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#### *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.

Date: Mon, 20 Nov 1995 09:40:13 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: microtome;NCA  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Gee, you were working late on a Sat. night!

Actually, I suspect the microtome (a very good, heavy duty one) still exists. When Spackman retired some years ago Alan Davis took over all of his equipment, and he's not a thrower. I have a phone call in to him to check. But one also needs the blade sharpening device, and God knows where that is--I'll ask about that too. Embedding is no big problem. I suspect if you just came to visit me Betty would break down and help cheerfully. She doesn't like me volunteering her, however. So, we have two ladies on our hands with bruised sensibilities.

Because I got yet another message from NCA this a. m. You mustn't leak that I informed you! She is still concerned that you are just angling for a place to work with no intention of a cooperative project. However, she notes that you and she have a lunch date, and she will discuss possibilities with you. She emphasizes that without a credible cooperative project she can't push the application for an appointment for you past the dean. Nan is a very reasonable person, but she is pretty nervous understandably about her position. UCB has a Harvard-like rep for keeping young Ph. D.s around for the usual 6-yr. sentence and then cutting them loose. I think you can convince her that cooperation with SJF will HELP her cause, not be a burden. By the same token, I think that the project you two undertake could help YOU get established somewhere in the area--USF, SJS, Stanford, etc.

All the best. Alfred.

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236. Received: from [129.236.30.167] (core\_kbox\_167.ldgo.columbia.edu) by lamont.ldgo id AA26339; Sat, 18 Nov 95 08:03:35 EST  
Message-Id: <9511181303.AA26339@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Sat, 18 Nov 1995 08:07:01 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Re: microtome  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

Thanks for checking with Betty. There's not much to be done if the microtome has vanished. And Betty is perfectly justified if she prefers to spend her time on German. I'll see if anyone at Berkeley has the proper knowledge and tools.

I think I've straightened things out with Nan. At least I hope so. We are back to focusing on collaborative issues. I appreciate your letting me know there was a misunderstanding. E-mail can be a very tricky medium.

Sarah

Sarah J. Fowell  
Lamont-Doherty Earth Observatory  
Palisades, NY 10964  
Phone (914) 365-8709  
Fax 914 365-8154

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236. Received: from [129.236.30.167] (core\_kbox\_167.ldgo.columbia.edu) by lamont.ldgo id AA26307; Fri, 17 Nov 95 13:06:34 EST  
Message-Id: <9511171806.AA26307@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Fri, 17 Nov 1995 13:09:58 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Re: NCA etc.  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

Oh dear. My primary reason for requesting an introduction to Nan Arens at all was, of course, because of the potential for collaboration. In her first message, SHE offered to try to get me a Research Associate position at the musuem. I was very excited by this, and told her so. I explained my current position (bi-coastal relationship and so on) very frankly, and told her how much access to library and labs would help me. I had never considered this before, so I was thrilled. But I also told her that I wanted to discuss collaborative projects and was thinking some ideas over.

I'm sorry she got the idea I just wanted space. Maybe I shouldn't have jumped on the offer so quickly. I have sent her a note that I hope will clear up the matter. It is very unfortunate that she got the wrong idea, especially as I haven't met her yet. Thanks for letting me know there is a problem.

And thanks for sending me the Pocock paper!

Best.

Sarah

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Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236.30.171]) (core\_kbox\_171.ldgo.columbia.edu) by lamont.ldgo.columbia.edu [129.236.30.171] id AA18894; Thu, 16 Nov 95 13:51:10 EST  
Message-Id: <9511161851.AA18894@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Thu, 16 Nov 1995 13:54:33 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Indiana  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

Thanks for sending Nan a note about me. I heard from her today, and we're planning to meet when I am in California.

I just received e-mail from Indiana, informing me that I am no longer being considered for the position there. So if you haven't sent them a letter already, I suspect it would be fruitless to do so.

Sarah

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Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236.30.171]) (core\_kbox\_171.ldgo.columbia.edu) by lamont.ldgo.columbia.edu [129.236.30.171] id AA08600; Wed, 15 Nov 95 16:47:20 EST  
Message-Id: <9511152147.AA08600@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Wed, 15 Nov 1995 16:50:41 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Re: Nan Arens  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

Glad you made it home safely, especially in light of the slippery conditions. The waiting must have been exceedingly dull, but it's lucky that you missed the excitement.

Thanks for contacting Nan Crystal Arens about me. It is true that I am on the lookout for a job in the bay area, but it hardly seems likely that one will materialize merely because I wish it. Jobs are a bit hard to come by at present, and I do not intend to restrict the scope of my search. Nevertheless, the bay area would be ideal.

I look forward to receiving Pocock's tome. Thanks for taking the trouble to xerox. I can pay for it, if it is very expensive.

Sarah

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Date: Wed, 15 Nov 1995 13:54:31 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: Nan Arens  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

It's Nan Crystal Arens, and she likes the whole thing in formal addresses. She says that one reason is that the initials "N.A." are not very flattering. I'm e-mailing her about you.

Betty isn't here today, but I'll talk to her about the microtome business asap and get back to you.

The trip home went great to Lock Haven, about 35 mi. from here. Then I ran into the aftermath of a freezing rain episode and cars all over the road, upside down, on their sides, etc. I (and thousands of other vehicles, stretching for miles) had to wait for 2.5 hrs. while they cleared it up. Nobody killed. I was lucky I didn't leave you at 11.30!

I found Pocock's thing--it isn't confined to Jr and Tr and is about 200 pp. long, including various unnumbered parts. I'll copy it as soon as I can get around to it and mail to you.

All the best. If I read correctly between the lines, you should be looking for a job at Stanford, San Jose State, or wherever?

Alfred

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236. Received: from [129.236.30.172] (core\_kbox\_172.ldgo.columbia.edu) by lamont.ldgo id AA19814; Mon, 13 Nov 95 12:26:16 EST  
Message-Id: <9511131726.AA19814@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Mon, 13 Nov 1995 12:29:34 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Nan Ahrens  
Content-Type: text/plain; charset="us-ascii"

Hi Alfred,

I just watched you drive off in your monster truck. Hope you had a safe and reasonably pleasant journey home.

This note is to remind you that I am seeking an introduction to Nan Ahrens. I will be in California (Bay Area) from Dec. 1 until Dec. 27, and would like very much to meet with her. As I told you, I have been spending a good deal of time there (every third month, just lately), and I would very much like to meet someone in the area with whom I could collaborate. I think that would be the best use of the time I spend there. I will be happy to contact her myself, but a more formal introduction from you probably would not hurt.

I also want to remind you about possibly slicing the wood samples sometime this spring. If the microtome is still there, and if Betty has the time, I would very much enjoy learning how to do that.

Thank you so much for visiting and discussing data with me. I'm looking forward to seeing what we can do with the New Brunswick samples.

Take care. Enjoy your trip to California. My best to Betty.

Sarah

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Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236.129.236])  
Received: from [129.236.30.172] (core\_kbox\_172.ldgo.columbia.edu) by lamont.ldgo.columbia.edu  
id AA14970; Mon, 13 Nov 95 11:32:06 EST  
Message-Id: <9511131632.AA14970@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Mon, 13 Nov 1995 11:35:24 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Pocock  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

Please remember to send me a copy of Pocock's unpublished work on Triassic and Jurassic bisaccates.

Thanks so much for taking the time to come visit.

Sarah

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Fax 914 365-8154

Received: from r04n12.cac.psu.edu (r04n12-fddi.cac.psu.edu [146.186.157.10]) by  
Received: from [146.186.155.88] (houston.bmb.psu.edu [146.186.155.88]) by r04n12  
Date: Fri, 3 Nov 1995 13:10:37 -0500  
Message-Id: <199511031810.NAA28656@r04n12.cac.psu.edu>  
X-Sender: rw9@email.psu.edu  
Mime-Version: 1.0  
To: traverse@ems.psu.edu  
From: rw9@psu.edu (Rosemary Walsh)  
Subject: Info on past EM work  
Content-Type: text/plain; charset="us-ascii"

*file Sarah Fowell*

Dear Dr. Traverse,

During our August, '95 Open Lab, you mentioned that perhaps the bill for Sarah Fowell's work was never sent or if sent went unpaid. I asked our accountant about this and only recently she came up with information from the Bursar's office indicating that indeed the bill was paid by Columbia University. I thought you might like to know that.

Regards,  
Rosemary

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from [129.236.30.194] (core\_kbox\_194.ldgo.columbia.edu) by lamont.ldgo  
id AA11990; Mon, 30 Oct 95 11:06:01 EST  
Message-Id: <9510301606.AA11990@lamont.ldgo.columbia.edu>  
Mime-Version: 1.0  
Date: Mon, 30 Oct 1995 12:09:11 -0500  
To: traverse@ems.psu.edu  
From: sjf@ldgo.columbia.edu (Sarah Fowell)  
Subject: Re: reprints, visit, rec  
Content-Type: text/plain; charset="us-ascii"

Dear Alfred,

6 PM on the 12th of November will be fine. I will alert Paul and Annika.

I will be interviewing with IU at GSA in New Orleans next week. This apparently means I have made the short list, so I assume they will contact you to ask for a recommendation, if they haven't already. I'm really excited.

Looking forward to your visit.

Sarah

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Palisades, NY 10964  
Phone (914) 365-8709  
Fax 914 365-8154

Date: Wed, 25 Oct 1995 11:39:51 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: reprints, visit, rec  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

The fat package with the reprints arrived a couple of days ago. Thanks a lot. But don't I owe something? Don't worry about extra copies. I'll make more by xerox as needed.

Regarding the recommendation, I deduce that I just wait for a contact from IU (as Hoosiers such as Betty call it)? From the ad you seem to be an IDEAL candidate and xx on top of the actual facts. If I am supposed to fire my letter at them without waiting to hear, let me know. Maybe would have more impact?

Visit: I will try very hard to be at the Lamont gate at 6:00 p. m. Last time I underestimated the driving time, but that won't be a problem on this occasion. I am really looking forward to being brought up to date on the project with which I have had so many connections--including my emotional ties to New Brunswick, where I spent every summer from birth to college.

*Sun. 12 Nov.*

All the best. Alfred.

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236. Received: from ghost.ldgo.columbia.edu by lamont.ldgo.columbia.edu (4.1/SMI-3.2) id AA07011; Tue, 17 Oct 95 12:24:18 EDT  
Received: by ghost.ldgo.columbia.edu (4.1/client-1.5-LDEO) id AA15295; Tue, 17 Oct 95 12:24:09 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Date: Tue, 17 Oct 95 12:24:09 EDT  
Message-Id: <9510171624.AA15295@ghost.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
Subject: Re: visit  
Content-Type: text

Dear Alfred,

Nov. 12-13 will be just fine. Paul can meet you at Lamont and guide you to his house. I've been there a couple times, but I'm sure I couldn't find it again either. Just let us know at what time you expect to arrive.

I'm sorry, I forgot about the reprints that you mentioned in your previous note. Yes, my initial request for additional reprints appears to have been lost in the mail, along with the first copy of the revised manuscript. I chose not to order more because of the exorbitant price. But I will send you a dozen immediately. That leaves me approximately 20. We were given 50, but I have received quite a few requests for reprints already. So I guess we will both be reduced to xeroxes in the near future.

If you feel a dozen is not enough, let me know. You can have the other 13 if you wish. I'm just thinking that I seem to be getting lots of requests for reprints, so I figure I'm sending them out for both of us. Is this OK with you? I just don't want you to feel cheated of your fair share. Especially since I'm the one who was supposed to be in charge of the order.

Please continue to be didactic. I need someone to correct my English every now and then. I try to be careful, but every once in a while I slip up.

Looking forward to seeing you in November. I would particularly like to discuss results from the Fundy assemblages. I think it's time we got together and started writing up the results from those localities. Hopefully I'll have some productive samples to add to what you have gotten already. I'll try to get mine through the lab before your visit.

My best to Betty.

Sarah

Date: Mon, 16 Oct 1995 19:45:13 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: [sjf@lamont.lidgo.columbia.edu](mailto:sjf@lamont.lidgo.columbia.edu)  
Cc:  
Bcc:  
Subject: visit  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

O. K., let's go with 12-13 November. Would Paul agree to meet me at Lamont, as he did last time? That worked great. I just know I could never reconstruct that route from Lamont to their house. If so, let me know what time they want me to hove into sight there. Tell Paul I'll do better about timeliness--I underestimated the driving time on the previous occasion. If they're willing to have me, that's a big plus. I enjoyed both of them very much, and the little room was a joy.

You didn't comment on my first paragraph, which was an enquiry about the reprints of our paper--I really only need one, to make xeroxing more practical than with the library's (now bound) copy. You did get at least the minimum freebies? Actually I can't recall where we left it, except that I think you said that you didn't get the reprint order sent in with the proofs, and that therefore reprints would be prohibitively expensive. Under normal conditions, I was ready to spring for paying for them.

I can't stop being didactic: it's "...either of these dates IS...." No charge!

Leo Hickey called a week or so ago with the latest BC story, which I'll share in November.

Cordially. Alfred.

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236.  
Received: from by lamont.ldgo.columbia.edu (4.1/SMI-3.2)  
id AB10317; Mon, 16 Oct 95 11:47:38 EDT  
Date: Mon, 16 Oct 95 11:47:38 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9510161547.AB10317@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: Nov. visit  
X-Lines: 13  
Content-Type: text

Dear Alfred,

Thanks for getting back to me regarding your fax number. I have applied for a "geobiology" position at the Indiana University-Bloomington. I'll send you an updated cv and a copy of the ad later this week.

As for November, Monday the 13th or the 20th would work for me. And you would be welcome to stay with Paul and Annika on Sunday the 12th or 19th. Let me know if either of these dates are good for you.

Sarah

Date: Fri, 13 Oct 1995 14:37:37 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: Nov. visit  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Thanks for your note of 12 Oct. I almost sent you one yesterday, because I was doing some filing, and was reminded about the reprints. I need one, in order to have xeroxes made for further copies.

Re the visit to NYC area: my classes are on Tues. and Thurs. That is somewhat limiting. I think the best idea is to drive down on Sunday, stay overnight, then report to you first thing Monday, with the idea of getting out by early afternoon for the drive back. Betty has choral society on Mon. evening, so will probably not come with, as she has already missed too many sessions. Please select a Mon. that would work best for you. I'm really looking forward to it.

Fax no.: 814-863-7823. Good to know you're trying for other jobs, as one really can't and shouldn't "go home." In the meantime, it's nice to have home, of course. (Home is defined as that place where, if you show up, they have to let you in.)

Best. Alfred.

Received: from lamont.ldgo.columbia.edu (lamont-gate.ldgo.columbia.edu [129.236.30.190] id AA17598; Thu, 12 Oct 95 17:25:02 EDT)  
Received: from 129.236.30.190 (core\_kbox\_190.ldgo.columbia.edu) by lamont.ldgo.columbia.edu [129.236.30.190] id AA17598; Thu, 12 Oct 95 17:25:01 EDT  
Date: Thu, 12 Oct 95 17:25:01 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9510122125.AA17598@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: fax number  
X-Lines: 21  
Content-Type: text

Dear Alfred,

I have returned from California. I'll be here at Lamont except for Oct. 25-29 (a conference in S. Carolina) and Nov. 4-9 (GSA). Under the circumstances, it looks like mid-November would be the best time for you to visit, at least from my point of view. What are your plans?

Can you send me your fax number? I'm applying for more jobs, and Bloomington, Indiana insists that I list fax numbers for all my referees. I'm particularly interested in this job, because it is described as a "geobiology position". The ad is in the August GSA Today (I just noticed it). I'll send you a copy when I send out my application, so you know what they are looking for.

Let me know when you would like to visit. I look forward to seeing both you and Betty, so I hope a trip to Lamont/New York is still in the works.

Sarah

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from 129.236.30.187 (core\_kbox\_187.ldgo.columbia.edu) by lamont.ldgo.c  
id AA14878; Mon, 21 Aug 95 16:22:14 EDT  
Date: Mon, 21 Aug 95 16:22:14 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9508212022.AA14878@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: October  
X-Lines: 15  
Content-Type: text

Dear Alfred,

November would be fine as well. I will be back immediately after  
GSA, which I believe is the first week of November. But I will have to  
check.

I will also have to find out when Paul returns from Morocco. But I  
believe he will not stay more than 2 - 3 weeks. I'll let you know as soon  
as I learn what the firm dates are.

Best,

Sarah

Date: Mon, 21 Aug 1995 15:31:56 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: October  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

This a. m. I wanted to fire off a note about the solid gold reprints before you got in over your financial head. Therefore, I didn't wait to think about the autumnal visit.

It's a little difficult all around, huh? I mean, Betty and I have to make our annual fall visit to our place in the Adirondacks in early October. Because the palynology course is on, that means leaving on Thurs. after class and returning the following Mon. Because of bad experiences when we leave it until the second week, we are planning for 5-9 Oct. In addition to the fact that it is awkward to be gone during two weeks running when the course is on, the next weekend ends on 16 Oct., which is just when Paul plans to be leaving. This seems to say that it would be better to wait until November? What do you think? When would you both be back? November is quite open for me at the moment. October would be better in that the iron will be hot, but one must face facts.

It is very kind of Annika and Paul to offer to put me up. I loved that little room. It is good to know they are married, as it gives A. some personal security of a kind that most women find emotionally satisfying. She has given Paul a lot.

All the best. Alfred.

Date: Mon, 21 Aug 1995 09:17:46 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.lidgo.columbia.edu  
Cc:  
Bcc: Sarah Fowell  
Subject: reprints  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Yours of Fri., 18 Aug., came while we were at my only nephew's wedding in Annapolis, MD. It was a super occasion for the whole family. My kids' only first cousin. Etc.

Netherlands guilder is \$0.60. The hundred reprints will be more or less one thousand dollars. That makes them \$10 apiece, and in my opinion not worth it. I would advise taking the freebies and having Kinkos make the rest (if they refuse--and they shouldn't for the authors--Betty will make enough for me. Is there a chance you have the decimal in the wrong place? It's possible that Kinko's would have a better price for more copies, but I don't know. It sure is too bad we somehow blew the early order possibility, but really, even that was \$750=\$7.50 per copy, which is ridiculous. I suspect, tho', that there was a 300 or 500 copy price that was more like \$2 each.

Have fun in NB, you lucky gal.

Best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from by lamont.ldgo.columbia.edu (4.1/SMI-3.2)  
id AB17298; Fri, 18 Aug 95 11:40:49 EDT  
Date: Fri, 18 Aug 95 11:40:49 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9508181540.AB17298@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: reprints  
X-Lines: 28  
Content-Type: text

Dear Alfred,

I have received word from Elsevier that we can order more reprints, but there will be an extra charge because the printing plates are destroyed after printing. Anyway, it seems the minimum of 100 reprints will cost Dfl. 1578. That's Dfl. 1218 (regular price) + Dfl. 360 (extra charge). I'm not sure exactly what the conversion is, but I intend to order more. How many do you want? Obviously I must order at least 100, and I have 25 of the "freebies" for you. How many more do you want, at that price?

Also, my October schedule is more concrete now. I will return to Lamont on Sept. 28, so I'll be here most of October. I leave again for a conference on Oct. 27. Paul and Annika say that they would be happy to have you stay at their house again when you visit. But Paul leaves for Morocco on Oct. 17, so it would be best if you could arrange to come the first or second week of October. Let me know what works for you.

By the way, I recently found out that Paul and Annika were married in June. I wasn't here, and they forgot to tell me. I have belatedly offered my congratulations.

I hope things are going well in Pennsylvania. Give my best wishes to Betty.

Sarah

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from 129.236.30.187 (core\_kbox\_187.ldgo.columbia.edu) by lamont.ldgo.c  
id AA18352; Mon, 7 Aug 95 16:58:50 EDT  
Date: Mon, 7 Aug 95 16:58:49 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9508072058.AA18352@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: address  
X-Lines: 17  
Content-Type: text

Dear Alfred,

The address should be fine. I just got your last message, and I also have one from yesterday (regarding where to get maps and a possible visit to the New York area). So I don't know why you get a message that there is a problem. Everything seems to be in working order.

Thanks for the information about maps. And I think it would be a wonderful idea for you to visit sometime in mid October. We can exchange data and discuss which way to proceed at that time. I will probably be away for much of September and the first few days of October. I will let you know when my travel plans are finalized, and we can discuss dates for you visit at that time.

Sarah

Date: Sun, 6 Aug 1995 10:58:11 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
BCC:  
Subject: maps  
X-NUPop-Charset: IBM 8-Bit

Sarah Fowell

Dear Sarah:

Before I forget, thanks for using a salutation--some of my e-mail correspondents seem positively curt. Neither salutation nor signature, to say nothing of kind wishes.

Now, about NB maps. It was a LONG time ago that I spent a couple of hours at the geological survey office in Fredericton, picking up the latest geological and topographic maps. I decided from that experience that the only good procedure was to go there in person and peruse. Extra copies I ordered later by mail. I would advise you to phone ahead to inquire whether they still have a publications office with map sales--if they do, don't let them try to talk you out of going, with the word that they "have a branch office in Sussex that is just as good, etc." They can also provide you with directions to their current location. When making your phone calls, try Geological Section, Department of Natural Resources, Government of New Brunswick. When I went they had the maps for the NB Survey, or whatever it is now called, as well as those for the GSC, but be sure to ask whether GSC perhaps now has a separate office in Fredericton, which you would also want to visit. As of the 70s, when I went, the abovementioned "Geological Section" housed the whole thing.

Now, as to which maps to get, I would say get whatever topographic and geological maps they have, at all scales, that involve Bay of Fundy coastal areas of NB. That won't be more than 20 maps, at most. I don't see any point in listing the ones that I hold, as they are surely in part supplanted. When you get back, perhaps in mid to late October when you are partially recovered from the trip, you could invite me down to LDGO to see your samples, perhaps get cuts of a few, talk about your results, and check out your maps. I could then order the ones that I might want by mail, after checking out yours. I could, incidentally, also pick up my assignment of reprints of our paper at the same time and save you from shipping them. Betty and I might make it the chance to visit the BA again. We would stay in a motel, on the west side of the Hudson somewhere. Maybe her brother would even see us.

That seems to cover it. Back to the microscope.

Regards to Paul [and Annika, whom I much liked, if she is still part of the picture] and greetings to you, dear friend. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from core\_kbox\_186.ldgo.columbia.edu by lamont.ldgo.columbia.edu (4.1/  
id AB15431; Fri, 4 Aug 95 14:23:51 EDT  
Date: Fri, 4 Aug 95 14:23:51 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9508041823.AB15431@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: maps  
X-Lines: 10  
Content-Type: text

Dear Alfred,

I think your idea to stop and get new maps at Fredericton was a good one, so I'm planning to stop there myself. However, I'm not sure where to go. Can you provide me with further information? I'll be happy to pick up a set of maps for you also. Just tell me which ones you want.

Sarah

Date: Wed, 2 Aug 1995 14:51:23 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: NB  
X-NUPop-Charset: IBM 8-Bit

*Fowell*

Dear Sarah:

Well, I'm worse than sorry, I am bigtime disappointed--I want to go so badly that it hurts, but I suppose Betty is right. After making a big fuss to be allowed to give palynology it just wouldn't "look right" and might even get me in big trouble to miss classes right at the very beginning of the semester, just when people are switching classes, etc. I did that at least once because of an international meeting, but I had Andy Schuyler to cover, and besides, the situation was different.

I've hoped in recent years that it would turn out that you and I could do a series of papers on the Fundy palynofloras, and I still hope so. So, I'd say collect all you can, and send me small (100 g.) cuts of what you're going to work with. Also, please keep an eye out for megafossils. I think still of trying to get Sid Ash to join us up there one day soon to go after them. I recall from my previous two visits, that there is a lot of megafossil paleobotany to be done.

Have fun. Best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from core\_kbox\_186.ldgo.columbia.edu by lamont.ldgo.columbia.edu (4.1/  
id AB20276; Mon, 31 Jul 95 14:05:46 EDT  
Date: Mon, 31 Jul 95 14:05:46 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9507311805.AB20276@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: NB trip  
X-Lines: 12  
Content-Type: text

Dear Alfred,

So sorry you can't make it to NB. Paul and I are disappointed, but of course we understand that teaching the class has to take precedence. If you should figure out a way to manage it in the next couple weeks, let us know. We'll be happy to meet up with you, even on short notice. Otherwise, please let me know if there are any particular horizons that you would like sampled. I'll try to get them for you.

Sarah

Date: Mon, 31 Jul 1995 13:44:55 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.lidgo.columbia.edu  
Cc:  
Bcc:  
Subject: NB trip  
X-NUPop-Charset: IBM 8-Bit

Fowell

Dear Sarah:

Well, I went to the travel agent this a. m. and came up with about four ways to make the trip, of which the fly to Bangor, get rent car and drive to SJ via Fredericton seemed most economical and practical for a variety of reasons. At the moment I actually hold such reservations, including car.

HOWEVER, and this is the most difficult decision in recent years because I so much want to go--more careful consideration with Betty of problems--especially that I would have to miss two periods of the palynology class which I am being allowed to teach on sufferance--make me realize that it would be unreasonable to attempt it. There are other problems with the timing, but none of them is so compelling as that one. I'm going to have to be exemplary to keep the course alive in retirement.

Hope you understand. It's just damnable that I can't be there. Have fun.

Best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu [129.236.10.30]) by p  
Received: from by lamont.ldgo.columbia.edu (4.1/SMI-3.2)  
id AB07138; Mon, 31 Jul 95 09:55:29 EDT  
Date: Mon, 31 Jul 95 09:55:29 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9507311355.AB07138@lamont.ldgo.columbia.edu>  
To: traverse@ems.PSU.EDU  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: NB  
X-Lines: 15  
Content-Type: text

Dear Alfred,

Paul and I will not be in a big rush on the 25th. We will be happy to wait for you before leaving for the field. Paul is flying to NB, because he is running the annual Mobil field trip there. I will be driving up on the 23rd and 24th. Paul will be staying at the St. John Hilton, so it would be easy for us all to meet there.

I think the maps are a good idea. We could use a new set as well. I hope the travel agent can work out something that is convenient for you. Keep me posted.

Sarahj

Date: Sun, 30 Jul 1995 13:48:42 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: NB  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Yours of 28 July read this a. m., as I spend the usual Sunday-at-the-lab.

First day of classes here is on 23 Aug., and it is a big no-no to miss the first day, which for my class is 24 Aug., p. m. And, unlike 1994, there is no Sarah Fowell to cover for me!

Tomorrow I'll go down to the travel agency and see what can be done. Let me have a few more details about the meeting in St. John--late in the day? Also, what did you think about my suggestion that it would helpful to visit the geological survey office in Fredericton to get a good set of the latest maps? I'm toying with the notion of flying, say to Bangor, on the 24th late, then leaving with a rent car early on the 25th for St. John via Fredericton to get maps. That may not be possible anyway, but surely wouldn't be if you were planning to get right out into the field on the 25th. However, the distances aren't great, and the roads are good...Are you and Paul flying or driving to NB? If you both are driving, there would be two vehicles? Etc.

So, let me hear what your reactions are on this map business, etc. Meanwhile I'll get to travel agency.

All the best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu) by pangaea.ems.psu.e  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA14844; Fri, 28 Jul 95 13:35:42 EDT  
Received: from lamont.ldgo.columbia.edu (4.1/SMI-3.2)  
id AB25273; Fri, 28 Jul 95 13:35:09 EDT  
Date: Fri, 28 Jul 95 13:35:09 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9507281735.AB25273@lamont.ldgo.columbia.edu>  
To: traverse@ems.psu.edu  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Re: NB etc.  
X-Lines: 13

Alfred,

Paul and I will be meeting in St. John on the 25th of August. We will do field work in NB first, then move on to NS. I will probably stay until August 31. You are very welcome to fly up and join us for as many days as possible, and I will be happy to bring your samples back to NY with me and put them in the mail.

Let me know how this works out for you.

Sarah

Date: Fri, 28 Jul 1995 11:58:50 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: NB etc.  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Being with you in NB in late August will not be easy for me because of the beginning of semester here (I am teaching palynology even tho officially emeritus), and family obligations relating to my 70th birthday. However, I really want to do it. Could you give me more details about exact dates, so I can see if I could shoehorn it in? The last week of Aug. actually is only five days, but perhaps you mean the next to last week? When would you be in NB in particular?--I note that NS is also on the docket, and I am only interested in the NB part. Someone should go to Fredericton to get updated maps. Mine are all very old. Anyway, please give me more details. I'd have to decide whether to fly up or drive--probably fly and hope you'd bring my samples/specimens back to NY.

No, I didn't know about the non-arrival of the revised copy of MS--hope that didn't cause any other mischief! I can't recall what I said about reprints. I know they are more expensive after the fact, but couldn't you protest as a hardship case? How many I want will depend on price. I would think at least 100, however.

To find about the availability of the generic cards, write Jan Jansonius: Institute of Sedimentary and Petroleum Geology, 3303 33rd St. NW, Calgary, Alberta T2L 2A7, Canada. e-mail: Jjansonius@gsc.emr.ca The cards are actually published at the University of Calgary, but the personnel change, and JJ can direct you to the right address. Supplements come out from time to time. If (I doubt it) the cards are out of print, you can come here some day and xerox the lot.

Thanks for phone number. Now that I'm emer. I pay for phone calls, but not (as yet) for e-mail, so tend to use the latter!

All the best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu) by pangaea.ems.psu.e  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA09369; Thu, 27 Jul 95 11:27:43 EDT  
Received: from 129.236.30.194 (core\_kbox\_194.ldgo.columbia.edu) by lamont.ldgo.c  
id AA25462; Thu, 27 Jul 95 11:23:08 EDT  
Date: Thu, 27 Jul 95 11:23:08 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9507271523.AA25462@lamont.ldgo.columbia.edu>  
To: traverse@ems.psu.edu  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
X-Lines: 43

Dear Alfred,

Thanks for the xeroxes of Bruce's thesis and your notes on sampling locations. They arrived on Monday.

Paul and I are planning to be in New Brunswick/Nova Scotia during the last week of August. We would be happy to have you join us if you wish to do so. We will be sampling for pollen and making decisions regarding the best intervals for paleomag sampling. I hope that Dennis Kent will be able to come with us to take paleomag samples, but he may have to make the trip at a later date.

I have received the reprints of our RPP paper, but there are only 50 of them. It has suddenly occurred to me that the order form may have been included with the revised copy of the manuscript which was lost in the mail. Did I tell you about that? I sent one copy by airmail, and a month later I learned that it had never arrived. So I sent another copy by Fed Ex. But until now I never thought of the reprint order forms. I sent e-mail to Elsevier, requesting information about ordering additional reprints. I hope we can still do it. I remember that you asked for 200. Is that correct? I have received several requests for reprints already, so I'll definitely want more than 50 copies for myself as well. I'll let you know as soon as I hear from Elsevier.

Since I am beginning a project on palynofloral diversity, I am thinking it would be nice to own a set of "genus cards" like the ones you have. Can you tell me where I can get a set? And do you know (approximately) how much they cost? I'll probably be basing most of my determinations of diversity on genera rather than species, in order to avoid some of the more serious differences of opinion between "splitters" and "lumpers". So easy access to generic definitions/descriptions would certainly expedite my task.

Thanks again for the xeroxes, and let me know if you are able to join us at the end of August in New Brunswick and Nova Scotia.

I now have an office phone. The number is (914) 365-8709.

Take care.

Sarah

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

19 July, 1995

Dr. Sarah J. Fowell  
Lamont-Doherty Geological Observatory  
Columbia Univ.  
Palisades, NY 10964

Dear Sarah:

Here are items you requested, and/or I described.

My plate is pretty full, but please keep me informed about plans for this field trip. I just might throw good sense aside and decide to join you, if I would be welcome.

Hi to Paul.

Yours very truly,

Alfred Traverse

encl.: pp. from BC diss.; xeroxes  
of AT notes

Date: Sun, 16 Jul 1995 13:54:31 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: sjf@lamont.ldgo.columbia.edu  
Cc:  
Bcc:  
Subject: back in touch  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah: *Fowell*

Glad to be connected again. Good to see you use a salutation at the opening of a message. Seems decent. Most don't. Reminds me of telephoners other than immediate family who start talking without identifying themselves or greeting me. Seems rude.

Re Betula nana: you say I sent you "samples." I thought I sent just a slide, but could send more if you need. I am SURE I'd count it as Corylus if encountered on a slide with other things. Do you have reflections about that? What have others said, if anything?

Interesting to hear about our paper. I just went down to the library, and sure enough, it's on the shelf! Looks good. What was the deal on the reprints? Surely I was going to help with the cost?

No, there's been no further talk about the SEM time. If you like, I can rattle that skeleton again, or we can just play dumb and see what happens.

As to the NB locations, I would like to be involved in the eventual detailed work up of the stuff because I have invested so much time in it. But I can't object to your revisiting the localities. I was hoping to get Sid Ash to accompany me on a return visit to the area to look for megafossil plants and to find some additional localities--additional to Fowndes Head and Martin Head, that is. Paleomag in the Triassic? Is that really dependable? I am sending you xeroxes of my collecting notes with which you can, with the aid of appropriate maps, find the places.

Xeroxes of the megafossil parts of Bruce's thesis also will be included with the above material.

Are there no apartments on the Yonkers side of the river, for heaven's sake? Why you would want to struggle across to that nightmare called Manhattan I can't fathom, nor can I imagine an employer who provides HOUSING!

So, I'll shoot this off and then make the xeroxes for shipment to you.

Best. Alfred.

Received: from lamont.ldgo.columbia.edu (ldgo.columbia.edu) by pangaea.ems.psu.e  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA28052; Sat, 15 Jul 95 16:44:00 EDT  
Received: from 129.236.30.194 (core\_kbox\_194.ldgo.columbia.edu) by lamont.ldgo.c  
id AA23055; Sat, 15 Jul 95 16:43:46 EDT  
Date: Sat, 15 Jul 95 16:43:46 EDT  
From: sjf@lamont.ldgo.columbia.edu (sarah fowell)  
Message-Id: <9507152043.AA23055@lamont.ldgo.columbia.edu>  
To: traverse@ems.psu.edu  
X-Mailer: MacPOP Macintosh Mail (1.5 02/90)  
Subject: Pages from Bruce's thesis  
X-Lines: 51

Dear Alfred,

I am now back at Lamont, and can think of several issues that I need to discuss with you. First of all, thanks for sending the samples of *Betula nana*. It is exactly because of the disturbing similarity to *Corylus* that I wanted to have some type material on hand. Thanks also for your suggestions as to sources for Kuprianova's work.

Our Fundy basin paper apparently came out last month in RPP. I say apparently because I have not received the reprints yet, but I have received three reprint requests already. I will send you your reprints as soon as they arrive. I suspect they went to South Carolina and are being sent on. If they don't show up soon I'll check with Elsevier.

Now that I have my own account here, I am able to pay for the SEM time at Penn State. Is that still an issue? Are you still receiving bills? If so, send another one to me and I'll make the payment.

Sometime in August (probably early to mid-month) I will be heading to Nova Scotia. At least, that is my current plan. As we discussed before, I am hoping to have Dennis Kent take some paleomagnetic samples in the area from which your Carnian/Norian pollen assemblages were collected. That way we have a chance of nailing down the age more precisely. Can you send me the locations of your samples? Is that alright with you?

Finally, I am wondering if you could xerox some pages out of Bruce's thesis for me (actually, for Paul). Paul is writing a paper which is supposed to be finished next week. He just asked me to return his copy of Bruce's thesis. Unfortunately, I left most of possessions in storage in South Carolina, including Bruce's thesis, and don't plan to return for them until August. Is it possible for you to xerox the chapter on macrofossil plants and send it along for Paul? We would both greatly appreciate it, and we can cover the xerox bill if need be.

So far, things are going well here. I am staying at Lamont temporarily until I find an acceptable apartment. I have been looking in the suburbs, but have found nothing nice in my price range (they keep showing me dark, basement studios). Next week I will hear from Columbia as to whether they are willing to offer me an apartment in Manhattan.

My congratulations to Betty, and my best to you both.

Sarah

PS. You may again change my e-mail address. It is now (again)  
sjf@lamont.ldgo.columbia.edu And my mailing address is once again

L-DEO, Palisades, NY 10964. They have not yet hooked up my phone, but I will send you the number as soon as they give me an extension

19-IV-95 dated to 914-365-8162

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

17 April, 1995

Dr. John Mutter  
Acting Director  
Lamont-Doherty Earth Observatory  
Palisades, NY 10964

Dear Dr. Mutter:

This is in support of the candidacy of Dr. Sarah J. Fowell for the position of Associate Research Scientist. As you doubtless know, Sarah is currently a post-doc at the University of South Carolina.

Dr. Fowell has spent two semesters here while she was a graduate student with Dr. Paul Olsen, at your institution. The reason for her stays here was to take my courses in palynology and to work with me on her Triassic palynofloras. More recently she has visited me several times for extended periods. Once was to give a guest lecture for me, another time it was to teach my palynology course, both lectures and lab sessions, while I was out of the country for two weeks in Sept. of 1994, still another was to use my research collections and library in connection with her Pleistocene work in Lake Baikal. On several occasions Dr. Fowell has also stayed as a house guest with my wife and me, so I believe I can claim to know this young woman very well.

In the palynology course, Sarah's work was probably the best in the 30 year history of the course. Her lab work was sensational. This is a small enrollment course with heavy emphasis on the practicum, and I do all the teaching myself. The students are in the lab every day, and I get to know them better than some of them like. Sarah was just a joy to have--very talented, but also a fun person, full of joy and good humor.

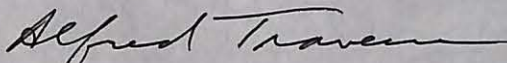
We have recently co-authored a paper on the palynoflora from the Triassic of Nova Scotia. This joint effort reinforced what I knew of Sarah from her dissertation (I was an outside member of her committee at Lamont). She has good ideas, knows the literature and understands how to organize a project and put her ideas in cogent form. I expect to hear about many new pieces of proposed research from her, and if I continue to enjoy good health, to do more joint projects with her.

In brief, Sarah Fowell is a very enthusiastic, very energetic,

very intelligent young woman with a great variety of experience in the earth sciences. She is also fully competent in many sub-areas of palynology, and I expect floods of important palynological research to come out of her lab, wherever she hangs her hat. I recommend her to you without reservation and would be happy to discuss any aspect of the above letter that I may not have explained adequately.

Thanks for reading.

Yours very truly,



Alfred Traverse

Pennsylvania State University  
Departments of Geosciences & Biology

Dr. Alfred Traverse  
Professor of Palynology

Palynological Laboratories  
Deike 435  
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E-Mail: traverse@ems.psu.edu

30 May, 1995

Dr. Sarah J. Fowell  
Department of Geological Sciences  
University of South Carolina  
Columbia, SC 29208

Dear Sarah:

Here's the Betula nana slide. It's a little sparse, but there are really plenty of specimens.

As I said earlier, the morphology is a little disconcerting. I would NEVER count these on a slide as "birch." Probably would count as Corylus. If you consult Erdtman's pollen morphology book, you'll find (p. 72, fig. 30) that he figures the situation exactly right, but I had never noticed it before, in fact I never noticed that the figure shows three different species for each of the pores of the P03 grain. Cute.

Do check USC herbarium for Pinus pumila.

Yours very truly,

Alfred Traverse

encl.:pollen slide

Date: Mon, 29 May 1995 12:30:02 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: fowell@paleo.geol.scarolina.edu  
Cc:  
Bcc:  
Subject: B. nana  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

Slide of *Betula nana* will be forthcoming soon. *Pinus pumila* not in our collections. I will put it on my list for acquisition--I'll try PSU herbarium first. How about you trying the SC herbarium? Then send the little envelope to us, and we'll split the residue with you and make a slide for you. If you find it, that is. I suspect I'll have to go to Smithsonian again.

*Betula nana* was something of a shock to me. The stuff looks more like a *Corylus*! Worrisome.

Have entered your e-mail add. as of 4 July to card. Best. Alfred.

Received: from epoch.geol.scarolina.edu by pangaea.ems.psu.edu  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA20908; Sun, 28 May 95 16:04:05 EDT  
Received: from paleo.geol.scarolina.edu by epoch.geol.scarolina.edu (4.1/6.0s-FW  
id AA05776; Sun, 28 May 95 16:04:05 EDT  
Received: by paleo.geol.scarolina.edu (4.1/SUN4.1-jc.1)  
id AA17864; Sun, 28 May 95 16:17:13 EDT  
Date: Sun, 28 May 95 16:17:13 EDT  
From: fowell@paleo.geol.scarolina.edu (Sarah Fowell)  
Message-Id: <9505282017.AA17864@paleo.geol.scarolina.edu>  
To: traverse@ems.psu.edu  
Subject: Betula nana

Dear Alfred,

Yes, I did request a slide of *Betula nana*. I would still like to have one, if you find the time. I would also like a slide of *Pinus pumila*, if you have any pollen from that plant. I realize you have much to do, so whenever you get around to it is fine.

I am moving back to New York on approximately July 4. I will be away for much of June, but I should appear at Lamont during the first week of July. My e-mail will again be sjf@lamont.lidgo.columbia.edu

Hope all is well in Pennsylvania. Best to you and Betty.

Sarah

Date: Sun, 28 May 1995 15:11:59 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: fowell@epoch.geol.scarolina.edu  
Cc:  
Bcc:  
Subject: Betula nana  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah:

My mills grind so slowly sometimes that I forget what has happened before action is finalized. Case in point: I'm photographing and studying a mess of modern pollen stuff that we've got from Smithsonian and elsewhere, and one item is the abovementioned taxon, which I know you requested that I get. Did I ever send you a slide thereof? Were there others that you "ordered at the same time? Do we have other unfinished business? Hang in there. Keep me posted. Best. Alfred.

Received: from epoch.geol.scarolina.edu by pangaea.ems.psu.edu  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA17023; Mon, 15 May 95 21:56:58 EDT  
Received: from paleo.geol.scarolina.edu by epoch.geol.scarolina.edu (4.1/6.0s-FW  
id AA28383; Mon, 15 May 95 21:56:56 EDT  
Received: by paleo.geol.scarolina.edu (4.1/SUN4.1-jc.1)  
id AA10192; Mon, 15 May 95 22:08:44 EDT  
Date: Mon, 15 May 95 22:08:44 EDT  
From: fowell@paleo.geol.scarolina.edu (Sarah Fowell)  
Message-Id: <9505160208.AA10192@paleo.geol.scarolina.edu>  
To: traverse@ems.psu.edu  
Subject: references

Dear Alfred,

I'm trying to wrap up my work here at the moment. Plus I'm working on an NSF proposal - I'd like to collect some short cores from northern Mongolia. I'm writing to you because I wanted to reference some of the palynological literature I xeroxed when I was in Russia, but I find I didn't quite get the complete source. I think you have some of the books in your collection, and I was wondering if you could fill in some of the blanks for me. The library here doesn't have these publications.

The author, as I transliterated it, is Kuprianova. The titles of the publications are: Monocot and Gymnosperm Pollen and Pteridophyte Spores from Europe and the USSR; Pollen and Spores of Plants from the Flora of Europe and the USSR; Dicot Pollen Flora from Parts of Europe and the USSR.

I know that these papers are published by the Komarov Botanical Institute of the Academy of Sciences of the USSR, but I don't have dates or number of pages of these publications. Do you have this information for any of the titles listed above? Be careful - my Russian is not very good and my translation may be a bit "loose".

If it's a hassle, don't bother. But if you can help me out I would greatly appreciate it. Thanks much.

For the record, I'll be moving back to New York sometime during the first week of July. My promotion is still under consideration at Lamont, but thank you very much for the reference letter.

Hope all is well in central Pennsylvania. Say hello to Betty for me.

Sarah

Georef

Biosis

Geobase

TO AT

DATE 19-IV-95 TIME 9 p.m.

**WHILE YOU WERE OUT**

M Hebbie

Of Lanont-Roherty

Phone 914-365-8404

TELEPHONED  PLEASE RETURN CALL

CALLED TO SEE YOU  WILL CALL AGAIN

RETURNED YOUR CALL  RUSH

MESSAGE \_\_\_\_\_

URGENT

Signed B

*Jual Foumel :*

*This was about the  
recommendation (to Dr.  
Arata). A copy was  
immediately forwarded to  
the .*

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

17 April, 1995

Dr. Sarah J. Fowell  
Department of Geological Sciences  
The University of South Carolina  
Columbia, SC 29208

Dear Sarah:

It's Easter as I work on this (we've just put WP 6.0 in, and it's doing funny things with the dates--and I don't have time to study the monstrous manual just now)--used to be an important focus in my life, but since 1980 just another Sunday, and upsetting because places that are usually open aren't, AND I'm expected to attend Easter egg hunts and dinners.

The package with the CV and proposal are here. Let's see, I guess I'll get at the recommendation quickly (P. S.: now done) and will therefore defer comment on the other things until a little later. Except to say that I am not at all concerned about your working on the Fundy Basin florules. I would just like to be included in your plans, and if we find more megafossil plants (I found scraps in NB), I'd like to have SA involved. In the future, for example, if you have field trips to the area, I'll be in a position to join you up there.

Re the proposal: I don't think I've seen this precise document, but the ideas are the same as I've seen in other writings from you, and we've discussed them a bit. One small caveat to keep in mind--if the animal and plant data are in lockstep it will be unique to the fossil record, in my opinion. As you know, Eshet and Visscher still haven't convinced me that the vegetation was wiped out at the P/Tr in nearly the same way as faunas were. Etc.

OK, keep in touch. I love hearing from you.

Yours very truly,

Alfred Traverse

Received: from epoch.geol.scarolina.edu by pangaea.ems.psu.edu  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA01886; Mon, 10 Apr 95 12:53:11 EDT  
Received: from paleo.geol.scarolina.edu by epoch.geol.scarolina.edu (4.1/6.0s-FW  
id AA22892; Mon, 10 Apr 95 13:05:31 EDT  
Received: by paleo.geol.scarolina.edu (4.1/SUN4.1-jc.1)  
id AA01504; Mon, 10 Apr 95 13:05:20 EDT  
Date: Mon, 10 Apr 95 13:05:20 EDT  
From: fowell@paleo.geol.scarolina.edu (Sarah Fowell)  
Message-Id: <9504101705.AA01504@paleo.geol.scarolina.edu>  
To: traverse@ems.psu.edu  
Subject: recommendation

Dear Alfred,

Thanks for agreeing to write me a recommendation for LDEO. I'm seeking promotion from post-doc to Associate Research Scientist, so they will want to know that I'm capable of conducting independent research, writing proposals and papers, and generating new ideas. The letter should be mailed to:

John Mutter, acting Director  
Lamont-Doherty Earth Observatory  
Palisades, NY 10964

To make your job a bit easier, I'm mailing a copy of my current cv and a copy of the proposal that has been funded - the one I'll be working on at Lamont. I can't believe I haven't shown it to you yet, but I don't remember giving you a copy. Any suggestions you have with regards to the best way to measure diversity in Triassic palynofloras would be greatly appreciated. I've got several ideas, but I'm not yet sure exactly how I wish to proceed.

With regards to the Fundy basin locations, I'm not trying to re-do any of your pollen work. I think that paleomag samples will merely help to cement correlation with the rest of the Fundy basin, so I thought they would be useful to you when you publish the results of the palynofloral analysis. I was also hoping to be able to study some of your samples when I compile my data on Triassic palynofloral diversity. I suppose I could also collect my own samples. But I intended the study to be a collaborative effort, not a competitive one.

Thanks again for the recommendation. There's no particular deadline by which you must send it, but do so as soon as possible. The sooner I get all my paperwork in, the sooner they will get around to considering my promotion.

Sarah

Date: Wed, 5 Apr 1995 16:20:49 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: fowell@paleo.geol.scarolina.edu  
Cc:  
Bcc:  
Subject: Lamont  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah: Of course, you can count on me for a recommendation to any honorable position. Just send details.

Regarding the Fundy Basin, I had always planned to do some more work up there and had, in fact, invited Sid Ash to join in it. I would, of course, have a poignant hope that somehow that might still happen. I believe in no territorial rights in science, however, so will share whatever I have in the way of info that you would find useful.

We reciprocate the good wishes. Betty's bound thesis just arrived!

All the best. Alfred.

Received: from epoch.geol.scarolina.edu by pangaea.ems.psu.edu  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA11739; Mon, 3 Apr 95 16:18:56 EDT  
Received: from paleo.geol.scarolina.edu by epoch.geol.scarolina.edu (4.1/6.0s-FW  
id AA11191; Mon, 3 Apr 95 16:31:11 EDT  
Received: by paleo.geol.scarolina.edu (4.1/SUN4.1-jc.1)  
id AA01504; Mon, 3 Apr 95 16:31:03 EDT  
Date: Mon, 3 Apr 95 16:31:03 EDT  
From: fowell@paleo.geol.scarolina.edu (Sarah Fowell)  
Message-Id: <9504032031.AA01504@paleo.geol.scarolina.edu>  
To: traverse@ems.psu.edu  
Subject: Lamont recommendation  
Status: U

Dear Alfred,

How are things at Penn State? All is well here. I am counting a few more of my samples from Baikal to fill in some gaps in the record. I'm trying to use the pollen spectrum to correlate with the marine record of glacial/interglacial cycles. Initial results look promising, but our sampling density isn't as high as I would like. Not much I can do about it at the moment, however. The Russians don't like to sample their core.

I'm writing primarily to ask you if you would write me a recommendation for promotion at Lamont. I'm seeking an appointment as an Associate Research Scientist. If I don't get it, I'll still be going there, but I will remain a Post-doc. I need an outside letter of recommendation, and I'm hoping you are willing to write on for me. If so, let me know and I'll send you details on whom to address your letter to, etc.

At the moment, I expect to move back to New York by July 1, at the latest. I'll be attending the AGU meeting in Baltimore at the beginning of June, after which I'll drive to Lamont to make arrangements, order supplies, sign papers, and find a place to live. After that, I'll come back to S. Carolina to finish packing and wrap up any unfinished projects. At Lamont, I'll immediately be jumping back into the Triassic. I'll be correlating horizons from the Newark, Fundy, Taylorsville, and Culpeper basins by means of cyclostratigraphy and magnetostratigraphy. Then I want to compare the diversity of coeval palynofloras. I expect to be doing some field work in the Fundy basin some-time during the summer, probably in August. Dennis Kent is going to take some paleomagnetic samples from the Triassic-Jurassic boundary there. I would also like him to take samples in the outliers from which you collected the Carnian-Norian palynofloras that you have shown to me. That way we could nail down the correlation to the Fundy basin, and date the palynofloras more precisely. So I'll probably be bothering you for the precise locations of your samples at some point in the next few months. I hope you like this idea - I think it will add much to our understanding of the Fundy basin palynofloras.

Please let me know if you can write the recommendation letter for me. There is no specific deadline, but the sooner the letters get written, the sooner they will begin to process my application.

All the best to you and Betty,

Sarah  
fowell@epoch.geol.scarolina.edu

Date: Tue, 28 Feb 1995 16:49:07 -0500 (EST)  
From: "Alfred Traverse" <traverse@ems.psu.edu>  
To: Fowell@epoch.geol.sc Carolina.edu  
Cc:  
Bcc:  
Subject: proofs, etc.  
X-NUPop-Charset: IBM 8-Bit

Dear Sarah: OK, I've finished my line by line go-through of the proofs. I found only the misspelling of Calamospora in one place. However, if "Fowell et al., in press" is now actually out, you should definitely put that info in at this time, i. e., add the updated stuff to the bibliography AND use your search to find every place it appears in the text and then make the appropriate proof-reading marks in the proof. Are you supposed to order reprints with the proofs? I would like a wad of them and am willing to pay the lion's share of the cost....breaking news: Elizabeth just passed her dissertation defense....additional comment: Tracie Sherry, the young lady who will apply your HNO<sub>3</sub> treatment to our stuff from Jurassic of Oregon (very black) has a copy of your letter. She will start with an hour, but I recall from the paper that you used TWO hours on the Blomidon stuff. Is there any reason why, if one hour doesn't work you can't put it back in for another hour? We are going to visit relatives and do some other things during Spring Break (attend Big Ten Women's Basketball Tournament in Indianapolis, for example), so we'll be gone from 3-10 Mar. or so. Hang in there. Alfred.

Received: from epoch.geol.scarolina.edu by pangaea.ems.psu.edu  
(4.1/PSU\_ESSC/GEOSC-2.02) id AA09312; Mon, 27 Feb 95 10:44:33 EST  
Received: from paleo.geol.scarolina.edu by epoch.geol.scarolina.edu (4.1/6.0s-FW  
id AA19802; Mon, 27 Feb 95 10:55:58 EST  
Received: by paleo.geol.scarolina.edu (4.1/SUN4.1-jc.1)  
id AA27669; Mon, 27 Feb 95 10:55:42 EST  
Date: Mon, 27 Feb 95 10:55:42 EST  
From: fowell@paleo.geol.scarolina.edu (Sarah Fowell)  
Message-Id: <9502271555.AA27669@paleo.geol.scarolina.edu>  
To: traverse@ems.psu.edu  
Subject: paper

Dear Alfred,

Did you get the letter I sent to you last week, along with proofs of our RPP paper? I'm going to send the corrected proofs back by Thursday of this week, so please contact me if you see anything that needs to be altered.

Do you need any more information re processing? I hope my description of the procedure was clear.

How are things in Pennsylvania? We are having spring here already. This is my favorite aspect of living in the south. I'm free to enjoy it, because I'll be moving back to New York by June 2 or so, before the horribly hot summer hits South Carolina.

Best,

Sarah

TO AT

DATE 28-II-95 TIME 11:35

WHILE YOU WERE OUT

M Sarah Fowell

Of \_\_\_\_\_

Phone URGENT

TELEPHONED  PLEASE RETURN CALL

CALLED TO SEE YOU  WILL CALL AGAIN

RETURNED YOUR CALL  RUSH

MESSAGE The pkg. she sent you has proofs of paper - she has checked but wants you to look over - fax her any pages you correct TOMORROW 13.

Signed \_\_\_\_\_

15 February, 1995

Dr. Alfred Traverse  
Palynological Laboratories  
435 Deike Building  
The Pennsylvania State University  
University Park, PA 16802

Dear Alfred,

Enclosed is a copy of the proofs of our paper. I thought you might want to take another look at it before I send it back. We can't add anything at this point, but if you notice any errors please let me know and I'll include the corrections on my copy.

With regards to a permanent mounting medium, I have enclosed some information regarding Elvacite. This is what I have been using since I arrived in South Carolina, and I think it is better than the casting resin I used in my thesis. Don Engelhardt, who works at ESRI, recommended it, and I have been very pleased with the results. He tells me the refractive index is approximately 1. Elvacite is made by Du Pont, and it can be ordered from Chemcentral in Houston. The phone number is on the enclosed forms. I'm afraid I don't know anything about the price.

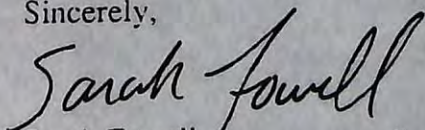
To prepare the Elvacite, it must be mixed with xylene. I've included a description of the procedure (see additional pages). When making slides, place one or two drops of sample (in water) on the coverslip, and mix it with a drop or two of Clearcol (polyvinyl alcohol would probably work just as well). Spread the residue evenly over the coverslip, then place the coverslip on the warmer, residue-up, until all the liquid has evaporated. When the residue is dry, place a couple drops of Elvacite on the slide, and carefully invert the coverslip onto the Elvacite. Slides must then be left on the warmer for approximately 24 hours so that the xylene evaporates and the Elvacite hardens.

Finally, the nitric acid oxidation procedure is relatively simple. I use concentrated nitric acid (~65%), which I add directly to my residues. Samples should be stirred thoroughly after the acid is added. If you are dealing with blackened fossil palynomorphs, I recommend placing the open tubes in a water bath for an hour or more. For modern assemblages, however, a couple of minutes should prove sufficient, and heating the samples is unnecessary. When oxidation is finished, place the tubes in the centrifuge (under the hood) for 3 minutes, decant the acid, and wash 3 times with water.

*She used 2 hrs. for Fandy material.*

I hope this helps. Send me e-mail if you need any further information, and please let me know as soon as possible if you find any errors in our page proofs.

Sincerely,

  
Sarah Fowell

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 November, 1994

Dr. Sarah J. Fowell  
Department of Geological Sciences  
The University of South Carolina  
Columbia, SC 29208

Dear Sarah:

Yours re cv, recommendations, just in. I was thinking a day or two ago that I hadn't heard from you in a while. Wish I were just down the hall! Your Siberian work sounds great--wow! Reminds me that I still owe you some slides. It'll happen eventually, but I still haven't rounded up some of the things.

For the Desert Research Institute you wouldn't sound on the surface of it to be exactly what they want. However, your Lake Baikal experience means that you could work into that Nevadan flora in a couple of weeks. I'll emphasize that in my letter.

The Santa Cruz job would be great--just right for you.

The NC job sounds as if they're looking for a geochemist with hands that can reach deeply into some outside funding source's pockets. I don't really like the sound of it.

However, I'll produce top letters for you to all three places, and I'll do it NOW.

All the best.

Yours very truly,

Alfred Traverse

Alfred, Here are the ads for the 3 jobs I've applied for, plus a current copy of my CV. Thanks.

Sarah  
Nov. 94

**Interdisciplinary/Other**

graduate transcripts, and three letters of reference to Professor Theodore W. Ross, Department of Geology, Lawrence University, Box 599, Appleton, WI 54912, by January 31, 1995. Inquiries only to [smilling@lawtrn.edu](mailto:smilling@lawtrn.edu). Lawrence University is an equal opportunity/affirmative action employer. Women and minorities candidates are encouraged to apply.

The Department of Geology invites applications for a new tenure track position at the assistant professor rank beginning September 1, 1995.

In expanding from a staff of two, we seek a person whose interests will complement those of the existing faculty, and who will broaden and enrich departmental offerings. Specialists of the current staff are fluvial and neotectonic geomorphology, pliocene igneous petrology, and structural geology.

The successful candidate will share responsibility for introductory courses, field geology (January), and sponsorship of student research. All Whittier College faculty members are expected to take part in college-wide academic programs.

Departmental facilities include the W. M. Kerk Foundation Image Processing Laboratory, the Fairchild Aerial Photography Collection, XRD, and Leeman Analyze 16 AA. Preference will be given to candidates with prior undergraduate teaching experience, an appreciation of the liberal arts college mission, and research that will utilize existing facilities.

The Ph.D. should be completed by the date of appointment. Review of completed applications will begin November 1, 1994.

Candidates should submit statements of research and teaching interests, curriculum vitae, supporting documentation (e.g., reprints, teaching evaluations), and the names, addresses, and telephone numbers of three references to Chairman, Department of Geology, Whittier College, Whittier, CA 90608. Whittier College, a selective liberal-arts college with an ethnically-diverse undergraduate enrollment of 1250, is an equal opportunity/affirmative action employer.

**Joint Institute for the Study of the Atmosphere and Ocean/University of Washington/Seattle, Washington/Postdoctoral Position/Research Assistant**  
As part of the U.S. Global Ocean Observing System (GOOS) Postdoctoral Program, the Joint Institute for the Study of the Atmosphere and Ocean (JISA/O), University of Washington, and the National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory (PML) will have available a research position starting in spring or summer 1995. The appointment will be made through the Department of Atmospheric Sciences at the University of Washington.

**Staff Palynologist/Quaternary Sciences Center/Desert Research Institute**

Duties include: (1) The extraction and analysis of pollen samples; (2) processing of pollen for analysis of pollen morphology with the scanning electron microscope (SEM); (3) processing and analysis of plant tissue from modern, sedimentological, or ancient wood and/or SEM; (4) short report preparation; and (5) assisting in major export or proposal writing. The job orientation will be toward: 1) The preparation of a great Basin Pollen Flora; 2) analysis of Great Basin fossil-localities; and 3) training of personnel in the above-mentioned area of expertise. Candidates should have a publication record demonstrating expertise in these areas.

Requires a doctorate in biology, palynology, Quaternary Studies, or a related field, research experience in palynology, paleobotany, and pollen morphology, demonstrated experience in the preparation of samples for the SEM and demonstrated ability in use of the SEM. Because of the research emphasis of the Quaternary Sciences Center the candidate should have experience in the palynology of the Intermountain West.

Rank 1. Salary will range from \$28,500 to \$32,500 per year. The Desert Research Institute offers an excellent benefits package.

Because the Desert Research Institute is a grant and contracts supported institution, continuation of the position will depend upon the appointment obtaining ongoing support.

Applications will be accepted until October 25, 1994. Send a letter of interest indicating academic and research strengths, a current resume, and a list of three personal references with addresses and telephone numbers to Recruitment Office Desert Research Institute University and Community System of Nevada P.O. Box 19040 Las Vegas, NV 89132-0040

Position is located in Reno, Nevada. The Desert Research Institute is an equal opportunity/affirmative action employer and employs only U.S. citizens and persons authorized to work in the United States.

**Tenure Track Position at the Assistant Professor Level in Structural/Tectonic Geology/Geophysics**  
Examples of appropriate research and teaching interests include igneous/metamorphic petrology, mineralogy, or geophysics. Will teach structural geology, petrology of crystalline rocks, introductory geology, historical geology, and freshman core program. Commitment to interdisciplinary and interdepartmental instruction and to research with undergraduates in specialty and in applicable problems of local environmental interest. A Ph.D. is required by the time of appointment. Send statement of teaching and research interests, curriculum vitae, undergraduate and graduate transcripts, and three letters of reference to Professor James A. Scarpus, Department of Geology, Bowling Green State University, Bowling Green, OH 43403.

The responsible of this position will include the promotion and supervision of graduate research, development of strategic/applied research, and undergraduate teaching. Appropriate teaching and research/consulting experience, a Ph.D., and a record of active specialist in climate-ocean systems (with an emphasis on climate as a resource and a hazard), and the coastal zone. An active research and teaching interest in the processes, causes, and impacts of environmental change would be welcomed.

The appointee will be expected to take particular responsibility in computer modeling and GIS technology (IDRISI and ARC/INFO). Interest and experience in Australasia or the Asia-Pacific Basin would be of considerable value. Further inquiries may be made to Professor Paul Mosley, Fax: +64-495-5127; E-mail: [paul.mosley@vuw.ac.nz](mailto:paul.mosley@vuw.ac.nz).

Salary scale for lecturers is NZ\$38,000-NZ\$50,000 per annum. Applicants should send a full curriculum vitae to the Appointments Administrator, Personnel Office, VUW, P.O. Box 600, Wellington, NEW ZEALAND; Fax: 64-4-495-5238; E-mail: [alison.munro@vuw.ac.nz](mailto:alison.munro@vuw.ac.nz) as soon as possible by October 25, 1994 and should ask for three references to write direct to the Appointments Administrator by October 31, 1994. The Victoria University of Wellington is an equal opportunity employer.

**Materials Science/Bowling Green State University (BGSU)**

The Department of Geology invites applications for a new position in materials science with a specialization in ceramics that emphasize the synthesis or characterization of The successful candidate is expected to develop and maintain a vigorous research program in ceramics. Teaching responsibilities include one course in the Geology Department (petrology) and one course in the materials science program per year. The opening is a tenure track position to be filled at the assistant professor level beginning in August 1995. A Ph.D. is required. The materials science program is an interdisciplinary effort between the chemistry, physics, geology, biology, and technology departments. Facilities include a complete geochronology laboratory (XRF, XRD, SEM, AAS; TEM, FTIR, NMR; Sun and Silicon Graphics workstations; SPARC 1000 server; microscopy laboratory including transmitted, reflecting, cathodoluminescence, UV, and fluid inclusion microscopes; and complete sample preparation facilities. Applications should include a vita and statement detailing research interests. Applicants should arrange to have three letters of reference sent. The deadline for applications is January 1, 1995. Applications should be sent to Chair, Search Committee, Department of Geology, Bowling Green State University, Bowling Green, OH 43403.

Consideration of any specialty area in ocean engineering will be given, but preference will be given to candidates with specialization in data analysis and ocean instrumentation. Candidates for appointment at the associate professor level must have a strong record of research, scholarly productivity, and teaching experience. Subject to budget approval. This is a tenure track, academic year position. Submit a letter of application and resume by January 31, 1995, or until position is filled to Malinda Spaulding, Search Committee Chair, Log #1041, University of Rhode Island, PO Box G, Kingston, RI 02881.

The University of Rhode Island is an equal opportunity/affirmative action employer and is committed to increasing the diversity of its faculty, and students. People from underrepresented groups are encouraged to apply.

**Solid Earth Geophysics**  
ona State University/Structural Geology/Tectonics. The Department of Geology at a tenured faculty position at the rank of assistant professor. Applicants are sought whose research will complement existing programs in the department. The successful candidate will be expected to develop a vigorous research program and to be fully committed to quality teaching. A Ph.D. in geology or related sciences required, with emphasis on the fields of structural geology and/or tectonics. Closing date is December 1, 1994. Prospective candidates should send a letter of application, curriculum vitae, statement of research interests, and the names and addresses of at least three references to Professor Richard C.J. Somerville, University of California, San Diego Scripps Institution of Oceanography Climate Research Division (E) 9500 Gilman Dr., Mail Code 0224 La Jolla, CA 92093-0224 619-534-4644

The University of California is an equal opportunity/affirmative action employer.

Rank and salary will be depend upon experience and qualifications subject to University of California salary scales. Closing date is December 1, 1994. Prospective candidates should send a letter of application, curriculum vitae, statement of research interests, and the names and addresses of at least three references to Professor Richard C.J. Somerville, University of California, San Diego Scripps Institution of Oceanography Climate Research Division (E) 9500 Gilman Dr., Mail Code 0224 La Jolla, CA 92093-0224 619-534-4644

Subject to budget approval. This is a tenure track, academic year position. Submit a letter of application and resume by January 31, 1995, or until position is filled to Malinda Spaulding, Search Committee Chair, Log #1041, University of Rhode Island, PO Box G, Kingston, RI 02881.

The University of Rhode Island is an equal opportunity/affirmative action employer and is committed to increasing the diversity of its faculty, and students. People from underrepresented groups are encouraged to apply.

**Solid Earth Geophysics**  
ona State University/Structural Geology/Tectonics. The Department of Geology at a tenured faculty position at the rank of assistant professor. Applicants are sought whose research will complement existing programs in the department. The successful candidate will be expected to develop a vigorous research program and to be fully committed to quality teaching. A Ph.D. in geology or related sciences required, with emphasis on the fields of structural geology and/or tectonics. Closing date is December 1, 1994. Prospective candidates should send a letter of application, curriculum vitae, statement of research interests, and the names and addresses of at least three references to Professor Richard C.J. Somerville, University of California, San Diego Scripps Institution of Oceanography Climate Research Division (E) 9500 Gilman Dr., Mail Code 0224 La Jolla, CA 92093-0224 619-534-4644

Rank and salary will be depend upon experience and qualifications subject to University of California salary scales. Closing date is December 1, 1994. Prospective candidates should send a letter of application, curriculum vitae, statement of research interests, and the names and addresses of at least three references to Professor Richard C.J. Somerville, University of California, San Diego Scripps Institution of Oceanography Climate Research Division (E) 9500 Gilman Dr., Mail Code 0224 La Jolla, CA 92093-0224 619-534-4644

Related departmental facilities/equipment, supported by field service engineer and a technician, include a hydrogeochemistry laboratory with AA and graphite furnace), IC, a stable isotope processing lab, scintillation counter, state-of-the-art computing facilities, X ray spectrographic and fluorescence equipment, soil mechanic equipment, ground penetrating radar and resistivity systems, truck-mounted drill rigs, truck-mounted seismic reflection systems, 19 field vehicles, an experimental watershed and a wetlands field both with dedicated pumping, observation, and monitor wells.

Inquires are welcome.

Applicants are requested to send their curriculum vitae, transcripts, a statement of research and teaching interests, and the names and addresses of three references to Dr. Robert W. Ritz, Department of Geological Sciences, Wright State University, Dayton, OH 45435; 513-873-3455.

Review of applications will begin October 1, 1994, and continue until the position is filled.

Wright State University is an equal opportunity/affirmative action employer.

**Earth History.** The Earth Sciences Department at the University of California, Santa Cruz (UCSC), invites applications for a tenure-track position at the assistant professor level (Step I-III).

We seek an individual who applies innovative research approaches to studying the evolution of life, Earth history, and global change.

Candidates should have expertise and primary research interests in paleontology and secondary interests in biogeochemistry, chemostratigraphy, paleoceanography, or paleoclimatology that complement existing research programs in Earth and marine sciences, which include paleoceanography/paleoclimatology and low-temperature geochemistry.

The successful candidate will teach at both the undergraduate and graduate levels including

introductory courses in paleontology and Earth history as well as advanced courses in their area of expertise. The candidate will be expected to develop a vigorous research program including the supervision of graduate students.

UCSC's research programs in Earth and marine sciences are supported by a broad range of analytical facilities, including gas, solid source, and ICP mass spectrometers, located in a new 132,000 sq. ft. building.

Salary: \$35,900-\$38,800 (9-month basis), depending on qualifications and experience and subject to final approval of university salary scales.

Position available fall 1995.

Minimum qualifications: Ph.D. or equivalent in Earth sciences or related field completed or expected by effective date, a demonstrated record of research excellence and potential to obtain external funding, and a commitment to and talent for teaching at both the undergraduate and graduate level.

To apply send curriculum vitae, a brief summary of research and teaching interests, reprints, and the names of five persons from whom the department may request letters of recommendation to Professor James Zachos, Search Committee Chair, UC Santa Cruz, Earth Sciences Department, Santa Cruz, CA 95064. In your reply, refer to provision #428.

Closing date: October 31, 1994.

UCSC is an equal opportunity/affirmative action/IRCA employer.

**Limno-Geophysics.** The Large Lakes Observatory (LLO) of the University of Minnesota has extended the deadline for applications for its faculty position in limno-geophysics to October 31, 1994.

The mission of the LLO is to carry out fundamental research on the large lakes of the world. Six new tenure track positions are being filled over the next 5 years in the physical ma-

rine/lakes sciences. The position in limno-geophysics is at the assistant or associate professor level and will emphasize the applications of marine seismic reflection or other acoustic methods to mapping and understanding large lake basins.

A significant record of research, publication, and external funding will be required for appointment at the associate professor level.

Refer to the longer ads published in the May 17, 24, and 31, 1994 issues for more information.

Send a statement of research and teaching interests, curriculum vitae, and names, addresses, and phone numbers of at least three references, by October 31, 1994, to Professor Thomas C. Johnson, Director, Large Lakes Observatory, University of Minnesota, Duluth, MN 55812.

Prospective candidates with questions may contact Tom Johnson at 218-726-8128 or by internet at tcj@d.umn.edu.

The University of Minnesota is an equal opportunity/affirmative action employer.

**ICP-MS Laboratory Manager.** The Department of Civil Engineering and Geological Sciences at the University of Notre Dame has an opening for an ICP-MS laboratory manager.

Duties will include maintenance and day-to-day running of state-of-art ICP-MS facility which includes a VG PQII-STE ICP-MS equipped with a LaserProbe, a Mark IV ETV, VGS 2000 continuous flow hydride generator, CETAC U-5000AT ultrasonic nebulizer.

The successful applicant will be required to maintain the equipment, train new users in the use of this facility and will be encouraged to participate in PIs research.

Applicants should have a strong analytical background and at least 1-2 years experience with ICP-MS; completed at least a master's degree in either electronics and/or chemistry.

Please send applications with the names and addresses of three referees by September 30, 1994, to

Department of Human Resources  
University of Notre Dame  
Notre Dame, IN 46556  
219-631-5900

E-mail: trossen.1@nd.edu

The University of Notre Dame is an equal opportunity/affirmative action employer.

## STUDENT OPPORTUNITIES

**JOI/USSAC (U.S. Science Advisory Committee) Ocean Drilling Fellowships.** JOI/U.S. Science Advisory Committee is seeking doctoral candidates of unusual promise and ability who are enrolled in U.S. institutions to conduct research compatible with that of the Ocean Drilling Program (ODP).

Both 1-year and 2-year fellowships are available. The award is \$20,000 per year to be used for stipend, tuition, benefits, research costs, and incidental travel, if any.

Applicants are encouraged to propose innovative and imaginative projects. Research may be directed toward the objectives of a specific leg or to broader themes.

Proposals and applications should be submitted to the JOI office according to the following schedule:

Shorebased Research December 1, 1994  
(regardless of DSDP or ODP leg)

For more information and to receive an application, contact: JOI/USSAC Ocean Drilling Fellowship Program, Joint Oceanographic Institutions, Inc., 1755 Massachusetts Ave., NW, Suite 800, Washington, DC 20036-2102 (Andrea Leader: 202-232-3900; Internet: aleader@brook.edu).

## Attention Students!

Do you know that you are eligible for special prices on AGU publications?



# SAINT LOUIS UNIVERSITY

## Department Chairperson: Earth & Atmospheric Sciences (Search Reopened)

The Department of Earth and Atmospheric Sciences of Saint Louis University invites applications or nominations for chairperson. We seek an individual with the leadership skills to develop and extend our research and teaching programs to meet both current and future needs in a diverse department (Geology, Geophysics, and Atmospheric Sciences). Candidates with expertise in any field of Earth or Atmospheric Sciences are encouraged to apply. Administrative experience is desirable but not essential.

The Department presently has 13 full-time faculty and 25 graduate students. We offer undergraduate degrees in all three disciplines and MS/PhD programs in Geophysics and Atmospheric Science. We have plans to institute a Masters program in Geology. Our research strengths include seismology, fault mechanics, marine geology, paleomagnetism, structural geology, severe local storms, tropical meteorology, radiative transfer, and climate studies.

The chairperson reports to the Dean of the College of Arts and Sciences. He or she is responsible for budget development, and is expected to provide direction for instruction and teaching.



UNIVERSITY OF CAPE TOWN

## Dept of Geological Sciences: Lecturer/Senior Lecturer

We invite applications for the above post in the Department of Geological Sciences.

### Marine Geoscientist

You should be an Earth Scientist with research interests and a strong publication record in the general field of Marine Geoscience, with an emphasis on continental shelf or nearshore sedimentological processes and stratigraphic research activities of the department; and to teach at the undergraduate and postgraduate levels. The post may be filled at Lecturer or Senior Lecturer level. The rank of the successful applicant will be decided on the basis of qualifications and experience.

A negotiable remuneration package includes attractive staff benefits such as medical aid, a pension scheme and a housing subsidy in certain circumstances.

Please send your curriculum vitae together with the names, addresses, telephone and fax numbers of three contactable referees to the Appointments Officer, University of Cape Town, Rondebosch 7700, South Africa. Telephone +27 21 650-2192/2196; fax +27 21 650-2138; email: appo@bremner.uct.ac.za for further information.

The closing date for applications is 30 October 1994, but the post shall remain open till filled. The University of Cape Town is committed to policies of equal opportunity and affirmative action which are essential to its mission of promoting critical inquiry and scholarship.

07213/2186-0

**Sedimentary Geology/University of North Carolina at Chapel Hill.** The Department of Geology at the University of North Carolina at Chapel Hill invites applications for an anticipated tenure track position for an assistant professor in the field of sedimentary geology effective July 1, 1995. This position is dependent upon approval of our dean.

Applicants must have a Ph.D. by July 1, 1995, and postdoctoral research and/or teaching experience in highly desirable.

Specifically, we seek a creative individual who uses the stratigraphic record to study significant problems in basin analysis or paleoceanography/paleoclimatology. We intend to hire a person with a commitment to achieve excellence in undergraduate and graduate (M.S., Ph.D.) teaching, and who will establish a vigorous, externally funded research program. Although we do not want to replicate research interests of our 20 faculty, compatibility with existing programs is essential, and the ability to use existing research facilities is desirable.

Departmental research facilities include VG Sector 54 thermal ionization mass spectrometer, Finnigan MAT 2523 GC-C-IR mass spectrometer, Leica 440 SEM, Spectraspan 7 DCP spectrometer, Cameca electron microprobe, XRD, alpha- and gamma-spectrometry, low-level beta counting, <sup>14</sup>C by benzene synthesis and scintillation counting.

Applicants must submit a letter of application, names and addresses of at least four references, statement of teaching and research interests, and a resume to Chair, Search Committee, Department of Geology, CB# 3315, University of North Carolina, Chapel Hill, NC 27599-3315. Applications must be received by November 4, 1994.

Members of the department will be at the Geological Society of America meeting in Seattle, October 24-27.

Applicants or potential applicants wishing to discuss this position at this meeting should contact Ms. Cathy Cash, 919-962-0678 by mid-October.

The University of North Carolina at Chapel Hill is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

**Geologist/Geophysicist.** Requires B.S. in geology with 3-5 years directly related experience in surface and subsurface geophysical methods. Prefer M.S. in geology with M.S. thesis in geophysics or M.S. in geophysics with 1-2 years directly related experience. Courses in hydrology/hydrogeology desirable. Knowledge and proficiency with computer software and operating systems (DOS and Unix) are necessary.

Duties include operation and maintenance of seismic network, borehole logging systems, research, publication, and public service.

Send resume and names and addresses of three references to Chair, Search Committee, Delaware Geological Survey, University of Delaware, Newark, DE 19716 by October 10, 1994.

The University of Delaware is an equal opportunity employer which encourages applications from minority group members and women.

**Geological Scientists.** The Geophysical Measure-

ing laboratory investigations of the mechanical and seismic properties of rock; thorough understanding of micromechanics as applied to rock deformation/failures; and experience in analytical and numerical modeling of seismic wave propagation in discontinuous, lossy rock. A Ph.D. in geophysics, civil engineering, or mechanical engineering is preferred.

**Job G/2813:** Will conduct basic and applied research to understand hydrologic/geophysical processes in rock and soil, with a focus on developing relationships between these processes. The work will concentrate on two-phase, multi-component flow and transport in soil and fractured rock and the geophysical properties of these systems. Requires demonstrated ability/experience in performing laboratory investigations of the hydrologic and seismic properties of soils, knowledge of multiphase flow and mass transfer processes pertaining to groundwater contamination, and experience in analytical and numerical modeling of seismic wave propagation in discontinuous, lossy rock. A Ph.D. in civil engineering or geophysics is preferred. Experience in research in two-phase flow in fractured rock and unconsolidated materials and experience with (D)NAPLs desired.

These are 1-year term appointments with possibility of renewal.

Please submit resume, publications list, names of three references, and job #(s) to Lawrence Berkeley Laboratory, Staffing Office, One Cyclotron Rd., Bldg. 938A, Berkeley, CA 94720.

Lawrence Berkeley Laboratory is an equal opportunity employer.

### Space Physics

**Space Plasma Physics/Experimentalist.** The Jet Propulsion Laboratory (JPL) is seeking an experienced space physicist to conduct a program for the development of advanced instrumentation for the measurement of plasmas, fields, and/or waves in space.

We are looking for expertise in design, calibration, and operation of flight instruments, experience in data management, reduction, and analysis, and strong interest in and knowledge of the solar wind and/or planetary magnetospheres.

To apply, please send a resume before September 30 to Professional Staffing, Department T-18

Jet Propulsion Laboratory  
California Institute of Technology  
MS 249/104  
4800 Oak Grove Dr.  
Pasadena, CA 91109

JPL is an equal opportunity employer.

**Chief/Laboratory for Extraterrestrial Physics.** The NASA/Goddard Space Flight Center invites applications and nominations for this senior executive service position, located in Greenbelt, Maryland.

The Chief of the Laboratory for Extraterrestrial Physics is responsible for developing and conducting a state-of-the-art program of experimental and theoretical research in specific areas of space science. These areas include highly advanced studies of the physical properties, composition, structure, and dynamics of solar

Compensation is ES-1 through ES-6 (currently \$92,900 to \$115,700, plus 4.23% locality rate.

Submit SF-171 (Application for Federal Employment) to  
Nelson Rodriguez  
Personnel Management Branch, Code 111  
Office of Human Resources  
NASA/Goddard Space Flight Center  
Greenbelt, MD 20771

Inquiries should be directed to Mr. Rodriguez at 301-286-9220.

Complete application must be postmarked by October 3, 1994.

U.S. citizenship required.

NASA is an equal opportunity employer.

### Interdisciplinary/Other

**ICP-MS Laboratory Manager.** The Department of Civil Engineering and Geological Sciences at the University of Notre Dame has an opening for an ICP-MS laboratory manager.

Duties will include maintenance and day-to-day running of state-of-art ICP-MS facility which includes a VG PQII-STE ICP-MS equipped with a LaserProbe, a Mark IV ETV, VGS 2000 continuous flow hydride generator, CETAC U-5000AT ultrasonic nebulizer.

The successful applicant will be required to maintain the equipment, train new users in the use of this facility and will be encouraged to participate in Pls research.

Applicants should have a strong analytical background and at least 1-2 years experience with ICP-MS; completed at least a master's degree in either electronics and/or chemistry.

Please send applications with the names and addresses of three referees by September 30, 1994, to

Department of Human Resources  
University of Notre Dame  
Notre Dame, IN 46556  
219-631-5900

E-mail: trossen.1@nd.edu

The University of Notre Dame is an equal opportunity/affirmative action employer.

**Postdoctoral Fellow.** The University of Texas at Austin Institute for Geophysics (UTIG) invites applications for a postdoctoral fellow in the ocean sciences.

This position is for a new or very recent graduate with a Ph.D. in physics or applied mathematics.

This position is for a 12-month period starting after January 1, 1995, and is designed to introduce scientists from other disciplines into the ocean sciences.

Applicants with a background in nonlinear and linear optimization theory and/or wave propagation with a strong and computational background are encouraged to apply.

Specialized facilities available to UTIG researchers include the new generation of UTIG digital OBS's, other marine geophysical data acquisition equipment, and extensive networked computing facilities which include a Cray Y-MP8/864 (CGG Geovecteur) supercomputer, Sun workstations, and GeoQuest seismic modeling and interpretation software.

**Geophysics and Geohydrology.** The Department of Geology at Pomona College seeks a tenure track faculty member in geophysics, with emphasis on field work and field applications.

Teaching will include geophysics, an introductory course in geohydrology, and an introductory course on the ocean and atmosphere. In addition, teaching will include a fourth course of choice, either in geophysics or in interdisciplinary areas, which could even include women's or minority issues in science. The existing specializations in the department include volcanology, structural geology, and carbonate sedimentology. Evidence of teaching excellence and ability to undertake collegial interactions of teaching will be important in the selection process.

Pomona College is a highly selective, liberal arts college attracting a diverse, national student body. It is a founding member of the Claremont Colleges and is nationally recognized for its strength in the sciences and international studies. The college has a strong commitment to faculty teaching and research and believes that these activities are mutually enhancing in our setting.

Research involving undergraduate participation is particularly valued.

To apply, please send a statement concerning teaching and research, a curriculum vitae, and three letters of recommendation, by November 15, 1994, to

Dr. Richard W. Hazlett  
Department of Geology  
Pomona College  
609 N. College Ave.  
Claremont, CA 91711-6356

Pomona College is an equal opportunity/affirmative action employer. Applications from women and persons of color are especially encouraged.

### STUDENT OPPORTUNITIES

**JOI/USSAC (U.S. Science Advisory Committee) Ocean Drilling Fellowships.** JOI/U.S. Science Advisory Committee is seeking doctoral candidates of unusual promise and ability who are enrolled in U.S. institutions to conduct research compatible with that of the Ocean Drilling Program (ODP).

Both 1-year and 2-year fellowships are available. The award is \$20,000 per year to be used for stipend, tuition, benefits, research costs, and incidental travel, if any.

Applicants are encouraged to propose innovative and imaginative projects. Research may be directed toward the objectives of a specific leg or to broader themes.

Proposals and applications should be submitted to the JOI office according to the following schedule:

Shorebased Research December 1, 1994  
(regardless of DSDP or ODP leg)

For more information and to receive an application, contact: JOI/USSAC Ocean Drilling Fellowship Program, Joint Oceanographic

SARAH J. FOWELL

Curriculum Vitae

**Work Address:**

Department of Geological Sciences  
The University of South Carolina  
Columbia, SC 29208  
Phone: (803) 777-3552  
FAX: (803) 777-6610  
email: fowell@epoch.geol.sc Carolina.edu

**Home Address:**

1321B Woodrow St.  
Columbia, SC 29205  
Phone: (803) 929-0144

**Personal:**

Birthdate: 12 March, 1965  
Social Security No. 396-68-7173

**Education:**

9/87-1/94 Columbia University  
M.A. Geology, February, 1990  
M.Phil. Geology, October, 1991  
Ph.D. Geology, February, 1994  
thesis: Palynology of Triassic/Jurassic Boundary Sections  
from the Newark Supergroup of Eastern North America:  
Implications for Catastrophic Extinction Scenarios  
supervisor: Dr. P.E. Olsen

9/83-5/87 University of Wisconsin-Madison  
B.S. Geology, May, 1987

**Experience:**

1/94-present Research Associate, The University of South Carolina  
Reconstructing Siberian paleoclimates using palynofloras from deep cores of Lake Baikal,  
Co-instructor of an undergraduate seminar on lacustrine environments

7/94-present Adjunct Associate Research Scientist, Lamont-Doherty Earth Observatory  
Writing proposals for studies of Triassic palynofloral diversity and its relationship to  
paleolatitude and paleoclimate

9/94 Visiting Instructor, The Pennsylvania State University  
Teaching classroom and laboratory sections of Dr. Traverse's paleopalynology course

9/87-1/94 Graduate Fellow, Columbia University  
Research Assistant: Palynology, biostratigraphy, sedimentology  
Teaching Assistant: Introductory geology, biostratigraphy

9/88-12/88 Visiting Student, The Pennsylvania State University  
Processing of modern and fossil pollen, paleopalynology, plant anatomy

9/86-5/87 Geology Museum Tour Guide, University of Wisconsin-Madison  
Designing exhibits, guiding tours for student groups

### Field Experience:

- 1994: Comparing pollen assemblages from deep cores of Lake Baikal with the local Siberian flora, supervising undergraduate students in the collection of water and sediment samples from Lake Baikal, Russia
- 1988-1993: Mapping, correlation, and palynological sampling of Newark Supergroup outcrops; sampling and description of Newark basin cores
- 1993: Description and measurement of stratigraphic units, collection of palynological samples, Argana basin, Morocco
- 1991: Collection of palynological and paleomagnetic data, Trinity Peninsula, Antarctica
- 1992: Collection of short cores from Brown's pond, VA, for palynological analysis
- 1987: Mapping sedimentary, metamorphic, and igneous rocks in the Wasatch and Uinta mountains of Utah

### Awards:

- 2nd Place Best Poster, GSA Annual Meeting, 1992  
AASP-NSF Travel Grant, 1992  
Langer Prize (Lamont-Doherty Earth Observatory), 1990  
Paleontological Society Student Research Grant, 1989  
Best Oral Presentation of Research by a Student (GSA, NE Section Meeting), 1989  
UW-Madison Geology Department Outstanding Junior (scholarship), 1986  
National Merit Scholar, 1983

### Societies:

- American Geophysical Union  
American Association of Stratigraphic Palynologists  
Geological Society of America  
Paleontological Society  
Phi Beta Kappa  
Sigma Xi

### Articles:

- Fowell, S.J., and Traverse, A., in press. Late Triassic palynology of the Fundy basin, Nova Scotia and New Brunswick. Review of Palaeobotany and Palynology.
- Fowell, S.J., Cornet, B., and Olsen, P.E., 1994. Geologically rapid Late Triassic extinctions: Palynological evidence from the Newark Supergroup. In: Klein, G. D., ed., Pangea: Paleoclimate, Tectonics and Sedimentation During Accretion, Zenith and Break-up of a Supercontinent. Geological Society of America Special Paper 288, pp. 197-206.
- Fowell, S.J., and Olsen, P.E., 1993. Time-calibration of Triassic/Jurassic microfloral turnover, eastern North America. Tectonophysics 222: 361-369.
- Olsen, P.E., Fowell, S.J., and Cornet, B., 1990. The Triassic/Jurassic boundary in continental rocks of eastern North America; A progress report. In: Sharpton, V. L., and Ward, P. D. eds., Global Catastrophes in Earth History. Geological Society of America Special Paper 247, pp. 585-593.

### Manuscripts In Preparation:

- Fowell, S. J., and Bezrukova, Y., in prep. Pleistocene vegetation and climate of Siberia, from long cores of Lake Baikal. For Geology.
- Williams et al., in prep. Preliminary results of the first drilling on Lake Baikal, Buguldeika site, southeastern Siberia. For Quaternary International.

### **Selected Abstracts:**

- Bezrukova, E. V., and Fowell, S. J., 1994. Late Pleistocene vegetation and climate of southern Siberia, from a 98 meter core of lake Baikal. Geological Society of America, Abstracts with Programs, 26: A64.
- Fowell, S.J., 1993. Evidence for regional palynofloral extinctions at the Triassic/Jurassic boundary. Annual Convention, Canadian Society of Petroleum Geologists with Global Sedimentary Geology Program, Program and Abstracts: 99.
- Fowell, S.J., 1992. Rare palynofloras from the Fundy basin: Implications for a regional Triassic/Jurassic boundary event. Geological Society of America, Abstracts with Programs, 24: A95-A96.
- Fowell, S.J., 1992. Palynology of the terrestrial Triassic-Jurassic boundary, eastern United States. 8th International Palynological Congress, Program and Abstracts: 48.
- Fowell, S.J., Cornet, B., and Olsen, P.E., 1992. Palynomorph assemblages from cyclic sedimentary sequences of Late Triassic age. 8th International Palynological Congress, Program and Abstracts: 48.
- Fowell, S.J., 1990. Palynological evidence for a Triassic-Jurassic boundary event, Newark Supergroup. Geological Society of America, Abstracts with Programs, 22: A355.
- Fowell, S.J., 1990. Palynological signature indicates disruption of floral ecosystems at the Triassic-Jurassic boundary, Newark Supergroup. Geological Society of America Northeastern Section, Abstracts with Programs, 22: 17.
- Fowell, S.J., 1989. Quantitative palynostratigraphy of the Newark Supergroup. Geological Society of America Northeastern Section, Abstracts with Programs, 21: 15.

### **References:**

Dr. Nick Christie-Blick  
Lamont-Doherty Geological Observatory  
Palisades, New York, 10964  
(914) 365-8821

Dr. Paul Olsen  
Lamont-Doherty Geological Observatory  
Palisades, New York 10964  
(914) 365-8491

Dr. Dorothy Peteet  
Lamont-Doherty Geological Observatory  
Palisades, New York 10964  
(914) 365-8420

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
435 Deike Building  
University Park, PA 16802  
(814) 863-3419

Dr. Douglas Williams  
The University of South Carolina  
Department of Geological Sciences  
Columbia, SC 29208  
(803) 777-7525

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  
24 October, 1994

Dr. Sarah J. Fowell  
Dept. of Geological Sci.  
EWSB 408  
University of South Carolina  
Columbia, SC 29208

Dear Sarah:

The enclosed xerox should give you deja vu and recollections of SEM "charges." At least, it sure did for me.

What do we do about this?

Don't give up on the modern pollen bit. Our mills sometimes grind a little slowly. We just had to be out of town again for our annual autumnal visit to the Adirondacks. It was incredibly beautiful, and we had a great time, but it does add to the backlog around here!

All the best.

Yours very truly,

Alfred Traverse

encl:xerox  
c:Deb Detwiler

THE PENNSYLVANIA STATE UNIVERSITY  
Earth System Science Center

Inter-Office Correspondence

**Date:** October 19, 1994  
**From:** The ESSC Computing Facility Staff  
**Subj:** Support Billing

Attached is a copy of the ESSC Computer Facility support bill you received in late spring of this year. We have not yet received payment of this bill.

Please make arrangements with Deb Detwiler in room 248 Deike Building, 865-1073 (deb@essc.psu.edu) by 15 November 1994 for payment of your bill. If you have any questions, feel free to contact Deb or Bill Peterson (865-0294; bill@essc.psu.edu).

Thank you!

ESSC Workstation Network Support Charges

Date: Thu, 04/21/94

Advisor: Traverse

Charging Class: Class 1

Accounts:

sjf Sarah Fowell

Computers under support:

None

Your total support charge based on the information above is  
\$ 300 for Class 1 support with 0 machines.

The Class 1 support level includes limited network access, such as the ability to send and receive e-mail, read Netnews, and use much of the public-domain software available on the ESSC/Geosciences workstation network.

The Class 2 support level, at a cost of \$1000, adds access to licensed software such as WordPerfect, the Island suite of programs, Lotus 1-2-3, ArcInfo, FrameMaker, IDL, PV-Wave, AVS, unbundled language compilers and MatLab. If you'd like to upgrade your support level, contact Deb at the number listed below.

Please contact Deb Detwiler at 865-1073 by 15 April 1994 to make arrangements for payment or if you have any questions.

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

15 August, 1994

Dr. Sarah J. Fowell  
Dept. of Geological Sciences  
Univ. of South Carolina  
Columbia, SC 29208

Dear Sarah:

The letter to University of Hawaii at Hilo is taken care of. From the ad it almost sounds as if I were supposed to send the letter to you, but I hate that, and I sent it in directly. Hope that's o. k. I suppose you noted what a mess the ad is?-- "University of References." Etc. If my letter will get you the job, start packing.

Maybe you ought to arrive here no later than the 14th in Sept.? We leave on the 16th, and we do have a lot to show you about living at our place and working in Deike. That seems pretty minimal time to me. I mention this because I thought I recalled the 15th being suggested.

All the best.

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

8 August, 1994

Dr. Sarah J. Fowell  
Department of Geological Sciences  
The University of South Carolina  
701 Sumter  
Columbia, SC 29208

Dear Sarah:

As I said over the phone earlier today, I am sending only the pages with various mistakes for you to take care of. I have made xeroxes of the pages so that I have a complete copy of the MS.

I also enclose a couple of reprints, one of which may be your missing Playford and Dettmann. It was in my files, along with my original. I suspect I saw it lying around after you left, thought it was mine and had it filed.

It is neat that you can cover for the class. I just checked the pre-enrollment: 16. With card-tables I can accommodate three more for a total of 19. I'd really rather it stayed at 16.

All the best.

Yours very truly,

Alfred Traverse

encl.: reprints, MS pages



THE UNIVERSITY OF SOUTH CAROLINA

Department of Geological Sciences

Columbia, SC 29208

3 August, 1994

Dr. Alfred Traverse  
Palynological Laboratories  
435 Deike Building  
The Pennsylvania State University  
University Park, PA 16802

Dear Alfred:

Enclosed is the revised copy of our paper, and copies of the reviews. The biggest changes were in the systematic section. Both reviewers suggested that we delete descriptions of species that were not amended, and Mary Dettman asked that we include page and plate numbers for all synonyms. I have done these things. I did not include the copy of the paper Mary Dettman sent, with a few of her comments on it. She merely indicated which sections to delete, and changed grani to grana in a couple places.

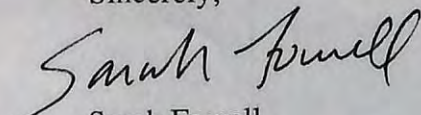
With regards to the recommendations by the anonymous reviewer that we 1) remove Table 2 and 2) reorder the sections of the paper, I disagree on both counts. Firstly, Table 2 is the only place where complete citations for all species are given, and I think it should remain. Secondly, I think the paper reads best in its current arrangement. But let me know what you think.

Mary Dettman has also suggested that we list reasons as to why species introductions/appearances have greater resolution than acme events. Aside from intuitively obvious reasons, such as the fact that the abundance of a certain species may be controlled primarily by local climatic factors, I'm not sure what she wants. I didn't begin the project with the assumption that acme events were less reliable. That was the conclusion I arrived at based on the species range data. Let me know if you have any ideas/suggestions along these lines. I'm still thinking about it.

As for using figures from Fowell et al., 1994, for talks and/or publications, you are naturally welcome to do so. Now you have it in writing.

I look forward to seeing you in September.

Sincerely,

  
Sarah Fowell

# Review of Palaeobotany and Palynology

An International Journal



ELSEVIER  
SCIENCE

## EDITORS

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Dr. S.J. Fowell  
University of South Carolina  
Department of Geological Sciences  
Columbia, SC 29208  
U.S.A.

Re.: PALBO 536

Amsterdam, July 4, 1994

Dear Dr. Fowell,

I can now inform you that the Editorial Board has evaluated the manuscript *Palynology and age of the upper Blomidon Formation, Fundy Basin, Nova Scotia* by Fowell, S.J. and Traverse, A.

I am pleased to say that it has been favourably received and publication with minor revision is recommended (see enclosed).

I look forward with interest to receipt, in duplicate, of the modified version. In a covering letter you should explain how and where the reviewers' comments have been incorporated; in addition, it would be helpful if you could indicate in the text where changes have been made. Should you disagree with any part of the reviews, please explain why. When submitting the revision (IN DUPLICATE AND ON A DISC), please return all material to me, including the old annotated manuscript pages.

Given that the requested revisions are fairly minor I would like you to encourage to return any new version within 4 weeks.

I hope that you will find the comments to be of use to you and am looking forward with interest to receiving your revision.

Yours sincerely,  
EDITORIAL OFFICE

F.G. Koning  
EMail: f.koning@elsevier.nl

Imprints:  
Elsevier  
Pergamon  
North-Holland  
Excerpta Medica

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

1 August, 1994

Dr. Sarah J. Fowell  
Department of Geological Sciences  
University of S. Carolina  
701 Sumter  
Columbia, SC 29208

Dear Sarah:

Just hung up phone from our conversation. Forgot to say that there was a message on the answering machine recently from Vicki Weintraub, my present Ph. D. student. She says that her boss was with you at Lake Baikal, and that she (VW) was looking forward to getting to know you in Sept. (you need to arrive, by the way, no later than the 15th--so that we can orient you--we leave for Spain on the 16th.)

re granum. It's 2nd declension all right, as I thought, but is nevertheless apparently grana in the plural. Sorry if the error was mine in the first place, which is quite possible.

Enclosed are the reprints I have available.

All the best.

Yours very truly,

Alfred Traverse

encl.: reprints

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

10 May, 1994

Dr. Sarah J. Fowell  
Department of Geological Sciences  
701 Sumter  
University of South Carolina  
Columbia, SC 29208

Dear Sarah:

I'm sitting here working on some paragraphs for the Fensome et al. paper for the GSC on Fundy Basin, and using our paper as the source for some quotes. I'm calling it "submitted"--I'll want to know when to switch to "in press"! However, the reason I'm writing is that I just noticed the dread word "microfloras" in para. 2 of the abstract. I've led a long campaign against that--microflora refers to bacteria etc., usually in a gut. Our word is palynoflora. Would you please make a note to replace microflora with palynoflora in the abstract, and use a global search to be sure it doesn't occur elsewhere? Thanks. I suspect you can do this when you get up the revised version of the paper. If not, in proof. I wonder if this will be my last anti-gremlin missive on the F/T paper?

All the best.

Yours very truly,

Alfred Traverse

THE PENNSYLVANIA STATE UNIVERSITY  
DEPARTMENT OF GEOSCIENCES  
PALYNOLOGICAL LABORATORIES  
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8 May, 1994

Dr. Sarah J. Fowell  
Department of Geosciences  
University of South Carolina  
701 Sumter  
Columbia, SC 29208

Dear Sarah:

It's a dreary Sunday afternoon. When it finally dries off, which is the promise, I'll head home to plant more of the 200 Thuja occidentalis I bought to make a tall privacy hedge. That's a lot of little trees. When I filled out the form from the back of the catalog it didn't really hit me just how many that is.

The paper came a few days ago, and I am glad to have it and proud to have been part of the project. I note a few gremlins that I either didn't think of sooner, or they entered later. The paragraph starting "In summary...." on p. 21 is very hard to understand. On p. 22, l. 4, it should be "these data." I hope that last one can be changed in the required revision that will presumably happen. I also hope that a few more words can be added to the "In summary...." paragraph so that I am sure I understand things of which I am officially co-author! Scheuring 1978 in the biblio: Microflore. Horrors! How did I let that get by? Litwin et al. 1991: Palaeobotany. Ditto. Please correct these in your master copy!

All the best.

Yours very truly,

Alfred Traverse

P.S.: Don't forget to have me high on the priority list for a copy of your thesis!

THE PENNSYLVANIA STATE UNIVERSITY  
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26 April, 1994

Dr. Sarah J. Fowell  
Department of Geology  
University of South Carolina  
701 Sumter -618 EWSC  
Columbia, SC 29208

Dear Sarah:

Do I eventually get a copy of your final thesis? If not, I should have "snuck" out my copy last Dec.! I keep wanting to refer to it. At the moment I need to cite it and could use a xerox of the title page on which you indicate the total no. of pages.

Hope all is going well!

Yours very truly,

Alfred Traverse

AT/et

THE PENNSYLVANIA STATE UNIVERSITY  
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PALYNOLOGICAL LABORATORIES  
435 DEIKE BUILDING  
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Phone: (814)863-3419; Fax: 814-863-7823

28 February, 1994

Dr. Sarah J. Fowell  
Department of Geology  
University of South Carolina  
701 Sumter-618 EWSC  
Columbia, SC 29208

Dear Sarah:

Well, we got the article to RPP sent off, and I turned then to our MS (with interruptions from the mid-semester exam for my paleobotany course, doctor's visits for Betty's injured hip--from fall on the ice, etc.).

First of all, answers to questions on sticky notes:

1. Name and address for me o. k.
2. Carnegie Museum: go directly to the Director, who is also the palynologist: Dr. James E. King, Director and Curator of Paleobotany, Carnegie Museum of Natural History, Div. of Earth Sciences, 4400 Forbes Ave., Pittsburgh, PA 15213; Ph.412-622-3280.
3. Re RPP: Send to Editor-in-Chief (an old friend): Dr. Wim Punt, Rijksuniversiteit Utrecht, Lab. Palaeobotanie en Palynologie, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands.
4. Plates should be put between heavy cardboards. Each plate also should have a protective sheet attached to it. I'm surprised I never demonstrated. I use onion skin, so that they can easily be turned back. Be sure to record on a xerox copy exactly what negative is involved for each picture. Once or twice in my career I've had to reconstruct a damaged or lost plate

Now about the MS itself, my red-pencilled copy of which is enclosed:

- a. I'm nervous about the Bujak quote of Mobil report. Are you sure it's o. k.? Better contact somebody if you haven't--perhaps Bob Clarke (see AASP directory) in Dallas would be good place to start.
- b. In the Acknowledgments you have Bujak's name wrong.

It's Jonathan Bujak, not as you have it. And it's Robert A. Fensome, not (holy smoke) "Fulsome." And you should use complete names in a formal publication. What if his nickname were Meathead?

c. Under methods, please give more exact description of mounting medium--trade name if any, etc. For one thing, I'd like to know, as I track such matters, as to index of refraction, etc. Also, re the HNO<sub>3</sub> treatment, say what %, what it does that conventional Schulze's doesn't do, etc. That's very interesting and potentially important. Did you get the idea from the outer space fella?

d. There are some boo-boos in the biblio, of which the worst is Potonié--but I can't find that ref. in the MS and maybe it can be dropped? If it IS referenced, you need to straighten out the biblio ref.

e. Small size and other peculiarities of palynomorphs in rocks can, in my opinion, sometimes be explained by things that happened during lithification/diagenesis. It's well known that one can shrink pollen exines in the lab--why not in the field?

f. I would not give the color of specimens as part of description, because these are treated specimens, after all. I'd be glad to entertain a contrary opinion, but I have been guffawing for years at palynologists who tell what color their specimens are, and I'll have to be convinced!

In general, the paper is in good shape, and I am proud to be co-author! All the best to you.

Yours very truly,

Alfred Traverse

enclosure: MS

~~her folder~~

el

use

13-XII-93

~~her folder~~

S. Georgia Area + 5° S in F<sub>2</sub>

Also cyclicity of lake beds depends at  
base on fabric determination  
of rock: roots, ripple marks, surface  
irregularities, forest laminations.

Importance: cycles can be translated to  
time

60% of late F<sub>2</sub> species make last  
stand at F<sub>2</sub>/F<sub>3</sub> boundary (as  
stipulated by B. Cornet): 201 MYA

[AT Firmly agreed - "spores don't mean anything  
stratigraphically"]

gracilipollis - range to that in Europe } Gracilipollis:  
Vallaspora grac. <sup>late</sup> longi in N Amer. } is the  
? thesis }

F<sub>2</sub>/F<sub>3</sub> boundary: spores + Circumpollis -  
dominant !

Fern + weed spore !

Capeper Base: has Circumpollis  
peak with late F<sub>2</sub> under  
Palmisporites etc.

S. Powell defense, 2005

W. M. Brant: 202 MB

[How do you account for  
good pres. 2m below the  
base?]

[where do classify Camerosporites?]  
Paritissporites?

[AT - Paul Olsen - says  
plenty of vert. fossils in siltstone  
matrix! Grass beds just had  
had luck?

Take Code

Lamont-Doherty Earth Observatory  
of Columbia University

| Palisades, NY 10964

Sarah J. Fowell  
Telephone: (914) 365-8621  
Home Phone: (212) 749-5034  
FAX: (914) 365-8150

28 November, 1993

Dr. Alfred Traverse  
Palynological Laboratories  
435 Deike Building  
The Pennsylvania State University  
University Park, PA 16802

Dear Alfred:

Enclosed is a copy of my thesis. Paul has read it, and this version incorporates his suggested revisions. I hope that you will be able to be the outside member on my defense committee. As I am due in South Carolina as soon as possible, I would like to defend the second or third week in December. Potential dates are Dec. 10, 13, or 17. I would prefer Dec. 10 or 13. Paul or I will contact you shortly to discuss which (if any) of these days are convenient for you.

You will notice that Chapter 3 is essentially our paper on the Fundy palynofloras. However, our paper will require some changes to the conclusions (so that it can stand on its own) before we submit it to Review of Paleobotany and Palynology. I also have not yet included England finder locations of the holotypes, because I haven't been able to locate an England finder. Perhaps you can bring one when you come for my defense.

I have called my third (and previously unnamed) new species *Cycadopites tattoo* in this version of my thesis. I've used this name because the species in question looks as though it has been used as a pincushion (it has a reticulum with tiny lumina). I realize that this name may need to be changed for publication (and for the final version of my thesis), as I think the published name must be Latin. Is that correct?

no - latinized if a species name (genus could be tattoo !)

I hope you had an enjoyable Thanksgiving. I will be speaking with you in the near future. Say hello to Betty for me.

unless stated to be "undeclinable"

Sincerely,

*Sarah Fowell*

Sarah Fowell

Sarah Fowell's

45 pls. outcrag

NW corner of

Portridge Hill,

near Passsboro

home phone  
212 - 749-5034 22 Oct '93

To A.T. & R.F.  
Date 22-X Time 1:12  AM  PM

**WHILE YOU WERE OUT**

M Sarah Fowell

of \_\_\_\_\_

Phone (914) 365-8622  
Area Code Number Extension

TELEPHONED	<input checked="" type="checkbox"/>	PLEASE CALL	<input checked="" type="checkbox"/>
CALLED TO SEE YOU	<input type="checkbox"/>	WILL CALL AGAIN	<input type="checkbox"/>
WANTS TO SEE YOU	<input type="checkbox"/>	URGENT	<input type="checkbox"/>

RETURNED YOUR CALL

Message will try to stay  
put for 20 min.

Lamont-Doherty Geological Observatory | Palisades, NY 10964  
of Columbia University

Sarah Fowell  
Telephone: (914) 365-8886  
FAX: (914) 359-5215

9 March, 1993

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

*Parasporites*

Dear Alfred:

This is a brief description of my Fundy basin palynofloras. I have four productive horizons, which I have labelled (from youngest to oldest) 1, 3, 4, and 9. All four samples are from the uppermost meter of the Blomidon Formation. 1 is immediately below the North Mountain Basalt, and 9 lies 66 cm downsection. All four palynofloras are dominated by *Corollina torosa* and *Corollina murphyi*. *Corollina meyeriana* is also present, but it is less abundant. Palynofloras 1, 3, and 4 contain more than 90% *Corollina*; 9 contains 59% *Corollina* and 25% small, non-striate bisaccates that I have tentatively assigned to the species *Vitreisporites jurassicus* Pocock 1970 and *Alisporites tenuicarpus* Balme 1970.

Despite the dominance of *Corollina* in all samples, I currently believe that 4 and 9 are Rhaetian and 1 and 3 are Hettangian. This is because 4 contains rare (but not reworked) specimens of *Patinasporites densus* and a variety of uncommon and unusual monosulcate species that are comparable to species from the latest Triassic of the Newark basin. Many of these species appear to be new. Assemblages 1 and 3 lack these species, and assemblage 1 contains the first appearance of *Pityosporites parvisaccatus* de Jersey 1960, which is known from the early Jurassic of Australia.

The dominance of *Corollina* might lead other researchers to place all my palynofloras within the Jurassic (a logical alternative), but I feel the combined evidence from the rare or uncommon species supports my interpretation. Below I will list the assemblages in stratigraphic order, followed by some of their constituent species (as yet unidentified species and rare species with little or no stratigraphic importance will be omitted). Species will be listed in order of abundance.

Sample 1: *Corollina murphyi*; *Corollina torosa*; *Corollina meyeriana*;  
*Cycadopites andrewsii*; *Pityosporites parvisaccatus*

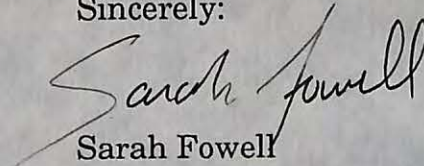
Sample 3: *Corollina torosa*; *Corollina murphyi*; *Corollina meyeriana*;  
*Cycadopites andrewsii*

Sample 4: *Corollina torosa*; *Corollina murphyi*; *Corollina meyeriana*;  
*Alisporites tenuicarpus*; *Vitreisporites jurassicus*; *Cycadopites andrewsii*;  
monosulcate sp. 1; monosulcate sp. 2; *Patinasporites densus*;  
monosulcate sp. 3

Sample 9: *Corollina torosa*; *Corollina murphyi*; *Corollina meyeriana*;  
*Alisporites tenuicarpus*; *Vitreisporites jurassicus*

I hope this brief outline is useful. Please note that there are quite a few more species present in each sample than those that I have listed above. Some have almost no stratigraphic value (for example, *Calamospora mesozoica*), some are new (the strange, *Ovalipollis*-like species), and others I have not yet identified with certainty (sample 9 contains several examples of what may be *Camerosporites pseudoverrucatus*, but they are poorly preserved).

Sincerely:

  
Sarah Fowell

Blouido Fomeloi — James  
Sample

Uppermost

Blouido

Uppermost

Crust

---

Parochoro regioi

---

Partridge ?  
Blouido

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

13 August, 1993

Sarah Fowell  
Lamont-Doherty Geological observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

A messenger from Rosemary Walsh's SEM lab dropped by the other day to get a few details about your work there last January (or whenever it was) for their required annual report. He also left the enclosed blurb indicating that they would appreciate acknowledgment in dissertations and other publications.

Hope all is going well. Looking forward to seeing you in September.

Yours very truly,

Alfred Traverse

AT/et  
encl: blurb

for Sarah Fowell

**Users of the EM Facility.**

**For Your Information:**

Instrument	Company	Model No.	Address
TEM	JEOL	1200 EXII	Peabody, MA
Ultramicrotome	LKB Instruments	LKB III-8800	Rockville, MD
Knifemaker	" "	7800 B	" "
Diamond Knife	DDK	3.5 mm dia.	Wilmington, DE
Vacuum Evaporator	Edwards	306	Grand Island, NY
SEM	JEOL	JSM 5400	Peabody, MA
SEM-Backscatter	ETP-Robinson	RBJ-5400 FML	Sydney, Australia
CRYO-SEM	Oxford-Hexland	C1500C	Concord, MA
Sputter-coater	Fisons	Polaron PS-2	Mt. View, CA
Critical Point Dryer	Fisons	Polaron E3000	" " "
X-ray Microanalysis	PGT	IMIX Version 6	Princeton, NJ

**Suggested acknowledgement:**

Publications including theses and presentations incorporating information obtained through the use of the EM Facility, 1 South Frear should include the following statement

(5 E M)  
"Transmission Electron Microscopy\* was performed at the Electron Microscope Facility for the Life Sciences in the Biotechnology Institute at Penn State University."

\* or SEM, Cryo-SEM, X-Ray Microanalysis

Thank you,  
Rosemary Walsh

TO AT

DATE 8/30 TIME 11:50

WHILE YOU WERE OUT

M. Sarah Powell

Of \_\_\_\_\_

Phone 914-365-8886

- TELEPHONED  PLEASE RETURN CALL
- CALLED TO SEE YOU  WILL CALL AGAIN
- RETURNED YOUR CALL  RUSH

MESSAGE Coming 7 Sept.?  
OK P 15 Sept  
Geo, a.u.

Signed B

The Standard Register Company

THE PENNSYLVANIA STATE UNIVERSITY  
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435 DEIKE BUILDING  
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26 March, 1993

Sarah J. Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

There's probably a message to call me too, but your "roommates" don't seem too swift in that direction, so I thought I'd better get a letter in the works too.

I talked to Sid Ash about the meeting in Flagstaff and ascertained that, though he's involved, there won't be a cough in a carload of paleobotany/palynology at the session, and the fieldtrip will be a redo of things I've done with Sid several times and don't need to spend hundreds of dollars to see again at this point. So, all in all, I decided that I'd rather have my \$1000+ to spend on something else, especially as it turns out that the proceedings will only publish an extended abstract sort of short paper, and the MS is due 30 April. I think we should aim at either Palynology, Journal of Micropaleontology, or Review of Palaeobotany and Palynology. What do you think?

Back to the photomicrography--three rolls so far. Unfortunately I will be interrupted this afternoon by John Bridge, in connection with our joint Devonian work, on which I'm three years in arrears, and all next week and part of the following week by the visit of Paul Strother, in connection with our interest in Ord.-Sil. matters.

All the best.

Yours very truly,

Alfred Traverse

THE PENNSYLVANIA STATE UNIVERSITY  
DEPARTMENT OF GEOSCIENCES  
PALYNOLOGICAL LABORATORIES  
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19 February, 1993

Sarah J. Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Reaching you by phone this a. m. hasn't worked. Imagine people in this day and age without an answering machine! Ha!

Rosemary Walsh just called with disturbing news. She says that if Columbia pays directly for the SEM, it will cost over \$800, instead of \$400, because the latter price included a big discount based on subsidy from PSU. So, we should figure out a way for you all to reimburse the Dept. of Geosciences here, and then we can pay. However, I've had a conference with our head, who says that it was a PSU project with a PSU professor in charge. Who pays is irrelevant. Therefore he advises me to hardnose on the subject--they get the \$400 or nothing. I have so communicated to poor Rosemary, who is caught in the middle. That's where it stands. So, we're back to square one--Columbia pays and pays the amount I would have paid. Woe is me! Pain in the neck, what?

Yours very truly,

Alfred Traverse

ELECTRON MICROSCOPE LAB

2/19/93

From: R. Walsh

To: A. Jernverse

FYI

865-0212

Microscope Facility

Columbia University  
Lamont-Doherty Earth  
Observatory, PA. 16802

*file  
Sarah  
Fowell*

Date: 2-19-93

From: Rosemary A. Walsh

To: Sonya Shomo, Biotechnology Institute

Re: Billing information for bill to Sarah Fowell, Lamont-Doherty Earth  
Observatory of Columbia University

Suggested format for billing to Ms. Fowell:

"For use of the Scanning Electron Microscope, services of the electron microscope technician, Rosemary Walsh, sample preparations and film supplies on January 5, 7 and 8, 1993 in the Electron Microscope Facility for the Life Sciences."

Total: \$480.75

Please forward a check made payable to PSU to:

Biotechnology Institute  
The Pennsylvania State University  
314 Wartik Laboratory  
University Park, PA 16802  
Attn.: Sonya Shomo

Electron Microscope Facility  
001 South Frear  
Pennsylvania State University  
University Park, PA. 16802

Date: 1/11/93  
From: Rosemary Walsh, EM Facility  
To: Sarah Fowell  
Address: Lamont-Doherty Earth Observatory  
of Columbia University  
Palisades, NY 10964

Please forward a check made payable to PSU to:  
Biotechnology Institute  
The Pennsylvania State University  
314 Wartik Laboratory  
University Park, PA 16802  
Attn.: Sonya Shomo

for the following: *DATES OF USE/SERVICES: 1/5, 7, 8/93*

<u>Use and Training Charges/hour</u>		
___ SEM by Trained User	\$ 38.00	_____
<u>5.25</u> SEM by EM Technician	\$ 61.00	<u>320.25</u>
___ SEM, IMIX	\$ 77.00	_____
___ SEM, CRYO	\$ 77.00	_____
___ SEM, CRYO, IMIX	\$116.00	_____
___ IMIX	\$ 39.00	_____
___ EM Technician fee	\$ 46.00	_____

<u>Expendible Supplies</u>		
___ Sample Preparations-Type I	\$8.00	_____
<u>24</u> Sample Preparations-Type II	\$5.00	<u>120.00</u>
___ Polaroid 54 Film (print)	\$2.10	_____
<u>18</u> Polaroid 55 Film (pr.+neg.)	\$2.25	<u>40.50</u>
___ Set-up of Photochemicals	\$5.00	_____
___ RC PCIII Print Paper (8x10)	\$1.00	_____
___ Archiving supplies(_____)		_____

Total 480.75

Phone: 814-865-0212  
Fax: 814-863-1357

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

1 February, 1993

Paleoclimatology Ocean Modelling Search  
Committee  
Department of Geological Sciences  
University of South Carolina  
Columbia, SC 29208

Dear Friends:

This is to support the candidacy of Sarah J. Fowell for the post-doctoral position in paleoclimatology.

Sarah is nearing completion of her doctorate at Columbia (Lamont Doherty). Several years ago she spent a semester with me, taking our course in palynology and working with me in the lab as if she were my own graduate student. More recently she has spent two months here working with me in our palynological library and our collections, in connection with her thesis and with a joint paper on the palynology of the Fundy Basin we are putting together. We are a small group, and these two visits have provided a good opportunity to get to know Sarah quite well.

Sarah is a very devoted student who works hard and intensely. Yet she is good to have around, always ready to discuss new ideas and to chip in what she has to offer in solving a posed problem. She is very trustworthy, very committed, and very ready to try new approaches. In the course she was one of the all-time top performers. On her recent visit she gave one of the lectures for my palynology class--she spoke of her fascinating work in the Newark Basin with cyclic lake sediments, and their possible meaning in terms of the Melankovitch cycles. The undergrads thought it was great stuff, and I enjoyed it too. She is a keen and able lab technician and is also very good in the field. Despite her petite appearance she is an all-round capable person. She is also a loyal friend. If I had funding, I'd love to have Ms. Fowell here at PSU next year. Since I can't pull that off, I most highly recommend her to you.

Yours very truly,

Alfred Traverse  
Professor of Palynology

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

1 February, 1993

Ms. Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Your fax of 25 Jan. just has been worked down to in the pile. When I finish with this letter I'll write the recommendation letter and enclose it in a sealed envelope, per request. Sounds like a good position. I did a bunch of Triassic consulting for geologists at U. So. Car. several years ago. (Whoops, your fax of 26 Jan. was under the pile. You got what Rosemary send me. If you need different, please contact her.)

Regarding our project, did I already communicate with you that I heard from Rob Fensome that he and Ron Litwin have been working on exactly "my" outcrops? I guess that's your "other reason?"

No, paleobotany didn't go (got 7 students), so I should be free for research, but it's amazing how many other things can start happening. We just finished the chapter for the Jansonius book and got that in the mail. It is going slower with Fundy than I had hoped. I am also trying to reach both Litwin and Fensome to find out to what extent I am being "scooped." So far, no luck.

All the best.

Yours very truly,

Alfred Traverse

FACSIMILE TRANSMITTAL SHEETLamont-Doherty Geological Observatory  
of Columbia University

Palisades, NY 10964

Cable: LAMONTGEO  
Telex: 710-576-2653  
FAX: (914) 359-5215 Seismology  
(914) 359-2931 Lamont General

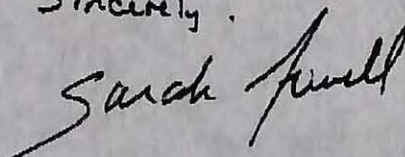
Telephone: (914) 359-2900

DATE: 1/26/93  
FROM: Sarah Fowell  
TO: Dr. Alfred Traverse  
FAX NUMBER: (814) 863-7823  
TOTAL NUMBER OF PAGES INCLUDING COVER: 1

Dear Alfred:

The accounting office here wants an original copy of the bill for the SEM work. For some reason, they don't want the xerox. Do you still have the original copy? If so, please send it along. If not, I may be able to persuade them to use the xerox.

Sincerely:


ACCOUNT NO: 5-60038  
DATE: ~~2-8-93~~ 1/26/93  
TIME: 2:35

WHEN RESPONDING PLEASE USE SEISMOLOGY FAX NUMBER: (914) 359-5215

Lamont-Doherty Geological Observatory | Palisades, NY 10964  
of Columbia University

Sarah Fowell  
Telephone: (914) 365-8886  
FAX: (914) 359-5215

25 January, 1993

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

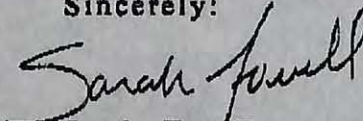
Dear Alfred:

Thanks for the bill. I had a copy of the rates, but wasn't sure what it came to. I'll arrange for it to be paid and let you know when I've done so.

I am applying for yet another post-doc, and hope that you will again be willing to write a recommendation for me. I have included a copy of the advertisement for that position (see additional page). They are looking for someone to relate pollen data from lake sediments to the climate record, so I feel I'm well qualified. The other two people who are writing recommendations for me are handing them to me in sealed envelopes - so that the whole application can go together. In the event that you are willing to write the recommendation, you can either send it to me, or to the address on the ad. If you choose the latter, let me know, as I want to make sure my application arrives in advance of the letters, and I'm not finished yet.

Are you teaching this semester? Clearly we now have another reason to push ahead with the Fundy data. I still hope to have a first draft ready in early March. What do you think?

Sincerely:

  
Sarah Fowell

Lamont-Doherty Earth Observatory  
of Columbia University

Palisades, NY 10964

Cable: LAMONTGEO  
Telex: 710-576-2653  
FAX: (914) 359-5215 Seismology  
(914) 359-2931 Lamont General

Telephone: (914) 359-2900

**FACSIMILE TRANSMITTAL SHEET**

DATE: 1/25/93

FROM: Sarah Fowell

TO: Alfred Traverse

FAX NUMBER: 814-863-7823

NUMBER OF PAGES INCLUDING COVER: 3

COMMENTS: Included are a letter + a copy  
of an ad in EOS (I'm  
applying for the position).

Please note my new  
phone #!

ACCOUNT NO: 5-60038

DATE: 1/25/93

TIME: 3:02

WHEN RESPONDING PLEASE USE SEISMOLOGY FAX NUMBER: (914) 359-5215

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

18 January, 1993

Ms. Sarah J. Fowell  
Lamont-Doherty Geol. Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

We miss you!

Enclosed is bill from Rosemary Walsh about the SEM charges. You can see why I don't do a whole lot of such! I seem to recall that you already had a copy of this and a plan to take care of it. Perhaps you can let me know that it has been paid, or whatever.

This morning I had a phone call from Rob Fensome of the Canadian Survey in Halifax. As an aside in the conversation he said he was working on samples from Fowndes Head and Martin Head, NB. Help! Apparently he got the idea from my abstracts. All the same, I must get that done!

Best regards from us both.

Yours very truly,

Alfred Traverse

encl: xerox of bill

# NSF-NATO Postdoctoral Fellowships in Science and Engineering

## Proposed Plan of Study and/or Research

### Instructions:

Please TYPE or PRINT all information clearly.

Name ..... Fowell ..... Sarah ..... Jane ..... Date 11/4/92 .....  
last first middle (maiden)

Title of proposed research Assessing the role of Milankovitch-type climate cycles in driving fluctuations of Triassic palynofloral diversity

In the block below, type or print a relatively non-technical abstract of the plan of study and/or research which you propose for the period of the fellowship.

An analysis of the relationship between wet and dry sedimentary cycles and palynofloral diversity of the late Triassic and early Jurassic Newark Supergroup is proposed in order to assess the relationship between climate change and extinction and to facilitate correlation with late Triassic palynofloras of Europe.

The Newark Supergroup of eastern North America contains one of the best records of Milankovitch-type climate cycles known from pre-Quaternary strata. Fourier analysis of measured stratigraphic sections and cores has documented four distinct cycles with periodicities of 20 ky, 100 ky, 400 ky, and 2 my (Olsen, 1986; P. E. Olsen, pers. comm., 1992). The Triassic/Jurassic boundary in the Newark Supergroup is denoted by a 75% extinction of common late Triassic palynomorph species and a spike in the spore/pollen ratio. Calibration by Milankovitch cycles indicates that this event was of short duration and potentially catastrophic in nature, but in European sections this palynofloral turnover appears to be more gradual.

Palynomorph samples will be extracted from cores of the entire late Triassic section of the Newark basin, and the relative abundances of environmentally significant groups will be tracked throughout successive 100 ky and 400 ky cycles. The resulting data set will not only facilitate comparison with coeval European sections, but also elucidate the magnitude of the floral response to global climate change.

Describe in detail, in not more than one or two pages, your proposed plan of study and/or research, limiting your description to the activities you expect to undertake while on tenure. Comment also on the appropriateness of both the institution selected and tenure period requested for your proposed work. Finally, indicate what plans have been made to date for the projected tenure period. Be sure your name is on all additional sheets.

See attached pages

In order to examine the floral response to Milankovitch-type climate changes and to refine correlations between North American and northern European Triassic strata, I propose to process and analyze palynofloras from cyclic sediments of the late Triassic and early Jurassic Newark Supergroup. The late Triassic is of particular interest as a time of warm global temperatures and high extinction rates; the Norian mass extinction of latest Triassic age is one of the five most severe Phanerozoic extinction events (Sepkoski, 1982). However, the difficulty involved in correlating terrestrial and marine rocks has left the relative timing of the late Triassic vertebrate and invertebrate extinctions unresolved. Palynomorph fossils are useful environmental indicators that are preserved in both continental and marine rocks. As such, they have much to offer to studies of late Triassic climate change, biotic turnover, and stratigraphy.

Sedimentary cycles with periodicities of 20 ky, 100 ky, and 400 ky have been recognized in outcrop sections throughout the Newark Supergroup (Olsen, 1986; Olsen et al., 1989). The most complete record of cyclicity is available from cores of the entire late Triassic section of the Newark basin; Fourier analysis of this data set has identified an additional cycle with a 2 my periodicity (P. E. Olsen, pers. comm., 1992). Samples will be obtained from these cores, which contain abundant palynologically productive horizons and provide a continuous record of wet and dry sedimentary cycles. The cores and an appropriate sampling apparatus are available at the Lamont-Doherty Geological Observatory. Consequently, I will be able to obtain the desired samples prior to the onset of the tenure period, and I can depart for the Netherlands with unprocessed samples in hand.

My thesis work has shown that the Triassic/Jurassic boundary in the Newark Supergroup is denoted by a 75% extinction of common late Triassic palynomorph species and a coincident spike in the spore/pollen ratio. Calibration of this palynofloral turnover by 20 ky cycles reveals a geologically brief, potentially catastrophic event. Yet extinctions in latest Triassic palynofloras from northern Europe appear to be relatively gradual. The proposed research will focus upon changes in diversity and composition of palynofloras throughout 100 ky and 400 ky cycles of the last 14 my of the Triassic in an attempt to assess the role of climate change in mass extinctions. To achieve significant results, a minimum of 70 productive samples will be required (one palynoflora per 100 ky interval). Since some barren horizons must be expected, and additional samples are desirable, I anticipate processing between 100 and 300 samples during the requested 12 month tenure period. This task alone will require at least 6 months of discontinuous work, but data analysis can proceed synchronously.

Preliminary investigations of 2 my cycles from the Newark basin cores show that fluctuations of the spore/pollen ratio track the sedimentary cycles. Hence, analysis of the palynofloras will begin with counts of 200 - 300 palynomorphs to determine the morphological and taxonomic composition of the assemblage. The relative abundances of ecologically significant taxa will then be calculated. Of these tasks, counting and identification are potentially the most time-consuming, as they rely greatly upon the abundance and

degree of preservation of the constituent palynomorphs. I expect that the entire 12 month period will be required in order to complete analysis of 100 or more samples.

The palynological information gathered from a climatic and ecological study of the Newark basin samples may also enhance understanding of the temporal relationship between late Triassic strata of northern Europe and North America. To date, marine, ammonite-calibrated sections of Europe remain only loosely correlated with terrestrial late Triassic outcrops in the United States. Since palynomorphs are preserved in both continental and marine rocks, they are key to cementing the correlation of late Triassic sections on either side of the Atlantic. I intend to compare and contrast the Newark basin assemblages with those from the European Triassic throughout the tenure period.

The Laboratory of Paleobotany and Palynology in Utrecht is the ideal place to carry out the objectives stated above for a number of reasons. Processing will be expedited by the availability of excellent laboratory facilities. Data analysis will be enhanced by access to unpublished data and theses dealing with the late Triassic palynology of Europe and contact with resource persons who have considerable expertise in late Triassic paleoecology and palynology. Finally, by working in Utrecht I will be able to examine slides from resident collections of late Triassic palynomorphs, facilitating correlation with the Newark basin.

References:

- Olsen, P. E., 1986. A 40-million-year lake record of early Mesozoic orbital climatic forcing. *Science*, 234: 842-848.
- Olsen, P. E., Schlische, R. W., and Gore, J. W. (editors), 1989. Tectonic, Depositional, and Paleoenvironmental History of Early Mesozoic Rift Basins, Eastern North America (International Geological Congress field trip guidebook T351). American Geophysical Union, Washington, D.C., 174 pp.
- Sepkoski, J. J., Jr., 1982. Mass extinctions in the Phanerozoic oceans: A review. *Geological Society of America Special Paper* 190: 283-289.

**NSF-NATO Postdoctoral Fellowships in Science and Engineering**

**Reference  
Report  
on Applicant**

Applicants' qualifications are evaluated for the National Science Foundation by panels of scientists. Awardees are selected by the National Science Foundation.

Please **type** or **print** all information requested on this form

Name of Respondent Alfred Traverse  
 Title Professor of Palynology  
 Respondent's Department Dept. of Geosciences  
 Respondent's Institution Penn State University

To be completed by applicant:

Name of Applicant Fowell Sarah Jane  
last first middle maiden  
 Field Earth Sciences  
e.g., Microbiology, Theoretical Physics, etc.  
 Date Due On or before December 4th

**THIS REPORT IS DUE ON OR BEFORE THE DATE SPECIFIED ABOVE. IT WILL BE OF NO VALUE IF RECEIVED AFTER THE EVALUATION OF APPLICATIONS, WHICH IS SCHEDULED TO BEGIN IN EARLY JANUARY.**

**Brief Statement of Applicant's Proposed Fellowship Program**

An analysis of the relationship between wet and dry sedimentary cycles and palynofloral diversity of the late Triassic and early Jurassic Newark Supergroup is proposed in order to assess the relationship between climate change and extinction and to facilitate correlation with late Triassic palynofloras of Europe.

The Newark Supergroup of eastern North America contains one of the best records of Milankovitch-type climate cycles known from pre-Quaternary strata. Fourier analysis of measured stratigraphic sections and cores has documented four distinct cycles with periodicities of 20 ky, 100 ky, 400 ky, and 2 my (Olsen, 1986; P. E. Olsen, pers. comm., 1992). The Triassic/Jurassic boundary in the Newark Supergroup is denoted by a 75% extinction of common late Triassic palynomorph species and a spike in the spore/pollen ratio. Calibration by Milankovitch cycles indicates that this event was of short duration and potentially catastrophic in nature, but in European sections this palynofloral turnover appears to be more gradual.

Palynomorph samples will be extracted from cores of the entire late Triassic section of the Newark basin, and the relative abundances of environmentally significant groups will be tracked throughout successive 100 ky and 400 ky cycles. The resulting data set will not only facilitate comparison with coeval European sections, but also elucidate the magnitude of the floral response to global climate change.

To be completed by reference respondent:

Please Type or Print

- I have known this person (check as many as apply)
  - .....as an undergraduate
  - .....as a graduate student
  - .....as a fellow employee
  - .....as a research assistant
  - .....as a teaching assistant
  - .....as thesis adviser
  - .....as a professional colleague
  - .....by reputation only
  - other student in course  
specify
- I was acquainted with his/her professional work during the period from Sept. 1988 to present  
month and year month and year
- His/her scientific field was palynology - geology  
name of scientific discipline or specialization
- His/her major function was research  teaching..... administration of research.....  
 other (specify) studying basic paleopalynology with me
- I had an excellent  good..... fair..... poor..... opportunity to observe the quality of his/her scientific or technical work.

(over)

6. In comparison with other scientists of comparable experience, indicate by checks your judgment of the applicant with respect to the following SCIENTIFIC ACHIEVEMENTS and PERSONAL CHARACTERISTICS:

Note: A typical group of 100 scientists at his or her level might be expected to divide about like this

Mastery of fundamental knowledge in his or her field .....

Design of research projects .....

Laboratory skill and technique .....

Growth during total period observed .....

Fertility of imagination; originality .....

Self-reliance and independence .....

BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	GOOD	UNUSUAL	OUTSTANDING	TRULY EXCEPTIONAL
Lowest 40	Middle 20	Next 15	Next highest 15	Highest 10		
				X		
				X		
					X	
					X	
				X		
					X	

INADEQUATE OPPORTUNITY TO OBSERVE

7. Would you be willing to have this applicant as a faculty member in your institution?  Yes  No

Comments .....

8. In the space below, please add any descriptive comments which will assist in providing a complete picture of the applicant's abilities and potential as a scientist. Include, where appropriate, comments on such matters as versatility, emotional stability, competence to envision and plan sound significant research, ability to make mature sound scientific judgments, and other strengths and weaknesses.

Sarah Fowell is dedicated, hard-working and bright. Her keen interest in and dedication to paleontologic research has always been apparent. She came to PSU in 1988 to take our course in palynology, because such instruction was not available where she was studying. Her performance in the course was outstanding. Since then she has become an outstanding young paleopalynologist, who has come to know the Triassic palynofloras very well indeed. She has a good sense of humor and gets along well with others and yet is very independent. In her work at Columbia she has steered her research toward the goals of 1) elucidating the nature of the Triassic/Jurassic boundary vis a vis the vegetation and plant geography and 2) studying the possibility of using palynological data for detection of relatively minor cyclic events. Both of these are frontiers of palynology and Sarah can well be a pioneer in both.

9. The primary objective of the NATO Postdoctoral Fellowships in Science program is to promote the progress of science and to foster closer collaboration among the scientists of various nations by assisting individuals who have demonstrated ability and special aptitude for advanced training to supplement their training. From past experience, it is anticipated that seven to ten times as many will apply in this program as can be given fellowships. Taking into consideration these facts, the applicant's proposed fellowship program, and the answers you have given to the above questions, to what extent do you recommend him or her for a NATO Postdoctoral Fellowship? You may answer by circling one or several consecutive numbers on the following scale.

Do not recommend [ 0 1 2 3 4 5 6 7 8 9 ] Recommend as strongly as possible

**IMPORTANT-CONFIDENTIALITY:** Before signing this report, you should check one of the two blocks at the right as applicable. If you wish to have your comments held in confidence so as not to reveal your identity as the author of these comments, you should check block A. If block A is checked, the Foundation will honor your request to the extent permitted by law. If you fail to check either block, the Foundation will treat your comments as confidential, but warns that your failure to check block A may result in a requirement to provide these comments to the applicant under the Privacy Act of 1974.

A. My preparation of this Reference Report is conditioned on the promise of the Foundation to hold my identity as the author of these comments in confidence.

B. My preparation of this Reference Report is not conditioned on the promise of the Foundation to hold my comments in confidence.

Signature of Respondent *Seamus Travere* Date *11 Nov 1992*

Alfred -

3:30

I am here, and I  
 have just finished  
 unloading my car. I  
 will be back as soon  
 as I move my car from  
 its illegal spot outside  
 to the Visitor's Lot.

- Sarah Powell

Greetings -

back at

345

A

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

1 October, 1992

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Just read your interesting abstract for GSA. I really look forward to hearing how you all succeeded where Bruce and I long ago failed--more intensive looking in Central Clarence, or what?

Reminds me I haven't heard from you re whether you're coming here, whether you got the book I sent, etc. Your abstract also reminds me that I think it would be neat and appropriate to include my palynoflorules from the NB side and my (Jurassic) core samples from the Bay with your new info as a Fowell & T. paper? Or perhaps a separate paper on that with you as co-author. Why not?

Hope all goes well. Regards to everybody.

Yours very truly,

Alfred Traverse

AT/et

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

*file Fowell*

19 October, 1992

Dr. George D. Klein (Co-Director)  
Project PANGAEA  
Department of Geology  
University of Illinois  
245 Natural History Bldg.  
1301 West Green Street  
urbana, IL 61801-299

Dear Dr. Klein:

Here's the review of Fowell et al.

The only really significant thing that I "demand" is that the authors either provide a taxonomic list in which the complete name-citations (including authors) are provided, or incorporate same into Fig. 4.

Note that I have also marked the MS with some red-pen corrections of minor errors that caught my eye and a few queries I had, intended to make the already good MS a bit more readable and/or informative.

Yours very truly,



Alfred Traverse  
Professor of Palynology

P.S. You may acknowledge me in the preface as a reviewer if you like, and may release my name to the author(s).

AT/et  
encl: MS and review



**GEOLOGICAL SOCIETY OF AMERICA**  
 P.O. Box 9140, Boulder, CO 80301

**BOOK MANUSCRIPT  
 REVIEWER'S APPRAISAL FORM**

Author(s): Sarah J. Fowell, B. Cornet, & P.E. Olsen

Title: Gradual or catastrophic late Triassic extinctions?..... Supergroup

Please indicate the strength of your response by marking the scale between YES and NO. Marginal notes may be made on the manuscript where appropriate. Use additional sheets as necessary to answer questions 1-17. Please send two copies of any additional comments.

- |  |     |                                     |                          |                          |                          |                          |    |
|--|-----|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----|
| 1. Does this paper contain new and original principles or concepts? .....                  | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| describe a geologically important area in an original way? .....                           | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| constitute a useful review?.....   | Yes | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| report significant new data? .....   | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| 2. Are the data available sufficient to justify the interpretations and conclusions? ..... | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| 3. Are facts clearly separated from interpretations? .....                                 | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| 4. Is the paper well organized? .....  | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |
| 5. Is the paper clearly written? .....   | Yes | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | No |

6. Has any part of this paper been published previously, or is it part of another manuscript?  
 If yes, please explain:

*It appears that Fowell & Olsen, in Press" covers some of same ground, but I haven't seen it.*

7. Would this paper be of interest in more than one subdiscipline of the geosciences?  
 Please list:

*Stratigraphy, paleopalynology, paleobotany, basin studies*

8. Can you suggest any reasonable way(s) to shorten the paper?  
 Please specify:

*no*

9. Can you suggest any improvement(s) in the title and/or abstract?  
 Please specify:

*Title: Palynological evidence for rapid Rate Triassic extinctions in the Newark Supergroup.*

10. Can parts of the text be replaced by figures and/or summary tables?  
 Please specify:

*No*

11. Can any of the illustrations be reduced in size, combined, eliminated, or significantly improved?  
 Please specify:

*No*

12. Are any additional illustrations needed?  
 Please specify:

*No*

13. Is the use of mathematics appropriate and correct?

14. How do you rate this manuscript? (circle one)    Excellent    Very good    Good    Fair    Poor

15. If this paper ranks low, could it be made into a top-quality paper?  
 If so, how?

16. On the basis of your review recorded above, should this paper be published by GSA following any necessary revision?

17. How much revision is required? (circle one)    None    Slight    Moderate    Major

18. Add any other comments on additional sheet(s). Please comment if you recommend rejection.  
 I agree to be identified to the author(s). (circle one)    Yes    No

*Please see letter*

SIGNED: Sepúlveda Traverso    DATE: 19 October, 1992

Name and address \_\_\_\_\_

NOTE: These forms do not require carbon paper. Please use ballpoint pen or typewriter with firm pressure. Reviewers should keep bottom copy and forward the top copy to the editor who sent you the manuscript for review.

GLOBAL SEDIMENTARY GEOLOGY PROGRAM  
A Commission of the International Union of Geological Sciences  
**PROJECT PANGAEA**

*file  
Fowell*

**REPLY TO:**

Dr. George D. Klein  
(Co-Director)  
Project PANGAEA  
Dept. of Geology  
University of Illinois  
245 Natural History Bldg  
1301 West Green Street  
Urbana, IL, 61801-299, USA

**TEL:** 217/333-2076  
**FAX:** 217/244-2446

October 9, 1992

Dr. Alfred Traverse  
Dept. of Geosciences  
435 Dieke Building  
Pennsylvania State University  
University Park, PA, 16802

Dear Dr. Traverse:

Thank you for agreeing to review a manuscript of a chapter for the edited volume on "Pangea: sedimentary/climatic responses to evolution of a supercontinent" which is being considered for publication as a Special Publication of the Geological Society of America. The volume editors are Benoit Beauchamp (Geological Survey of Canada) and me.

The enclosed manuscript details are:

Author: Sarah J. Fowell et al

Title: Gradual or catastrophic late Triassic extinctions?....Newark Supergroup

I enclose a reviewer's form for you to complete. Feel free to add additional comments on a separate sheet of paper if you like. Please be sure to let me know whether you will agree to be acknowledged in the preface of the publication as a reviewer, and whether you want your name as a reviewer released to the author of the paper which you are reviewing.

I look forward to receiving your review within a month of receipt of this letter and its contents.

Sincerely

  
George D. Klein  
(Co-Director, Project PANGAEA)

ξ

Lamont-Doherty Geological Observatory | Palisades, NY 10964  
of Columbia University

Sarah Fowell  
Telephone: (914) 359-2900 x286

28 September, 1992

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

Dear Alfred:

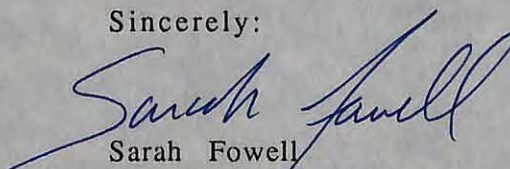
Thank you for your prompt response to my last letter, and for your willingness to let me visit. Let me fill you in on the state of my affairs at the moment, as I am currently trying to organize my schedule for the next few months.

I returned from the IPC meeting several days ago. The meeting was enjoyable; I believe my talks went over well. I discussed the possibility of a post-doc in Utrecht with Visscher. He says I am welcome if I can provide my own funding. This is fine, as I am planning to apply for NATO-NSF.

I would still very much like to spend a couple weeks (or more) at Penn State in November to do some intensive work on species identifications. I would also very much like to work on a joint paper on the Fundy palynofloras. If you are willing, perhaps we could get an initial draft ready during my visit? In that case, I would stay as long as a month or more. What are your thoughts? Does this sound like an acceptable plan of action?

The NATO-NSF deadline is November 7. I cannot foresee leaving Lamont before that date, but I would like to arrive at Penn State very soon thereafter. At the IPC, I spoke to Carmen about finding a sublet. I will need to call her about this soon, but I would like to hear from you first so I have a better idea how long I should arrange to stay.

Sincerely:

  
Sarah Fowell

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

30 July, 1992

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

So nice to hear from you!

No, I can't justify returning to Europe before really getting unpacked from the last visit. So, I'll miss your talks.

Goodness, you should be able to whip out a Ph.D. dissertation on the basis of the info you already have?

Re suggestions for post-doc (seems to be like a disease--nobody just gets a job anymore!): Bruce is right that the Utrecht operation now no longer has Brugman and others. I believe though, that Visscher and his new people (I can't recall their names) would be interesting to be around, and Brugman is only a bicycle ride away. You could profit a lot by going to Göttingen to be part of Walter Riegel's group--really lively bunch, and lots of Triassic interest around, though no Triassic specialist at the moment (I'm not sure that matters). The same sort of thing could be said about Geoff Norris' group in Toronto. If you're interested in a really exotic suggestion, you might consider the Birbal Sahni Institute, Lucknow, India. I was there last November, and I'm quite impressed with the Triassic group--dynamic (Tiwari, Vijaya and others).

You are always welcome here, including in November of 1992. I like to have my visiting palynologist niche used! The news on your Fundy Basin stuff is intriguing--I still have the intent of publishing my florules from the New Brunswick side some day--maybe we could do a joint paper?

Best regards.

Yours very truly,

Alfred Traverse

AT/et

Lamont-Doherty Geological Observatory | Palisades, NY 10964  
of Columbia University

Sarah Fowell  
Telephone: (914) 359-2900 x286

23 July, 1992

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

Dear Alfred:

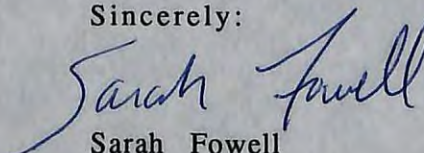
Last fall you indicated mid-July as the end of your European sabbatical, so I presume you have returned to the United States by now. Welcome back! I hope you enjoyed your time in India and Germany.

Currently I am working frantically on presentations for IPC8 in September. I will be giving one talk on the palynology of the Triassic/Jurassic boundary in the Newark basin, and another on palynomorph assemblages from 2 Ma sedimentary cycles in the Newark and Richmond basins. Are you planning to attend IPC?

If I remain on schedule, I will be finishing my thesis in another year (by August of 1993). Consequently, I am beginning to seek out post-doc opportunities. I intend to apply for a NATO post-doc (the deadline is early November), but I have not yet decided where I wish to go. I am hoping that you could offer me some advice in this matter, as you are familiar with the European palynological community. I would like to work in a lab where I can continue my work on the Triassic and Jurassic. I may even wish to take samples of the Newark cores with me. My original intent was to apply to go to Utrecht, but Bruce has indicated to me that the department there has been experiencing difficulties recently. Do you have any suggestions as to where and with whom I should consider working? If I do apply to Utrecht, do you know who is still there? Bruce tells me that several people have left, but he doesn't know who remains.

After IPC8 and GSA are over, I would very much like to spend some time at Penn State. Would an extended visit in October or (more likely) November be possible? I have recently been looking at some unusually productive, late Triassic assemblages from the Fundy basin that I would like to show you. I would also like to discuss some of my species identifications prior to publication. Please let me know if this plan is agreeable to you.

Sincerely:

  
Sarah Fowell

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30 September, 1991

Sarah Fowell  
Lamont-Doherty Geological Observatory of  
Columbia University  
Palisades, NY 10964

Dear Sarah:

How nice to hear from you! I've been wondering what the latest is. You have a very interesting project, that's for sure. And you have the talent to do very well with it.

You are most welcome to use my name as a reference, and I will write you a super recommendation.

Now for the downside. I go on sabbatical 27 December, to the Senckenberg Museum, Frankfurt (Devonian spore work), and I'll be gone until mid-July, 1992. I'm also going to India for much of November (10th to Thanksgiving). Between now and then I'm in orbit with good ol' 423, several important unfinished projects and just getting ready for India and Germany. So, I fear a visit until late next summer is out of the question. Sorry.

Best wishes as ever.

Yours very truly,

Alfred Traverse

AT/et

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of Columbia University

Telephone: (914) 359-2900 x 286

September 17, 1991

Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

Dear Alfred:

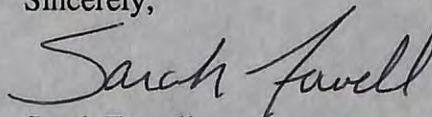
I am applying for a summer job at Chevron, and I have put your name down as a reference. I hope this is alright with you.

I have finally finished writing up most of the data that I presented at my oral exams. Next I begin the final stage of my research. I will be working with the cores of the Triassic Newark basin section, comparing the palynofacies in regions where the cores overlap. Much of this work will involve counts of individual species, in order to document small fluctuation in assemblage compositions. At present, I can identify most of the common species and classify other grains at the generic level. Clearly, I have a lot of work to do where species identifications are concerned, and this is difficult to accomplish at Lamont. Not only is there no extensive reference collection, but the literature is not easily accessed. A single requested volume may take weeks to arrive.

Consequently, I am wondering if I might spend several weeks this fall or next spring at Penn State. I would like to bring my slides from the Newark basin and Antarctica and spend approximately 3 weeks working solely on species identification. Is this proposal agreeable to you? It would be a great help to me, and I would enjoy making contact with everyone there again. I was thinking of either late November - early December, or late January - early February, but the time of my visit is certainly flexible.

I will be in Europe from September 19 until October 6, but after that I will be back at Lamont. I'll look forward to hearing from you in regards to my proposed stay at Penn State.

Sincerely,



Sarah Fowell

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26 November, 1990

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Palisades, NY 10964

Dear Sarah:

It was good to hear from you. Occasionally somebody here mentions having seen you somewhere or other. And, of course, I read your abstracts as they appear. We all have very fond memories of your stay here.

What an opportunity, to go to Antarctica! I hope you'll keep me posted on how that goes. It can't help but be one of the memorable experiences of a lifetime!

Now, about the kind and flattering invitation to be on your committee. I would love to do that, but I can't go to Palisades the week of 17 December. Our semester ends the previous week, and Betty and I are leaving on the 13th for the Midwest, to visit Betty's mother in a nursing home, and then my sister in the St. Louis area. My Mother died on 11 October, after a summer-long struggle, and my sister and I still must deal with her personal affairs. Finally, we will visit our younger son and his family in Memphis and should get back here about 21 Dec., just in time to cook up a Christmas for our two local daughters. Sorry!

All the best to you. I am certainly willing to help you in whatever way or ways you like, and I look forward to future collaboration.

Yours very truly,

Alfred Traverse  
Professor of Palynology

AT/et

Lamont-Doherty Geological Observatory |  
of Columbia University

*Palisades, NY 10964*

Sarah Fowell

Telephone: (914) 359-2900 x286

14 November, 1990

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
Palynological Laboratories  
435 Deike Building  
University Park, PA 16802

Dear Alfred:

I apologize for my long silence, but things have been even more hectic than usual for the past several months. Currently I am attempting to write the paper which must be submitted to my committee prior to my oral exam and preparing to leave for a research/collecting trip to Antarctica and Patagonia on January 2.

I have been looking for an additional field area for some time, in order to obtain samples from Triassic/Jurassic boundary sections in regions far removed from the Newark Supergroup and to expand my understanding of Triassic and Jurassic vegetation and climate. Consequently, I jumped at the chance to collect samples from Triassic and Jurassic outcrops on the Antarctic Peninsula when it was presented to me in October. However, the fact that I leave on January 2 means that I must take my orals before Christmas. Which brings me to the main topic of this letter.

You have previously expressed an interest in being on my committee. If you are still interested, I would like it very much if you were present for my oral exam. The department here does not appear to have any problem with placing you on my committee, so I believe the principle barrier would be a time constraint. As I

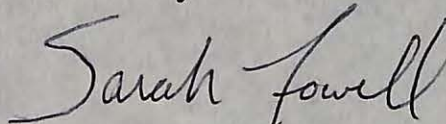
mentioned above, I need to schedule my exam before Christmas, and I am targeting the week of December 17.

Please let me know if you would still like to be placed on my committee. If so, can you arrange to appear at Lamont any time during the above-mentioned week? I'm terribly sorry this is such short notice. My travel plans were finalized only recently, so I'm a bit surprised by the narrow time constraints myself.

Enclosed is the abstract for a paper I presented recently at GSA. My orals paper, which I will send to you as soon as I finish it, will be a detailed write-up of this project. Whether or not you choose (or are able) to be part of my committee, I would value your comments on the forthcoming paper.

I hope all has been well with both you and Betty throughout the past year. I'll try to send more frequent updates from now on.

Sincerely:

A handwritten signature in cursive script that reads "Sarah Fowell". The signature is written in dark ink and is positioned above the printed name.

Sarah Fowell

PALYNOLOGICAL EVIDENCE FOR A TRIASSIC-JURASSIC BOUNDARY EVENT,  
NEWARK SUPERGROUP

FOWELL, Sarah J., Lamont-Doherty Geol. Observ., Palisades, NY 10964

The synchronicity, and hence the significance, of late Triassic faunal extinctions has been hotly debated in recent years. Palynological data from the Triassic-Jurassic boundary of the Newark Supergroup, eastern United States, provides an external test of catastrophic extinction theories and sheds some light upon terminal Triassic events.

The palynologically defined Triassic-Jurassic boundary within the Newark Supergroup is broadly identified by the transition from palynofloras containing a variety of Triassic species to Jurassic assemblages dominated by the genus *Corollina*. Intensive sampling of this transition interval in the Jacksonwald syncline of the Newark basin reveals a more complex pattern of floral turnover that tightly constrains the position of the boundary. A sudden, drastic reduction in the abundance of Triassic species is accompanied by a sharp increase in the percentage of trilete spores. These spore-dominated palynofloras are replaced upsection by Jurassic assemblages. The cyclostratigraphy of this region allows the duration of the transition interval to be estimated at less than 21,000 years.

Palynofloras immediately above mass-kill event horizons (i.e. the K-T boundary) are characteristically dominated by spores, and this palynological evidence of catastrophe is strengthened in the Newark Supergroup by the brevity of the transition interval. Both isolated, regional disasters, such as forest fires, and externally controlled, global events, such as impacts or climate change, are capable of causing floral mass-kill. The crucial test is to determine the areal extent of the palynological signature. Samples from exposures of the Triassic-Jurassic boundary throughout the Newark basin indicate that this is not an isolated event, and preliminary results imply that other basins of the Newark Supergroup were also affected.

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fax: 814-865-3191

1 December, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

At last I've had a few minutes to read your "Masters Paper 2", which is damned nearly ready to publish, in my opinion! I enclose the MS.

I have penned in a few comments, none of which challenges your main ideas--just gives suggestions for improvement. I believe we should get our act together on the terms for the episodes in question--why "end Permian" but "K/T"?

Your Fig. 2 needs more explanation on how to read the %--perhaps two abscissa scales, one reading r-l, one l-r?

All the best to you for the forthcoming holiday season.

Yours very truly,

Alfred Traverse

AT/et  
encl: MS

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20 November, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Thanks for yours of 10 Nov., just in.

Please do me the honor of calling me "Al" or "Alfred" (your choice). If you don't, I'll begin calling you Miss Fowell.

The file re Rhaeto-Liassic locations is part of my "info-file" of 3x5 cards. A xerox of the pertinent ones is enclosed. However, it isn't really a "list of suggested sites" per your request and it isn't complete at all. You could use the cards as the basis for a literature search of such places, however. You might wish to write to Jens Lund re sites in Greenland, Pim Brugman re eastern Europe, Geoff Warrington re UK.

I have put your MS in my to-do bag, and it'll be reviewed when it floats to the top. I seem to be on about a 30-day cycling scheme now. If this is too urgent for that time frame, let me know (phone call, postcard, or fax).

Best regards.

Yours very truly,

Alfred Traverse

AT/et

Lamont-Doherty Geological Observatory  
of Columbia University

| Palisades, N.Y. 10964

10 November, 1989

Dr. Alfred Traverse  
The Pennsylvania State University  
Department of Geosciences  
435 Deike Building  
University Park, PA 16802

Dear Dr. Traverse:

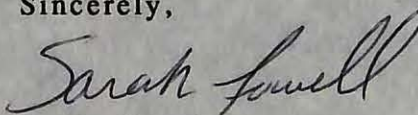
Thank you so much for your helpful and constructive comments on the first of the papers I am writing for my Masters degree. I have included most of your suggestions in the revised version. I also appreciated the paper you sent to me (Plant Evolution Dances to a Different Beat). I found it to be one of the most clear and comprehensive summaries of the unique mechanisms governing plant evolution that I have read to date. It provided me with an invaluable list of references, and it was very timely in that it helped me to place my second paper into the broader context of plant evolution. I have enclosed this second paper, which I believe bears the mark of your influence. In addition to submitting it to the department as part of my Masters degree requirements, I have sent an abstract to northeast GSA on the same topic. Thus, I would greatly appreciate your suggestions and comments on the manuscript.

I also wish to thank you for returning the items I left at your home. I just can't seem to avoid leaving something behind every time I visit! Pass along my thanks to Betty for the book. I'll probably have to wait until Christmas to have enough time to read it, but it looks interesting.

If memory serves me, the plastic refrigerator box ("Bulk Maceration EVB SF") is indeed mine. Feel free to dispose of it, however. That particular layer was so faulted and sheared that little of the plant material was left intact.

Finally, I wish to bring up a topic that we discussed briefly during my visit. I am casting about for a new location at which to study Late Triassic and Liassic palynology in order to compare and contrast the results with what I am finding in the Newark Supergroup. I recall that you mentioned having a file on hand which might help my search. Therefore, I'm hoping that you could send me a list of suggested sites for my future research. Your aid and input would be most appreciated.

Sincerely,



Sarah Fowell

THE PENNSYLVANIA STATE UNIVERSITY  
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435 Deike Building  
University Park, PA 16802  
(814)863-3419

24 October, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

In one of our hoods I discovered the other day a plastic refrigerator box marked: "Bulk Maceration EVB SF". There was a largish piece of Nitex cloth in with the material.

Can you illuminate and/or instruct us what to do?

All the best.

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

18 October, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Just read your "M.P. 1" of 25 September '89 with interest and profit. I have a number of comments:

1. The figs. in general need much more caption-info. In Figs. 7-8, for example, the reader has trouble figuring out what's going on. Figs. 9-11 are also difficult. The text tells me that I am supposed to be able to see things about the Tr-Jr boundary--where is it? Etc. I believe more complete captions will handle this problem, but a few more labels may also be necessary.

2. Re sentence 3 of Intro.: you may wish to quote a paper or two here--for example, Traverse 1988, reprint enclosed.

3. Nit-pickings, but important:

a. Abstract, para. 1, l. 16. Cornet did not "publish" in 1977--you should say, "established" or some such weasel-word.

b. Time calibration, l. 8: "hare"?

c. p. 8. I believe I've caught you in a bibliographically unwise practice here--you probably copied the Cornet 1977 reference from Cornet & Olsen. Anyway, Philadelphia's institution should get no credit for Bruce's work!

The whole business about your graphic correlation method is a tad hard to follow, at least for me. I'd like to see you expand it by at least 50% to make it easier to follow the figures along with the text.

We enjoyed having you here very much. Hope you got the box of left-behinds.

Best wishes.

Yours very truly,

Alfred Traverse

P.S. Have you seen Tipper, J.C., 1988, Geol. Mag. 125:5, 475-494? You also need to be on the mailing list for the Newsletter of the Committee on Quantitative Stratigraphy (Dr. F. M. Gradstein, Atlantic Geoscience Centre, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada B2Y 4A2).

AT/et

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435 Deike Building  
University Park, PA 16802  
(814)863-3419

9 October, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
of Columbia University  
Palisades, NY 10984

Dear Sarah:

A box containing plastic bottles with two (2) residues of hair-treatment is on its way. Included is the book Betty promised you and promptly forgot.

Good to see you. Come again soon.

Yours very truly,

Alfred Traverse  
Professor of Palynology

AT/et

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

12 September, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Oh, silent one! You are still missed hereabouts.

What should we do with your printer? I am so short on storage space that one of these days I'll dispose of it.

All the best.

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)865-6711

13 March, 1989

Sarah Fowell  
Lamont-Doherty Geological Observatory  
Columbia University  
Palisades, NY 10964

Dear Sarah:

Just read your abstract. Would love to hear your paper (how come I didn't hear about it in Sept.-Dec.), but must instead get ready for visitors here and my trip to Europe (in April). Don't forget you have a largish box to pick up here. Greetings to Paul and Bruce.

All the best.

Yours very truly,

Alfred Traverse

AT/et