

PALYNOs

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NEWSLETTER of the INTERNATIONAL FEDERATION of PALYNOLOGICAL SOCIETIES



D. C. McGregor

A NOTE FROM THE NEW IFPS PRESIDENT

Our international palynological organization has grown through an evolutionary (if not phylogenetic) process. In the beginning there was established the "International Commission on Palynology" (1954, Paris); then the "International Committee" (1962, Tucson); the "International Committee for Palynology" (1966, Utrecht); and the "International Commission for Palynology" (1971, Novosibirsk). Evolution continued and in the process we have become no longer a committee or commission, but a federation (some would prefer "confederation"). In fact, it seems we may now be close to realizing the vision of those who struggled in the early years to form an organization that would truly represent the world's palynologists.

The most recent landmark has, I suppose, been the change in our name. A compelling argument for change was that the old title was no longer appropriate, and was in fact confusing. And so the name is now the INTERNATIONAL FEDERATION OF PALYNOLOGICAL SOCIETIES (IFPS), but the objectives of the organization remain the same: to advance knowledge in palynology by the promotion of international cooperation and meetings between scientists of all regions and countries.

As part of the cooperative process we need to continue consolidating the channels of communication through the Councillors to the constituent societies. Consequently, this is an appropriate time to remind the officers of each of the societies to: (a) send us the name(s) of your representative(s) on Council; so far about five of the societies have not done so; (b) send us an up-to-date list of the members of your society and their mailing addresses; (c) send us your society's newsletter if you have one; and (d) communicate newsworthy items, letters, etc., directly to Jim Canright, the "Palynos" editor. You will find my address and those of the Secretary-Treasurer and Editor elsewhere in this newsletter.

Finally, my thanks and appreciation go to Claude Caratini and Roger Jan du Chêne for shepherding the ICP so capably through the past four years, and to Len Hills and Jan Jansonius and the members of their Organizing Committee for a superb "Calgary 1984" (6th IPC).

On to Brisbane in 1988, and I look forward to seeing you there at the 7th International Palynological Conference.

D. C. McGregor, President IFPS
Geological Survey of Canada
601 Booth Street
Ottawa, Ontario
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WHAT'S IN A NAME?

As indicated in the previous note from the president, last August at the Assembly of the International Commission for Palynology (ICP) at the 6th IPC in Calgary, it was voted to change the name of our organization to the International Federation of Palynological Societies (IFPS). This decision necessitated a new name for the former *ICP Newsletter*, as well as a new logotype.



Passé

Rather than contribute to the ever-increasing conglomeration of confusing "alphabet soup" names (viz., IFPS Newsletter) beloved by government bureaucrats everywhere, your editor selected the name *PALYNOs* for

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IFPS MEMBER SOCIETIES

AASP (*American Association of Stratigraphic Palynologists*)
H.V. Kaska & D.J. Nichols

ACP (*African Committee for Palynology*)
E.M. van Zinderen Bakker

ALPP (*Association Latinoamericana de Paleobotanica y Palynologia*)
E.J. Romero

APLE (*Association de Palinologos de Lengua Espanola*)
M.C. Risueno

APLF (*Association des Palynologues de Langue Francaise*)
A. Le Thomas & G. Lachkar

APP (*Arbeitskreis fur Palaobotanik und Palynologie*)
W. Riegel

BPS (*British Micropalaeontology Group, Palynological Section*)
TBA*

CAP (*Canadian Association of Palynologists*)
J. Utting

CIMP (*Commission Internationale de Microflore du Paleozoique*)
Henk Visscher

CPS (*Collegium Palynologicum Scandinavicum*)
Ulf Hafsten

GPSBI (*Gruppo di Palinologia della Societa Botanica Italiana*)
M. Follieri

OCP (*Organization of Czechoslovak Palynologists*)
TBA

PK (*Palynologische Kring*)
W. Punt

PPAA (*Palynological and Palaeobotanical Association of Australasia*)
B. Balme

2. this newsletter. As most palynologists know, the term palynology was coined by Hyde and Williams in 1944 to refer to the study of both fossil and modern pollen. The etymology of this term comes from the Greek verb *palynein*, meaning "to strew or sprinkle." In turn, this verb was derived from the Greek *pale*, referring to a fine meal or flour (and by inference, pollen as well). Accordingly (admittedly with some poetic license), the name *PALYNOS* means "of, or relating to, pollen." And since this newsletter is distributed (= strewn) throughout the world to all palynologists, we have now come full circle in our etymology to the original Greek verb. *PALYNOS* is now registered with the U.S. Library of Congress in Washington, D. C. with the International Serials Standard Number (ISSN) 0256-1670.

Significance of the New Logo

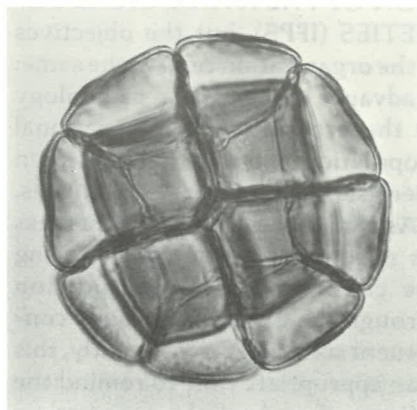
Whenever a company adopts a new name, or a manufactured product is re-named, every attempt is made to retain the original logotype of the particular company or product, because of the "recognition factor" of the logo in the marketplace. However, in cases where the company/product name or initials are a part of the original logo, name changes also necessitate the development of a new logo. This was our dilemma when ICP recently "evolved" to IFPS.

In analyzing the problem, i.e., how to modify the 3-part symbol (a tri-lobate spore) used by ICP to a 4-part logo to accommodate IFPS, it soon became obvious that our choices of palynomorphs were somewhat limited. Specifically, if a palynomorph were to be used, it had to be a tetragonal tetrad (e.g., the annonaceous genus *Xylopiia*), a linear tetrad (rarely found in *Typha*), a tetraporate grain (e.g., *Epilobium*), or a radially symmetrical polyad. Your editor supplied photographic examples of all these types of palynomorphs to his Number One son (used in the Chinese sense only, viz., firstborn), Douglass, who was employed as a graphic artist before he became an architect. Upon completion of his various "renderings," we jointly decided to recommend the 16-grained

polyad that you now see in the masthead of this newsletter. The Executive Committee of IFPS (Drs. McGregor and Jarzen) formally approved of this logo in a meeting at Arlington, Virginia on October 18, 1984.

At this point you may be wondering why this particular polyad was chosen to be representative of or symbolize IFPS.

First of all, this type of compound palynomorph is a relatively common characteristic in many of the 40 genera and ca. 2000 species of the well-known family Mimosaceae (formerly merged with the Leguminosae). Mimosaceous genera with radially symmetrical polyads include species of *Acacia*, *Albizia*, *Affonsea*, *Adenanthera*, *Dichrostachys*, *Inga* (see photo), *Pithecellobium*, *Prosopis* and *Xylia* (Van Campo & Guinet, 1961; Vishnu-Mittre & Sharma, 1962; Markgraf & D'Antoni, 1978).



Inga uruguensis Hook. & Arn., 113 μ m.
(Courtesy of V. Markgraf, U. Colorado)

Acacia is the largest genus in the Mimosaceae, comprising some 800 species distributed throughout tropical and subtropical regions of the world; thorn trees belonging to this genus are especially prominent and distinctive features of the landscapes in the savannas of Australia and Africa.

My next point is that acacias are of considerable value in the world of commerce. Two or three species of *Acacia* in North Africa and the Middle East are sources of gum arabic (used in the textile, mucilage, polish and confectionery industries); several Australian species of *Acacia* (wattles)

are now widely cultivated (particularly in southern Brazil and Africa) for their reddish bark tannins utilized by the tanning industry; *A. catechu*, native to India and Burma, is the source of an important brown dye, black cutch or catechu, as well as a masticatory and in medicine; *A. farnesiana* (cassie), although a native to the American tropics, is cultivated in Southern France and Algeria for its ethereal oil used in the perfume industry—cassie oil is particularly valuable in the compounding of "violet" odors; and *A. melanoxylon* (Australian blackwood) is an important timber for cabinetry and furniture.

My final consideration is that *Acacia* is a relatively old genus, both historically and geologically speaking. The distinguished German botanist, Carl Sigismund Kunth (1788-1850), is believed to be the first to describe and illustrate polyads of *Acacia* in his extensive account of Mimosaceae (1819) collected by Alexander von Humboldt and Aime Bonpland during their "Voyage aus Regions equinoxiales du Nouveau Continent" (1799-1804).

According to Muller (1981), the earliest known pollen of the *Acacia* type is from the upper Eocene of Cameroon; other accepted fossil occurrences are from the Oligocene of Puerto Rico, middle Miocene of Australia and the Pliocene of New Zealand.

In summary, our new logotype is based on the genus *Acacia*, which is abundant (800 spp.), widely-distributed throughout the world, of considerable economic importance, and of relatively great antiquity. In the editor's opinion, therefore, **Q.E.D.** (L., *quod erat demonstrandum*)—that which was to be proved is proven!

References

- Kunth, C. S. 1819-24. Monographie des Mimoses et autre plantes legumineuses du Nouveau Continent. Paris.
- Markgraf, V. & H. L. D'Antoni. 1978. Pollen flora of Argentina. University of Arizona Press, Tucson, AZ. 208 p.
- Muller, Jan. 1981. Fossil pollen records of extant angiosperms. Bot. Rev. 47(1): 1-142.
- Van Campo, M. & P. Guinet. 1961. Les pollen composeés. L'exemple des Mimosacées. Pollen et Spores 3: 201-218.
- Vishnu-Mittre & B. D. Sharma. 1962. Studies of Indian pollen grains. I. Leguminosae. Pollen et Spores 4: 5-45.

PSC (*Palynological Society of China*)
Xiangjun Sun

PSI (*Palynological Society India*)
S. Chanda

PSJ (*Palynological Society of Japan*)
K. Takahashi

PSL (*Palaeobotanical Society, Lucknow*)
TBA

PSP (*Palynological Society of Poland*)
E. Turnau

SPC (*Soviet Palynological Commission of the Botanical Society and Paleontological Society*)
E.D. Zaklinskaya & A.F. Chlonova

TCP (*Turkish Committee for Palynology*)
TBA

*To be appointed

6TH IPC WRAP-UP

Although the number of official registrants (407) was down from the ca. 650 who attended the 5th IPC in Cambridge in 1980, the 6th IPC conferees were almost uniformly enthusiastic about the smooth organization of the meetings, accommodations, social programs and field trips. And, yes, even the weatherman was cooperative in helping to make these meetings eminently successful.

The number of participants in the six field trips ranged from a low of 8 (FT#6 — Overflight, Calgary to Rocky Mts.) to a high of 33 (FT#2 — Plains Region, Campanian to Paleocene).

The Co-Chairmen, Jan Jansonius and Len Hills, have recently indicated that a small supply of 6th IPC Abstract Volumes, which include 400 abstracts, is still available for purchase. You are requested to direct your orders to: Dr. L. V. Hills, Dept. Geology, University of Calgary, Calgary, Alberta T2N 1N4, Canada, together with a check or money order in the amount of CAN \$20 payable to the University of Calgary.

In addition, those registrants who neglected to pick up their copy of the group photograph before leaving Calgary, may obtain a copy from Dr. Hills.

Congratulations, 6th IPC Organizing Committee, for a job well done!

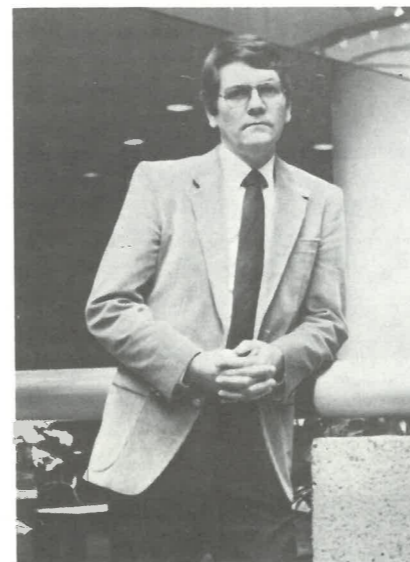


6TH INTERNATIONAL PALYNOLOGICAL CONFERENCE

University of Calgary, Aug. 27-31, 1984
Calgary, Alberta, Canada

Although it is impractical to attempt to identify all the conferees in the group photograph, most of the members of the Canadian Organizing Committee (with their 6th IPC role indicated) are located in the front row as follows (right to left): Bob Turner (*Extraordinary Sessions*), Jan Jansonius (*Co-Chairman*), John Utting (*Printing & Editing*), Art Sweet (*Field Trips*), Silvana de Gasparis (*Recording Secretary*), Jan Dolby (*Entertainment*), Dennis Braman (*Councillor*), Judith Lentin (*Programs*), Bert van Helden (*Commercial Exhibits*), Sedley Barss (*Councillor*), Dave McIntyre (*Posters*), Wayne Brideaux (*Field Trips*), and Len Hills (*Co-Chairman*).

MEET YOUR NEW SECRETARY-TREASURER



David MacArthur Jarzen

David Jarzen began his graduate studies in palynology at Kent State University (Ohio), where, under the guidance of Alan Graham, he investigated and published on the Oligocene palynoflora of Puerto Rico.

After Kent State, David spent one year at Indiana University with David Dilcher looking at Eocene plant macrofossils from Tennessee before beginning his Ph.D. work at the University of Toronto. Working closely with Geoff Norris, David earned his Ph.D. in 1973 with his thesis on "Evolutionary and Paleocological Significance of Albian to Campanian Angiosperm Pollen from the Amoco B-1 Youngstown Borehole, Southeastern Alberta."

Since his graduation, David has been employed by the National Museum of Natural Sciences in Ottawa, Canada, as Curator of Fossil Plants. His research interests have been centered on pollen and spore floras, with an emphasis on angiosperm pollen, from uppermost Cretaceous and lower Tertiary deposits in the Western Interior of North America. In addition to his research studies, David serves the Museum public through lectures, slide show presentations, tours, and display functions.

David has travelled extensively worldwide over the past years making collections for the Museum and to obtain material to build one of North America's largest pollen and spore reference collections. Recently, with Len Hills, David has begun a major programme to increase the Museum's plant macrofossil collection.

Other than his dedication to palynology, David's other interests include photography, music and public relations. His address is: Paleobiology Division, National Museum of Natural Sciences, 1767 Woodward Drive, Ottawa, Ontario, Canada K1A 0M8.

NEW JOURNAL: LITORALIA

Starting in May 1984, Van Nostrand Reinhold Company will publish a new quarterly journal, *LITORALIA: An International Journal of Coastal Research*. This journal is the first of its kind in North America to take a look at coastal science on an *interdisciplinary* basis.

LITORALIA will enhance and foster the understanding of the coastal zone by exploring the common ground between different disciplines in this area. *LITORALIA* will probe, professionally, analytically, and in depth, the fields that overlap marine physical science and biological science — fields such as: oceanography, geology, biology, marine science, ecology, climatology, soil science, geomorphology, mineralogy, coastal engineering, and more.

LITORALIA will provide basic, original research, theoretical papers, and applied science articles. It will present traditional applications along with the most modern, up-to-date developments in the areas of coastal science. *LITORALIA* will supply professional reports, correspondence, literary reviews, abstracts, schedules of events, calendars of meetings, and recent research bibliographies. All this will combine to make *LITORALIA* one of the newest, most comprehensive journals in coastal science research.

Editor-in-Chief: is Charles W. Finkl, Ph.D., Center for Coastal Research, P.O.B. 2473, Colee Station, Fort Lauderdale, Florida 33303, 305/564-5049. The Editorial Board members represent a broad range of interests in the areas of coastal science.

Call for Papers: In order to address the complexity of coastal biophysical and socioeconomic interactions, professionals in related fields are encouraged to submit manuscripts to be published in *LITORALIA*. Contributions should be original studies dealing with interdisciplinary elements of coastal science and environmental issues involving theory, methodology, applied science, and case studies.

Subscriptions to *LITORALIA* are available now at the rate of \$96 per year for institutions and \$48 per year for personal subscriptions.

Single issues are also available. *LITORALIA* will be published in a 7x10" perfect-bound hardcopy format, averaging 400 pages per annual volume.

All subscription correspondence may be addressed to: *LITORALIA*, Van Nostrand Reinhold Company, Inc., 135 West 50th St., New York 10020, 212/265-8700.

NEW WORLD LIST OF PALYNOLOGISTS

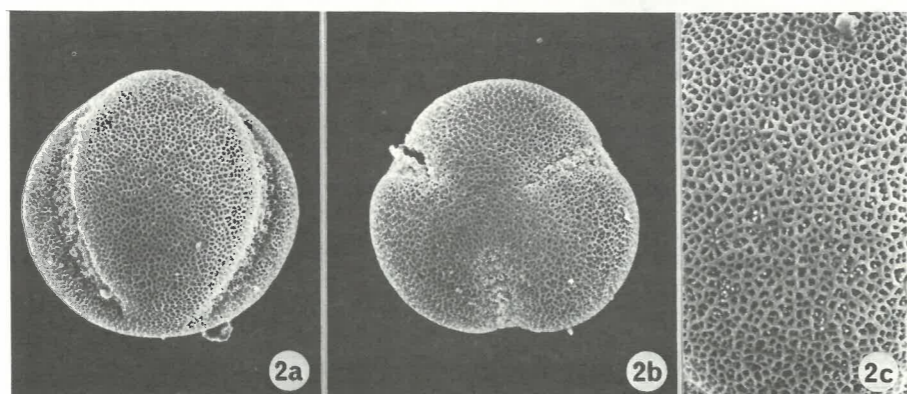
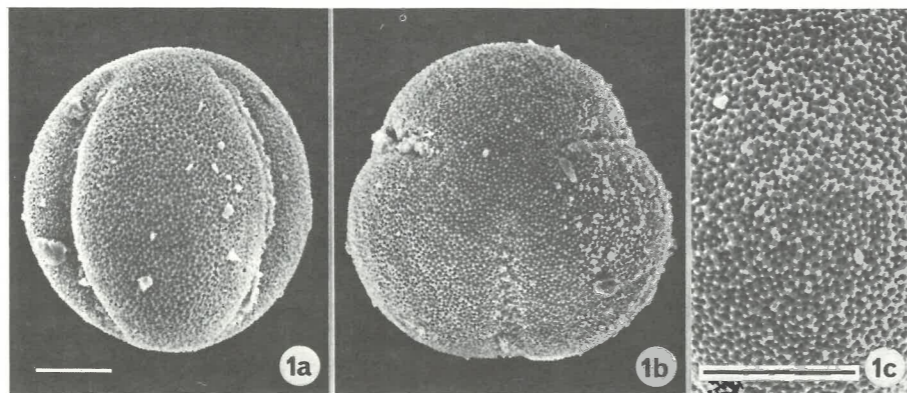
President McGregor has asked Rob Fensome of the Atlantic Geoscience Center (Geological Survey of Canada, Dartmouth, Nova Scotia) to compile a new world list of palynologists. In agreeing to undertake this task, Rob notes that the Atlantic Geoscience Center already has assembled an extensive data base (ca. 1000 names and addresses) through the computerization of the latest membership lists of the Canadian Association of Palynologists (CAP) and the American Association of Stratigraphic Palynologists (AASP). The secretaries of the other 19 societies affiliated with IFPS are urged to forward their current membership lists to Dr. Fensome as soon as possible.

NOTEWORTHY PALYNOMORPHS

Submitted by: **Norio Miyoshi**, Biological Laboratory, Okayama University of Science, Ridai-cho, Okayama 700, Japan.

Serissa japonica Thunb. (Rubiaceae) is a well-known ornamental hedge plant in Japan. Like many other members of this family, it is characterized by heterostylis flowers. The pollen grains produced by both the short-styled and the long-styled flowers have essentially the same morphotype: radially symmetrical, isopolar, prolate spheroidal, tricolpate with long colpi, plus microreticulate sculpturing. However, the pollen from the short-styled flowers differs from that of the long-styled flowers by its slightly larger size and possession of fine grana at the intersections of the muri.

(Source of specimens: collected by S. Yamaguchi, Sept. 27, 1983 in Handa-cho, Okayama City, Japan).



Short-styled flower pollen (Fig. 1a-c): Size, 40(46)55 X 40(45)53 μm (measured in glycerine jelly). P/E 102. Sculpture reticulate with grana occurring at the intersection of the muri. Width of muri ca. 0.3 μm ; lumina 0.1-0.3 μm in diameter. (Size bars = 10 μm).

Long-styled flower pollen (Fig. 2a-c): Size, 35(41)48 X 38(40)48 μm , P/E 103. Sculpture finely reticulate, but lacking grana on muri. Width of muri 0.3 μm ; lumina 0.1-0.6 μm in diameter.

FUTURE MEETINGS OF INTEREST TO PALYNOLOGISTS

SYMPOSIUM: ADVANCES IN LIBYAN PETROLEUM GEOLOGY A MODEL BIOSTRATIGRAPHIC SEQUENCE FOR THE NORTH-EAST AFRICAN CRATON

Site:
University of Garyounis
Benghazi,
Libya, S.P.L.A.J.

Date: March 1986

As a result of close scientific cooperation between the staff of the Exploration Division of Arabian Gulf Oil (AGOCO) and the Research Centre of Garyounis University (both in Benghazi, Libya) and members of the Commission Internationale de Microflore du Paléozoïque, a project on all aspects of the palynostratigraphy of Northeast Libya has now been completed. The

objective of the project was to obtain a better understanding of all palynomorph groups in sediments ranging in age from Ordovician to Cretaceous.

This Symposium will provide an opportunity for the presentation of new data from a region where little published information is available, and to permit the demonstration of the palynostratigraphic framework for the subsurface stratigraphy of the region.

The meeting will consist of technical sessions based on the work of the AGOCO/Garyounis/C.I.M.P. Biostratigraphic Project, together with invited lectures from speakers who are world authorities in the fields of palynology, palaeobotany, stratig-

raphy, sedimentology, source rock analysis, petroleum geology and tectonics of the North African Craton. Contributions from adjacent areas in North Africa and The Middle East will be encouraged in order to provide a more comprehensive region assessment. Papers presented will be published in a special Symposium Volume.

It is anticipated that field excursions to a variety of sites of geological and historical interest will be available.

If you are interested in receiving further details of this meeting, please complete the form below and return it to one of the contact addresses indicated. It is hoped that the first circular will be issued in early 1985.

Project Co-ordinator
Palynostratigraphy Project
Exploration Division
Arabian Gulf Oil Company
Benghazi
Libya, S.P.L.A.J.
Tel: 28931 — 6
Tlx: 40033

Palynostratigraphy Project
Umm Al Jawaby Oil Service Co. Ltd.
33 Cavendish Square
London W1M 9HF
Attn: Mrs. D. Lacey
Tel: 01-499 0855
Tlx: 261443

I am interested in receiving further details of the Benghazi 1986 Symposium when available.

Name: _____

Address: _____

Research Interests: _____

The American Association of Stratigraphic Palynologists (AASP) will hold its 18th Annual Meeting October 16-19, 1985 in El Paso, Texas. The program will include a symposium on pollen ultrastructure, technical paper sessions and poster sessions. Two field trips are planned: one to the Franklin Mountains of Texas and one to the Sierra de Juarez of Mexico. For further information, contact the Local Committee Chairman: Dr. William C. Cornell, Department of Geological Sciences, University of Texas at El Paso, El Paso, TX 79968-0555 (Telephone: 915/747-5218).

BOOK REVIEW

CENOMANIAN MICROFLORAS OF THE PEACE RIVER AREA, NORTHWESTERN ALBERTA

By Chaitanya Singh
Alberta Geological Survey,
Edmonton, Alberta, Canada
Alberta Research Council, Bull. 44,
322 pp., 62 pls, 19 text-figs.,
15 tables; 1983. Price \$30 (Canadian).

The connection between hydrocarbon discoveries and the exquisitely-illustrated plant microfossils of this monograph might possibly appear remote to some exploration personnel. But, as emphasized inside the dust cover, the correlative and environmental inferences provided by such palynomorphs are essential for continued exploration success in the hydrocarbon-producing Cretaceous sequence of Alberta. In recognition of the importance of meticulous palynological research, the Alberta Research Council has published this handsome volume, the third in a Chaitanya Singh trilogy, dating from 1964, on Cretaceous palynomorphs of western Canada.

The monograph embodies a detailed study of Cenomanian spores, pollen, fungal palynomorphs, dinocysts, and acritarchs from the upper Shaftesbury, Dunvegan, and lower Kaskapau Formations of the Peace River area, northwestern Alberta. A total of 416 palynomorph species is recorded. Detailed systematic coverage is accorded 191 species that are documented as having first appearances in two outcrop sections of the upper Shaftesbury and Dunvegan Formations. Other outcrop and subsurface sequences discussed by Singh are said to be thermally indurated and only their contained megaspores were found to be well enough preserved for reliable identification. Newly-instituted taxa comprise one genus and 37 species of spores and pollen, together with two genera and 25 species of microphytoplankton.

A brief review of previous palynological work on the mid and late Cretaceous of North America is followed by an outline of the stratigraphy and faunal evidence for the age of the Peace River marine and deltaic sections. Although Singh states (p. 7) that the "boundary between the Shaftesbury Formation and the overlying Dunvegan Formation is transitional and laterally diachronous," this is not conveyed by the correlation table (Table 2) that depicts stratigraphic relationships of late Albian to Turonian sequences of western North America. Then follows a section on stratigraphic paly-

nology, where the palynofloral succession is discussed within the lithostratigraphic framework. Reference is made to Tables 3-15 and Appendix B which plot the distribution, and in some cases provide broadly categorized relative abundances, of the palynomorph species. Unfortunately, the sections (C and D) on which the stratigraphic palynology is primarily based do not span the contact between the marine upper Shaftesbury Formation and the deltaic Dunvegan Formation. The palynological differences between the two formations may well, at least in part, be related to facies changes, a circumstance hinted at by Singh in his discussion of the megaspore, angiosperm pollen, and dinoflagellate species.

The systematic section occupies the greater part of the volume. The various categories of palynomorphs are classified in their appropriate morphological hierarchies. Descriptions are meticulous, concise, and unambiguous; but there is only passing reference to botanical affinities. Appendix A contains an update of the taxonomy of Albian species described in the preceding monograph of Singh (1971). Much praise is due for the photographic illustrations. Chaitanya Singh has demonstrated that judicious selection of suitably orientated, well-preserved specimens illustrated by high quality light photomicrographs achieves results approaching, if not equal to, scanning electron micrographs.

This monograph is a meticulously-researched and magnificently-presented piece of work. It is not a question of recommending palynologists to buy it — none can afford to be without it.

Mary E. Dettmann
c/o C.S.R. Oil & Gas Division
Brisbane, Queensland 4001
Australia



6 books - 24 c - AASP

Journal of Micropalaeontology, Volume 4, Part 1

JANUARY 1985

THE PALYNOSTRATIGRAPHY OF NORTHEAST LIBYA

Editors: **B. Thusu**, AGOCO, Benghazi, Libya; **B. Owens**, British Geological Survey, Nottingham, U.K.

This volume represents the initial results of four years of close co-operation between the staff of the Exploration Division of Arabian Gulf Oil, the Research Centre of the University of Garyounis, both in Benghazi, Libya, and members of the Commission Internationale de Microflore du Paléozoïque on all aspects of the Palynostratigraphy of Northeast Libya. The project was initiated to provide a more complete understanding of the distribution of all palynomorph groups from sediments ranging in age from Ordovician to Cretaceous in Northeast Libya. The results present the most comprehensive documentation of palynological data from this particular region to date and have considerable scientific significance in terms of extending our stratigraphical and palaeogeographical knowledge. They also have considerable value in their practical application to the resolution of the problems of sub-surface geology in an area where variation in thickness of sediments caused by facies changes, erosion, non deposition and faulting are numerous.

The data presented in the volume which contains 69 photographic plates is designed to provide a visual record of the succession of palynological events together with brief synoptic discussions of the salient palynological features for each stratigraphic unit. No new taxonomic units are proposed. These will be dealt with in a subsequent volume to be published after the International Symposium on the Palynostratigraphy of Northeast Libya and Adjacent Areas which will be held in Benghazi, Libya in 1986.

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A. El-Arantui, Garyounis University, Benghazi, Libya.
M. Shelmani, Arabian Gulf Oil Co., Benghazi, Libya.
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