Correspondence - S - 2. 1940-1949

THE FIRST NATIONAL BANK
MADISON, WISCONSIN

No 3507

OUR DATE: 6/28/40 | IN ACCORDANCE WITH YOUR REQUEST OF: 6/28/40 | EXPIRATION DATE: 8/29/40

(S. P. #) | (TIME): 9:47

WE HAVE PLACED A STOP PAYMENT ORDER AGAINST THE CHECK OF: Amy M. ~~XXXXXX~~ Thwaites

NUMBER: 134 | DATE: 6/22/40 | AMOUNT: $ 2.69

TO THE ORDER OF: Sears Roebuck & Co.

REASON: Lost

SENT TO:

Amy M. Thwaites
41 Roby Road
Madison, Wisconsin

PAYMENT STOPPED
DATE 7-8-40 E.H.

CUSTOMERS' NOTICE

STOP PAYMENT

EXPIRING

In asking this courtesy the depositor agrees to hold the above named bank harmless for said amount and for all expenses and costs incurred by it on account of refusing payment of said check, and further agrees not to hold the said bank liable on account of payment contrary to this request if made through inadvertance or accident.

If a duplicate check is issued or if the original check is returned, the depositor agrees to NOTIFY THE BANK PROMPTLY. If this request is not previously revoked, the depositor agrees that it will AUTOMATICALLY EXPIRE AT THE END OF SIXTY DAYS UNLESS A NEW REQUEST IS MADE before that time for the Stop payment to continue in force.

A charge of 50c is assessed in the analysis of the depositor's account for ecah stop-payment order entered, or renewal thereof.

THE FIRST NATIONAL BANK
MADISON, WISCONSIN

No 3507

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41 Roby Road,

Aug. 5, 1940

Personal Service Department,
Sears, Roebuck and Co.,
Chicago, Illinois

Gentlemen:

The photographer I have patronized has gone out of bu business and as I am not satisfied with work of others here I am trying to set up my own equipment for printing and enlarging with the emphasis on quality.

I have at hand both your special catalog of photographic equipment and the new general catalog.

Now what I need is a good enlarger in which the range is size of enlargment is from a little over size of negative up. Using 2¼ X 2¼ and 2¼ X 3¼ negatives I do not care to enlarge too much for I do not want to have to use the low-contrast fine-grained developers.

I cannot find in either catalog what the lower limits of enlargement are with each instrument. I do not expect to enlarge most negatives above postcard size or less commonly to 5 X 7.

Any advice you can give will be greatly appreciated.

Very truly yours,

41 Roby Road,

July 21, 1940

Sears Roebuck and Co.,
Chicago, Illinois

Attention Treasurer's Office

Gentlemen:

In reply to yours of the 17th file 174-EG 517643

the trouble over the choke arose from the fact that the person to whom Mrs. Thwaites gave her order to mail left it on a bus. We waited over a week and as no order came through concluded that whoever picked up the letter had opened it to see if it contained money. Feeling that the check surely had reached hands for which it was not intended prudence demanded that payment be stopped. Accordingly I did that and we then sent a duplicate order which was delivered promptly.

Subsequently the orginal order was delivered. It was returned a week ago with letter attached explaining the whole matter. I trust the second cock went through all right. It must be that the original letter was not found on the bus for some time and was then mailed by one of the bus employees as is their custom.

We are very sorry that this matter has caused so much trouble.

Very truly yours,

41 Roby Road,

July 21, 1940

Dr. R. B. Dryer,
Poynette, Wisconsin

Dear Dr. Dryer:

At last I have finished rush jobs and nobody at home is ill so I could run up to Poynette almost any time on weekday afternoons or at any hour on Saturdays or Sundays.

The two older boys are going to Summer School mornings and I have been working at Science Hall. We had no more cases of measles for the "shots" were evidently so strong that those who had them did not comedown at all.

We have been prospecting along Lake Wisconsin to some extent hoping to find a place where we could go on holidays and any suggestions you may be able to offer as to a desirable locality would be greatly appreciated.

Sincerely,

xxxxxx 41 Roby Road

July 13, 1940

Sears, Roebuck and Company,
Chicago, Illinois.

Gentlemen:

When I learned that my order of June 22 had been lost in a Madison Railway Bus, I waited for several days and subsequently cancelled my original check and sent a duplicate order on June 28. The goods arrived promptly, but very shortly I received a notice from the bank that payment had been stopped. In a day or so a duplicate order arrived from you, but I still did not know whether it was simply my order of June 28 refilled or my order of June 22. A day or so ago the papers showing my order of June 22 had reached you arrived. I am, therefore, returning the second order to you under separate cover (attached) and thirty five cents to cover twenty three cents due on my order of June 28 and twelve cents postage on my order of June 22.

I am sorry for the trouble I have caused you and hope that this letter and accompanying papers will explain the whole matter.

Yours very truly,

Amy M. Thwaites

xxxxxx 41 Roby Road

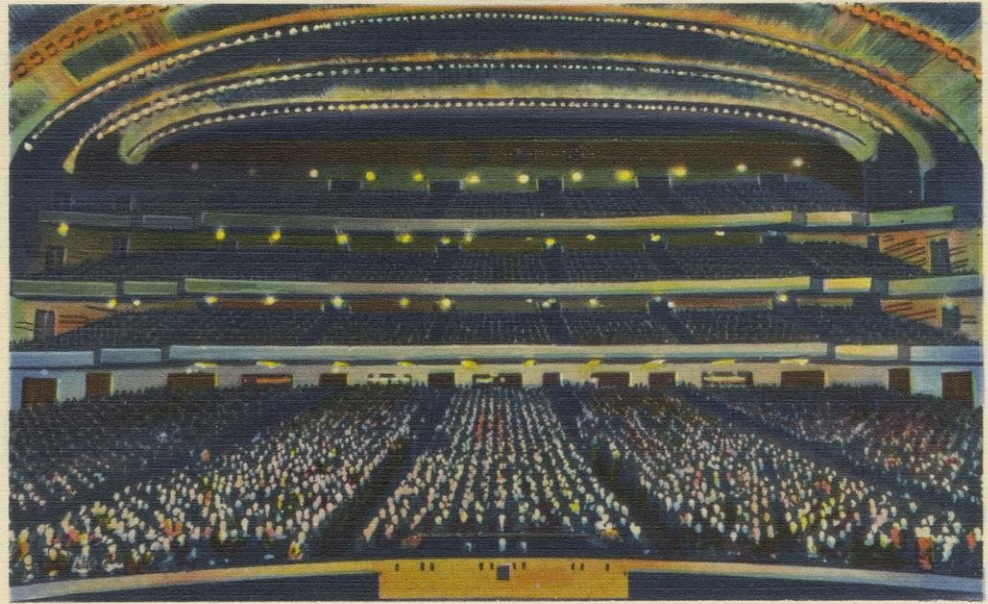
July 13, 1940

Sears, Roebuck and Company,
Chicago, Illinois.

Gentlemen:

On June 22 I ordered four playsuits

152:—RADIO CITY MUSIC HALL, NEW YORK CITY, N. Y.



42093

Sunday, July 28.

RADIO CITY MUSIC HALL, the world's largest theatre has a seating capacity of 6,200 persons. A spectacular stage show is a weekly feature of this Rockefeller Center playhouse. The stage is 144 feet wide and 62 feet deep. The screen is the largest ever built measuring 70 x 40 feet.

Manhattan Post Card Publishing Co., Inc.

MADE IN U.S.A.

POST CARD

STATION H

THIS ~~SIDE IS FOR THE~~ ADDRESS

Mrs. Fred Thwaites
Roby Road
Madison, Wis.

Dear Amy:

This is one of the little items we missed in 1923.- or was it 4?

They have also planted some trees on Fifth Ave, and, while they're still wrapped in burlap, they are still alive.

I am enjoying my "M.A." school much more than I expected to,- I have a lot of company "in the same boat".

Love. Estelle. Thelon

F1788

SEARS, ROEBUCK AND CO.

CHICAGO

Shop at Sears and Save

Amy M Thwaites
41 Roby Road
Madison, Wis

July 17 1940
174-EG
517643

Dear Madam

Your check for $2.69 drawn on the First National Bank of Madison, Wisconsin has been returned marked "Payment Stopped."

Will you please write and tell us why you have taken this action so that we may determine how to adjust the matter? If you received any bills or letters with your order, please return them with your reply, or, if you have a complaint, give us the details making use of the enclosed envelope.

Yours truly

SEARS, ROEBUCK AND CO.

Treasurer's Office

Enc Env

F1788

SEARS, ROEBUCK AND CO.

CHICAGO

Shop at Sears and Save

Amy M Thwaites
41 Roby Road
Madison, Wis

July 24 1940
517643
174/LM

Dear Madam

You will find enclosed your check of $2.69 that was returned to us marked, "Payment Stopped" as our records are now closed regarding the tranxaction.

Very truly yours

SEARS, ROEBUCK AND CO.

Enc. Ck.

Treasurer's Office

79-46
7

THE FIRST NATIONAL BANK OF MADISON

79-46
7

MADISON, WIS. June 22, 1940 No. 134

PAY TO THE ORDER OF Sears, Roebuck and Company $2.69

Two and 69/100 DOLLARS

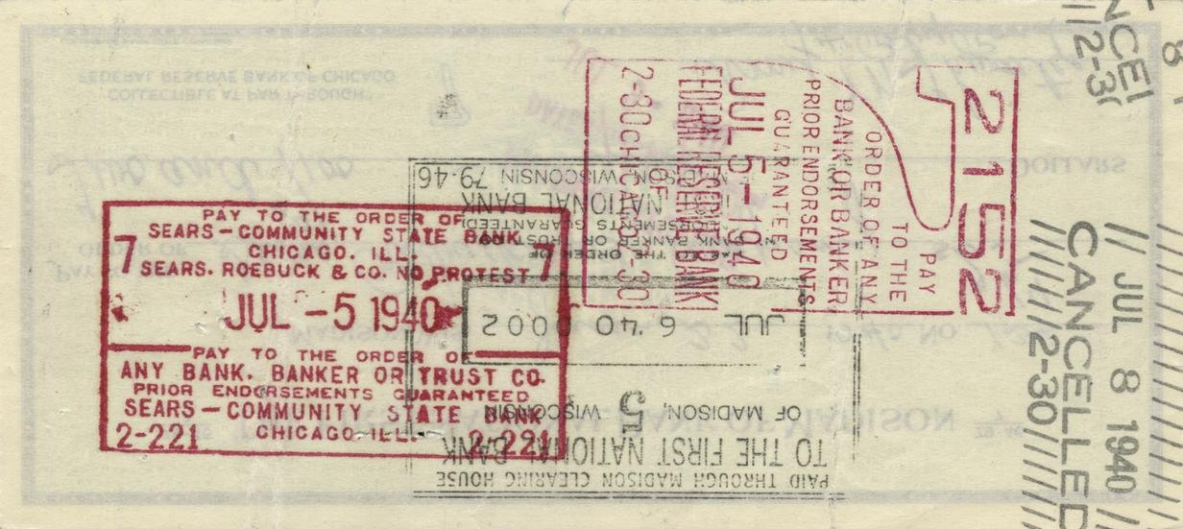
PAYMENT STOPPED
DATE 7/6/40
JUL 9- 1940

COLLECTIBLE AT PAR THROUGH
FEDERAL RESERVE BANK OF CHICAGO

7

Amy M. Schwartz
Mrs. Ruby Pearson

COLUMBIAN BANK NOTE COMPANY


PAY TO THE ORDER OF
SEARS - COMMUNITY STATE BANK
CHICAGO. ILL.
SEARS. ROEBUCK & CO. NO PROTEST
JUL - 5 1940
PAY TO THE ORDER OF
ANY BANK. BANKER OR TRUST CO.
PRIOR ENDORSEMENTS GUARANTEED
SEARS - COMMUNITY STATE BANK
CHICAGO. ILL.
2-221
2152
PAY
TO THE
ORDER OF ANY
BANK OR BANKER
PRIOR ENDORSEMENTS
GUARANTEED
FEDERAL RESERVE BANK
OF CHICAGO
JUL 5 - 1940
2-30
JUL 8 1940
CANCELLED
2-30

ROBERT W. SAYLES,
263 HAMMOND STREET,
CHESTNUT HILL, MASS.

Nov. 12th 1940

Professor F. T. Thwaites,
University of Wisconsin,
Madison, Wis.

Dear Professor Thwaites:-

I understand that there is a new edition of your Outline of Glacial Geology, since the 1934 edition. I would like to secure a copy. Have forgotten the price but enclose a check for $2.00. Have used the 1934 edition a great deal. I have quoted your classification of Wisconsin sub-stages in my paper, and Alden says it is not the latest word you have, so I must have your latest ideas as I correct the proof.

I now have some interesting data on four glacial tills on the Cape, and three interstadials with much pollen evidence, as determined by Knox. Hope we can hitch these up with midwest events before we get through. It would seem impossible at present.

Very truly yours
Robert W. Sayles

xxxxxxxx 41 Roby Road,

Nov. 14, 1940

Dr. Robert E. Saylor,
263 Hammond St.,
Chestnut Hill, Massachusetts

Dear Dr. Saylor:

In accordance with your letter of the 12th I am mailing you a copy of the 1939 edition of the "Outline of Glacial Geology". The retail price is $.50, postpaid.

You will note some changes in nomenclature of the substages of the Wisconsin in this last edition in that I used Kay and Leighton's names. In the report on northeastern Wisconsin which is now in last stages before sending in, I have made another change. I have, at the suggestion of Antevs, applied the name Valders to the red till of northeastern Wisconsin. This is because the connection and correlation with the Keewatin gray drift called Mankato is through unsettled country where tracing is difficult. Certain phenomena with regard to time lapses do not check. I made an attempt in the 1934 edition to straighten this out but later abandoned it and do not intend to make any statement as to age relations of the Valders and Mankato drifts.

I am much interested in your results in the east.

Sincerely,

ROBERT W. SAYLES,
263 HAMMOND STREET,
CHESTNUT HILL, MASS.

Nov. 19th 1940

Professor F. T. Thwaites,
University of Wisconsin,
Madison, Wis.

Dear Dr. Thwaites:-

I received the Outline of Glacial Geology today and thank you therefor.

I enclose a check for $3.00 and ask for another, but please send it to Arthur S. Knox, 65 Bromfield Rd., Somerville, Mass. He is working with me and I wish for him to have one.

I note that you do not touch on the glacial geology of the Rockies or Sierra Nevada to any extent. I do not see the name of F.E.Matthes at all. I may be all mistaken and perhaps you have mentioned his Yosemite work and other work in the Sierra Nevadas. Anyway he is one of the outstanding glacialists in the country. I had the privilege of having him with me for 3 days last summer and his knowledge of glacial geology is great and especially of post-glacial time and events. I refer you to his article in the XVI Intern. Geol. Congress Guidebook, 16, p. 26-40. Washington p. 36-38, 1933. And also to Trans. 1940, Amer. Geophysical Union, Committee on Glaciers, 1939-40, F. E. Matthes Chairman. There is some wonderful data in this just published. I dont believe you attempt to take in post-Glacial glaciations but Matthes has proved that most of the small glaciers in the Rockies date from the post-Glacial Optimum. He says we are living in a new glacial sub-stage dating from about 1300 A.D. I just mention this as he has sent me a copy.

With best regards,

Very truly

Robert W. Sayles

See top p 6 and plate 1

41 Roby Road,

Nov. 22, 1940

Dr. Robert W. Sayles,
263 Hammond St.,
Chestnut Hill, Massachusetts

Dear Dr. Sayles:

Thank you for yours of the 19th with enclosed check and order for another Outline. I will mail same in the morning to the address given.

With regard to Matthes work you will find a reference to his Yosemite report on top of page 6, also credit for illustrations in legend for Plate 1 I have always had the highest regard for his work and felt it furnished the key to problems of glacial erosion. I am sorry the references are so mixed up but the typing was done in 1931 and in every new edition since 1934 I had to crowd them in vacant spaces to avoid redoing the whole. The new edition (when I can get to it) will avoid this trouble by placing them all at the end, then new references can be added without prohibitive expense. The same trouble comes with including very much about the western mountains, postglacial changes, Europe, etc., that is it would increase the cost. You must realize that this book was intended for the needs of students going out on road material work or on the old mineral land classification survey in northern Wisconsin. They were not interested at all in some phases of the subject, Thanks for the references which will be read in more detail when I get to the new edition.

Sincerely,

xxxxx 41Roby Road

December 3, 1940

Sears, Roebuck and Company,
Chicago, Illinois.

Gentlemen:

I am returning the three suits of under-wear (i.e.short legs) for the reason that I wanted them knee-length / and with short sleeves. I also thought I was ordering a heavier quality. Will you please send 16F7094 instead of 7095.

Yours very truly,

Mrs. F. T. Thwaites

November 25, 1940

Professors Tyler
Winchell
Newell
Twenhofel
Thwaites

At an informal meeting of the group last Friday the following decisions were reached relative to Sigma Xi nominations:

To be nominated -- Broughton
McKinstry
Steierman

Nominations postponed -- Renfro
Perko
Burma
Fischer

R. C. Emmons

DEPARTMENT OF GEOLOGY

Oklahoma A. and M. College

Stillwater, Okla., January 10, 1948 19

I acknowledge with thanks the receipt of your publication

Field Photography for Geologists.

and assure you of my appreciation of your courtesy.

Cordially,

Raymond C. Lip

Feb. 11, 1941

Dr. H. T. U. Smith,
Dept. of Geology, University of Kansas,
Lawrence, Kansas

Dear Dr. Smith:

Thank you for your report on southwestern Kansas which arrived this morning. It was very timely as we take up the Great Plains in physiography within a few day. Also this was the location of the first field work I ever did as rodman on Slichter's party.

I note this was written before Melton's paper on sand dunes early last year but I am much interested in your approach which is so different from his. In this connection I wanted to say that I have a student who is considering starting a doctors thesis on sand dunes here. I have been looking over the air photos and today got funds to buy some. If you come up here next summer maybe you could give us some pointers. I do not imagine much will have been done by ten.

Although I have already read much of your report I am not yet in a position to argue any of the points. It occurs to me, however, as an argument against purely climatic cause of the Pliocene andearlier continental deposits is that they are by no means universal all around the mountains. Another point that struck me is Rich's idea that the surfaces on the Rockies are pediments with the youngest at the top.

5

March 30, 1941

Prof. H. T. U. Smith,
Dept. of Geology, University of Kansas,
Lawrence, Kansas

Dear Prof. Smith:

Thank you for the reprints of your three papers which came today.

In class discussion of your paper on southwestern Kansas the point was raised that the thickest part of an alluvial fan is not necessarily right at the foot of the mountains if the country on which it was deposited was not a perfect plain. I feel inclined to agree with this.

I have been going over some aerial photos of dunes in this state. The greater bulk of them are too complex to draw much in the way of definite conclusions. I think that there must have many many cases of reworking of dune sands by reason of fires and dry seasons before the prominent rejuvinations due to the work of man. I have found some dunes, however, with a pronounced curve which is convex to the southwest. I suggest that they are not barchanes but are blowouts formed when the ice lay in the north. Doubtless all our dunes began to be fixed by vegetation soon after the ice retreated (except along the shores of the Great Lakes and possibly along some rivers.) It looks as if we have a good subject for study here. My early examination of foreset beds was misleading.

Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Feb. 14, 1941

Prof. F. T. Thwaites,
University of Wisconsin,
Madison, Wis.

Dear Prof. Thwaites:

I was interested to receive your comments on my report on southwestern Kansas, and pleased to know that someone is really reading it! When and if you have had more time to think about it, any further criticisms, either constructive or destructive, would be welcomed. In many respects, the report is to be considered as preliminary, and already I find that there are some things which I would say somewhat differently. At some future time, after having done field work in a much wider area, I hope to write up a more definitive discussion on many of the topics touched on.

The Wisconsin dunes should make an interesting doctorate problem (or problems). Although plans are as yet uncertain, I hope to be in the state during the coming summer, and would be more than pleased to contribute anything that I can to the project.

Melton's treatment of dunes is really complementary to my own, or rather to one part of it. His illustrations of dune morphology are excellent, but his assumptions as to genesis seem to me to be extremely weak, and his classification unacceptable. It is to be regretted that his paper makes so little reference to the literature on the subject, for many of the ideas which he seems to think are original have been in print for some time. However, my review in the Journal of Geomorphology for December touches on some of these points.

Cordially yours,
H T U Smith

June 3, 1941

Dr. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Prof. Smith:

I feel just about as you do with regard to both Lobeck and Worcester. I am choosing the former for a course next fall mainly because the author used to be here. In fact I took his place when he left. I am also giving several extra readings for each week to try to make up the shortcomings.

So far as I know there is nobody from here who is working in the Driftless Area and you are certainly welcome to go ahead along a line we have never even thought about. There is nothing doing as yet on sand dunes except that I bought some photos. On these I now think I have some barchannes made by southerly winds. This checks with observations on bedding made years ago. Most dune areas inland from the Michigan beaches are just a mixture due to a long series of blowouts. I expect to be in Madisonmost all summer and be in my office mornings at least so will be glad to talk with you or go on any trips you desire. Please note I have not staked any claims in the state except the Pleistocene of northeastern! Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

June 1, 1941

Professor F. T. Thwaites,
University of Wisconsin,
Madison, Wis.

Dear Professor Thwaites:

The Geneva Lake Institute of Natural Science has given me a 3-credit course in Physiography to teach this summer, and suggested that I consult with you about textbook and other details. Personally, I have little choice between Lobeck and Worcester, for both have faults aplenty. Field trips will play a large part of course, and I will try to give some work on topographic maps and on aerial photographs.

In between teaching, I am planning to make some studies of periglacial features in the Driftless Area, supported by a small G. S. A. grant. The Blue Mounds area looks promising for a starter, and I should welcome any suggestions which you might have for other points of attack. If there are any particular areas or problems on which you wish to hold priority, please let me know.

How are plans coming for the thesis project on sand dunes? I am very much interested in this, and will be more than glad to give any help possible. Recently I have gained some added field knowledge on dune bedding, and found that some of my previous ideas were too narrow. Glad to have found it out before publication.

Will look foreward to some interesting discussions and field excursions with you during the summer.

With best regards,

H R Smith

Memo. for Miss Schroeder April 16, 1941

The Departments of Geography and Geology have approved that following proposals by the Joint Committee on the Library and request that attention be given to the following matters:

It is estimated that three-fourths of various serial publications are incomplete. We wish an inventory to be begun on all such serials in order to learn specifically our deficiencies. The term serial is to be interpreted in the strict sense for all kinds of periodicals and publications that total more than one volume.

Mr. Bean is willing to place duplicates of some of his publications in our library and it will be necessary for you to take up this matter with him. A bried survey indicates there are many duplicates of various publications in dead storage in Science Hall. Will you get in touch with Mr. Bean and Mr. Trewartha, Mr. Thwaites and Mr. Twenhofel in regard to these books? An inventory should be made of this material and you should personally supervise exchanges with other institutions and book dealers in order to fill in some of our own deficiencies. This material must not be turned over to the main library. Naturally you should be on the mailing list of all of the great dealers in used books.

We desire that you regularly solicit authors for reprints for our permanent reprint file, such authors to be designated by the staff members. This techniquesis employed by many institutions and if vigorously prosecuted will add a tremendous amount of literautre to our reprint series at a very small cost.

We desire that you start an extensive correspondence and other investigation to discover why some of our periodicals have been discontinued. Many of the reports of foreign and domestic geological organizations can be received gratis.

We request a formal occasional report on the status of backorders of books. In no case will we be satisfied with a firstrefusal from the Library. If we can learn of those books that are not yet received from some reason or other staff members can take up the issue immediately with the Director of Libraries.

Suggest that foreign language periodicals <u>not</u> be placed in desk when first received.

Richard Hartshorne
F. T. Thwaites
N. D. Newell
For the Departments of Geography and Geology

April 14, 1941

Aug. 17, 1941

Dr. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Dr. Smith:

I am enclosing enlargements of four of the photos I took while out with you a week ago. The fifth of the rock stream on the east side of Barters Hollow was shaken so I did not print it.

I enjoyed the trip very much and did not suffer any ill effects from the wetting!

This coming week I expect to go out with Hole to see some of the drifts of central Wisconsin. Then we go north for two weeks on account of Tommy's hay fever and I hope to get in some Pleistocene work there. We will be back in my old stamping ground of 1910 when I worked on the Lake Superior sandstone.

Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

On the field,
Sept. 1, 1941

Professor F. T. Thwaites,
Madison, Wis.

Dear Professor Thwaites,

Thanks very much for your pictures of the rock streams. They came out very nicely, despite the lighting conditions. My own I haven't seen yet, and probably will not till we return to Lawrence at the middle of the month. Should they fail, there will be yours to fall back on, much than I should hesitate to reproduce a picture with myself in it!

That was certainly a stimulating day we had together in the field, and whatever success the project has must be credited in good part to the kindness of yourself and Professor Bretz in pointing out significant localities for study.

Kansas seems a far cry from Wisconsin, and it takes a bit of time to readjust ones thinking to an entirely new set of problems. Just now its the loess and younger alluvium. There seems to be some Loveland loess here, and more of a younger loess, which Leighton calls Peoria, and of which today I measured a section 110 feet thick.

Tomorrow we finish up here, then go to Colorado for a short vacation. I hope to spend some time in Rocky Mt. National Park.

Trusting that the vacation trip is a pleasant one for yourself and the family, I am

Cordially yours,
H. D. Smith

Oct. 7, 1942

Hon. Harry Southoff,
House Office Bldg.,
Washington, D. C.

Dear Mr. Southoff:

. . Could you please secure for me a copy of U. S. Dept. of Agriculture, Miscel. Publications No. 404 "The slotted templet method of controlling maps made from aerial photographs"

Very truly yours,

HARRY SAUTHOFF
2D DISTRICT WISCONSIN

HOME ADDRESS:
MADISON, WISCONSIN

SECRETARIES:
EDWARD G. LITTEL
MRS. MARY A. LUTHER

Congress of the United States
House of Representatives
Washington, D. C.

2D DISTRICT
COLUMBIA COUNTY
DANE COUNTY
DODGE COUNTY
JEFFERSON COUNTY
WAUKESHA COUNTY

October 10, 1941

Mr. F. T. Thwaites
41 Roby Road
Madison, Wisconsin

Dear Mr. Thwaites:

I have your letter of October 7, and I am immediately trying to secure from the Department of Agriculture the publication entitled "The slotted templet method of controlling maps made from aerial photographs".

It will be a pleasure to forward this to you promptly if I am able to secure a copy.

Sincerely yours,

Harry Sauthoff

71114

October 24, 1941.

Sears, Roebuck and Company,
Chicago, Illinois. Attention Vera 137

As I have never received an invoice, it has been difficult for me to check my order of recent date. So far as I can recall, I have received all but the Sou'wester Hats. Will advise that I include them with my next order. Are you keeping a credit in my name for them?

I am returning attached size 12 of the sheep-lined bedroom slippers. Please send me Size 5 in 67K3963. The sizes in 15K919 seemed to run very small.

I am answering on a separate sheet of paper as I find it difficult to use the rear side of your letter.

Yours very truly,

Amy M. Thwaites

HARRY SAUTHOFF
2D DISTRICT WISCONSIN

HOME ADDRESS:
MADISON, WISCONSIN

SECRETARIES:
EDWARD G. LITTEL
MRS. MARY A. LUTHER

2D DISTRICT
COLUMBIA COUNTY
DANE COUNTY
DODGE COUNTY
JEFFERSON COUNTY
WAUKESHA COUNTY

Congress of the United States
House of Representatives
Washington, D. C.

November 25, 1941

Mr. F. T. Thwaites
41 Roby Road
Madison, Wisconsin

Dear Mr. Thwaites:

In response to your request of November 21, I am endeavoring to get a copy of the War Department Technical Manual 5-230 on topographic drafting. If a copy is available at this time I shall forward it to you as soon as it can be secured.

It is a pleasure to extend this cooperation.

Sincerely yours,

Harry Sauthoff

HARRY SAUTHOFF
2D DISTRICT WISCONSIN

HOME ADDRESS:
MADISON, WISCONSIN

SECRETARIES:
EDWARD G. LITTEL
MRS. MARY A. LUTHER

Congress of the United States
House of Representatives
Washington, D. C.

2D DISTRICT
COLUMBIA COUNTY
DANE COUNTY
DODGE COUNTY
JEFFERSON COUNTY
WAUKESHA COUNTY

December 1, 1941

Mr. F. T. Thwaites
41 Roby Road
Madison, Wisconsin

Dear Mr. Thwaites:

Referring to my letter of November 25, I am enclosing a copy of a communication which I have received from the Adjutant General in response to my efforts to get you a copy of Technical Manual No.5-230, Topographic Drafting.

As you will note, copies of the manual are not available through the War Department. The Superintendent of Documents of the Government Printing Office has copies for sale at $1.00 each.

If you desire other Federal publications, I will be pleased to do what I can to get free copies for you from the appropriate department.

Sincerely yours,

Harry Sauthoff

ESA

(COPY)

WAR DEPARTMENT

THE ADJUTANT GENERAL'S OFFICE

WASHINGTON

AG 032.13 Sauthoff, Harry
(11-25-41) PD

November 27, 1941.

Honorable Harry Sauthoff,

House of Representatives.

My dear Mr. Sauthoff:

Reference is made to your letter of November 25th relative to a request for Technical Manual No. 5-230, Topographic Drafting.

The War Department maintains a limited stock of its publications, based on the needs of the Military Establishment, and no surplus is available for distribution to the public in general. However, the desired publication can be purchased from the Superintendent of Documents, Government Printing Office.

Very respectfully,

E. S. Adams

Major General,
The Adjutant General.

Directory of Beta Chapter of Sigma Delta Epsilon, 1940-1941

Name	Business Address	Department	Home Address
Archie, Vivian	Biology Bldg.	Zoology	325 N. Lake St. G.5136
Bilstad, Nellie	Biology Bldg.	Zoology	1620 Monroe St. B.5191
Bowler, Eleanor	Service Memorial Institute	Medicine	Box 2063 - Univ.Sta-tion B.4021
Chidester, Mary	------	Forest Pathology	4157 Hiawatha Drive F.9919
Claus, Pearl	Biology Bldg.	Zoology	1620 Monroe St. B.5191
Christisen, Frances	Sterling Hall	Physics	1621 Jefferson St. B.2175
Cooper, Mrs.D.C.	------	Botany	University Park F.6507M
Everson, Gladys	Home Economics	Home Economics	425 Hawthorne Court F.9677R
Field, Beulah	Sterling Hall	Physics	1104 W. Johnson St. B. 1251
Fisk, Emma	Biology Bldg.	Botany	419 Sterling Place B.1786
Gardner, Josephine	Home Economics	Home Economics	1104 W. Johnson St. B.1251
Gerry, Eloise	Forest Products Lab.	Forest Products Lab.	1105 Dartmouth Shoreword Hills G.512
Glassow, Ruth	Lathrop Hall	Physical Education	2530 Kendall Ave. F.279

Grimm, Elizabeth	Chadbourne Hall	Medicine	Chadbourne Hall U. 763
Haan, Irene	Home Economics	Home Economics	1501 Linden Drive U. 252
Hare,Mrs. Mary	Biology Bldg.	Botany	220 N. Orchard St. F. 1626
Hellebrandt,Frances	Service Memorial Institute	Physiology	1715 Jefferson St. F. 9302
Heller, Mrs.Emily	Service Memorial Institute	Medicine	308 Breese Terrace G. 1873
Holt, Harriet	University Extension Bldg.	Mathematics	14 N. Prospect B. 3491
Husseman,Dorothy	Home Economics	Home Economics	425 Hawthorne Court F. 2296
Johann, Helen	Moore Hall	Plant Pathology	1320 Spring St. F. 7047
Johnson,Mrs. Carl	Genetics Bldg.	Agr.Bacter.	1822 Van Hise B. 1238
Jones, Mrs.F.R.	------	Plant Pathology	1713 Chadbourne F. 1761
Landes,Margaret	Biology Bldg.	Botany	1104 W. Johnson St. B. 1251
McCarter, Janet	Agr. Hall	Agr.Bacter.	33 Lathrop St. B. 7319
McCoy, Elizabeth	Agr. Hall	Agr.Bacter.	412 W. Gilman St. B. 3231
Manning,Mrs.Winston	-------	Botany	1553 Adams F. 8356

Marlatt, Abby	------	Home Economics	612 Howard Place B. 5332
Martin, Ella	------	Botany	1805 Univ. Ave. B. 5237
Milbauer, Inez	Sterling Hall	Physics	1104 W. Johnson St. B. 1251
Mortimer, Iva	Home Economics	Home Economics	1805 Univ. Ave. F. 3329
Noland, Mrs.L.E.	------	Zoology	1723 Summit Ave. F. 950
Olson, Helen	------	Geography	1011 E. Gorham St. B. 3852
Parsons, Helen	Home Economics	Home Economics	130-1/2 Lathrop St. F. 7084
Payne, Mary Ann	Biology Bldg.	Zoology	Chadbourne Hall U. 480
Personius,Catherine	Home Economics	Home Economics	107 N. Randall Ave. B. 3917
Petermann, Mary	Chemistry Bldg.	Chemistry	911,Clymer Place G. 1191
Platz, Blanche	Biochemistry Bldg.	Biochemistry	444 Hawthorne Court F. 1268
Reynolds, May	Home Economics	Home Economics	1320 Spring St. F. 4181
Richards, Audrey	Forest Products Lab.	Forest Products	1815 Regent St. B. 4676
Riker, Mrs.A.J.	------	Plant Pathology	211 N. Spooner St. F. 4074

Rollefson, Erna	------	Zoology	1910 Monroe St. B. 7580
Rumboldt, Caroline	Forest Products Lab.	Pathology	417 Sterling Place F. 4266
Schubring, Selma	------	Geography	410 N. Pinckney St. B. 3816
Stewart, Charlotte	------	Mathematics	111 W. Gilman St.
Struckmeyer,Burdean	Agronomy Bldg.	Botany	2217 Oakridge Ave. F. 2627
Thwaites,Mrs. Fred.	------	Geology	41 Roby Road G. 1178
Tyner, Mrs. H.	------	Medicine	217 N. Orchard St. G. 5034
Van Derzee,Margaret	Biology Bldg.	Zoology	330 N. Carroll St. G. 3896
Van Donk, Evelyn	Biochemistry Bldg.	Bio-chemistry	115 N. Orchard St. F. 3156
Wipf, Louise	Genetics Bldg.	Genetics	221 Clifford Court F. 2466
Walliker,Catherine	Home Economics	Home Economics	1104 W. Johnson St. B. 1251

Nov. 21, 1941

Hon. Harry Sauthoff,
House Office Bldg.,
Washington, D. C.

Dear Mr. Sauthoff:

Could you please secure for me a copy of War Department Technical Manual T M 5-230 on topographic drafting?

Thank you for getting me the copy of the manual from the Soil Conservation Service.

Sincerely,

December 28, 1941

Sears, Roebuck and Company,
Chicago, Illinois.

Gentlemen:

Among the Christmas gifts which I orderedfrom you was a raincoat - 40K3358 - size 10, $1.95. As it was for a boy one year younger than mine, I felt sure that the size was correct and failed to keep the order blank. If it is possible for you to exchange it for one size 12, I shall certainly appreciate the favor. I am inclosing return postage in the amount of twelve cents.

Yours very truly,

and
filed w

Form 3813 1086

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POSTMASTER,

By JEE

p. 393-E

February 17, 1942

Superintendent of Documents
Washington, D.C.

Dear Sir:

I am enclosing twenty dollars ($20) for twenty copies of the United States War Department Technical Manual T. M. 5-230 which my class will use in mapping.

I trust that I shall receive them as soon as possible. Thank you.

Sincerely

F. T. Thwaites
Ass't. Professor of Geology
Science Hall
University of Wisconsin
Madison, Wisconsin

Enclosure
fft:l

Jan. 13, 1942

Supt. of Documents,
Washington, D. C.

Dear Sir:

Enclosed please find money order for $1.00 for which please send me

U. S. War Dept. Technical Manual T M 5-230

which is for use in course in Military Geology at University of Wisconsin.

Very truly yours,

DIRECTORY OF BETA CHAPTER OF SIGMA DELTA EPSILON, 1941-1942

Name	Business Address	Department	Home Address
Almon, Lois	Service Memorial Inst.	State Hyg. Lab.	1834 Rowley Ave. F-6106
Baker, Anne	Biology Bldg.	Zoology	6 S. Orchard St. F-9971
Bilstad, Nellie	Biology Bldg.	Zoology	1620 Monroe St. B-5191
Bernstein, Myrtle	Genetics Bldg.	Vet. Sci.& Agr. Bact.	1301 Univ. Ave. B-7453
Bond, Lora	Biology Bldg.	Botany	916 Conklin Pl. F-5700
Chidester, Mary	----	Forest Pathology	4157 Hiawatha Dr. F-9919
Claus, Pearl E.	Biology Bldg.	Zoology	1620 Monroe St. B-5191
Christisen, Frances	Sterling Hall	Physics	1621 Jefferson St. B-2175
Cooper, Mrs. D. C.	----	Botany	621 Eugenia Ave. University Park F-6507M
Denniston, Mrs.R.H.	Lathrop Hall	Phy. Ed.	303 Lathrop St. F-3712
Everson, Gladys	Biochemistry	Home Ec.	425 Hawthorne Ct. F-9677R
Fisk, Emma	Biology Bldg.	Botany	419 Sterling Pl. B-1786
Gates, Frances	Engineering Bldg.	Education	718 S. Orchard St. F-3815
Gardner, Josephine	Biochemistry Bldg.	Home Econ.	1104 W. Johnson B-1251
Gant, Ola	Agr. Hall	Bacteriol.	112 N. Orchard B-5705
Gerry Eloise	Forest Products Lab.	Forest Prod.Lab.	1105 Dartmouth Shorewood Hills G-512
Glassow, Ruth	Lathrop Hall	Phy. Ed.	2530 Kendall Ave. F-279

Grimm, Elizabeth	Chadbourne Hall	Medicine	Chadbourne Hall U-763
Haan, Irene	Home Economics	Home Econ.	1501 Linden Dr. U-252
Hare, Mrs. Mary L.	Biology Bldg.	Botany	35 Lathrop St.
Hellebrandt, Frances	Serv. Mem. Inst.	Physiol.	1715 Jefferson F-9302
Heller, Mrs. Emily	Serv. Mem. Inst.	Medicine	308 Breese Terr. G-1873
Hellegers, Alice	Chemistry Bldg.	Chemistry	929 University B-2922
Holt, Harriet	Univ. Exten. Bldg.	Math.	14 N. Prospect B-3491
Husseman, Dorothy	Home Economics	Home Econ.	425 Hawthorne Ct. F-2296
Johann, Helen	Moore Hall	Plant Path.	1320 Spring St. F-7047
Johnson, Mrs. Carl (Mildred Gumm)	Agric. Hall	Agr. Bact.	1822 Van Hise B-1238
Jones, Mrs. F. R.	----	Plant Path.	1713 Chadbourne F-1761
Kimble, Mrs. Marian	Wis. Gen. Hosp.	Medicine	2246 Keyes Ave. B-395
Landes, Margaret	Biology Bldg.	Botany	1104 W. Johnson B-1251
McCarter, Janet	Agric. Hall	Agr. Bact.	33 Lathrop St. B-7319
McCoy, Elizabeth	Agric. Hall	Agr. Bact.	412 W. Gilman B-3231
Marlatt, Abby	----	Home Econ.	612 Howard Pl. B-5332
Meyer, Ineva Mrs.	Lathrop Hall	Botany	304 Walnut St. G-4667
Mortimer, Mrs. Iva	Home Economics	Home Econ.	1805 University F-3329
Nielsen, Mrs. E. A.	Transfer from Alpha	Botany	Randall Apts. Hoyt & Breeze Tr.

Noland, Mrs. L. E.	----	Zoology	1723 Summit Ave. F-950
Olson, Helen	----	Geography	1011 E. Gorham B-3852
Parsons, Helen	Home Economics	Home Econ.	130½ Lathrop St. F-7084
Payne, Mary Ann	Chadbourne Hall	Zoology	Chadbourne Hall U-480
Personius, Catherine	Home Economics	Home Econ.	107 N. Randall B-3917
Petermann, Mary	Chemistry Bldg.	Chemistry	911 Clymer Place G-1191
Platz, Mrs. Blanche	Biochem. Bldg.	Biochem.	444 Hawthorne Ct. F-1268
Rusch, Mrs. Lenore	----	Bacter.	2708 Regent St. G-4353
Reynolds, May	Home Economics	Home Econ.	1320 Spring St. F-4181
Richards, Audrey	Forest Products Lab.	For. Prod.	1815 Regent St. B-4676
Riker, Mrs. A. J.	----	Plant Path.	211 N. Spooner F-4074
Rollefson, Mrs. Erna	----	Zoology	1240 Wellesley B-7580
Rumbold, Caroline	Forest Products Lab.	Pathology	417 Sterling Pl. F-4266
Schubring, Mrs. Selma	----	Geography	410 N. Pinckney B-3816
Shipley, Elva	Biology Bldg.	Zoology	1104 W. Johnson B-1251
Snell, Mrs. Katherine	----	Botany	228 E. Sunset Ct. Sunset Village
Stewart, Charlotte	----	Math.	113 W. Gorham F-4962 - Office B-7312
Struckmeyer, Burdean	Agronomy Bldg.	Botany	2217 Oakridge F-2627

Sigma Delta Epsilon - 4.

Thwaites, Mrs. Fred.	----	Geology	41 Roby Road G-1178
Tyner, Mrs. H.	----	Medicine	217 N. Orchard G-5034
Van Donk, Evelyn	Biochem. Bldg.	Biochem.	115 N. Orchard F-3156
Wakeman, Dr. Nellie	Chemistry Bldg.	Pharmacy	1814 Keyes Ave. F-536
Wipf, Louise	Genetics Bldg.	Genetics	221 Clifford Ct. F-2466
Wolf, Dr. Louise	North Hall	Math.	College Club 12 E. Gilman
Whitney, Rae	Biology Bldg.	Zoology	206 N. Orchard B-4032

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Washington, D. C.

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41

41 Roby Road
January 11, 1939

Dr. Scholl's Foot Comfort Shop,
221 East Wisconsin Avenue,
Milwaukee, Wisconsin.

Gentlemen:

Please send me a pair of black oxfords as follows:

A	25873 2379	or	8A	40032 2379

SB X50 260
2379

If the shoes are satisfactory, I shall remit promptly.

Yours very truly,

Amy M. Thwaites

June 5, 1942

Dr. Scholl's Foot Comfort Shop,
221 East Wisconsin Avenue,
Milwaukee, Wisconsin

Gentlemen:

Please send me a pair of black kid oxfords and a pair of braces (arch supports) as follows:

8B X50260 2379

I will send you check as soon as these arrive and are found satisfactory.

Very truly yours,

Amy M. Thwaites

8B X50260 2379

UNIVERSITY OF WISCONSIN
School of Education
1942 Summer Laboratory School

May 26, 1942

Mr. F. T. Thwaites
41 Roby Road
Madison, Wisconsin

Dear Mr. Thwaites:

We are happy to inform you that the application for your son, Robert, in the Summer Laboratory School has been accepted.

A payment of $ 7.50 by June 15 will assure you a reservation for him in the school. Received check for $7.50 — 5/29/42

If there is further information you would like about the school, we will be happy to hear from you. The school will be open Monday, June 29, at 8 o'clock and classes will start at 8:30.

For the past two years we have sponsored a swimming program which proved to be very worthwhile. This year, due to a limited budget, we are unable to continue this activity. Would your child participate in the swimming program if we charged an additional fee to be determined when school opens?

Very sincerely,

C. S. Liddle

C. S. Liddle
Principal

Dear Miss Hunter.

Just a note to thank you for your nice Wedding gift. I was so glad you were able to get to my house Friday evening.

We are just getting settled now, Harry is working nights and sleeps most of the day. He is almost as bad as having a few children under your feet.

How are the boys? I hope well and being good. I certainly miss them and wish I could see them. When I come to Madison I will

come out to see them. Hope you are getting along alright and not working too hard. Please write me sometime, as would love to hear from you. Again I will thank you for the gift. Say hello to the Boys and Mrs Shanks for me.

Peggy.

P.S. House number is the finishing

Wyngate Inner annex - Apt. 11
3006 W. Pierce Street

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Mar. 20, 1942

Dear Prof. Thwaites:

I was interested to hear of your course in Military Geology. The idea is a good one, and I have been trying to talk up one here, but without much result. The course that I started this semester requires math and one geology course as prerequisites. We have 12 students, ranging from freshman to seniors, hence not too well balanced.

Altho we have a Fairchild stereocomparagraph ordered, it hasn't arrived yet, and for practice purposes I have a simplified version of the instrument designed by me and made by an NYA helper, with a total outlay for materials of not more than $15, exclusive of the alignment mechanism, which is to be a rapidraft machine costing $16.50, if we can get a priority on it. The stereoscope is the simple lens type made by Zeiss. The micrometer, which is none too accurate, I purahased at a Western Auto supply store for about $1.25. In lieu of the alignment mechanism, the machine can be used with a T-square, altho that's rather awkward. Incloses is a sketch of the device. Personally, I think that Fairchild or Abrams would do well to put out a simplifed student model to sell for $50 to $75. The profit on their regular models must be scandalous.

Ordinanace plants seem to be going up everywhere, even here in Kansas. I suppose that developments in the Baraboo area will put a crimp in any plans to use aerial photos of that area. We've been having a devil of a time getting photos of any kind recently, particularly of coastal areas, in which our collection is weak. Do you know of any good photos along Lake Michigan to show various types of shore features, which might now be obtainable?

I gathered from Twenhofel's remarks at the meetings that he didn't exactly approve of the periglacial idea, and so assume that he's the chief sharpener of the ax. Well, it would be a dull world if everyone agreed about everything. Controversy is the spice of scientific work. I wish I had more time to think about the Baraboo project just now. The defense course has been absorbing most of my time. However, I'm still hopeful of getting a manuscript of some sort finished soon enough before the deadline to send a copy for your comments.

Cordially yours,

H R Smith

March 17, 1942

Prof. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Smith:

Thank you for the copy of your course on aerial photgraphs. I have been working up some similar material for our course in Military Geology so your data came very opportunely for me. I am also working on a contour-finding device which will eliminate the expensive micrometers heretofore used. I am trying several different types of markings which seem to do very well.

Axes are being sharpened in preparation for greeting your paper on periglacial phenomena around here! I can assure you without revealing any "miltary secrets" that such will meet with a hot reception!

I was up to the Range twice recently to see about geologic problems of the new ordinance plant on the outwash plain just south of the Bluffs. Some of the district we visited last summer may be soon fenced in at least for the duration. I will not be able to take my class up this year for there will be no vacation. Add to this the tire situation and the building of the plant and it is apparent we must stay home and make the best of it. Glacial geology will also be home-bound this year at least.

Sincerely,

41 Roby Road,
Madison, Wis.,
March 27, 1942

Prof. H. T. U. Smith,
Dept. of Geology,
Kansas University,
Lawrence, Kansas

Dear Prof. Smith:

Thank you for yours of the 20th with diagram of "contour finder" you made. I had thought of the same thing but so far have not made one. Instead I devised an arrangement to eliminate the drafting machine. This is a simple parallel rule along which the stereoscope frame slides So far I have only a working model without the necessary roller bearings on this slide. I also thought of having two parallel rules at right angles to one another although this would be somewhat clumsy. However, it would get around priorities! The stand for the stereoscope has several holes for the legs to allow of change of focus. Instead of using a micrometer I have tried a scale on film base. When seen through the stereoscope one end of the scale is superimposed on the other and parallax can be measured with reasonable accuracy. Is not the limiting factor the detail in the photo and not the method of measurment? I feel that this is the case and that instrument makers may be feeding us a lot of bunk. Another improvement was to place the pencil at the right where one naturally reaches to put data on the sketch. A good suggestion for a fine scale was to draw same with white ink on black paper and then photograph down to desired scale using the negative on the machine. I have not tried this yet.

My reaction toward machines is that they are nice if not a necessity if one is doing a lot of work. But for beginners I feel that they should not be made slaves to the machine. I think they ought to lear how to do it without mechianical aid and then if they get such aid they can learn its use. But if they start on the machine and then do not have one they are simply sunk. For this reason my machine still is a model.

With regard to photos there are lots along the Great Lakes which show shore features beautifully. Our Highway Commission has been making copies for authorized persons but I do not know just what the conditions now are. They are still allowing us to look over the photos although I have no doubt that strangers would be looked on with suspicion.

The chief critics of your idea on rock streams are Twenhofel and Bean. My ideas you already know. I think none of your photos are of any military importance.

I take over the Military Geology class Monday with active aid from the R. O. T. C. I fear it will be long on lectures and short on field and lab work. The class in mapping is just the opposite which I feel is much bet ter. Mrs. Thwaites is studying nursing, the boys are selling waste paper for Defense Stamps, one of our faculty was ordered out to manage a mine and another may go. So you see we are all doing what we can toward the War!

Best regards,

Sincerely,

86A.— AIRLINES TERMINAL AT 42ND ST. AND PARK AVE., NEW YORK

Courtesy United Airlines

Dear Amy-

Due to your "command" I'm greeting you when I feel that I just got here, - each day goes much too swiftly.

People seem to feel that some day when the war is over, we'll all come to this station, instead of by train. Love, Idelle.

POST CARD

THIS SIDE IS FOR THE ADDRESS

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UNITED STATES OF AMERICA INDUSTRY AGRICULTURE

STATION H

FOR DEFENSE

POSTAGE 1 CENT

Mrs. F. Thwaites
Roby Road
Madison, Wis.

Washington, D.C.
June 22, 1942

University of Wisconsin
Madison, Wisconsin
Science Hall

Dear Mr. Thwaites,

I suppose that Science Hall has settled down to its regular summer lethargy now that classes are over and most of the fellows are working or in the army. Washington is a good place to stay away from in the summer time. The heat here is the most oppressive I have ever experienced notwithstanding some pretty hot days in Madison. However, it does rain a lot so there is always some temporary relief. The work here on the U.S.G.S. is very interesting and instructive. Our work is secret and in conjunction with the Army Air Corps but the method we use is not secret. It is similar to the method outlined in the manual of topographic drafting issued by the War Department. The big difference is, I believe, in our use of a metal template method instead of the slotted template method. The true horizontal location of the points is first located by radial intersections on a strip of acetate paper- this is by use of the vertical photographs. Paper templates, on which are drawn rays to to points on the oblique photographs- both distant points and points common to obliques and verticals, are used to combine the two. True location of points on the obliques is gotten by orienting the paper templates with respect to the radial plot since there are points common to both. In this operation the plot is reduced to half scale. The metal template laydown is constructed from the so-called "combined templates" or paper templates. After constructing the metal templates our control

sheet is gotten by pricking the control points through to the paper. The sketching is done on the control sheet. I know very little about other methods so I have no basis of comparison but this method does enable us to construct maps of a very large area very rapidly and accurately.

My draft board has placed me in class I-A so I am planning to enlist in some branch of the service if the Geological Survey has no success in obtaining my deferment. They are trying to get me deferred but I don't think they will be very successful. Consequently, would you be kind enough to write a letter of recommendation for me. Since things are so uncertain and I do not know which branch I will be able to get in to I would advise that the letter be addressed to" to whom it may concern" or some similar phrase. Will you forward it to me as soon as possible since I may expect induction notice at any time in the next couple of weeks.

My regards to Mrs Thwaites and the boys

Very sincerely yours

Edward C.Seeger
1724 P St. N.W.
Washington, D.C.

June 30, 1942

To whom it may concern:

I have known Mr. Edward C. Seeger for several years while he was a student in my classes at the University of Wisconsin. I always found him a good worker and fully dependable. I have never had any reason to doubt his loyalty to the United States. He has an agreeable personality.

Assistant Professor of Geology,
University of Wisconsin

June 30, 1942

Mr. Edward G. Seeger,
1784 P. St., N.W.,
Washington, D. C.

Dear Seeger:

I am afraid I have been a long time answering your letter of the 22nd but Billy had his tonsils out and now I am starting him and Bobby in Summer School. Also I have been working with Bobby trying to teach him to read and write. So far we have got to A. B. C. stands for Always be Careful and writing his name. But there always has tobe a start.

Science Hall was nearly deserted for a time. Now Rummel is back to go to the Army, also Bailey. Schoenicke is to go soon as he finishes his thesis. Percy has a 6 month deforment and is going to Trout Lake. Hole worked four weeks at Marshfield and came back today. But he may be interned at any time, I suppose. There will be no Road Survey and I am just about caught up on samples. Mary Jane was to work on road material reports but thi is off now. Maybe I will be out too but have heard nothing about it yet. There is little drilling except for war work.

I am enclosing the letter as per yourrequest. I would like to see just how you do the work. I have applied for funds to make a contour finder and slotted templets. Sincerely,

HYRUM SCHNEIDER
F. F. HINTZE
R. E. MARSELL
BRONSON STRINGHAM
G. C. SELFRIDGE, JR.

DEPARTMENT OF GEOLOGY
UNIVERSITY OF UTAH
SALT LAKE CITY

October 7, 1942

Mr. F. T. Thwaites
Science Hall
Madison, Wisconsin

Dear Thwaites:

On September 10, I wrote Professor Finch a letter and have not yet received any answer. I am wondering if he is off the campus, perhaps in Washington D. C.

The Director of our Summer School would like to offer a course in geography next summer, that will tie in with the present world situation. The students will be mostly teachers that have had no courses in college geography. In my letter to Professor Finch I asked him to suggest someone to teach such a course. Since I have received no answer from him, you might give me some suggestions.

How are the Departments of Geology and Geography? How are you?

With kind personal regards,

Sincerely,

Hyrum Schneider

Oct. 15, 1942

Dr. Hyrum Schneider,
Dept. of Geology,
University of Utah,
Salt Lake City, Utah

Dear Schneider:

Yours of the 7th has been at hand for several days until I could take time to answer it.

First I spoke to Prof. Finch and he stated that he would send you a copy of his answer which you seem not to have received. He had no idea what might have become of it. I expect that by now you may have the second letter.

Things are not quite as bad here as was feared for a time. Although most advanced classes were cancelled I myself have nearly as many students as last year. Of course, as the University never bought any cars or busses field trips are just about out. Notwithstanding, I hear that the structural class raised enough cars to make one trip. I have had no such luck. The situation in this respect will certainly get worse by the spring. Last spring no Devils Lake mapping trip was possible because of no vacation. Next spring there will be a short vacation but there certainly will be no cars. But there may not be any students so I will not worry about it just now. General geology has almost as many students as last year. I have to take one of the labs. Three of the seven on the faculty have gone because of the war and there is only one assistant. Many of the advanced students have already enlisted and may be called at any time. I expect your institution is in about the same fix.

My three boys keep me busy at home. The last few nights I have helped them look up scrap metal. Seeing as we have only lived four years in the new house in town our supply is not great. However, they carted off several loads this morning before school hoping to get their pictures in the paper alongside the largest dump. You see we had to move after my mother passed away in 1938. My cousin bought us out as he wanted the place to himself. With the present tire situation it is a good thing for us. What we will do with the one car left after rationing starts remains for the future to decide.

Just now I am trying to build a "Countour finder" for use with aerial photograph I find the surveying people have never recognized aerial mapping to any extent so that the burden (which may be greatly increased by cooperation with the R. O. T. C. next semester) falls mainly oneme. I now have one thesis student who is mapping his area entirely from photographs and another applied yesterday. I still have one working on a doctor's thesis. He is a Quaker and has so far escaped internment. The well record business is slow but the war contracts broughtin a lot of new data. I have the typewriter in my office for well work.

Best regards,
Sincerely,

COPY

MADISON GAS & ELECTRIC COMPANY

MADISON, WISCONSIN

October 16, 1942

Mr.

Dear Mr.

Limitation Order No. L-174 of the War Production Board, issued August 25, 1942, imposes a duty upon gas utilities, in the event that the available supply of manufactured gas is insufficient, to reduce deliveries to consumers who have standby equipment. Because you are able to heat your home with either gas or solid fuel, you fall within the classification of customers who have standby equipment and to whom delivery of manufactured gas is to be reduced if the demand exceeds the supply.

The Madison Gas & Electric Company has already taken all possible measures to insure a continuous supply of gas to you, by increasing its capacity to the extent that is possible under the present War Production Board's limitations on the use of critical metals. Limitation Order No. L-174 also prohibits the use of gas for additional space heating uses after September 1, 1942. We are hopeful that no reduction in deliveries will be necessary during the coming Winter; however, unforseen conditions, such as an increase in war production in this area, may alter this situation.

In accordance with the War Production Board's Limitation Order No. L-174, it is therefore suggested that you make arrangements so that if gas deliveries to you are reduced, you may make immediate use of your standby equipment. We therefore recommend that a ten to twenty day supply of coke or coal be kept on hand at all times, should it be necessary to curtail gas service to you during short periods. By taking the necessary steps to permit the use of your standby equipment, you will not only be doing your patriotic duty by contributing to the continuous operation of war production plants but you will also be insuring continuous heating service for your home.

Should you have any questions regarding the use of your standby equipment or the provisions of Limitation Order No. L-174, we would be pleased to discuss this subject with you in greater detail at your convenience.

Yours very truly,

(Signed) Edward R. Felber

LF Vice President & Sales Manager

P. F. IRWIN

TELEPHONE BADGER 1046

GEO. B. BREMER

STRUCK & IRWIN FUEL CO.

DEALERS IN

COAL, OIL AND BUILDING MATERIAL

826 WILLIAMSON STREET

MADISON, WISCONSIN

October 21, 1942

Mrs. Amy M. Thwaites
41 Roby Road
Madison, Wis.

My dear Mrs. Thwaites:

Many thanks for the copy of the Madison Gas & Electric Company letter concerning Limitation Order L-174.

This information will be of help to us in case we have further calls from the people of Madison.

Respectfully yours,
STRUCK & IRWIN FUEL CO.

By _____

PFI/LL

October 17, 1942

Mr. Paul F. Irwin,
Struck & Irwin Fuel Company,
826 Williamson Street,
Madison, Wisconsin.

Dear Sir:

In accordance with our request of October 17, 1942 I am inclosing a copy of the letter Mr. Thwaites received from the Madison Gas & Electric Company. I thought it was too long to dictate over the phone and hope that the delay has caused you no inconvenience.

Yours very truly,

AWT

HYRUM SCHNEIDER
F. F. HINTZE
R. E. MARSELL
BRONSON STRINGHAM
G. C. SELFRIDGE, JR.

DEPARTMENT OF GEOLOGY
UNIVERSITY OF UTAH
SALT LAKE CITY

October 30, 1942

Mr. F. T. Thwaits
Science Hall
Madison, Wisconsin

Dear Thwaits:

I could not understand why I did not hear from Finch. When you spoke to him he wrote to me at once. We are now trying to have Dr. Durond teach geography here next summer. Thanks for talking to Finch.

I enjoyed your letter particularly the news about yourself and about the Department. It seems that you are having some of the same troubles that we are having. We can't take any of our large classes on field trips. Have you any graduate students and seniors? Ours are all in the Army and Navy. When the 18 and 19 year olds are taken, I don't know what we will have left. I hope the war won't last too long.

Best regards,

Sincerely

Hyrum Schneider

Jan. 18, 1943

Dr. H. T. U. Smith,
Dept. of Geology,
Kansas University,
Lawrence, Kansas

Dear Smith:

Enclosed are drawings for a "contour finder" I just had built which I thought might interest you. You will note how we overcame the drafting machine bottleneck. The entire outfit fits on a drawing board 30 inches square with a handle to carry it. A cover will be arranged to fit over it when and if we get into the field.

Our students being very few I am going, along with two others of our staff, to teach Physics next semester.

Best regards,

Sincerely,

41 Roby Road,
Madison, Wis.,
March 17, 1943

Dr. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Smith:

Your letter of Feb. 12 with photo of your "contour finder" has been in m folder a long time but was waiting until I had finished a new problem with oblique photos. Unfortunately we have no supply of such so the class can do little at present. Also I found that our library does not take Photogrammetric Engineering. Apparently the surveyors in the College of Engineering take no interest in aerials which throws all the burden on me.

In reply to your questions the verniers work against a spring. A flat spring above the block which holds the celluloid marker holds this against turning yet can be moved to allow it to turn up out of sight. I considered dots but turned them down as it looked as if we could get a closer measurment with crosses. Some of my pet improvements are having the pencil at right where you can draw freehand on the sketch, placing the alignment out of the way above the instrument and having a sliding weight on the pencil arm. Several students have worked with the machine and seemed to find it all right. I have heard that they have done a lot at Chicago and have copies of some papers by Fisher. Am enclosing some new directions.

We have sent a number of students to Washington to make maps but there is little call for teaching more. After all we could not find minerals quickly enough to help to a material extent.

Yes, I will be glad to see the draft of your paper. I feel that the old graded slopes are glacial in age but doubt your ideas about the stone rivers. I still have hopes to get the mapping class up there for a week if we can manage to feed them. Transport is arranged and I still have some hopes.

Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Feb. 12, 1943

Dear Professor Thwaites:

Thanks very much for the drawings for your contour machine. The alignment mechanism is particularly ingenious, and I am planning to have one made here if we can scrape together enough materials. On the machine itself, there was one point that was not quite clear, and that was how the adjustments and the verniers that actuate the index marks work. Do you find the cross on the index marks to be more satisfactory that the dots used on manufactured machines?

Inclosed is a photo of the contouring machine that we made. The general plan seems to be similar to yours.

I recently had opportunity to talk to Pettijohn of Chicago about his teaching in photogrammetry, and find that he's been concentrating on it for nearly a year, and has worked up a fine course, with many original ideas.

I've recently had a camera lucida constructed for work on aerial photos, and also a celluloid model to show the perspective geometry of a tilted photo. Will send photos when I get time if you are interested.

I was surprised to learn of you and your colleagues teaching Physics etc. Certainly Croneis was right, and we geologists have been too modest about the importance of our geological work. We still have a few students in the department here, but the prospect for next semester is very poor unless the Army decides to have us teach geography or aerial photos or map interpretation.

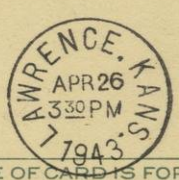
I am hopeful of soon finishing the manuscript on the periglacial features of the Driftless Area. Would you still be interested in looking over a preliminary draft?

My book on photos is due to be off the press in April. I'm beginning to feel that that will be just too late to be of much help to geology departments for war training, but copies will be distributed anyway.

Best wishes for your war work!

Cordially yours,

H. L. Fairchild



THIS SIDE OF CARD IS FOR ADDRESS

Prof. F. T. Thwaites,
41 Roby Road,
Madison,
Wis.

DEPARTMENT OF GEOLOGY
UNIVERSITY OF KANSAS

April 26, 1943

Dear Prof. Thwaites:

550 Los Pinos
San Isidro
Lima
Peru

Could you send the forewarding adress for Norman Newell? I've heard something about his present work, and would like to get in touch with him.

Cordially yours,

H T U Smith

Form 3811
Rev. 1-4-40

RETURN RECEIPT

Received from the Postmaster the Registered or Insured Article, the original number of which appears on the face of this Card.

1 Dr. Scholls Foot Comfort Shop
(Signature or name of addressee)

2 R. A. Keith
(Signature of addressee's agent—Agent should enter addressee's name on line ONE above)

Date of delivery MAY 18 1943, 194

U. S. GOVERNMENT PRINTING OFFICE 16—12421

CHICAGO, ILL. MAR 12 PM 1943 CHESTNUT ST. STA.

Post Office Department

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

POSTMARK OF DELIVERING OFFICE

Return to Mrs. J. T. Thwaites

(NAME OF SENDER)

Street and Number, or Post Office Box, 41 Tobey Rd

REGISTERED ARTICLE

No. 10462

INSURED PARCEL

No. _____

MADISON,

WISCONSIN.

April 30, 1943

Dr. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Smith:

Your letter of March 25 and post card of April 26 are at hand. Thanks for the suggestion in regard to the mapping machine. I have had good results with it but had to change to glass markers because the celluloid wore out too fast and became opaque. The bearings will also make trouble in time.

Newell's address is
550 Los Pinos,
San Isidro,
Lima, Peru

I think all mail must go via air but your post office can tell you for sure. I have heard nothing myself but heard that Mrs. Newell is out there too and is having a fine time.

We had a Devils Lake mapping trip despite rationing and other troubles. In fact it went off very smoothly and we lived in luxury in the old C. C. C. camp. I took some obliques from the top of the bluff- they are in the hypo now in the basement.

Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Mar. 25, 1943

Dear Professor Thwaites:

Thanks for the new copies of your lab problems. I believe that you are giving one of the most thorough courses on mapping that has come to my attention. I was particularly interested to see that our minds worked in the same channel in devising a simplified graphic method of preparing the perspective grids for oblique mapping. The construction that you gave is exactly the one that is being used in my book. I am inclosing some mimeographed tracings of oblique photos obtained from Canada which we use for an oblique mapping exercise. Numbers are included, and the originals can be ordered from the National Air Photograph Library, Canada Department of Mines and Resources, Ottawa, for about 25¢ each.

Last month I stopped at the University of Chicago, and found that Pettijohn has been doing considerable work with aerial photos. He has gone into photogrammetry rather thoroly, in fact, and has developed some very good ideas for presenting the subject. I believe that geologists are doing a better job of teaching this subject than the engineers - as is frequently the case with planetabling also.

I am inclosing also photos of a folding camera lucida which I had constructed here, and find most useful for obtaining moderate degrees of enlargement and reduction in transferring detail from aerial photos. Will be glad to send further details if you are interested.

Work on the Driftless Area paper isn't progressing as rapidly as hoped. However, I'm still optomistic.

Here's an idea for the index marks on your contouring machine, gleaned from one of the British publications. It consists in having half of the cross on each side:
If you have occasion to try this
out, I'd be interested in knowning what success you have,; theoretically, it looks good.

I certainly agree with you that the factory models of contouring machines are open to considerable improvement. It's really surprising that machines priced as they are and precise as they are supposed to be should have so many shortcomings of design.

It looks now as though our geology department may be converted into a geography department. The army is to send students here, and we understand that geography is required on their curriculum, but so far

(over)

have received no details about the course prescribed.

Cordially yours,

H R Smith

P. S. Have you heard much from Norman Newell since he's been in South America? His job sounds like a most interesting one.

April 27, 1943

Hon. Harry Sauthoff,
House Office Bldg.,
Washington, D. C.

Dear Mr. Sauthoff:

Thank you for the Government publication just sent me.

May I trouble you again? This time I would greatly appreciate copies of two more U. S. Geological Survey publications just announced.

Professional Paper 196-F

Bulletin 938

Very truly yours,

April 3, 1943

Hon. Harry Sauthoff,
House Office Bldg.,
Washington, D. C.

Dear Mr. Sauthoff:

I will greatly appreciate it if you can get me a copy of U. S. Geological Survey Professional Paper 197-D publication of which has just been announced.

Very truly yours,

POST-OFFICE ADDRESS: c/o Postmaster
Boothbay Harbor, Maine

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

October 4, 1943

Dear Mr. Thwaites;

I thought it was about time that I wrote and told you how the course in mapping, which I took from you, is almost the sole basis for the work which I now do. Of all of the officers of the U. S. Coast and Geodetic Survey, I happen to be the only one who is not a graduate Civil Engineer.

The work we do includes all types of mapping and I imagine you are almost as familiar with it as I am, as I by no matter or means claim to know all about anything.

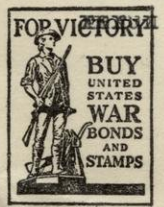
Since I have been in here I have been head of a section in Washington for the final check of Aeronautical Charts before they went to the printer. After leaving there I did hardly anything but learn seamanship and do ship and launch hydrography. Last April we came north from Panama City and I was transfered to a seventy five foot cutter as second officer. This gave me the responsibility of seeing that the ship was taken care of, doing my share of the surveying operations, and standing regular watches which gave me full control of the bridge for as long as eight hours at a stretch.

We have been engaged in triangulation, topography, leveling, tide work, and hydrography. I have learned most of the computations we use in triangulation---altho I am a little slow yet; have learned to observe for triangulation, build suitable signals, fast; am in charge of all topography and leveling as well as all tide gages and do half of the hydrography. I really have learned a lot altho I had to really bluff my way at first.

The first topographic sheet I did after entering here was a chart of 2500 scale which is really quite some scale to work on. None of the older officers wanted it so I got it. The projection had to check to half a meter and then I started. When I finally closed I was three meters off so had to go back and set up on high objects or build towers and work three point problems to correct it. I found that by taking a sextant along I can work a three point problem in about five minutes.

My first job of leveling was a half mile run which made a loop of about a mile and had to close to within .015 of a meter foot. It took me all afternoon but I finally got it. When I went back to rerun the same line after completing our work with the tide gage I found that I could run it in about an hour.

In the line of triangulation I have learned to observe but



POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

the man I learned from is very good on a theodolite and I can no wheres near keep up with him.

Computations are coming, but quite slow. I can do them if I think out each step but I haven't gotten to the point where everything is automatic. Sun azimuths are begining to get under control so that I can click one off in about half an hour. We use and average of five horizontal angles and five inclined angles.

So far I haven't gotten any work with aerial photographs but expect to soon. They took a lot of pictures with the nine lens camera in Alaska and I think a lot of the junior officers are going to get them. I have a friend from Kansas U. that is working on them in Maine here and another fellow from Miss. U. that is working on them in Maryland.

I have had an itch to get a transfer for the duration to one of the air corps but so far I have had no luck. I can't resign and they won't transfer me so it looks like I'm trapped. I might try to transfer as a specialist later but I don't know if I can work that angle or not.

Sometime before the end of the month I expect to move to Baltimore and then I will be in closer contact with the Wahington office and will know better what is going on and may be able to learn to fly and get in a little of it before the war is over. I kind of like the idea of having something to come back to tho if I did get a transfer.

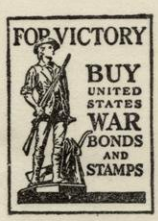
About the middle of August I married a girl that I went with while in school---I don't know if you met her or not--her name was Jeanne Parks. She has gone back to Wisconsin to teach and get her permanent license and then she will meet me whereever I am---if its in this country---in the spring.

My best regards to Mrs. Thwaites, the boys and everyone at the school.

Sincerely,

Robert D. Singel

Robert D. Singel
Ensign, C & GS



Oct. 19, 1943

Mr. Robert D. Singel,
Coast and Geodetic Survey,
C/f Postmaster,
Booth Bay, Maine

Dear Singel:

I was much pleased to get yours of the 4th. Congratulations on your marriage. No, I am afraid I am not acquainted with Mrs. Singel.

We are all well at home although Mrs. Thwaites had a serious operation last spring followed by radium and x-ray treatments. Tommy is in Junior High now and Bob is starting first grade. Tom is now interested in radio because hwne his set blew a tube he was obliged to build a crystal set to replace it. That has now gone out of comission from causes unknown. That, however, was one good thing that came out of the war when he could listen to the radio without disturbing the rest of the family! Our radio is now restricted to "the new only" for the duration.

The Geology Department is very close to a total shut down. Twenhofel has about 50 in general. Con has a few students and is helping in general. Winchell has no students (so I think) and is also helping. I am giving Physiography to a class of three, two girls and a blind man. Another girl called up tonight and wants to start late. Of course I had to say yes.

I was called late in June to teach in the V-12 Navy program. Since July 5 I have had 102 sailors to whom I taught or rather tried to teach Physics. There were about 50 civilians at first but many have been drafted since. The sailors are mainly freshmen and as is normal many did not make the grade. The final exam is Thursday and after that we will soon know the size of the casualty list. The dropped ones will be replaced at once they say and a new class will be formed. I will then teach lab with a reduced quiz section programbut probably more hours of work than before. My office mate is Prof. Ramsperger of the Philosophy Department.

I am flattered that you have been able to get along in Engineering with only Mapping as a preparation. Maybe you heard that we did go to Devils Lake last spring making the one and only geology field trip of the year. But I am afraid that this year it will be all off. Today I loaned my machine for mapping from aerials to the State Planning Board as it has been idle since August when Mees went to the Army and Dahm to the oil fields.

Probably you have heard more news of the others than I have. Frederickson is C. O. of a large training camp in the southwest. Nelson is a flying instructor. Jerry was in the other day. He is at Milwaukee now. Saw Bill Twenhofel the other day on his way to Washington. Saw the Wilcox's one day during the summer. Robeck was in with Seeger once but really I am not a good source for news for I am away from Science Hall so much of the time. Winchell and Con are also in Physics although not as many hours as I have been.

Best wishes,

Sincerely,

Mr. and Mrs. Rollin Parks

announce the marriage of their daughter

Jeanne Alice

to

Ensign Robert V. Singel

on Saturday the fourteenth of August

Nineteen Hundred and Forty-three

at

Congregational Church

Boothbay Harbor, Maine

Seal of the City of New York

At Rockefeller Center the pansy beds are a feature of the lovely Channel fountain, and are kept meticulously fresh, withered pansies being removed at the rate of 20,000 a day.

LANDMARKS OF NEW YORK CITY

THIS SPACE FOR WRITING MESSAGES

Sunday evening -

Dear Amy, -

Its so beautiful here to-day, and its the first time we've had anyhow to enjoy it. Right now, I'm watching the sunset on the river from our roof-garden, and I wish you could all be here.

The park at the foot of our block is very lovely since they built the new drive, and runs for miles along the river front.

I'm hoping you're well and strong again. Love,

Gladys

Designed and produced by Harry H. Baumann, 216 W. 18th Street New York, N.Y.

POST CARD

Mrs. F. Thwaites
Roby Road
Madison, Wis.

16

July 29, 1943

Railway Express Agency,
201 S. Blair St.,
Madison 3, Wisconsin

Gentlemen:

I am informed by Spencer Fireworks Co. of Polk, Ohio that they shipped the box described in the enclosed receipt No. 8012. The same never arrived although it is now over a month since it was shipped. Value of the goods was $3.75

Will you please investigate the loss.

Very truly yours,

(707-D) 9-40
Printed in U.S.A.

RAILWAY EXPRESS AGENCY
INCORPORATED

Madison, Wis., August 13 1943

Referring to your inquiry of August 3 1943 File

Shipment referred to covered by our receipt No. 8812

Consigned to F. T. Thwaites

At Roby Road, Madison, Wisconsin

Was Delivered No record of 194 delivery A. M. P. M.

Signature held Per

C. O. D. on this shipment was paid by Draft issued 194

Shipment reforwarded returned to

at Date 194

Yours truly,
J.D.White, G/A

THIS SIDE OF CARD IS FOR ADDRESS

F. T. Thwaites
41 Roby Road
Madison, Wisconsin

7011—4-34—Printed in U.S.A.

In submitting this check in payment of your claim we wish to assure you that we deeply regret the loss and inconvenience caused you.

We appreciate your patronage and trust that we may serve you more satisfactorily in the future.

RAILWAY EXPRESS AGENCY
INCORPORATED

NATION WIDE

RAIL and AIR SERVICE

5 Oct. 18, 1943

Spencer Fireworks and Novelty Co.,
Polk, Ohio

Gentlemen:

In reply to yours of July 14 the claim agent of the Express Company says that he wants the original receipt for me to file to recover the cost of the lost package.

Could you please either send me same or enter claim for me at your station.

Very truly yours,

July 9, 1943

Spencer Fireworks Co.,
Polk, Ohio

Gentlemen:

My order of June 17, 1943 was never received. If not filled please cancel and return the money. If filled it was lost by the Express company.

Very truly yours,

306 Van Deusen St
Madison

Dear Mr and Mrs Thwaites

I am enclosing a Money order to pay the intrest.
Im very glad to be back in Madison but am not able to help my self. I spent over $400.00 while in Milwaukee for Hospital Dr bills and Medicine and I still am taking x ray treatments at Madison General. and on Oct 9th I have to go for another Opperation.
I hope your family are all well

Sincerely Mrs Eleanor Sloan

Oct. 4, 1944

Mrs. Eleanor Sloan,
306 Van Deusen St.,
Madison 5, Wisconsin

Dear Mrs. Sloan:

Thank you for the money order for $5.00 covering interest to October 25, 1944. We were all very sorry to hear that you are still ill and hope there will be an improvement. Receit is enclosed.

We are all very busy, I at the University, Mrs. Thwaites trying to keep the house going with very little help, and the boys at school. Tommy is in 8th grade and has just become a First Class Scout.

Hoping you will soon be better,

Sincerely,

July 13, 1944

Mr. Tom Patterson,
Camp Tichora,
Green Lake, Wisconsin.

Dear Sir:

My son, Thomas, has lost the Second Class Scout Certificate which he earned at Green Lake last week. It is necessary to have a Duplicate in order to go on with the achievements for a First Class Scout? Is it necessary to have a Duplicate in order to buy a Second Class pin?

Anything you can do to help him in this matter will be much appreciated.

Yours very truly,

MEMORANDUM

To: Scout Parents, Troop 2

Place: Congregational Church, Dining Room

When: Tuesday, October 3, at 7:30 p.m.

Why: Combined Court of Honor with Troop 15 which also meets at the church

The Scouts of Troop 2 very cordially invite you to attend their first Court of Honor of the fall season. The Court of Honor is the "conferring of degrees" upon Scouts who are qualified, by having passed all the tests, for higher ranks. The simple ceremonies are interesting, and will give you an idea of what Scouting is and what the Scouts are doing.

As you probably know, Troop 2 has been without a Scoutmaster for about a year. In spite of our search and entreaties we were unable to get a qualified person to take over the job. But we got along -- not as well perhaps as before, but the Troop is still intact and going strong.

Lately, a miracle occurred! Out of the blue sky a man walked right up and volunteered to be Scoutmaster. Most men are interested in boys, but apparently few do anything out of the ordinary about it. But here is a man who did something about it, and without solicitation. The fact that he has several boys of his own may have had some bearing on his decision to be a leader of boys.

Come out and meet our new Scoutmaster, Mr. R. A. Lippett, and enjoy an evening with the Scouts -- your own boys.

We will be expecting you.

Sincerely,

Geo. C. Morbeck, Chairman,
Troop 2,
For the Troop Committee.

Madison, Wisconsin,
September 30, 1944.

OFFICE OF NAVAL OFFICER PROCUREMENT
1320 G Street, N. W.
Washington, D. C.

QR/P14-1 EAB/mll 26 August 1944

Professor F.T.Thwaites
University of Wisconsin
Madison, Wisconsin

Dear Sir;

Ref: Edward Gustave SEEGER
Applicant for commission, United States Naval Service.

In placing this important matter before you, it is sincerely regretted that a personal letter cannot be sent, but to do so would make it necessary to divert energy now focused on other wartime duties.

The conscientious thought given your reply to this request may affect the welfare and safety of many men, as the man about whom we are writing may eventually be in a position of command. Therefore, the requested information is of more than usual significance.

Please tell us in detail what you can about this applicant. For your convenience we have enclosed a form which covers the essential items upon which information is desired. It would contribute to our appraisal of the applicant if you would place your answers below the questions on the enclosed sheet.

A return envelope is enclosed. Your reply will be kept in strictest confidence and will have an important bearing on the final decision. Please accept our thanks for your assistance.

Very truly yours,

John H. Engel Jr.

J. H. Engel, Jr.,
Lieutenant, USNR.,
Sr. Investigating Officer

URGENT

Shinners

SOUTHERN METHODIST UNIVERSITY

DALLAS, TEXAS

INSTITUTE OF TECHNOLOGY AND PLANT INDUSTRY

OFFICE OF THE DIRECTOR

November 21, 1944

Professor F. T. Thwaites
Department of Geology
University of Wisconsin
Madison 6, Wisconsin

Dear Professor Thwaites:

We are establishing in our Institute a research fellowship in systematic botany to further the work upon the flora of Texas. Dr. Lloyd H. Shinners, who has indicated an interest in the Compositae of Texas, is being considered for this fellowship. Since Dr. Shinners was your student, I would appreciate to receive from you a statement regarding his qualifications. Does he have the initiative to carry a research problem through to completion? How does he work with his colleagues?

Sincerely yours,

C. L. Lundell

C. L. Lundell
Director

CLL:lh

6 Dec. 2, 1944

Shimmers

Dr. C. L. Lundell, Director,
Institute of Technology and Plant Industry,
Southern Methodist University,
Dallas, Texas

Dear Dr. Lundell:

In reply to yours of Nov. 21 Dr. Shimmers took his monor in Geology and hence much of his work was with me. I have the highest opion of his ability and scholarship. Although he did no research with me he was always industrious and thorough so that I am sure that he would complete any project which he started. He seemed tobe well liked by his coworkers the others he worked with. I am confident that you would find him worthy of the followship.

Very truly yours,

F. T. Thwaites

F. T. T. Assistant Professor of Geology

Ed Stocker

Sept 8.	1 peck jelly crabs	0.75
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Oct 29	1½ bu ganos	1.75
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Paid 2-6-45 Check No. 28

F. S. Shuattes 14
2
to
Ed N. Stocker, Dr., 20

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Bainter, Monica	Sterling Hall	Physics	453 W. Main St. F. 2254
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Bent, Mrs. Irene	Home Ec. Bldg.	Home Ec.	1630 Monroe St. G. 1775
Bere, Ruby	Service Mem. Inst.	Lab. Hyg.	3423 Sunset Dr. Shorewood G.4586
Bilstad, Nellie	Biology Bldg.	Zoology	1620 Monroe St. B. 5191
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Chidester, Mrs. Mae			4157 Hiawatha Dr. G. 9199
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Cole, Elsie	Biology Bldg.	Zoology	1223 Lee Ct. F. 6856
Cook, Hyla	Chemistry Bldg.	Chemistry	925 Conklin Pl. B. 5448
Denniston, Dr. R. H.			Box 2011 Univ. Br. P O 0124J11
Dilks, Eleanor	Biology Bldg.	Zoology	517 Randall Av. F. 4926
Duncan, Mrs. Robt.	F. P. L.	F. P. L.	317 E. Gorham
Duroux, Dorothy	Sterling Hall	Physics	819 Irving Pl. F. 8505

Evenson, Adelaide	Agr. Hall	Ag. Bact.	1610 Chadbourne
Faber, Alice	Biology Bldg.	Botany	144 Breese Terr. F. 6975
Fisk, Emma	Biology Bldg.	Botany	419 Sterling Pl. B. 1786
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Powelson, Dorothy	Agr. Hall	Agr. Bact.	211¼ N. Randall G. 591
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Reynolds, May	Home Ec. Bldg.	Home Ec.	3326 Blackhawk B. 4972
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Snell, Mrs. Katherine			228 E. Sunset Ct. G. 3306-R
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Tappins, Katherine		(Botany)	Chadbourne Hall U. 763
Thwaites, Mrs. Amy			41 Roby Rd. G. 1178
Toki, Toshi	Science Hall	Geography	Route 4 F. 762-W
Wakeman, Nellie	Chemistry Bldg.	(Pharmacy)	1814 Keyes Av. F. 536
Walliker, Catherine	Biochemistry Bldg.	Biochemistry	1104 W. Johnson B. 1251
Wipf, Louise	Genetics Bldg.	Genetics	221 Clifford Ct. F. 2466
Zepplin, Marie	Biochem. Bldg.	Biochemistry	215½ N. Mills F. 7351

Military Geology Unit,
U. S. Geol. Survey,
Washington 25, D. C.,
Aug. 3, 1945.

Dear Professor Thwaites:

Living here as an office geologist, I often think back to those two very pleasant summers in Wisconsin. Are you having opportunity for field work now? I'm looking foreward to getting out again perhaps next summer, at any place possible.

During week-end hiking trips in the Blue Ridge near here, I've found several rock streams similar to those of the Baraboo area, though longer and on much lower gradients. Periglacial solifluction seems the only answer, altho these are up to more than a hundred miles from the glacial border. Thinking about these has given me many new ideas applicable to the Baraboo occurrences, which I'm still hoping to write up before too long.

Did I mention to you the giant glacial grooves which I saw in the Northwest Territories of Canada? They're up to about a hundred feet deep, fifty yards or more wide, and up to miles long. Trend both parallel and transverse to structure. I've been doing some looking around in the literature to find something comparable, but so far without success. Do you have any references to such features postdating the ones in your Outline of Glacial Geology?

Have you seen Cotton's recent books on geomorphology? I believe that he is far ahead of all others.

I learn that Trask is joining your department. He should be a good man. You've certainly been having a turnover since the war began.

Are you doing much with aerial photos now? I see them frequently in connection with the work that we're doing here, which covers large portions of the globe, but have little time to think about the photogrammetric aspects. One thing that I'm looking foreward to now is taking aerial photos, especially in color, of places of geological interest, as soon as restrictions are removed. They should be extremely useful for teaching. There are several places in Wisconsin that I'd particularly like to get to show glacial landforms.

Will look foreward to seeing you again and talking over things geomorphic, when better days come.

Cordially yours,

H V Smith

August 13, 1945

Dr. H. T. U. Smith,
Military Geology Unit,
U. S. Geological Survey,
Washington 25, D. C.

Dear Smith:

Yours of the 3rd did not reach me until last Saturday because I went to the hospital on July 9 for a double hernia operation. This was the third for one side but now I was sewed up with tantalum wire so that the drop back nearly to zero strength after a few days with catgut does not take place. Of course, I am still sore and very lame but time ought to cure that and I now hope to be able to carry on for some time yet. Things just could not have been left as they were.

I was up to Devils Lake yesterday but naturally could not go on the bluffs. My opinion still is that you will have some difficulty in proving that a climate different from the present is required for the "stone Rivers" Most of them are due to erosion by modern drainage of an older mantle of rubble and clay. This mantle which forms an apron at the foot of the bluffs may have been formed under different climatic conditions. Of course, some seem to have moved en masse and this movement would be easier with more snow or more water.

No, I had not heard of the giant grooves and have no references on them. So many years of war for Canada must have set them back terribly.

I have read Cotton's books very carefully and agree with you that they are ahead of the American books on geomorphology most of which are about of freshman grade or lower. I have been making use of my five semesters in Physics to rework some mathematical concepts of geomorphology.

Yes, we certainly will have a different atmosphere in Science Hall than of old. Besides Trask Cline is to come. But Tyler may be back and that may soften the transition.

I have not done much with aerial photos recently. Classes have been small. We have used your book for a reference and I started requiring your derivation of the parallax equation.

Last summer and parts of this I have worked on a thorough revision of the Outline of Glacial Geology. This will use stereo pairs for some illustrations and a few other photos taken on the ground. It is a big job and I wish I knew how to publish it. I have been unable to hear from Edwards Brothers and think they must be gone out of business.

Well, let's hope the war will end soon and we can all get back to normal!

Sincerely,

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J. C. SCHADOW, ASST. MANAGER

SALES DEPARTMENT

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Through arrangement with our subsidiaries and other companies, your Standard credit card will be honored in every state in the Union, and in Canada.

We urge that you use your card in order that you may determine for yourself its convenience and utility.

Very truly yours,

J. H. Budde

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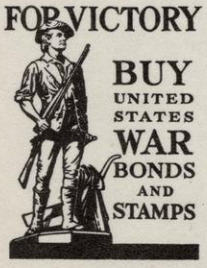

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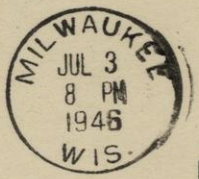

Mrs. F. T. Thwaites
41- Roby Rd.
Madison 5
Wis.

7-3-46

Dear Mrs. Thwaites –

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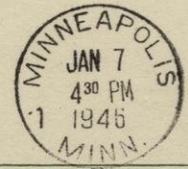
C V Hughes Mgr.
Dr. Scholls Store.



THIS SIDE OF CARD IS FOR ADDRESS

Prof. O. T. Thwaites
Dept. of Geology
Univ. of Wisconsin
Madison,
Wisconsin

Kindly note my new address:

Robert P. Sharp

Department of Geology

University of Minnesota

Minneapolis 14, Minnesota

Dr. Thwaites

GEOPHYSICS

College of the Air - Radio Interview

One of a Series

entitled

"The Story of Physics"

Feb. 20, 1946

Wisconsin State Stations

Interview Between

Mr. W. B. Harley,

and

Mr. L. B. Slichter,
Professor of Geophysics
at
University of Wisconsin

GEOPHYSICS

Mr. H. This word geophysics, just what does that mean, just what do geophysicists do?

Mr. S. I knew that one was coming. It is a tough one to answer briefly. In the early days in Canada when geophysical field equipment was rather heavy we used to say that geophysicists carry heavy weights! In a few words, geophysics connects physics and geology. It is an application of the methods of physics to problems in geology and could equally well be called "earth-physics".

Mr. H. Do you mean all the earth, the ocean, and atmosphere as well as solid ground?

Mr. S. Yes, all these things are parts of geophysics but this afternoon I hope we can restrict ourselves to the solid earth. Meteorology, the science of the atmosphere andof the weather, and oceanography have become special sciences of their own.

Mr. H. That suits me fine. I would just as soon keep one foot on solid ground. What I would like to know is why you scientists keep coming up with these new five dollar words like geophysics? I hear that geophysics is a new venture at the University of Wisconsin. Why does the university think it should spend money on geophysics?

Mr. S. Now you have raised a real question. Of course I can't speak for the president and regents, but I think I can give you a picture of the growing importance of geophysics in our kind of life and this will explain why geophysical work is now being emphasized by educational institutions as well as by oil and mining companies. Geophysics has two main functions: one of these is exploration for certain types of essential and valuable minerals. This is called geophysical prospecting, and geophysical prospecting has become a primary tool of exploration.

Mr. H. All that sounds a bit technical to me. Why is geophysical prospecting regarded as important?

Mr. S. Well, to appreciate the importance of any efficient prospecting tool it is necessary to picture the vital role which minerals play in our present civilization. Mineral wealth is the root of all wealth, and the primary source of our amazing material prosperity. Former President Van Hise of the University was a pioneer in teaching the importance of our irreplaceable natural resources and of their conservation. His successors in the department of geology at Wisconsin, notably Professor C. K. Leith, Dr. W. O. Hotchkiss, and others, have extended and emphasized his teachings. Professor Leith's book, "Minerals in War and Peace" and more recently Dr. Hotchkiss's book, "Minerals of Might," clearly bring out the importance of minerals. An abundant supply of minerals is the life blood of the present social organism. In a democracy founded on mineral wealth, it's obviously important for people to be interested in such things.

Mr. H. That seems interesting, but could you bring out the point about our dependence on minerals a little more clearly.

Mr. S. Well, I think the clearest statement about that is made by Hotchkiss in his recent book. He points out that during the long centuries when the Indians occupied this country before the white man's arrival, the greatest total population supported here was around a half million. Now the Indian is an intelligent individual, so nearly like the white man in mental capacity that I understand there is still difference of opinion among the experts as to whether any real difference exists. The major reason why this country now supports 135,000,000 people on a far higher standard of living than was possible for the primitive Indian is merely that the white man makes abundant use of minerals. The Indian hada hunting and farming civilization; we have a mineral civilization and hunt oil and ore instead of deer and buffalo.

Mr. H. I see, so you would probably claim that geophysics improves the hunting.

Mr. S. I certainly would. Almost all new oil discoveries made in this country today involve the use of geophysics, and the oil industry is the biggest industry in this country. To make good the annual consumption, new discoveries of about 2 billion barrels a year are needed. Just before the war our average consumption of crude petroleum was about 1½ gallons per day for every man, woman, and child in the country. But the real value of this product in performing work is concealed by these figures. Assuming that the energy in the crude oil is converted into useful work by the usual means available, there is, as Hotchkiss points out, enough available energy in the petroleum produced each year to provide the equivalent of 7 slaves working 8 hours a day every day for each man, woman and child in the country. That's why we each enjoy relatively high standards of living.

Mr. H. That seems fine, but I wish I could get one of my seven slaves to tend my little daughter, sitters are hard to get these days. Won't you say something about the savings that geophysics makes in finding these 2 billion barrels of new oil needed every year.

Mr. S. That is really quite a difficult question. The trouble is that the chief effect of geophysical prospecting is to enable exploration to be carried out under conditions which would otherwise be impossible. When oil-filled sands occur at depths of two miles, there is without geophysics, no way to predict their location with sufficient precision to justify drilling. Geophysicis in effect has immensely increased available oil reserves by bringing new deep horizons within the zone of reasonable prospecting risks. So the chief effect of geophysics is to make possible very difficult jobs which could not be risked at all without its help. Even so, the number of wasted or dry wells has been considerably reduced by use of geophysics. In certain regions competent geophysical firms have hadreally phenomenal records. In Venezuela one firm has had only one or two dry holes in the last seven or eight years, -- a nearly 100% score. That is certainly making the drill holes pay!

Mr. H. Then geophysics must save considerable sums in drilling costs.

Mr. S. Yes, especially when one considers that deep wells may cost around $100,000 each; and sometimes much more.

Mr. H. It must be quite a responsibility to give the 'go ahead' signal on exploration "bets" of this kind that may cost several million dollars a throw!

Mr. S. Of course it is - and the responsibility for prospecting in this country rests on a relatively few experienced men. There are only about 1,000 members in the Society of Exploration Geophysicists and 4,000 in the American Association of Petroleum Geologists, --as compared with other professional societies like the American Chemical Society with it's 38,000 membeбs.

Mr. H. What kind of training do you think students entering geophysics need to fit them for these complicated prospecting problems? It must take a real Sherlock Holmes to detect an oil field two miles below the surface.

Mr. S. On the contrary it takes a well organized team or staff of them. It is too much of a job for one brain to carry. But to answer your question about training -- All geologists need to know something about geophysics because geophysics has become a factor, small or large, in almost every exploration problem whether it be for oil or ore. Those who wish to specialize in the subject can do no better than to ground themselves thoroughly in the three "R's" of science. That is to say, in the three basic sciences of mathematics, physics and chemistry. These will give the young geophysicist a good core of science to build upon. If he gets that, the embellishments will come relatively easy. Graduate training leading to a doctorate degree is almost essential if a man wishes to qualify himself for future leadership in this field.

Mr. H. That must mean that the emphasis is on quality rather than quantity.

Mr. S. You are 100% right. The need is for well trained scientists because the responsibilities are great. As in a medical school, much expense is devoted to the training of relatively few students. This is later abundantly returned to society in the essential and difficult services performed. Of course the number of geophysicists needed is by no means as great as doctors, and not every school need set up facilities for training them. It is better to concentrate facilities in a few suitable places and do the job well, than to do it partially at numerous places.

Mr. H. I am sure you consider Wisconsin a good place for training geophysicists.

Mr. S. Of course, how could I think otherwise in speaking over the State Stations? But, seriously, Wisconsin has always been a leading school in the geological sciences, - ever since the days of Sterling and Van Hise. Its geology department has been noted as few others for the leadership its graduates have attained. Its physics department, although of course not primarily interested in exploration, has also contributed much to geophysics. Indeed, in former years much work was done at the university which would now be called geophysics. For example, the work of Professor Ingersoll in the deep mines of the Michigan peninsula furnished the best information then available about the loss of heat from the earth. The important joint report on the tides by Wisconsin andChicago scientists, and the pioneer work here on the flow of underground waters were also geophysical projects. As early as 1924, Professor Max Mason, then in the physics department here, initiated the first extensive research program in this country on the detection of ore bodies by geophysical methods. Furthermore, the Wisconsin Geological Survey, under Dr. Hotchkiss, and later Mr. Bean, was the first to introduce extensive use of magnetic methods in geological surveys - and of course that is applied to geophysics.

Mr. H. That all adds up to quite a geophysical story, doesn't it!

Mr. S. Yes, it really does. There is no doubt that Wisconsin has a fine tradition of cooperation in physics and geology, and an excellent record of performance in these two fields. In fact, it is natural that prospecting should loom large here. We are near the biggest iron producing region in the world in northern Minnesota and Wisconsin, near the copper region of the Michigan peninsula, near some of the earliest mines in the country in the lead-zinc area of southwest Wisconsin. I even hear rumors about a new zircon deposit in the Wausau area. No, it is not surprising that Wisconsin continues to be interested in developing good geologists and also good geophysicists.

Mr. H. You have said quite alot about geophysical prospecting for oil. Won't you say a word about the way a campaign is laid out and what geophysical methods are used?

Mr. S. First comes the selection on purely geological grounds of favorable areas,- The source beds of oil are always sands or other sedimentary rocks, particularly rocks which were originally formed from materials deposited in shallow seas near their shores or beaches. Porous sandstones are the most common oil bearing rocks. Where such rocks are known to occur the area may have possibilities for oil concentrations. For example, much of the states of Texas and Oklahoma is known to be prospective oil lands. After selecting a suitable area it is common practice to make a preliminary search for favorable conditions in these rocks by means of gravity measurements or magnetic measurements, or sometimes by both. Such measurements may, for example, reveal features of the topography of the older igneous rocks upon which the sediments were originally deposited. Such hidden topographic features can be evaluated in terms of their possible effect upon the occurrence of oil pockets or oil traps. You see, the search for oil is today still only an indirect one.

Mr. H. What do you mean by that?

Mr. S. I mean that one cannot find the oil itself without a drill hole. All one can do is locate so-called "traps" in which oil might be expected to accumulate. For example, the infamous Teapot Dome is thought of as a dome-like shape or structure in the deep rocks produced by gentle bending of the rock layers in such a way that an inverted saucer-like structure resulted, capable of trapping any oil, gas, or water tending to flow into it from beneath.

Mr. H. Yes, but about these gravity andmagnetic measurements. just what are they and what do they mean?

Mr. S. Well, in the case of the gravity work -- the pull of gravity on any given chunk of material changes just a very little from place to place depending among other things, on the weight of the underlying rocks. The so-called gravimeter measures by the extension of a special highly sensitive spring the changes in the pull of gravity from place to place. In this manner it is possible to learn something about the thickness of the lighter rocks in which oil may occur and about the changing depth to the heavier basement rocks.

Mr. H. That instrument must be a highly sensitive one.

Mr. S. It is one of the most sensitive instruments ever devised. In actual field operations it detects changes of gravity of only a few parts in a hundred million. By the way, since Mr. Ickes has recently brought to public attention the oil reserves under the sea in the coastal regions of California, you may be interested in hearing that gravimeters are used on the sea bottom under several hundred feet of water for prospecting for oil structures at sea.

Mr. H. That is very interesting, but suppose such structures seem to be indicated by gravity readings or magnetic readings? What next?

Mr. S. Well, the next stage is usually the use of a remarkably accurate technique known as seismic reflection prospecting. In principle, this closely resembles a common procedure at sea about which you may have heard, namely the sounding of the depth of water beneath aship by measuring the time of return from the sea bottom of an echo produced by a sharp underwater sound pulse sent out from the ship. Sound waves travel in solid rock in about the same way as they do in air or water, --echoes are returned from boundaries between different kinds of rocks just as an echo may be obtained from a suitable cliff. In the seismic case, however, a complicated pattern of reflections is obtained from the various rock layers, hence it is essential to record these echoes permanently, so they may be carefully studied and interpreted later. The instrument and special camera used for this purpose, is, as you know, called a seismograph. As you can easily imagine, the research staffs have made many short cuts and improvements in the art of obtaining desirable types of records of these echoes and in interpreting the complicated story which they tell. Just to indicate how good this work can be under favorable conditions, predicted depths two miles below the grass roots frequently are confirmed by drilling with an error of less than 100 feet.

Mr. H. You have said very little about ore prospecting. What about the use of geophysics in exploration for ores?

Mr. S. I think the full possibilities of geophysical work in the prospecting for ore are yet to be realized. Of course much work has been done in ore prospecting with geophysical methods and many new ore bodies and extensions of old ones have been found, but the results are not so spectacular as in the case of oil and to date much less effort has been devoted to improving geophysical methods for finding ore. However, during the last few years much greater interest is being shown in this subject by large mining companies. I believe geophysics will give important aid in the discovering of new ore bodies. As Leith has pointed out, there has not been a major

mineral discovery, save oil and potash, in the United States since 1915, - or in Europe since 1850. The need for further discoveries is becoming more pressing and I believe geophysics is capable of supplying much help in meeting this need.

Mr. H. That sounds encouraging. I admit I have not been aware of the tough going here or in Europe in prospecting for new mines.

Mr. S. The old world, namely Western Europe, has really grown old in the sense that its mineral resources are old and well on their way to depletion. Russia, on the other hand, is truly a new country, in the sense that its great mineral wealth is still largely untouched. Our good bankers always warn their customers against the danger of living off their capital and I have 'heerd' tell that down in Maine dipping into one's capital is considered a major crime. But the State and Nation should remember that we are all living primarily off our non-replaceable mineral capital, and that at a good merry rate! Speaking of ore reserves, we have recently been reading in the paper about the great new iron discoveries in the western Labrador region, which are to be compared only with the Mesaba deposits in grade and size. I have been told that magnetic work has proven quite helpful in the discovery of these ore deposits. The techniques used were quite similar to those used in the iron mining regions of northeastern Wisconsin. You will recall that I mentioned the early work of the Wisconsin Geological Survey in mapping that area magnetically.

Mr. H. I think you said some time near the beginning that geophysics has two main functions. What did you mean by that?

Mr. S. I have explained one of them -- the prospecting function which has recently come somewhat spectacularly into the oil business. The second function, from a long range point of view, is probably as significant and important as the first, --if not more so. The second function is the study of the physical workings or behavior of this planet. It is obvious that science needs to know all it can about the nature and construction of the earth as the home of mankind. Clearly, the study of man cannot well be divorced from the study of the home on which he lives. Furthermore, in studying the sole available planet accessible to our close inspection, we are inevitably studying some aspects of nature not reproducible in laboratories. From this point of view the study of earth-physics resembles that of astronomy. Both are suitable for extending the breadth of observation beyond the narrow limits set by man-made laboratories.

Mr. H. Won't you enlarge a little on that point?

Mr. S. Well, one of the first things we might note is the enormously great age of the earth as revealed by radioactive measurement. No time intervals nearly so long as those recorded in geology are elsewhere available. The tiny amounts of radioactive materials found in rocks provide, luckily, kinds of clocks which so to speak were set going when the rock first congealed and have been kept going ever since at a known and constant rate. These clocks provide the means accurately of measuring the times between events in the long and active history of the earth. We find that the oldest rocks were formed on the surface about two or three billion years ago. These long times provide a means of checking over exceedingly long intervals the validity of certain physical laws which can be tested in the laboratory only throughout very brief intervals. This interesting information concerning the unchanging rates of radioactive disintegration is furnished by evidence formed during the first half of the earth's existence. The study of the radioactivity of rocks is just beginning and will, I am sure, tell us much more than we now know about the history of events in the younger days of the earth. Dr. Hurley at Wisconsin is one of the leaders in this growing field.

Mr. H. It does seem queer to me that you should show concern about events that occurred more than one thousand million years ago. Can you explain such interest?

Mr. S. Yes, I think so. I hate to bring in the commercial aspects again but frequently the almighty dollar affords the easiest out-for a quick explanation-even though other, and better reasons may be concealed by emphasis on the mere financial aspects. It happens that much of the ore which is providing our material prosperity today was laid down in rocks during the first half of the earth's lifetime, and, accordingly we are vitally interested in learning more about the detailed story of those days. This story, when more fully revealed, will be of much help in the search for ore, --if you need a practical reason.

Mr. H. I guess that explains it. Fortunately we are concerned just now with the next four minutes, -- when our time is up. Is there something more that you ought to get in before the bell rings?

Mr. S. Oh, yes, there is plenty more, but, as you say, there is not much time. Besides providing the only really long time scale, the earth furnishes a kind of test laboratory where the pressures and temperatures are far higher than we can achieve in man-made laboratories. At only 200 miles below the surface the pressure in the earth is about 100,000 atmospheres; at the center about 3 million atmospheres. Compare this with the highest working pressures obtained in the laboratory, of about 100,000 atmospheres. Under great pressures deep in the earth, theory predicts a change in the compressibility of rock materials. Such theories have apparently been confirmed from observations concerning the velocity of propagation of earthquake waves through the upper 300 miles of the earth's crust. The earth's crust with all its hundreds of different minerals occurring in many different types of associations and concentrations affords unique conditions for the study of fundamental questions in both chemistry and physics. Restricting ourselves to the purely physical side, the creep and flow phenomena exhibited by rocks, and the recrystallizations observed to have occurred in them under changing conditions of great stress and pressure bear directly upon fundamental questions of the creep and flow of solids and in particular of metals used in engineering. With the advent of high temperature steam plants and of even higher temperature gas turbines, rocket motors and jet propulsion, this subject of plasticity and creep is becoming very important in mechanical engineering.

Mr. H. This subject geophysics seems to have a broad coverage!

Mr. S. Yes, and it is perhaps natural that it should, since I might remark that the earth itself is in the habit of covering quite a broad field. In fact, there are many interesting, and little-understood phenomena about the earth whose study should some day lead to new knowledge of importance. Magnets, for example, have been known since the days of the Greeks and Romans, and no doubt back to primitive man's first discovery of lodestone or magnetite crystals. We know that the earth itself is a great magnet and this fact has been used to guide navigation since before the time of Columbus. But we still are searching unsuccessfully for the true cause of the earth's magnetism. It is these larger questions in geophysics, wherein better understanding of the basic nature of things is sought, which should be regarded as more significant and worthy of effort, than those aspects which can pay immediate returns in the discovery of oil and ore.

ILLINOIS WATER WELL DRILLERS ASSOCIATION, INC.

NATURAL RESOURCES BUILDING
URBANA, ILLINOIS

October 17, 1946

Mr. F. T. Thwaites
Department of Geology
University of Wisconsin
Science Hall
Madison, Wisconsin

Dear Mr. Thwaites:

Last February at the 19th Annual Convention of The Illinois Water Well Drillers Association plans were initiated for revamping and expanding The Illinois Well Driller. A copy of our first, Mid-summer, issue of this journal is enclosed. The Fall Issue is now at the printers and will probably be in the mail by the end of this month. Your name has been placed on our mailing list to receive that and all future issues.

Despite its name, The Illinois Well Driller is being sent to all drillers in the Midwest states of Wisconsin, Iowa, Missouri, Indiana, and Michigan in addition to all the Illinois drillers. Present plans call for further expansion in circulation during 1947, with the hope that eventually this will become, in effect, the trade journal of the water well drilling industry with national coverage and national circulation. To this end the name of the journal will be changed, probably in July, 1947, to The Water Well Driller.

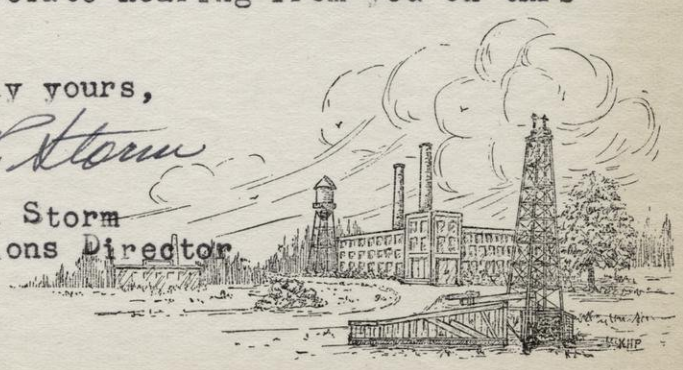
You and your work on groundwater in Wisconsin and Illinois are well known to many drillers in this area, and I have been asked to contact you relative to contributing articles to the journal. The choice of subject matter can be left to your discretion. Any article, or series of articles, that you may care to contribute would be greatly appreciated. You would be free to use as much illustrative material as you desired.

Copy for the December Issue is now being gathered with a deadline of November 15. The deadline for our February (Program) Issue will be January 1st. The latter issue is to be the most ambitious endeavor to date, and we would be very pleased if it contained a contribution from you. I would appreciate hearing from you on this matter at your convenience.

Very truly yours,

Robert R. Storm

Robert R. Storm
Publications Director



Jan. 27, 1947

Prof. H. T. U. Smith,
Dept. of Geology,
University of Kansas,
Lawrence, Kansas

Dear Prof. Smith:

Thank you for yours of the 16th with check for the book I sent you. I do not remember just why I reduced the size of the map in the last edition but think it was b e-cause of the scale on which it was drawn. I am mailing you under separate cover a black line print of the original. There is no charge for this. This was traced from the map of North America in the making of which I had a part.

With regard to the source of the map of loess I used an advance copy of Marbut's Atlas of American Agricultu re. I have not consulted the final copy. The map of loess on the map of North America is decidedly inferior to this.

The geomorphology text is now at a standstill as my classes are so large I can get little time for it. I hope to resume field work next summer but as yet plans are most uncertain.

Best regards,

Sincerely,

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Jan. 16, 1946

Dear Prof. Thwaites:

Enclosed is a check for your "Outline of Glacial Geology." I think the new edition is a great improvement over its predecessors. The one change that I regret to see was the reduction of Plate III from 2-page to 1-page size. One topic that I would like to see more about is effects of the glacial climate in unglaciated areas, with particular reference to periglacial phenomena.

Could you give me the reference to Marbut's map used in compiling Fig. 78? I've been trying to find something along this line without success. The loess map for the U.S. given in Schmidt must have been based largely on theories.

I will look forward with interest to receiving your material on the quantitative approach to geomorphology.

Cordially yours,

R. R. Smith

March 29, 1947

Sears, Roebuck and Co.,
925 S. Homan Ave.,
Chicago 7, Illinois

Gentlemen:

We are returning herewith a pair of rubbers 76M3149 size 10 which we found too large and desire to exchange for size 9½. The order blank was not enclosed and has not been seen. It may have dropped out of the package. We are enclosing postage for the other size. (13 cents.)

Very truly yours,

May 12, 1947

Dean C. A. Elvehjem,
Graduate School,
150 Bascom Hall

Dear Dean Elvehjem:

Mr. George W. Starke has asked me to write you in regard to his work with me. My only experience with him has been in Mapping, Geology 11, this current semester. His work in that was very good. Final grades have not been computed at the time of writing but preliminary estimate indicates that he will make a B. He proved a hard worker on the recent field trip to Devils Lake and think is worthy of a trial in the Graduate School.

Very truly yours,

F. T. Thwaites, Assistant Professor of Geology

May 14, 1947

Dr. William T. Stafford,
First Central Building,
Madison 3, Wisconsin.

Dear Dr. Stafford:

Last February I read an article in the Milwaukee Journal about the use of glutamic acid in cases similar to Bob's. The immediate effects seem to be good.

Do you think its use would be beneficial?

Yours very truly,

Amy M. Thwaites

Schmidt

Maplewood N. J.
April 5th 1947.

Dear Mrs Shwaites,

We were just talking about our Colorado trip, so thought I would write to tell you what a pleasant surprise you gave me with the picture of yourself husband and Bone.

Yes Sue's Kodochrome slides turned out real good. She has been showing them to our friends during the winter evenings. He also got some beautiful shots of the "Garden of the Gods".

after returning to Denver

we had a hard time getting hotel accomodations. Finally got located through the Travelers aid at one of the small hotels, right in back of the Capital building, it was nice and comfortable.

We took a trip to "Mt Evans", had lovely weather.

One day we rented a car, drove to "Red Rocks Park" and "Bear Creek canyon".

Gus took about 200 pictures on the trip.

Enjoyed the trip so much that we are thinking of taking one this year to "Yellowstone Park."

If you folks come East we would be glad to have

you come and stay with us,
then Gus will show you
the pictures of the trip, also
others taken in the East.

Gus is going to send
Tom some black and white
enlargements, also colored
prints which he made.

With kindest regards
to you, and family from
Gus and I.

Sincerely
Sabrina Schmidt

June 30, 1947

Dear Mrs. Schmidt:

The pictures arrived just as Thomas was getting ready to go to Camp Tichora. Now he is busy developing the film he took at camp. Tom wants me to thank Mr. Schmidt for them. He was especially interested in the colored pictures.

Saturday night there was quite a storm at Camp Tichora. Five-foot waves tore down the pier and wrecked two war canoes which cannot be replaced.

About three weeks ago Minnie Hastings called up from the church office and asked me to rent my guest room to a veteran who was unable to find another apartment for his family. His wife and daughter are at Wild Rose with her father who is the Presbyterian minister.

A new set of tires has enabled us to take several short trips: we went to Milwaukee two weeks ago tomorrow; to Camp Tichora the last two Sunddys; and to Plymouth last Saturday.

I shall be glad to hear about your trip this year. As yet our plans are very uncertain.

Sincerely,

Mrs Gustave Schmidt
890 Oakview Ave
Maplewood, NJ

June 1, 1947

Dear Mrs. Schmidt:

In answer to your letter of April 5 (It seems impossible I have been so long in answering.) Tom will be much pleased with the enlargements and colored prints.

We appreciate your invitation to see the pictures, but there is little liklihood of our coming as we have to go west or north to avoid hay fever.

I wanted to take Tom out to see the flatirons. I guess they have spoiled them to a large extent by building seats between them.

I went through Yellowstone the latter part of June when the dwarfed wild flowers were in bloom in the alpine meadows. I think Mr. Schmidt would like Glacier better than Yellowstone, The rocks, however, are black and white and not colored like they are in Colorado. The trip to the north rim of Grand Canyon is also very lovely.

Try to stop off in Madison on your way west and we'll take you to see Devils Lake.

Sincerely,

July 29, 1947

Mrs. Roman Schmitz,
R. F. D.,
Waunakee, Wisconsin.

Dear Mrs. Schmitz:

As my plans have been changed, I am asking you to cancel my order for the two chickens which were to be delivered on Saturday, August 2, 1947.

Yours very truly,

Mrs. F. T. Thwaites

Fri. Aug 1, 2:30 Stauffer basement

THE COMPOSITION OF THE SUGAR MAPLE HEMLOCK YELLOW BIRCH ASSOCIATION IN NORTHERN WISCONSIN

By Forest Walden Stearns

Written under the supervision of J. T. Curtis, Associate Professor.

Data gathered in three "virgin" or undisturbed stands of the northern hardwood forest growing in northern Wisconsin show that although there is considerable variation between communities there is sufficient homogenicity to establish a typical grouping of species, the sugar maple-hemlock-yellow birch association, which may be considered as the normal climax forest for northern Wisconsin. This association is found on relatively fertile and well drained loamy soils and is replaced by an edaphic climax of pine species on the sandy soils.

The composition of the sugar maple-hemlock-yellow birch association, determined on the basis of dominance (taking an average of the three stands) is as follows: sugar maple (Acer saccharum) 28 per cent, hemlock (Tsuga canadensis) 23.8 per cent, yellow birch (Betula lutea) 24.9 per cent, basswood (Tilia americana) 13.8 per cent, white pine (Pinus Strobus) 4.8 per cent, American elm (Ulmus americana) 2 per cent, with the remaining 3 per cent made up of assorted minor species including ironwood (Ostrya virginiana), blue beech (Carpinus caroliniana), white ash (Fraxinus americana) and balsam fir (Abies

balsamea). Typical shrubs of the climax are Corylus cornuta, Dirca palustris, and Ribes Cynosbati, while the most common herbaceous species include Maianthemum canadense, Dryopteris spinulosa, Polygonatum pubescens Clintonia borealis, Lycopodium obscurum and Viola spp.

The composition of any stand shifts from time to time depending upon the natural vicissitudes to which the forest is subjected. The records made by the surveyors in 1857 and 1859 indicate that forest composition then was very similar to composition at the present time. Natural catastrophes are to be considered a normal and common occurrence in the life of the forest and may take the form of windfall, fire, ice storm, or insect or fungus epidemic. The ultimate result of each individual occurrence upon forest composition depends not only upon environmental conditions preceeding the event but also upon those following it. The composition at a particular spot is never stable but varies continually with the passage of time.

New and more exact methods are needed in field ecology, particularly methods which will facilitate interpretation of relationships between individual plants and between plants and their environment. Several techniques are suggested, including an adaptation of the point observation quadrat, use of chi square and presence and absence correlations, and a study of micro-

shifts in dominant species. The need for further age studies in consideration of stand history is also emphasized.

The northern hardwood forest is shown to be fairly homogeneous in composition. The sugar maple-hemlock-yellow birch climax association in the Lake States differs chiefly in a single component, beech, from the climax in the East which is a beech-hemlock or beech-hemlock-yellow birch-maple association. There is a strikingly close relationship between the eastern and western associations in their several lower strata. The northern hardwood forest is considered as a subformation of the deciduous forest complex with the southern hardwood forest as the other subformation. The comparative simplicity of the northern as compared to the southern hardwood forest appears to be related to the more recent (post glacial) development of the northern component and to the fact that climatic limitations of many species of the more complex southern component prevent their northward migration.

APPROVED FOR PUBLICATION_____

Mrs. Gustave Schmidt,
89 Oakview Avenue,
Maplewood, New Jersey

July 22, 1947

Dear Mrs. Schmidt:

We have enjoyed your postals from Glacier and Yellowstone. I am glad that you liked Glacier. When I was there in 1925, I walked over Piegan Pass.

Do you remember the name of the hotel you stayed in while in Denver last year? The trip we took last year is the only one that comes within our price range. As I do not think we would care to repeat it, I am thinking of going free-lance and staying in Denver most of the time. Tom also wants to go back to the Garden of the Gods and walk around in leisure. If we do decide to go, I want to be sure of hotel reservations.

If reports that prices in northern Wisconsin are dropping prove true, the whole family may be able to spend a vacation together.

We were at Lake Geneva on August 13 and the boys had a grand time swimming. Last Sunday we went to Rocky Arbor State Park just north of Wisconsin Dells and then to Cold Water Canyon. Now the boys feel satisfied that they have been at the Dells.

Sincerely,

April 1, 1948

Dear Mrs. Schmidt:

Have been intending to write you ever since I received your Christmas card telling about your operation. I trust that you are now feeling quite up to par. From experience I know how long it takes to get back one's strength. If one has to take X-rays as I did in 1943 recovery is very much retarded.

Does your son finish his junior or senior year at Georgia Tech this year? Tom is now a junior in West High and Bill is a freshman. They are both up in the attic with a friend taking pictures with an old camera of Fred's that has a portrait lens.

Before spring vacation began last Friday, the boys informed me that they would hardly be home at all. A group of scouts was over on Friday and planned an overnight to begin Easter Sunday. Before their plans were completed, it began to rain and Tom became less enthusiastic much to Bill's disgust, but Tom had experienced a night of rain at the spot where they were to camp. In the morning we awoke to see a spring blizzard in progress. We all had to shovel. The snow stopped about noon and the plows reached our street in the afternoon. I was

thankful the snow came on Friday night. If it had occurred on Sunday night, the boys would have been soaked the minute they left their mountain tents on Monday morning and we would Not have been able to rescue them until evening provided the side road on which they were encamped had also been plowed. The boys have had a perfectly miserable week following the grand week when school was in session. Thus far it rained and snowed on Friday; snowed on Saturday; snowed and rained on Monday; and rained Wednesday morning. Rain and perhaps snow is predicted for tomorrow night.

Due to the cold weather we have had to have our gas intake cleaned of tar three times. Only this morning we had to have the man out here because our gas furnace refused to light because the pilot was stuffed with carbon which was probably caused by low pressure when the intake pipe was clogged.

Tom has bought himself a new bicycle with his own money.

Though Tom was quite miserable at times, the benadryl made it possible for him to stay in Madison and we did not get away at all. I hope we shall be able to get to Houghton at least this summer.

Fred takes his mapping class to Devils Lake, about 45 miles north of here, for the University Spring Vacation which begins April 17.

Please do not be as tardy in answering my letter as I have been in answering yours.

Sincerely,

CONSTITUTION

Beta Chapter of Sigma Delta Epsilon

ARTICLE I. Name and object.

Section 1. The name of this organization shall be the Beta Chapter of Sigma Delta Epsilon, Graduate Women's Scientific Fraternity; its motto, Συνοικειωμεναι δια επιστημης meaning "united in friendship through science".

Section 2. The object of this organization shall be: to promote interest in science: to provide a society for the recognition of women working in science: to provide for securing combined action by them: and to provide for regular meetings for furthering their common interests.

ARTICLE II. Qualifications of members.

Section 1. Any woman who holds a degree from a recognized institution of higher learning, and who has been or is engaged in research in one of the mathematical, physical or biological sciences shall be eligible for membership.

Section 2. An active member shall be a woman who holds a degree from a recognized institution of higher learning and (1) is engaged in original investigation; or (2) is registered for an advanced degree that requires the completion of an original research problem in one of the above named fields of science and has done enough work thereon to demonstrate the possession of research ability, or (3) holds such a degree and is actively engaged in scientific work. A candidate for active membership shall, before initiation, be instructed in the aims and history of the fraternity, in its traditions of scientific objectives, and in the provisions of its national and chapter constitutions and by-laws.

a. Active members pay full dues and have all the privileges of the Fraternity. They shall be in residence and may continue in active membership as long as they maintain contact with the chapter by paying dues and fulfilling such other requirements as the chapter may prescribe.

b. An active member of another chapter may become affiliated with Beta Chapter by presenting a certificate of membership in good standing from the secretary of the former chapter.

Section 3. An associate member shall be a woman (a) who has at one time been qualified for active membership, but is no longer actively working in science, or (b) one who has been an active member and wishes to become associate.

Section 4. An honorary member shall be one whom the organization wishes to honor in recognition of special achievements in science. Honorary members shall have all the privileges of the Fraternity except those of voting and holding office. They shall not pay dues.

ARTICLE III. Officers and their election.

Section 1. The officers of the organization shall be a president, a vice-president, a secretary, a treasurer, a liaison officer, and a chairman of the program committee. These officers, constituting the executive committee of the chapter, shall be elected for a term of one year, by the majority of the votes cast by the active members of the chapter at the annual meeting, with the exception of the liaison officer who shall hold office for an indefinite period.

ARTICLE IV. Meetings.

Section 1. There shall be a general meeting at least once a month during the academic year.

Section 2. The annual meeting shall be held in April.

ARTICLE V. By-laws and amendments.

Section 1. This organization shall have power to adopt by-laws not inconsistent with this constitution.

Section 2. This constitution may be amended by a three-fourths vote of the active members present at any business meeting provided a copy of the amendment and notice of this meeting shall have been given to every active member of the organization at least one week before the meeting at which the amendment is to be voted upon.

BY-LAWS

ARTICLE I. The officers' duties.

Section 1. The duties of the president shall be those that usually pertain to this office.

Section 2. The duties of the vice-president shall be: to assist the president, to act in her place when she is absent, and be chairman of the membership committee.

Section 3. The duties of the secretary shall be to keep a record of all meetings, to supply the treasurer with a list of members, and to attend to all correspondence of the Chapter other than that pertaining to the office of the treasurer.

Section 4. The duties of the treasurer shall be to attend to all the financial affairs of the Chapter and to render an account of expenditures whenever called for.

Section 5. The liaison officer shall have long-term or permanent tenure for the purpose of providing continuity of relations between the Chapter and the National organization.

Section 6. The duties of the chairman of the program committee shall be to determine the general nature of the program and arrange for the place of meeting of the Chapter.

ARTICLE II. Nomination of officers.

Section 1. A nominating committee of three members, appointed by the president, shall present the Chapter with at least two tickets giving names of two nominees for each office. Such presentation shall be made by the nominating committee at the meeting previous to the annual meeting or shall be submitted in writing to each active member of the organization at least one week before the annual meeting.

ARTICLE III. Election of members.

Section 1. The names of women proposed for membership shall be submitted to the vice-president as chairman of the membership committee. After investigation by the membership committee the names, with recommendations, shall be presented to the organization. They shall then be voted upon by the Chapter members not less than one week later. The names of the proposed candidates shall be made known to every active member at least three days before the meeting at which they are to be voted upon.

Section 2. Election of members shall be by a closed ballot of at least three-fourths of the active members. In case a member is unable to be present her sealed ballot may be sent to the secretary.

If one or more negative votes shall be cast, the candidate in question cannot be elected at that meeting. Her name shall be referred back to the membership committee which shall make further investigation of the case and may receive in confidence any information given by those opposing the candidate's election. The candidate shall then be reported upon and voted upon at a meeting not less than one month later and at that time three negative votes shall prevent her election.

ARTICLE IV. Dues.

Section 1. The annual dues shall be $2 for graduate student members and $3 for other members.

ARTICLE V. Quorum.

Section 1. For formal business a quorum shall consist of 50 per cent of the active members of the Chapter.

Section 2. At times other than the regular college year all business pertaining to the Chapter as a whole can be transacted only by written consent of one-half of the active members of the Chapter.

ARTICLE VI. Amendments.

Section 1. The by-laws may be amended in the same manner as that prescribed for the amendment of the constitution.

ARTICLE VII. Rules of Order.

Section 1. The rules contained in Roberts' "Revised Rules of Order" shall govern the Chapter in all cases to which they are applicable and in which they are not inconsistent with the by-laws or special rules of order of the Chapter.

May 11, 1948

Mrs. Winnifried Smith,
Winghaven,
R. 1,
Two Rivers, Wisconsin

Dear Mrs. Smith:

I am planning on bringing my class in Glacial Geology to see the Forest Bed on May 22. On account of high costs we are intending to make the trip in a single day instead of the two days allowed previously. This we hope will bring us to Two Creeks in the forenoon and following the visit there we intend to eat lunch at the State Park to the south. There are 18 in the group.

May we park at your place and walk through your yard down to the beach? That is a much better route than the old one along the shore.

Hoping to see you then, I am,

Sincerely,

Winghaven,
Route #1,
Two Rivers, Wis.
October 24, 1947.

Dr. F. T. Thwaites,
41 Roby Road,
Madison 5, Wisconsin.

Dear Dr. Thwaites:

Thank you so very much for the reprint "Recent Stream Intercision", which you sent to me. It is indeed most interesting to us. I am especially interested in learning about the changes in our property during the past years. As we plant new trees, and in our own small way change the place I hope to keep a record of the change in wildlife and vegetation (native).

Enclosed is a clipping of my column written after your visit. It is not at all scientific, as you can see--no doubt you will find many errors in it, but it was the best I could do with the information I had on hand. At least, I hope, it will create a little local interest in the geological features of this area.

When we moved here a number of people told me about the "petrified forest" along the lake shore. It wasn't until last summer, when the water was very high and exposed some of the forest bed, that I learned just what the Two Creeks Forest bed was.

I will be looking forward to your visit next spring, and also any future publications you might have on these glacial deposits.

Keeping complete weather records is also one of my hobbies. If notes on the wind directions and velocities here, at Two Creeks, can ever be of any use to you let me know--the records are available.

Sincerely yours,

Winnifred Smith

Nov. 20, 1947

Mrs. Winnifred Smith,
Winghaven,
R. 1,
Two Rivers, Wisconsin

Dear Mrs. Smith:

I have been wanting to write you for some time and thank you for yours of October 24 and the clipping. It is most interestingly written and I do not note any errors in it. But first the cold which I already had when I started on the Conference got worse and it was some time before I was myself again. Then my work at the University has been very exacting and the task of looking after three growing boys at home in the evenings does not conduce to speed. This evening all but one were gone out so at long last I could get to writing this and other letters.

Just the other day I received the air photos of northern Manitowoc County which are a prerequsite to the further studies which I hope to get at in the summer. With them, even if they are now 10 years old, I can look for steep stream banks in which more of the Forest Bed may be exposed.

Thanking you again, I am,

Sincerely,

Oct. 16, 1947

Mrs. Winnifred Smith,
Winghaven,
R. 1,
Two Rivers, Wisconsin

Dear Mrs. Smith:

Just as soon as we returned from the Tri-State Field Conference I looked over my papers to see if still had any of the papers by Dr. Wilson on the Forest Bed. I could not find any extras whatever. However, I did find a copy of my wife's paper on the change in the course of the creek which I enclose. I hope you will find it interesting. The Forest Bed is discussed fairly fully in the road log which I gave you. Next summer I hope to start a study of the glacial deposits of the entire area east of Fox River and Green Bay north of the latitude of Oshkosh. When the report on this is published I will repeat the data on the Forest Bed. I hope to find other exposures as it has been reported in many wells.

I will be up with my class in Glacial Geology sometime next May and will try to arrive when there is more light. Meantime I will keep looking for extra copies of Wilson's papers.

Thanking you for your kindness,
Very truly yours,

Mrs. Kenneth Smith
Hazelhaven
Route #1
Two Rivers, Wis.

Oct. 23, 1947

Prof. H. T. U. Smith,
Department of Geology,
University of Kansas,
Lawrence, Kansas

Dear Prof. Smith:

On June 11 I note that I promised you a short discussion of the use of aerial photographs in glacial geology by Nov. 1

I forgot about this for a long time but in cleaning up things the other day decided to get at it. So here it is with illustrations taken from t he "Outline". I hope it is all right. Anyhow it is short.

I am afraid I have no list of recommended photos for class use. I not not even have now available the serial numbers of those used for illustrations. I have no used photos much on account of the bother of stereoscopes and difficulty in showing the same to all at once. I use lantern slides of some without stereo pairs. Most of those I have published have also been single pictures.

Just now I am starting on a project in northeastern wisconsin where mapping will be largely from the photos but it is just begun. Doubtless I will learn more about how to do it later.

Hoping I am not too late,

Sincerely,

R. T. Thwaites

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

May 29, 1947

Prof. F. T. Thwaites,
41 Roby Road,
Madison, Wis.

Dear Professor Thwaites:

I have been asked to aid in organizing an issue of Photogrammetric Engineering to be devoted wholly to geological uses of aerial photos. It is desired to have all fields of geology included, and I am wondering whether you would care to submit an article on the use of photos in research in glacial geology. Photographic illustrations may be used, and I hope that it can be arranged for them to be printed on coated paper. This material is planned for the December issue, and the final date for receiving manuscripts will be Nov. 1.

A brief statement on your use of photos in teaching, together with a list of photos which you recommend for classroom use for studying glacial or other features, would be welcomed also, and would be placed, together with others, in a separate part of the issue.

Belated thanks for the large-scale copy of your map of glacial geology of the upper Mississippi Valley.

I hope that you have found time to continue with your studies on quantitative geomorphology, and will be interested in seeing it when you have it written up.

Cordially yours,

H T U Smith

H. T. U. Smith

Illustrations

Stereo pairs Reduce 8 inches to about 4½ inches

Figure 1 Drumlins made by ice moving north of west. Deposits between drumlins are pitted outwash.

Figure 2 Rugged termonal (end) moraine south of flat plain of outwash.

Figure 3. Sandy outwas h with non-pitted and extremly pitted phases depending on numb r of ice masses present. Note sandy beds of some of the lakes and the general mottled appearance of the area. Narrow ridges of sand betwee n kettles are crevasse fillings.

Figure 4 Esker in plain of clay till. The ridges consists of gravel and sand. Note that it is not continuous so that gaps are a perplexing problem withouth the view from above.

June 11, 1947

Prof. H. T. U. Smith,
Department of Geology,
University of Kansas,
Lawrence, Kansas

Dear Prof. Smith:

Reply to yours of May 29 was delayed by rush of work when school let out.

I will be glad to write a very shor paper on use of aerial photographs in glacial mapping. This would be simply a rehash of the remarks given in the 1946 edition of my book. Possibly I could use some of the photos given there. However, I am way behind with well samples, have a paper to work over for the Michigan Academy or mayb e elsewhere if I could get more prompt publication, to say nothing of working up illustrations for the geomorphology course. Besides all this I have asked funds for photos in order to complete a glacial survey of northeastern Wisconsin ea t of the area described before.

Although I find aerial photos of inestimable value in research I am fradid that the bother of using stereoscopes has made me neglect them with large classes. In Glacial I always put much stress on field trips and still do. When offered the photos afterward few looked at them.

I take it manuscript should be sent you.

Best regards,

Sincerely,

USE OF AERIAL PHOTOGRAPHS IN GLACIAL GEOLOGY

F. T. Thwaites, University of Wisconsin

In mapping the deposits left by continental glaciers topographic form is a very important criterion. For this reason aerial photographs are of immense value to the field geologist. Only in vertical aerial photographs may all sides of a hill be examined at once. This ability makes the discrimination of drumlins, which are defined in terms of their streamlined form, possible in circumstances where ground observation is not only difficult but uncertain. (Fig. 1). The topography resulting from a change in direction of ice movement across an area of drumlins is most confusing on the ground but is as clear from the air as it is on the best contour map. There is no excuse with photographs for the confusing of drumlins with knobs of a terminal moraine as has often been done in the past, particularly in heavily forested terrane. Other common errors of the past include mistaking of gullied areas and highly pitted outwash for true terminal (end) moraine. Figure 2 shows a typical rough terminal moraine with associated plain of sand and gravel outwash on the right (north). View from above disclose that the details of the topography of many moraines are not entirely without system. Even in this apparently lawless confusion of knobs and hollows there are many ridges parallel to the ice front. Lakes in terminal moraine are irregular in outline with few sandy beaches and contain many bouldery islands. Outwash deposits which contained many residual ice masses (Fig. 3) have been mistaken for moraines in many ground surveys. From above the sandy soil photographs in light tints and the many rounded kettles containing lakes and marshes give the landscape a mott led appearance. The example shown displays a cultivated area which is almost free from kett les as well as a district where the ice masses lay so close together that the only outwash consists of narrow ridges often termed crevasse fillings. When it is necessary to map an esker or ridge of sand or gravel outside of an outwash deposit the value of vertial aerial

photographs is prehaps greater than in any other application to glacial geology. When an esker appears to end within a cedar swamp the photograph provides a final answer to the old conundrum of whether or not there is another section of the esker and, if so, in what direction does it lie? (fig. 4). Photographs also aid in many other branches of the subject which are not illustrated here. Among these may be mentioned discrimination of thinly drift-covered rock hills, shore lines and depoits of glacial lakes, erosion forms produced by glacial waters in many localities before all the buried ice masses had melted to leave kettles, as well as the sand dunes of both outwash plains, lake shores, and lake bottoms. Many photographs display curious soil mottling which is commonly not visible on the ground. In some cases the long-abandoned courses of glacial streams are obvious in the picture because the soil holds more moisture in old stream beds than under adjacent higher areas.

In making maps from the photographs a stereocomparator is most desibable partiularly if elevation data is desired and ground elevations have already been determined. Much information can be sketched directly from the pictures . In areas covered by a reasonably reliable public land survey t he photographic data can be adjusted to fit section lines without need for radial line ground control.

The photographs were supplied by the Wisconsin Highway Commission from Department of Agriculture surveys. All are from northeastern Wisconsin and have been previously published in the "Outline of Glacial Geology" by the present writer.

RAYMOND C. MOORE
CHESLEY J. POSEY
RUSSELL S. KNAPPEN
WALTER H. SCHOEWE
CLIFTON S. CORBETT
CARY G. CRONEIS
HAROLD W. HOOTS

UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Feb. 27, 1923.

Mr. Fred Thwaites,

Madison, Wisconsin.

Dear Fred ;

I received the outline of your course in topographic mapping and I wish to thank you very much for it. It is of considerable help to me. The course which I am offering is for two hours and like your course is for undergraduates. I should like to have three hours at least. During the first semester, I have an advanced course, Geologic Methods, for graduates. This is a five hour course. In my course this semester I have 11 students. Tester gave this course a year ago. I am surprised that you don't have more students demanding the work. I am sure that I should have liked to have had the training while at Wisconsin had such a course been given. Probably sufficient publicity is not given to the course. I feel that a course in topographic mapping is of prime importance. How about changing the name of the course ? We call it Field Geology and don't emphasize the topographic mapping part. We try to develop the use of the instruments as applied to geologic mapping rather than to topography. Perhaps the students at Wisconsin would be more interested (especially since they are hard rock geol.) if your course were presented from that view point. I should like to see that course at Wis. and I know that you can surely give them the dope.

Yes, I should like to see your outline for glacial geology . I am not teaching any glacial geology. Couldn't get by with it here where everything is "oil". I am interested in that particular field, nevertheless. I should like to be at some university where I could do work along those lines. Don't need a good man at Wisconsin, do you ?

Just heard to day that Martin got married. Regards to your mother.

W H Schoewe

41 Roby Road,
Madison 5, Wisconsin.
August 12, 1948

Sears, Roebuck and Company.
Chicago 7, Illinois.

Gentlemen:

I am returning the following:

9D2792	2 Cone V-pulleys	(Total price)	$1.90
9D1625	1 $\frac{1}{2}$" V-belt		.46
			$2.36

in exchange for:

9D1631	1 $\frac{1}{2}$" V-belt	$0.52
9D2808	1 Single-groove V-pulley - 3"	1.50
9D2880	1 Single-groove V-pulley - 1$\frac{1}{2}$"	.40
		$2.42 + 14¢ Postage

Enclosed please find $0.20.

Yours truly,

William Thwaites


SPIDER LAKE FROM VOSS BREEZY POINT COTTAGES B-1250
MANITOWISH, WISCONSIN

POST CARD

ADDRESS

We are having a grand time. We have a darling little cottage to the our meals at the lodge. Sorry to miss all the parties this week. Sue

Love

Margaret

Mrs. Fred Schwaiter

Roby Rd

Madison, Wis

Vacation

Keep

May 14, 1948

State Highway Commission,
Pierre, South Dakota.

Gentlemen:

Please send me a copy of your free booklet on the scenic attractions of South Dakota.

Yours very truly,

Mrs. F. T. Thwaites

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K. C. HEALD.
STAFF GEOLOGIST.

June 18, 1927.

Dear Mr. Thwaites:

I am sorry that I failed to see you before I left Madison. I had fully intended to get up to Science Hall Sunday afternoon, but several things intervened, and I just didn't. Now I am keeping my promise to myself to send you a note from here.

The work Mr. Heald is giving me to do is very interesting, and I am enjoying that part of things very much. Pittsburg I don't think very much of, but perhaps I shall get used to it. It is all that it is described, and more. I never saw so much dirt in all the rest of my life.

I had a letter from Margaret yesterday, telling me of your offer concerning my exam. It is very kind of you, but I think that I shall let things stand as they are. When I come back to Madison for my Ph.D. I shall take the trip with you, and the exam. I shall need a little review then, I imagine. I havn't any of my books with me, and the detail of glacial geology would need considerable review before I could keep up with the generous mark which you gave me. However, I thank you very much.

Please give my best to Koplin. I hope that the work is starting out nicely, and keeps on that way.

Sincerely,

Clyde G. Strachan

536 South Graham St.

February 7th, 1916.

Prof. T. E. Savage, J
University of Illinois,
Urbana, Ill.

Dear Sir:-

I have read with interest your recent paper in the American Journal of Science on the iron ore in eastern Wisconsin, and if you have some separates of this, I would like very much to get one. I would also appreciate it if you could send one to Mr. Arthur Davis, Lawrence College, Appleton, who is doing some work on this problem.

I have visited the DePere locality since writing the paper in Bulletin 540, and made more detailed observations. While we did not see the fossils it was largely due to the fact that a great deal of water was coming down the falls and it was hard to work in the wet and slime. I failed to get your point about the residual character of the ore on account of its containing pyrite. The mineral is probably marcasite, and from my observations mainly confined to the overlying dolomite. A large body of marcasite has been found at Iron Ridge in the new mine, but we have not yet studied it. This unstable mineral has obviously been formed under conditions when little or no oxygen was present.

I also have in my notes that we found the surface on which the ore rested at DePere to be very even, although it is true that the ore does ~~not~~ contain pebbles of the underlying shale. The reason for using the term Clinton was not so much on account of the correlation but because that name has been used heretofore and it seemed inadvisable at the time to change it. We now have ~~three or~~ four names for this formation, no one of which has been officially adopted.

Very truly yours,

FTT/D

Curator,
Geological Museum.

RAYMOND C. MOORE
CHESLEY J. POSEY
RUSSELL S. KNAPPEN
WALTER H. SCHOEWE
CLIFTON S. CORBETT
CARY G. CRONEIS
HAROLD W. HOOTS

UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Jan. 31, 1923.

Mr. F. Thwaites
Madison, Wisconsin.

My dear Fred:

I am going to give a course this semester called "Field Geology". The course includes work with the plane table, Brunton etc. essentially a field method course. Dr. Corbett tells me that you have been giving a course in topographic mapping. I should like to know what you give and how much time you devote to the various phases of the work. In other words I should be glad to secure any pointers which you might have to offer. If you have your course outlined, an outline would be of great help.

Well, how is everything at Wisconsin? I looked for you at Ann Arbor during the G. S. A. meetings. How much teaching are you doing.

Regards to all.

Cordially

Walter H Schoewe

PHONE: GIFFORD 2882
DIAL NO. 6-5885

SERVISOFT
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SOFT WATER SUPPLY COMPANY
555 West Mifflin Street
MADISON 3, WISCONSIN

May 20, 1948

F. T. Thwaites
41 Roby Road
Madison 5, Wis.

Dear Sir:

Constant increases in the cost of materials, maintenance and labor make it necessary for us to make a slight increase in ServiSoft service charges. We have postponed taking this step as long as possible, but the situation shows no signs of changing.

Effective July 1st, the monthly charge for your service will be $4.75 net.

This change for ServiSoft service is well below the nation-wide average. In fact the Madison rate has always been one of the lowest in the United States.

You are truly getting a constant supply of soft water at the lowest possible price via ServiSoft.

Very truly yours,

SOFT WATER SUPPLY CO.

Tracy W. Allen

President

P.S. For your convenience if you care to pay either six months or a year in advance, we will again allow an extra 4% discount from the net amount.

UNIVERSITY OF CALIFORNIA

THE SCRIPPS INSTITUTION OF OCEANOGRAPHY
LA JOLLA, CALIFORNIA

June 15, 1949

Professor Fredrik T. Thwaites
University of Wisconsin
Madison, Wisconsin

Dear Professor Thwaites:

I wish to thank you for sending me your reprint, "Geomorphology of the Basin of Lake Michigan," from Papers of the Michigan Academy of Science, Arts, and Letters.

Sincerely yours,

Francis P. Shepard

Francis P. Shepard

FPS:Y

213 N. 75th Street
Milwaukee 13, Wisconsin
January 6, 1949

Mr. F. T. Thwaites
Department of Geology
Science Hall
University of Wisconsin
Madison 6, Wisconsin

Dear Mr. Thwaites,

I am very sorry to have had to delay notifying you of the date, time and place for my preliminary examination, but I had to wait for a reply from one of the other committee members concerning his acceptance.

Since January 15th seemed satisfactory to all of the members of the examining committee, I think that that date will be set. Also, 10:00 a.m. seemed to be most convenient for all concerned, and the place will be Dr. Fassett's office, room 201, Biology Building.

I hope that this short notice will not be too inconvenient, but if it interferes with any of your plans, will you kindly notify Dr. Fassett, and probably another date may be scheduled. Thank you very much for your kind cooperation.

Sincerely,

Peter J. Salamun

Peter J. Salamun

P. S. I overheard that Hobbs seems to have some new idea on glaciation. I would appreciate hearing about it from you some time.

Jan. 4, 1949

Sears, Roebuck and Co.,
Chicago 7, Illinois

Gentlemen:

I am returning herewith the "medium" rubbers sent instead of size 10. These proved too small and I would like to change them for a larger size size approximately that of size 10½ Arctics.

Very truly yours,

STANDARD OIL COMPANY OF TEXAS

P. O. Box 1249

HOUSTON 1, TEXAS

LEONARD W. ORYNSKI
CONSULTING GEOLOGIST

December 10, 1948

AIR MAIL

Professor F. T. Thwaites
University of Wisconsin
Madison, Wisconsin

Dear Professor Thwaites:

Mr. George W. Starke has applied for a position in the Geological Department of our Company and has furnished you as a reference.

There is a possibility we may be able to use the services of Mr. Starke as a Geologist, doing elementary subsurface geological and stratigraphic work over portions of Texas and New Mexico.

We will appreciate it very much if you will advise us at your earliest convenience what you know of the character, education and general fitness of Mr. Starke for the assignment we have in mind.

Thanking you kindly, we are

Yours very truly,

L W Orynski

LGL:bj

In reply to yours of the 10th Mr. George W. Starke was in my class in Mapping in 1947, where he made a good record. He has been working on a Thesis in a formation which was almost totally unknown before. Although under the direction of Prof Cline, I have been keeping track of his results because it bears upon my subsurface studies. I feel that Starke has done an excellent piece of work so far.

So far as general ability, industry and personal qualities I rewmed Starke very highly

5

December 14, 1948

Mr. L. W. Orynski
Consulting Geologist
Standard Oil Company of Texas
P. O. Box 1249
Houston 1, Texas

Dear Mr. Ornyski:

In reply to yours of the 10th, Mr. George W. Starke was in my class in Mapping in 1947 where he made a good record. He has been working on a thesis, tracing zones in a formation which was almost totally unknown before. Although under the direction of Professor Cline, I have been keeping track of his results because it leans upon my subsurface studies. I feel that Starke has done an excellent piece of work so far.

So far as general ability, industry and personal qualities, I recommend Starke very highly.

Very truly yours,

F. T. Thwaites

FTT:cah

April 6, 1949

Mr. George L. Smith,
George L. Smith and Co.,
Milwaukee 2, Wisconsin

Dear Mr. Smith:

I wish to thank you for yours of the first asking me to speak at Milwaukee during the first week of June. I would be glad to do this but it happens that the date is the last week of school when final examinations are beginning. Second, most of the work on ground waters has been turned over to Dr. Frank Foley of the Ground water Division of the U. S. Geological Survey. Since they started up I have confined my efforts to geology since they have the equipment to take care of the engineering aspects for which I did not have time. I would, therefore, appreciate it if you could try to get Dr. Foley to talk instead.

Sincerely yours,

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April 1, 1949

Professor F. T. Thwaites
Geological Department
University of Wisconsin
Madison, Wisconsin

My dear Professor Thwaites:

I have just been contacted by Mr. D. J. McGowan, chairman of the Speakers Committee of the Wisconsin Power Conference which is holding its annual convention in Milwaukee under dates of June 2, 3 and 4 at the Schroeder Hotel.

Thurs. Fri Sat.

This conference is made up of the power plant engineers, plant superintendents, material supply men of the industrial plants in the State of Wisconsin, and the convention is put on under the auspices of the Associate Engineers and Supplymen who are the suppliers of various Wisconsin industries in the power plant and processing field.

Inasmuch as I am in the water supply business and as I have had contact with you in the past on different well problems throughout the state, I was asked if I knew of anyone who would be willing to present a paper or lecture to the power plant engineers of Wisconsin at this conference in a discussion of well water supply and its relationship to Wisconsin industries, also to discuss the effects of the lowering of water tables in Wisconsin on the operation of power plants, in particular.

Knowing as I have over the past twenty years that you have spent a great deal of time and effort in the study of Wisconsin water tables and that you have at your finger tips an intimate knowledge of all the rock formations and mineral characteristics that would be encountered in underground water formations in this area, I suggested that you would be a good man to present such a paper to this conference, and so I have been asked if I would contact you to see whether or not we could persuade you to talk on any one of the three days indicated here, namely, June 2, 3 and 4.

Professor F. G. Thwaites

This conference includes the men who have to use well water in ~~and~~ boilers and treat such water for boiler operation, and I believe are the group of men who probably are more intimately interested in the problem of water supply for industrial applications than any other group in the State of Wisconsin, outside of municipalities, even more so than the well drillers.

The answers we would like to have from you are as follows:

1. Would you be willing to present us such a paper of thirty minutes to one hour in length.

2. What fee would you be asking to present such a paper. You would be assured of expenses under any conditions in addition to your fee.

3. What particular day would best suit your needs if it could be arranged.

We would appreciate your consideration if you could give us an answer to the above questions at your earliest convenience.

Thanking you for your further consideration, we are

Yours very truly,

GEORGE L. SMITH & COMPANY

George L. Smith

Sales Manager

GLSmith:emh

June 15, 1949

State Industrial Commission,
State Office Building,
Madison 2, Wisconsin.

Gentlemen:

As I think working in the Wisconsin Highway Commission during the present summer will help my son, Thomas T. Thwaites, in his University work next year, I hope you will find it possible to issue a permit for him to do this.

Yours very truly,

FTT-M F. T. Thwaites

Winghaven,
Route #1,
Two Rivers, Wis.,
May 18, 1948.

Dr. F. T. Thwaites,
41 Roby Road,
Madison 5, Wisconsin.

Dear Dr. Thwaites:

I was very disappointed to learn that May 22nd is the date you plan on visiting the Forest Bed. I am taking my group of 4H youngsters on a field trip up to Ellison Bay to see my friend Jens Jensen, on that date. So sorry to miss seeing you.

You may park in our yard. Perhaps you would find it even more convenient to park over in our barn driveway and then cross the field in front of the barn and go down the little path that leads to the "stream recession" opening.

The exposed portions of the Forest Bed have been covered somewhat by the crumbling banks, this spring. I wish you could have visited us late last fall after a particularly severe south east wind. The entire bank on our property showed evidences of the Forest Bed. Perhaps I should have written and told you about it at the time--but the weather wasn't very nice for a field trip. The best place to see the exposed portions at the present time, is south of our property, on the higher banks.

I hope you have a fine day for the trip (incidentally I also wish for a nice day for our own group). Again, I'm sorry I won't be able to see you at this time.

Sincerely,

Kinsford Smith

P.S. I had hoped that sometime whan you come up this way that Joe Hickey would be able to come with you. However, now that he will have to take over all of ProfessorrLeopold's classes he probably couldn't get away, anyway.

".S.

Mrs. Winnifred Smith
Winghaven, Route #1
Two Rivers, Wis.

Dear Mrs. Smith:

We are coming up this Saturday, May 7 and there will be about 31 in the party. We would like to go down to the beach through your yard again.

Best regards,

F. T. Thwaites

April 14, 1949

Sears, Roebuck and Company,
925 South Homan Avenue,
Chicago 7, Illinois.

Gentlemen:

I am returning one dozen white socks 86p1716, size 12 at $2.19 and weighing 2 pounds, 4 ounces and am ordering in their place:

86w1770, 12 pairs, white, size 12, at $3.30, 2 pounds 4 oz.

$3.30		Check for $1.16	
2.19		Sears check .06	
1.11		Sears check .16	
.17	postage	Total	$1.28
$1.28	total		

Thanking you for your attention,

I am

Yours very truly,

Mrs. F. T. Thwaites.

December 17, 1948

Dear Mrs. Schmitt:

Was very pleased to receive your card stating that you were taking a vacation this winter. Fred and I spent a couple of days in Cuba on our wedding trip. We took an auto trip across the island to Matahana on the south coast. We were fortunate enough to stay on the boat while we were in port. After we went through the public market, we were very glad to be able to go back to the United Fruit boat for our meals. I hope Mr. Schmitt was a ble to get some color pictures of the bougainvillea on Morro Castle. Do the vendors still try to sell you beads?

My sister and my father are starting on a trip to California today. Her family will return by train and my father intends to spend about a month there.

This fall I had a sequel to the 1943 operation and eight more X-rays. So far I seem to be getting along very well.

With best wishes for the holiday season, we are

Sincerely,

The Wisconsin Society for Ornithology

ORGANIZED 1939 INCORPORATED 1942

The Passenger Pigeon
OFFICIAL PUBLICATION

1949-1950

April 17, 1950.

Dr. F. T. Thwaites,
Department of Geology,
Madison 6, Wis.

Dear Dr. Thwaites:

Thank you so very much for the Two Creeks Forest Bed article. I have been slow in telling you how much I appreciated it, but last minute details for the convention have kept this typewriter far too busy.

Our programs aren't quite as elaborate as I had planned at first, so I couldn't use the article in them. However, I plan to read at least part of it at the meeting before we go out to the Field Trip on Saturday morning, and people will know what they will be looking at.

I will send you a program the middle part of the week, when they get to me. You will find your name listed as conducting a visit to the Two Creeks Forest Bed. I changed the time for the visit to Winghaven to 10:30 to Noon, on Saturday, with the hope that you and your class will be here about the same time our members come to Winghaven to see the planting demonstration. I hope that is all right with you.

The past two warm days are encouraging. I was beginning to wonder if spring would ever come--and whether we'd have ice on the lake shore on May 6th!! Our pond still has ice on it--about three weeks later than usual. There is quite a good exposure of the Forest Bed right at the creek opening, at present--in other places the falling banks have covered it.

We'll be looking forward to seeing you the 6th of May. Our members will be having luncheon on that day right at Point Beach--reservations for this meal are being taken--$1.00 per plate. No doubt that's more than your class will want to pay for lunch, but there will be sandwiches available at the park too. Perhaps your groups would like to join us at that time.

My best regards,

Winnie Smith

May 10, 1950

Mrs. Winifred Smith
Winghaven, R#1
Two Rivers, Wis.

Dear Mrs. Smith:

I neglected in the excitement of the meeting and the hurricane last Saturday to tell you that I expect to visit the Forest Bed this coming Saturday along with a party led by Prof. Judson. We should be there some time in the morning, probably toward noon, as we are to spend the night at Appleton, and would like to go down through your yard.

Sincerely yours,

F. T. Thwaites

FTT:ac

February 9, 1950

Mrs. Winnifred Smith
Winghaven, R#1
Two Rivers, Wis.

Dear Mrs. Smith:

In reply to yours of the 6th it seems very probable that we will be making the Two Rivers trip on May 6 so that I can talk to your group. However, it is impossible to get to your place before 11 A.M. and even that involves leaving here at 5 A.M. The class is larger than last year and every one more increases the difficulty of getting started.

In regard to writing up the Forest Bed I will be glad to try my hand at it although as I recall it you had a very good account of your own. My eyes have been bad recently due to a cold, and I have had to go slow on evening work, but I hope that will be over before long. Dr. Wilson collected some specimens of wood last summer for age determination by the amount of Carbon 14 or radio-active carbon. Results were less than anticipated but are still being checked and meantime they do not want the results announced. However, they are in line with some of my earlier estimates.

Best regards,

F. T. Thwaites

FTT:ac

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Dec. 4, 1948

Prof. F. T. Thwaites,
41 Roby Road,
Madison, Wis.

Dear Professor Thwaites:

I am finally back again at the MS. on periglacial features in the Driftless Area, and expect to finish it within the month. I find that there is one point on which I do not have adequate information, and wonder whether you might be able to help me. It has to do with the relations of the Devils Lake talus to the fluvioglacial deposits at the south end of the lake. I note that in one of your writings you mention sags in the sediments due to subsidence into openings in the talus. I infer that this means that the talus antedates the latest fluviogdacial deposits, and also that there was little addition to the talus after deposition of the latter. I am wondering whether there are enough well records in the vicinity to give much additional information about these relations, or about the subsurface extent and profile of the talus, or about any pre-talus deposits.

While in the area, I recall seeing a contour map of the lake bottom at the Wisconsin Civil Engineering camp. Do you know how I could get a copy of that map?

I hope that you find time to continue your studies on quantitative geomorphology, and am looking forward with interest to seeing your results.

I would be interested also in hearing how my former colleague Laudon is making out in your department.

My ideas about periglacial phenomena have undergone considerable refinement since doing field work in the Driftless Area, and I wish now that I could go back and look for more things than I found in the time available then. But no doubt others will carry on from where I left off.

Cordially yours,

H R Smith

H.T.U.

In reply to yours of the 4th you are right about the sags in the lake sediments above the ~~talus~~ at Devils Lake. The "Alaskan grotto" where cold air comes out of the rocks all summer is one. The well at the shelter house appears to hit the talus at depth 285. This is less than 350 ft from the foot of the talus. The well at CCC camp to east is about 400 ft from the talus and hit gravels at depth 337. Material is all till and delta gravels. We recommended a test hole in the center of the valley and contract has been let. We are taking a chance on pre-lake outwash under the lake sediments. There is a contour map of Devils Lake in Wisconsin Geol. Survey Bull. 27, ~~pp~~ p. 32. ~~Although not~~ ~~stated~~ I ~~am sure~~ it was surveyed by me and it is so stated on p. viii.

Landon seems to be well liked. I have not had any contact with his students yet.

May I add that I am sure that the most, if not all, "rock streams" are not periglacial. They are modern concentrates of ~~what may be~~ residual mantle which might itself be periglacial (~~period~~)

The geomorphology project is now suspended in favor of glacial mapping in northeastern Wisconsin

December 8, 1948

Prof. H.T.U. Smith
Department of Geology
University of Kansas
Lawrence, Kansas

Dear Professor Smith:

In reply to yours of the 4, you are right about the sags in the lake sediments above the talus at Devils Lake. The "Alaskan grotto", where cold air comes out of the rocks all summer, is one. The well at the shelter house appears to hit the talus at depth 285. This is less than 350 feet from the foot of the talus. The well at CCC camp to east is about 400 feet from the talus and hits quartzite at depth 337. Material is all till and delta gravels. We recommended a test hole in the center of the valley and contract has been let. We are taking a chance on pre-lake outwash under the lake sediments. There is a contour map of Devils Lake in Wisconsin Geological Survey Bulletin, 27, p. 32. It was surveyed by me, and it is so stated on p. viii.

Laudon seems to be well liked here, but I have not yet had any contact with his students.

May I add that I am sure that most, if not all, "rock streams" are not periglacial. They are modern concentrates of a residual mantle which might itself be periglacial.

The geomorphology project is now suspended in favor of glacial mapping in northeastern Wisconsin.

Sincerely,

F. T. Thwaites

January 6, 1950

Miss Nancy Ann Smead
S. Rockefeller Hall
Mount Holyoke College
S. Hadley, Massachusetts

Dear Miss Mead:

Mr. Thwaites has asked me to drop you a note in reply to your letter of January 3.

The staff at the present time is debating a departmental requirement for the master's degree. It is probable that no change will be made. At the present time we require field training equivalent to our Course Geology 124. The remainder of your requirements are arranged between you and your major professor,-- in your case that will be Mr. Thwaites.

Mr. Thwaites will correspond with you directly on the details.

Sincerely,

R. C. Emmons
Chairman

cc Mr. Thwaites

January 6, 1950

Prof. H. T. U. Smith
Department of Geology
University of Kansas
Lawrence, Kansas

Dear Prof. Smith:

In reply to yours of December 27, I am enclosing my notes on geomorphology. You will note that some of this year's supplements no longer agree with the text even if that is only three years old.

The Kansans here seem to be arousing much more interest in geology than did the previous administration. Anyhow my class in Mapping is many times the size it used to be.

Thank you for the reprint of your recent paper.

With best regards,

Sincerely yours,

F. T. Thwaites

FTT:ac

THE UNIVERSITY OF KANSAS
DEPARTMENT OF GEOLOGY
LAWRENCE

Dec. 27, 1949

Prof. F. T. Thwaites,
41 Roby Rd.,
Madison, Wis.

Dear Professor Thwaites:

I'm teaching geomorphology again next semester, and am interested in introducing as much of the quantitative approach as possible. I understand that you now have some of your ideas out in mimeographed form, and if a copy of same is available, would greatly appreciate receiving one. I would expect, of course, to reimburse you for the cost of reproduction.

How are our Kansas boys doing at Wisconsin? I hope that all of them get to take your courses, and have suggested that to them before they left here.

With season's greetings,

H R Smith

SERVICE CONTRACT

Lessor — SOFT WATER SUPPLY CO., INC., OF MADISON

Lessee Mr F T Towaters 41 Raby Road G-1178
Name billing address Phone

41 Raby Road G-1178
installation address Phone

Size Family 6 Previous Supply Rainbow Floor Drain ✓ Shower

Home Washing ✓ Cold Soft Outlets yes

The Lessor will supply and install 1 "Servisoft" Water Softening Unit subject to the terms and conditions hereinafter stated:

1. The Lessor will service the equipment at regular intervals sufficient to insure the Lessee a minimum of 3600 gallons of soft water per month.

2. The Lessor will make all necessary repairs and replacements to the softening unit excepting repairs and replacements necessitated by damages caused by others than the Lessor's employees.

3. The Lessor will upon request by the Lessee reinstall equipment without further installation charge at a new address of the Lessee, provided such change is not made more than twice during the life of this agreement.

4. If this contract is cancelled either by the Lessor or Lessee, the Lessor will at its own expense remove its equipment and make the connection necessitated thereby.

5. The Lessee agrees to pay $12.50 for the installation which shall include a run of not more than 12 feet of pipe.

6. The Lessee agrees to pay service charges of $3.50 a month in advance. Service charges will be billed in advance on the first day of each month and will be due on or before the tenth day of each month. Charges paid by the tenth of each month will be subject to a net discount of 25 cents. On accounts thirty days in arrears, the Lessor may at his election, without demand or notice, cease to service said Equipment or may take possession of same and the Lessee agrees that for this purpose the Lessor may enter upon the premises and remove the Equipment.

7. At the request of the Lessee, service will be discontinued for periods of not less than one month and not exceeding a total of six months in any calendar year, in which case the charge during the period of non-service shall be one dollar per month.

8. The Lessee agrees that the title and right of possession shall be vested in the Lessor and that the Equipment will not, without the consent of the Lessor, be removed from the place where it was originally installed and that reasonable care will be given it.

9. The Lessee may cancel this contract at any time, but such cancellation will not relieve him from the obligation to pay all charges then due.

10. The term of this contract is one year from the date thereof and it will be automatically renewed from year to year thereafter unless written notice to the contrary is given by either party to the other 30 days prior to any expiration date.

Remarks:

Signature of Lessee

Received $ Date as payment of

SOFT WATER SUPPLY CO., INC., OF MADISON

Date Per

CONSENT OF OWNER

The undersigned states that is the owner, agent of the premises herein above described where the equipment specified above is to be installed under the terms of the above agreement, and the undersigned hereby consents to such installation and agrees that the equipment shall retain its character as personal property regardless of how said equipment may be affixed to said premises and consents and agrees that said equipment may be removed from said premises without objection from the undersigned and the undersigned hereby waives any right to insist that said equipment shall be considered as part of the real estate at the premises described on the above.

Signature of Owner or Agent F. T. Towaters

Oct. 18, 1956

Soft Water Supply Co.,
555 West Mifflin St.,
Madison 3, Wisconsin

Gentlemen:

In accordance with your undated contract I herby give you notice of its cancillation at close of time we have paid up. We will notify you when the new softener is installed so you can remove yours.

In doing this I will say that we have no complaint of your service. Our family is now so small since the boys have all left that it is often difficult to wait until the service man calls. He comes at an hour which spoils a morning by the necessary waiting.

Sincerely yours,