-east Tataria with deposits of the same name in Western Bashkiria. "Oil-industry Geology", State Committee of the Oil Producing Industry at the State Plan of the USSR, VNII Trans. No. 43: 332-338. Translation #2450.

SERGEEVA, L.A., 1965. Establishment of the age of Paleozoic salts in the southeastern part of the Dnepro-Donets Depression according to spore-pollen analysis. Geological Journal, 24 (6): 96-98. Translation #2197.

SERGEEVA, L.A., 1971. New species of spores from Upper Devonian deposits of the Dnepro-Donets Depression. In: Problems of Palynology, Academy of Sciences of USSR, "Nauk. Dumka", Kiev: 42-56. Translation #892.

SERGEEVA, L.A., 1973. Microphytofossils of the Devonian salt deposits in the Dnieper-Donets Basin. Acad. Sci. Ukrain. RSR, Inst. Geol. Sci., Fossil fauna and flora of the Ukraine, No. 1, pp. 57-62, Kiev. Translation #901.

SERGEEVA, L.A., 1974. Micropaleophytological characterization of Devonian deposits of the Dnepro-Donets Basin. In: Stratigraphy of Ukrainian SSR, 4 (Part 2, Devonian), "Naukova Dumka", Kiev: 162-174. Translation #900.

VOLOCHAEV, F. Ya., KUD'YAROV, I.S. and PETRENKO, V.I., 1979. Age of the volcanogenic-sedimentary terrane of eluvial bauxites' roof in Middle Timan. Proceedings of the USSR Academy of Sciences, Geological Series, 1979 (5): 151-154. Translation #2326.

YALISHEVA, A.A., 1980. The age of bauxite deposits of Timan on palynological data. In: PANOVA, L.A. (ed.) Paleomicrophytological research for purposes of stratigraphy. Ministry of geology of USSR, VSEGEI, Transactions, N.S., Leningrad, 305: 42-53. Translation #2502.

YEGOROV, A.I., 1971. Some principles that lessen the precision of palynological stratification. In: Palynol. of the lower Don and northern Caucasus, for the 3rd Internat. Palynol. Conference (Novosibirsk, U.S.S.R., 1971). Publ. Rostov Univ., 1971: 3-15. Translation #2282.

BOOK REVIEWS

Geobotany II, R.C. Romans (Ed.). Plenum Press, New York and London, 1981. (Plenum Publishing Corp., 227 W. 17th St., New York, NY 10011.) 263 p., $39.50.

Geobotany II is a collection of papers that were presented at the Geobotany Conference at Bowling Green State University in 1980. According to the preface, the purpose of the meeting is to promote interaction and interdisciplinary work among geologists, botanists, palynologists, paleobotanists, ecologists, and paleoecologists. Like its predecessor Geobotany, it is a mix of papers from many of these fields. Five papers deal with Quaternary palynology, three with paleobotany, and one each with floristic plant geography, with peat-forming environments, and with plant succession. The significance of the papers also varies; some report the results of work on a single site, whereas others attempt more of a synthesis of existing information. The papers are organized by increasing age, except for the last paper.

The book begins with a paper on the plant geography of fens in Ohio. Distribution maps and tables show the geographic affinities of the flora of the fens. These data are interesting, but many palynologists now question their use to infer the timing and direction of migration of plants. Late Quaternary plant migrations are increasingly well documented from the fossil record (for example, three other papers in this volume deal with this

topic), and these records have cast doubts on the usefulness of modern distributions as indicators of past migration patterns. The documented Quaternary migrations seem to make the use of the term "Arcto-Tertiary species" meaningless in this paper.

Kremer and Spackman elegantly summarize their work on the vertical and lateral distribution of peat lithologies of tree islands in the Everglades. The paper is short but well documented and well illustrated. The results seem parallel to previous work by Spackman and his students on Okefenokee Swamp, but they are nonetheless interesting because of the somewhat different Everglades environments. Their demonstration of Walther's principle in Holocene sediments will warm a stratigrapher's heart.

Articles by Bailey and Ahearn and by Terasmae stress details of Late Quaternary migration routes of particular species. Bailey and Ahearn use pollen and radiocarbon dates to examine the Holocene migration routes of white pine (Pinus strobus) and beech (Fagus grandifolia) in the lower peninsula of Michigan. They use one site in a key geographic position along with the pollen stratigraphy from five other sites to make their case. Terasmae provides several plausible migration routes for spruce (Picea) to enter Ontario, and ties these to the record of fluctuations of late Wisconsinan glaciers and glacial lakes. He provides a useful generalized pollen diagram for southwestern Ontario, but his migration routes depend on areas judged to be free of ice or lake water, not on detailed pollen data.

Cotter and Crowl provide a record of pollen and paleo-pigments from north-central Pennsylvania, an area that has not been well studied. The pollen sequence is interesting, and it correlates fairly well with New England diagrams. The pigments indicate that the lake was oligotrophic throughout its history, but that several short-term changes in sediment chemistry occurred. The lack of synchroneity of changes in lake productivity and upland vegetation is interesting. I found no reference to the quadrupling of the sedimentation rate that occurred in the lower part of the upper zone of the core. Apparently neither the pollen nor the paleopigment record gives any clue to the cause of this change. More radiocarbon dates would have been very helpful to tie down this and other changes in the record.

A short report on the pollen sequence from a "buried tree" site near Marquette, Michigan seems out of place in the book. The radiocarbon dates are not properly documented, there is no scale on the pollen diagram, and the site is generally not of great importance.

One of the most serious editorial oversights occurs in one of the most interesting papers, that by Delcourt and Delcourt entitled "Vegetation maps for eastern North America; 40,000 yr B.P. to the present." The legend for the units on the vegetation maps has been greatly reduced, so that they do not match the map units. With determined effort and a hand lens, the maps can be read, but this oversight is bound to discourage readers. The earlier maps (for 40,000 and 25,000 yr B.P.) have pretty sparse data networks to make a map from, but the authors concede that point, and their expertise in the ecology of southeastern U.S. gives some credibility to their extrapolations. The paper gives an interesting and authoritative look at vegetational changes during this time period.

Upchurch and Doyle's paper on the paleoecology of the peculiar Mesozoic conifer family Cheirolepidiaceae (producing the distinctive Classopollis pollen) provides a model that paleopalynologists would do well to follow. By using diversity of miospores and acritarchs along with megafossils and sedimentary features, these authors make a strong case for extremely varied environmental conditions for the different taxa within the family. A range of coastal habitats as well as inland communities seems to be represented. Thus Classopollis pollen cannot by itself indicate any single environment, as some authors have suggested.

The following two papers also deal with paleobotany, but are somewhat less ambitious. Blackwell, et al. re-examine and reinterpret lower Oligocene silicified wood from a National Natural Landmark near Flora, Mississippi. Only two taxa are present, and the authors assign them to modern families, find different modern analogs, and change the inferred geographical affinity from "northern" to tropical or subtropical. Matten and Lacey discuss the details of cupule arrangement in early seed plants from Devonian and Carboniferous rocks. The paper is primarily descriptive but illustrates the variety of organization present. The scarcity of subheadings leaves the reader to wonder if the paper consists of only an abstract and acknowledgments.

The final paper is a chronological list of 21 years of succession in a salt marsh in Massachusetts that had been filled in by the Army Corps of Engineers. Pictures document the changes that occurred on the marsh surface. The paper is interesting, but one hopes that more substantial works on succession and phytosociology will appear in future conferences.

Tucked in at the end are abstracts of three papers given at the meetings but not written up for publication. Updates on the papers by Knoll on Precambrian acritarchs and by Doyle on Cretaceous angiosperm evolution would have been timely. The paper delivered by Davis relating the mid-Holocene hemlock (Tsuga) decline to forest pathogens has probably been adequately published elsewhere.

As with many symposium volumes, the papers vary widely in quality and scope. This collection also varies in subject matter. It is likely that most palynologists and paleobotanists will find a few papers of interest in Geobotany II, but I suspect that many will use the book as a reference work, rather than buy it.

Richard G. Baker

Recherches Palynologiques sur la Végétation Pleistocene et Holocene de Quelques Sites du District Phytogeographique de Basse-Loire (Palynological Research on Holocene and Pleistocene Vegetation of some Sites in the Phytogeographical District of Basse-Loire, France), by Lionel Visset. Societe des Sciences Naturelles de L'ouest de la France, Supplement Hors-Serie au Bulletin 1979. Universite de Nantes, France, 283 pages.

Dr. Visset's extensive palynological study pertains to core and sediment deposits collected from locales (including archaeological sites) in western France and in an area on both sides of the Loire River from the coast inland for about 130 km. In his study, the author examined deposits as old as the Holsteinian from the late Pleistocene and as young as the Sub-Atlantic Stage of the late Holocene. The report is full of information pertaining to the geology, vegetation and proposed paleoenvironmental reconstructions of numerous sites in the Basse-Loire region of western France. These data are accompanied by numerous large, easy to read fold-out pollen charts and graphs.

His records of Pleistocene deposits record various oscillations in the vegetational sequences of the Armorican Massif as well as indicating nearby changes in sea level and levels of the Loire River due to glacial fluctuations. Also included are numerous pollen diagrams of the Pleistocene deposits he examined and his suggested vegetational reconstructions for the various time periods.

The Holocene records in this report are more extensive and come from both soil and archaeological site deposits. They reveal that during the Boreal Stage the region underwent a rapid rise in sea level and that the regional vegetation was composed mainly of upland oak (Quercus) groves mixed with groves of hazel (Corylus) growing in more favorable wet habitats. With the onset of the Atlantic Stage, the sea level continued to rise but did so more slowly than during the previous Boreal Stage. The vegetation of the Atlantic Stage was characterized by a decrease in the abundance of hazel groves and an increase in the amount of oak wooded areas. Pollen records from Atlantic Stage sediments in archaeological sites of the region also note that prehistoric man had already begun rudimentary cereal cultivation. By the next stage, the Sub-Boreal, there was a regression of 3-4 meters in the sea level with an accompanying expansion of salt marshes onto the nearby exposed mud flats of the Loire River. Also noted for this period was an apparent deforestation of many local oak groves by Neolithic man. Local cereal cultivation and vegetation modification due to the introduction of cattle domestication are also evident in the pollen records during this stage of the Holocene. Finally, during the Sub-Atlantic Stage, Dr. Visset notes that the main regional vegetational component is still oak groves but that there is an apparent invasion and spread of heather (Ericaceae). Also prominent during this period is widespread evidence that cereals were being grown during the Iron Age occupation by the Celts. Later, with the beginning of the Roman occupation in the area, pollen records are characterized by the first appearance and then widespread distribution of pollen from plants introduced by the invading Romans. These plants included buckwheat (Fagopyrum), nut-bearing trees including chestnuts (Castanea), and grapes (Vitis) used for wine making.

Dr. Visset's work is comprehensive and well documented with numerous pollen diagrams. It affords important information for geologists, biologists and archaeologists who might want to know how sea levels and vegetation have changed in western France during late Pleistocene and Holocene times. Also, it provides archaeologists with important information pertaining to land modifications and forest clearing practices of prehistoric man and offers clues about the onset and spread of the Neolithic. More importantly, however, it clearly documents the introduction and spread of the Roman occupation in western France during the final Sub-Atlantic Stage of the Holocene.

This book is an essential reference for all those who plan to work in the Basse-Loire district of western France. Also, it is useful to others who wish to see how fossil pollen analyses can be used to unravel and interpret a number of past events such as changes in sea level, the introduction of agriculture and animal domestication, and finally, how new types of cultigens are introduced by invading cultures such as the Romans. The volume's only drawback for most North American readers is that it is published in French. However, the author was kind enough to include a brief English summary on pages 245-257 for those who do not read French.

Vaughn Bryant, Jr.

Selected Papers in Phycology II, J.R. Rosowski and B.C. Parker, eds. Phycological Society of America, Inc., Book Division, P.O. Box 368, Lawrence, KA 66044. 866 p. $42.85.

The current explosion in the production of scientific literature makes keeping up-to-date an increasingly formidable task. Most of us manage to keep tabs on developments in our own specialties but may be less successful at monitoring the information from parallel fields we need to place our work in a broader perspective. Selected Papers in Phycology II is valuable not only as an introduction to current literature about the algae, but also as a guide to the research that phycologists consider significant.

This volume provides a classic example of how word processors and offset printing from camera-ready copy can be used to facilitate scientific communication. Intended to update and partially supplant Selected Papers in Phycology (1971), Selected Papers in Phycology II focuses on phycological literature published during the past decade.

The book is divided into three principal parts. Part I includes 77 reprinted papers, which are divided into the following sections: A. Taxonomy, Morphology and Life Histories; B. Ultrastructure; C. Physiology and Biochemistry; D.

Cytology and Genetics; E. Ecology; F. Evolution. All papers are in English. Each section is preceded by a brief introduction to the selected papers, and followed by an introduction to the bibliography of additional current literature.

Comprehensive coverage of each of these topics is clearly impossible using selected papers. The diversity of specific subjects covered is impressive, however, and the selected papers exemplify a wide variety of methods applied to all major groups of algae. Sections A, and especially E and F will prove the most interesting to paleontologists.

Among the papers included are a review of cyanobacterial (blue-green algal) photosynthesis, by Stanier; a paper on the enhancement of algal productivity by zooplankton grazing, by Porter; and a review of the ecological significance of life-forms of the phytoplankton, by Margalef. The experimental demonstration of resource competition in planktonic diatoms by Titman and the work by Dayton on competition for space among intertidal algae have had considerable influence on the thinking of ecologists. Papers on evolution include those by Whatley and Whatley (chloroplasts), F.J.R. Taylor (dinoflagellates), Pickett-Heaps and Marchant (green algae), and Stewart and Mattox (phyto-flagellates). None of these papers will be of practical value in the routine identification of fossil algae in palynological preparations. Their value lies rather in suggesting constraints which can be placed on the interpretation of fossil data, and in stimulating application of the fossil record toward the solution of important biological problems.

Papers from journals with small-sized pages are rotated 90 degrees and printed with two facing pages to a single page in the present volume. Although this arrangement is somewhat disconcerting (and makes reading a bit awkward), the minor inconvenience is more than compensated for by the additional literature the editors were able to include by this method for no extra cost. A few of the transmission electron micrographs are a bit fuzzy, but in general the reproduction of photographic figures is surprisingly good.

Part II includes bibliographies of each of the major algal groups. Each bibliography is prefaced by a brief introduction, and subdivided according to the preferences of individual compilers.

The editors took full advantage of word processing technology in soliciting the bibliographies. Compilers were encouraged to add new references in proof. As a result, 1981 citations abound, and even a few 1982 references are scattered about. The bibliography of the Prasinophyceae, the class with which I'm most familiar, is both thorough and up-to-date.

Part II includes special bibliographies organized along the lines outlined above. If you ever need to know about algae in medicine or the commercial uses of algae, this is a good place to start.

Lists of algal culture collections, field stations, phycological societies, books and monographs, and a useful glossary complete the volume.

It's always possible to quibble about omissions in a compilation of this sort, and two points come to mind. Of the reprinted papers, only Taylor's on dinoflagellate evolution makes reference to the fossil record (and he rejects the available fossil evidence). Coverage of paleontologic literature in the bibliographies is sporadic and generally incomplete. Apparently, those of us who work on fossil algae have failed to convince phycologists that our work warrants serious consideration.

Of greater concern is the paucity of references to Soviet phycological literature. Granted that this literature is commonly difficult to assimilate and may be of marginal value, some feel for the research being undertaken in the Soviet Union is nonetheless desirable.

Such quibbling aside, Selected Papers in Phycology II provides an excellent introduction to the biological literature on algae and is packed with information. The volume is a must for libraries, and at a price slightly under 5¢ per page, should be a tempting item for compulsive collectors of literature (like myself). The editors are to be commended for compiling this useful work.

Kent Colbath

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