



Hunt Institute for Botanical Documentation
5th Floor, Hunt Library
Carnegie Mellon University
4909 Frew Street
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: www.huntbotanical.org

The Hunt Institute is committed to making its collections accessible for research. We are pleased to offer this digitized item.

Usage guidelines

We have provided this low-resolution, digitized version for research purposes. To inquire about publishing any images from this item, please contact the Institute.

Statement on harmful and offensive content

The Hunt Institute Archives contains hundreds of thousands of pages of historical content, writing and images, created by thousands of individuals connected to the botanical sciences. Due to the wide range of time and social context in which these materials were created, some of the collections contain material that reflect outdated, biased, offensive and possibly violent views, opinions and actions. The Hunt Institute for Botanical Documentation does not endorse the views expressed in these materials, which are inconsistent with our dedication to creating an inclusive, accessible and anti-discriminatory research environment. Archival records are historical documents, and the Hunt Institute keeps such records unaltered to maintain their integrity and to foster accountability for the actions and views of the collections' creators.

Many of the historical collections in the Hunt Institute Archives contain personal correspondence, notes, recollections and opinions, which may contain language, ideas or stereotypes that are offensive or harmful to others. These collections are maintained as records of the individuals involved and do not reflect the views or values of the Hunt Institute for Botanical Documentation or those of Carnegie Mellon University.

About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
307 DEIKE BUILDING
UNIVERSITY PARK, PA 16802, USA
Phone: 814-863-3419; Fax: 814-863-7823
E-mail: traverse@ems.psu.edu

25 June, 2001

Dr. Aureal T. Cross
Dept. of Geology
206 Natural Science Bldg.
Michigan State University
East Lansing, MI 48824-1115

Dear Aureal:

An actual formal letter--from say the AASP President-- never did come, but the most recent **AASP Newsletter** seems to be pretty definite. I guess we'll go ahead with travel plans. It will be fairly wild, as we will just have returned from a trip to Scandinavia and Russia.

Just e-mailed you the address and phone no. for Bill Spackman. The last time I talked with him was several [5?] years ago when Bruce Tiffney and I were trying to talk him into joining us in publishing a complete flora of the Brandon Lignite. It would have involved some revision of the taxonomy for his woods, and he just wouldn't hear of it.

Thought you might like to see the document I put together as a result of a request from Owen Davis to do so.

All the best.

Yours very truly,

Alfred Traverse
Professor Emeritus of Palynology

P. S. Only six months to Christmas!

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
307 DEIKE BUILDING
UNIVERSITY PARK, PA 16802, USA
Phone: (814)863-3419; Fax: 814-863-7823
E-Mail: traverse@ems.psu.edu

5 August, 1998

Prof. Aureal T. Cross
Department of Geological Sciences
Michigan State University
East Lansing, MI 48824-1115

Dear Aureal:

Just read the abstract for your paper for AIBS in Baltimore, probably given more or less today. I am amazed to learn about a Jurassic flora in my home state (with which I no longer have the slightest connection, other than my parents' graves in St. Joseph).

You obviously have done a nice job with this flora, and it makes me wish I were in Baltimore to hear your paper. Actually, I had toyed with the idea of attending, since it's so near, but I was told in June that I had to clear out of my space here, and I have been overwhelmed with that job almost ever since. Actually, my deadline to be out was 15 July, and I made it by 24 hours. However, I am trying to set up a work space at home by putting an addition on the house, and that is not ready yet. My library is in about 100 boxes in the garage. Here I have a cubicle I share with another emer. prof. I am now pretty much moved into it, with computer, a few shelves, and some filing cases. I apparently will be allowed to keep my prep lab for the time being, so it won't be so bad when I get settled.

I would like to see you again one of these days. Please remember me when reprints are sent out. I enclose some that my card says I have never sent you.

Best wishes.

Alfred Traverse
Professor Emeritus of Palynology

enclosures: reprints

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 DEIKE BUILDING
UNIVERSITY PARK, PA 16802, USA
Phone: (814)863-3419; Fax: 814-863-7823
E-Mail: traverse@ems.psu.edu

7 Feb., 1997

Prof. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, MI 48824

Dear Aureal:

In the cleaning out of a room near mine somebody found four reprints of Dijkstra megaspore papers that obviously belong to you. The persons who found them fortunately noted "spore" and brought them to me. My guess is that you loaned these papers to Kremp or Spackman close to forty years ago.

Question is: do you want these papers back? If not, may I give them to a deserving former student? I'd be happy to dispose of them in whatever way you wish. (I have my own copies already.)

Hope you are o. k. Betty and I are both doing fine, and various projects keep us busy, but not too busy to do a lot of travel. Perhaps you know that Betty got her Ph. D. a couple of years ago, in (of all things) mediaeval German literature. She has a couple of things in press. I am working on several things - a project with the archaeology department on pollen analysis of a lake in central Mexico at the moment.

We are going to the Womens' Big Ten basketball tournament in Indianoplace in three weeks, and to Italy for a few weeks in March-April.

Best regards.

Yours very truly,

Alfred Traverse

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 DEIKE BUILDING
UNIVERSITY PARK, PA 16802, USA
Phone: (814)863-3419; Fax: 814-863-7823
E-Mail: traverse@ems.psu.edu

14 February, 1995

Professor Aureal T. Cross
Department of Geological Sciences
206 Natural Science Bldg.
Michigan State University
East Lansing, MI 48824-1115

Dear Aureal:

How nice to hear from you, per yours of 7 Feb.

Guess I'll handle the handwritten part first. The reprint of the Rev. Pal. Pal. Brandon paper, and some other things that might be of interest, are enclosed. I have persuaded Spackman at long last to agree to have his wood study (his Ph. D. thesis) published, and Bruce Tiffney and I are boiler-plating it in with some further contributions of ours into a comprehensive Brandon paper, for which we will list WS as senior author. Thanks for the kind words about the Brandon business.

Now, about the typewritten letter. Unwin-Hyman doesn't exist any more, having been bought out (with several in between stations) by Chapman & Hall (2-6 Boundary Row, London SE1 8HN). I had permission from Mrs. Erdtman to use that picture, and furthermore I can't imagine any difficulty from Chapman & Hall. As you can see in the textbook, I hold the copyright. You have my permission. So be it.

As you may have heard, PSU found a clever way to get me to retire in this, my seventieth year. I really had no intention of doing it as long as my health continued to be good, which it so far has. I may continue to teach the palynology course, if there is demand for it.

I never have liked meetings, and now that I don't have to go to them for self-preservation, I probably will go even more seldom. I'll never forget that you were present at the very first meeting I ever attended--AAAS in late Dec. of 1947 or so. Maxine Abbott gave a paper on the use of Helen Neushafer (sp.?) fingernail polish for making transfers. Etc. I can't for the life of me recall what you talked about, but I remember being impressed.

Betty is getting her Ph. D. at the Spring Commencement. Defense in two weeks. Very gratifying to us all. We are expecting our

7th and undoubtedly last grandchild in a few weeks. We went to the Rose Bowl game just after Xmas and spent a week on things in S. CA. we hadn't seen before (even went to the Nixon birthplace & library). We are BIG FANS of the womens' basketball team and will go to the Big Ten tournament in Indianapolis in two weeks. It's also Betty's hometown, and she still has connections, though her mother died last year. It will also be a celebration (presumably) of successful weathering of the defense! (There is talk of publishing her dissertation as a book. She was invited to Princeton a few weeks ago to lecture. Wow!)

All the best. Good news to learn than your health is good-- you're right about short time. One is always being reminded by good old friends expiring.

Yours very truly,

Alfred Traverse

encl.:reprints



MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOLOGICAL SCIENCES
206 NATURAL SCIENCE BUILDING
EAST LANSING MI 48824-1115

(517) 355-4626
FAX (517) 353-8787

February 7, 1995

Professor Alfred Traverse
Department of Geosciences
Pennsylvania State University
435 Deike Bldg.
University Park PA 16802 Tele. 814-863-3419
FAX 814-863-7823

Dear Al,

In the process of cleaning up loose ends for the G. S. A. to publish the chapter on early history of Palynology in North America (see exact titles in attached letter to Unwin Hyman Ltd.) I have discovered that for one of the illustrations that Kosanke had originally planned to use, the Erdtman-Hoffmeister picture from your Palynology, 1988, p. 11, fig. 1 4c, there seems to be no written permission to use this though it was my understanding from Bob K. that he had requested it. However I have taken this over, completed the mms in quite a different style (and far more inclusive) and we have sent it off (galley should be back by later this month). I hope all the suggestions you made in your initial review were met and that you will like what we have done. It was a big job, and difficult to decide what to exclude. Our choices will probably not meet with approval from all quarters!

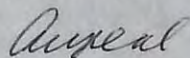
Would it be possible that you (as well as Unwin Hyman Ltd.) could provide written permission to reproduce the Erdtman-Hoffmeister figure for the GSA Memoir 185 Chapter 29? I once had a similar print taken at the time Erdtman was here when I was with Pan American (now Amoco) Research Center in Tulsa. Hoffmeister and I had met privately (against anti-trust regulations) and had worked out a way to cooperate in bringing Erdtman over for that 1959 trip to the Int. Bot. Congress and to give several lectures and visit several labs. We split the bill and I think it was good policy and had some good results. We did the same for Robert Potonié and his wife and for two or three others.

Bob K. had also planned to reproduce two other photos from your "Palynology" (Wilson Fig. 1.5c and Schopf 1.5d) but I used some other pictures instead.

I hope all is well with you. I thought you would be at the A.A.S.P. last Fall at Texas A. & M. but not too many were there.

We are fine. Both Bob and I are O.K. as far as cardiac problems are concerned (we think) - but it is a matter of diminishing time!

Sincerely yours,


Aureal T. Cross, Prof. Emeritus

Encl. Copy of letters to Unwin Hyman Ltd.



MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOLOGICAL SCIENCES
206 NATURAL SCIENCE BUILDING
EAST LANSING MI 48824-1115

(517) 355-4626
FAX (517) 353-8787

February 7, 1995

Publisher's Office
Unwin Hyman, Ltd.
15/17 Broadwick St.
London W1V 1FP
United Kingdom

Manager:

This letter is a request for permission to reproduce a photograph published in Alfred Traverse', *Paleopalynology* 1988, p. 11, figure 1.4C a photograph of Gunnar Erdtman and William S. Hoffmeister.

This photograph would be included as one illustration in a forthcoming memoir (No. 185), A Historical Perspective of Early Twentieth Century Carboniferous Paleobotany in North America, of the Geological Society of America, Chapter 29, "History and development of Carboniferous Palynology in North America during the early and middle twentieth century".

We would appreciate your written permission to reproduce this figure and would acknowledge the source, with gratitude to Unwin Hymen, Ltd. and to Prof. Alfred Traverse.

Thank you, in advance for your consideration of this request.

Sincerely yours,

Aureal T. Cross
Aureal T. Cross

copy to Alfred Traverse

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOLOGICAL SCIENCES

EAST LANSING • MICHIGAN • 48824-1115

Feb 3, 1995

Dr Alfred Traverse
Dept of Geosciences 435 Doike Bldg
Pennsylvania State University
University Park, PA 16802

Dear Al,

Just a note, I was looking up some recent papers and I just wanted to comment on the two papers by you and Tiffany, on the Brandon lignite. I was so glad to see that you answered the Stockwell-Washington 1990 paper so clearly and forcefully by simply showing that his amateurish wanderings into an area they knew nothing about were totally without foundation. I am really tested by those who substitute modeling and numerical based theory for reality.

It was most rewarding to see your excellent illustrations of that Brandon polynoflora. I have used your Bur of Mine paper (and many copies - several purchased at the time it came out) for years and they are in tatters. However this updated and comprehensive consideration of other polynofloras as well is a very important contribution. I am not surprised you and Tiffany agree it is from Early Miocene. It is about mid way between what we have found at Saccor Creek and environs and Florissant. If you have a printed copy of this paper I would very greatly appreciate receiving a copy.

MSU is an Affirmative Action/Equal Opportunity Institution

Best Regards

Hurt Institute for Botanical Documentation

AUREAL T. CROSS



as resp. - Cross



Third Circular/Program

10th Mid-Continent Paleobotanical Colloquium

Michigan State University, East Lansing, Michigan
May 14, 15, and 16, 1993

PROGRAM

FRIDAY, May 14, 1993

- • 5:30-7:30 PM **Welcoming Reception and Buffet**, Habitat Hall, M.S.U. Museum
- • 7:30 PM **Evening Lectures: Elisabeth Wheeler**, North Carolina State University, *Status of Fossil Wood Research: Recent Work, Modern Approaches, Active Projects, and Application of New Tools/Methods.*
- • 8:30 PM **Richard Beerbower**, SUNY Binghamton, *Late Paleozoic Plant Associations and Early Tetrapod Herbivory.*

SATURDAY, May 15, 1993 326 Nat. Sci. Bldg.

- • 8:00 AM - **Lecture: Jean Galtier**, Universite de Montpellier, *Recent paleobotanical research of the Lower Carboniferous of Western Europe.*
- • 9:00 AM - **Coffee Break/Poster Session/Fossil Exhibits**, 205, 207, & 213 Nat. Sci. Bldg.
- • 9:30 - 12:00 Noon - **Technical Session**, 326 Nat. Sci. Bldg., **Ralph E. Taggart** and **Charles B. Beck**, Moderators
- **Patricia G. Gensel**, Dept. of Biology, Univ. of North Carolina, *Probable trimerophytes from the Lower Devonian of Germany.*
- **Patrick Herendeen**, Dept. of Geology, Field Museum of Nat. Hist., *Anatomy and relationships of early Angiosperm woods.*

- **Paul C. Lyons**, U.S.G.S., Reston, Va., *Discovery of Nova Scotian coal balls.*
- **Xuanli Yao**, Ohio State Univ., *Anatomy of Pteruchus-like pollen producing organs from the Triassic of Antarctica.*
- **M. Jane Knaus**, Univ. of Michigan, *Would the Real Triphyllopteris please stand up!*
- **Hermann Pfefferkorn**, Dept. of Geology, Univ. of Pennsylvania, *The Paracas flora between Gondwana and Euramerica.*
- **Shya Chitaley**, Cleveland Museum of Nat. Hist., *On a permineralized wood from the Late Devonian of Pennsylvania.*
- **Hongqi Li**, *Foliage anatomy of Gigant-onoclea guizhouensis Gu et Zhi (Gigantopteridales) from the Upper Permian of Guizhou Province, China.*

- • 12:00-12:50 **Lunch**, Campbell Hall (for those rooming there or with the meal plan).

- • 1:00-2:30 PM - **Technical Session**, 326 Nat. Sci. Bldg. **Shya Chitaley** and **Scott Wing**, Moderators

- **F. Schaarschmidt** and **Volker Wilde***, Senckenburg Museum, Frankfurt am Main, Germany, and **D.L. Dilcher**, Florida Museum of Nat. History, *Transatlantic comparisons of Paleogene floras.*
- **Alicia Lesnikowska**, Dept. Biology, Georgia Southwestern College, Americus, GA, *The paleobotanical collections of the University of Kansas: an under-utilized resource.*

Al: This is (or should be) a great meeting. We have a great range of papers - Arctic to Antarctic - from Germany to China, Vertebrates to Fungi, Antarctica to far as to biostratigraphy. We hope for beautiful spring weather. Garry Gorman/Moyd Come on over. It would be great to see you and still accommodate poster or sampling. Pencil

- **Lisa Boucher**, Ohio State Univ., *Morphometric and cuticular analyses of *Dicroidium* from Antarctica*
- **William Gillespie**, *Fossil flora and biostratigraphy of the Pennsylvanian of the Southern Appalachians*
- **Stephen R. Manchester**, Florida Museum of Nat. Hist., *Malvacean fruits and flowers from the Eocene of Wyoming*
- ● 2:30-3:00 PM - **Snacks, Poster Sessions, Fossil Exhibits, Computer Displays, and Slide Exchange**, 205, 207, 213 Nat. Sci. Bldg.
- ● 3:00-5:00 PM - **Technical Session**, 326 Nat. Sci. Bldg. **Shya Chitale** and **Scott Wing**, Moderators
- **Charles Daghlian**, Rippel Electron Microscopy Facility, Dartmouth College, Hanover, NH, *Venation analysis*
- **Dan Chaney**, Dept. of Paleobiology, Smithsonian Inst., Washington, DC, *Paleofloras of the Arroyo Formation (Permian, Texas): comments on their geologic setting and preservation*
- **Georgina M. Del Fueyo**, Dept. of Plant Biol., Ohio State Univ., *Studies of Triassic cupules from Antarctica*
- **Wilson Taylor**, University of Wisconsin, Eau Claire, *The thrill of complex, the agony of homogeneous - one man's experience with sporoderm ultrastructure*
- **Mitchell Blake**, W. Va. Geol. and Economic Survey, Morgantown, WV, *Fossil plants and stratigraphic relationships of the New River-Kanawa interval in southern West Virginia*
- **Victor Call**, Florida Museum of Nat. Hist., *Wind-dispersed Angiosperm disseminules from the Middle Eocene Claiborne Group, northern Mississippi*
- ● 5:00 PM - **Tour of the Botany Conservatory** complex.
- ● 6:30 PM - **Banquet**, Kellogg Center. After dinner, we will have two talks, bringing us up-to-date on two current research projects: **Jim Basinger** will present an illustrated talk on *Paleobotany of the High Arctic; Plant Assemblages: Life and sedimentary Environments, and Inferred Latitudes*. This will be followed by a

presentation by **Tom Taylor**, *Paleobotanical, Palynological, and Paleoecological Research in the Antarctic: A Status Report*.

- ● 10:00PM - **Refreshments and conversation**, Campbell Hall.

SUNDAY, May 15, 1993

- ● 8:00 - 9:15 AM - **Technical Session**, 326 Nat. Sci. Bldg., **Tom Phillips** and **Judy E. Skog**, Moderators
- **Gar W. Rothwell**, Univ. of Alberta, *Polysporangiate mosses and the phylogeny of embryophytes*
- **Jane Masterson**, Chicago, IL, *Using fossil cell size to estimate the ploidy levels of extinct woody Angiosperms*
- **William D. DiMichele**, Dept. of Paleobiology, The Smithsonian Institution, Washington, DC, *Macroevolution and the origin of major groups of vascular plants*
- ● 9:15-9:45 - **Coffee Break, Posters, Computer Displays, Fossil Exhibits**, Rooms 205, 207, 213 Nat. Sci. Bldg.
- ● 9:45-12:00 Noon. **Technical Sessions**, 326 Nat. Sci. Bldg. **Tom Phillips** and **Judy E. Skog**, Moderators
- **Peter Crane**, Field Museum of Natural History, Chicago, IL, *Platanus, Platanus, and more Platanus*
- **Janelle S. Pryor**, Dept. of Biology, Tougaloo College, Tougaloo, MS, *Interpreting paleoecology from an autochthonous peat deposit: Comparison of analyses using different types of data*
- **Douglas P. Jensen**, Univ. of North Carolina, Chapel Hill, NC, *A new zosterophyll from the Lower Devonian of New Brunswick and its possible affinities*
- **Diane Erwin**, Dept. of Geology, Univ. of Pennsylvania, Philadelphia, PA, *Reconstruction of an early Late Carboniferous Pteridosperm from the western margin of Gondwana*
- **Brian J. Axsmith**, Ohio State Univ., Columbus, OH, *The Permo-Triassic conifer *Glyptolepis* and its place in conifer evolution - A preliminary report*
- **Richard Leary**, Illinois State Museum, Springfield, IL, *Did *Glossopteris* of Gondwana arise from Euramerican *Lesleya*?*



Second Circular

10th Mid-Continent Paleobotanical Colloquium

Michigan State University, East Lansing, Michigan

May 14, 15, and 16, 1993

PROGRAM

FRIDAY, May 14, 1993

- 6:30-7:45 PM **Welcoming Reception**, Habitat Hall, M.S.U. Museum
- 8:00 PM **Evening Lecture**: Dr. Elisabeth Wheeler, North Carolina State University, *Status of Fossil Wood Research: Recent Work, Modern Approaches, Active Projects, and Application of New Tools/Methods.*

dinner, we will have two talks, bringing us up-to-date on two current research projects: Jim Basinger and colleagues will present an illustrated talk on *Paleobotany of the High Arctic; Plant Assemblages: Life and sedimentary Environments, and Inferred Latitudes*. This will be followed by a presentation by Edie and Tom Taylor, *Paleobotanical, Palynological, and Paleocological Research in the Antarctic: A Status Report*.

SATURDAY, May 15, 1993

- 8:00 AM - **Lecture**: Dr. Jean Gauttier, Universite de Montpellier, *Recent Paleobotanical Research in Western Europe*. 326 Natural Science Building
- 9:15 AM - **Coffee Break/Poster Sessions/Fossil Exhibits**, 205 and 207 Natural Science Building.
- 10:00 - 12:00 Noon - **Technical Session**, 326 Natural Science Building
- 12:00 Noon - **Lunch**, Campbell Hall
- 1:00-2:30 PM - **Technical Session**, 326 Natural Science Building
- 2:30-4:00 PM - **Poster Sessions, Fossil Exhibits, Slide Exchange**, 205 and 207 Natural Science Building
- 4:00-5:00 PM - **Technical Session**, 326 Natural Science Building
- 5:00 PM - **Tour of the Botany Conservatory complex**
- 6:30 PM - **Banquet**, Kellogg Center. After

SUNDAY, May 15, 1993

- 8:00 AM-12:00 Noon - **Technical Session**, 326 Natural Science Building, with coffee break/Poster Session/Fossil Display in Room 205 and 207 Natural Science.

REGISTRATION

The registration fee for the Colloquium is **\$60.00** (\$40.00 for students), which includes the Friday evening reception, attendance at all technical sessions (including three coffee-breaks with drinks and snacks), and the Saturday evening banquet. **Checks should be made payable to MCPC-X - Geological Science.** Checks should be returned with the Registration Form, to the address indicated.

Registrants will be mailed a final program, map, and additional information in **mid-April**. To be sure to

Al: we had excellent response to the first circular - Now we will see what will really be presented. It will be diverse but related - time for discussion - questions, dinner, - situations, etc. Some leading - Informed to your coming. Pleistocene Cross - I am gradually regaining some strength after emergency multiple coronary by pass surgery. Finally got the heart to beat in good sinus rhythm a week ago with an electronic pacemaker. New to get well!

obtain these materials in ample time, registration materials should be mailed to arrive in East Lansing by **April 15, 1993**.

TECHNICAL PROGRAM

There will be three technical sessions (two on Saturday and one on Sunday morning). Technical presentations will consist of oral presentations, poster presentations, and displays of fossil material. It is our intention to maintain an atmosphere of relative informality in keeping with the tradition of the Mid-Continent Colloquium. Oral presentations on completed research, work in progress, methods, or theoretical or speculative topics or new ideas will normally run from **5 to 15 minutes** in length (some may be slightly longer) and the schedule will be adjusted to provide ample opportunity for questions and discussion.

Poster presentations and/or displays of fossil material are encouraged and will be available for examination during each of the three 45-minute coffee breaks. Those desiring to participate in this aspect of the program should indicate their requirements on the Registration Form in terms of wall-space for posters and an estimate of the table space required for specimen display.

Lighted viewers will be set up in conjunction with the posters and specimen displays for those desiring to participate in the slide exchange.

Students are particularly encouraged to present papers, posters, or exhibits of work in-progress to take advantage of the unique opportunity for feedback provided by the Colloquium.

In addition to the technical program and scheduled lectures, those attending the welcoming reception on Friday evening will have the opportunity to tour the exhibit halls of the M.S.U. Museum. A tour of the ranges of the Botany Conservatory, managed by the Department of Botany and Plant Pathology, is scheduled for Saturday afternoon.

HOUSING

A block of rooms has been set-aside for Colloquium registrants at Campbell Hall, centrally located across from the M.S.U. Student Union. Housing rates include the per-night room charge (\$21.00 **single**/\$15.00 **double** occupancy) and the **mandatory** meal package, which includes breakfast on Saturday and Sunday, and lunch on Saturday. If you desire to take advantage of this housing option, payment should be received along, with your registration materials, by **April 15, 1993**. The Lansing/East Lansing area has a wide range of motel/hotel accommodations, should you desire to make alternative arrangements. Informal housing arrangements are possible for a limited number of students. The meal program can be purchased separately for those with alternative housing who wish to dine with other Colloquium participants.

Rates for **two nights** (Friday and Saturday) with **three meals** (breakfast and lunch on Saturday and breakfast on Sunday) are as follows:

- Single Room - \$56.50 (includes meal plan)
- Double Room - \$44.50 (includes meal plan)
- Meal Plan Only - \$14.50



ARRANGEMENTS

Banquet Entree (check one):

Roast Cornish Game Hen _____ Chicken Grand Traverse _____

ROOM RESERVATION - Campbell Hall

Room rates include Friday and Saturday night with three meals (breakfast and lunch on Saturday, breakfast on Sunday):

Single Room (\$56.50) _____

Double Occupancy (\$44.50) _____

Meal Plan Only (\$14.50) _____

Roommate Request _____

Please indicate below if you have need of any special arrangements or problems where we might be of assistance:

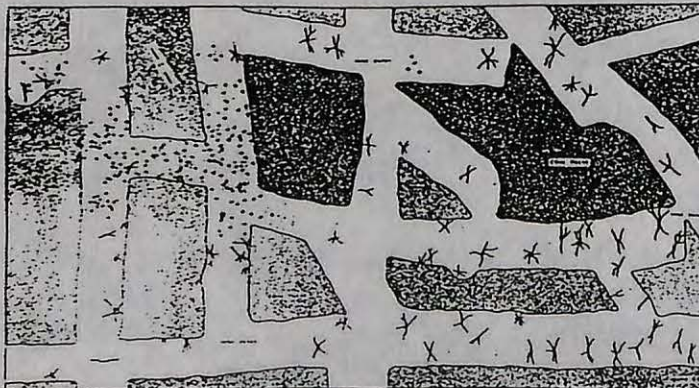
If you have questions concerning registration, presentations, or any other aspect of the meeting, please feel free to contact us at Department of Geological Sciences, Michigan State University, East Lansing, MI 48824-1115.

Aureal T. Cross
517-355-4630
517-332-6187

(Office)
(Home)

Ralph E. Taggart
517-353-5175
517-676-1207

Fax: 517-353-8787





Cal: You might as joy as this meeting. It would be nice if you could come and bring a couple of students or colleagues. The meeting is usually pleasant relaxed and interesting.

MICHIGAN STATE UNIVERSITY
MAY 14, 15, and 16, 1993

FIRST CIRCULAR

*Best regards
Aureal*

We are pleased to announce that the TENTH MIDCONTINENT PALEOBOTANICAL COLLOQUIUM, sponsored jointly by the Departments of Geological Sciences and of Botany and Plant Pathology, will be held MAY 14, 15, and 16 (Fri. 5:30 P.M. thru Sun. Noon) at Michigan State University, East Lansing, Michigan, 48824-1115.

The Paleobotany Fest will open with a reception mixer, registration and buffet at 5:30 P.M. May 14, at the MSU Museum, followed by a special presentation by Dr. Elisabeth Wheeler, of North Carolina State University, on, "Status of Fossil Wood Research: Recent Work, Modern Approaches, Active Projects, and Application of New Tools/Methods."

Saturday morning session will begin with a presentation by Dr. Jean Gaultier, Universite de Montpellier, on, "Recent Paleobotanical Research in Western Europe." Our regular INFORMAL PRESENTATIONS will follow for the remainder of Saturday and Sunday A.M. These INFORMAL "Papers" may be short notes of from 5 to 20 minutes, each followed by discussion. There will NOT be a formal time schedule arranged in advance except sequence of talks. We encourage status reports of ongoing research, new ideas, recent discoveries, knotty problems, controversial subjects (within reason!), and interdisciplinary topics on paleobotanical/palynological aspects of botanical and geological research.

POSTERS and FOSSIL PLANT SPECIMENS OR SLIDES for display and discussion are encouraged. Easels and table space should be requested in advance. Displays will be available for viewing/discussion throughout the meeting near the coffee/snack room and lecture hall.

The Banquet Saturday evening will be followed by two summary "bring-us-up-to-date" talks: Jim Basinger and colleagues will present a well-illustrated talk on "Paleobotany of the High Arctic; Plant Assemblages: Ages, Life and Sedimentary Environments, and Inferred Latitudes" and personnel, projects, and institutions involved and localities. Edie and Tom Taylor will then present a talk with similar emphases on "Paleobotanical, Palynological and Paleoecological Research in the Antarctic: A Status Report".

We have arranged for room, breakfasts and lunch accomodations at a University dorm near the campus center at special rates. Registration fee for the Colloquium will be about the same as for recent meetings with a reduced student rate. Registration fee includes Friday buffet, Saturday banquet, coffee and snacks. Visits to paleobotanical facilites, university gardens, etc. will be included in the program.

THE SECOND CIRCULAR AND CALL FOR TITLES WILL BE SENT ABOUT FEBRUARY 10, 1993 to those who return the form at the bottom of this page before February 1, or who call or fax.

Aureal T. Cross (517) 355-4630 (Off.) Ralph E. Taggart (517) 353-5175
(517) 332-6187 (Res.) FAX (517) 353-1926
FAX (517) 353-8787

CUT HERE

Please send the SECOND CIRCULAR for the X-MCPC to:

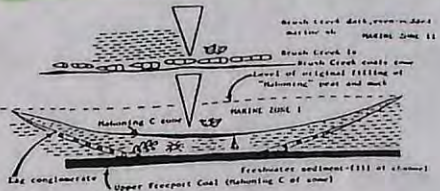
Name _____ Address _____

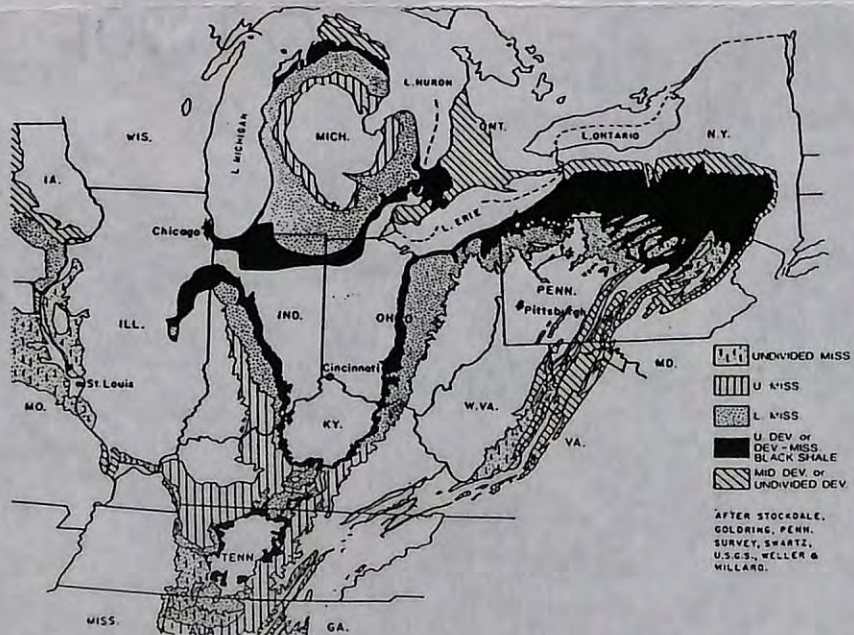
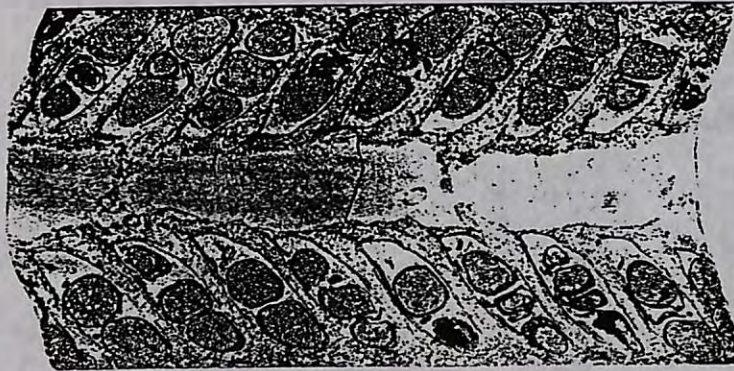
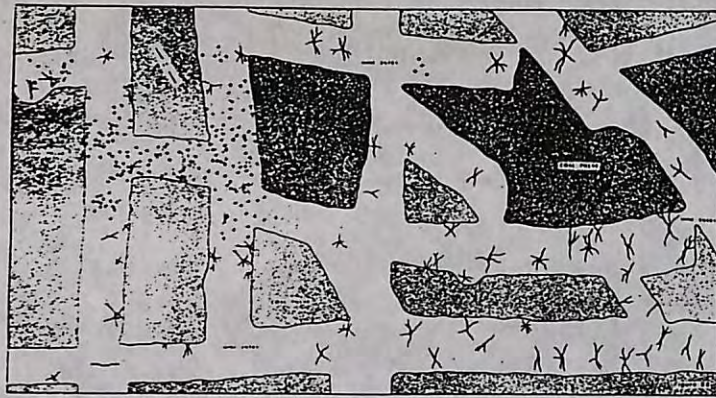
Phone _____

- Send I'd do either for both*
- (X) I plan to make a research presentation (X) I plan to present a poster display
() I will bring some slides, specimens, etc. () I would participate in a slide exchange

PLEASE RETURN THIS FORM BEFORE FEB. 1, 1993 to Aureal T. Cross, Dept. of Geological Sciences

Michigan State University
East Lansing MI 48824-1115





THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 DEIKE BUILDING
UNIVERSITY PARK, PA 16802
Phone: (814)863-3419; Fax: 814-863-7823

25 November, 1992

Dr. Aureal T. Cross
Dept. of Geological Sciences
Michigan State University
East Lansing, MI 48824-1115

Dear Aureal:

Thanks for the nice note. That sounds like a super little meeting. I will try to come. It's after end of semester here, so should be OK. I'll probably come alone or just bring Betty, as, for the first time in my career, I have no graduate students. Perhaps Carmen Moy, my perpetual post-doc, will want to attend.

All the best to you all for the holidays, as ever.

Yours very truly,

Alfred Traverse

encl.

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 DEIKE BUILDING
UNIVERSITY PARK, PA 16802
Phone: (814)863-3419; Fax: 814-863-7823

29 October, 1992

Professor Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

Sorry I missed you when you phoned a while back, although in general I like to miss as many phone calls as possible. They seem to be much more likely to be bad news than good!

Thanks very much for the reconstruction of the Carboniferous coal swamp. I had our blueprint department make a 1:1 copy so that I wouldn't have to risk posting the original. It will be very useful for the appropriate lab session in the paleobotany class.

There are 17 in the palynology course this semester, so I am very busy, as I teach the labs personally (always have). We just had a big family wedding--daughter Celia. That makes 6 big weddings from four kids. Glad my father didn't live to know about it! Celia found the guy with an ad in the paper while we were in Germany. He seems all right. The wedding was great fun, as our family assembled from all parts of North America.

All the best. Please look us up when you in this general area, if ever. I no longer have connections in Michigan, for the first time since I was 4.

Yours very truly,

Alfred Traverse

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 DEIKE BUILDING
UNIVERSITY PARK, PA 16802
Phone: (814)863-3419; Fax: 814-863-7823

22 July, 1992

Dr. Aureal T. Cross
Dept. of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

Just going through huge mail backlog from a 6-month absence in Germany. Found xerox of Cross & Phillips from Int. J. Coal Geol. 16 (1990): 1-46. For my paleobotany course, I'd like to have a slide made of Fig. 5 (p. 12), but the xerox is too poor for that. Could I borrow an original? (I'd make a slide for you too.)

Hope you are thriving--I hear rumors that that is the case!

Yours very truly,

Alfred Traverse

AT/et

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 Deike Building
University Park, PA 16802
(814)863-3419 or (814)865-6393

10 October, 1988

Dr. Aureal T. Cross
529 N. Harrison Rd.
East Lansing, MI 48823

Dear Aureal:

Thanks for the nice letter of 21 September. Your prognosis sounds good, for which we are all most grateful! If I had a home phone number I'd call--I tried the one I had and got no answer. Maybe you could supply a number.

Glad you enjoyed the IOP card. I sponged the card off of Dianne Edwards. Tom Taylor had the latest (encouraging) news of your progress. Betty and I left here for Australia less than three weeks after her emergency hysterectomy-plus, but she did fine.

The textbook is now readily available and was being hawked (at a ridiculous price) in Australia. It is the text for my course here this semester, so at least 10 copies sold!

All the best, and regards to Aleen.

Yours very truly,

Alfred Traverse

AT/et

529 W. Harrison Rd
East Lansing, MI 48823
21 Sept. 1988

Dr. Alfred Traverse
Dept. of Geosciences
435 Deike Bldg
Hunt, PA 16652
Rt 2, Box 390
University Park, PA 16802
Pennsylvania State Univ.

Dear Al:
I am still unable to sit and the electrical/technical workers of the University are on strike, but I want to get at least a note of thanks to you for your good letter, and the two multiple signed cards. I have had a number of letters and phone calls, as well as many cards, from professional colleagues, former students, friends and others. These have all been very gratifying and have given me an important lift during a very serious and painful debility and a psychological depression.

It was very difficult to cancel all arrangements through early October and especially the two meetings in Australia. I had no choice. From time to time of verifying the presence of an active, fast growing cancer of the prostate (July 29) and the time of final verification of extent of the cancer (surgery to remove and biopsy of the lymph nodes of the lower pelvic area (Aug 8) was about as fast as arrangements could be made. Prior to that ultrasound July 25 and two chemical tests had indicated probability. The biopsy of the lymph node was negative (reported 10:30 AM Aug 8)

So the major surgery (radical prostatectomy) was carried out that afternoon. Biopsy (many sections) of the prostate indicated ^{cancer} that had spread throughout the prostate but had not penetrated the capsule (within 1 mm in places). So the prognosis is that I probably should have no further problem at this site once the surgery and problem of incontinence are overcome. I am still in bed about 1/2 time. Strength is only gradually returning but energy and desire are rapidly returning. Allen has been most professional in her nursing care (extremely capable and understanding and gentle). Since she still works part time in the cardiac care dept. of the hospital, where I was incarcerated, she was able to be with me most of the time for the 2 weeks in the hospital. She set up a hospital bed in our library/den where I could see out a large window to the trees, sky, and some garden. I have been so lucky. What a marvelous person.

The card which you, Betty and 24 others sent from Melbourne was also a very interesting classic of early botany. Thanks so much to you all. The enclosed is a copy of my response to being awarded the Gilbert & Cady Coal Geology award at Geol. Soc. America meeting in Phoenix last November. There are a couple of paragraphs in reference to the future of technology that might interest you. By the way has your book ever seen the light of day? I had 4 copies back ordered over a year ago. If it is out, I'll send in an order - My best regards to you and Betty. Sincerely, Burrod

file as rpt
AT Cross

rapidly changing landscapes of the flood plains on which I played and worked were quite evident. I could see relicts of changing uses of environmental resources over past centuries, and these were often explained by elders with anecdotes, some passed on for generations. At the same time, I was enthralled by the study of history, geography, and literature. I owe much to my teachers in primary and secondary education. They exuded excitement that I found to be quite infectious.

Throughout my life, I continued my avocations and interests in history, the classics, and geopolitics. My career in geology led to concentrations in sedimentology, stratigraphy, and micropaleontology. My research expanded into the many aspects of the geology of coasts with emphasis on processes and the nature of evolution of coastal landforms such as beaches, barriers, lagoons, and so on. Changes in relative and eustatic sea levels in the Holocene Epoch became critical in my inquiries into the nature of lateral and vertical facies changes in paralic environments. It was the realization that I could interpret time-depositional surfaces in the sense of the short term, minutes to days, years, and centuries—a time frame of import to individuals and generations of peoples—that led me onward in my studies of ancient landscapes. I became quite excited about these methodologies of perhaps “the obvious” as applied to a better understanding of history, the nature of or *raison d'être* for many archaeological sites and indeed, in some cases, historical and geopolitical events. I was, of course, merely restructuring basic concepts of geology—uniformitarianism, superposition, and correlation of sedimentary facies—to the study of recent events, the millennia of the Holocene Epoch. A broad spectrum of thought processes was required, including both analyti-

cal and empirical methodologies. Indeed, I found it to be quite reasonable to mull through concepts varying from factual (assuming we can actually know what reality is) to historical and even the mythical.

Much of my early work on coastal process and response in paralic and littoral environments had direct and immediate application to the nature of our recent occupancy of the nation's coastal zones. Moreover, our ever-changing coastal landscapes abound with artifacts of our historic past. Clearly, geological methodologies could be used to reconstruct shorelines of the near past (several hundreds of years) with great accuracy. Equally, it seemed quite evident that paleogeographies of coastal environments occupied by American Indians could be delineated to at least 12,000 years before present in my study area, the mid-Atlantic coastal zone. My first research ventures related to archaeology were in reconstruction of Archaic and Woodland Period landscapes along Delaware Bay. A number of occupancy sites of the past several thousand years seemed to be “out of place” in terms of present coastal environments. Littoral processes, sea-level rise, and lateral and vertical migration of sedimentary facies were all part of the solutions. Early reconnaissance-type coastal studies in Greece with the Minnesota Messenia Expedition staff (William MacDonald, Director; George Rapp, Jr., Associate Director; Stanley Aschenbrenner, anthropologist; and Rodger Howell, archaeologist) set the stage for nearly two decades of interdisciplinary research, in Greece, Turkey, Hawaii, and the east and west coasts of the United States, that now dominates my career.

Long ago, when I first read Homer's *Iliad* and *Odyssey*, I could not know that my career eventually would take me to the plains of the

Scamander and Simois Rivers of ancient Ilios. It is indeed an exciting pursuit of knowledge that leads one from the pages of the *Iliad* to the geology of a delta-flood plain in the Troad and the paleogeographic delineation of a shoreline and seascape that wrapped around the fortification Troy in the 13th century B.C. The overwhelming question of course remains: Having set the landscape, was it the arena for the events as described by Homer? Equally, we could read Herodotus and Pausanias and go to the Malian Gulf of east-central Greece and discover that up to 20 m of sediment and a kilometre-wide delta flood plain overlie the ancient pass at Thermopylae and separate us from the heroic events of 480 B.C., so important in the psyche of western peoples.

My goals in reconstructing the near past as related to people's occupancy of ancient landscapes are now bearing fruit. The major spur to our endeavors lies in the many uses of paleogeographic and paleoclimatologic interpretations. Indeed, it becomes increasingly evident that these research methodologies are equally relevant to our understanding of our present world environments. I have striven to assure that our colleagues in history, archaeology, and the classics become aware of our research in archaeological geology. It is quite clear that our discipline could not thrive without the base of current thought in the realm of our colleagues in the humanities and social sciences. As John Gifford noted, research at the interface between geology and history-archaeology has surely been greater than the sum of both for me. I would not have it otherwise.

Once again my thanks to you of our Division of Archaeological Geology and the Geological Society of America for honoring me with the Archaeological Geology Award.

Presentation of the Gilbert H. Cady Award to Aureal T. Cross

CITATION BY DENNIS SPARKS

This year's honoree, Aureal T. Cross, is an especially worthy addition to the distinguished list of recipients of the Cady Award.

For nearly 50 years, beginning with a publication written with L. R. Wilson in 1939 describing a Pennsylvanian flora from Iowa, a non-stop succession of more than 150 scholarly and professional contributions has been produced by this remarkable man, and it continues to this day. His collaboration with his teacher and col-

league, J. H. Hoskins of the University of Cincinnati, from 1942 through 1952 resulted in major advances in the understanding of the occurrence, distribution, and taxonomy of Paleozoic plants in North America. From 1949 to 1957, Dr. Cross held a dual position at the University of West Virginia and with the West Virginia Geologic and Economic Survey. His work with the Survey included all aspects of coal geology, from field mapping and paleobotanical research to more mundane studies of mine support and roof bolting. He made significant contributions

in the application of coal petrography to rank determination and coal classification. At the same time, he guided three students to Ph.D.'s and extended his research in palynology. His teaching career continued at Michigan State University, where he retired in June 1986 to Emeritus status after 25 years and 26 Ph.D. students. During 1983 and again in 1985, Dr. Cross was invited to India, where he shared his enthusiasm and expertise with students and faculty of the University of Lucknow's Birbal Sahni Institute for Paleobotany. His research in

coal geology continues, as does his academic guidance with an additional five Ph.D. candidates expected to complete their work in 1988.

The total measure of Dr. Aureal Cross' contribution to coal geology must be seen not only from the perspective of his own efforts in research and teaching, but from the cumulative works of those in government, academia, and the energy industry to whom his guidance and wisdom have meant so much. His tireless effort, acute and perceptive observations, and infectious enthusiasm have inspired many. He is a deserving recipient of this prestigious award.

RESPONSE BY AUREAL T. CROSS

This is an amazing hour for me—a happy happening that was never included in my plans for this or any future year. I am emotionally overwhelmed—but not yet speechless. As I reflect on the seven previous recipients, six of whom I know, or knew, personally (I see that only Jack Simon, from among those, is here today), I am unable to identify myself as being at their levels of contribution to coal science. I feel that as I accept this honor, I am at the same time representing several of you here today, and some who are not here, who are equally or more deserving of the Cady Award in Coal Geology.

My first contact with Dr. Cady occurred on a Tri-State Field Conference in 1938. Dr. Schopf, the first recipient of the Cady Award, was also on that trip. But my first real acquaintance with Dr. Cady's professional acumen came in September of 1943, at the beginning of my tenure as National Research Council Fellow in Geology, when I went to Illinois for about a week to discuss my plans for a study of Appalachian coals with Dr. Cady and Dr. Wanless. My longest working relationship with Dr. Cady came in the early 1950s when he was helping to initiate a broadened coal research/resource program at the Ohio Geological Survey. It was there that I came to appreciate his stern but compassionate demeanor and his extensive knowledge of many aspects of coal science. His sincerity of purpose, exemplary work habits, charity toward all levels of persons whom he taught or with whom he dealt, clarity of thought, and resolute integrity were impressive. He was a model to be emulated insofar as possible.

Now before I try to thank you, I am taking the opportunity to make a few observations on the state of our science, the opportunities (and some of the pitfalls) ahead, and what must be done to fulfill our commitment to advancing the knowledge of the geology of coal and associated rocks, and to coal science in general, as we approach the 21st century.

Coal is not black, and neither is the future of the broad spectrum of research on coal. It only looks that way from the outside. Coal science is



not dead and should not be neglected or abandoned. More particularly, the geology, geophysics, botany, and chemistry, and the exploration, extraction, and utilization of coal challenge us as much today as ever before. Opportunities abound for both original fundamental and applied research. Coal utilization continues to increase slowly. Wildly gyrating cycles of economic boom and bust in other fossil fuels (petroleum, natural gas, oil shales) have definitive effects on the health of the coal industry.

The prosperity of the coal industry is controlled more by the realities of economics and politics than by the science. The near-level plateau of coal production at almost 900 million short tons since 1984 has put many coal scientists out in the cold or has at least caused the thermostats to be turned low on many of their activities.

The science, however, must continue to progress in such times as these in order to provide the controlling knowledge for making technologic advances in coal exploration, extraction, processing, transportation, utilization, and other factors which limit the wise, safe, and profitable use of such resources. There is a natural negative reaction of coal scientists to a low curve in such cycles, but it is really the time to consolidate our gains and push toward new frontiers.

At the annual meeting of the American Association of Stratigraphic Palynologists in New York in October 1986, considerable discussion centered on the viability of the paleontologic

subscience, palynology. Because of the economic state of the petroleum industry and, perhaps more importantly, because of the introduction of some new techniques and applications of geophysics and geochemistry to oil exploration, palynology was being decreasingly supported by the major oil companies, the largest users of the science. This does not mean that the science is dying, or is no longer needed. The science is still there. The ideas that were generated by Muller, Tschudy, Wilson, and Hoffmeister for their respective oil companies that led to the application of palynology as a useful tool for finding oil, beginning in the mid-forties, were derived from the earlier study of the palynology of peat, in the 'teens of the 20th century, and the palynology of brown coals and coals of higher rank, in the late twenties and thirties in Europe and America. The extrapolation, by those four pioneers, of this technique or tool to resolution of stratigraphic and paleoecologic problems for a broad spectrum of sedimentary rock types, was based on the knowledge of a so-called "pure" sub-science which had been slowly accumulating basic concepts and data in Europe and America out of the persevering research of such early workers as Potonie, Luber, Waltz, Naumova, Raistrick, Simpson, Knox, Schopf, Wilson, Kosanke, and Dijkstra. It was a utilitarian science for selective application to exploration for petroleum. Its time had come. Even innovations which greatly expanded the science, for example, the development of studies of phytoplankton for correlation and environmental interpretation (dinoflagellates, acritarchs, coccoliths, and so on), and the development of the idea that the level of maturation of organic matter in the sediments to form oil or gas, or to have been formed and lost by overmaturation, could be determined by the level of reflectance of vitrinite or the alteration of spores and pollen, could not prevent the science of palynology from being eclipsed by new innovations from other areas such as geochemistry or geophysical technology. That has not made obsolete the science of palynology, however. The science will be rejuvenated or not, depending on the vigor of the practitioners and their development of new ideas and applications. Certainly, at least a reduced number will carry on with uninterrupted fervor. Hunger often makes us lean and keen, sharpens our senses, and stimulates our mental prowess.

Another example of this sort was the demonstration by Schapiro and Gray in America (two former students of mine) and Ammosov in the Soviet Union that the quality of coke could be predicted and the blends determined by petrographic analysis of coal. It was an idea whose time had come. It was based on extensive fundamental petrographic work on coal carried on over many years by such persons as Thiessen, Wheeler, Hickling, Stopes, Seyler, H. Potonie,

Duparque, Stach, Kuhlwein, Petrashek, Cady (the man whose memory is being honored by this presentation), Schopf, and R. Potonie, followed by such idea- and application-oriented persons as Teichmuller, Abramski, Mackowsky, Alpern, Hacquebard, Marshall, Spackman, Harrison, Berry, Dutcher, and many others. Each one did something to advance the science. Some were particular-goal oriented, and each contributed in various ways, with modified or new techniques and processes, and some generated new ideas that collectively advanced the whole science of the petrographic analysis of coal.

These and other examples, that might easily be drawn, reinforce the thesis that coal science is alive and well—only the industry is unwell, and our funding suffers. As Jack Simon used to say during the forties and fifties, there were times when all those of us working on coal could hold our meetings in a telephone booth and not preclude the use of the instrument. Yet, the threads of work that were maintained during the mid-century low swing in the cycle of coal science provided the warp and woof to a broad fabric of coal science which suddenly expanded in the late sixties and seventies.

The maintenance of coal science does require funds and facilities at this time. There is need for sponsoring agencies to strike a balance in funding allocations, to restore to individuals a greater percentage of support as compared with groups and megaprojects. More ideas and fundamental information are developed in academic environments per dollar spent than in government or industry, because of low-cost personnel (students and faculty) and lower overhead. The academic area is the basic resource for new scientists and their ideas. Their financial support has been reduced to a fraction in recent years. A science deprived of new blood is soon stultified.

Illiteracy of the general public and politicians in science today is at least an order of magnitude greater than the reading illiteracy of the adult American population, which has now exceeded an astounding 11%. Most politicians and large numbers of professional people are basically ignorant in modern science and technology. Astrology is having a heyday; creationism has become a major force; a major segment of the population is being left in abject isolation as computer technology races forward with exponential acceleration. In this climate, "Carl Sagan science" rivets the masses to desultory mediocrity.

There are no bounds for the imagination and drive of youth. Our younger scientists may "re-discover" many things, without realizing the repetitive nature of their "discoveries," but along with such duplication of effort, there is a net move forward in the science, with new clarity of understanding of old problems and new directions, occasionally quantum jumps, in funda-

mental knowledge and technology. The support of the academic environment for education of our youth, adequate to maintain qualified, mentally stimulating, disciplined, and inspiring teachers, is requisite for sustaining the flow of new talent into coal science or any other professional discipline. It is in this setting that "budding" scientists, if they are to "bloom," must be "planted" in the fields of the fundamentals of science located in library, classroom, laboratory, and field; "injected" with the growth hormones of curiosity, desire, self-discipline, personal integrity, and orderly work habits (including planning and execution of work within prescribed time frames); "fertilized" with information resource bases in peripheral fields of science, economics, communication skills, and applied technology; "watered" with good health, social responsibility, support and understanding of family, friends, peers, and faculty; "lighted" with respect, encouragement, compassion, and financial sustenance; and "pruned" to develop fewer, more perfect flowers of new ideas, scientific writings, and other professional and societal contributions.

Creative thinking is stimulated in such an environment. Not all new ideas are fruitful; not all old ideas are outdated. In the proper environment, ideas are less likely to be "put down" by peers and elders out of ignorance or jealousy. All ideas, no matter how far out, deserve their day in the courts of reasoning, experiment, and testing.

In science, serendipitous discoveries are always waiting in the wings of our minds, and we must learn to recognize and seize upon unusual ideas and recognize their significance. We must be wise enough to search related, even unrelated, fields of science and technology, to attend meetings with scientists in other fields, to read their journals, to bring our concerns to their attention, and to bring their insight and ideas to bear on the resolution of our own problems. Let the facts be our base of reference; let the theories fall into line.

To earn such support from government or industry, we must learn to accept the fact that applied research is really a high moral goal in that it makes available to our fellows, and to society as a whole, the products of our minds. In a practical sense, it stimulates some of the main sources and the broadest avenues of support, such as scientific and technological users (that is, petroleum, steel, coal, and utilities). The biases built up, in both academic and government-supported laboratories, against "applied" research has stemmed from a loss of the sense of responsibility, and in some cases, a loss of direction and of sense of mission. Our major technological advances have stemmed largely from fundamental research, often through serendipitous discoveries. We can ill afford the luxury of

considering ourselves too "pure" to be sullied by directing some of our efforts toward applied or technological goals.

This brings me to my final points. Who is to be credited for this unbelievable happening in my life? How many do I represent in receiving this high honor from my colleagues? What is the true source of discovery and of scientific advancement? On whose shoulders do we stand? What is the lineage or professional genealogical pedigree of each of us and of each of our predecessors in the science?

I owe my start in botany and geology to L. R. Wilson, and he to N. C. Fassett, Fred Thwaites, Wm. H. Twenhofel, and others. My paleobotany training and the stimulation of research on fossil plants was from J. H. Hoskins, a professional F₁ generation of Mottier, Coulter, and C. J. Chamberlain in botany, and T. C. Chamberlain and Salisbury in geology. Jim Schopf was the real motivator for my expanding from paleobotany and palynology into coal geology and petrology; his mentors included John T. Buchholz and Gilbert H. Cady (the Cady coal thread continues!). K. E. Caster provided the greatest stimulation for my paleontological interests and application. Harold Wanless generated my interest in stratigraphy of the coal-bearing rocks. Long talks with Gordon Rittenhouse convinced me that sedimentary features of the rocks, as well as their lithologic characteristics, had a message. E. Lucy Braun, in her inimitable way, convinced me that ecological interpretation of living plants and animals could be applied with proper modifications to ancient biocoenoses and in some cases to thanatocoenoses. The list could go on. It does not stop with those under whom I studied or with whom I worked. It is a certainty that ideas are gleaned from professional meetings and field trips, from casual conversations, from students, from colleagues in other fields of science and technology, from farmers and amateurs, from miners and dentists, from tombstone cutters and observant fishermen. They have supplied me—and you—and our predecessors—with specimens, localities, ideas, techniques, photographs, and even occasionally, money, to carry on research.

To whom do we give credit; and how is it possible to give credit? As I have told nearly all of my classes in geology, there is a story in every rock. We must employ every talent and the knowledge developed by our forebears as we study each rock or outcrop to bring out the bits and pieces of the story that each tells us of the time, the life, the space, and the energy it represents. Discipline, cultivation of powers of observation, knowledge of the literature, development of the ability to think, faithfulness in recording, perseverance, and absolute integrity of reporting will make us faithful to those who have led the way. I also tell my students to give

full credit to any who have contributed to their research—that such credit will not diminish them; it will enhance them.

With this I will close, with appreciation and credit to all those who have gone before, known and unknown, and who have brought me, and all whom I represent today, to this honor: to my

teachers, colleagues, especially to my students, and field, lab, and office assistants, and to you in the Geological Society of America and friends, and I must say, most of all, to my loving, understanding, patient, durable, persevering wife, Aleen, and children, who have been, at various times, my field assistants, lab preparators, ana-

lysts, curatorial assistants, draftsmen, photographers, "gophers," and sustainers. I am immensely proud, but humbled, by this signal honor of receiving the Gilbert H. Cady Award in Coal Geology, and the privilege to be recognized with the seven previous recipients.

Presentation of the E. B. Burwell, Jr., Memorial Award to Joseph I. Ziony

CITATION BY CHRISTOPHER C. MATHEWSON

Each year the Engineering Geology Division of the Geological Society of America honors, with the E. B. Burwell, Jr., Memorial Award, the author or authors of a published paper which advances knowledge concerning the principles or practice of engineering geology. This year's recipient, Dr. Joseph I. Ziony, is being honored for his scientific and editorial contributions to U.S. Geological Survey Professional Paper 1360 entitled *Evaluating earthquake hazards in the Los Angeles region—An earth science perspective*. Dr. Ziony organized and coordinated the preparation of the 505-page book, which contains 16 chapters contributed by 22 authors and describes the principal geologically controlled earthquake hazards, summarizes state-of-the-art methods for their evaluation and mapping, applies these methods to a postulated earthquake on the Newport-Inglewood fault zone, and discusses various hazard-reduction techniques for the Los Angeles region. Dr. Ziony was also the senior author of three chapters in this publication.

It is appropriate that Dr. Ziony be recognized for his earthquake studies in the Los Angeles region, because he was born in Los Angeles in 1935. He began his studies in geology at the University of Wisconsin in 1951, but transferred to the University of California at Los Angeles where he received his A.B., M.A., and Ph.D. degrees in 1956, 1959, and 1966, respectively. His Ph.D. dissertation work concentrated on the origins of systematic jointing in sedimentary rocks of the Monument Upwarp of southeastern Utah.

Dr. Ziony joined the U.S. Geological Survey upon graduation with his A.B. degree in 1957 and served as a research geologist and manager of scientific programs until 1986, when he retired. During his nearly 30-year career, he actively contributed to our knowledge through the

publication of nearly 60 papers on earthquake hazards and risk in the western United States, the geology and mineral resources of the Great Basin, and the mechanics of jointing in sedimentary rocks. His early years with the Survey included engineering geologic studies of foreign countries for the Military Geology Branch, geologic mapping and stratigraphic studies in western Utah for the Fuels Branch, and geologic and mineral resource studies in central Nevada for the Southwestern States Branch.

In 1969 he joined the Engineering Geology Branch and collaborated in the development of environmental geology maps for use in siting nuclear power plants. His analyses of stratigraphic and geomorphic evidence for late Cenozoic slip along faults, presented in a summary report (USGS MF-Map 585), classified faults in coastal southern California according to age and recency of surface rupture. This experience was applied to the development of a geologic rationale for delineating earthquake source zones for probabilistic seismic risk maps of Alaska, Washington, Oregon, California, and adjacent offshore regions during his assignment to the Branch of Earthquake Hazards in 1976–1977.

Following his second managerial assignment within the Survey, he returned to research on southern California in 1981 and resumed his investigations of late Quaternary fault slip characteristics with the Branch of Engineering Seismology and Geology. The primary goal of these investigations was to provide a regional assessment of the earthquake- and surface-faulting potential of these faults. This study resulted in his mobilization of others working in the region and culminated with the publication that he is being honored for today.

It is indeed a great honor for the Engineering Geology Division to recognize Dr. Joseph I. Ziony's contributions to the profession and to present him with the 1987 E. B. Burwell, Jr., Memorial Award.

RESPONSE BY JOSEPH I. ZIONY

I feel deeply privileged to have been selected as the 1987 recipient of the E. B. Burwell, Jr., Memorial Award.

Professional Paper 1360, which is being recognized today, represents the efforts of 22 researchers. My colleagues were geologists, seismologists, a civil engineer, and a land-use planner. It was a stimulating and rewarding experience to have worked with this talented group. Only those of you who have organized and edited similar books will appreciate the challenge of a joint venture between personalities having strongly held and divergent scientific opinions!

When the idea for the professional paper was first conceived, we had several goals in mind. One goal was to integrate the vast amount of geological and seismological data that had been accumulated on the earthquake hazards threatening the Los Angeles region. The book also was an opportunity to look carefully at the geologic factors that might control those hazards and to demonstrate several new predictive methods being developed by USGS scientists. In addition, we wanted to show how planners and engineers could use this earth-science information for reducing the hazards. Finally, we hoped that the concepts presented in the professional paper might be transferable to other earthquake-prone regions. Today's award is an unforeseen but pleasant bonus.

During the past 20 years, earthquake-hazards analysis has evolved from a seat-of-the-pants art into a mature and increasingly quantitative science. Some of the techniques described in Professional Paper 1360 are being routinely applied in the practice of engineering geology. A few have been incorporated in laws or codes regulating the development of land and facilities. Workshops that disseminate the latest geologic methods for evaluating earthquake hazards are becoming commonplace at professional meet-

1/21/87

Dr Al Travers
Diebe Bldg
Pennsylvania State Univ.
University Park, PA.

Dear Al:

The picture came out quite good for the conditions and haste of the day! Have fun with it!

I just had to go through the traumatic and physically demanding 2 weeks. My collections were moved to another building (basement); my office was moved to the same building (McDonel Hall) on 2nd floor; the preparation room had not been vacated (as yet a biological storeroom) so that part of the move to a different area of McDonel Hall was not completed; and I had to set up the microscope lab (with all my paleobotanical/palynologic reprints and main journals) in the basement of the Natural Science Bldg. I may get used to it but I find it exceedingly inconvenient. I still have 6 Ph D's to finish and 2 more M.S.'s. Most will finish this calendar year.

My best regards and best wishes to you and Betty.
Sincerely yours
(Arnold J. Cross)

THE PENNSYLVANIA STATE UNIVERSITY
DEPARTMENT OF GEOSCIENCES
PALYNOLOGICAL LABORATORIES
435 Deike Building
University Park, PA 16802
(814)863-3419 or (814)865-6393

27 January, 1987

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

Thanks very much for the slide (I plan to use it as an intro to some AASP paper). You did a good job with the photog!

Your move sounds terrible. If anybody can do it, ATC is the man! Of course, when I get near the end here there will be no facilities for me at all (unless I can figure something out between now and then, which seems increasingly unlikely). Funny thing is that the new "geological-systems" people they're hiring here are making noises resembling support for paleo!

We didn't get out seasonal greetings this year, largely because Betty's father's death on 22 November left us with many duties and distractions on top of the PSU obligations. (Her brother had an emergency operation and her mother a stroke the same week as the death, so it was wild! Dad's death, however, was not tragic. He had suffered enough.)

Best to you and Alene.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/et

3 July, 1986

Dr. Aureal T. Cross
Dept. of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

It really is bad that I missed both the dinner for you and the opportunity to have a letter for you for the bound volume of same. It has just been an impossible year for us. At the time of the dinner, for example, we were on the way back from Louisiana and a surprise wedding of our youngest. During April and May, when I should have been responding to Ralph Taggart's letter about the dinner, we were faced with other emergencies about family matters, and, of course, the various PSU duties also reached a crescendo, including three Ph.D. students defending their dissertations. Nevertheless, I should have found time to write a letter, but, darn it, I didn't.

I have now known you almost 40 years. I can hardly believe it is so long! You have been a good friend, and I have always followed your work with great interest. Betty and I will always remember our visit with you in Morgantown in Oct., 1951, with special fondness. She joins me in wishing you and Alene all the best for many years of health to enjoy continued work and play.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/et

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOLOGICAL SCIENCES

EAST LANSING • MICHIGAN • 48824-1115

24 March 1986

To the Friends and Colleagues of Aureal T. Cross:

Although it hardly seems possible, Aureal T. Cross will be retiring on September 1, 1986, after 25 years of service as Professor of Geological Sciences and Botany and Plant Pathology at Michigan State University. All of you know Aureal well and you might predict that such an event is one that he will not look forward to celebrating. Given his energy and capacity for work, retirement simply marks the opportunity to put aside mundane tasks and devote all his energy to continued research.

Although Aureal may wish to ignore this event, those of us who have worked with him over the years feel compelled to stage a modest gala to recognize his many professional and private contributions over an incredibly productive career. We do so not to note the end of his career but to mark a significant transition. To this end, we will be holding a dinner in recognition of his years of service to be held in the Ballroom at the University Club of Michigan State University on Friday, June 6th, 1986 at 6:00 PM. The cost of this dinner will be \$15.50 per person and spouses are obviously welcome. A cash bar will be available throughout the evening. Checks for dinner should be made payable to the M.S.U. Geology Club and mailed to me at the address below. The absolute deadline for setting up the dinner reservations is Wednesday, June 4, but earlier responses would be helpful.

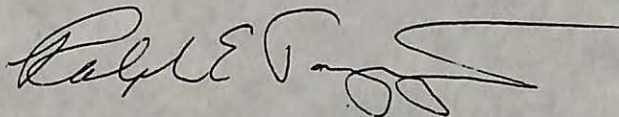
Not all of you will find it possible to attend such an affair but I would like to offer any of you a role to play in several ways. First, we plan to put together a bound copy of letters of recognition or commendation on this occasion and I invite any of you who wish to contribute a letter to send it to me for inclusion in the volume. If you would like to contribute a letter, please do not put it off as we will have to have all materials together if they are to be included in the copy to be presented at the dinner. I should have all such letters in hand by the middle of May to assure adequate time for binding. Since it is not possible to reach all individuals who might wish to honor Aureal in this fashion, feel free to pass on the invitation to others you know on the chance that we may have missed them in putting together our mailing list.

Another aspect of the evening will be an affectionate "roast" where we will recount stories and anecdotes covering various episodes in Aureal's career. All who have worked with Aureal in the field or laboratory have a story of such tales and I invite you to share them with me separately from any formal letters you may provide. Those of you with photographs or slides of events, memorable or otherwise, might also wish to send copies so that they might be shared that evening.

Up to this point, we have managed to keep these plans hidden from Aureal. It is probably unreasonable to think that we can maintain secrecy right up to the event but we will try. For that reason, I would ask you to treat this matter as confidential. Any correspondence should be directed to me at the address indicated below in order to minimize the chance that Aureal will get wind of what is going on. If you have any questions or suggestions regarding the evening, feel free to contact me by letter or telephone.

I look forward to hearing from you.

Sincerely,



Ralph E. Taggart, Professor
Department of Botany and Plant Pathology
Department of Geological Sciences

Mailing Address: 158 Plant Biology Building
Michigan State University
East Lansing, MI 48824

Phone: 517-353-5175 (Work) 517-676-1207 (Home)

14 March, 1986

Dr. Aureal T. Cross
Dept. of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

Most of the permission letters are perfunctory, so I enjoyed your fuller one of 5-III-86. Unfortunately, because Elsevier is the publisher, I also have to pay 10 for the privilege!

It is interesting to hear about Aleen's father and so forth. My mother is now in her 94th year and still running her own home (St. Joseph, MI), but that can't go on for ever. At the time you were writing me, we were in Indianapolis, moving Betty's mother to a single room from the small apt. she had--Dad Insley is now in the 'health center' and will clearly never emerge from it alive. The latest horror is that the whole complex was hit and badly damaged by a tornado last Monday and windows of Dad's room were blown in--he apparently was not hurt, and Mother's room (in a different building) was not damaged at all.

Your mentioning finances as a retiree hit a responsive chord with me. I get 2.4 times as much salary as I got when I came here in 1966, but the cost index is 4x that of 1966, so I have far less purchasing power than I did then--and the prospects for retirement seem bleak. I've talked with a couple of really old guys who retired 15 yrs. ago, who still come in, and they say it's very discouraging. Their pensions are based on pre-1970 salaries, and they're dead broke. They had hoped to travel in retirement, etc.--can't do it. However, I always had the image that ATC, with years of oil company employment and so long at MSU, would have it pretty well set up. Discouraging to hear that it isn't so. All my colleagues here either have 1) a working spouse, or 2) a large consulting practice to bridge the 'inflation gap'. Betty works full time for me but gets no pay.

All the best to you both and thanks for the great letter.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/et

PROPOSAL NO. EAR-8507977	INSTITUTION Michigan State University	PLEASE RETURN BY 03/11/85
PRINCIPAL INVESTIGATOR Aureal T. Cross		NSF PROGRAM PETROGENIS & MINERAL RESO
TITLE Palynology of Upper Cretaceous and Tertiary Strata of the San Juan Basin New Mexico and Colorado and Contiguous Areas		

Please evaluate this proposal using the criteria presented on the back of this review form. Continue on additional sheet(s) as necessary.

Aureal Cross is an excellent scientist whose contributions to coal petrology, paleobotany and palynology are mind-boggling. He is really a legend in his own time, still productive as he nears the beginning of his 70th(!) year. I don't know Dr. Jameson, but all indications are that he is a very capable fellow. The proposal is well put-together--characteristically of A.T. Cross, perhaps somewhat over-ambitious for the time-frame. Aureal always works hard and usually bites off at least as much as he can chew. The area of the proposed research is one that does indeed need more work. Michigan State's facilities are excellent. The budget is modest enough, considering that it will completely or almost completely support two persons. However, Michigan State should provide the PC from overhead money--NSF has convinced me of that!

Now that all that is said, I would like to raise what seems to me fatal objections. Is it appropriate for a man who will be retired and presumably drawing a pension, plus a man who already has a Ph.D. and could be employed independently somewhere to be supported by NSF money so desperately needed to support graduate student research at other institutions? Why could not Professor Cross request only supplies and travel money? Another matter that is disquieting: can Michigan State be counted on to continue de facto support of Cross' establishment after his retirement? Is there a commitment at MSU to continuation of a program in paleopalynology? If NSF funds this project, would it tend to force MSU to maintain the program? It's all rather worrisome and in view of Cross' age and impending retirement, a questionable use of the meager funds of NSF for geological programs.

My rating of "very good" is based on the scientific merits and the talents of the proposer. The appropriate panel should be governed at least in part, however, by what is good for the whole community.

OVERALL RATING: EXCELLENT VERY GOOD GOOD FAIR POOR

REVIEWER'S SIGNATURE	REVIEWER'S NAME (TYPED) Alfred Traverse
----------------------	---

OTHER SUGGESTED REVIEWERS (OPTIONAL)	Dr. Alfred Traverse Department of Geosciences Pennsylvania State University
--------------------------------------	--

REVIEWER'S COPY

Dec. 84

Al Travers

Dear Al:

This reminded me of our conversation with one of my non-religious former student (Jim Anderson, U. of Alaska) at Calgary. 'Innocence can be so real.'

PEANUTS
by Schulz



State News - E. Lansing MI. 10/29/84 p. 13

P.S. I am going to India to give the Seward Memorial lecture at Acharya Institute and will stay on a couple of months on some research & other lectures in India. This is Not the best time to go for Nord Americans!

Best regards for a wonderful Christmas Season to you and your family.

Arneek
Arneek Travers

1 March, 1978

Dr. Aureal T. Cross
Dept. of Geology
Michigan State University
East Lansing, MI 48824

Dear Aureal:

Thanks for your letter of 22 February. I am turning over the stuff about the Catalog to the appropriate office, as I have had no connection with CFSP for at least a year, I think probably longer. The reasons why I dropped my relationship with that project I would be glad to discuss with you privately some day. The long and the short of it is that I was expected to produce results but without any real authority to effect policy. By the way, I don't recall that you were dropped from "assistant editor" status. As far as I remember, you were a member of the editorial board, and it was my decision when I came here to restrict the board to a very limited number of people who were able to find time to work hard and long at finding the many errors that existed in the copy of the completed catalog volumes. You were not the only one dropped, as you can find out easily by comparing the list of people in Volume 24 when I arrived here with that in Volume 40 when I left. It's the sort of job which does get to you, and I think it was wise to get new blood on the board and work them until they were sick of it and then put somebody else on. I realized at the time that you were slightly burned, but I am sure you really understood and perhaps approved my policy of having a working board rather than an honorary one. What Spackman will now do with the Catalog ~~now~~ I have no idea, but I am very aware that they have done nothing at all during the year I have been away from it. I noticed that they were typing the index sheets for Volume 41 the other day. Heavens to Betsy, I did the editorial work on that thing close to two years ago!

It was delightful to hear about your side of things with reference to the Conference in India. I had hoped to be there and was scheduled to give a couple of papers, as you know. However, I was not funded by the NSF until about two days before I would have had to leave, that is to say just before Christmas. By that time, I had long since decided that it was down the drain and had cancelled all

Cross, pg. 2

plans. I honestly believe at this point that it was fortuitous that I did not go. One way or another, I might very well have made an ass of myself or come apart emotionally. I didn't need to be a part of that Bharadwaj-Hughes fight at all. As far as I know, I was not really Hughes' candidate. Indeed, I was nominated by the ICP Council following two mail ballots. Inasmuch as I was not able to make it to Lucknow, I didn't really expect to be elected ICP President, and some of my friends here (including my wife) would have been delighted if that's the way it had turned out. It has already been an immense amount of work. Some of the news you gave me in your letter were items I had not previously heard, and I think I will stick your letter in the ICP files for future reference.

Very interested to hear about your graduate student program. You obviously are worked harder than I am by your university. That is good because, as you can see by the enclosure, I could hardly find time for much more! Best wishes to you and Alene.

Yours very truly,

Alfred Traverse
Professor of Palynology
President, ICP

AT/et
encl: copy of news clipping

February 22, 1978

Dr. Alfred Traverse
Dept of Geosciences
529 Dieke Bldg. Pennsylvania State University
University Park, Pa. 16802

Dear Al:

Under separate cover I am returning 1 copy each of Index Vols 11-20 and Vols 31-40. I need only one copy of each to go with my two sets of the Catalog.

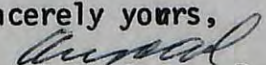
A check for the other copy of the Index to 31-40 is enclosed.

Our paths have not crossed since I was dropped from the assistant editor status prior to the publication of volume 40. I thought I would see you in India. There, as you may have heard, was some unfortunate bickering and division among the palynologists at the "high-handed" operation of the governing board. Bharadwaj' attack on Hughes publicly was uncalled for but Hughes took it graciously. Bharadwaj showed-up at the field trip later (he was supposed to have led it but at the last minute he "found other things that required his presence") and acted as if nothing had happened. Following the meeting at which the outburst occurred, Surange and Lele called upon me rather formally that evening and "thanked me for restoring order and peace to the meeting" and asked on what basis I could "forgive" Bharadwaj and what they should require of him in the way of apology. I just told them to have Bharadwaj write a letter of apology to Hughes and an official one from them and then forget the matter. You were castigated only because you were "Hughes" nominee (actually an action of the governing body and a "vote"). and not there. Some of the Russian delegation did walk out when Hughes insisted on speaking from the podium following Bharadwaj' attack.

I have several graduate students finishing up this year and am expecting several more to enter next fall. My course load has dropped to four or five classes a year plus one seminar per term (as compared with 6 per year for the last 6 years). I have also been giving special short courses on the geology of coal and associated rocks for the U.S. Geol. Surv. Conservation Div. and the Bur. of Land Management. We have a few attending from the U.S. Bur. Mines and the Bur. of Reclamation. Some of those are 20 lectures in a week; others are two days field and three days lecture.

Perhaps we will again meet at one of the conventions this year. In the meantime, my best regards,

Sincerely yours,


Aureal T. Cross, Professor.

XXXXX
865-2342

Sept 11, 1978

7 September, 1977

Dr. Aureal Cross
Department of Geology
Michigan State University
East Lansing, MI 48823

Dear Aureal:

Long time--no contact! I do enjoy seeing references to your work in various bibliographies, etc.

I heard at a thesis defense recently about a paper in which you or a student of yours showed that some rocks in the Michigan Basin are Jurassic in age. I cannot seem to find reference to this in my files, though I suppose I once had it. Could you let me have the literature reference, please?

Hope all goes well with you. I hear about you indirectly from time to time. Best wishes.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/et

May 13, 1975

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thank you for the copy of the letter to John Stolar. The history of this is that he took my course in palynology during the winter term, and for his term project I gave him a piece which I whacked off of a Cordaites fossil that I collected with Chester Arnold a quarter of a century ago from the Grand Ledge Clay Products quarry. Then this term he decided to take my problems in palynology course, and I suggested that he build on what he had last term by working up the rather incomplete section I collected that day, including the coals, overburden, etc. He got so interested he thought it might make the basis for the required thesis in the program in which he is enrolled--a doctor of education with a speciality in earth science (he is now a Ph.D. candidate, and the thesis requirement is really hardly more than a paper). It certainly is a beautiful flora, and I thought that if no one else was working on it it might be suitable for his purposes. I guess under the circumstances we had better leave it alone?

I am leaving in about a week for the Black Sea as on-board palynologist on the Glomar Challenger. It certainly seems like an exciting adventure, and I can only hope that something will come out of it palynologically speaking.

Best wishes to you and yours from "Happy Valley"!

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/vsi

*Al: I thought perhaps you should know of
this correspondence manual*

April 25, 1975

Mr. John Stolar
7-D Graduate Circle
University Park, Pennsylvania 16802

Dear Mr. Stolar:

Your letter of April 4 was on my desk when I returned here from a field trip to Texas, working with a student who is making a Ph.D. study on the Navarro pollen and spores of Texas.

I was suprised to learn that you are concerned with or interested in studying the Grand Ledge cyclothem just west of Lansing here, and I guess what I should tell you is that we have a rather extensive study of this now essentially completed and it includes not only an analysis of the pollen and spores in several of the strata of coal which are found in this deposit and in a comparable deposit to the southwest of Lansing (Erickson Power Plant), but it also includes a study of the spores and pollen in the various sediments intercalated between the coals. This study was begun several years ago by a doctoral student, Mr. David Ennis, and following his departure from here (insufficient financial support and a family to take care of) we kept the problem open for him for several years until we determined that he would definitely not be coming back to complete it. Then when the Erickson Power Plant material became available, I started in on the problem myself and prepared a report which has been largely dedicated to the description of a number of fossil woods from that locality and a comparison of them with the Grand Ledge coal bearing sequences. Then we also have carried on a rather extensive study of some of the fossil leaves, particularly Megalopteris, a manuscript which is now awaiting publication.

The description of some of these pollen and spores has no particular priority, but they compare very favorably with lower middle Illinois Basin coal spores. We have also compared this material with a little bit of material from the Williamston area.

Therefore, I cannot encourage you to continue on with this as a thesis of unique or original work, because though unless you are nearly finished with it, I am certain that some of this material that I have just been discussing will be prepared for or perhaps in publication within a year or so.

I do not have any unusual or specific reprints other than those which you are probably aware of, such as Bartlett, 1928, Arnold (3 papers) and Venkatachala 1971, concerning the Pennsylvanian spores and pollen of this area.

Sincerely yours,

ATC
Aureal T. Cross
Professor

File
ATC:dmr

cc: Dr. Alfred Trautvater

February 4, 1975

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thanks for yours of 27 January. It was very interesting reading. As you say, you read into my letter more than was intended. I certainly did not mean to slight your accomplishments, of which I am very well aware, but your letter makes it clearer than I could have that you are already overworked and have a heck of a lot of irons in the fire. The question was and is--aren't you too busy for Catalog review? God knows you work hard--that is precisely the problem that I was raising. I do believe we should get somebody whose time is less committed if we can find someone who will do it.

The information about Dr. Logo was interesting, but I hasten to say I have nothing at all to do with the peat work at Penn State.

Best wishes as always.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/vsi
cc W. Spackman

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF GEOLOGY

EAST LANSING · MICHIGAN · 48824

January 27, 1975

Dr. Alfred Traverse
Professor of Palynology
Dieke Building
Pennsylvania State University
University Park, Pennsylvania 16802

Dear Al:

Your letter of January 10 arrived today (January 16) and I hasten to reply.

You didn't hear from me regarding Volume 39, a proof copy of which I received October 17. I recognize three months is too long for anyone to take to make a review. However, inasmuch as I've had no notice of the time of the manuscript for Volume 39 prior to its receipt, there was no possible way I could plan for the several days of work which it requires until after it arrived. After it arrived I was in the midst at that time of proofreading the manuscripts (16) for a special volume for the Journal, "Review of Paleobotany and Palynology" and 7 manuscripts on Coal Resources and Research in Latin America for a GSA special paper.

I was also teaching two courses of regular classwork and two graduate problems plus directing 13 theses for Ph.D. students and one Masters. When the semester ended December 15, I had to direct my energy and interest to the preparation for the wedding of my oldest daughter for December 21 and since all of my children came home for the holidays and for the wedding, I had no further time to work until December 27. I worked steadily on the other manuscripts from December 27 until school started January 2. During the registration week I found about 15 hours to work on the Volume 39. The following week I spent three days in Waterloo, Ontario and Toronto arranging the joint meeting of the Geological Society of America North-Central Section with the Geological Association of Canada, the Mineralogical Association of Canada and other groups. So this past 5 days I have practically finished the Volume 39 review.

I don't know that had I received a notice a month or 6 weeks before the volume would have been ready that I could have allocated my time in a better fashion, but I certainly would have been able to handle the volume better toward the end of the summer than I was after school started in the fall term, having already committed myself to several other editorial jobs on top of my regular work.

Dr. Alfred Traverse
January 27, 1975
Page 2

So much for explaining why I was so late in looking over Volume 39. Since it has gone to press, of course this is time wasted. I have looked over with reasonable care and sometimes with extreme care nearly every volume to date prior its going to press. I have made many suggestions, and I have found many errors in various volumes. Some of the suggestions I have made have had to do with principles such as the pagination, which was ultimately changed as recommended. Some of the suggestions I have made had to do with clarification of arrangements or comments. Some of them were simply errors of one sort or another. I suspect that the time has probably come for me to quit doing this. I think that your letter indicates you would rather have someone else probably from a foreign country doing it. It was my understanding that Chaloner was added several years ago to supplement the work that Schopf and Kosanke and I were doing as an Editorial Committee. Kosanke is certainly working full time in palynology besides his administrative duties. Schopf and Chaloner are neither one doing as much in palynology as I am doing, but they are doing more in regular paleobotany than I have been getting published. Since coming here I have had 18 doctoral theses, only one of which has been on megascopic paleobotany and 2 of which have been on Pleistocene palynology. Work in the Baja Peninsula has run the entire range of the palynology of Upper Cretaceous to Pliocene and there will be several major papers on this in the very near future. In addition we have done palynology on the Sucker Creek Formation of western Oregon and a paper is in press in Geology on this at the present time. Further we have an extensive amount of work going on in the Utah area and at least 2 unfinished theses at the present time and 2 that are under publication. Therefore, my activity in palynology is, in spite of your inference, extensive.

Therefore, I am agreeing with you that if you wish to replace me, you are certainly at liberty to do so, and I will certainly find other valuable uses for my time. I have considered the Catalog a very important resource for palynologists around the world. I have been a promoter of it, both from the financial aspects, when I was with the company, to the editorial aspects when I was with the company and later here at Michigan State. I would still expect to promote it though I think that the rate of publication is much too slow to ever completely catch up. This is probably the biggest argument that I have had with a number of people over the value of the Catalog, but I still think it is something that is highly desirable to be on every major reference shelf.

There is always a problem in determining what a man's capabilities are when you ask him to do something. Time is one of the limiting factors that cannot really be judged from a distance or unless you are in his

Dr. Alfred Traverse
January 27, 1975
Page 3

place of business and see how he operates. It is certainly one thing to be an editor of such a thing as the Catalog and give it a quick once over which even takes several hours or to give it a rather thorough perusal or reading for errors of various sorts of both substance and typography. No reader is going to cover this kind of material in less than several days of concentrated work. Each is somewhat like looking at a thesis, and I often spend as much as 200 hours on a thesis. The ones that I haven't spent as much time on show it.

Somehow it seems as though the credit for working is only accorded to those who have their names in first place on a major publication. There are many publications coming out on palynology which are drivel or little more than notes. Some of them are simply repetitive exercises illustrating and describing another flora very little different from one that has preceded it or several that have preceded it. Details must be filled, but there also have to be some of those who are developing both new principles and new ideas for potential use and application. You cannot possibly measure the contribution of any palynologist on the basis of the number of titles. Some like you or me who are directing graduate research are also putting a considerable amount of your own talent out through the minds, the words, or the pens of your students. This is as it should be. Each of us has to make a decision as to where his work and capabilities can best be invested. A part of my investment has been in the Catalog and a considerable portion of my time has been in my students. I could slight my students and take much less time with them both while they're developing their ideas and writing their theses and in correcting their theses. The same is true of editing journals and papers. Whenever one is sent to me, I edit it with a very great deal of care. No one is slighted. Manuscripts sent to me or proposals to NSF or other similar types of work are all handled with the utmost care and professional integrity, and I can't do it any other way.

Finally then, if the time has come for me to be replaced, you will have to do so. I would have not resigned previously because I have felt it somewhat of a duty to give services of this sort in this area for something I have so firmly promoted and believed in as the value of the Catalog. I do not need additional work, but I will not shun it if I feel it my responsibility. If you know of others who want to do it and will do a good job, that certainly might be an advantage to me.

Perhaps I've read more into the letter than you've actually intended, but I have received similar letters from Sergius Mamay and others who for some reason have not really looked into the amount or type

Dr. Alfred Traverse
January 27, 1975
Page 4

of work which I have been doing. Though my titles have not been extensive in the past 10 years, my reports at meetings have been on a wide array of subjects with some fairly new ideas being developed in several areas, and somehow I feel that inferences of inactivity have not been carefully drawn by those who have made them.

One additional note before I terminate this "epistle" which may be of interest to you and certainly to Bill (Spackman). Dr. Ariel Logo, Assistant Secretary of Science and Technology, Department of Natural Resources of Puerto Rico was here this past week and gave a most interesting seminar on Mangrove Ecology. He has done a good deal of work very similar to that which you have been conducting in the Everglades and to some extent the Okefenokee Swamp area. He has many analyses which point out the biomass production and deterioration, the effect of storms, the effect of salt, and the requirement of salt in the soil and a number of other aspects. I have recommended that he get in touch with you and I think you might find it profitable to be in touch with him. He has done some work on one of the rivers just a little to the northwest of the Shark in southern Florida as well as his work in Puerto Rico.

With best regards to you and those at Penn State,

Sincerely yours,



Aureal T. Cross
Professor

ATC/ss

cc: Professor W. Spackman

January 10, 1975

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

We didn't hear from you regarding Volume 39, of which we sent you a proof copy several months ago. The volume has now gone to press. As you know, I changed the policy on the editorial board soon after I came here, from a large, loosely organized committee to a (we hope) small, very active editorial board. I am wondering if the time has now come for us mutually to consider whether it might not be best if we were to replace you on the board with one of the people (probably not in the U.S.) who is very actively working in this area of research. I don't want to do this unilaterally, but if you were to agree that it would be a good move, and had any suggestions as to a possible "young Turk" I would be most interested. What we need is somebody who has the time to read the proof copies of the Catalog using the proverbial fine-tooth comb, something very few members of the present committee are doing.

Hoping that you are all right, with best wishes for 1975, and looking forward to hearing from you as to a nomination of a new person for the committee (from anywhere in the world).

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/vsi
cc W. Spackman
H.T. Ames

October 7, 1974

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we are sending you a "proof" copy of Volume 39 of the Catalog of Fossil Spores and Pollen. Will you follow previous procedures by sending us back pages which you feel need corrections, along with an explanatory letter? We would very much like to have your critique by mid-November.

You may have been wondering what has been happening with Volume 38. It came back from the printers about six months ago, but we have been unable to obtain the binders from the General Binding Corporation despite pleas, threats, and prayers. The current lie is that they will be delivered on 9 October. Once we get this order filled, we are taking our business elsewhere.

Looking forward to hearing from you about Volume 39 as soon as possible, and with best wishes, I am

Yours very truly,

Alfred Traverse
Editor

AT/vsi

August 1, 1974

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Sometime ago in connection with editing one of the volumes of the Catalog you sent me a xerox copy of the title page of Ibrahim, 1933 (the dissertation deal). What are the chances you'd be willing to lend for a matter of a week or so your copy of this? I would promise to get it back to you within a matter of days.

All goes well here. You should be receiving Volume 39 for review within a couple of weeks. We have, however, hit a snag on distribution of Volume 38 which was delivered to us in May. The problem is that we have no binders for it, and do not seem to be able to extract the binders from General Binding Corporation.

Best wishes as always.

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/vsi

February 15, 1974

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Enclosed are the items which I mentioned over the phone that I was going to send you in the hope that you could spend a little time (I really mean a little time--I don't want to increase your burdens) on them, with the hope that I might be able to recast the proposal so as to get some funding and allow this work to go forward. There are some criticisms of fact in the NSF letter which I think are wrong, and you might be willing to say something about that, but I suppose what I mostly need is advice on how to "beef up" the proposal itself.

Thanking you in advance for your help and with continued best wishes, I am

Yours very truly,

Alfred Traverse
Professor of Palynology

AT/vsi
Enclosures

P.S. I suppose that it is obvious that the poor xerox of a reprint-looking affair is a copy of the galley proof of the little preliminary paper on the single Black Sea core. The letter from Wright is to substantiate that there were those who thought this was important in the first place.

December 13, 1973

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Tate and I are currently working on a series of "Supplementary Volumes" which will provide new combinations, new names, and other tads of nomenclatural information from the papers covered in volumes 1-30--before we begin covering such data.

There is one very thorny problem we have already encountered on which we badly need your advice before we proceed: many genera have been based on species which were originally attributed by Potonié to the genus Pollenites. Tate and I have so far been unable to discover any proof that Pollenites was ever validly published. If it was invalidly published, under the rules none of the species attributed to it were validly published either. As you can imagine, this plays hob with many generic names published by Thomson & Pflug and others.

Will you please let us have the benefit of your counsel as soon as possible so we know how to proceed. Do you have information that Pollenites was validly published? If so, by whom and where?

Looking forward to getting your advice, I am

Yours very truly,

Alfred Traverse
Professor of Geology & Biology
Editor, Catalog of Fossil Spores & Pollen

AT/vsi

December 11, 1973

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thank you so much for the work you did on volume 38. We especially appreciate the fine comments about the general difficulties of the problem and what we have done with them.

Regarding the availability of Malyavkina, 1949, this is a problem which George Hart raised with me sometime ago. As far as I can tell the book was sufficiently distributed to count as effectively published. You can borrow a copy of it from the U.S. Geological Survey library in Washington. Failing that, you could borrow my copy to make a xerox if you wanted it or we could make a copy for you at cost (which is unfortunately 5¢ a page on our machine).

Specific comments follow: regarding "Embensk district" and "Emba area", the problem is that these are two slightly different things. "Embensk district" is a direct translation of the words which appear in Malyavkina's production on p. 6. In the locations given in the captions to the figures and elsewhere, Malyavkina uses just the word "Emba", but it is apparent that she means more than just the town of "Emba", so we have said "Emba area". I hope this makes it clear what goes on. The transliteration which we have used for place names is throughout the Library of Congress, as I believe has been explained in a previous Compiler's Preface. I suppose a complete list of the names in both Latin characters and Cyrillic might be useful, but I think we will not add one at this point.

We are very happy you picked up the "1973" in the Compiler's Preface. This will of course have to be changed to 1974 and has been done.

We have dropped out the "a or b" business which confused you and added substitute wording which we hope will be satisfactory. We have not changed the position of the paragraph in which that occurred, however, because we thought that this little explanation really belonged at the very end rather than with the description of the type localities which came from Malyavkina's;introduction. We appreciate the comments about the spacing and how we could have saved a couple of pages here and there. However, it would now require repaginating, etc., with the danger of introducing further errors, and we think it would be not worth the trouble. However, it's a good suggestion and we will try to remember it in the future. We have made some of the changes which you recommended in the Nomenclatural Comment on Acuminella but not all of them. For example, the one sentence which you said you couldn't understand, we cannot see is that difficult and have left it. I hope you won't mind. We certainly do appreciate calling these things to our attention, and a good share of them we accept, particularly if they agree with what another reviewer says.

We have changed the wording of "Middle Urals" wherever it occurs to "Central Urals" per your comments on p. 38-19.

We have corrected the mistakes you noticed in the nomenclatural comment on Aliferina.

Your comment on p. 138 regarding intention was rather disturbing to us. We have always assumed that Article 34 of the Code covers this situation and that a clearly worded disclaimer in the Compiler's Preface or on the page concerned is sufficient to make it clear that we are not validating anything which we cover. We were, however, so shaken by your comment that we immediately dashed off a letter to the Oracle of Utrecht (Frans Stafleu) and will await word from him.

Regarding your comment on p. 79, we agree that it is unfortunate that Bullulina media becomes the type, but there isn't much we can do about it.

Regarding the broken letter which you picked up on p. 148--we would normally have a footnote about this, but it would cause problems on p. 149 to add one at this point, and we have decided to pass. I guess it isn't as bad as it might be since the same word appears correctly spelled immediately ahead of the mistake.

Regarding your comment on p. 149 and the way we handle the phrase "type species of the generic name..."--I think your point is quite well taken, but we have an awful lot of inertia of motion going for us. The way we did it is the way we have been doing it for so long that it would probably make for confusion to change now.

Your observation about Jurea is most interesting--in case you don't remember, that it might be a Eucommidites--you could perhaps be right, but I don't suppose anybody will ever know.

In the Index the problem with Pinojello was that we had the page number wrong. It was referred to on p. 139. We are deeply grateful to you for picking up that sort of mistake, which is embarrassing when it gets into print and besides that is not helpful to the reader.

We have agreed with your point on p. 164 and have made the appropriate change in the handling of the epithet "spinosus".

Have a wonderful holiday season with your family (or what remains of them at home!) and thank you again for your most helpful comments.

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

Dec. 2, 1973

Dr. Alfred Traverse, Editor
Catalog of Fossil Spores and Pollen
Dieke Bldg.
Pennsylvania State University
University Park Pa. 16801

Dear Al:

Here are my comments on the Volume 38. This was a tough one. First of all I think you guys ~~are~~ have done an excellent job of putting this together and analyzing the various problems. There may be some static but if the Catalog is to be useful I think the comments could be increased if anything -- not reduced or deleted. (agreed)


Trying to figure out the Russian is not easy for me. I think I told you that I have only enough ability to try to read captions and the like but I can do nothing with the texts. Transliteration of a number of the words (stratigraphic, morphologic, etc. are often confusing) is so different from one author to another that it is often very confusing.

I do not have a copy of the original paper. Was this ever made available either in original or in translation? I sure would like to get a copy. This has been particularly interesting to me as it deals with a number of species (and genera) which have been the subject of our work on the Upper Cretaceous of the Rocky Mountains and the Jurassic of Michigan and Iowa. (USGS)

I am sorry to be so slow. I have put in about 40 hours on this -- even though it may not show!

My best regards to you and Tate (and to Bill Spackman) for the Season (copy mine)

Sincerely yours,


Aureal T. Cross

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

March 10, 1973

Dr. Alfred Traverse
Professor of Geology and Biology
Catalog of Fossil Spores and pollen
Dieke Bldg
Pennsylvania State University
University Park, Pa. 16802

Dear Al:

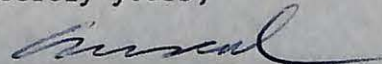
Your interesting problem concerning Malyavkina's use of Greek letters as a sort of prefix to infraspecific entities has been thought about and discussed here.

I agree with Stafleu and with your decision to drop the Greek letter as part of the name, i.e., as a prefix to the infraspecific epithets. There is no useful purpose served by the Greek letter designations and they are no more a part of the name than if a number had been used. Certainly there would be no justification for changing these letters to spelled-out romanized equivalents. Alpha would be the inferred equivalent of Variety No. 1; Beta, of Variety 2, etc., no more and no less. I think there is, aside from this, a taxonomic problem in her basis for assignment of forms as distinguished from varieties, but that is for someone else to deal with in accepting or rejecting these subspecific assignments and their epithets.

This was a busy term; I had one full scheduled introductory course and one advanced seminar which kept me hopping. I have three overdue manuscripts which are about to put me under.

My best regards to you and Tate.

Sincerely yours,



Aureal T. Cross, Professor

January 4, 1973

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thank you so much for your comments on Volume 37. We have now gone over all comments and I offer the following reaction to your various corrections:

- p. 1. You are quite right about the slipped information. Here it simply came unglued.
- p. 4. Same thing is true here as mentioned above--we must get better glue!
- p. 6. The broken line business which you noticed on the left hand margin of the pages is simply a product of the reference tab slips contacting the marginal line of our format cards. None of this appears in the final form.
- p. 27. Misspelling of *atilis* has been changed.
- p. 28. Same comment as the previous one about the line at the left hand side of these pages. That appears only on the format card and will not be in the printed version.
- p. 110. We wrestled long and hard about your statement that the authorship of the genera should be included at the top of this Nomenclatural Comment and finally decided that it is okay for it not to be given because paragraph 1 on the page explains the situation in some detail. In the second paragraph there is no exact date given for the publication of the paper by Bharadwaj because the folks at the Sahni Institute were not able to provide one, and we felt that we had reached the end of the line. In the fourth paragraph of this page we have changed the wording which we think will satisfy your cogent objection.

- p. 209. We agree that the introduction of the material from Jansonius is a little confusing because of the length of the insertion, but actually it is exactly what we have always done in other similar cases, and the situation is explained in a footnote. We did not provide detailed information about Pocock's emendation because we did not consider it a "primary" emendation. We did include Jansonius' diagnosis because some, especially Potonié, have regarded it as the "primary emendation". Some even regard it as Jansonius' genus.
- p. 211. We have corrected the word name to epithet as you suggested. We have corrected the spelling of Bolkhovitina. However, we have decided not to break paragraph 2 into two paragraphs because we think the whole of the second paragraph deals with emendation.

Bibliography: Bhardwaj was the correct spelling of the gent's name until 1962. Sometime I will regail you with all of the circumstances surrounding this change of orthography in case you don't know them. The difficulty is that you must be very careful to remember that the name's spelling changes. I certainly was grateful for your picking up the missed word in the paper by Tschudy and Kosanke.

Thanks again for all your help with this volume. I hope we will be able to count on similar assistance for a very long time in the future. Best wishes to you and your family for a pappy 1973.

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

October 6, 1972

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we have sent you the usual "proof" copy of Volume 37 of the *Catalog of Fossil Spores and Pollen*. The only thing which is unfortunately different about this volume in "proof" is that we inadvertently neglected to paginate the main body of the volume before making the xerox copies. However, the page numbers do appear penciled in in the upper right hand corner of the pages. In a few instances these penciled numbers are faint, but I believe there will be no difficulty in determining which page is which.

As previously, I suggest that the way to handle your review is to return the pages on which you have comments with red pencil indication of the corrections.

We would like to have your comments returned by 1 December.

Best wishes to you from all of the Catalog staff.

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

September 15, 1972

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thank you for yours of 28 August and the further comments regarding Ibrahim, along with the xerox pages. I am now convinced that you are right regarding page 48! I have changed my permanent card accordingly, and it will be corrected in future usages. It is interesting that Potonié usually refers to it as having 46 pages, apparently throwing both pages 47 and 48 which contained biographic material. You are also undoubtedly right that the dissertation should bear only the initial A for Ibrahim, not A.C. (The thought has occurred to me, by the way, that Ahmedjan is really the same thing as Ahmet Can.) I really do think it is too confusing to carry him with different initials and, at least for the moment, I have decided to carry him as A.C. throughout, even though I recognize that for the 1933 dissertation this is not strictly speaking correct. Man, can things get complicated!

Looking forward to seeing you in Morgantown, I am

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

August 28, 1972

Dr. Alfred Traverse
Professor of Geology and Biology
Editor, Catalog of Fossil Spores and Pollen
Deike Building
Pennsylvania State University
University Park, Pennsylvania 16802

Dear Al:

Thank you for your letter of August 4 and I am replying because of the comments which I made on Ibrahim and his original thesis. Actually, I have copied here for you the title page of the thesis and the page including the table of contents (unnumbered page before page 1). Then in sequence as they came to me from the Library of Congress where my photocopy came from, I have pages 46-47 unnumbered page of the explanation of plates which followed that immediately (Tafelerklärung) and then page 48 and Plate 1 which apparently were opposite each other. Then, of course, there were plates 2 through 8 and following Plate 8 is a chart showing the ranges of the principal palynomorphs. This appears to be the last page and is also unnumbered. You will note on the title page the spelling of Ibrahim's first name as Ahmedjan. On the top of page 48 under "Lebenslauf" you see his summary of his life commencing "Ich, Achmedjan Ibrahim, wurde, etc." At the bottom of the page under Adresse: is the name Ahmet Can Ibrahim. There is no question but that index of the original thesis would carry the single name or initial Ahmedjan or some other transliteration of it. Later papers by Ibrahim may indeed have a different name and, of course, the name of his wife's family - Okay - was added at a somewhat later time. I remember Dijkstra told me about the addition of this name back in 1951 when I visited his lab. So I guess a person working with a catalog or bibliography really has a time in deciding what to use, but certainly the original thesis has one name and one initial. Perhaps sometime, if you have time, you might write him and find out what the deal is.

I am sorry my other letter was late in arriving although I dictated it the same evening that I talked to you. Dictated letters are usually typed rather quickly but there is probably at least a two day lag from the time I dictate them till the time I have them ready to sign; occasionally it's longer.

I hope this information will be of some value to you later if not now.

Best wishes.

Sincerely yours,



Aureal T. Cross
Professor

August 4, 1972

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

We were holding the presses, as it were, for your comments so when your most welcomed telephone call came the other night we proceeded with putting Volume 36 to bed immediately without waiting for your letter (which has still not come!).

We were very happy to have your useful comments and they have been treated as follows: we were saved the embarrassment of saying that we covered seven papers when we covered only four, we have changed the "genera covered" statement to something that I hope you will find acceptable. However, we decided that the statement about sub-genera, etc., on the next page could stand as is, because the reader will understand that the subheading has the same meaning as the major head. We were glad that you caught the mistake regarding van der Brelie on page 36-260. When we get your letter, if it indicates a still further page, there will still be time to fix that up as well. We have really been over the humps regarding Ibrahim. I enclose a xerox copy of a recent paper which seems to indicate that he does regard C. as a middle initial. However, you are quite right about his handling of the middle name in earlier papers. It's really a very perplexing business. Another problem is that we can find no evidence that the numbered pages in the Ibrahim paper which we quoted should be 48, as my note seems to say that you stated over the phone. We find only 47, and we notice that others (such as Potonie, Schopf, S.W.B.), etc.) also state 47. I am a little mystified at the moment, but I guess we will stick to 47 until somebody can show us that we really are wrong. You were certainly right about the Gladkova reference. That would have been very embarrassing if it had remained that way. In the course of checking it out I discovered a very interesting fact which is that Neustadt's usually 100% complete bibliography of Russian palynological papers does not list the contribution in question for 1950. What do you make of that? We have noted your suggestion regarding handling of Hedlund's

Dr. Aureal T. Cross

-2-

August 4, 1972

paper in two columns and will keep it in mind for future reference.

Most of all, Tate and I are extremely grateful to you for closely eyeballing the volume. It is your help and that of the other members of the Editorial Committee which make this job of ours possible. I always hate to get the letters which we get from certain members of the Committee time and again that they have read the thing through carefully and compliment us on our work and state that they were unable to find any mistakes. I suppose we should feel pleased that it looks so good, but the reaction I have is always one of dismay.

Looking forward to seeing you in September in Morgantown, I am with best wishes to you and your family

Yours very truly,

Alfred Traverse
Professor of Geology & Biology
Editor, Catalog of Fossil Spores & Pollen

AT/vsi

Enclosure: xerox copy of paper

DEPARTMENT OF GEOLOGY · NATURAL SCIENCE BUILDING

August 4, 1972

Dr. Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen
Dieke Building
Pennsylvania State University
University Park, Pennsylvania

Dear Al:

It was good to talk with you last night, and I'm sorry to be so late in making the review of Volume 36 of the Catalog.

My main suggestion would be that hereafter whenever there is a two-column format which you are reprinting or taking protologs from, such as Hedlund's paper, that these be printed in two-column format in the Catalog. It is clearly evident that at least nine pages could have been saved, and perhaps 12, had it been done, (e.g., 36-128-129, 36-130-131, possibly 36-134-135, 36-136-137, 36-138-139, possibly 36-140-141, probably 36-144-145, 36-148-149, 36-151-152, 36-153-154, 36-155-156.

A correction of significance on page 36-ii, line 2, where you have seven papers included, it should be four papers. Also, on the same page, the second heading is misleading. The second heading, "Genera Covered" is not accurate. Actually, what you mean is "New Genera Included Are:" The reasoning is that other genera are dealt with in the Catalog besides these nine. An inexperienced reader or even others may be confused, anticipating that here in this catalog you have covered the species of nine genera. Also, on the following page (page 36-iii more explanatory heading is desirable also for "Subgenera." A better heading would be "New Subgenera Included Are:" I recognize that these are clarified if one carefully reads paragraph two on page 36-ii, but on the other hand, this referral is unnecessary if the title or heading is made more clear.

I have two recommendations on "References from Publications." On page 267 Ibrahim has the initials A. C. Actually this may be so, and Dr. Potonie has cited this as Ibrahim, A. C., in some instances, but he has used only the A. in other instances. On the original dissertation title page, the name is Ahmedjan Ibrahim; on page 48 on the personal resume ("Lebenslauf") the write-up commences, "Ich, Achmedjan Ibrahim,--" which indicates, in both instances, that Ibrahim himself in writing this up has indicated that his name is one word, Ahmedjan or Achmedjan, and this difference in spelling

Dr. Alfred Traverse
Page 2
August 4, 1972

is probably simply a difficulty in transliteration from the way his Persian is into the German. However, at the bottom of the same page, (page 48) there is an address given as Ahmet Can Ibrahim, Dr. Ing., Berlin N. 4, et cetera. This, however, could very well have been put in by the editor or by one of his German colleagues at the time, so I don't know what the answer is, but I do know that when the man signs his name as one single word on his thesis and again in his write-up of his personal history or life, he probably means that he has one name. The Ahmet Can given in the address appears to me to be an editorial or some kind of an error again in transliteration of the word Ahmedjan. However, you can do what you wish about the initials, although I think A. C. is incorrect. You will also note that the actual pagination is incorrect as given. You have 47 pages; actually there are 48 numbered pages, and then two pages of explanation (unnumbered) of the plates, and then followed by eight plates (Tafel I-VIII) and this is followed by one chart on an unnumbered page, so these also should be given at any time a reference is cited because any one copying this from a library and ordering only 47 of 48 pages would miss all of the plates and the explanations of plates.

Another error is under Gladkova, page 266. The reference should be Gladkova, A.I., et al. The initials should, of course, be used under such a citation.

There is some inconsistency in the use of Brelie or von der Brelie. On page 36-260 Brelie should be von der Brelie in the sixth new combination given. Some other minor errors, page 259, next to the last line, Sphagnites should be capitalized. Page 260, the third name given, the basionym, should be Lygodium Bellum, page 30-46 for the capital CFSP reference. This has been omitted. On page 262 it seems to me that the ending of cavernosum would be correct for Lygodium cavernosus and that would be true for the next reference on page 262 referring to Lygodium cavernosus variety tuberculatus which should also be tuberculatum. Also, the page number for the CFSP reference for Lygodium cavernosum should be 30-48 instead of 30-49.

I hope these will be of some assistance to you. With best wishes.

Sincerely yours,



Aureal T. Cross
Professor

ATC:cs

July 20, 1972

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

If you have comments on the "proof" volume for Volume 36, will you please let us have them as soon as possible. Even though the original "deadline" has come and gone, anything that you might have to say about mistakes in the volume would be most welcome and helpful.

I hope that you are having a good time this summer and that I will see you before many more months have gone by. Regards to Alene and best wishes to you all.

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

March 1, 1972

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thank you so much for your extremely prompt handling of comments on volume 35. As usual, they were extremely helpful. I suppose it might be interesting to comment on them in detail:

p. 37-38. You were quite right about *M. trisina*, and we have made the necessary correction.

p. 38, etc. Regarding the style "type species of the generic name"--at first this was a bit jarring for me too, but it is apparently absolutely correct--it is the name which is being typified. I enclose a xerox copy of a letter from Stafleu which may be of interest in this regard.

pp. 50, etc. & pp. 35-249, etc. These comments did us a great deal of good. Regarding the pages which do not say "species name" at the top--most of those are explained by virtue of the fact that they happen to represent pages which will appear on the back of pages which do carry the correct notation at the top. However, we have no satisfactory explanation for the pages which say "species name" at the top where they should say "generic name". That was just a big mistake, and nobody noticed it except you. Not Traverse, Ames, Spackman, Dolsen, Chaloner, Kosanke, Schopf, or Kremp! Just goes to show why we need to have an editorial committee!

pp. 251. You're right about the name of the species being a binary combination, and we have made the appropriate change.

Regarding the pagination of the introductory pages to the appendix sections--I think you are right, but I hesitate to tackle renumbering in this volume. What we will do is commence numbering those pages with the next volume.

Thanks again for your extremely useful comments. I really count on you and the other members of the committee to give the "proof" volume a close eyeballing, and it is paying off!

I pass along a xerox of your letter to Spackman so that he'd have the information about Navale, and have also made a note about your temporary change of address. Hope you have a good time at USC.

Best wishes to all of you from us.

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

Enclosures: letter from Stafleu
copy of comment page from Chaloner

DEPARTMENT OF GEOLOGY · NATURAL SCIENCE BUILDING

January 17, 1972

Dr. Alfred Traverse
Editor, Catalog Fossil Spores and Pollen
The Pennsylvania State University
Dieke Bldg.
University Park, Pa. 16802

Dear Al:

Here are a few comments on Volume 35 which was awaiting my return from India. I have probably not given it a complete analysis but I have a few questions and perhaps caught a couple of discrepancies.

p.37-38. (enclosed) M. trisina cited with footnote one (1) is not referred to in footnote 1 p. 38.

p. 38 enclosed) and many other pages (e.g., 180, 188, 197, 199) you end up with "TYPE SPECIES OF THE GENERIC NAME" This is not a new practice but I wonder about the reasoning behind it. Why not "TYPE SPECIES OF THE GENUS" The genus is identified by the name but the two are not supposed to be different. It is the genus which is significant not the generic name.

According to the present Code, however, (perhaps Art. 7, par. 1, and Notes 5 and 6). The "nomenclatural type" probably indicates this fully and I suppose is based on the assumption that the name is actually attached to the specimen or element typified and not to all the other variants (including specimens or elements) which are intended to be related and to which the name is also applied. I still think the type species applies to the genus.

pp. 50, 52, 54, etc. Why do you have some pages with "Species Name" at the top of the page and others (quite often but not always) do not have this heading? Is this because the even pages will be printed on the backs of odd-numbered pages? If so, then this applies to p. 272 and 274 but not to pp. 273, 275 and 276. There is something quite inconsistent here.

pp. 35-249, 252, 263, 268, 270, 274, 272, etc. Why do you have "Species Name" as the heading when you have a new or emended generic name? In the pages cited, there is not even a species attached to these generic names.

p. 251, footnote 1. See note on enclosed page. The name of a species is a binary combination.

Appendix Part I New Generic Names

Part II Emendations of Generic etc.

These two pages are unnumbered, perhaps like a title page. Now that all the pages of the volume are numbered (a plan which is a big improvement over the unnumbered pages and for which I plugged steadily!) is it wise to leave out these from the numbering? *perhaps in future*

Also, since there is only 1 sheet under Appendix Part I, the title on this page could be modified and both parts one and two could be combined. This would save the cost of a page. There is no advantage to a 1-page section.

Index See comments written on page as to inconsistency in numbering pages.

Sincerely yours,

Aureal T. Cross

P.S. I forgot to mention that I am taking a Sabbatical leave from Feb. 1 to June 1 and will be at the following address:

Department of Geological Sciences
University of Southern California
University Park, Los Angeles, Calif. 90007
(Ph. 213-746-2717)

Also I had a long talk with G.K.B. Navale who wants to be remembered to Bill Spackman. Navale indicated he had at one time an invitation to come to spend a year at Penn State on coal and palynologic research but at the time he couldn't come because he was with Teichmuller at the time (1969, I think). He says he would like to have another such opportunity. I merely told him I would relay the message to Spackman. If you would do that for me it will save me another letter at this very busy time. His home address 7-B L Park

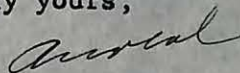
Mahanagar Extension
Lucknow, India.

However, I think his personal mail would reach him as surely and as privately at the B. Sahni Institute of Palaeobotany, 53 University Rd. Lucknow 7, India.

My best regards to you, to Spackman too.

Sincerely yours,

ATC



Species name: *Latosporites colliensis* (Balme and Hennelly 1956)
emend. Bharadwaj 1962



72



73

72, 73. *Latosporites colliensis* (Balme & Henn.)
comb. nov., Ph. Nos. 94/1, 10.

Description:

Diagnosis (emend.) — Longitudinal axis 50-100 μ , holotype 75 μ , monolete mark distinct, $\pm 2/3$ the long axis in length, ends not bifurcated, labra thin; exine laevigate, thin, frequently folded.

Remarks — The Australian specimens are usually smaller than the Indian ones.

Holotype — Balme & Henn. 1956a, Pl. 1, Fig. 1.¹

Syn. — *Laevigatosporites vulgaris* forma *colliensis*² Balme & Henn. (1956a, p. 55).

Author: Bharadwaj, D.C., 1962, p. 85, pl. 4, figs. 72-73

Reference: The miospore genera in the coals of Raniganj stage (Upper Permian), India: *The Palaeobotanist*, vol. 9, nos. 1 & 2, pp. 68-106, pls. 1-22, 16 text figs.

¹ [Identification of a holotype for *L. colliensis* in Bharadwaj, 1962, may constitute initial typification of this taxon, as it was not typified in Balme and Hennelly, 1956.]

² [See *Laevigatosporites vulgaris* f. *colliensis*, CFSP 13-12.]

EMENDATION AND CHANGE OF RANK
FROM FORM TO SPECIES

I believe it is desirable to always use the binomial for there is no such name as "colliensis" that is merely the specific epithet and a part of a combination
A.T.C.

INDEX
Volume 35

All references to taxa mentioned in Volume 35 are listed in this index, along with all significant citations of geographic and stratigraphic names. For names covered in this volume, the first page number given is for the page on which reproduction of the information begins, and this number is italicized. Also for names covered in this volume, the specific and infraspecific epithets are listed independently from the generic names in order to facilitate searches for synonymy. For names so listed italicization of page numbers is unnecessary, since they are all for primary references.

<i>Acanthotriletes</i>		
<i>dentatus</i>	-----	
<i>ericianus</i>	-----	35-123, 284
<i>ramosus</i>	-----	35-70--71, 233, 285
<i>tereteangulatus</i>	-----	35-87
<i>villosa</i> (see <i>A. villosus</i>)		
<i>villosus</i>	-----	35-36, 38, 257, 286
sp.	-----	35-122--123
<i>Accinctisporites</i>		
<i>exundatus</i>	-----	35-181, 185
<i>nemus</i>	-----	35-183, 199
Africa		35-161
Africa, Southwest		35-61, 243
<i>africana, Vittatina</i>		35-158
<i>Ahrensispurites</i>		35-222
<i>Alatisporites</i>		35-149
<i>Alisporites</i>		35-279
<i>nuthallensis</i>		35-137
<i>phaseolosaccatus</i>		35-163
America, North		35-279
<i>Anapiculatisporites</i>		
<i>dentatus</i>	-----	35-284
<i>ericianus</i>	-----	35-284, 122
<i>longispinosus</i> (cf.)	-----	35-122
<i>Anguisporites</i>		
<i>anguinus</i>	-----	35-215
<i>contortus</i>	-----	35-215
<i>minutus</i>	-----	35-215
<i>angulistriatus, Striatites</i>	-----	35-288
<i>angulistriatus, Taeniaesporites</i>	-----	35-288
<i>Amulatisporites</i>	-----	35-193
<i>apertus, Apiculatisporis</i>	-----	35-186

There seems to be a discrepancy in the use of italics for numbers. Under *Acanthotriletes* all 6 times the vol. is given (35-284, 35-123, 35-70-71, etc.) it is not italicized. Under *Alisporites*, both refer to 35-181 & 35-183 are italicized. The next to be explained in lines 3-5 in A below, it is not made clear that the page number includes the vol. no. yet this is not entirely true because the vol. no. is given only for the first page listed for line.

It seems that if the page number includes vol. no. for the first number listed for entry, then it should include vol. no. for every no. listed. eg. 35-123, 35-284, 35-70-71, 35-285.

Finally, do not believe that the vol. no. should be italicized along with the page no. etc.

August 2, 1971

Dr. Aureal T. Cross
Tundra Biome Project
Institute of Arctic Biology
University of Alaska
College, Alaska 99701

Dear Aureal:

It was so good to hear from you regarding Volume 34 of the Catalog. I don't think we had a response from you on the last volume or two, and we missed it. You are certainly right that it's easier to do the job when you have your library handy.

Regarding the situation on Ctenolophonidites--the reason why the documentation of the basionym was not sufficiently detailed was that the paper did ~~not~~ fulfill the requirements of the Code that a full and direct reference to the basionym, including page number or plate and figure number, be supplied. You are probably right that we should have spelled this out more, and we have therefore changed the nomenclatural comment to make this absolutely specific.

I can't tell you how grateful I am that you caught the stupid mistake which somebody made in omitting one of the papers from the Table of Contents. This was obvious from the statement in the Compiler's Preface that seven papers were covered, but somehow we managed to miss it.

Regarding the statement that one species was effectively but not validly published--this is quite possible since effective publication has to do only with the fulfilling of the requirements of a few of the articles in the Code having to do with the nature of the publication itself and the degree to which it was distributed. The matter has some importance to us because our requirement for coverage in the Catalog is effective publication, not valid publication. We cover all sorts of things that are invalid as long as they were effectively published and are therefore in the literature.

I am also glad that your sharp eye caught the two places which should have been italicized. It is really a continual astonishment to me how things like that creep in. ~~As~~ I read back through the Catalog I still am picking up such things, and in instances where I would have sworn in court that we had combed them all out!

Thanks so much for your help, and I hope that we can continue to expect such cooperation in the future.

I am sorry that I missed the meeting in Edmonton. It sounds to have been very good. I had family and other obligations which made it impossible for me to be there though I had planned to come and had actually paid my fees. I would like to hear more about your work in Alaska one of these days. It sounds like something right down my alley too. There is nothing in the world that I enjoy than a field botany.

Looking forward to seeing you again before too long (Tucson in October?), I am

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT/vsi

Esteeck

Fidelity Onion Skin

100% COTTON

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

Summer Address until Sept. 1, 1971
Tundra Biome Project
Institute of Arctic Biology
University of Alaska
College, Alaska, 99701

Dr. Alfred Traverse, Editor
Catalog of Fossil Spores and Pollen
Pennsylvania State University
University Park Pennsylvania 16802

Dear Al:

Your letter of May 26 and Catalog (Vol. 34) received June 9, just before I left the office for field work on the way to the Botanical Society Meeting at Edmonton. I have worked over the volume a little at a time, though without the benefit of references while reviewing it. It seems to me this has been a particularly difficult issue to prepare from many standpoints.

I have enclosed copies of pages on which I have actual questions or editorial corrections.

The Simpson paper seems to have been handled right in illustrating the modern (extant) species which have been used to amplify the descriptions.

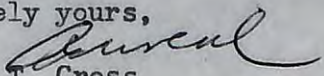
A number of the nomenclatural comments are very useful and certainly appear to be directed to a proper conclusion. Some of them are not so clear. I will cite one of the latter: The reasoning for considering the Ctenolophonidites invalid is not clearly supported by a study of the text on p. 71-72. Furthermore, "documentation of the basionym was not sufficiently detailed to meet the requirements --etc." appears to me to be a subjective point of view. When I read all the text which you have included on those two pages, including the generic description, there is not any doubt in my mind about the author's intent to make Stephanocolpites costatus the type of Ctenolophonidites. If you can be more specific in your reasoning that "documentation of the basionym was not sufficiently detailed" you might be able to maintain the conclusion which you reach (p. 73).

The Edmonton meeting was one of the best paleobotanical meetings I have attended. There were over 40 papers; a few duds; but a very wide range of research; topically, stratigraphically, new approaches, etc. There were quite a few new faces in the group; attendance was very good -- over a hundred for most papers. We missed you and a few others. But it was expensive to get there!

I am camped about 40 miles south of the Arctic Circle (over a hundred miles northeast of Fairbanks) working on some modern and sub-recent vegetation history and ecology. I intersperse this with short (2-4 day) collecting trips in other parts of Alaska. It will be a long but interesting summer. My family could not come with me this trip. I hope you and your family are all well and enjoying life in the Appalachians.

With best regards,

Sincerely yours,


Aureal T. Cross

COMPILERS' PREFACE

Volume 34 of the *Catalog of Fossil Spores and Pollen* treats the new species, new genera, emended descriptions and new combinations from seven publications on Cenozoic spores and pollen (one paper includes some Upper Cretaceous as well). The forms treated are from Africa (Nigeria), South America (Colombia and Guyana), and Europe (Germany, Czechoslovakia, and Scotland).

As explained in previous prefaces, we are now covering both specific and generic descriptions, as well as all nomenclatural changes. New generic names and all emendations are handled in the main body of the volume, and new combinations are presented in the appendix. This volume treats 22 new genera and 139 new species from the papers covered. This includes one species that is effectively but not validly published because there is no illustration. Five infraspecific taxa are treated. In addition, the protologs of nine species from other papers are presented because they provide typification for generic names which are new in the papers covered in this volume. These nine species are also listed with four other new combinations in the appendix. Four emended specific descriptions are presented, and since the names are new combinations they are also listed in the appendix. It should be noted that one of the new species, *Retitricolporites crassicostatus* van Hoeken-Klinkenberg 1966 (34-94), is a homonym of *Retitricolporites crassicostatus* van der Hammen & Wymstra 1964 (34-60). *Taurocephalus* Simpson 1961 (34-241) represents an apparently somewhat heterogeneous assemblage but seems to be synonymous with

seven?

How can it be effectively published if it has no illustration? Without the illustration it is neither effectively or validly published.
etc

TABLE OF CONTENTS

Compilers' Preface	ii
Hammen, T. van der, and C. Garcia de Mutis, 1965 The Paleocene pollen flora of Colombia	1
Hammen, T. van der, and T.A. Wymstra, 1964 A palynological study on the Tertiary and Upper Cretaceous of British Guiana	33
Hoeken-Klinkenberg, P.M.J. van, 1966 Maastrichtian Paleocene and Eocene pollen and spores from Nigeria . .	69
Hunger, R., 1953 Mikrobotanisch-stratigraphische Untersuchungen der Braunkohlen der südlichen Oberlausitz und die Pollenanalyse als Mittel zur Deutung der Flözgenese	100
Pacltova, B., 1960 Rostlinné mikrofosilie (hlavně sporomorphy) z lignitových ložisek u Mydlovar v Českobudějovické pánvi - Plant microfossils (mainly sporomorphae) from the lignite deposits near Mydlovary in the České Budějovice Basin (South Bohemia)	104
Simpson, J.B., 1961 The Tertiary pollen-flora of Mull and Ardnamurchan	126
References	251
Index	254

Kedves, M., and N. Sole de Porta

104

good!

INDEX

Volume 34

<i>Eustigma</i>	
<i>gracilis</i> -----	34-186
<i>pre-oblongifolia</i> = <i>Eustigma preoblongifolium</i> -----	34-186--187
<i>preoblongifolium</i> -----	34-187, 186
<i>Faurea</i>	
<i>faureoides</i> -----	34-188
<i>speciosa</i> -----	34-188
<i>wentzelliana</i> -----	34-188
<i>faureoides</i> , <i>Faurea</i> -----	34-188
<i>Ficus</i> -----	34-78
<i>Filtrotriletes</i> -----	34-74
<i>nigeriensis</i> -----	34-74
<i>flexibilis</i> , <i>Psilabrevitricolpites</i> -----	34-83
<i>florschutzi</i> , <i>Foveotricolporites</i> -----	34-37, 247
<i>Formosa</i> -----	34-135
<i>Foveosporites</i> -----	34-74
<i>Foveotricolpites</i>	
<i>perforatus</i> -----	34-4
<i>pomarius</i> -----	34-5
<i>santanderianus</i> -----	34-247
<i>Foveotricolporites</i>	
<i>crassiexinus</i> -----	34-76
<i>florschutzi</i> -----	34-37, 247
<i>fragilis</i> , <i>Cricotriporites</i> -----	34-69
<i>franciscoi</i> var. <i>minutus</i> , <i>Mauritiidites</i> -----	34-15
<i>franciscoi</i> var. <i>pachyexinatus</i> , <i>Mauritiidites</i> -----	34-16
<i>Geiseltal</i> -----	34-100
<i>Gemmamonocolpites</i> -----	34-6
<i>gemmatus</i> -----	34-6--7, 249
<i>Gemmastephanocolpites</i> -----	34-8
<i>gemmatus</i> -----	34-8
<i>gemmatus</i> , <i>Gemmamonocolpites</i> -----	34-6, 249
<i>gemmatus</i> , <i>Gemmastephanocolpites</i> -----	34-8
Georgetown (Guyana) -----	34-38, 45--47, 51, 54--55, 64--68
Germany (DDR) -----	34-101--103
<i>Ginkgo</i>	
<i>biloba</i> -----	34-189
<i>shiabensis</i> -----	34-189
<i>globulus</i> , <i>Psilastephanocolporites</i> -----	34-85
<i>Glyptostrobus</i> -----	34-174
<i>pensilis</i> -----	34-210
Görlitz -----	34-101--103
<i>gracilis</i> , <i>Eustigma</i> -----	34-186

ital ital.

INDEX

Volume 34

<i>Sabalpollenites</i> -----	34-6
<i>Salix</i> -----	34-124 <i>ital.</i>
Santa Rosita -----	34-39--40, 52--53
<i>santanderianus</i> , <i>Foveotricolpites</i> -----	34-247
<i>Sapindus</i>	
<i>drummondii</i> -----	34-240
<i>mukorossi</i> -----	34-240
<i>scotica</i> -----	34-240
Sarmatian -----	34-117--118
<i>Scabrastephanocolpites</i> -----	34-30
<i>lisamae</i> -----	34-29
<i>scabratus</i> -----	34-30
<i>vanegensis</i> -----	34-31
<i>Scabratrporites</i> -----	34-97
<i>annellus</i> -----	34-97
<i>asper</i> -----	34-97
<i>simpliformis</i> -----	34-96
<i>scabratus</i> , <i>Scabrastephanocolpites</i> -----	34-30
<i>scotica</i> , <i>Acer</i> -----	34-129
<i>scotica</i> , <i>Alnus</i> -----	34-139
<i>scotica</i> , <i>Cornus</i> -----	34-165
<i>scotica</i> , <i>Corylopsis</i> -----	34-168
<i>scotica</i> , <i>Dicoryphe</i> -----	34-176
<i>scotica</i> , <i>Haloragis</i> -----	34-192
<i>scotica</i> , <i>Hamamelis</i> -----	34-194
<i>scotica</i> , <i>Magnolia</i> -----	34-205
<i>scotica</i> , <i>Petrophila</i> -----	34-218
<i>scotica</i> , <i>Picea</i> -----	34-220
<i>scotica</i> , <i>Platanus</i> -----	34-232
<i>scotica</i> , <i>Sapindus</i> -----	34-240
<i>scoticum</i> , <i>Menispermum</i> -----	34-207
<i>scoticum</i> , <i>Nelumbium</i> -----	34-213
Scotland -----	34-127--128, 130--132, 134, 136, 138, 140--146, 148, 150--151, 153--155, 161, 163--164, 166--167, 169, 171--175, 177--179, 181, 183, 185--188, 190--191, 193, 195, 197--198, 200--201, 204, 206, 208, 210, 212, 215--217, 219, 224, 226, 228--231, 233, 235, 238--240, 244, 246
Scrophulariaceae -----	34-40--41
<i>sculptatus</i> , <i>Tetracolporopollenites</i> -----	34-122
<i>Selaginella</i> -----	34-100
<i>Sequoia</i> -----	34-174
<i>sempervirens</i> -----	34-209
<i>washingtoniana</i> -----	34-209

May 26, 1971

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

In the attached package is your "proof" copy of Volume 34 of the Catalog of Fossil Spores and Pollen. As in previous volumes, we would appreciate a thorough review of this volume so that we can then submit it for printing. As I believe I have also previously said, please do not bother to return the volume to us but either tear out the pages on which you wish to make comments and return just those pages, or send your comments referring to particular pages and lines.

I am sure you know how much we all appreciate the effort that you put into doing this work for us, and we realize that your complimentary copies of the Catalog are only a token compensation. In order to keep to our publication schedule, we would very much appreciate having your comments by 1 July.

With best wishes as ever.

Yours very truly,

Alfred Traverse
Editor

AT/vsi

P.S. A number of minor changes, including substitution of "syntypes" for "cotypes" in Simpson's papers, have been made on the formats, but the changes were made after the "proof" copies were xeroxed.

Cross
CATALOG OF FOSSIL SPORES AND POLLEN

DEIKE BUILDING
THE PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA 16802
U. S. A.



THE
INTERNATIONAL COMPENDIUM
OF
PALYNOLOGICAL SYSTEMATICS

November 13, 1970

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

In the attached package is your "proof" copy of Volume 33 of the Catalog of Fossil Spores and Pollen. Please return your review to me by 7 December, so that we can get the thing published before the first of the new year.

As I have previously explained, it is not necessary to return the volume to us. Just remove the pages on which you wish to make comments and return those, or (if the comments are relatively simple) merely mention the page number and line in your review.

You will note that this volume is some pages shorter than the last two volumes. The reason is that Volumes 31-32 were nearly a hundred pages too long, which strains both the ring-binders and the CFSP budget.

Looking forward to receiving your review and with assurances of the great value of these reviews to our editorial process, I am

Yours very truly,

Alfred Traverse
Editor

AT/vsi

September 15, 1970

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thanks for yours of 9 September. We are waiting until we can assume that most of the letters about missing pages have come in and will process the whole business at once, probably sometime soon after the first of October.

Regarding Ebtehadj--I could turn nothing up on him, but Dick Hedlund was more successful and has given me the following, rather incredible address: Khosrow Ebtehadj, Tehran Cement Company, Kooshk Avenue, Tehran, Iran.

Looking forward to seeing you in Toronto, I am

Yours very truly,

Alfred Traverse
Professor of Geology & Biology

AT:kc

Aureal Cross

called 6-X-69

4.25 p.

Quisquilioid ----- picked up by some other
catalog

Tasmanian in diff. catalog.

- says index should show inclusive

August 11, 1969

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we have sent you the customary proof copy of Volume 32 of the Catalog. I hope that you will give it a careful critical reading and let us have your comments not later than 1 October. As before, note that it is not necessary to return the proof copy. Either put comments on separate sheets of paper, noting pages and lines, or rip out the appropriate pages, red-pencil your comments and return the pages to us.

We greatly appreciate your cooperation in helping us in this tangible way.

Best wishes as ever. Perhaps I will see you in Seattle before you get this.

Yours very truly,

Alfred Traverse
~~Editor~~
Catalog of Fossil Spores and Pollen

AT:kwc

June 25, 1969

Dr. Aureal T. Cross
Professor of Geology and Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Enjoyed yours of 13 June. You are one of the few people in the world I think is probably busier than I. The trip with the kids sounds like an experience they shouldn't forget for a while. Grand of you and Aleen to do it.

The comments for Volume 31 are most useful. I especially appreciate knowing about my mistranslation of "exploratory borehole". It is unfortunate, however, that we are already into the printing process, and I fear that it will be impossible to make the changes except in a few cases where the formats don't happen to have been processed (I'll try my darnedest). That's what I was getting at earlier when I suggested that perhaps we should just face up to the situation that you have too many irons in the fire to mess around with the Catalog. That's why I asked whether you would like to be relieved, and if so, whether you could suggest a replacement. Of course, if it looks possible that you won't be so rushed in the future, and if you wish to stay aboard, so be it.

We were interested in your comments about the political side of the information processing thing. Neither Sanders nor I is opposed to cooperation, but we are not at all interested in just becoming part of an operation that is 100% designed and controlled by others. Cooperation involves give and take, not just take. Wilson's proposition was one that we could not buy, either scientifically (we think that Sanders has some better ideas) or practically (Penn State would never have stood for our co-signing such a proposal). But when we suggested changes, Wilson just came back with a "take-it-or-leave-it" statement.

Dr. Aureal T. Cross
June 25, 1969
Page 2

The Spackman-Dolsen axis and entourage is in Florida. We leave for Seattle about 2-3 August and will follow in your family's practice of a few years ago by tent-camping out and back. This will be the last chance for us all to be together, and we decided to do it. Wish we didn't have so many pets to arrange for.

Program for the Oct. AASP meeting here looks good. I hope that you and or students are planning to attend.

Good to hear about Aleen's parents, though it must mean that your ties with Pa. are now more tenuous than before.

Best wishes to Aleen. Please don't interpret paragraph two as being critical--I don't mean it that way.

Yours very truly,

Alfred Traverse
Associate Professor of
Geology and Biology

Recd 23-VI-69

The quality of the plates in Samoilovitch is variable and in fact not too bad, but it seems hardly defensible for the Catalog, considering its intended permanence and significance as a reference, to publish inferior plates if the originals would have been available. (See Editor's preface p. iv.)

Yes

P. 31-1
P. 31-6

I wonder about the translation of "piling borehole" - could not this be "cable-tool bore-hole"? I cannot imagine any test hole for piling being driven 1196 m.

Yes

P. 31-5

Delete comma after xiphophylla, Spring —
(3rd line from bottom)

P. 31-7 I concur strongly with your footnote!

P. 31-11 Should the Cyrillic of "fusciforme" be given as are the other new names? i.e. * and footnote?

P. 31-12 I wonder if you have the right to select only 2 figures here as holotype (4a, 4b) even if 4c is only a drawing (sketch). This sketch, if from the same entity as 4a - 4b, is also a valid illustration. You cannot legislate quality of work.

P. 31-14 - last sentence of footnote! Do you think there

is close similarity of Fig 7 to fig. 1? This would be difficult to support but is possible.

P. 31-16 Footnote 1 - I think this was previously published but I was unable to locate it.

31-22 (3) I don't understand footnote 2. As given at footnote 2 p. 31-22(1) it is 26-4 then.

31-49 on last line the preparation number given by the author is U-III-2-64-1 rather than -64-I- (i.e. arabic.)

31-62 last line. -14, 5/96, 2
not 14. 5/96. 2

31-79 Footnote¹. The author may have intended to not include it. It is quite possible another specimen oriented to show the equatorial view (or end view) was selected.

~~31-80(1)~~ C. at numerous other places the type used for the Species name is run together - probably your typewriter needs adjusting. the "an" & "un" combinations are consistently bad.
see "punctus"

etc. { p. 31-86 (3) under type *Keuper* -
31-87 (2) should be: lower - middle *Keuper*
31-88 (2) not lower middle - *Keuper*.
31-89 (2)
31-90 (2)
31-87 (2) Ed. rule 1 is again dependent on
whether or not the same grain is used.

~~31-91 (3) This page has the same heading as 31-91(1).~~
also ~~31-92 (3) This is not customarily done in your format,~~
also ~~31-93 (3) i.e. usually the name only appears only
on the first sheet. Is this not correct?~~

June 13, 1969
Tuba City, Ariz.

Dr. Alfred Traverse, Editor
Catalog Fossil Spores and Pollen
University Park, Pa. 16802

Dear Al:

Enclosed is the rough copy of some comments on the Volume 31. Your letter of April 21, announcing this review volume came about 10 days before the volume itself. Since that time, I have had to complete reading four Ph.D. dissertations and administer exams for three of them. So May was jam-packed from end to end (like it always seems to be).

I am on a trip for the church with 13 high school kids for two weeks (Aleen and one other couple and I are running a large vacation church school), and I have finished going over the Volume this week. It looks good, except, of course, I cannot tell anything about the final illustrations. Most of my comments are minor, in nature. It took me about 40 hrs. during the last ten days. A couple of the papers in the volume are not among those available to me, so I could not seriously check text on those two.

Thanks also for your earlier letter of Apr. 4, concerning the Lawrence and Norman meetings. It is always nice to be able to visit with you. I was glad to meet Sander. I think some type of coordinated and cooperative effort and program for literature information storage and retrieval is needed and must eventually come. This obviously cannot be unilateral and there must be some give and take. The "inventor", of course, was pathetic(!) but one may have to overlook inbuilt weaknesses (in each of us) in order to bring out and use effectively the several strengths (of most of us). Sometime this summer I hope to try to get this message across to Wilson, who seems to be both somewhat rejuvenated by this new angle of work and somewhat blinded by it.

Aleen's parents moved to Lansing this past week and will be nearer to us for the next few years.

My best wishes to you, Spackman, the Polsens, Tate and Russ.

Sincerely yours,

Aureal

Aureal T. Cross

June 9, 1969

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

We haven't heard from you regarding Volume 31, which is going to press. I know you have multiple other obligations, and I wonder how you would feel if we passed the mantle on to one of the fellows who has fewer obligations? I have, as you know, reframed the editorial policy so that we are supposed to have a small (3-4 man) editorial committee, but it is essential that the members thereof be in a position to give a careful review to each volume. Under the circumstances, could you nominate somebody as a successor? I have been thinking in terms of Chaloner, if he will do it, but I would rather have somebody in North America if a suitable person could be found.

Regards as always.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

April 21, 1969

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we are sending you the customary proof copy of Vol. 31 of the Catalog for your perusal. Following the procedure established a couple of volumes ago, it will not be necessary for you to return this copy to us. If you like, you may tear the sheets out on which you wish to make red-pencil marks and send those sheets to us. Naturally, we would also appreciate any general comments you may have, but I usually regard such comments more for our edification with respect to future volumes than with regard to corrections of the volume you are reviewing. The reason is that changes which involve alteration of page assignments get us into difficulty as far as the indexing, footnoting, and so forth are concerned. Perhaps we should consider including you in the earlier stage of volume preparation, when page numbers are first assigned.

If at all possible, we would like to have your comments on mistakes in Vol. 31 before 1 June, so that we can proceed with publication. Thank you very much for your continued cooperation. Best wishes.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

bcc: Dr. Cima

April 4, 1969

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

I suppose that your letter of St. Patrick's Day, 1969, is really superseded by our subsequent encounters in Norman and Lawrence, but I don't like to file a letter without even acknowledging it! First of all, let me congratulate you on your paper at Lawrence. That is the sort of work I would dearly love to be doing if I didn't have to spend my time answering the telephone and administering the various projects around here (o.k., o.k., Spackman says I should refer to it as "leading").

Regarding Gerhard's proposal to buy into his deal--I am sure that I need not comment much on the impossibility of this. Regarding the trustworthiness of the Norman operation, I am also sure that you now understand my suspicions and reservations! Sure, it would be fine for there to be a joint project, but for varieties of reasons I don't think it is in the cards. Sanders and Spackman and I are convinced that we have built a better system, and the momentum in this field is really with Penn State (since 1957 or so). We are not going to be stampeded by Gipsy or Topsy into something that appears plausible but really would not be good science. We propose to forge ahead with our own program.

Hope my form letter re support for us with our graduate program didn't offend--the purpose was to make everybody aware that students are being trained and will want to be employed and also that in instances where your students would like to sample another university, Penn State is worth considering. I know that you have been a good friend and hope that you will remain that way.

It was delightful to see your charming wife again. The two of you on some sort of rejuvenation pills, I am convinced. You looked just great.

There will doubtless be a lot of rumor and gossip about the information projects. Let's keep in touch about the matter.

Best wishes.

Yours very truly,

Alfred Traverse
Associate Professor of Geology

AT:kwc

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

March 17, 1969

Dr. Alfred E. Traverse
Catalog Fossil Spores and Pollen
Dieke Bldg. Department of Geology
Pennsylvania State University
University Park, Pa., 16802

Dear Al:

Enclosed is a copy of a letter I sent to Kremp about a month ago. I believe the message in it is clear enough. I heard from Gerhard recently to the effect that I could "join" the program of Palynology Data Retrieval which he is spearheading for about \$9,000. Now obviously I am not likely to be able to turn up that kind of a sum for such a purpose even if I wanted to have the service.

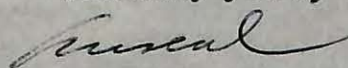
I strongly urge you to get together with Wilson and Kremp and see if some type of common denominator does not exist for a cooperative program instead of each group going its own direction and competing, in the truest sense of the word.

I am going out to Norman next week and hear about the GYPSY system.

Your other letter was received, i.e. where you were asking for a little publicity for your program there. I suspect that, over the years, I have included favorable comments and recommendations towards the program conceived and executed there by Bill Spackman, as much or more than any other person outside the Penn State organization. My support of the total program there, including the Catalog, has been more than lip service. I hope that I have reason for continuing such support and assure you and Spackman of continued cooperation.

My best regards to your family and to Spackman, Ames, the Dolsons, Dutcher and others.

Sincerely yours,



Aureal T. Cross

February 17, 1969

Dr. G. O. W. Kremp, Professor
Geochronology Laboratory
University of Arizona
Tucson, Arizona 85721

*Letter dictated
Feb. 13*

Dear

I had a sort of a strange call today from a Mr. Jack Morrison of the Computer Center at Norman, Oklahoma, inviting me to a one-day seminar on March 26, concerning a demonstration on a data center, which is being set up by he and Professor Wilson, and an examination of this program.

This sounds to me like exactly the same thing that you have undertaken for several of the oil companies. It seems to me that, if this is the case, that some of you fellows ought to get together. This is an important type of work but duplication seems to be a little bit unnecessary. Mr. Morrison told me that the Permian data had been nearly completed at the present time and that they were starting on the Tertiary. Obviously, the Tertiary will take at least ten times as long, and maybe much longer than that to get the data together because it is considerably more extensive and complex. They are apparently putting in ages, ranges, identifications, that is names, and any other pertinent data and then will hope to build this data-bank to the point where they can answer many ordinary questions.

A second major program, along this line, also apparently comparable to yours, is the one that was announced in the Earth and Mineral Sciences Circular for October 1968 from Pennsylvania State University. This new NSF project for palynology, underwritten by the National Science Foundation to the amount of \$108,000, sounds like a major undertaking. It is obvious that your connection with the Catalog over the many years would have put you in a position to have been a partner in the undertaking. What seems to be the problem here? Are all three of these doing the same thing or have you portioned out the work? I am really puzzled by all of this. I think this kind of thing is extremely important and I believe that you certainly are capable of undertaking such a job, as would probably Traverse at Penn State. At this time, I am not sure how far Wilson might get with his project.

Dr. G. O. W. Kremp, Professor

Page 2

February 17, 1969

In looking up your address to get the Zip Code number, I noticed that you are not a member of the Geological Society nor the AAPG. Perhaps some of us have neglected to invite you to join these organizations. Do you wish to become a member of these two or any other organizations of which I am a member? If so, I would be very happy to nominate you. Please advise.

I hope your family is well and that your work is going along very well. I may get out past Tucson the latter part of March or the early part of April in connection with some work on the Baha project.

With best wishes.

Sincerely yours,

Aureal T. Cross
Professor

ATC:cs

March 5, 1969

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

It is perhaps superfluous to be one's own PR man, but in an effort to leave no stones unturned, I thought it wise to state modestly that graduate students in palynology are being trained here under my direction, and that we would therefore appreciate being grafted into the grapevine along which information about various job opportunities is said to travel.

Also, I would appreciate it if you would consider advising prospective graduate students in palynology who want to sample education elsewhere to keep the possibility of Penn State in mind. We have laboratory and library facilities as good as any, located in the new Deike Building (College of Earth & Mineral Sciences). The personnel and library of the Catalog of Fossil Spores and Pollen and our "palynological data project", as well as the various research projects, make ours a stimulating place palynologically. We now have three full-time professional palynologists (H.T. Ames, R.B. Sanders, A. Traverse), as well as a paleobotanist with a strong collateral interest in palynology (W. Spackman). Spackman and I now both have joint appointments in biology and geology, so graduate students can organize work here toward degrees in palynology-paleobotany in either biology or geology. In terms of flexibility of requirements, this is a very desirable arrangement. For example, a botanically oriented palynologist can now enroll in biology at Penn State and does not need to satisfy the various local requirements for a degree in geology. Yet such a student has available to him at Penn State first class instruction, facilities and contacts in all those areas of geology which may be pertinent to his work and interests.

Please keep us in mind.

Yours very truly,

Alfred Traverse
Associate Professor of Geology
Editor
Catalog of Fossil Spores and Pollen

Oct. 14, 1968

Dear Al,

I'm checking across Aurea's mail and find that you need a review of Vol. 30 of the Catalogue from him by Nov. 1. Unless he plans to do this in the field and send it on to you, I'm afraid that date is impossible. He left for his final(?) trip to Baja last week and won't be back until late November.

You would have had to be here to believe the wild and crazy month of

September. On top of all the
regular + usual work - he
moved his office + lab, under
the most impossible circumstances.

(Due to the construction strike, Botany
was held up getting out of their
quarters, some of which were reassigned
to Animal - so all moving was
delayed until after school had
started rather than before - what
a Mess!)

He took satchels of work with
him, among which might have been
the Catalogue, but I don't know.
Say Hi to Beth for me.

Sincerely,

Alexander

October 10, 1968

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we have mailed to you your review copy of Vol. 30 of the Catalog. Inasmuch as we are now in the basis of putting the volumes out for printing only after all review is complete, I am hoping that you can complete your study of the volumes as promptly as possible. Let's ~~try~~ shoot for 1 November.

As I have previously explained, there is no reason to return the review copy. However, if you wish to tear certain pages out on which you have red-penciled comments and mail those pages to us, that would be quite acceptable.

I need hardly say how much we appreciate your efforts in carefully reviewing the volumes--the quality of the Catalog depends to a large extent on this sort of assistance from the members of the Editorial Committee.

Best wishes.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

Preface ii

Last sentence -

" - as we did not obtain the original plates. " -

Should this be "could not".

Should this not have been highly desirable? In the past, republication from original plates resulted in some improvement in illustration which is greatly needed.

Preface iii

~~Part~~ 2 New binder on Vol 28 is very good.

A 1. ~~Just~~ line 4 - "unless there are other cataloguing efforts" ?

Enough done?

What is meant here?

line 11 - Do you intend to cover acrotanks? or are you using "hystriospheres" in its original descriptive sense here (which I still use in preference to acrotanks!)

yes -
"I spend my night of paper"

29-1

I believe with such plates
there is going to have to be
subtitled or added a page
designation for reference.

e.g. 29-1.1

29-1.2

29-1.3

29-1.4

29-1.5

or 29-1-1, etc.

or 29-1, 1², 1³, 1⁴, 1⁵

or 29-1a, ~~1b~~
1a, -1b, -1c etc.

good point -
but not for 29

must start on vol. 33

29-1 (and all succeeding entities)

Holotype: Pl. 26, fig. — etc.

I think the "holotype" should be placed on the left margin just as "author", "Reference", "Type locality", etc.

It is lost when indented under repository and particularly, since there is no space or line between.

~~good font~~

→ for this

have now given
printed up ?!

29-4

Fig. 2-6 Granosiscus granulatus

It would be desirable to have this
as follows:

Pl. 23, Fig. 2-6 Granod. gran. etc.
just as you have it on 29-1 &
29-2.

Actually, when only one plate
is involved it is not requisite
that this be done but it would
be useful.

~~Take of the word -
we will do it
wherever there is
2 plates~~

29.8 +.2

Footnote 1

original
reference

Why Pollenitis?

and not Pollenites?

29-12 (also 29-18 for some type
of comment)

I do not have Madler's paper
at hand (one of students has it
out) so cannot review this

effectively - what is the reason
for splitting the plate into (21)

into figs 1-3 & 4?

If necessary some space could
be closed up rather than split the
plate

in my judgment
more work
needed!

done by
original author

29-51 - Is Inflatosaccus elegans
monotypic? If not
where are other species.

no-
4.

29-52

J. inflatus

If it is, should a statement
similar to that at bottom of
p. 29-50.2 be inserted ~~on~~
on p 29-51.2

29-57 Is the line yes

"Syn: Lueckiafontis sp. etc -"
etc

part of Mader's original description

(~~Is~~ just question whether Lueckiafontis
sp. Pot, L.K. is a Syn. It is
merely a composable polynomeph
but the name is not a synonym)
etc.

29-61.1 Is the [Diagnose, Holotypus -

Bemerkungen: Das in -

Hypotypoid: -

TK-Mr. 4784] ¹

part of the material referred to in the
footnote on 29-61.2 as well as that
in the 1st line on 29-61.2?

no-
this

29-69 & elsewhere for similar footnote
situation.

Comment. Footnote on 29-69. 2 footnotes
only to footnote placed in left on 29-69.1

It seems to me that such a footnote
really ought to be placed at the bottom
of the page where it occurs rather
than on a physically separated
page.

29-70 This whole thing is
a puzzle to me!

As has been suggested previously
— sep^e on footnote
from their footnote.

29-132

The ? appears in the legend to
the Figs. 1-3 therefore it may be
interpreted reasonably that it was
an error to have omitted it from
the title. Therefore this is an
invalid name not pa det 34
Note 1

Also is Fig 3 of the same
entity or a different one?
This would affect the designation
of the type -
how know

June 14, 1968

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

That was a most helpful job of reviewing that you did on Vol. 29!

Responses to some of your specific points:

1. By other cataloging efforts we shall not duplicate I meant: Eisenack's work on dinoflagellates, various efforts with diatoms. Acritarchs we will cover if it seems desirable--I suppose Tasmanites might be regarded as an acritarch?

2. Your suggestion re numbering the successive pages of the multi-page "pages" is very good. I have had the same idea myself and have found some resistance to changing here--it will make more work in preparation and indexing. I believe I would really prefer to have consecutive pagination like any other book, but the most that I can get without a major fight is "29-1a, 29-1b, etc." I would appreciate further comments. This will take effect with Vol. 30

3. I think you are absolutely right about the "holotype line." Trouble is that we have a jillion of the printed form on hand. I have asked HTA to design a new form, and I'll circulate it for comments before having it printed. If we make a change of one line, we might as well have everybody happy about the whole format while we are at it! Your comment is so good and to the point that I can't see why we didn't do this long ago.

4. Regarding the listing of plate numbers: until very recently this wasn't done at all, but I have insisted on it wherever there might be confusion and will continue to do so. It is extra work, however, and I guess I won't have it done where no confusion exists--where there is only one plate involved.

5. Re 29-8--Pollenitis is the "correct" spelling, or at least the spelling used in the original publication.

6. Regarding 29-12 and the splitting of a plate into two pages--this was a question of judgment, and ours was that squeezing all the figures onto one page would have been worse.

7. Inflatosaccus is not monotypic--there are two species treated in Vol. 29.

8. Re the footnote business--this comes up frequently. The argument used on me when I first raised the question is that it is better to have all CFSP notes at the end of the treatment, reserving the space at the end of preliminary pages for footnotes from the original text, if any. This separates "their footnotes" from "our footnotes". I have been won over to agreeing with this point of view.

9. Re 29-132. As I read Art. 34, Note 1, of the current Int. Code Bot. Nomencl., a question-mark does not invalidate a name. I would appreciate further comments on this, if you have any. We have argued back and forth here a good bit on the issue.

Well, this is probably getting boring. I do want to thank you most warmly for the helpful hints. PLEASE keep it up!

Best wishes as ever.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

CC: W. Spackman
H.T. Ames

May 6, 1968

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

In the attached box we are sending to you a copy of Vol. 29 for review--I hope that you can return the review to us before 3 June because for financial reasons we need to have this volume printed in mid-June. Thank you for your continuing help.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

Attachment: Vol. 29

March 13, 1968

Excerpt
Professor Aureal T. Cross
Department of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823
Division 5/10

Dear Aureal:

100X/500/100
I am returning a batch of publications you lent us for the Catalog, with which we have finished. We surely appreciate your lending us a hand in this way, and your patience. If there are ever individual publications that you are worried about, please let me know, and I'll report on our progress.

We were sorry to have failed to hear from you on Vol. 28. I placed a number of phone calls during the critical period and discovered that you were out of town. Perhaps your non-communication just meant that you weren't displeased with the state of the thing.

G. Erdtman has just become the first man in history to refuse the Catalog permission to republish. Says that it would hurt sales of Grana Palynologica. What would you do? As far as I can tell, GP is not copyrighted.

Best wishes to the family.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

CC: H.T. Ames

NATIONAL SCIENCE FOUNDATION

PROPOSAL RATING SHEET

Reviewer Dr. Alfred Traverse
 Department of Geology
 and Geophysics
 Pennsylvania State University
 University Park, Pennsylvania 16802

Proposal No.: A80529R
 Investigator: Cross
 Institution: Michigan State Univ.
 Please return to: Geology
 if possible by: 2/19/68

Comments (Continue on additional sheet if necessary)

This proposal is a typical A.T. Cross tour de force. I never hear a technical paper by him that I am not left gasping for breath. He always wages total war on all fronts against the enemy--the project, whatever it is. Like some military establishments, he sometimes seems to be wasting firepower, when less effort more strategically applied would do as much good. Dr. Cross is an extremely energetic, hard-working and productive man--to a fault. In this proposal, for example, I would seriously question whether the grand assault on the floral complexes of his area is really necessary to accomplishing his aims. Only small numbers of genera are really important contributions to the sediment he studies. These are already abundantly represented in herbaria. Unless money is no object, I believe that Cross's efforts could be more effectively centered on the sediment studies per se. Then too, as far as the sediment studies are concerned, the number of different things he proposes doing is really staggering. Not that he won't do them, or at least something with most of them--but his philosophy of attack is always "charge on all fronts." I should think, for example, that the study of cored material proposed could and should be a separate proposal and study altogether.

Dr Cross's statement that a scanning-electron-microscope is essential to his work is doubtful. Such an outfit is a very handy tool indeed, but inasmuch as the fossil pollen found in recent sediment tends to be rather restricted, ^{important} the sort of information he needs to obtain could in fact be produced by light microscopy at a satisfactory level of competence. The proposal, after all, is not primarily for a morphologic study of pollen. ^{Types}

However, the information Cross obtains will be important. The man is very able. The laboratory is well equipped. The institution gives the man more than adequate encouragement. The proposal is really about ten proposals, at least seven or eight of which are perfectly sound. Therefore, I would recommend that the grant be funded if possible, but I would try to cut Dr. Cross back about 50%, by paring out the scanning-electron-microscope and urging him to direct his focus on fewer aspects of the proposal.

OVERALL RATING

- EXCELLENT
- VERY GOOD
- GOOD
- FAIR
- POOR

Signature of Reviewer: *Alfred Traverse*

Date: 12 Mar. 1968

Other suggested reviewers (optional):

J. Edward Stanley
 Dept. of Geology
 Univ. Georgia

NSF Form 9-32 July 1967

"Reviewers' comments are solicited and received in confidence by the National Science Foundation, an agency of the U.S. Government, and will be given maximum protection from disclosure permitted under applicable laws, including 5 U.S.C. 552 (The Freedom of Information Act)."

January 23, 1968

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

At long last the copies of vol. 28 of the Catalog for review are submitted to you in the attached package. We are hoping to send the formats off for printing in about three weeks, so we would appreciate it if you would review the volumes as quickly as possible and let us know what is the matter before the formats are shipped off. That way we can make the required changes here without reprinting being involved.

I am still not satisfied with this operation regarding the review, but I think we are improving. I would like you to have the review copies at least six weeks before the formats are sent to the printer so that we wouldn't have to press you so much, and I have some cheerfulness about the prospect that we can do just that for Volume 29, which is being proofread and corrected at this time.

Best wishes as ever.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores And Pollen

AT:kwc

Dear [redacted];

1/8/68

Thanks for your letter. Have no time
now for further analysis of comments.

I did not receive 2 pages for
27-50. Only 3 illustrations are on
page 27-50 received. (I do not have
a copy of my comments).

Best regards

Arnold Cross

December 27, 1967

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

You are so right in the "post moretem" comment you made in your letter of 5 December! Your little packet of comments contained quite a number of things that it really hurts not to be able to include in 27. I had resolved not to send the thing back for the third time to the printers unless one of you discovered a complete catastrophe.

As I may have told you, I have been turning over in my mind the idea of having a "newsletter of CFSP". If this materializes, I would like to include in the first number some of the comments you have made.

I don't see any point in telling you about your comments (most of them) which are obviously right, but there might be some value in discussing the ones on which we do not seem to agree:

1. The article of the Code that requires that there be an infraspecific taxon including the type of the species which bears the specific epithet repeated as the infraspecific epithet (Triletes anaticus f. anaticus) is Article 26.

2. Regarding 27-14: we understand "nomen nudum" to refer to casually mentioned names. The name on this page is not exactly that, since it includes a description. There is no doubt, however, that it is invalidly published as you point out. I agree that there is some doubt whether we should have included it, but we did so to be on the safe side.

3. Regarding 27-50: we are concerned that you may have failed to get part of this "page". There are two sheets to it, and the first one consists entirely of illustrations, including all of the ones you say you are missing (e. g., the holotype). To my horror, I just discovered that my own copy of 27 is lacking one of the two sheets of p. 27-50.

4. re 27-53a, etc.: the reason these were included was strictly as a supplement. The paper has the odd phenomenon of apparently dual descriptions by the two joint authors.

Thanks again for your helpful comments. I am sure that in the future, when you will be getting proof copies before publication, your comments of the sort you provided for Volume 27 will be extremely useful. Knowing that we can put the suggestions into effect will probably make you feel more like being critical, which is all to the good.

Happy holidays.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

December 11, 1967

Dr. Alfred Traverse, Editor
Catalog of Fossil Spores and Pollen
Deike Building
The Pennsylvania State University
University Park, Pennsylvania 16802

Dear Al:

It was good to see you in New Orleans and I enjoyed having dinner with you. We had an excellent trip back except that Tim came down with a sore throat and flu before we arrived back in Lansing. We did about two days field work on the way.

I have just been going through some more mail that accumulated between April first and the end of the summer and on through the fall. I've been answering letters as rapidly as possible. Your letters of October 30 probably do not need to be answered. However, the second one which proposes a new "Editorial Board" for the Catalog and your substitution of an editorial group to function in a real capacity is an interesting and good move which will make the Editorial Board more effective. I thank you for inviting me to serve on this Board and I will accept the opportunity to do so.

I still plan to try to get up there to Penn State to see Aleen's parents before Christmas and will try to let you know in time so that we may be able to get together there.

With best wishes to you and your family and a good Christmas season.

Sincerely yours,



Aureal T. Cross
Professor

ATC:cs

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

December 5, 1967

Dr. Alfred Traverse, Editor
Catalog Fossil Spores and Pollen
Deike Bldg.
Pennsylvania State University
University Park Pa., 16802

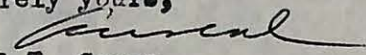
Dear Al:

Enclosed are some notes which I have made after a quick once-over of Volume 27. There certainly were some real problems encountered here. I have no major corrections, a few minor ones, and a number of questions.

I have been too swamped to take more time though I did take about eight hours in looking this over. It is sort of a post-mortem for me to make suggestions at this time since it is already printed.

Best regards

Sincerely yours,


Aureal T. Cross

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover we have sent you your review copy of Volume 27 of the *Catalog of Fossil Spores and Pollen*, which has finally cleared the printing process (for the second time!).

We would appreciate having your comments on those changes that absolutely must be made (we sincerely hope there are none) within the next two weeks.

As you know, in the future we will be sending you a photocopy of each volume well before publication. This should, beginning with Volume 28, obviate the necessity of this final review after the volumes are already in the final, printed form.

Thank you for your continuing help.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

October 30, 1967

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Under separate cover you will receive a form letter announcing the dissolution of the former Advisory Committee of the Catalog of Fossil Spores and Pollen.

The purpose of this additional letter is to say that I propose formation of a new "Editorial Board", of which I very much want you to be a member. The effect of this move, as you can probably see, is to produce an editorial group that actually functions in that capacity. In effect, this means that your status is the same as before, except that I intend to operate a little differently: when each volume is in the "page-proof" state (we call the pages formats at this point), we will make a photocopy and send one each to Cross, Kosanke, Kremp, and Schopf. We tried this experimentally with several of you for Volume 27, and it was much more helpful than the former custom of sending a copy of the completed volume after printing. Corrections received at that point are really "bad news", while those received from the page-proofs can easily be inserted before printing.

Presuming that you are willing to be a member of the "Editorial Board" (I will assume so unless I hear differently), you will of course receive a complimentary copy of each volume of the Catalog in recognition of your labor in going through the page-proof copy.

Your copy of Volume 27 goes forward to you soon under separate cover. Naturally, if you see anything that is amiss with it, we

Dr. Cross

- 2 -

October 30, 1967

would appreciate hearing about it promptly--before the volume is shipped out to the subscribers!

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

cc; H.T. Ames, W. Spackman, G.O.W. Kremp

PS: Flash--bad news--we have just discovered that the printing job on Volume 27 is a catastrophe--it will all have to be redone--so there will be a further delay before you receive it.

bcc

October 30, 1967

To: Drs. Barghoorn, Cross, Grayson, Guennel, Hoffmeister,
Kosanke, Loeblich, Schopf, Stover, Wilson

Dr. Aureal T. Cross
Professor of Geology & Paleobotany
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Beginning with Volume 28, we are planning to discontinue the Advisory Committee of the Catalog of Fossil Spores and Pollen. The Advisory Committee has served the Catalog faithfully and well, and those of us on the regular staff of the Catalog wish to express our thanks to all of you for a job well done. "CFSP" is now established on a fairly firm, permanent footing at Penn State, and we feel that it is no longer necessary to bother so many people with the various problems connected with publication of the Catalog. We hope that we can still continue to call on you less formally when advice is necessary.

Hoping to see each of you in person before long, I am

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kwc

April 12, 1967

Dear Al,

The two catalogues of Fossil Spores + Pollen arrived today - In checking Auneal's mail, I noticed that you asked to hear of their arrival + I assume "these are they"! I found this card on the desk + don't know its intended purpose, so used it! Love to Betty + all -

Aleen

April 4, 1967

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Thanks for yours of 28 March. Bon voyage to Mexico!

The mystery of what happened to the copies of Option A that the records show were shipped remains unsolved. The shipment, of course, happened before either the girl at present responsible for such matters--or I--had arrived on the scene.

Under the circumstances, we are sending you replacement copies of Option A for volumes 24 and 25. The pay-as-you-go policy will take effect with volume 26. I do hope that MSU can pick up the tab for you--at least most of the time. Will you acknowledge receipt of 24 & 25, or instruct somebody to do so?--I want to be sure you really do get them this time.

Very best wishes.

Yours very truly,

Alfred Traverse
Editor
Catalog of Fossil Spores and Pollen

AT:kaw

DEPARTMENT OF GEOLOGY • NATURAL SCIENCE BUILDING

March 28, 1967

Dr. Alfred Traverse
Associate Professor of Geology
Dieke Building
Pennsylvania State University
University Park, Pennsylvania 16802

Dear Al:

I am unable to locate the copies of Volumes 24 and 25, Option A (card stock) of the Catalog of Fossil Spores and Pollen which were supposedly sent January 10, 1966, and May 26, 1966, respectively. The library has no record of receiving them and I did not receive them.

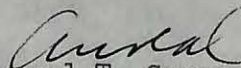
I purchased all my Option A volumes up to Volume 16, I believe. After that, I received them free by request. I presume the limitation of one bound volume (Option D), per member of the advisory committee, is reasonable.

Certain volumes may be purchasable on project funds but they must be directly pertinent to the project. The others I will have to purchase myself.

I have written to Manten concerning date when we may expect the publication of the issue of Marine Geology containing "Marine Palynology." I have heard nothing yet. I leave this coming Saturday for Scripps Institution and Mexico.

With best wishes,

Sincerely yours,


Aureal T. Cross
Professor

ATC:cs

March 23, 1967

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan 48823

Dear Aureal:

Enjoyed hearing from earlier this month. Sorry that you didn't get up here after Christmas. Weatherwise, it was probably a blessing, tho' East Lansing isn't exactly like the Florida Keys either, for that matter.

The reason that you got only 4,400 cards instead of 5,000 was that there turned out to be 9,400 instead of 10,000 as previously counted, and Al Loeblich's order for 5,000 came in before yours did. We certainly were grateful to you both for helping to free us from the investment in cards that we could no longer use.

Your bound volumes of the Catalog seem to be in order--that is, from what you say, you have received everything there is so far. Volume 26 is being printed and should be distributed within a couple of weeks unless the printers do us dirt. Volume 27 is also very nearly ready for printing. Volume 28 is on the ways. I am very hopeful that Volumes 29 and 30 will also appear this year and that we can stick to a 4 vol. per year production from now on. If we really could do it for a couple of years, I believe we could justify an enlargement of technical staff so that the production could get up to a point that the Catalog would be the indispensable aid that it should be.

Now, regarding Option A--the heavy cards: Our records show that they were shipped to you as follows--Vol. 24 on 10 Jan., 1966; Vol. 25 on 26 May, 1966. If you didn't get them, they must have been captured by the library or somebody, I suppose. The Michigan State Library has a subscription to Option D (bound vols.).

I do hope you will react favorably to a suggestion I have in this connection. We are reviewing as many things as possible that we can do to cut costs. One step I plan to take, with Bill Spackman's approval is to limit the complimentary copies of the Catalog. In particular, I plan to limit the copies sent to the advisory committee to one copy of Option D to each committee member. In other words, to get right down to cases, we think it would be desirable if you could get MSU, or one of your projects, to purchase volumes of Option A (cards) that you may need from now on. Let us know whether you want us to bill you personally or whom we should bill, presuming that you wish to keep up the cards.

No--I have heard nothing from Manten since the galley proofs. Mine contained also quite literally hundreds of errors. It would be very desirable for my professional development at this point in time (as Bill would put it) for the paper to come out. I am a little publication shy these last couple of years!

I should think you could refer to the Bahamas paper if you wanted to--it is in the abstracts for the Utrecht meeting. I would be happy to provide you with an illustration or two if you would find it useful.

Better get on with the chores. Do hope you understand about the belt-pulling-in re the Catalog.

Yours very truly,

Alfred Traverse
Associate Professor of Geology

AT:kaw

DEPARTMENT OF GEOLOGY · NATURAL SCIENCE BUILDING

March 1, 1967

Dr. Alfred Traverse, Editor
Catalogue of Fossil Spores and Pollen
Deike Building
Pennsylvania State University
University Park, Pennsylvania 16802

Dear Al:

It has been quite some time since I have had a chance to write to you. The cards which were ordered quite a long while ago finally were received today. I presume that our Purchasing Department, being at least a month to six weeks behind in purchases, was somewhat late in getting the order to you. The cards sent numbered about 4,400 instead of the 5,000 which were originally ordered. I think we can put these to very good use and would like to thank you for the opportunity to get them at this price.

At the present time I have received Catalogues in the green binder through Volume 25 and two Indexes through Volume 20 and two volumes of Translations. I presume there have been no further Catalogues issued though I have been somewhat concerned that perhaps some of the things that were being sent to me have been missent to the University Library and, in their cataloging procedures, they simply take those things which come in from unknown sources and list them as gifts. So if further Catalogues have been sent, please advise me.

Throughout the entire issue of the Catalogues I have been also obtaining the set on heavy weight cards. It is necessary for me to use these in the method which we are using in morphologic filing. I have not received Volumes 24 and 25 in this style. I need these as soon as possible because we are setting up our ~~type~~ catalogue or system for the Cretaceous of the Rocky Mountain area in connection with the program which we have been developing in the study of the palynology of the transgressive-regressive Marine Mancos shale-MesaVerde ~~shore-line~~ sequences. I would greatly appreciate if you could check with Mrs. Dolsen and see if these have been simply overlooked.

I had hoped to come to Penn State earlier this winter and had planned to visit Aleen's parents there right after Christmas but I haven't been able to get away. I am planning to go to Mexico on the Gulf of California project and will not be able to get up there now probably until after the middle of May.

I was wondering if you had heard anything from Manten concerning the publication of the special issue of the Journal of Marine Geology which is supposed to contain several papers on marine palynology. I have heard nothing since I submitted the corrected proof in November. Actually the galley proof which

Dr. Alfred Traverse
Page 2
March 1, 1967

I had was very poorly done. There were literally hundreds of errors introduced by an editor or the printer himself. There were many editorial changes which I objected to and these even included changing the names of authors like VanAndel so that it was alphabetized under Andel rather than VanAndel. Or Jekhowsky to be alphabetized under deJekhowsky, whereas Jekhowsky himself actually lists his name under the J alphabet. The plates looked good and the general paper seemed to come out pretty fair. I just hope that the thing comes out soon because I have been waiting for it. I am very anxious also to see your paper and had hoped to include some remarks concerning it in this paper I am presenting at the AAPG meeting in Los Angeles in April. I was impressed by the work you had done and the conclusions you had reached and felt that it was one of the more significant contributions to palynologic studies of marine sediments. But if the journal isn't out in time, of course, I will be unable to refer to it or to illustrate any portion of that which you have contributed.

Please give my regards to Bill Spackman, Russ Dutcher and others around there. With best wishes,

Sincerely yours,



Aureal T. Cross
Professor

ATC:cs

December 2, 1966

Dr. Aureal T. Cross
Professor of Geology and Paleobotany
Michigan State University
East Lansing, Michigan

Dear Aureal:

Phil Dolsen has done some further checking on the cost to the Catalog of the Keysort cards we discussed in San Francisco. The 10,000 of them we have on hand came to us at a cost of 3.4¢ per card. Therefore, if you would like to purchase 5,000 of them at \$170, it would enable the Catalog to get off the Keysort hook with no loss of money. (Presuming that Al Loeblich is able to take the other 5,000.)

Phil tells me that the check should be made out to The Pennsylvania State University, but that it should be sent to him, Catalog of Fossil Spores and Pollen, at the above address, not to the University as such. Similarly, if it is handled by purchase order, the order should be sent to C.P. Dolsen, etc.

Yours very truly,

Alfred Traverse, Editor
Catalog of Fossil Spores and Pollen

AT:le

26 Nov., 1966

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan

Dear Aureal:

Somebody told me during the meeting in San Francisco--
was it you?--about a thesis on the Pennsylvanian-Permian
boundary in Texas by a fellow named Fred Stone.

Is this one of your people? My note says that he is now
at Michigan State, but the note doesn't make clear the
source of that info. If he is one of your students or
co-workers, could you ask him to lend me the thesis for
a couple of weeks, or have him let me know what the procedure
is for me to borrow it? Would appreciate it.

Much appreciated your help with the CPSP meeting. If I can
count on your continuing help, it will be a source of
considerable comfort!

It was interesting to learn of Alene's connections with
Centre Lanes! Every time I drive by on my way to church
(I am curate of the parish in Philipsburg) I think of y'all.
Plan to visit the area soon!

Yours as ever,

Al

Alfred Traverse

THE PENNSYLVANIA STATE UNIVERSITY

ORGANIC SEDIMENTS LABORATORY
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Mineral Industries
Department of Geology and Geophysics

Area Code 814
865-6545
865-6543

October 20, 1966

Dr. Aureal T. Cross
Member, Advisory Committee, CFSP
Professor of Geology and Paleobotany
Michigan State University
East Lansing, Michigan

Dear Aureal:

Good to see you in Utrecht, though we had little chance to visit. I am writing to you as (new) editor of CFSP, to an esteemed member of the Advisory Committee.

I have proposed elimination of Option C (punch-cards) of the Catalog effective with Volume 26 (almost ready) as a step toward expedition of the operations here. The subscribers have responded slowly but mostly favorably to a questionnaire. Few (if any) people use the punch feature anyway. Any comments?

Yours very truly,

Alfred Traverse, Editor
Catalog of Fossil Spores and Pollen

AT:16

30 April, 1966

Dr. Aureal T. Cross
Department of Geology
Michigan State University
East Lansing, Michigan

Dear Aureal:

When I got back here I discovered that I had written Tidwell some time ago, probably the day I got your letter. In the meantime I had forgotten it--I suppose I must have written fifty such letters. There were letters here from the department chairmen of both Eastern Washington and Indiana (I guess Shaver is a committee chairman, not departmental chairman), expressing a degree of interest. I wrote Washington that I did not want to explore the matter in view of developments since I wrote them originally. I meant that there was also a formal offer from Penn State here when I got back. It is not technically permanent, but I am really sure that it will work out to be such eventually.

I wrote Shaver, however, that for personal and family reasons I would really prefer to go to Indiana (he is talking about the South Bend campus), and I would possibly reconsider if they gave me a good enough deal. Despite my tentative acceptance, I am not under contract at PSU. However, I would consider it impossible to reconsider unless the IU thing were pretty flashy. Chances are it'll be PSU.

I realize that this counters your advice. I do hope you won't be in a position to say "I told you so"!

Good to see you again in St. Louis. I had an interesting time with my friend, the slum priest from E. St. Louis. First time I ever slept in a real, for-sure tenement (in which we were the sole white people). His is a life of dedication. The people love him. The power structure of E. St. Louis hates him.

Yours as ever,

Hunt Institute for Botanical Documentation

Alfred Traverse

15 April, 1966

Dr. Aureal T. Cross
529 N. Harrison
East Lansing, Michigan 48823

Dear Aureal:

Your thoughtfulness in writing is very much appreciated! A friend in need is a friend indeed--a very true proverb.

The situation here, as far as I am given to understanding it, is that Steve Clabaugh was speaking for himself only when he promised me that I would be given consideration for a permanent deal here. Most of the other senior faculty members understood it to be a one-year deal to provide a body to teach the elementary course while the department was short-handed, period, explanation point. Trouble is, nobody told little old me. So, while I was signing up graduate students (had three of them) and so on, and asking people to send me this and that, I now know that various faculty members here were telling anybody who wanted to know that I wouldn't be here next year--for example, I have letters that indicate that this was going on at Kansas City last November. While I was giving you the impression that I would be here for good, Bill Muehlberger and others were telling everybody that I wouldn't be back for 66-67. Everybody agrees that I have done a good year, especially considering the handicaps; I am even having trouble keeping groups of my undergrads from demonstrating in my behalf (no kidding).

Well, no use worrying about all that. I will have letters in the mail to the places you suggest as soon as possible. Thanks very much for the suggestions. I'll let you know as soon as anything develops. I decided to go to AAPG (which I don't ordinarily attend), just on the chance I might hear about a teaching job. (That's definitely what I want.)

You are right about the fossils--let's keep open the possibility for where I do light, though. Regards to Alene. Yours etc.

Dr AIT Traverser
5508 Covey Lane
Austin, Texas



Sheraton-Lincoln Hotel Houston, Texas

4/13/66

Dear Al:

I was in Houston yesterday and talked with
Serenals by phone. They said you were still looking
for a job.

Check the following immediately.

Dr Wm Don. Donald Tidwell, Division of Science
Eastern Washington State College
Cheney, Washington.

He needs someone to teach this summer
good salary and it may be permanent
(if he goes to another Univ.) It is a high
paying job \$10,000 + for extra teaching, etc.

9 - Robert Shover
Dept. of Geology, Indiana University, Bloomington

They are opening 2 branches (Cory &
Indianapolis) and need staff immediately.

When I met you at Kansas City, I thought your
Austin job was permanent. When I found out it
isn't I decided not to send any fossils just for
someone to kick around after you leave. If
I am in error on this please let me know.

I'm writing this on a very rough flight
so please excuse the illegibility. I am nearly
sick, besides!

Best wishes

Hunt Institute for Botanical Documentation Arnell Cross

MICHIGAN STATE UNIVERSITY EAST LANSING

DEPARTMENT OF GEOLOGY

February 9, 1962

Dr. Alfred Traverse
Shell Development Company
Post Office Box 481
Houston 1, Texas

Dear Al:

Thank you very much for your late reprint on "Effect of 1959 International Botanical Congress on Nomenclature of Fossils, Spores, and Pollen." These papers which you have written have done considerable to organize the information which was accumulated at Montreal.

Is your work on the gulf coast flora and palynology and the relationship to modern sedimentation still under wraps at Shell? I have a proposal under consideration for a project in southwest Texas.

Best wishes.

Sincerely yours,



Aureal T. Cross
Professor

ATC:cs

PAN AMERICAN PETROLEUM CORPORATION

PAN AMERICAN BUILDING

P. O. BOX 591

TULSA 2, OKLAHOMA

August 25, 1961

Dear Dr. Traverse:

After September 15, 1961 I will become Professor in the Departments of Geology and Botany, Michigan State University, East Lansing, Michigan.

My mailing address will be:

DR
Aureal T. Cross
Prof. of Geology and Paleobotany
Michigan State University
East Lansing, Michigan

*Done
T. add*

My plan to return to University teaching has been known to many since I left West Virginia four years ago. I look forward to renewing my work of teaching and research in paleobotany, palynology, coal geology, and stratigraphy and sedimentation of U. Paleozoic rocks, especially of the Appalachian area. I will expect to once again participate in various meetings, field conferences, and society and committee activities relative to these subjects.

There are many fascinating aspects of the research on exploration for oil, especially palynology, which I have been doing for four years at Pan American's Research Center in Tulsa, which I am sorry to leave. I have enjoyed this experience and profited greatly from it by coming to understand much better what large corporations, and oil companies in particular, expect of our graduating geologists and what they need, and how these companies operate. I also have a much greater appreciation of the many facets of oil exploration besides geology, which bear on finding and developing oil fields.

My successor here at Pan American has not yet been named. However, the program of research in Palynology is in the very capable hands of six palynologists, Dr. Donald W. Engelhardt, Dr. Karl W. Klement, Mr. H. Y. Ling, Dr. Karl R. Newman, Dr. Edward A. Stanley and Dr. Charles R. Upshaw. I would appreciate it if you could continue to send copies of your separates to the Palynology Lab, Pan American Petroleum Corp. Research Center, P. O. Box 591, Tulsa 2, Oklahoma, or to one or more men on the palynology staff. The reports of your work are very useful here since a wide range of stratigraphic and paleoecologic problems from many parts of the world are under investigation. These studies involve the use of spores, pollen, hystrichospheres, dinoflagellates, chitinozoans, coccolithophorids, and other groups of algal or protistan affinity.

My family and I have enjoyed our sojourn in Tulsa immensely. My work at Pan American has been pleasant, instructive and interesting. We now look forward to our life and work in Michigan. Continued or renewed correspondence with you and exchange of reprints will be appreciated.

Sincerely yours,

Aureal
Aureal T. Cross
Research Group Supervisor

Dr. Alfred Traverse
Shell Development Company
Houston 1, Texas

File: D. T. Adams

January 12, 1960

Pan American Petroleum Corporation
Pan American Building
P. O. Box 591
Tulsa 2, Oklahoma

Attention Mr. George Roberts, Jr.

Gentlemen:

Thank you for your letter of December 18, 1959, regarding the exchange of reference fossil spores and pollen. After thorough consideration, we find we are not in a position to participate in the exchange program that you have outlined.

We appreciate your considering us and wish you success in this venture.

Very truly yours,

NOYES D. SMITH, JR.

Noyes D. Smith, Jr.
Vice President

DVH:mpd

bc. Vice President's binder
Mr. Purcell's binder
Technical Information binder
Mr. Connolly
Dr. Higgs
Dr. Traverse
R file

June 24, 1958

Dr. Aurzal T. Cross
Pan American Petroleum Corporation
P. O. Box 591
Tulsa 2, Oklahoma


Dear Aurzal:

I greatly enjoyed the visit to your fine laboratory facilities and even more, the visit with you. I hope you will convey my appreciation to your supervisors, especially to Harry, who seemed to pull all the stops to help us have a good time. We were tremendously impressed by your facilities and the general attractiveness of the whole laboratory.

The conference on nomenclature seemed to cover as much ground as possible in the time available. I think a great deal of good came of it in clarifying the issues and insuring that proposals eventually submitted will be as non-asinine as possible. It is my feeling that your presence at the meeting was a godsend to give some connection with the reality of how those things are handled. I intend to go ahead with the Section's nomenclatural activities along the lines we discussed. I am presuming you'll be chairman of the nomenclatural committee. You'll hear more about this, I'm sure.

It was fun to see Alene and your kids again. You seem to be pretty well entrenched in Tulsa for having been there only a year.

Very truly yours,


Alfred Traverse

AT:mpd

Shell Development Company
Exploration and Production Research Division

PAN AMERICAN PETROLEUM CORPORATION

(FORMERLY STANOLIND OIL AND GAS COMPANY)

POST OFFICE BOX 591

TULSA 2, OKLAHOMA

March 5, 1958

Dr. Alfred Traverse
Shell Development Company
Exploration and Production Research Division
3737 Bellaire Boulevard
Houston 25, Texas

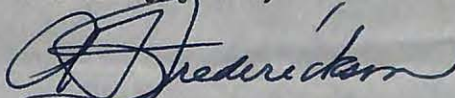
Dear Dr. Traverse:

✓ Aureal T. Cross, our palynologist, has told me of his recent telephone conversation with you and of the opportunity which you have extended to him to visit with you in Houston. Mr. Cross now plans to come to Houston Monday and Tuesday, March 10 and 11, to see you. At the same time he would also like to be able to visit with personnel in the technical service laboratory, including Dr. Mart P. Schemel.

If it can be arranged Mr. Cross would like to see the laboratory facilities and equipment which you are using in research on plant fossils in sediments, especially, spores and pollen grains. It might also be desirable for him to discuss with you the need for a general exchange of reference collections of modern or fossil spores and pollen and the methods by which such an exchange might be accomplished.

We would appreciate any courtesy which you may show to Mr. Cross and, in turn, hope you will have an opportunity to visit with us some time.

Sincerely yours,



A. F. Frederickson

AFF:rn

cc: S. W. Walker
T. A. Hendricks

VIA AIR MAIL

Peters

February 5, 1958

Dr. Aureal T. Cross
Pan American Petroleum Corp.
Research Center
P. O. Box 591
Tulsa 2, Oklahoma

Dear Aureal:

Just returned from a swing north, during which I laid some of the groundwork for the paleobotanical meeting in August, in Bloomington. Canright and Guennel will lead what looks like a good pre-meeting field trip (two days).

For the meeting-proper, I am trying to arrange a full-day program on Paleozoic spores, feeling that Bloomington is a natural for such a deal. From previous experience I know it's a long shot, but is there any chance that you could get together a contribution of some Paleozoic spore material and get permission to come and give it?

Best wishes to all the Crosses, as ever,

Very truly yours,

Alfred Traverse, Secretary
Paleobotanical Section, B.S.A.

AT:ml

Shell Development Company
Exploration and Production Research Division

September 10, 1957

Dr. Aureal T. Cross
Pan American Petroleum Corporation
Research Center
P. O. Box 591
Tulsa 2, Oklahoma

Dear Aureal:

Your paper was ably presented by Wayne Fry. I cannot seem to remember for certain that I gave the slides back to Funkhouser to convey to you or not. I certainly hope that I did, for they are not in my gear and would otherwise have to be listed as lost. The photography, by the way was nothing short of sensational. Easily the best slides on the program. Please let me know whether they turned up. I enclose your manuscript.

The meetings were on the whole very successful. The field trip was probably the best paleobotanical trip the Section has sponsored. I think the participants will agree that it was a good time and a profitable experience. It was also pretty hard work. The sessions in Stanford were well attended and reasonably good. The luncheon was a sellout--turned away 15 and fed 50. I found this hard to believe.

The business session was something of a disappointment. The palynological committee idea was talked to death. Even Koenike ended up being convinced by Grayson, et al., that it was not a good idea. I also failed to get approved a proposal that the secretary represent us on B.S.A. Council, which I think is a good idea because of the secretary being more in touch with affairs of the Section and a more permanent officer than the chairman. There are things going on in the B.S.A. that need our close attention. For example there is a good chance that the Sections, as such, may be abolished. Where would this leave us?

I enclose your carbon of letter to Grayson.

Very truly yours,



Alfred Traverse, Secretary
Paleobotanical Section, B.S.A.

AT:ml

July 17, 1957

Dr. Aureal T. Cross
Pan American Petroleum Corporation
Research Center
P. O. Box 591
Tulsa 2, Oklahoma


Dear Aureal:

Attached to this letter is a copy of the announcement sent to expected participants in the paleobotanical field trip. I think it provides the information you will find necessary for planning to attend. The experience of seeing that part of California should be valuable geologically, especially since there will also be opportunity to collect samples from some of the famous localities we are planning to visit. I know that Funkhouser of Carter Oil Co., and others of the oil company palynology laboratories are planning to collect material that can be used in their stratigraphic studies as reference material.

As for the meetings proper, I told you over the phone about the 4th National Pollen Conference, the program for which seems quite good to me. In addition, as you know, the business meeting of the Paleobotanical Section, B.S.A., will take up the various proposals under consideration for organization of palynologists of North America. This may be the most important discussion that has taken place at the Section's business meeting in many years. Magnolia, California Standard, Carter, Sun, and various Shell installations will be represented. Since Pan Am is now in the palynological business, it would seem reasonable that Pan Am should be represented at this important meeting.

A circular with the preliminary program for the Section's meetings will reach you soon.

Very truly yours,


Alfred Traverse, Secretary
Paleobotanical Section, B.S.A.

AT:map

Attachment

A. T. Cross

Approx. date: May, 1957

Mail to the Secretary of the Section before which the paper is to be presented before May 18. (See notes on abstracts.)

Section before which paper is to be presented Paleobotanical

Name Aureal T. Cross and William H. Gillespie

Institution or Address West Virginia Univ., and West Virginia Geol. Survey, Morgantown, W. Va.

Title of Paper Upper Pennsylvanian Flora of Fairfax Knob, West Virginia-Maryland.

Time required for presentation 15 minutes

Size and type of lantern slides 2x2 and 3 1/4

Detach here

Region III
Box LL, University Station
Grand Forks, North Dakota

January 21, 1955

Dr. Aureal T. Cross
West Virginia Geological Survey
Morgantown, West Virginia

Dear Aureal:

Many thanks for the package of reprints that came recently. They all are very welcome additions to my technical library, which must be a rather self-sufficient thing.

As I may have noted in our Christmas letter, I am being moved to the Bureau's station in Denver and a bigger opportunity to study all the Western fuels. Unfortunately, my preoccupation with moving at the end of February will prevent my attending the coal group meeting in Chicago next month.

Very truly yours,



Alfred Traverse
Coal Technologist

ATraverse:vh

cc: East
Traverse
File 625.1
C File



PAUL H. PRICE
STATE GEOLOGIST

STATE OF WEST VIRGINIA
GEOLOGICAL AND ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN

RECEIVED

MAY 11 1953

U. S. Bureau of Mines
Grand Forks, North Dakota

May 7, 1953

Dr. Alfred Traverse,
U. S. Bureau of Mines,
Grand Forks, North Dakota

Dear Al:

The information concerning the "Atlas" is given in the enclosed brochure. I obtained mine directly from Amt. fur Bodenforschung, Am Kleiner Felde 12, Hannover, Germany.

The copy for our library was obtained through Stechert-Hafner, 31 East 10th St., New York 3, (\$14.00).

My work is about to bury me alive. This has been a long busy winter. Spring is here but it is more of a monsoon season. Our summer field work gets under way in two weeks. I have not yet prepared my paper for the fall meeting at Madison, but will try to work it in during the summer. I hope to see you at Madison.

Hope your family is all well.

Best wishes,

Sincerely yours,

Aureal
Aureal T. Cross,
Coal Geologist-Paleobotanist
and
Assoc. Prof. of Geology,
W. Va. University

ATC/vf
Enc.

Region V
Box LL, University Station
Grand Forks, North Dakota

June 4, 1952

Dr. Aureal T. Cross
West Virginia Geological Survey
Morgantown, West Virginia

Dear Aureal:

Is there a chance you could supply me with the
addresses of

G. Leschik

1951 Mikrobotanisch-stratigraphische Untersuchungen
der jungpliocänen Braunkohle von Euchenau (Kr.
Hünfeld). Palaeontographica 92:B:1-2) and/or of

F. Murriger and H. Pflug

1951 Über die Altersstellung der Braunkohle
von Burghasungen, Bezirk Kassel, auf Grund pollen-
analytischer Untersuchungen und Vergleiche mit
anderen Braunkohlenvorkommen. Hess. Landesamt
Bodenf., Notizbl., ser. 6:2:87-97

1952 Über eine palynologische Untersuchung des
Braunkohlenlagers der Grube Emma bei Marxheim
(Untermaingebiet) Idene V.4:3

If you have either or both of these addresses, I
should like to write for copies of the papers.

Best wishes to all.

Sincerely yours,

AT

ALFRED TRAVERSE
Coal Technologist

cc Region V
Dr. Traverse ✓
File

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region V
Box LL University Station
Grand Forks, North Dakota

November 27, 1951

Dr. Aureal T. Cross
West Virginia Geological Survey
Morgantown, West Virginia

Dear Aureal:

Here is something in the way of formal acknowledgment of the wonderfully stimulating visit I had with you and the others in the Survey's laboratories. I very much appreciate the time you spent with me and hope that the experience can be repeated soon and often.

After the Detroit meetings I went to Urbana for a short visit and then came on up to Grand Forks. The laboratories here are all that had been promised and more - spacious and well appointed - but it will take me some time to get all of the necessary equipment and set it up for work.

Thanks once again for a valuable visit. Best wishes to all.

Yours sincerely,

ALFRED TRAVERSE
Coal Technologist

cc Traverse ✓

The Speech Department of West
Virginia University presents the
University Players in Noel Coward's

Attended w.

Johnna + Grant Schenck

Frederic + Alene Cross

PRIVATE LIVES

THE PLAY

PRIVATE LIVES is a light comedy in three acts. This play was first produced in London at the Phoenix Theatre on September 24, 1930, with Noel Coward, Gertrude Lawrence and Laurence Olivier in the major roles. PRIVATE LIVES enjoyed several long runs in the American theatre and is considered one of the outstanding works in Modern British Drama.

TECHNICAL STAFF

All scenery for this production was constructed in our own shops by students in technical theatre classes.

ASSISTANT TECHNICAL DIRECTOR _____ JOE FORD
STAGE MANAGER _____ PAUL BROWN
ASSISTANT STAGE MANAGER _____ NEIL SWANN

COSTUMES: Ann Ardigo, John Letopoulos, Heads; Anna Marie Baller, Helen Early, Evelyn Justice.

LIGHTING: Charles Cochran, Head; Charles Gates, Robert Whitehill.

MAKE-UP: Maria Brown, Head; Lorna Douglass, Barbara Hamrick, Roy Provins, Peggy Sells, William Simington, Phyllis Walker.

PROPERTIES: Lorna Douglass, James Welden, Heads; Ila Rose Dodge, Eileen Ficks, Edna Lee Giudice, Helen Richardson, Teddy Toothman.

SCENERY: Frank Black, Laul Brown, Roy Dickenson, Bradley Hope, Mary Ann Loar, Bob Murphy, Susan Myers, Dan Naranch, Frances Roush, Helen Richardson, Ray Stickley, Neil Swann, Jackson Vaughan, Charles Wheeler, Robert Whitehill.

STAGE CREW: Ray Dickenson, Ray Stickley, Charles Wheeler, Robert Whitehill.

SOUND: Harvey Gastineau, Al McClung, Dave Wiechman.

BOOKHOLDER: Evelyn Justice.

PRIVATE LIVES

by

Noel Coward

DIRECTED BY _____ Sam Boyd, Jr.
SETTINGS BY _____ Robert Burrows
LIGHTING BY _____ Charles Cochran

CAST

SIBYL	Darrance Crawford
ELYOT, her husband	William Simington
VICTOR	Jennings Martin
AMANDA, his wife	Carolyn Lowe
LOUISE, the maid	Doris Gabriele

SETTING

Act One: Hotel Terrace in Southern France.

Act Two: Amanda's apartment in Paris, evening, (three days later).

Act Three: The same, the following morning.

INTERMISSIONS

FIVE MINUTES

NOTICE: The State Fire Marshal and the City Fire Department have forbidden any smoking in any part of this building. This order includes both lobbies, upstairs and down. The building is not fire proofed and we solicit your cooperation to avoid a fire hazard.

November 1 2 3 1951

Curtain 8:15



STATE OF WEST VIRGINIA
GEOLOGICAL AND ECONOMIC SURVEY

PAUL H. PRICE
STATE GEOLOGIST

P. O. BOX 879
MORGANTOWN

October 16, 1951

Dr. Alfred Traverse
c/o U. S. Bureau of Mines
4800 Forbes Street
Pittsburgh 13, Pennsylvania

Dear Dr. Traverse:

I was very glad to hear from you and will be delighted to have you come to visit our laboratory at Morgantown. Dr. Price concurs in this invitation.

When I returned from Europe this summer I stopped off at Cambridge to see Elso and was surprised to learn that you were going to North Dakota. I think there is considerable opportunity in the new experimental laboratory and hope you will enjoy your work. It is my experience, however, that the Bureau of Mines has too little time for the fundamental and requisite, so called "academic", studies on fossil plants. Perhaps this will prove to be an exception.

The dates, November 1 and 2, will be satisfactory for us. Please give my very best regards to Mr. Parks and Hughie O'Donnell.

Sincerely yours,

Aureal T. Cross

Aureal T. Cross
Coal Geologist
Paleobotanist

ATC:ss

12 October, 1951

Dr. Aureal Cross
West Virginia Geological Survey
Morgantown, West Virginia

Dear Dr. Cross:

Having completed my work at Harvard, I am to do coal petrography work for the Bureau of Mines in the new lignite research installation in Grand Forks, North Dakota. As you know, I am primarily a paleobotanist. It seemed wise, therefore, for me to spend some time here learning the Bureau's techniques and methods for coal petrography. This I have done during the last two months with the help of Messrs. Parks and O'Donnell. Before going out to North Dakota I'd like to visit Morgantown, talk with you about coal work and paleobotany, and see as much as possible of the laboratories and so forth in Morgantown. If possible for you, I'd like to come for the 1st and 2nd of November. I have also written Dr. Price about this.

Sincerely,

Alfred Traverse