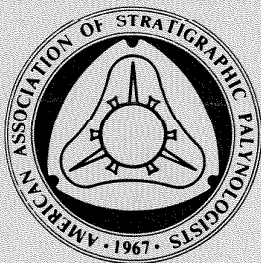


AASP NEWSLETTER



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Union Oil Co., Research Center
P. O. Box 76
Brea, CA 92621

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P. O. Box 76
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AASP NEWSLETTER

VOLUME 17, NUMBER 3

JULY 1984

R. L. RAVN, EDITOR

ISSN 0732-6041

This issue of the Newsletter contains a large amount of information concerning this year's AASP Annual Meeting in Washington, D. C. Principal among this information is the preliminary program, the first time to my knowledge that it has been assembled and disseminated at such an early date. We hope that presentation of the program schedule several months in advance of the meeting will stimulate more interest and potentially more attendance.

Lucy Edwards, the program chair for the meeting, is mainly responsible for the assembly of the program, and is to be congratulated for her effectiveness in solidifying the schedule of presentations as quickly as she did. Having been involved in a similar position for the 1981 meeting in New Orleans, I can empathize with the problems she faced and marvel at the efficiency with which she obtained the necessary cooperation of presenters. I guess there is a useful purpose to threatened violence.

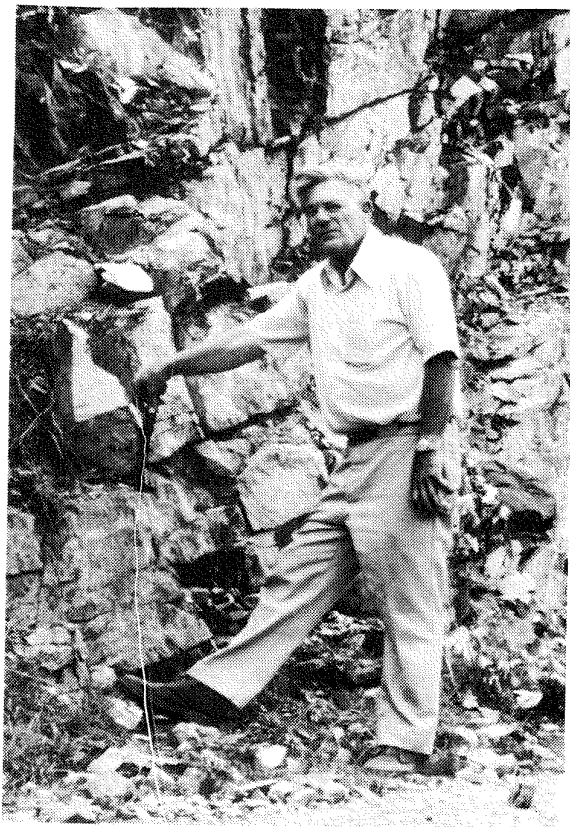
I would like to thank Lucy and Norm Frederiksen for their effort in putting this together, and especially for providing the beleaguered Newsletter editor with camera-ready copy for this issue. It made my job a whole lot easier. Lucy and Norm join the long and distinguished list of people to whom I owe a beer.

In the April Newsletter in which I announced my change of location, I lied. The official address is now Robert Ravn, Sohio Petroleum Company, 50 Fremont St., San Francisco, California 94105. The phone number is (415) 979-4981.

AASP Managing Editor Doug Nichols has informed me that his phone number in the new AASP Directory is erroneous. The correct number is (303) 236-5677. Please mark this correction in your Directory, so we can avoid further harassment of a bewildered woman somewhere in Colorado to whom calls to the incorrect number are being directed.

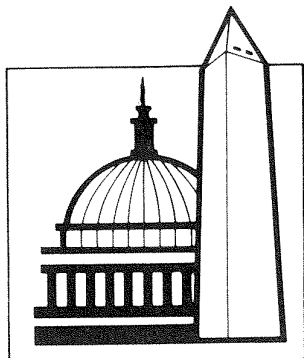
Because of the extensive amount of information about the forthcoming meeting, and the necessity to include two separate sheets for registration forms and an important advertisement concerning airline arrangements, two book reviews and a technical note submitted to the Newsletter regrettably have to be postponed until the fall issue. Even more regrettably, I had to postpone a significant and profound editorial comment I spent weeks of agonized soul-searching in preparation of. Oh well.

Bob Ravn



Elso S. Barghoorn in the field with rocks of the Fig Tree Group, South Africa, 1978. Photo courtesy of P. K. Strother; see the memorial to Dr. Barghoorn by A. Traverse on p. 7.

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



PROGRAM

The preliminary program for the 1984 Arlington meeting is given below. Highlights of the meeting include invited speakers Robert C. Milici, State Geologist of Virginia, speaking on "The History of the Appalachian Basin" on Thursday morning, and William G. Chaloner, Bedford College, London, speaking on "Spore-Pollen Polarity Revisited" on Friday afternoon.

This year's program includes a formal poster session. Posters will be up all day Thursday, and authors will be attending their posters during an expanded morning coffee break. Thursday is also a day of exhibits and demonstrations. Microscope and computer vendors will be displaying their wares all day. Kathleen Heide has put together what should prove to be an exciting symposium on "Data Handling" Thursday afternoon — this will consist of 2 hours of talks to be followed by 2 hours of hands-on demonstrations. Friday morning will feature a symposium on "Late Cenozoic Palynology" (additional late Cenozoic-oriented papers occur elsewhere in the meeting schedule). Saturday will be devoted to "Biostratigraphy."

AASP 1984 -- ARLINGTON, VA Preliminary Program

WEDNESDAY, October 17, 1984

FIELD TRIP to classic Va/Md localities

7:00pm Executive committee meeting, Roosevelt Room
everyone welcome

THURSDAY, October 18, 1984

ALL DAY Exhibitors, Potomac Rooms

8:15am Welcome and Announcements, Regency A & B
8:20am INVITED SPEAKER Milici, R., The history of the Appalachian Basin
9:20am Nowicke, J., Yellow rain: a palynological analysis
9:40am COFFEE BREAK and POSTER SESSION, Potomac Rooms

Cousminer, H., Middle Jurassic to Eocene Canadian dinoflagellate palynozones in Georges Bank Basin
Frederiksen, N., History of the Alangiaceae and Symplocaceae pollen in eastern United States
Hutter, T., Ordovician chitinozoan zones of the western United States
*Jensen, R., Cushman, R., & Fisk, L., Palynostratigraphy of Eocene rocks, southwestern Washington
McIntyre, D., Paleocene palynological assemblages from the Eureka Sound Formation, Somerset Island, NWT, Canada
Saldukas, R., Permian paleogeographic maps of North America, 1984
Trent, C., & *Gensel, P., Analysis of branching in Psilophyton. I. a new species from the Emsian of New Brunswick, Canada
*Ward, J., Farabee, M., & Daghljan, C., A video demonstration of a simple method for same-palynomorph isolation technique for light and electron microscopy
*Wood, G., & Miller, M., Acritarchs, spores and chitinozoans from the Lower Devonian Ross Formation, Tennessee, U.S.A.

TECHNICAL SESSIONS, Regency A & B

10:40pm (S) Ediger, V., Some practical and theoretical considerations about palynological processing
11:00am (S) Overpeck, J., Automated stratigraphic correlation between sequences of Holocene pollen data
11:20am Peteer, D., Late Pleistocene climate simulation using the GISS General Circulation Model (GCM) — a comparison with African pollen records

11:40am LUNCH

Symposium on Data Handling, Kathleen Heide Presiding

1:00pm Webb, T., Database and computer programs for statistical analysis and display of Quaternary pollen data
1:20pm Howe, S., Application of the guide to available mathematical software to palynological investigations
1:40pm Maher, L., Palynological data analysis using a microcomputer
2:00pm Edwards, L., Graphic correlation using various kinds of data
2:20pm Barss, S., Palynology data management at the Atlantic Geoscience Centre
2:40pm *Suchland, C., and Heide, K., Computer demonstration of a biostratigraphic database and applications system

3:00pm COFFEE BREAK and On-Line Computer Demonstrations, Potomac Rooms (all afternoon)

Howe, S., Maher, L., Edwards, L., Phillips, F., Barss, S., Goodman, D./Heide, K., Suchland, C., and Ward, J.

ICE BREAKER

FRIDAY, October 19, 1984

TECHNICAL SESSIONS, Regency A & B
Symposium on Late Cenozoic Palynology

- 8:15am Announcements
8:20am (S) Farley, M., Palynomorphs from surface water of the eastern and central Caribbean Sea
8:40am Fredlund, G., & *Johnson, W., Two Holocene pollen records from the southeastern pine forest in the Florida Panhandle
9:00am *Fair-Page, T., & Cohen, A., Paleoenvironmental reconstruction of a west-central Okefenokee swamp-forest based on pollen stratigraphy
9:20am Knox, A., Palynology and the Pleistocene terraces of Washington, DC
9:40am COFFEE BREAK
10:00am *Delcourt, P., & Delcourt, H., FORMAP Project: Late Quaternary mapping of past forests in eastern North America
10:20am (S) Wilkins, G., Late-Wisconsinan and Holocene vegetational history of central Kentucky
10:40am (S) Smith, E., Paleovegetation zonation and tree-species migrations in southeastern Missouri: 17,110 yr BP to the present
11:00am *Holloway, R., & Ferring C., A 12,000 year pollen and vegetational record from the southern plains
11:20am *Ager, T., Rubin, M., & Riehle, J., History of vegetation in the Cook Inlet region, south-central Alaska since deglaciation
11:40am *Sarro, T., Heusser, L., & Morley, J., Quaternary paleoclimatic evidence from the Sea of Japan: pollen and radiolaria records from the last 60,000 years
12:00 LUNCH
1:20am *Rich, F., & Hower, J., Palynological and petrographic composition of Claiborne lignites from Kentucky
1:40am *Thompson, C., & Dembicki, H., Amorphous kerogens and the hydrocarbon generation potential of source rocks
2:00pm INVITED SPEAKER Chaloner, W., Spore-pollen polarity revisited
3:00pm COFFEE BREAK
3:20pm (S) Kurmann, M., Sporoderm ontogeny in selected gymnosperm pollen grains
3:40pm (S) Taylor, W., Spore morphology and ultrastructure of the Sphenophyllaceae
4:00pm (S) Lucas-Clark, J., Some friends of Cribroperidinium: Spongodinium and a new genus
4:20pm Benson, D., Observations and recommendations on the fossil dinocyst genera Ctenidodinium and Dichadogonyaulax
4:40pm (S) Pariente, V., Morphology of two new species of Paleogene dinoflagellates and implications for the taxonomy of the Wetzeliellaceae complex

* speaker
(S) student paper

SATURDAY, October 20, 1984

TECHNICAL SESSION, Regency A & B, Symposium on Biostratigraphy, Del Potter Presiding

- 8:00am (S) Fleming, R., Palynology of the Cretaceous-Tertiary boundary event, Raton Formation, New Mexico
8:20am (S) Waln, K., Palynology of the Lincoln Creek Formation (Oligocene) of western Washington, U.S.A.
8:40am *Damassa, S., & Knoll, A., The interpretation of Late Proterozoic acritarchs from the Arcoona Formation, Stuart Shelf, Australia
9:00am *Melchin, M., and Legault, J., Evolutionary lineages in some Ordovician Chitinozoa
9:20am *Wicander, R., Merwin, K., & Newman, B., Palynomorphs from the Middle Devonian (Givetian) Arkona, Hungry Hollow, and Widder Formations, Hungry Hollow, Ontario, Canada, and their biostratigraphic significance
9:40am COFFEE BREAK
10:00am *Traverse, A., Bridge, J., Schuyler, A., & Bowers, M., Palynostratigraphic zonation of part of the Late Devonian Catskill Magnafacies, south-central New York
10:20am Utting, J., Palynology of the Visean rocks of Atlantic Canada
10:40am *Zotto, M., & Habib, D., Re-study of the dinoflagellate stratigraphy at Deep Sea Drilling Project Site 100
11:00am *Waanders, G. & Sprinkel, D., Palynologic age and correlation of the Twin Creek Limestone and Arapien Shale, southwest Wyoming and central Utah
11:20am announcements and adjourn for group photo
12:00 ANNUAL LUNCHEON and BUSINESS MEETING, Regency F
TECHNICAL SESSION, Washington Room
2:00pm Guy-Ohlson, D., Palynology of Swedish Upper Jurassic sediments
2:20pm Brenner, G., Palynological age determination of basal Cretaceous sediments from the Coastal Plain to the Northern Negev of Israel
2:40pm Kaska, H., A spore and pollen zonation of Early Cretaceous-Tertiary nonmarine sediments of central Sudan
3:00pm COFFEE BREAK
3:20pm Nichols, D., Palynomorph assemblages from uppermost Cretaceous deposits in the Denver Basin, Colorado
3:40pm *Tschudy, R. & Tschudy, B., Microstratigraphy of the "fern spike" at the Cretaceous-Tertiary boundary, Western Interior
4:00pm *Wrenn, J., & Hart, G., Biostratigraphy of organic-walled microplankton from Seymour Island, Antarctica

Executive committee meeting, 3rd floor Board Room, everyone welcome

REGISTRATION

To pre-register, return the form included in this Newsletter to the address given at the bottom of the form: AASP Registration, P.O. Box 2228, Rockville, MD 20852. Please enclose a check payable in U.S. funds and made out to AASP. Walk-in registration will take place Wednesday, October 17, from 5:00 to 8:00 p.m., and on Thursday, October 18, from 7:00 to 11:00 a.m., in the hallway outside Regency Ballrooms A & B on the Ballroom level.

A block of rooms is reserved from October 16 to October 20 at the Hyatt Regency Crystal City, Arlington, Virginia. Their address is 2799 Jefferson Davis Highway, and the phone number is (703) 486-1234. Included in this Newsletter is a hotel registration form; send this form directly to the hotel. We point out that the single room rate, \$60 plus tax, is far below the normal convention room rate for this hotel; we got this special guaranteed rate several years ago when they were first building the hotel and were anxious to book conventions.

TRANSPORTATION

We have made arrangements with Eastern Airlines to get their convention rate of 30% off normal coach fares (see their advertisement in this issue). When you call the 800 number listed in the ad, please refer to our convention number, EZ10P65.

The meeting will be held at the Hyatt Regency Crystal City, 2799 Jefferson Davis Highway (U.S. Route 1), only minutes from Washington National Airport. At National Airport, you can call on the hotel courtesy phone to the Hyatt Regency and they will come pick you up.

There are 3 airports in the Washington area - National Airport; Dulles International Airport (IAD), 25 miles west of Washington; and Baltimore-Washington International Airport, between Baltimore and Washington. Due to FAA regulations, long-distance non-stop flights have to land at Dulles or BWI; thus, if you are not planning to rent a car, it might possibly be more convenient in the long run to take a flight that stops en route and then can land at National. Express bus transportation is available between Dulles and National (every hour on the hour, 7 am to 10 pm, \$9, approx. 45 min. trip) and between BWI and National (every hour on the half hour, 6:30 am to 9:30 pm, \$11, approx. 50 min. trip). For those who will be renting a car at one of the airports, or who will be driving to Washington, give us a call or drop us a postcard, telling us how you expect to get here, and we will send you instructions and a map that will tell you the easiest way to get to the hotel (Norm Frederiksen or Lucy Edwards, 703-860-7745).

ANNUAL AASP FIELD TRIP

The field trip at the 1984 Annual Meeting will be on Wednesday, Oct. 17. The trip will include stops at classic Lower Cretaceous and Tertiary localities of the Maryland and Virginia Coastal Plain. The fee for the trip is \$75. Included in this fee is breakfast, lunch, and a crab feast dinner (participants will buy their own drinks at the feast), bus and boat transportation, a field trip volume and guidebook that will include approximately 12 articles on the stratigraphy, paleontology, and palynology of the Cretaceous and Tertiary rocks of the region as well as the road log and stop descriptions, and a set of approximately 14 samples from the units to be visited and also from several

other Cretaceous and Tertiary units of the region. The reason for providing participants with a set of samples is that no sample collecting will be permitted on the trip. We are making up 50 sample sets, and only a maximum of 44 participants can go on the trip, so there will be a small number of extra sets for sale at the meeting. There will be a little wading along the beach, and from the boats to the famous cliff exposures along the Potomac River. The river should not be cold in October, but the shoes and the lower part of the pants will get wet. Therefore, participants should wear old pants and sneakers on the trip and bring an extra pair of pants and shoes to wear afterward. Also bring a jacket, because we will be making an early start, and it may be cool in the first (non-boat) part of the trip. The feast of famous Maryland crabs will be informal, but bring a healthy appetite. Timing of the trip and feast will be such that participants will be back at the hotel by 7 p.m., when the Board meeting begins.

L.R. WILSON AWARD FOR BEST STUDENT PAPER

Students will be competing for the L.R. Wilson Award for Best Student Paper. This year the award will consist of:

1. A commemorative plaque.
2. A monetary prize.
3. A two-year fully paid membership in AASP
4. Announcement of the recipient of the award in the Association's journal.

Participants for this year's award should indicate to the Program Chair that they wish to be considered for the award, so that the Program Chair can send each participant a copy of the judging form for his/her guidance, and can schedule the paper at the appropriate time. The Program Chair is:

Dr. Lucy Edwards
U.S. Geological Survey
970 National Center
Reston, VA 22092

To be eligible for consideration for the L.R. Wilson Student Paper Award, a speaker must fulfill the following requirements:

1. The speaker should be registered in a graduate or undergraduate degree program, or if the speaker has formally completed his/her graduate degree requirements, he/she cannot have been employed more than 6 months at the time the paper is given.
2. The paper must represent research carried out during his/her academic career.
3. The paper cannot be coauthored, and must be presented by its author.

These requirements are intended to minimize any advantage that might be gained through resources available at post-graduate, non-academic institutions. In addition, the Awards Committee believes that oral presentation of research results is an integral part of the experience the Association is attempting to encourage with its award. Thus, posters are not eligible for the award. The committee also recommended that in the instructions to judges it be made clear that illustrations are to be judged solely for their clarity and effectiveness, and that judges take into consideration the limited facilities available at many academic institutions.

By now, all qualified students should have received a letter and a copy of the judging form from Dr. Edwards. Any students who have not received these materials should contact Dr. Edwards right away.

OTHER MEETING REMINDERS

Lucy Edwards wishes to remind students planning to attend this year's AASP Annual Meeting that she will aid students in making housing arrangements. Students who bring sleeping bags may stay free-of-charge at Lucy's house in Fairfax. The first 3-4 get beds, after which its the sofa, cushions, and the plushly carpeted floor, more or less in that order. The house is about 30 minutes from the meeting site, depending on traffic.

Lucy also will act as a clearing house for students wishing to stay at the hotel but who need roommates to make it affordable. Those interested should get in touch with Lucy as soon as possible. Please indicate whether you would like to stay at the house or at the hotel, and whether or not you will have a car for transportation.

Lucy E. Edwards, U. S. Geological Survey, 970 National Center, Reston, VA 22092. Phone: (703) 860-7745.

RECREATION

Athletic-minded attendees are encouraged to bring their running shoes. There are excellent footpaths along the Potomac River.

OUTRAGEOUS HYPOTHESES

A reminder also that Norrie Robbins wishes to know if anyone is interested in participating in a special symposium on Outrageous Hypotheses (ideas that might prove difficult to test) and Palynological Leftovers (tissues you can't identify). This session would be held, theoretically, sometime during the Washington meeting, convened one night in a room with a slide projector. No abstract would be solicited, and talks would be limited to ten minutes (?). A handout showing the shape and dimensions of any strange tissues the presenter wishes to illustrate would be useful. All interested parties should contact:

Eleanora I. Robbins, U. S. Geological Survey, National Center MS 956, Reston, VA 22092. Phone: (703) 860-6697.

NEW CONSULTANCY

A. Hossein Zahiri, after five years working for the Oil Service Company of Iran as a stratigrapher and paleopalynologist, has now set up a consultancy based in England, and welcomes any consultant work. Highly qualified reports with very competitive prices are guaranteed to customers.

A. Hossein Zahiri, PPS (Paleontological Petroleum Services), Unit 11A, Mid-Cheshire Business Centre, Winnington Avenue, Winnington, Northwich, Cheshire TW8 4EE, England. Phone: (0606) 781379; Telex: J69581.

HERTZ AUTO RENTALS

The Hertz Corporation is offering guaranteed rental car rates to AASP Annual Meeting attendees. For the dates of the meeting, and one week before and after, the following unlimited mileage rates will be guaranteed:

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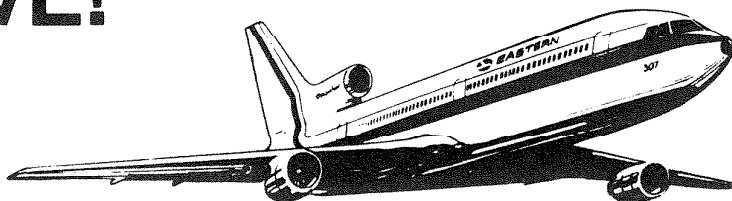
NEW INDIVIDUAL MEMBERS

Phillip E. Barnard, Jr., 67-04 Selfridge St., Forest Hills, NY 11375.
Jason Minnis, Robertson Research International, Tyny-Coed, Llandudno, Gwynedd, North Wales.
Ching S. Pang, Exploration Department XGL/2, Brunei Shell Petroleum Co. Ltd., Seria, State of Brunei.
Mariam Tajuddin, Exploration Department XGL/2, Brunei Shell Petroleum Co. Ltd., Seria, State of Brunei.
Gary R. Wilkins, 3500 Sutherland -- H306, Knoxville, TN 37919.

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ELSO STERRENBURG BARGHOORN, 1915-1984

SOME PERSONAL REFLECTIONS

This is a piece I never contemplated writing because, though Elso was my "doctor-father", he and I belonged almost to the same generation. This is no proper biography, either, but an unvarnished vignette of my reactions to this talented and unusual man.

Elso was, when I first met him in 1947, a very junior assistant professor at Harvard, recently arrived from a teaching position at Amherst College. He seemed even younger than he was, short, lean and with a thick shock of straight brown hair. One of my current graduate students was astonished when he saw the picture made in 1948 of Barghoorn and me in the Brandon Lignite pit (the photo is in Henry Andrews' 1980 history book). The student said he thought I looked *older* than Professor Barghoorn. Most of the nearly 40 years I knew Elso he did indeed seem boyish -- with the enthusiasms, adventurousness and sometimes almost the irresponsibility of a boy. I recall seeing him start the worst lab fire I have ever seen, by throwing *ad seriatum* into the sink a quantity of ether and a quantity of hot cigarette ashes. I was mortified and applied my best fire-department skills. Elso was highly amused. Speaking of devil-may-care attitudes, the cigarettes were always a factor. When I was with him he even used them in the darkroom, by puffing very hard, as tiny safelights.

When I saw Elso after a lapse of several years at the Harvard Forest paleobotanical meetings in November, 1983, I was stunned by his apparently rapid physical decline, and was hence somewhat prepared for his death. The prospect of a weakened, stumbling, old Elso was discordant and unnerving. Although at his death, he was the venerable, recently retired Fisher Professor of Natural History, I never ceased to think of him as the marvellously enthusiastic, Peter Pan-like figure I knew in the '40s and '50s.

It is taken for axiomatic in paleontology that to amount to very much, one should be sharply focused. Barghoorn was not -- not even in his Precambrian studies. When I told my tutor at Cambridge University, Hamshaw Thomas, in 1946, that I would go back soon to Harvard to study paleobotany with ESB, Thomas said he'd never heard of him. Indeed at that time, Barghoorn was best known for his series of dissertation-based (Ph.D. Harvard, 1941, with I. W. Bailey) splendid papers on wood rays. (These and other early papers were published as "Elso S. Barghoorn, Jr.", and I later met European paleobotanists who knew his papers both before and after Elso dropped the "Jr."; they assumed that a father-and-son team must somehow be involved.) However, Barghoorn at the time I arrived to be his graduate student, though he was barely 30 years old, had already done significant work in marine fungi, cellulose chemistry, peat palynology, coal-ball paleobotany, and the chemistry of fabrics and leather, among other things.

With his boyish zeal, he was always observing and probing. Even while on swimming forays near the Brandon dig in 1947-49, he would be collecting half-rotten twigs from the lake, to compare with stakes he had earlier buried at the seashore near Boston, and with stakes found in the excavations of the Boylston Street paleo-Indian fishweir. And yet he was in another sense focused, as his interests were more purely scientific than those of any scholar I have known so well. Hamshaw Thomas was a great and zealous paleobotanist, but he was also well informed about other matters, even theology. Elso knew rather little about things outside of what is, broadly speaking, science. I recall still with amusement his asking me when I arrived fresh from England to explain what "parliament" was about. At that point, I simply couldn't imagine a Harvard professor asking such a question. In his youth Barghoorn was a keen athlete -- a sprinter -- and he was a star track man both in high school (Oakwood, Ohio) and in college (Miami University of Ohio, A.B., 1937). When I first met him he still moved and talked like an athlete. The idea of a scientist being a sports fan, however, was not even worth discussion, and he was puzzled, I recall, that I attended so many Braves and Red Sox games when I was his graduate student.

Elso wrote a personal sketch for his 50th high school class reunion in 1983, which his son, Steven, has kindly let me see. It is quite revealing. In this piece Elso relates to his classmates of so long ago how his research on early life had taken often to all continents but Antarctica, and had thus given him a very rewarding life. Nothing about his teaching or about his many students and co-workers occurred to him as worth comment when there was only room for essentials. Or perhaps he thought that such matters would bore his classmates?

However, despite his total devotion to many aspects of natural science, to the neglect of other matters, it would not be right to portray Elso as an automaton. He was for one thing very fond of worldly pleasures -- especially good food, tobacco and alcohol. He was also no saint in human relations. Although, for example, he wanted and sought the best for his students because they *were* his students, I can testify that he could have very human awareness of prerogatives, and could be annoyed rather easily by slights. I know he was annoyed with me for not being grateful enough for all he did for me, and the last time I saw him he brought up again how he had "grub-staked" me to the Brandon Lignite research. By this time, I was just amused and not annoyed at all as I inwardly recalled that the "grub-stake" consisted mostly of two bus tickets from Boston to Rutland, Vermont, and return. Later students, in the era of NSF grants, did indeed get trips to most of the continents on Elso's ticket.

One of the last phone calls I had from him was about a personal bone that he still wanted to pick, over thirty years after the fact. It was really better to avoid offending him. Elso's attitude toward graduate students was on the whole helpful and good, but he certainly regarded students as extensions of *his* own work, and their productions as inextricable

from his. It is not surprising that one sometimes felt that more credit was due. Just recently I discovered that Elso once gave my Ph.D. thesis as an oral paper without listing me as co-author, but I am sure this seemed natural to him, and it was so public that it could in no way have been dishonest. In 1949 or 1950, he told me that he had been approached to devise a way of preserving the timbers from the then-being-excavated colonial ironworks in Saugus, Massachusetts. I outlined for him how I'd do it: By paraffin-embedding in specially-made large pans. He did it just as I had outlined, but from that day to his death he never mentioned the matter to me again. Perhaps he already had decided what to do and was just seeing what I'd say. In any event, the ideas of graduate students were inextricably entwined with his own. However, when I got my Ph.D., I received a gift from Elso: A pewter spoon, a replica of one found in the ironworks dig. I have kept it on my desk ever since.

Elso was a notorious "late person", at least when I knew him best. I am an early person, whose best work is done before noon, sometimes about when Elso would wake up, either figuratively or even literally. As a result, he sometimes expressed doubts about my seriousness of purpose because I almost never worked late into the evening. In the field at Forestdale, Vermont, I recall Bill Spackman's pique that Elso would not get the digging started until nearly noon, then would group vehicles with headlights trained on the pit to prolong digging into the evening, this activity to be followed by seed-and-fruit picking over beer, illuminated by Coleman lantern, well into the night hours.

This is not the place to go into such matters in detail, but it simply must be mentioned that much of Elso's career was played out in the shadows of desperate personal problems -- near-fatal accidents and attendant serious injuries on a number of occasions, tragic deaths of loved ones and colleagues, broken personal relationships. These things restricted Elso's effectiveness for protracted periods. Elso probably knew that he was partly responsible for at least some of these problems, but he was not self-critical or self-analytical enough to amend very much. Nor was he as overwhelmed by grief or self-pity as one might expect. Again, I suppose, youthful characteristics.

When I arrived back at Harvard in 1947 to study with Elso, he told me almost immediately that I should do the pollen and spores of the Brandon Lignite for my dissertation research. He had rediscovered this fascinating deposit in Vermont, long ago studied by E. C. Jeffrey and others. Barghoorn was working on the seeds and fruits himself, and William Spackman was investigating the woods for his thesis. One of Barghoorn's fellow graduate students, W. S. Benninghoff, had already processed a sample or two and had confirmed to ESB that the stuff was rich in spores and pollen. I recall Barghoorn telling me that pollen studies would perhaps one day be the tail wagging the dog of paleobotany. Though Elso only published a few palynological papers, he was very conversant with the literature, and he later continued his interest in pollen and spores right up to his death. A list of

his other palynological students and co-workers is impressive: Margaret Wolfe -- later Steeves -- (*Ephedra* pollen), Wolfe and Kathryn Clisby (*Zea* pollen in Mexican post-glacial sediments), U. C. Banerjee (cereal pollen and grass pollen in general), Grace Somers Brush (Paleozoic spores), Patrick Butler, D. R. Whitehead, A. S. Bartlett and Cecilia Lenk (post-glacial pollen analysis), J. A. Doyle (evolution and stratigraphy of early angiosperm pollen). James W. Walker is a good example of those who, although officially students of other Harvard professors, were for periods of time members of the Harvard "palynological team" and were influenced by Elso and his students. There were also various other Barghoorn projects that were at least partly paleopalynological.

Sometime in the mid 1950s, Elso arrived one day in my office at Shell Development Co., in Houston, and asked me to look at a slide he was carrying in a 2-slide mailer in his pocket. "What do you think, Al?" he said, as he put the slide on my microscope. I said that the things looked like bacteria. "You're more or less right, but that's a thin section of a chert about two billion years old. It's called the Gunflint Chert." I was crestfallen, but tried not to show it. Imagine my old professor ruining his reputation by claiming to find Precambrian fossils! It turned into a typical Barghoorn performance and provided the subject matter for much of his remaining scientific career.

People had studied the Bandton Lignite before, but never really got deeply enough into it to do much good; Barghoorn stimulated several generations of students such as William Spackman, R. H. Eyde, Bruce Tiffney and me to have a go at it, with some most rewarding results. Organic bits in the Gunflint Chert had also been noticed before, but Elso's persistent enthusiasm was behind the first significant Precambrian fossil research. He continued to stimulate such investigations right down to and including the work of his last Ph.D. candidates, Paul K. Strother and Cecilia Lenk. It seems rather a shame that the story ends there. Had Elso been a more ordinary person, he would doubtless have changed his *modus operandi* a couple of decades ago and lived happily well into the next century. But that wouldn't have been Elso. Consuming himself physically, emotionally and mentally was intrinsic to this ever-youthful, intensely-burning man.

Alfred Traverse

ACKNOWLEDGMENTS

Paul K. Strother lent me the picture of ESB in the field (p. 1 of the Newsletter). Steven Barghoorn gave me a copy of his father's autobiographic sketch for the 50th Reunion of his Oakwood High School Class, and shared with me some recollections of ESB's life. A. H. Knoll also helped obtain other material for this memorial.

PUBLICATION CITED

Andrews, H. N., 1980. The fossil hunters: In search of ancient plants. Cornell Univ. Press, 421 pp.

1984
17TH ANNUAL MEETING
AMERICAN ASSOCIATION OF STRATIGRAPHIC PALYNOLOGISTS

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