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## Correspondence - S - 1. 1931-1939

Thwaites, F. T. (Fredrik Turville), 1883-1961

[s.l.]: [s.n.], 1931-1939

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February 16th 1932.

Professor F. T. Thwaites,  
Madison, Wis.

My dear Thwaites:-

Instead of attending the Toronto meet., I wrote some verses, for one thing, and almost at a sitting, on the Oelwein Cut. These I sent to Dr Keyes, with permission to print if he dared. He then requests me to put the matter into prose, promising to publish it if I do. Following recovery from the operation of having my "gizzard" removed last summer, I requested the return of my verses, which Keyes calls "poetry", and sent them on to Dr Frank Leverett.

Instead of blowing up, as I suspected that he might, upon reading the verses, he requested permission to make copies of them. Lately he sends a copy each to Dr Alden, Prof. Rollin Chamberlin, Prof. MacClintock, Prof. Leighton and to Dean Kay. He has not yet heard from Alden nor Leighton. Meanwhile it occurs to me that you, and Wisconsin, are entitled to be admitted to the ranks of the benighted, - Sh-h-h-h-h, keep it dark, - and a duplicate copy of the M.S. as sent to Keyes is forwarded herewith to you.

You may show the verses to any person that you dare, so far as concerns me. Rollin expresses himself as pleased that I make the thrust at the Iowan nomenclature. Mac Clintock has seen the Oelwein Cut and can not find any Iowan till, of any kind there, and neither can Kay. They both seem to mistake the second grader's dump for Calvin's Iowan, which of course it is not and could not have been, for, the first dump there is Calvin's Iowan till, in fact.

When Calvin saw it, the old first dump was grassed over, but still "calcareous to the grass-roots," - while the new second dump was bare and not mistakable as such. If you follow up the footnote citations 1 and 2 with the verses you may understand clearly. In the latter, the figure as given by Chamberlin and Salisbury, shows the second dump in the back ground and not numbered. To the extreme right of the picture (4) there is a small remnant only of the older dump, Calvin's Iowan till. Numbers (3, 2 & 1) else show only the Iowan proper or Calvin's Kansan, in fact, and the Aftonian sand and peat with the "pre-Kansan" or Kansan proper are not seen in that picture.

Calvin's Plate I, Vol. IV, Iowa Academy of Science and description on page 58, show the full section, - at the east end of the Oelwein cut. The new dump is there seen in the back ground and is neither numbered nor described.

I am not sending copy of the verses to any but you, - and Leverett. Those receiving copy from Leverett can not blame him and probably may hesitate about jumping onto me: My purpose further is now to follow up with an article on Traditional Errors in Glaciology, to which the Oelwein Cut is incidental.

It is a mystery to me how Alden, Leighton, Kay, MacClintock and Leverett can hang together longer unless it is because of their mutual distrust of Keyes, - or fear of Antevs? But what is Science as between friends?

Very truly yours,

F. W. Sardeson

OELWEIN CUT

by Dr Frederick W. Sardeson,

Minneapolis, Minn.

Brother Winchell onetime presages,  
Glacial history has two or three pages,  
Younger, Old and Older Glacial stages.  
From Minnesota, a foot or more away,  
McGee sees much the same in Iowa,  
But does not cite Winchells pages.

Below a topmost till, in his domain,  
An Upper till and Lower till are plain,  
Or at least he mentions them by name.  
Two main tills lie in separation  
With a "forest bed" in median position,-  
All viewed too by Salisbury and Chamberlain.

First or Lower or Older, Second or Upper or Old,  
And Later, Younger or Top then unfold,  
As names such as make a fellow scold.  
Better names we must have, Norton proposes  
In M.S. as Chamberlin disposes,  
And all the world is told.

Glacial stages thus named are four,  
East Iowan and three more.  
Iowan is for Iowa and Kansan is galore;  
In Illinois is Illinoian till,  
While prediction claims others still,  
Unnamed between or at least before.

Chamberlin is the theorist then most wise,  
Leverstt has the best of legs and eyes,  
Geologic boys there are of every size,  
With Salisbury, to study till and loess,  
Until they come to the Oelwein Cut.  
There a great exposure in fulfilment lies:

By the railway cut, a dump by graders  
Makes a top till-sheet for the raiders;  
Till is till, ~~and~~ clay is clay and boulders, boulders.  
An Older till lies below old soil and peat.  
Soil too, above the Old till seen, is neat.  
Deep soil they have, but thin lies on the laterals.

That graders' dump is given noblest name.  
That then is Calvin's Iowan;  
Iowan till before then becomes the "Kansan".  
Place too is found in Illinois  
For supposititious "Iowan till". Ahoy:  
And, that is Leverstt's Iowan.

Nebraskan name soon takes pre-Kansan place  
And five Stage names are in the race,  
While authors proud are full of grace,-  
Authors proud and disciples prouder,  
Praise the "Iowan" loud and louder,-  
Except in Minnesota, where it's in disgrace.

Room there for Calvin's Iowan is least.  
Four tills and stage names are not increased.  
Four are seen south, west and east  
While no one can find five.  
Exhortation is to seek alive:  
If Iowan till fails, then make it up with zest.

Zest makes thin till, or as good as none.  
Leverett admits that the Stages are four plus one;  
And, ~~of~~ of these the one is gone;  
In fact, it never was here;  
And truly is found by him nowhere,  
So that with friend Leverett, the case is won.

But, Ah: Alas: The secret, he fails to keep;  
He tells it to the world while feeling runs deep;  
And what they did to Leverett makes us weep:  
Old Iowan, Young Iowan, Younger Iowan till,  
There must be an Iowan stage recognized still;  
If we can't find it awake, we see it in our sleep:

?) Find that "Iowan" till is the main refrain  
And we look for it everywhere again and again,  
While all that is found for it is an empty plain.  
We can't give it up and quit in disgrace,  
But at last we do and lose the race  
And get no relief from ~~the~~ dogmatic strain.

New Geology great Chief, with zest,  
Makes an Iowan stage away out west  
And which Iowan till it is may be guessed.  
Iowan of Norton? Iowan of Calvin, you bet:  
Iowan of Leverett it ~~might~~ be yet?  
Iowan tills and stages we now have until we can't rest.

Confusion arising in a medley of names  
Is now imminent as appears in main,  
So that what is written can not be plain;  
Iowan-Kansan, Kansan-Nebraskan,  
Old Iowan, Young Iowan, Younger Iowan can  
Either be different or just the same.

But, four glacial Stages surely came.  
Four tills are seen, names or no name.  
What is most needed is to tell which is same.  
Making more "Iowan" should be a crime,  
The no one prevents it an any time.  
But see: It is all at last, only a game:

Type of Calvin's Iowan till, we must say,  
Was in the Oelwein Cut, down in Iowa,  
And the Oelwein Cut has not run away.  
Pictured by Calvin at the time (1,  
Pictured by Chamberlin as the paradigm,  
The graders' dump as Iowan is there today (2.

1. Iowa Academy of Science, *es. iv*, 58, Plates I, II and III.  
(2, Chamberlin and Salisbury, *Geology iii*, p. 387, Figure 572.

That Iowan fifth Stage, we may now assert,  
Is not of Glacial tills but only plain dirt  
And such a little error becomes a great hurt.  
Iowan of Leverett is a different synonym  
And the Iowan of Norton was quite another thing.  
Thus 4 plus 0 is not 5, if you are alert:

P.S. - Science in verse? But, poetic license may be no worse than the commonly met beaurocratic license and in this case they should just balance.

F.W.S.

Jan. 15, 1932

Dr. Richard M. Snodgrasse,  
Dept. of Anthropology,  
University of Chicago,  
Chicago, Illinois

Dear Dr. Snodgrasse:

In reply to yours of the 12th I regret to say that the 1927 edition of the Outline of Glacial Geology is exhausted and I do not wish to send out any more by replacing some of the stencils. This is because I have finished the manuscript of a revised edition which is much better and is illustrated. This I hope to have photo-mimeographed but the price is uncertain. The old edition was put out by the University and sent for transportation charges only. If you can wait I would appreciate it as I do not want to use any more of the old editions for which, as mentioned above, some of the pages are all gone and the stencils also. It is barely possible that I may make up a few sets if the new one is not completed in time and if so will send you one express collect. If not, I will enter your name on the list of orders for the new work which I hope will not cost over \$2.50 postpaid.

Very truly yours,

F. F. Thwaites, Lecturer in Geology

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

DEPARTMENT OF GEOGRAPHY

APPLIED GEOGRAPHY  
CONSERVATION  
FOREIGN AND  
DOMESTIC COMMERCE

C. C. HUNTINGTON  
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GUY-HAROLD SMITH  
ALFRED J. WRIGHT  
CARL D. VARVEL  
N. C. BURHANS  
J. H. GARLAND  
A. F. CAMERON

December 12, 1931

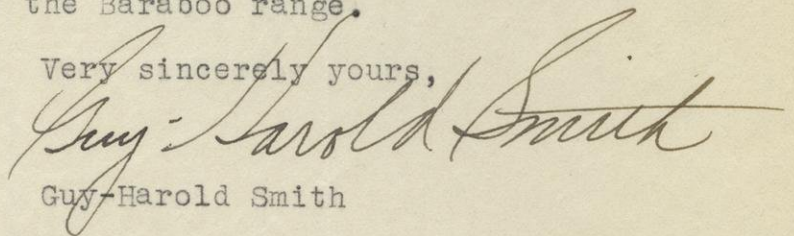
Professor Fred T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Dear Fred:

I want to thank you for your good letter of December 2. I have passed on to Professor Transeau, the news that he is soon to receive a copy of Mr. Wilson's study of the Forest Bed.

Also, I want to thank you for the brief but interesting paper by Amy. I shall be glad to see a copy of your paper in which you announce the Marine theory for the benches and other erosional surfaces of the Baraboo range.

Very sincerely yours,



Guy-Harold Smith

GHS:K

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

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J. H. GARLAND  
A. F. CAMERON

November 27, 1931

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

Dear Fred:

Recently in a conversation with Professor Transeau of our Botany Department I mentioned your glacial studies and incidentally the buried forest near Two Rivers. He asked me if you or any one else had ever published a paper on these buried trees. I would be very glad to have the reference if anything has been published. As an alternative you might write me a memorandum, setting down briefly the facts and I will pass it on to Transeau. Has this wood ever been identified, and has there been any attempt to study the annual rings?

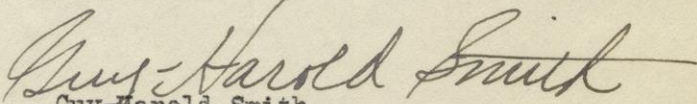
We have been enjoying the unusual autumn, but on Wednesday it changed very quickly to winter weather. Thanksgiving was a dull cold day with snow in the evening.

Have you met Mr. Karnes yet? I hope he takes some of your work while he is in the Department of Geography.

I had a letter from MacClintock a few weeks ago stating that I had not mentioned the subsummit benches in the Baraboo Range. In reply I told him that an alternative hypothesis (as opposed to the penplain idea) will be presented soon. Is that the truth?

Give our best wish to Amy. By this time your boy must be quite active. Mr. and Mrs. Wright of our department have a boy, Thomas, born on the same day, and last Sunday they brought him to call on us.

Sincerely,

  
Guy-Harold Smith

G-HS:KU

Dec. 2, 1931

Dr. Guy-Harold Smith,  
Dept. of Geography,  
Ohio State University,  
Columbus, Ohio

Dear Guy-Harold:

In reply to yours of Nov. 27 Mr. L. R. Wilson of the Botany Department wrote his masters thesis on the Forest Bed. This will soon be printed in the Transactions of the Wisconsin Academy. I am writing him a note to send a copy to Prof. Transeau. Wilson's study is very thorough and he is continuing similar work for his doctors thesis. Unfortunately the last two dry years lowered Lake Michigan so greatly that unless we have a lot of snow this winter conditions for finding exposures will be very poor again. Last spring they were fair but that was because there had not been enough rain to spoil the cliffs from the high level storms.

I do not think that I have met Mr. Karnes, at least he is not in the physiography class which is now only 12 owing to the slump in the Geography Department.

With regard to Baraboo physiography my class in advanced physiography last year made a start on the study of the upland surface of the Range. In the spring while on the mapping trip I noted lower benches. Since then J. M. Wanenmacher has been working in the district for his doctors thesis. He has run levels all over the ranges but since his work was mainly on the Cambrian he did not touch the 1470 foot plain anywhere. He also finds lower benches particularly at 1100 feet. These lower ones are clearly due to marine work, I think. Both of us are strongly in favor of marine planation for the summit peneplain also. We have now found three localities of high level conglomerate just off the edges of this plain as it should be. Unfortunately, the steep initial dip of the formations adjacent to the ranges makes correlation with the surrounding region difficult. I am announcing the marine theory in a paper now in press but have not attempted to discuss it in detail. I do not know just when that will be done. Wanenmacher may if he can find space in his publication.

I am now revising the Outline of Glacial Geology and the new edition will be illustrated. Date of publication is as yet uncertain.

Enclosed is a paper by Amy which may interest you. Both she and Tomay are well. Mother is not at all well and has gone up to Rochester to have an examination not having become used to Madison being now a more important medical center. We hope that everything will turn out all right.

With best regards from both of us to Mrs. Smith and you,

Sincerely,



R. J. ST. GERMAIN

804 WRIGHT BLDG.

TULSA, OKLAHOMA

November 5, 1931.

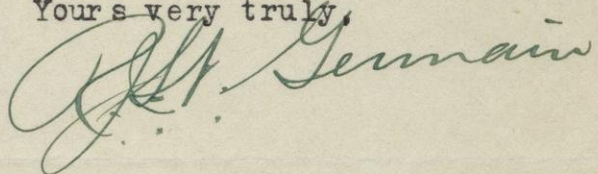
F. W. Thwaites,  
Department of Geology,  
University of Wisconsin,  
Madison, Wisconsin.

Dear Sir:

Replying to your letter of October 20th, relative to oil companies having surplus surveying instruments for sale, at the present time, I know of only one company that has a surplus on hand and is willing to dispose of them. This is the Indian Territory Illuminating Oil Company, at Bartlesville, Oklahoma, attention Robert Riggs, Chief Geologist.

If I learn of any other Company that wishes to dispose of some of its instruments, I shall be only too glad to let you know.

Yours very truly,

A handwritten signature in cursive script, reading "R. J. St. Germain". The signature is written in dark ink and is positioned below the typed name "Yours very truly,".

RJS-LL

Nov. 9, 1931

Dr. Francis P. Shepard,  
Dept. of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Dr. Shepard:

In reply to yours of Oct. 29 I had the office send you express collect five copies of the 1927 edition of the Outline of Glacial Geology. The new illustrated edition will not be finished before spring.

I am sorry to say that I will not be able to go to Tulsa. I was on the Fifth Annual Field Conference of the Kansas Geological Society this summer and so visited that part of the country quite thoroughly and under better weather conditions than prevail in most winters. I'm afraid that one trip to the same region will have to be enough for the same year.

I wish we had time to argue glacial erosion. The matter is tied up with so many other things that letters do us suffice to make ones position clear. My attitude has always been one of caution, possibly because Martin was so outspoken an advocate without definite proof. I stress the lack of motive power in the form of gravitational stress in the "pancake" shaped continental ice sheets. I can visualize them cozing out during growth with the margins moving actively and altering country where conditions were favorable to removal of broken rock, spurs, crags, towers, small hills, etc. But I simply cannot see long rivers of ice flowing even during wastage such as we have in the mountains. I feel that too long have we thought of continental glaciers as simply overgrown mountain glaciers. Of course, off Scandinavia and Labrador the gradient was present to give rise to conditions more like those of valley glaciers. But on the plains of the Great Lakes country I cannot see where the motive power came from. However, I fully recognize that the origin of the rock basins of the Great Lakes is not a problem easily solved. We have similar although smaller rock basins in northeastern Wisconsin one of them with bed rock less than 200 feet above the sea. These do not lie in regions favorable to glacial scour. I think of them as parts of valleys which have been warped by earth movements. Most people forget that the Great Lakes basins are several hundred times as wide as they are deep. I wish we had a chance to argue these points. I was in Urbana a year ago last summer and the summer before that was stalled there 27 days with little to do!

Very truly yours,

Lecturer in Geology

UNIVERSITY OF ILLINOIS  
DEPARTMENT OF GEOLOGY  
URBANA, ILLINOIS

October 29, 1931.

Dr. F. T. Thwaites,  
Department of Geology,  
University of Wisconsin,  
Madison, Wisconsin.

Dear Doctor Thwaites:

I wish to thank you for your letter of October 28. I am glad to hear that you are getting out a new edition of your Outline. I shall be very interested to see what you have to say about glacial erosion in that Outline.

I must say that I am inclined to believe that the Great Lakes basins are a product of glacial erosion. They seem to be so much like the submarine glacial troughs that I discussed in that last article, and the features of that variety are so entirely confined to glacial regions, that it is difficult for me to understand how they could have been produced in any other way. However, I am very possibly wrong.

We would be very glad indeed to have the five copies of the old Outline which you have kindly volunteered to send. If you will mail these collect to me, I shall arrange to have the charges paid.

I hope that you will go to Tulsa this winter. I should be very glad to have a talk with you.

Very truly yours,

*Francis P. Shepard*  
Francis P. Shepard.

FPS:H

Oct. 29, 1931

Dean Sallery,  
South Hall,  
University of Wisconsin

Dear Dean Sallery:

Mr. F. J. Schampf has asked me to write you in regard to his work with me.

Last Spring Mr. Schampf approached me to see about a thesis. He suggested that he do some plane table geological mapping. Inasmuch as Mr. Wannmacher was then contemplating a detailed survey of the Baraboo region for his doctors thesis I suggested cooperation. Mr. Schampf was to do the topography and areal geology of several square miles and his results were to be useful to Mr. Wannmacher. Mr. Wannmacher was to have the say as to location of the area and to supervise the work if done after school closed as he would be a Devils Lake or vicinity all summer. This arrangement was satisfactory to those concerned and appointment was made to go out to the field and look it over to locate the area to be mapped in detail. Mr. Schampf never appeared to go and stayed absent until August 13.

On August 13 he happened to find me in my office although it was then my vacation. He made various excuses for not appearing before. As I was going out of the city until school opened I got in touch with Wannmacher and turned over care of the matter to him. He furnished some of the instruments which he had been using himself and others were borrowed from the University collection in my charge. Arrangements to work during vacation such as this are often necessary because weather and other engagements can only make field work on week ends during the fall a very unsatisfactory arrangement. Mr. Schampf then departed for the field.

When school opened he appeared with only a little work done although he states that he put in 14 days in the field on only 3 square miles. Experienced topographers would cover such an area in about 16 days. He had no contours drawn but had done some of the geology with help of Wannmacher. In the meantime I had checked some of the work he had done for me at Devils Lake in 1930. At the time I was unable to get far from camp because I had just had a serious operation and was forbidden to walk on slippery stones for fear of falls. I had discovered that what had looked like careful work was really miserably poor. In fact he had been lost much of the time in the field. I was therefore now skeptical of his ability to do any work which would aid in the Baraboo project. He promised more work immediately but soon it became apparent that he was not in school. Inquiry then developed the fact that he had agreed to write a thesis with Prof. Twenhofel in second semester, 1930-31 and had failed to appear to do any work whatever. It also came out that he had been dropped from school for causes not known to me. I then, through Wannmacher, got in touch with Schampf and made him return the instruments, some of which we needed for other use. He claims that work was discontinued on account of illness but that does not account for the long periods in which we heard nothing from him. I doubt that weather conditions would allow the completion of the proposed work this fall. I refused to lend any more instruments unless he was registered in school and had a proper class card.

Very truly yours,

Lecturer in Geology

Oct. 20, 1931

Mr. R. J. St. Germain,  
304 Wright Bldg.,  
Tulsa, Oklahoma

Dear Sir:

I am writing you at the suggestion of Dr. G. K. Loith to learn if you can put me in touch with any of the oil companies which desires to dispose of some of their surplus surveying instruments. The Department of Geology is anxious to learn of any such instruments which are in good condition as we desire to replace some of our obsolete instruments. Any information you can furnish will be much appreciated.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

Oct. 28, 1931

Dr. Francis P. Shepard,  
Dept. of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Dr. Shepard:

In reply to yours of the 21st, delayed by reason of a series of field trips, I wish to thank you for the reprint of your recent paper on Glacial troughs.

With regard to the outline of glacial geology, these were mimeographed for use of students and no charge was made for them. The edition is now almost exhausted. I have destroyed the stencils and am now rewriting the entire outline with illustrations. I have not yet decided whether I will mimeograph it, published it by the Edwards Brothers process, or have it printed. Whatever way it is done I intend to keep down the price to less than \$2.00

Now, this cannot possibly be done until the end of the school year. If you want copies of the old outline I can send you not over five express collect for they have to go first class if mailed as none of these are bound. If you want these please write me while they last.

With regard to glacial erosion I feel that most geologists have erred in thinking of continental glaciers as simply super mountain glaciers. I think that save in exceptionally favorable spots continental glaciers did not have the gradient to allow of extensive and long-continued erosion in the same spot. Another point on which the new outline will elaborate is that there is a profound difference between the efficiency of grinding and of plucking. The latter is largely facilitated by lines of jointing and faulting. This undoubtedly explains Gregory's view that fiords are due directly to faulting. I admit the faults but only as prerequisites to glacial excavation by high gradient constantly flowing mountain glaciers or tongues of an ice cap in high country. I simply cannot see the same conditions in the Great Lakes Basins although I fully recognize that most of the lakes lie in rock basins. Space forbids further explanation of these ideas most of which were not mine originally although the putting them together is original, I think. When the new outline is ready they will be fully explained.

Please let me know soon about the old copies of the Outline.

Very truly yours,

Lecturer in Geology

UNIVERSITY OF ILLINOIS  
DEPARTMENT OF GEOLOGY  
URBANA, ILLINOIS

October 21, 1931.

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

Dear Doctor Thwaites:

I have been using the Outline of Glacial Geology which you sent me in connection with my graduate course in Dynamic Geology. It has proved to be of great help. I should like very much to get a couple of copies for our library, also some of our students are interested in purchasing copies. Will you kindly tell me whether these outlines are for sale, and if so, what the cost is, and where they may be obtained.

You must have spent a tremendous amount of time working up this outline. I hope you will have it published sometime. It seems to me that it would be of great value to many people. I should enjoy discussing with you the relative merits of glacial erosion. I judge that we are not quite in agreement in that respect.

Sincerely yours,

*Francis P. Shepard*  
Francis P. Shepard

FPS:H

Oct. 8, 1931

Dr. Guy-Harold Smith,  
Dept. of Geography,  
Ohio State University,  
Columbus, Ohio

Dear Guy-Harold:

I wish to thank you for the separate of your recent paper on the Baraboo Range. But why did you have to publish it in the Pan-American Geologist? As you undoubtedly know by now Keyes does not hesitate to change papers sent to him for publication in any way he desires. Furthermore, he devotes a considerable part of his publication to venting private grudges against others in the profession. He has devoted two articles, one of 14 pages, to proving (?) that I am a crook hired by the University of Chicago to defend them by misrepresentations of the facts! This does not mention a lot of other similar papers.

With best wishes from both of us,

Sincerely,



Oct. 8, 1931

Dr. Paris B. Stockdale,  
Dept. of Geology,  
Ohio State University,  
Columbus, Ohio

Dear Dr. Stockdale:

I wish to thank you for your report on the Borden Rocks of  
Southern Indiana which arrived a few days ago.

Very truly yours,

Lecturer in Geology

414 Harvard St., S.E.,  
Minneapolis, Minn.  
Dec. 8, 1931.

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

My dear Thwaites:-

Having just completed reading your very interesting paper on "Buried Pre-Cambrian of Wisconsin" I am struck with the pertinence of exchanging a few ideas and facts before the subject gets cold. I have already given up trying, so far as I had any such expectation at all, to reform the horse-jockeying habits of some of our contemporaries and their disciples, but I have not yet given you up as gone astray or lost: See?

Dr Weidman one time showed several of us geologists the base of the Cambrian (Mt Simon) at Chippewa Falls, where the pre-Cambrian with its rotted surface is seen, - "a pre-Cambrian soil!": In the rotted top of the Crystallines were reworked some quartz pebbles, an inch or two in diameter. Quartz pebbles at the surface of the old soil and adjacent to the Mount Simon had been wind blasted, so much so that they were flat topped, even with the soil surface. Two climatic conditions appeared to me shown there, a period of oxidation and one of deflation, and all pre-Simon at least. (I brought samples with me.)

The Pine Bluff hill at Argyle, Wis., is red St. Peter sandstone as is also the Red Rock below Darlington. The latter was mistaken for pre-Cambrian by Chamberlin, as he onetime told me. My explanation now for the Argyle occurrence would be that a conedome and oil pool developed there formerly. "Oil" frequently generates red sandstones and cherty dolomites. You do well to be cautious with red sandstones in S. Wisconsin and Illinois as seems to me too.

At Hudson, Wis., I think you missed the clue. I found fossils and diabase pebbles (Keweenawan?) together in the Dresbach strata above the railway track there. From them I inferred that an "island" of the Keweenawan diabase lies in the Dresbach sandstone at no great distance, - perhaps less than a mile, - from there. On enquiry, I was told, furtively, that the City and the well drillers did not want it known that they hit diabase at less than 100 feet below Lake level in the Hudson city's wells, by the Lake Saint Croix:

I remembered that Prof. Hall always claimed that the well (for gas) at Stillwater, Minn., went through diabase, interbedded with the Red Clastics and that he quoted C.K. Leith as confirming the same, - "but don't tell Van Hise" about it:

Accordingly your Figure 3 needs revision? Anyway your "fault" there is a dud: Hudson is an "island" of the "bed rock" under Cambrian and the formations have obviously sagged around it making your "horst"

What was new about the fossils shells that Stauffer reports from the well at Wauconia? I asked him what they are and he told me that the shells are so badly smashed up that identification is impracticable. Ergo: He does not know that they are Mid-Cambrian, nor even that they are Cambrian. He does not even know for certain that they came from the well originally but may have been dropped in for a joke: The red sandstone there is on a west bluff of the pre-Glacial Mississippi, that ran from Delano, under Minnetonka lake to Hastings, direct. Red sandstone in an old cliff is not necessarily Red Clastic series nor Cambrian.

I felt very sorry and it seemed like losing the game when I heard that the Wisconsin Geological Survey was "abolished" by the Legislature. I could not quite understand it; but now I do: It is your "faults" as you present them to the ~~USA~~ G.S.A. in this paper that did it. Camouflaging Chicago Geologists "soup" is a crime as Keyes tried to tell you once before? And, associating yourself with Iowa geologists in an Iowan way is quite unforgivable, - to a Legislature?

An Iowa geologist comes to Minnesota and then makes the dum decision that the exposure at Shakopee, Minn., (the type locality) is not the Shakopee formation. His pronouncements on "faults" is equally dumb, along the Mississippi and St. Croix. There may be faults in Wisconsin and in the Cambrian formations but I doubt that they are as you say. Don't try to kid me: Where is your evidence that "The existence of large faults in the vicinity of ~~the~~ Lower Saint Croix in Northwestern Wisconsin, although denied by Sardeson, is now definitely proved"?

Limiting the word "fault" geologically to displacements along fractures, such do not occur in the Paleozoics of the Saint Croix Valley. Not every displacement of strata is a fault. Of course, sag around buried "islands" of the pre-Cambrian may produce small stratal displacements but such are usually along seams and joints and hence not properly called faults. Slumps and slides may simulate faults but are not such, even when on large scale: Sag of strata over reefs of the Onecta and Shakopee dolomites does sometimes cause faulting of strata, as at South Saint Paul, but those are insignificant in size and do not involve a whole formation.

I have quit criticising as now useless or worse since the day of the judgment has arrived, as indicated by the abolishing of so many State Surveys in one season. Worse is yet to come? There may be many causes for such action but not the least of them is the public opinion that "No one trusts a geologist".

My 14 years as "expert" examiner for the Securities Commission of ~~the~~ the "blue sky law" impressed me that dishonesty of my fellows, such as Ulrich, Alden, T.C. Chamberlin, is to beque us bitter fruit, as geologists. Commissioners in 35 states sit to hear applications for "Blue sky" licenses, - that is something new, - and they get first hand impression of the commercial dishonesty and unscientific spirit of geologists, which to say the least is frequently of the vilest type, commercially. Commissioners intercommunicate about that same freely:

Sitting in the capitols, such men may have subtle and yet very great influence on legislation, - in at least 35 states. Their impressions as as revealed to me here and elsewhere are not at all complementary of geologists. Professors are particularly suspected of being light in an honest scientific intent; Their graduates nearly all "fall" for the first temptation and few of them rise again?

Some years back, I studiedly tried to give warning by ultra critical publication. I accomplished nothing seemingly but to invite some quibbling provocation to controversy, - even you seem to descend to it. So now take your medicine: It is too late for anybody to save the situation and I no longer care. "NOBODY TRUSTS A GEOLOGIST";

And how does Wisconsin like it?

Very truly yours,

*F. W. Sardeson.*

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

COLLEGE OF COMMERCE AND  
ADMINISTRATION

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C. W. REEDER, *Junior Dean*  
FELIX E. HELD, *Secretary*  
CLAIRE HARMEYER, *Assistant to Dean*

October 13, 1931

Professor Fred T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Dear Fred:

Of course I am very disappointed that Keyes so changed my paper that it appears as a very bad piece of writing. The legends are terrible. I haven't written a letter of protest, for I fear that I could not control myself if I started writing, and it wouldn't help any.

This is how the paper came to be published at all: Last May I saw Lawrence Martin in Williamsburg, Va. and we came to discuss his Bull. 36 then being revised. I told him about my drawings of the Baraboo Range. He asked to see them and when I sent them down to Washington he decided that he would like to use the last three in the revised edition of Bull. 36. However, he suggested that I try to get them published first under my own name and then he would try to borrow the cuts. I next approached Bretz about having the drawings and a brief text published in the Journal of Geography. He replied that he did not regard them as suitable for the Journal and besides they could not be published in much less than a year from that date- June 1. He suggested that I send the paper to Keyes and request that it be published early.

First I sent Keyes copies of the maps and told him my story. He replied that he would accept the material and asked for the manuscript within a month. It was about the middle of July when I got the maps and text off to him. As you know it was published in September. I did not see proof, and was surprised when I returned to my office and found a package of 100 reprints.

Now that it is published I do not know that Martin will be able to use the cuts. He wrote me early in the summer that Bean was so short of funds that he doubted if the slightest expansion would be possible. I haven't heard from him lately.

FTT--2.

10/13/31

We were very sorry to have missed you on our recent visit to Madison, but of course we do not count our visit a loss for we got to see Any and the boy.

Sincerely,

*Guy Harold Smith*

Guy-Harold Smith

GHS:K

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CABLE ADDRESS:  
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BUFFALO, N. Y., U. S. A.

October 13, 1931

Prof. F. T. Thwaites,  
University of Wisconsin,  
Department of Geology,  
Madison, Wisconsin,

Dear Prof. Thwaites:

Thank you very kindly for sending us  
the four pictures of drumlins in eastern Wisconsin. We are  
enclosing a check for forty cents on payment of these pictures.

Again thanking you, we are

Yours very truly,

SPENCER LENS COMPANY

A handwritten signature in cursive script, appearing to read "G. F. Poole".

GKP  
Enc

Oct. 8, 1931

Spencer Lens Co.,  
Buffal, New York

Attention Mr. G. K. Poole

Dear Sir:

In reply to yours of the first I am enclosing prints of four pictures of drumlins in eastern Wisconsin, three from the Wisconsin Geological Survey collection and one from my personal collection. All of them show drumlins in the Waupaca region somewhat to the north of the better known district described by Alden in U. S. Geological Survey Bulletin 273 and Professional Paper 106. The topography is, however, much more striking and the quality of the photographs much better than any we have in the other part of the district.

The charge for these prints is 40 cents, payable to me personally, not to the University.

Very truly yours,

F. T. Dixwites, Lecturer in Geology

MANUFACTURERS  
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# Spencer Lens Company

CABLE ADDRESS:  
SPENLENS, BUFFALO, N. Y.  
WESTERN UNION CODE



BUFFALO, N.Y., U.S.A.

October 1, 1931

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

Dear Prof. Thwaites:

Thank you for your letter of September 29th. We appreciate it very much.

Inasmuch as you say you can secure some very good smaller photographs for us at ten cents per print postpaid, we would ask that you send us, say three or four. We will remit immediately upon receipt of the pictures.

Again thanking you for your courtesy,  
we are

Yours very truly,

SPENCER LENS COMPANY

*G. F. Poole*

GKP

<del>3641</del> sec of drum 106	- 3875 excellent
3642 long paper pair	- 3906 long paper good
<del>3681</del> pair	- 3921 good or
- 3682 general good <i>omit</i>	<u>997 per.</u>



Science Hall

March 25, 1930

Mr. Atwood Smith, Supt.,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I telephoned Mr. Harrington yesterday and he said that we can have the Hopkins house again for the geology field trip next month. I plan on coming up for a week beginning April 8 but of course weather may force a change. I would like to know what condition the house is in with regard to beds and chairs, stove, etc and when it will be best to send up the cook to look things over. My cook will probably be Mr. Gallatin who was one of the students last spring. I would also like to know about the electric light. Judging from last year we used less than a dollar's worth and then they charged \$3 to read the meter. Couldn't we pay the State direct for the current and save this charge? The party will be larger this year than last, 15 from present indications. We can bring some cots but would prefer beds if we can get them. I understand that the house has been repaired and repainted. I will greatly appreciate information about conditions as owing to an operation in January it is still hard for me to travel and I do not want to come up until I have to.

Very truly yours,

F. T. Thwaites

UNIVERSITY OF ILLINOIS  
DEPARTMENT OF GEOLOGY  
URBANA, ILLINOIS

November 13, 1931

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

Dear Dr. Thwaites:

Please accept my thanks for your kindness in sending the five copies of the Outline of Glacial Geology. I hope the students will also acknowledge their great indebtedness, as they were very pleased indeed to get the copies.

As you say, it does seem difficult to understand how glaciers could erode rock basins in relatively flat regions. Do you see any other way to explain the glacial troughs of the continental shelves, which I described recently? I wish that I could have a chance to show you some of my continental shelf chart collection. The contours off glaciated areas are in such tremendous contrast to the contours off unglaciated areas that I simply can't see any way out of glacial erosion, or, at least, glacial action as a cause for this contrast. It looks to me as though great thicknesses of clay moraines south of the Great Lakes speak for tremendous removal of material from some place, and especially from the Great Lakes, especially as they were supposed to maintain shale deposits. I shall be interested to hear what you think of my paper about the St. Lawrence trough. It will be published very shortly in the Bulletin of the Geological Society of America. I have not closed my mind on the subject by any means, as I can see the great difficulties in the glacial erosion explanation.

Sincerely yours,

*Francis P. Shepard*

Francis P. Shepard.

FPS:FH

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MADISON,

Devils Lake Neb. 27<sup>th</sup> 30

F. J. Thwaites

Madison Wis.

Dear Sir:-

The cottage has not been occupied by any one since you had it last Spring and the same outfit is there as when you left. In regard to the lights I could not make a charge for them and I think the company would charge me the same for reading meter as they would you.

Hoping you have a speedy recovery from your operation

Yours truly

Atwood Smith

Sept. 29, 1931

Spencer Lens Co.,  
Buffalo, New York

Attention Mr. P. L. Pease

Dear Sir:

Your letter of Aug. 28 to the Department of Agriculture was given to me for reply. Neither the University nor the State Geological Survey has any photographs of drumlins of the size you mention. There are plenty of smaller ones, some of them very good photographs, however.

I can get you a picture of the size required taken by a commercial photographer for \$4.00. Smaller photographs will cost you only the printing which is 10 cents postpaid.

Dr. W. C. Alden of the U. S. Geological Survey, Washington, D. C. has some good drumlin photographs but I think they are all 4 X 5. You could secure a print of one of these by writing him.

Very truly yours,

Lecturer in Geology

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WESTERN UNION CODE

# Spencer Lens Company



Buffalo, N. Y., U. S. A.

August 28, 1931.

State Department of Agriculture,  
Madison, Wisconsin.

Dear Sirs:

We are in need of a picture, showing the drumlins in Southeast Wisconsin, for use in a series of educational pictures to be used in the schools of the country. This should be approximately 8" x 10" in size and suitable for photographic reproduction.

We would appreciate your sending us what you have and, if suitable, will be very glad to remit for the same.

Very truly yours,

SPENCER LENS COMPANY

*P. L. Pease*

P. L. Pease

/DP

September

8,

1931

Spencer Lens Company,  
Mr. P. L. Pease,  
Buffalo, New York

Dear Sir:

We are not in position to fill your request of August 28th. We are turning your letter over to the Department of Geology of the University of Wisconsin, and it is very likely they can fill your request.

Sincerely yours,

DEPARTMENT OF AGRICULTURE & MARKETS,

\_\_\_\_\_  
Secretary

OJT-M

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

DEPARTMENT OF GEOGRAPHY

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P. C. MORRISON

251 Sunset Avenue  
Englewood, New Jersey  
July 8, 1931

Dear Fred:

I have just seen your review of Fenneman's Physiography of Western United States and I want to express my appreciation of the compliment you paid to me by your favorable comments. I spent an important part of a year preparing the maps, but I have noticed that some reviewers failed to note how such maps facilitate the reading.

This summer I am spending two months or more at the Locks working with him on his physiography, and just at present he is trying to get a grant from Columbia so I can have a salary while I prepare the drawings for his guidebook of the airway between New York and San Francisco.

If all goes well we hope to get west to Wisconsin in September.

Give our best regards to Amy.

Sincerely,  
Guy Harold

Concord State Normal School

ATHENS, WEST VIRGINIA

July 2, 1931

Prof. F. J. Shwartz  
Dept of Geology,  
University of Wisconsin,  
Madison, Wisconsin.  
Dear Mr. Shwartz -

I am spending a very enjoyable summer down here just on the edge of the Plateau. Our elevation is 2600 feet so the temperatures are not so severe as in some places. I have been scouting around quite a bit since I've been here. One week end we drove thru the McDowell County Coal Fields and found them immensely interesting. We also got over the first ridge and into Virginia. Last week end we drove over into Virginia and passed thru the gap cut by New River in the East River Mountain, the first fold of the Folded Appalachian. I took a picture but have not had it developed yet.

In speaking of terraces or benches there are plenty of them around here. I've seen one valley with four or five distinct terraces. I took a picture of it but it proved to be over exposed and not good. These benches are directly connected with the bed rock axis very evident in the road cuts. There are alternating beds of sandstone and shale especially here on the plateau. I wish you were here to scout around with me. With best wishes to both you and Mrs. Shwartz, I am

Sincerely yours  
Ward Strain.



THE UNIVERSITY OF WISCONSIN  
MADISON

COLLEGE OF LETTERS AND SCIENCE  
OFFICE OF THE DEAN

June 25, 1931

Mr. F. T. Thwaites  
Geology Department  
Science Hall

My dear Mr. Thwaites:

I have your letter regarding Gaylord Owen's course Geology 130. Will you please get an incomplete card and fill it out, giving him the grade you think he deserves for the course, and send it to this office.

Yours very truly,

G. C. Sellery  
Dean

Dean Sellery,  
South Hall

Dear Dean Sellery:

Mr. Gaylord Owen has handed in some work to me to make up an incomplete in what was then Geography 130, Physiography of the United States, second semester 1928-29 (now Geology 130). I gave him a note to you some time ago asking the right to make this work up as this was the first second semester he was in school since incurring the incomplete.

I wrote Dr. Lobeck in New York and received the following reply:

Replying to your letter of June 8, I have just looked up my class book for 1928-29 for the course on the Physiography of the United States and do not find Mr. Gaylor Woen listed as a member of that class. It seems to me that it is rather late now to be making up an incomplete acquired at that time.

Knowing Owen as I do I expect that he entered late and never discovered that he had no class card. By telephoning the Registrar I found that he was registered for the course. Possibly Dr. Lobeck thought he was an auditor for (I understand) the rule requiring all students including auditors to have cards has not always been enforced.

Now I cannot turn in an incomplete for 5 credits on the showing given above. The laboratory work finished is very good but that does not indicate anything about the rest of the course.

Possibly I could get some others who took the course that year to attest to Owen's presence. Please advise me what to do.

Very truly yours,

Lecturer in Geology

THE UNIVERSITY OF KANSAS  
DEPARTMENT OF GEOLOGY  
LAWRENCE

March 13, 1931.

Mr. Fred Shwartz  
Madison, Wis.

My dear Fred: -

Thanks very much for the notes on photography that you sent to me sometime ago. They are very good.

Well, what do you think about Kay's and also Leighton's new classification of the Pleistocene. Kay's classification is not published as yet, but you heard his paper at Toronto didn't you? If not,

here it is:

<u>Period</u>	<u>Epoch</u>	<u>Age</u>
	Edoran	{ Wis. Peorian Ia.
Pleistocene or Glacial	Centralian	{ Sangamon Ill
	Ottumwan	{ Yarmouth Kansan
	Grandian	{ Aftonian Nebraskan

Leighton sort of pulled one over on Kay by getting his paper published first.

THE UNIVERSITY OF KANSAS  
DEPARTMENT OF GEOLOGY  
LAWRENCE

2.

I see Keizer in the Pan-American Geologist takes a delight in taking a crack at you every now and then. Well, that is the way it goes.

How are classes coming along at U. W. What are you teaching this semester and what are you going to do next summer, work for the Illinois Geological Survey? I think I shall be up in Northeastern Kansas again completing my work in Brown and Doniphan counties.

With best regards,

Cordially,

Walter H. Schoene

March 25, 1931

Dr. W. H. Schoewe,  
Department of Geology,  
University of Kansas,  
Lawrence, Kansas

Dear Schoewe:

Your letter of the 13th was much appreciated.

I have seen the papers you refer to and think that they will have a hard time putting over the new classification. Not but that I think that most will agree as to the new correlation of the Iowan but the new names will be rather hard to take with most people.

I am in the middle of the usual spring rush. Had 15 in mapping but one just quite. He was a history major and found himself in the wrong place, I guess. Have only 10 left in glacial. One has gone, sick I hear. Most are good students and seem to be interested. Physiography has gone down to 13, most of them geography majors. We are nominally using Bowman but most have voluntarily bought Fenneman. Could not make it the regular text as it came out too late. Field work is now beginning and we go to Devils Lake on the 7th of April. After that have two long glacial trips. After May 10 things will be less rushed.

Cannot make plans for the summer yet. I applied for a job with the Illinois Survey. It is reported that our survey has been cut a third in the new budget but I haven't dared to ask officially. The road survey has been placed under civil service too so most of the boys will be unable to get summer jobs in the old way. Maybe I can start a field course like the one we had at Tomah in '16. But maybe I will have to stay home anyway!

Had several letters from Martin in re the revision of Bull. 36. He said he did not tell what he thought of some of my new ideas because he had no asbestos paper to write on but I squelched him by saying that he need not worry since I had found that if given time most people came around to agreeing with me!

With best regards,

Sincerely,

March 7, 1931

Mr. F. P. Shepard,  
Department of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Sir:

I wish to thank you for the separate of your paper on Fundian faults  
or Fundian glaciers which just came.

I mailed the outline of glacial geology a short time ago.

Very truly yours,

Lecturer in geology

BEF

UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF CHEMISTRY AND SOILS  
WASHINGTON

ADMINISTRATION

February 27, 1931.

Mr. F. T. Thwaites,  
Lecturer in Geology,  
University of Wisconsin,  
Madison, Wisconsin.

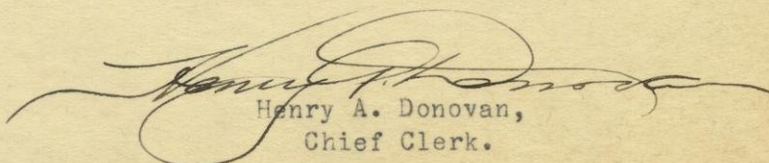
Dear Sir:

In accordance with your request of February 21, copies of the Soil Survey Reports of Calumet, Sauk, Monroe, and Sheboygan Counties, Wisconsin, are being forwarded to you.

Soil surveys of Barron, Bayfield, Brown, Crawford, Manitowac, Trempeleau, Vernon, and Winnebago Counties are in the course of preparation. The field work in the survey of Barron County has not yet been completed. The Public Printer now has in his hands the soil survey report and map of Manitowac County. The other reports and maps listed above are now in the office where there still remains considerable work to be done. You are being listed to receive copies of these reports at the time of issuance.

For your information, there is inclosed a list of all the soil surveys that have been made by this Bureau in the State of Wisconsin.

Very truly yours,

  
Henry A. Donovan,  
Chief Clerk.

LAW OFFICES  
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WILLIAM H. SPOHN  
FRANK A. ROSS  
MYRON STEVENS

FIRST CENTRAL BUILDING  
MADISON, WISCONSIN

February 27, 1931.

Mr. Fredrik Thwaites,  
Route 4,  
Madison, Wisconsin.

Dear Sir:

Pursuant to our conversation, we enclose herewith a quit claim deed to the property of Dean Roe of University Heights. If we can give you any further information, please feel free to call on us.

We wish to thank you for calling us in the matter.

Very truly yours,

BAGLEY, SPOHN, ROSS & STEVENS,

MS:LW

By *Myron Stevns*



2-26-31.

LAW OFFICES  
BAGLEY, SPOHN, ROSS & STEVENS

WILLIAM R. BAGLEY  
WILLIAM H. SPOHN  
FRANK A. ROSS  
MYRON STEVENS

FIRST CENTRAL BUILDING  
MADISON, WISCONSIN

February 24, 1931.

F185

Mr. Fredrik Thwaites,  
Route 4,  
Madison, Wisconsin.

Dear Sir:

In our examination of an abstract of title to the property of Professor F.W. Roe at 2015 Van Hise Avenue, in Madison, being lot 6, block 24, University Heights, we find that under the final judgment of Rueben Gold Thwaites, an undivided one-half of this property was assigned one-third to yourself and one-third to Jessie Turville Thwaites.

We presume that this is an error in the final judgment of your father's estate. If such is the fact, we would appreciate you and your mother giving to the Roes a quit claim deed. Could you at your convenience call us or arrange a conference with us?

Very truly yours,

BAGLEY, SPOHN, ROSS & STEVENS,

MS:LW

By *Myron Spohn*.

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, PRESIDENT

DEPARTMENT OF GEOLOGY

COLUMBUS

February 20, 1931

Dr. F. T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Dear Dr. Thwaites:

I have read with interest the paper by you and George L. Ekern on "The Glover Bluff Structure". I wish to thank you for sending me a separate.

I shall welcome future separates from you.

Respectfully yours,

*Paris B. Stockdale*

PBS:LF

Paris B. Stockdale.

Feb. 21, 1931

U. S. Bureau of Soils,  
U. S. Dept. of Agriculture,  
Washington, D. C.

Gentlemen:

At the office of our local Soil Survey they inform me that you have available Soil maps of Calumet, Sauk, Monroe, and Sheboygan counties, Wisconsin. Could you please send me copies of these reports to use in my teaching at the University. I would also appreciate any others maps in Wisconsin as soon as they are published.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

UNIVERSITY OF ILLINOIS

DEPARTMENT OF GEOLOGY

URBANA, ILLINOIS

February 11, 1931

Dr. F. T. Thwaites  
The University of Wisconsin  
Science Hall  
Madison, Wisconsin

Dear Dr. Thwaites:

Wanless showed me a copy of your outline of glacial geology which you had presented to him. I wonder if you have another copy of this which you could spare. I am teaching a course in physiography and would find this extremely helpful.

Very truly yours,

*Francis P. Shepard*

Francis P. Shepard

FPS: FH

*sent B/H/31*



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	<u>27.06</u>

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Paid - 9/5/23.

ORIGINAL

No. \_\_\_\_\_, 19 30

RECEIVED OF Amy F. Shwartz  
Two <sup>50</sup>/<sub>100</sub> DOLLARS (\$ 2<sup>50</sup>/<sub>100</sub> )

For rent of Deposit Box No. 247 from Jan 11, 1930  
to Jan 11, 1931

In renting the above numbered box the liability of the bank is limited in accordance with the rules and conditions printed on the back hereof referred to and made a part of this receipt.

Rules and Conditions Accepted by

Bank The State Bank, Madison, Wis.

By J. Mayne Derry Cashier

Renter

IF THE KEYS TO YOUR BOX SHOULD BE LOST NOTIFY THE BANK IMMEDIATELY

## RULES AND CONDITIONS REFERRED TO IN THE WITHIN RECEIPT AND SUBJECT TO WHICH THE WITHIN NUMBERED BOX IS RENTED

1. Duplicate keys that fit no other lock owned by the bank will be delivered to each renter, and must be surrendered at the end of the lease. The Bank will retain no key that opens any of its rented boxes.
2. The cost of replacing a lost key or combination shall be paid at once by the renter.
3. All rentals are payable in advance. In case the lease of a box is not renewed within six months after expiration, or six months from the expiration of any renewal of the lease, the Bank reserves the right and is hereby authorized to open the box at the expense of the renter and to sell sufficient of the contents thereof at public auction upon ten (10) days notice published in a local newspaper, and from the proceeds of such sale retain the cost and charges of said sale and the amount due the Bank for rent, with interest thereon, returning the surplus arising from such sale, if any, to said depositor, or his personal representatives.
4. The within numbered box is rented subject to all risks against loss by fire, theft and burglary and without any liability whatever against the Bank for any loss or damage occasioned thereby.
5. The bank reserves the right to terminate a rental at any time, on written notice to the renter or his deputy, and on refunding the proportionate part of the rent paid. The renter shall thereupon withdraw his property and surrender the keys.
6. Access to box may be had only during hours when the Bank is open for business.
7. No one except the renter or his deputy, to be designated in writing on the books of the bank, or in case of his death, his legal representatives, shall have access to the safety deposit box, whether this lease is signed by one or more persons. If, however, a JOINT ACCOUNT is desired, carrying the right of access to the survivor or survivors in case of the death of one or more of the undersigned, without the consent of their legal representatives, this lease shall be stamped "This Is a Joint Account" in the presence of the undersigned.
8. Renters will not examine their boxes or papers in the vaults but will use desks provided for that purpose.
9. No renter will be permitted to enter the vaults except in the presence of an employee of the Bank.
10. This lease may be renewed from year to year at the option of the Bank by the payment of such annual rental as may be fixed by the Bank.



STATE BANK OF WISCONSIN

Receipt No. 1594

1 W. Main Street  
Madison, Wisconsin

1-8-31

We acknowledge receipt of \$ 2.50 for rent of  
Box No. 247 in our Safe Deposit Vault, subject to the  
covenants and agreements contained in the lease.

Date of lease 1-11-31 Lease expires 1-11-32

STATE BANK OF WISCONSIN

Per E. Selond

Mrs. Amy Mueller Shwaites  
R. # 4  
Madison, Wis.

414 Harvard Street, S.E.,  
Minneapolis, Minn.  
May 30, 1930.

Professor F.T. Thwaites,  
Madison, Wis.

My dear Thwaites:-

At Des Moines in the E meeting of the AAAS, considerable part of the program was Glacial. In fact, there was much Glacial on the program. But, mirabile dictu nothing was said about Wisconsin's glacial geology; nor of Minnesota. At the dinner, neither Wisconsin nor Minnesota was represented, unless it was in the "eats".

Today I have a letter from Dr. Wm. Alden in which he incidentally says that he soon will go to Montana to progress his work out there. He does not say that he will go through Minneapolis, nor when. I suspect that he will stop off at Madison. Fact is, that Glacial Geology in Wisconsin is in a way to delay progress soon unless matters are cleared up some. Logically Alden should try to get Wisconsin straight, on his way?

Not knowing just what you are doing over there, I am in doubt whether to or not try to induce you and Alden, et. al. to stop at Saint Paul. I have been watching an excavation in the Twin City Brick Company's pit at West St. Paul. It is now hundreds of feet long and exposure is from the Decorah shales to top. As I make out, the Nebraskan till, Kansan gravel and boulders (till) and the red Wisconsin till are shown. Gray Wisconsin till is a little west, where its border comes in.

Dr Sam. Weidman used to come over occasionally to see whatever we had of new evidence in Minnesota, and having means then, I sometimes went with him far into northern Wisconsin. Since Weidman decamped, there have been no Indians in sight over on that side of the Saint Croix, and (you know the rule) no Indians seen then look out for trouble.

Weidman used to show us four tills & glacial stages in Wisconsin but Antevs's map, Fig 5, p. 544, Vol. 40, GSA, shows but three: What is the matter over there? If as Leverett claims the Illinoian is of the same stage as the Iowan (Alden & Leighton) then there are but three Stages instead of four or five? Chamberlin claimed six Stages, Leverett reduced them to five, I cut them to four (never recognized more than that) and now are you cutting to three? Three is what N.H. Winchell recognized:

If you are, this section seen at Saint Paul is critical. Alden may wish to see it. I probably shall not publish description of it so long as it is open to inspection anyway and progressively changing. I am not sure but that one of the gravels is Illinoian pre-wash. A lot of the "laminated clays" of the Minnesota and St. Croix river valleys seem to be just that:

You might tell Dr Alden frankly that if he wishes to extend the Wisconsin glacial geology over into Minnesota, he should be ready to pay for the "eats". I was glad to entertain Dr Waldstedt three days as my guest but those rich Survey fellows should entertain us?

Yours truly,

*F.W. Sanderson*

June 6, 1930

Dr. F. W. Sardeson,  
414 Harvard St., S. E.,  
Minneapolis, Minn

Dear Dr. Sardeson:

In reply to yours of May 30 I talked with Alden when he was in Madison and called his attention to the exposure you mention. He said that expected to be in Minneapolis on the 11th inst. He is now in northwestern Wisconsin with Messers Bean, Aldrich, and Hensell.

In regard to glacial work in Wisconsin the only work now in progress is within the area of Wisconsin drift and therefore has no relation to the older drifts. My work is now confined to teaching at the University which allows only of a few short field trips.

Very truly yours,

F. T. Thwaites

June 6, 1930

Dr. W. H. Schoewe,  
19 Garden St.,  
Cambridge, Massachusetts

Dear Schoewe:

I wish to thank you for the separate of your paper on the relocation of the drift border in Kansas. I had not known before that you had moved to the east.

My work on glacial geology in northeastern Wisconsin has been discontinued which I greatly regret. It had been paid out of the road material fund and when Mr. Bean was removed from the Highway Commission by a new law he decided not to ask for its continuation. Last summer and this summer again I will be working in Illinois on road material work. I do not like the climate down there very well but they sure treat one very nicely. If they continue to have work for me I will probably stay there for summer jobs.

At the U.W. I have taken over some of the work formerly given by Dr. Lobeck and enjoy it very much. This last semester I gave three courses and counting those who took more than once course had about 50 students. Our field trips went off well. I still look after well samples for the Wisconsin Survey but that is all. Martin was in town a short time ago. He looks like a very old man now as his hair is entirely white. Was up to see the quartzite hills in Adams County we heard of in 1915 and which Martin didn't think could exist. As a result of this decision they were not known to science until a year ago. Such is luck.\*

With best regards from both of us,

Sincerely,

March 8, 1930

Prof. R. W. Sayles,  
Harvard University,  
Chesnut Hill, Massachusetts

Dear Sir:

I wish to thank you for the separate of your recent paper on the varves in the rocks at Squantum. I have been much interested in trying to check some of DeGeer's correlations of glacial lake varves in Wisconsin. Some seem all right but others are simply impossible. I keep thinking of the remark of one of my former students who concluded that correlation by varve curves "must require more powerful imaginations than are granted to mere Americans!"

Very truly yours,

F. T. Thwaites, Geologist

January 4, 1950

Dr. Guy-Harold Smith,  
72 West Tulane Road,  
Columbus, Ohio.

Dear Guy-Harold:

I wish to thank you for the separate of your recent paper which arrived some time ago. I have been laid up with the same trouble I had in 1925 but hope not to have to miss very much time on account of it.

Yours very truly,

FTT-T

F. T. Thwaites

STATE TEACHERS COLLEGE

H. A. SCHOFIELD, PRESIDENT

EAU CLAIRE, WISCONSIN

Sept. 18, 1933.

Dr. F. T. Thwaites,  
Science Hall,  
Madison, Wis.

Dear Doctor Thwaites:

What I would like to secure is an article or group of articles which explain how to locate physiographically or otherwise deposits of gravel suitable for road building.

Enclosed please find a check for one dollar to cover cost of two copies of illustrations, etc. to your new edition on glacial geology.

Yours truly,

*Geo. L. Simpson*

GLS)A

Geo. L. Simpson.

STATE TEACHERS COLLEGE

H. A. SCHOFIELD, PRESIDENT

EAU CLAIRE, WISCONSIN

Sept. 12, 1933.

Dr. F. Thwaites,  
Science Hall,  
Madison, Wis.

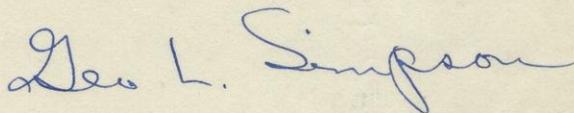
Dear Doctor Thwaites:

Please advise me where I can find references  
on gravels.

What texts do you use in your course on  
Glacial Geology?

Sincerely,

GLS\*A

A handwritten signature in cursive script that reads "Geo. L. Simpson". The signature is written in dark ink and is positioned to the right of the typed name.

Geo. L. Simpson.



Sept. 27, 1933

Dr. Francis P. Shepard,  
Department of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Dr. Shepard:

I wish to thank you for the separate of your recent paper on "Depth changes in Sagami Bay during the great Japanese earthquake" which came several days ago.

I have not published anything recently as my New York report seems to be held up. The glacial geology text is still resting although I have a blueprint edition of the illustrations out with 10 pages of block diagrams and maps with 14 pages of mimeographed description. I sold a number of these to members of the Glacial Geology Excursion of the Geological Congress and so far have not had any adverse comments that I know of at least!

Sincerely,

F. T. Thwaites

Sept. 15, 1933

Mr. Geo. L. Simpson,  
State Teachers College,  
Eau Claire, Wisconsin

Dear Mr. Simpson:

In reply to yours of the 12th I would like to know more exactly just what you would like to know about gravels, origin, occurrence, or utilization or utilization. I have an extensive bibliography but this would make the task of answering your question much easier. G. K. Gilbert, The transportation of debris by running water, U. S. G. S. Prof. Paper 86, and Hydraulic-mining debris in the Sierra Nevada, U. S. G. S. Prof. Paper 105 are both good.

With regard to glacial geology my mimeographed text which I have used since 1927 is ~~now~~ exhausted. The new edition is held up by the well-known Depression (still here in full force). However, I have prepared for sale advance copies of the illustrations for the latter, 10 pages of blueprints and 14 pages of explanation, cost postpaid 50 cents a copy with lower price in quantity. Possibly this Depression substitute may meet your needs.

Very truly yours,

Dec. 29, 1932

Mr. R. Richard Schweitzer,  
633 New Monroe Bldg.,  
Norfolk, Virginia

Dear Sir:

Yours of the 23rd to the Department of Geology was turned over to me for reply.

Since the publication of the bulletin by Weidman and Schultz in 1915 we have accumulated a vast amount of information on underground waters in Wisconsin little of which has been published. Now that all funds have been cut off there seems little chance for any more publication. I am sending you a copy of my paper of 1923. I do not think that the Minnesota people have been doing anything much on well records but am inclined to think that they still think that records of churn drill holes are worthless. Unfortunately for your purpose little information about northwestern Wisconsin has come in, partly because of the unsettled condition of much of the country but mainly because the drilling there is done by Minnesota firms who do not cooperate with us.

With regard to nomenclature of Cambrian formations the entire matter is at present involved in controversy. This is not because of the facts but is due to the looseness and carelessness of definitions of the old-time geologists. The same name has been used for different formations by different writers who apparently paid little or no attention to what had been done before.

I am strongly inclined to think that the sandstone at Hinckley is part of the Red Clastics and not the same as the Mt. Simon of recent Wisconsin studies. The lowest water-bearing formation near the Twin Cities is apparently the same as our Mt. Simon. I doubt that the Red Clastics contain a material amount of fresh water.

With regard to head of water my experience has been (see also Bull. 35) that head is largely a local matter. For instance the water level in the Dresbach is higher south of Madison under high ground than it is for some distance to the north of here. Water enters the artesian formations under the hills and wells offer an easy escape under the valleys, hence flows. The old idea of a closed hydraulic system must be modified in Wisconsin and Minnesota. I doubt that there can be any relation between head at the Twin Cities and at Superior. Most of the flows along Lake Superior are due to the glacial drift.

I am much interested in your suggestion of preglacial streams flowing into Lake Superior. My report of 1913 showed some abnormally deep preglacial valleys both at Superior and south of Ashland. To connect these with the deep drift north of St. Paul is a big stretch but is an explanation that should be considered. The preglacial St. Croix valley is thought to cross from the big bend to the west northwest of Taylors Falls to the Twin Cities but to the northeast the country is almost unknown because of lack of deep wells. The other route northwest of the Keweenaw flows is also possible. However, I fail to see the bearing of the sand at Ashland and the thick sandstone there as the former is much younger and the latter much older than the erosion of valleys.

I presume that you have available U. S. Geol. Survey Water Supply Paper 256. You would also be interested in Prof. Winchells study of artesian water for Minneapolis published in the American Geologist, vol. 35, pages 266-291 in 1905.

My general reaction to the proposed change to underground water is that it is possible provided that enough water without prohibitive iron content can be discovered. On the whole I would favor shallow wells in the glacial outwash plains which are mapped in U. S. Geol. Survey Prof. Paper 161 just out. Very favorable locations for tests would be in the deep preglacial valleys but I fear that wherever the gravels are of the red type, that is derived from the formations to the northeast, iron will be found and in many places manganese also. My suggestion would be to explore in gray gravels although water in these may be harder than in the other type. I failed to find any data on iron in the sandstones waters but think that it probably is not bad although such waters are all quite hard.

I also failed to find much information on the specific capacities of wells in the sandstones. If they are like wells in most of Wisconsin such cannot be over 20 gallons per minute per foot of drawdown. I think, however, that the sandstones are coarser to the northwest judging from the few sets of samples I have examined so that it is possible that a larger yield is possible.

If there is anything else I can do for you please feel free to ask.

Very truly yours,

F. T. Thwaites, Geologist in charge of well records  
Wisconsin Geological Survey

R. RICHARD SCHWEITZER

ENGINEER

~~213 S. A. L. RY. BUILDING~~

NORFOLK, VIRGINIA

~~901 NATIONAL BANK OF COMMERCE BLDG.~~

633 New Monroe Building

MEMBER  
A. S. C. E.-A. S. M. E.

December 23rd

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Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Gentlemen:

The writer has been making a study of the artesian supplies around the City of Minneapolis, Minnesota, with the view of a supply for the twin cities.

These studies necessarily include a study of the geology of Wisconsin, particularly, in that section contiguous to the St. Croix River and north. I have your publication issued some time before 1920 on Wisconsin geology, but I should like to know whether you have published anything since that time pertaining to the northwestern section of the state.

In studying the supply for Minneapolis, the writer has been impressed with rather peculiar phenomena in regard to the heads of the various waters in the various horizons. The writer claims no academic knowledge of geology; consequently, the terminology I use may be subject to severe criticism.

Minneapolis geology terms the sandstones lying immediately above the red clastic series in the Minneapolis sector, as Hinckley sandstones. Above these they classify the sandstones and sandstone shales as Dresbach formation. Southwest of Minneapolis in the vicinity of Mankato and easterly, the artesian head of the Hinckley sandstones rises equal to or above the Jordan sandstone artesian heads. At Minneapolis the Hinckley sandstone artesian head ranges from 40 to 60 feet less than the Jordan sandstone heads.

In my research on the artesian supply, I find no outlet for the Hinckley sandstones to the south or east to which the Minneapolis basin could discharge.

*W. H. Amberg, 35.*

*266-291, 1905*

Having specialized in underground water supplies for over twenty-six years, I have found it a valuable practice to attempt to discover the natural outlets for underground flows, if any. I find your Department in former works has estimated the depth of the Superior sandstones at something over 20,000 feet at Ashland and at considerable depths at Superior. The artesian head in these sandstones is given as somewhat above the surface of Lake Superior, which would make them approximately 150 to 200 feet lower than the Hinckley sandstone artesian heads at Minneapolis, or almost a perfect gradient from the vicinity of the Mankato parallel, to Lake Superior, and it has occurred to the writer that the possible outlet for these Hinckley sandstones northward under the shales separating this from the Dresbach sandstone to the northeast emptying into Lake Superior. The writer has also plotted as far as possible the deep pre-glacial channels in the vicinity of Minneapolis and St. Paul, and to the northeast, and I am wondering if it would not be an interesting investigation to see whether it was possible for the pre-glacial streams to flow northeast from Minneapolis and empty into Lake Superior.

There is a decided chain of lakes through St. Croix, Washburn, Sawyer, Bayfield Counties, and I am wondering if it would not be indicative of a very deep formation between the Keweenawan intrusive lying to the west and the one to the east. And on the west side of the intrusive extending up through St. Croix, Burnett and Douglas Counties, whether there is not another possible chance of deep pre-glacial channel. The shape of the sand deposits around Ashland and Superior is very indicative of a delta formation, and I believe it is very possible, if not probable, that there were two extremely deep gorges from the Minneapolis-St. Paul district around the western Keweenawan intrusive emptying into Lake Superior. In this case, the ancient stream would be in line with the Blue Earth River rising in Minnesota and still flowing directly north, emptying into the Minnesota River at Mankato, and then flowing north and northeasterly to Minneapolis and St. Paul, where it joins the Mississippi and then turns in a southeasterly direction; whereas, the deep pre-glacial channels, traced as far east as Center City in Minnesota, would indicate this ancient stream followed this same approximate channel toward Lake Superior.

It would seem to the writer that your deep sandstones at Ashland and Superior were also indicative of this condition.

If you have had any recent drillings in between the two Keweenawan intrusives in the counties named that would either entirely refute or partially substantiate this theory, I shall be very glad indeed to review such information as you have for publication.

Department of Geology  
University of Wisconsin

- 3 -

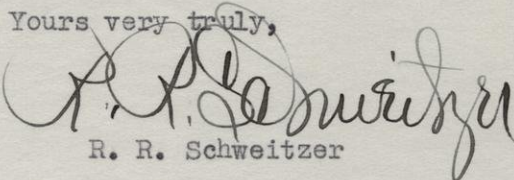
Dec. 23rd, 1932

Very recent drillings north and northeast of Minneapolis have indicated sandstone formations of much greater extent and along certain lines do not show an upturn or outcrop of these sandstones. For instance, the original information was that the drift was 500 feet deep at St. Francis on the Rum River. Recent drillings a short distance from this show great beds of sandstones which appear to be typical Dresbachs. Further northeast at Cambridge, recent drillings at the State School have revealed that there are extensive beds of sandstones.

The writer would like very much indeed to have your reactions on these suggested theories, and again wishes to assert that he lays no claim to a geological education, except as his experience in underground water development has caused him to study the water producing capacities and flows of certain formations.

Thanking you for the information requested in advance, I beg to remain

Yours very truly,



R. R. Schweitzer

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MEMBER  
A. S. C. E. - A. S. M. E.

R. RICHARD SCOTT  
ENGINEER  
~~213 S. A. L. RY. BLDG~~  
NORFOLK, VIR  
~~601 NATIONAL BANK OF COM~~  
633 New Monroe Bldg

**CHANGE OF  
ADDRESS**  
**NEW ADDRESS**  
**LAYNE ATLANTIC COMPANY**  
**633 NEW MONROE BUILDING**  
**NORFOLK, VIRGINIA**

Mr. F. T. Thwaites, Geologist  
Wisconsin Geological Survey  
University of Wisconsin  
Madison, Wisconsin

Dear Sir:

Your very kind letter of December 29th received,  
and I have noted the contents very carefully.

For your other information, along this line and  
to give you an idea of what prompted my letter to you, I am today  
sending to you under separate cover, copy of my report to the City  
Council of Minneapolis on the guaranteed artesian water supply.  
This report will perhaps be realized by you to be almost in exact  
contradiction to the report of engineers, which the City terms the  
Water Supply Commission, which reported to them in June of last  
year. This commission consisted of Mr. Frederick Bass, Professor  
of Sanitary Engineering at the University of Minnesota, Mr. Adolph  
Myer, Consulting Engineer of Minneapolis, and Mr. Sven Norling,  
Consulting Engineer of Minneapolis. Mr. Bass was the engineer in  
charge of all investigation work and in charge of all design and  
construction with Rudolph Herrin of New York, when the original  
filtration plant on the Mississippi River was built for Minneapol-  
is, and is Chairman of the present Water Supply Commission, making  
the report against artesian water.

While the writer is reporting for a commercial firm,  
and therefore may be prejudiced in favor of artesian water, certain-  
ly that prejudice could not carry us far enough so that we would  
endanger our own financial position by guarantees which we could not  
fill; yet -- at the same time, we do not believe the Bass Commis-  
sion is wholly without prejudice, in that they have always been  
filter exponents and were the engineers who originally put Minneapol-  
is on a filter plant basis.



Mr. F. T. Thwaites

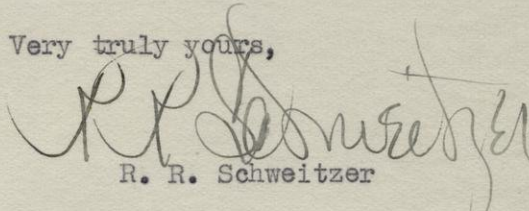
- 2 -

January 3, 1933

The writer is going to attempt on his next trip to Minneapolis to spend several days in Madison, looking over such records as you have, and will be very glad indeed to have a personal discussion or conference with you.

Thanking you for your very kind and courteous letter, I am

Very truly yours,



R. R. Schweitzer

R R S  
L G

THE UNIVERSITY OF KANSAS  
DEPARTMENT OF GEOLOGY  
LAWRENCE

April 27, 1933.

Prof. Fred Thwaites  
Madison, Wis.

Dear Fred:

In connection with my course in Advanced Sedimentation I have a problem which involves staining methods. I am somewhat handicapped by the lack of suitable rock specimens which contain dolomitic material as well as calcite. I recall that Steidtmann used to do considerable staining while at Wisconsin. I am wondering whether you have around the department a specimen or two that you could send me by parcel post which might answer my needs.

What are you going to do this summer? Our survey is still functioning, but that is about all. I am afraid that there will be no field work for me this summer. In addition to our 10% cut in salary this last year, we are looked for another 20% cut. I hope matters are better at Wisconsin than here, at least in so far as salaries are concerned. How is the little Thwaites?

Regards

Walter H. Schoene

May 24, 1933

Dr. W. H. Schoewe,  
Department of Geology,  
University of Kansas,  
Lawrence, Kansas

Dear Schoewe:

I am afraid I have been very slow in answering yours of April 27. I took it at once to Gilbert Raasch who is the present Curator but he did not offer much encouragement. All but the few Steidmann specimens which were put in regular collections have been lost and he knows nothing of any. I presume that what you want is the integrown dolomite-calcite rock which Ulrich ascribes to algae. I know where I could get some of this rock in the field but it is too far from here to get. However, I will continue to look and will stir up Raasch again.

Things are bad here. I had an 8 percent cut this year and the entire salary budget is cut 26 percent for the next two years. All one can hope for is to be able to keep a job regardless of salary. Last summer I worked in New York state but this year there is nothing at all. I was laid off from all but well record work on the State Survey in 1928 so could expect nothing there even if they had money which they do not. However, we are carrying on and hoping for a turn for the better before long.

Tommy is growing and is as active as they make them. He can say a few words now but hardly carry on a conversation!

Sincerely,

April 14, 1933

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

It was too bad that we had to go home so suddenly when the snow drove us out. I waited to write until I had fixed the date for finishing the trip. This has now been fixed as May 4-7. In the meantime I have not authorized any of the students to use the house. We left the curtains up and also left an oven, a box of soap chips, a broom, and a lampshade in the closet under the stairs. We also left the tables in place and the weather prevented any attempt to mop the floor. Next time I am strongly thinking of getting another cook but this matter is not settled. We had not yet settled for the electric light which we found turned on outside the building. We certainly hope for better weather next time. Last time the dampness spoiled the hairs in the telescopes. The ground was frozen so that we could not dig a hole to bury the garbage so put it in a can and covered it with ashes.

Very truly yours,

F. T. Thwaites

March 23, 1933

Mr. Atwood Smith; Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I just called up Mr. Harrington and he says that we can have the Hopkins House at the south end of the lake as usual.

If the snow goes off we will want to come up on the afternoon of April 4 but if it does not then we may have come up on two week ends later. The party will be small this year, in no case over 10 and much more likely only 8. I will take special care to see that we leave everything in the best of condition. Would like to know if there are enough beds in the house now. I bring cots for two anyway.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

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MADISON,

*Devils Lake Neb. 20<sup>th</sup> 33*

*Mr. F. G. Shwaitis*

*- Madison Wis.*

*Dear Sir:-*

*The furniture in Hopkins house is practically the same as when you were here last.*

*Yours truly*

*Atwood Smith*

Feb. 9, 1933

Dr. Francis P. Shepard,  
Department of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Dr. Shepard:

I wish to thank you for the separate of your recent paper on Submarine Valleys. Have always been interested in this problem and once started to work on a thesis along those lines but gave it up with information available then.

I now have some of your former students, Mr. and Mrs. Trefethen taking glacial geology with me.

The new text in glacial geology is stalled. We have not been able to finish the typing, decide on how to publish it, or if it is possible in view of inevitable huge salary reductions or possible loss of my job to publish it at all. This year I am getting along with some old copies in the library and will soon get out advance copies of the illustrations at 50 cents a set ( 10 pages letter size plus mimeographed descriptions). Have sent the drawings both to Leighton and to Leverett for correction but can't please both, of course!

Very truly yours,

Jan. 28, 1933

Dr. Walter H. Schoewe,  
Department of Geology,  
University of Kansas,  
Lawrence, Kansas

Dear Schoewe:

I wish to thank you for the five separates of your recent papers which arrived the other day.

It is some time since I have been able to get out anything for a year or more ago I began to revise my glacial text. This is still not done as I had a job in New York state last summer and am still working on the report for that. Publication of the text is most uncertain in view of the new demand for a reduction of the University by two million more. Maybe we will all be hibernating on farms soon! Meantime, it is hard to carry on and to pretend that you do not care

We are all well and Tommy is learning to talk.

With best regards,

Sincerely,



Dean Slichter,  
Bascom Hall

Dear Drean Slichter:

In regard to my denying graduate credit to Mr. L. R. Wilson in Geology 130, Physiography of western U. S. will state that his work this semester was not such that I felt that I could raise his grade substantially above that based on written exams. On these he rated in order of exam 4th, 10th, 9th, and 6th in a class of 10. On a make-up exam before the final he rated first but that group included only those who had failed in previous written work. Numerical grade on final exam was 61. Now I feel that his load of teaching and research work is probably mainly to blame for the failure to reach the level of the first semester. Is it possible to give him any extra work to do next semester to redeem this record meantime regarding the Geology 130 grade as "Incomplete"?

Very truly yours,

F. T. Thwaites, Lecturer in Geology

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

DEPARTMENT OF GEOLOGY AND MINERALOGY

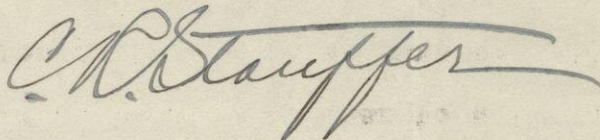
July 22, 1932.

Professor F. T. Thwaites,  
School of Natural History,  
Quaker Bridge, New York.

Dear Professor Thwaites;

I certainly thank you for your kind reply to my letter in regard to Father Retzek. On receipt of the letter Dr. Jenks was worried lest our men, here at the University, were making some gross errors in their Pleistocene geology and appealed to me for help. I could think of no better way than to write the men whom Father Retzek mentioned. Of course we have been able to find some things that Dr. Leverett did not and that is to be expected. But Dr. Leverett did a very good piece of work and we appreciate it.

Sincerely,



CRS:JT

7-16-32

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

July 12th, 1932.

DEPARTMENT OF GEOLOGY AND MINERALOGY

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

Dear Professor Thwaites;

I am enclosing herewith a copy of a letter from Rev. Henry Retzek, a Catholic Priest at West Union, Minnesota. Since it relates to some work being done by this department for Dr. A. E. Jenks in connection with his "Minnesota Man", I desire to know how authoritative this man's work is likely to be and how seriously it may be taken. We, at Minnesota, have a rather high regard for Dr. Leverett's work on the Pleistocene and of course pin our faith on him, although we have checked the region and plan further work there.

Several of the men here have met Rev. Retzek and have had conversation with him on some phases of the state geology but no one feels sure of his work. Since he refers us directly to you for an opinion of his work, I would appreciate a frank statement on the matter.

Very truly yours,

*Clinton R. Stauffer*

COPY

St. Alexius Rectory  
West Union, Minn.  
July 8, 1932

Prof. A. E. Jenks, Ph. D.,  
Minneapolis,  
Minn.

Dear Dr. Jenks:

The writer is a Catholic priest - located and active in a country Parish. However, I am so interested in geology - that I took off time and went to Harvard in 1929 and took an M.A. in geology. You may be interested in knowing that my "Special Regional Research" was - "A Proposed Revision of the Minnesota Pleistocene". It was given an "A" by Harvard - although it was entirely away from Leverett's conclusions.

The Drs. Brabec and Brabec of Perham - good friends of mine told me to write direct to you anent the skeletal discovery you announce in Science, Vol. 75 - 1094. Dr. Stephen Richarz and I went to Prairie Lake and interestedly studied the region. I knew there was only one spot of LC in Otter Tail Co. We will keep the location secret. Only - I have one request - in your next excavation, will you allow me to be present? Dr. K. F. Mather and Dr. P. E. Raymond both of Harvard, as also, Thwaites of Madison and Bretz of Chicago U. are my references.

Four years have been spent to date in my studies of the glacial problems - and I believe I have made some headway. But, Prairie Lake silt is not "Varves". I tried several times to achieve an approach with the geologist at the Minn. U. but without success. If they were right or wrong, I'd leave to my above mentioned References.

If interested, you would answer - No answer from you - will be interpreted then the other way.

Friendly

(signed) Henry Retzek  
West Union  
Minn.

July 20, 1932

Professor Clinto R. Stauffer,  
Department of Geology and Mineralogy,  
University of Minnesota,  
Minneapolis, Minnesota

Dear Prof. Stauffer:

Your letter of the 12th has been forwarded to me where I am working this summer.

Father Retzek was at the University of Wisconsin doing graduate work for part of a semester in the fall of 1930. He took no courses with me and all that I know of him is from his coming in to talk with me and show me his report which he had just sent in at Harvard. I read this with considerable interest. His English was terrible but his observations seemed to be both thorough and accurate. However, his INTERPRETATIONS were worded in such a way that I was far from convinced that I understood them. When he spoke of glaciers buckling up at the edges I just could not get what he was driving at. In conversation, however, I discovered that he had what seemed to me sound ideas on glaciation which were simply not well expressed.

Dr. W. S. Cooper of your Botany Department has been in the field with Father Retzek and is in a better position to judge of his work than I am. I suggest talking with him.

With regard to reaching conclusions different than those of Leverett, I do not feel that to reach new conclusions after so many now and deep cuts have been made in recent years is any reflection on the quality of the older work. Besides science has evolved new interpretations particularly of the methods of sedimentation in the years which have elapsed since Leverett tramped through Minnesota. All that I hope for it that my work will be as well thought of as is Leverett's now when the year 1970 comes for that will be about as long from now as the time that has elapsed since Leverett did much of his work! In Illinois I found that little change could be made in Leverett's survey made in the 90's but in Wisconsin I differ in places. Northern Minnesota was a very hard job and still is. We must expect that new observers will reach new conclusions. I suggest that Father Retzik's ideas be considered remembering that his experience in the field has been largely in working alone with very little background in either book knowledge or working with others.

Very truly yours,

Sept. 22, 1932

Dr. F. P. Shepard,  
Department of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Dr. Shepard:

I wish to thank you for separates of your three recent papers which arrived a few days ago.

My glacial geology text is slowly making progress although I do not yet know just what I will do with it when done. Illustrations are all done but a little lettering unless I redo some of the earlier ones. All but a few pages of text are in final form. Dr. Leith wants me to have it printed instead of lithoprinted but as yet we know nothing of what that would cost.

I spent the summer working in western New York. Toward the end went over to the Finger Lakes and returned much more favorable to the idea of glacial erosion than I was formerly although I also suggested that interglacial stream erosion should also be considered as explaining some of the more youthful topographic features. That seemed a much better explanation of the youthful valleys of part of the Cattaraugus quadrangle in western New York which bear no relation to direction of glacial motion.

Very truly yours,

WATER AND LIGHT COMMISSION

J. A. LAACK, PRES.  
A. F. MEYER, SEC'Y.  
R. A. BADE  
H. G. DAVIS  
C. C. ROHDE

W. C. RUNGE, MAYOR, EX. OFFICIO

WALTER SANDERS,

MANAGER

*Express  
Collect*

# PLYMOUTH CITY WATER WORKS

*12 South Milwaukee Street*

OFFICE OF WATER AND LIGHT COMMISSION

*Plymouth, Wisconsin*

February 29, 1932

F. T. Thwaites  
Geologist in Charge of Well Records  
c/o University of Wisconsin  
Madison, Wisconsin

Dear Sir:

On August 4th we sent to you \$10.00 which covered the making up of a tube showing the formation of our new well #7.

To date we have not received it and we are just wondering when we may expect same.

Very truly yours,

PLYMOUTH CITY WATER WORKS

*Walter Sanders*  
Manager.

WS:M

8-23-32

# Plymouth City Water Works

12 South Milwaukee Street

OFFICE OF WATER AND LIGHT COMMISSION

Plymouth, Wisconsin

August 4, 1932

Walter Sanders, Manager

Water & Light Commission

J. A. Laack, President

A. F. Meyer, Secretary

R. A. Bade

H. G. Davis

C. C. Rohde

W. C. Runge, Mayor, Ex-Officio

F. T. Thwaites  
Geologist in Charge of Well Records.  
c/o University of Wisconsin  
Madison, Wisconsin

Dear Sir:

We have your letter of August 2nd and also the blue print covering our well #7 for which kindly accept our thanks. We note that the tube is now ready and we are therefore, enclosing, herewith, our check for \$10.00 to cover the same and will you kindly have same shipped to us as early as possible.

Again thanking you, we are,

Very truly yours,

PLYMOUTH CITY WATER WORKS

*Walter Sanders*  
Manager.

WS:M



August 2, 1932

Mr. Walter Sanders,  
Manager of Water Works,  
Plymouth, Wisconsin.

Dear Sir:

I am inclosing a blue print log of city well No. 7.

The tube is now ready for delivery and the charge is ten  
dollars (\$10.00).

Yours very truly,

Geologist in charge of well records  
Wisconsin Geological Survey

AMT

Check received  
8-23-32  
AMJ

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

DEPARTMENT OF GEOGRAPHY

APPLIED GEOGRAPHY  
CONSERVATION  
FOREIGN AND  
DOMESTIC COMMERCE

June 9, 1932

C. C. HUNTINGTON  
EUGENE VAN CLEEF  
RODERICK PEATTIE  
FRED A. CARLSON  
GUY-HAROLD SMITH  
ALFRED J. WRIGHT  
CARL D. VARVEL  
N. C. BURHANS  
J. H. GARLAND  
A. F. CAMERON

Mr. Fred T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Dear Fred:

I was very glad to get your letter of May 31st.

We are now busy with examinations but at the moment I am waiting for the students to write on my second examinations.

About two weeks ago I was on an Ohio Academy of Science field excursion down in the southern part of this state. We examined the old Teays Valley country. Fenneman was there, but he didn't know any more about it than many others. In the party we had a Dr. Gordon from the Department of Botany. He is to be at Alleghany State Park this summer, and I am quite sure you will find him an interesting companion. I would like to have you along on my next trip down into the Teays country. When you write your new text on Glacial Geology I hope you will give some consideration to conditions in the areas just beyond the ice. I also hope you can find a publisher for your manuscript, for we certainly need a text on that subject. Dr. Cole, a recent addition to our Department of Geology (from Cornell) teaches a course on Glacial Geology here at Ohio State University. If you will come to Columbus Cole and I will try to arrange an excursion over into the driftless area of Ohio. Perhaps we can get Stout, the State Geologist to go along, for he knows Ohio as you know Wisconsin.

F. T. T. - 6/9/32

- 2 -

I think you should be glad that the Sparta-Tomah report is to be disinterred. It probably will mean some more work, but you certainly will profit by getting it published.

We hope this will find Tommy improved, for a skin disorder during the hot weather is very uncomfortable.

Beth is away at present doing tuberculosis work down in Chillicothe country. She is away from home about half of the time. This week end we plan to get away for a couple of days vacation, for summer classes start here June 21st.

Sincerely,

*Guy-Harold Smith*

Guy-Harold Smith

TH

COMMISSIONERS

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O. C. LEMKE, WAUSAU  
A. W. ICKS, GREEN BAY  
HASKELL NOYES, MILWAUKEE  
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THE STATE OF WISCONSIN  
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F. G. WILSON  
CHIEF FIRE WARDEN  
D. H. KIPP  
SUPT. OF EDUCATION  
AND PUBLICATIONS

Devils Lake June 1<sup>st</sup> 32

Mr F. J. Thwaites  
Madison Wis.

Dear Mr Thwaites:

In reply to yours of 31<sup>st</sup>  
All in regard to cottage being  
left in poor condition.  
Some of the office force were  
up here to occupy the cottage  
for day shelter and reported the  
condition, I told them it was  
just as you left it and that  
I had not got around to scrub  
it out. The beds and mattresses  
you got out of the Pine cottage  
were returned and dumped in  
the rooms and not set back in  
shape. Making it look rather  
messy.

Yours truly  
Atwood Smith

June 10, 1932

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Berkeley, Wisconsin

Dear Mr. Smith:

Thank you for your recent letter. I could not imagine what had happened to arouse criticism. The failure to put up the beds in the Pine Cottage was due to a misunderstanding of instructions from me. I remember telling Mr. Finch to return the beds and which rooms they went in. He had finished this job before I got in from the field and when I asked him if everything was all right assured me that it was. He must have misunderstood and thought I said NOT to put them up when I had intended to say put them up. As we had to leave they keys with one of the boys to return we had none when we passed the place on the way out so I did not check up as I should.

We could have mopped all the floors in the Hopkins house but did only the kitchen as we thought that as it would not be used for another two months unless we came up again on a make-up trip, that it would be effort thrown away. We would, however, have been glad to do whatever you wanted us to. We tried to leave things just as we had in previous years. I was very much upset to learn that everything was not left as I intended it to be. Please accept my regrets and assurance that I will personally check everything in the future.

Am sending a copy of this to Mr. Harrington.

Very truly yours,

Lecturer in Geology

May 31, 1932

Mr. Atwood Smith, Superintendent,  
Devil's Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I met Mr. Harrington the other day and he said it has reached him indirectly that we had left the cottage at Devil's Lake in very poor shape after the recent trip. I said that I doubted the correctness of this report for I had personally inspected the premises before leaving and found that things were, aside from some furniture in different places, essentially the same as when we arrived. I did not have the floors mopped as they would just need it again when anyone else moved in. I also talked with Mr. Wannemacher and he reported that when he went up shortly after we left things were in excellent shape. I am, therefore, at a loss to understand this report and would greatly appreciate a statement from you. Of course, I am anxious to leave everything in as good shape as it normally is after a winter and if anything is not right would be glad to make it good. Envelope for reply is enclosed.

Very truly yours,

Lecturer in Geology

May 31, 1932

Dr. Guy-Harold Smith,  
Dept. of Geography,  
Ohio State University,  
Columbus, Ohio

Dear Guy-Harold:

Yours of March 20 got put aside in the bottom of my folder to be answered later and has been there ever since! But you know how things go particularly when one is trying in vain to finish a book.

With regard to the onyx deposits of western Wisconsin Aldrich is the geologist who turned them down. I never had anything to do with the matter and know nothing of them.

Had a letter from Mendenhall saying that the Sparta-Tomah report will be disinterred from the resting place in Washington to which Ulrich and Campbell consigned it years ago. If this is correct and we revise the same I may have to return to western Wisconsin from which area I was expelled in 1924 by Hitchcock for failing to agree with Ulrich. Now Ulrich and Campbell will both be retired on account of age. Possibly we have some blessings for which to thank the well-known Depression! It has always seemed as if every major project I have been associated with has turned out a failure and not through any fault of mine that I could see unless it has been that I would not subordinate what I thought was right to some temporary expediency.

All last summer and this winter has been largely devoted to my revised Glacial Geology. I had no idea that it would take so long but Part IV has not yet been revised. Illustrations are nearly done for Part III and Amy is typing the text of that part. We had planned to have it mimeographed by Edwards Bothers but since Loith looked at it he is anxious to have it printed. We are now negotiating to see what can be done in this line. But I have to take off a lot of time for well records not to mention family duties.

Amy and Tommy are both well. The latter is troubled with oecoma at times and now has to be covered with a salve which makes him resemble the creature which caused the downfall of Brer Rabbit. I expect that it will trouble him more or less until he gets all his teeth but he now has eight out of the 20 so that may not be long.

I start for New York state about June 27 and certainly wish that you could get up there while I am there. It is only two months and helps stave off the depression for a bit longer. They intend to cut salaries next year by a system of forced vacations so as not to affect retirements and future advances. So far the only ones laid off are the assistants for next year and some of the non-teaching staff. On the whole we may really think ourselves lucky judging from other institutions. But they have money for new wiring and new floors in the building which is a mystery to everyone!

My joins in me in sending best wishes to both of you.

Sincerely,

## THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

DEPARTMENT OF GEOGRAPHY

APPLIED GEOGRAPHY  
CONSERVATION  
FOREIGN AND  
DOMESTIC COMMERCE

March 20, 1932

C. C. HUNTINGTON  
EUGENE VAN CLEEF  
RODERICK PRATTIE  
FRED A. CARLSON  
GUY-HAROLD SMITH  
ALFRED J. WRIGHT  
CARL D. VARVEL  
N. C. BURHANS  
A. F. CAMERON  
R. T. HICKMAN  
P. C. MORRISON

Dear Fred,

In a recent number of the Vernon County Lensor, a Mr. Edward Sylvanus published a little article on "Wisconsin Onyx." He ventured to include certain other remarks about the general geology and physiography to which I objected in a later issue of the same paper. The paper the following week carried a long reply to my letter by Mr. Sylvanus. His letter was not a reply but a communication filled with irrelevant statements, mostly true but still not answers to my criticisms. For example, he stated that the valleys in the driftless area were not there during the glacial period. My letter hurt his pride, so he found relief by writing a long letter in reply. I could write another.



letter in reply to his second, but I think I will keep silent.

While you were up in that country did you discover any travertine in the Lower Magnesian or other formations? This man, Mr. Sylvanus, heads a company which is interested in mining travertine, or Wisconsin onyx as he calls it. He implied that a geological organization, perhaps the Survey, or the Dept. of Geology had not considered his venture a worthy one. I am wondering if you were ever consulted about these deposits, or whether you know of any one who may have been called up there to examine the deposits. From his implication I am guessing that the Field Museum examined specimens, and declared them to be valuable travertine, whatever that may mean. As I stated above, I do not believe I will discuss this matter further, but I would like to learn what you know about it.

In Science I saw that you are going to Alleghany State Park this summer to teach in the School of Natural History. I wish we could make the trip while you are up there.

We have just been allowed enough money for the summer quarter to permit us to ask Professor Whitbeck to come down for six weeks and Professor Huntington just told us that he has accepted. He wrote that he would help Wisconsin through the slump by accepting the invitation to come here. Since this is my summer on duty here, Beth and I are glad that it happens to be the summer in which Whitbeck comes.

Next year one of our instructors will be dropped from our staff, so we are feeling the depression again. Last year everyone receiving more than \$3000 annually received a cut of 5 per cent or more. The higher salaried men were cut  $7\frac{1}{2}$  per cent

or 10 per cent. Of course we haven't a cent for maps and other equipment, but fortunately for us we made material additions to our collections just before the financial stringency.

How is your family? We often think of you. The Christmas card of Thomas (or is he Tommy?) was very good, and we certainly appreciated being remembered.

Very sincerely,  
Guy Harold

March 23, 1932

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I have been unable to get in touch with Mr. Harrington because my office telephone has been cut off for economy and he has been out whenever I have been at home during office hours. However, I suppose it is all right to use the house again this year. The class numbers 17 and adding myself, the cook, and an assistant that I will need with so many, makes a total of 20. Mr. Wannenmacher informs me that most of the beds and one of the stoves are out of the house. When we come up we will bring a trailer so we can move some of the things needed back again provided roads are then all right. I am planning on coming up this coming Saturday afternoon if weather is favorable, if not the next Saturday afternoon. Please do not put yourself out, however, to wait for us. I will make the usual arrangements with the electric company. This year I will not allow any students to use the house unless I or some other responsible person is there. Heard afterward that some who went up afterward did not clean up very well. We will be sure that this does not happen again although I have an unusually good crowd this year. Thank you for all you have done for us in past years.

Am sending a copy of this letter to Mr. Harrington.

Sincerely,

Lecturer in Geology

P. S. The class comes up on Tuesday, April 5 and moving will have to be mostly done at that time when we have lots of hands to help.

March 23, 1932

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I have been unable to get in touch with Mr. Harrington because my telephone at the University has been cut off for economy

March 31, 1932

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I at last found Mr. Harrington in and he said that we can use the house again for my class. I will run up Saturday afternoon sure unless there is a blizzard and look things over. The maximum of the party is now 19 and I have cots for three so any extra beds we can scare up will be appreciated.

Very truly yours,

Lecturer in Geology

Oct. 6, 1933

Mr. George L. Simpson,  
State Teachers College,  
Eau Claire, Wisconsin

Dear Mr. Simpson:

Your letter of Sept. 18 with enclosed check came in due course but I did not get around to filling the order for copies of the glacial geology illustrations until a few days ago. I thumailed you the two copies.

In these you will find considerable information on the use of physiography in locating gravel. I really do not know of any satisfactory published information along this line. Mr. Bean wrote two short papers some years ago, one in Economic Geology, vol. 16, pp. 215-221, 1922 and the other in Pan-American Geologist, vol. 37, pp. 341-343, 1922. The Indiana Survey has published several reports on road material but as they are old I doubt if they would help much. The Canadian Survey has also a number of reports. Few if any of the reports I have read makes any attempt to stress the use of science in determining the extent of a deposit in advance of actual exploration. Most are rather old and were written before the importance of a study of the environment under which each sediment was deposited was realized. Even today, many road material geologists simply find gravel by use of the shovel rather than by use of the head.

As a general proposition, it may be said that gravel deposits almost without exception make steeper slopes than do sands. Add to that the paucity of vegetation on gravels and you have two excellent guides. Kames, eskers, outwash terraces, and the sides of kettles in outwash all show these facts. Even on flat plains of outwash vegetation is generally poor where the gravel is coarse. Of course, where gravel is covered by deep stripping the above does not hold but few such deposits are worth much anyway. This in large part explains why the gravels of the older drifts do not show very much at the surface. Even there, however, the slopes are steeper than in the adjacent till.

I trust that the above will meet your needs, if not please advise me and I will try to do what more I can. These matters are much more fully treated in my manuscript text than I can do in a letter.

Sincerely,

F. T. Thwaites





Dear Friends:

Below you will notice that we  
have a little daughter. She is 17 months  
old, has blue eyes and light, curly hair.  
She walks all over the place and is  
just beginning to talk. She came to  
our home about 6 weeks ago.

M.S.



To all the Thwaites

Wishing you Christmas happiness

And all the Season's cheer

With everything that's best in life

To last through the New Year

Mr. Mrs. W.S. Schoewe and

Betty Ann Schoewe



Betty Ann Schoewe

Age 17 months.

Dec. 1933.

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

DEPARTMENT OF GEOLOGY AND MINERALOGY

October 3, 1934

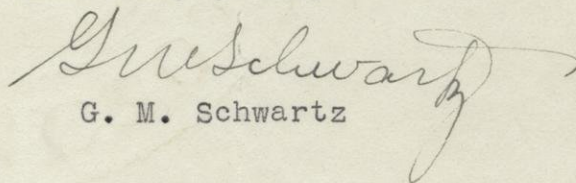
Dr. F. T. Thwaites,  
Department of Geology,  
University of Wisconsin,  
Madison, Wis.

Dear Dr. Thwaites:

Your letter of September 28 has been brought to my attention. Miss Van Cleve has forwarded the bulletin requested.

So far as I am aware, there is no Minnesota Water Department. The reference may be to the Division of Drainage and Waters, or it may be a misquote for the Minneapolis Water Department which has an elaborate report on the artesian problem with several supplements representing work done from about 1930 to 1932. I am inclined to think it was the latter which was referred to. I shall be glad to help you trace it down if I can.

Sincerely yours,

  
G. M. Schwartz

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

DEPARTMENT OF GEOLOGY AND MINERALOGY

Sept. 8, 1934

Mr. F. T. Thwaites,  
Wisconsin Geological Survey,  
Science Hall,  
Madison, Wis.

Dear Mr. Thwaites:

I have your letter of September 5 and your statement regarding the so-called granite checks exactly with my ideas. I did not want to change the logs, however, without some other check. I find that I do not have the log of Hole #1, but do have numbers 2 and 3; the latter was drilled in 1931. If No. 1 shows any variation from No. 2, I should be pleased to have a copy of the log.

Regarding the fossils in the Wauconia well, they may be Eau Claire, I suppose, but I believe they are somewhat different species. We have found, however, that Trowbridge's recorrelation is impossible. We are gathering information in all deep wells in that direction and will have a definite lithologic correlation soon.

I greatly appreciate your help on the South St. Paul wells.

Very truly yours,

*J. M. Schwarz*

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

DEPARTMENT OF GEOLOGY AND MINERALOGY

June 29, 1934

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

Dear Mr. Thwaites:

I have been at work for two years on a new report on the geology of the Minneapolis and St. Paul area. In some of the well logs which I have for South St. Paul, granite is reported at a depth of about 900 feet. This is so out of line with the depth of granite in near by regions, particularly St. Paul and Minneapolis, that I wonder if the cuttings referred to granite may not be arkosic material of the Red Clastic series.

I find that some of Armour's logs were compiled by you, and wonder if you have samples from this depth which might aid in a solution of the problem. It seems to be mainly Swift and Company wells that report granite, but a 1931 well for Armour reports it from 895 to 910. I would greatly appreciate any help you may be able to give me on this problem.

Sincerely yours

*Gus Schwartz*

Sept. 5, 1934

Mr. G. H. Schwartz,  
Dept. of Geology and Mineralogy,  
University of Minnesota,  
Minneapolis, Minnesota

Dear Mr. Schwartz:

Reply to yours of June 29 was delayed because I was in the field all summer.

I have now looked up the original notes on the two Armour wells at South St. Paul. These wells were drilled very hastily during the war boom and the samples and records are not reliable as are modern records.

In Well No. 1 drilled by F. M. Gray, Jr. in April, 1918 "granite" was reported at 900 feet but the last sample showed a very coarse light red sandstone. Well No. 2, drilled by the same firm a month later the samples from the bottom of the hole seem to have been taken care of somewhat better. Here the red sandstones were struck at 760. From 895 to 897 (total depth) the material is a conglomerate with pebbles of quartzite and chert in a matrix of red sandstone. It seemed probable to me that this is what some drillers have called "granite" and that it is part of the so-called Red Clastics.

If you want a split of the samples from these two holes can easily send them to you but I doubt that they are worth much for detail.

After all has been said and done I feel that my conclusions of 1912 about the age of the Red Clastics still stand. Paleontologists tell me that Stauffer's fossils are of Eau Claire age and that he is off on the correlation of the strata in that well!

If I can be of any more help to you please do not hesitate to call on me.

Very truly yours,

F. T. Thwaites, In charge of well records  
Wisconsin Geological Survey

Wausaukee, Wis.,

July 5, 1934

South Side State Bank,  
Lakeside Street,  
Madison, Wisconsin

Gentlemen:

Enclosed please find check for \$67.71 which please credit to my personal account and either mail or give the duplicate deposit slip to Mrs. Thwaites.

Very truly yours,

F. T. Thwaites



April 25, 1934

Dean C. S. Slichter

Bascom Hall

Dear Dean Slichter:

Mr. H. M. Reeves took Geology 143 the second semester of 1932-33 and received a grade of B (Incomplete). He did not finish a report on field work as he left to work in a C.C.C. camp. According to our usual arrangements, he is to receive 2 credits with the same grade.

Very truly yours,

H

F.T. Thwaites

April 30, 1934

Dean C. S. Slichter  
Bascom Hall

Dear Dean Slichter:

Mr. L. L. Berg took Glacial Geology 143 in 1932-33. He was unable to go on the principal field trips, and as he has been unable to substitute any work for this I recommend that he be given one credit with the grade indicated on the card.

Very truly yours,

FTT:N

F. T. Thwaites

THE STATE OF WISCONSIN

CONSERVATION DEPARTMENT

Devils Lake Mich. 26<sup>th</sup> 34

Mr F. Y. Thwaites

Madison Wis.

Dear Sir:

The Hopkins house has the same furniture in it as when you left. The CWA men working at south end of the lake took their dinners there during the winter. You know about how they would have it. However I will try and have it brushed up by the time you arrive.

Yours truly,

Atwood Smith

March 23, 1934

Mr. Atwood Smith, Superintendent,  
Devils Lake State Park,  
Baraboo, Wisconsin

Dear Mr. Smith:

I called up Mr. Harrington and he said that we could use the Hopkins House again this spring. However, he said that some of the beds had been disposed of although I gathered that these were not the ones we had been using but those which were stored at the North End.

My party will probably be larger than last year, almost certainly we will have nine and possibly eleven to care for. I would like to know what is available in the way of beds for them.

As the vacation is unusually early this year we plan on opening camp either the evening of Friday, March 30 or the morning of the next day. It will doubtless be very cold at times so I plan on placing as many as possible in the warmer rooms, namely the big room downstairs and the one over the kitchen.

I hope that when we leave we can put a coat of paint on the kitchen floor which as it is now is very hard to keep clean but this will have to be decided later.

My cook this year is one of last years class, Mr. Carl Bays and I am sure from the way he worked when Finch deserted us last year that he will be a great improvement. I think he will be better than depending on the lady who lives at the south end who offered to take the job last year. The boys will get along better with a male cook, I think.

I am enclosing a stamped and addressed envelope for your convenience.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

Dean Chas. S. Slichter,  
Bascom Hall

Dear Dean Slichter:

Mr. George Field has asked me to write you regarding his work with me. When he took Glacial Geology in 1931 he was taking Geology 1 at the same time, a practice which is no longer allowed. Beyond question this accounts for the low grade but I note in my class record that he made a B in class work and was then penalized for a late field report and several poor grades in examinations. With the experience he has had on the Road Materials Survey since then I am sure that he did really learn the subject. I feel no hesitation in recommending his admission to the Graduate School.

Very truly yours,

F. T. Thwaites, Lecturer in Geology



Fracham  
1507 E. 14th St.,  
Tulsa, Okla.

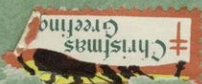


Mr. & Mrs. F. T. Thawates  
& family

R.F.D. #4

Madison

Wis.







Tacoma

Choleau

Los Angeles  
El Monte

Boulder

St. Paul  
White Bear  
Winoona

Appleton  
Janesville  
Madison

Golden  
Denver

Houston

New Orleans

Kingston  
O'Hawa

Merry Christmas  
Albany

Windsor N.S.  
Topsfield  
Boston  
Wollaston  
Amherst  
Cambridge  
Danvers  
Manchester  
Cheshire  
Waterbury  
Westport  
Middletown  
Searsville  
Bethlehem

Sunnyside  
Orange  
Mortontown  
Norfolk  
Boundbrook  
New Brunswick  
Asbury Park

Merry Christmas  
Taleado  
Norwalk  
Bristol  
Bedford  
Washington

Merry Christmas  
Christmas  
Merry Christmas  
Merry Christmas

Merry Christmas  
Merry Christmas  
Merry Christmas  
Merry Christmas

MERRY CHRISTMAS AND  
HAPPY NEW YEAR TO ALL  
OF YOU.  
FROM CLYDE AND CLARICE  
STRACHAN.



ROCKFORD ARMS APARTMENT  
1507 EAST 14TH STREET  
TULSA, OKLAHOMA

Oil Co. territory.

We have had some beautiful weather down here. Clarence and I have played tennis since Christmas, and have done a good deal of hiking around in very light clothes. There was a little snow on Sunday morning, and I got out my skis, but there wasn't enough to keep me from nearly breaking my neck on the slope of one of

the Osage hills.

I suppose that Prof. Trenchard is there. It has been a long time since I have seen him or heard from him, and I shall write me of these times. I certainly wish that I could get back to Madison to see all again.

Please give our best regards to Amy. It would be delightful to hear from you sometime.

Sincerely  
C. G. Strachan

ROCKFORD ARMS APARTMENT  
1507 EAST 14TH STREET  
TULSA, OKLAHOMA

Jan. 24, 1934

Dear Mr. Thwaites:

Christmas cards are always exciting for among them are always some that carry bits of news of old friends who have been beyond the horizon most of the rest of the year.

It doesn't seem possible that your son has grown as big as the picture indicates him to be and I have never seen him. I have been

puzzling over the picture of  
the new one in the carriage,  
but cannot decide whether  
it is a boy or a girl. I wonder  
if you are planning to have  
a new face every year or  
so on your cards. Anyway,  
my heartiest congratulations;  
they are fine looking youngsters.  
I wish that I could see  
them.

I havnt been in Madson  
for a long time - the last

ROCKFORD ARMS APARTMENT  
1507 EAST 14TH STREET  
TULSA, OKLAHOMA

time was in the summer of 1932, when Mrs. Strachan and I stayed a little while and saw a few of the folks around Science Hall. I have just finished <sup>reading</sup> a rather terrific arraignment of Glenn Frank in the current American Mercury. Among other things it discusses the salary cuts among the poorly paid instructors. I can imagine that there is a good deal of hardship

as a result.

I never thought when I left there that I would blossom out into a geophysicist, but that is about what I am now. However, it extends only to seismograph work, and there is so much geology mixed up with it that I am really more of a geologist. I was interpreter on a party for a while, but am now in the Tulsa office and sort of in charge of the work of the parties in the Cuyler

Glacial Geol.

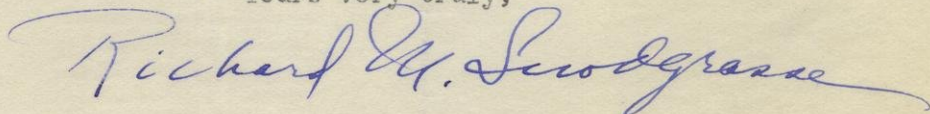
January 26, 1932

Dr. F. T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

Dear Dr. Thwaites:

Replying to your letter of January 15, I have no immediate  
particular <sup>need</sup> for the Outline of Glacial Geology, therefore, prefer  
to await the appearance of the new edition. Thanking you for thus  
entering my order,

Yours very truly,



Richard M. Snodgrasse

Department of Anthropology  
University of Chicago

February 14, 1934

Dean C. S. Slichter

Bascom Hall

Dear Dean Slichter:

Mr. Meek's work with me has always been very good,  
decidedly above the average.

Very truly yours,

FTH:M

F. T. Thwaites



458 Sycamore Road,  
Santa Monica, Calif..  
January 3, 1933.

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

Dear Doctor Thwaites:

I was glad to get your letter of December 12th and have been meaning to answer it for some time. I look forward to seeing an article by you on the subject. If you will submit it to me after writing I can change my quotations from the Outline to your article. I should think it proper that your article should appear first as it will contain more information concerning the lakes than mine.

Several points in your letter interested me. Regarding the "rock bottom" of Lake Superior how did you find out that the report was based on boulders? I did not suppose that any survey method would make it possible to obtain boulders from the bottom, although boulders can be obtained by dredges easily enough. By the way I find lots of rock bottom out here on the sides of the submarine valleys and on the fault slopes. The reported rock of Lake Superior may, of course, be only boulder deposits.

Why do you object to a "Lake Michigan glacier" meaning a tongue of ice which extended out beyond the main body? I think of this or rather these tongues as eroding particularly when the ice was on the advance rather than when it was ~~the~~ retreating.

What do you think about sending the articles to the Geographic Review? If you have any other preference, it makes no difference to me.

You would have been interested in the floods we have just experienced out here. The erosion in gulleys was certainly enormous. Despite fairly large waves the mouth of the stream, near which I am living, formed a distinct delta into the open ocean. This is also despite the ribbed cement stream channel which caught most of the coarse material before it reached the sea. The delta had little if any trace of the silt carried down in great quantities by the stream. I collected various samples. The most interesting sight was the debris choked streets leading down from the hillsides, some ~~off~~ them with large boulders in them. This condition extended down into the heart of Hollivood in some places. The sea cliffs inside the Coast Road near here show very little change so far as I could observe. The vertical slopes seem to have withstood the effects of rain much better than more moderate slopes as I suppose would be expected.

Very sincerely yours,

*Francis P. Shepard*  
Francis P. Shepard

Jan. 20, 1934

Dr. Francis P. Shepard,  
453 Sycamore Road,  
Santa Monica, California

Dear Dr. Shepard;

I am now just able to get around to cleaning up the letters which accumulated while I finished the first consulting job which has come my way since the first of the well-known Depression.

You will be glad to know that I have finished arrangements with Edwards Brothers of Ann Arbor to publish the Outline of Glacial Geology. It will then be possible to quote from something which can be bought and which libraries should (although most either will not or can not) have. Unfortunately space in that preliminary publication forbids adequate discussion of the Great Lakes. I want to work up some cross sections based on geology on the two sides and now that Newcombe's report has appeared we are in a position to do that. Once the glacial outline is out of the way I will get to work on the paper on the lakes.

With regard to the points in my letter. When I sailed on Lake Superior in my launch during the summer of 1910 the winter before had been very dry and the lake was unusually clear. Often I was startled to be able to see bottom in depths of several fathoms. That was how I saw the large boulder fields. Recently peat has been discovered at a depth of 60 feet under later lake sands. I suspect that many of the boulder fields were concentrated when the lake level was lower than it now is. Have you read my account of the lake in Bull. 25 of the Wisconsin Survey? I still stand by almost all of the statements in that and am most pleased to find that my views on the main subject of the report are being confirmed by those who came after me. (See Atwater's paper on the Hinckley sandstone.) Of course, I have not been on the lake east of the Wisconsin-Michigan line.

With regard to the Lake Michigan glacier I admit, of course, that there was such whenever the ice margin was not too far south. All that I object to is the idea that the ice in the basin was moving all the time the way a mountain glacier does.

Anywhere you would like to publish will suit me. I think the idea of companion papers on controversial subjects is excellent although I fear that when all is said and done we may not find so much difference between our respective views!

I was much interested in your observations on the floods.

Sincerely,

F. T. Thwaites

Jan. 12, 1934

Dean Sellery?  
South Hall, U. of W.

Dear Dean Sellery:

Mr. Ernest Fosshage has asked me to recommend that he receive credit for the short course in surveying taken in the College of Engineering. He states that he intends to major in geology in which profession a knowledge of surveying is important. The course in Mapping (Geology 11) which I give stresses surveying with the instruments commonly used by geologists but the engineering course is a great help.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

Dec. 12, 1933

Dr. Francis P. Shepard,  
458 Sycamore Road,  
Santa Monica, California

Dear Dr. Shepard:

Yours of the 5th with enclosed manuscript came duly to hand and I wish to thank you very greatly for sending this to me. Inasmuch as the 1927 mimeographed Outline of Glacial Geology is now out of print and the new edition is indefinitely postponed by the well-known Depression it is useless to give references to it. I think that your suggestion that I work up an article on the same subject is the best. If that suits you I will hold your manuscript until I can give the matter attention.

Since writing the 1927 Outline Matthes work on the Yosemite has appeared. It seems to me that it gives the solution to the glacial erosion problem. If plucking is vastly more effective than abrasion it is easy to see how amount of shattering of the bed rock is the key to the question. This enables us to reconcile the tectonic and glacial-erosion theories of the origin of fiords. I now fully recognize the effects of glacial erosion on the Niagara escarpment in eastern Wisconsin as long ago pointed out by Martin but I still cling to the attitude supposed to be characteristic of the citizens of Missouri when it comes to the matter of the Great Lakes. I just cannot see glacial erosion in Lake Superior with those Apostle Islands standing out the way they do. This despite the fact that the lake lies in a rock basin. However, I do recognize the fact that the salt and gypsum of the Salina which outcrop under Lakes Michigan and Huron must certainly have been eroded by ice. I also recognize the amount of drift south of the lakes, the scarcity of tributary valleys on the Wisconsin coast of Lake Michigan, and the rock barriers which surround a not inconsiderable portion of most of the lower lakes. I also recognize that thin-bedded shales and dolomites of the Salina and Devonian in Lakes Michigan and Huron would have suffered much more than would the thicker bedded dolomites and limestones. On the other hand there are drift-filled rock basins in Wisconsin which could hardly have been excavated by ice. Moreover, as I see it, the very nature of continental ice sheets concentrates movement in a marginal zone. During wastage they doubtless lost the margin slope sufficient to induce active flow for at least part of the time. Keeping these facts in mind gives me pause when a "Lake Michigan glacier" is mentioned. Unless only the margin of an ice cap moved how could such minor topographic features as the Niagara cuestas have had the effect they did? At present date, therefore, I ascribe glacial erosion as only one of the factors in the production of the basins and do not admit it as the sole factor as did Martin who claimed the rock floor in preglacial time was at present lake level. By the way, I found that much of the "rocky" bottom on the Lake Superior chart is boulders and not bed rock. But this question is too long to argue out in a letter. I am now working on a short paper which suggests that many of the features of the Finger Lakes region are due to interglacial stream erosion and that glacial erosion was a minor factor which simply straightened and smoothed the valley sides.

I am glad to learn that you are at work on submarine valleys I did quite a bit on them when a student,

April 11, 1934

Dean G. C. Sellery

South Hall

My dear Dean Sellery:

Mr. Harold Winger has been taking Mapping (Geology 11) and was confined to the hospital at the time of the field work at Devils Lake. It is impossible to make up this work this year. I recommend that he finish some extra work which he can do alone here at Madison and receive 2 credits instead of 3. This will obviate his carrying an Incomplete a whole year. The same arrangement was made in the case of another student two years ago, who was not allowed to go on the trip because of recent illness.

Very truly yours,

FTT:N

F. T. Thwaites

THE OHIO STATE UNIVERSITY

GEORGE W. RIGHTMIRE, *President*

COLUMBUS

DEPARTMENT OF GEOGRAPHY

May 8, 1936

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

Dear Fred:

Please accept my belated thanks for the re-print on field photography which you sent me some time ago. I had intended to write you much earlier but it seems that I have delayed it until I am embarrassed to acknowledge it.

This spring has been particularly a busy one for us. We are planning to finish up our many duties by the middle of June so that we can get to Madison for a brief vacation before the opening of our Summer Quarter. We feel that we would rather take John to Wisconsin in the month of June rather than in September. We shall try to look you up when we get to Madison.

Sincerely yours,

*Guy-Harold Smith*  
F.

Guy-Harold Smith

GHS:MF

May 18, 1936

Dr. Guy-Harold Smith,  
Dept. of Geography,  
Ohio State University,  
Columbus, Ohio

Dear Guy-Harold:

Yours of the 8th has been on hand for several days but as I crowded all field trips this year into aith days I could not answer it before.

We would be most pleased to have you stop with us when you come to Madison. We have a crib which is at present not in use also "other things which would be needed. We will write Mrs. Nutt that you are coming here for probably they will want to come down.

Our two are now in the "wild Indian" stage although Tommy denies that he belongs in that class any longer, a claim we do not always agree with!

With best regards to both of you,

Sincerely,

J T Thwaites

Madison, Wisconsin  
May 6, 1936

To the Members of the Staff:

I have received the following letter from Dean Sellery which I am transmitting to you:

April 30, 1936

"Dear Professor Winchell:

I would like to request now, at some time before the end of the semester, that all the courses in Geology be continued during the scheduled period of instruction and that the examinations be given at the periods scheduled for them in the timetable. Any other practice is very demoralizing, and I hope that we shall have no more of it.

Yours very truly,

(Signed) G. C. Sellery"

I wish to endorse this request, as I feel that it is in line with the best interests of the University.

Very truly yours,

ANW:N

A. N. Winchell, Chairman



February 29, 1936

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

Dear Sir:

Please send me copies of the following United States Geological Survey bulletins:

Bulletin 843, A brief review of the geology of the San Juan region of southwestern Colorado, by Whitman Cross and E. S. Larsen.

Bulletin 869, Bibliography of North American geology, 1933-1934.

Thanking you in advance for these bulletins, I am

Yours very truly,

FTT-T

P.S. Kindly include a copy of Water-Supply Paper 772, Studies of relations of rainfall and run-off in the United States by W. G. Hoyt and others. - FTT

Silver Spring

February 5, 1936

Mr. George Hansen  
Superintendent of Parks  
Milwaukee County Park Commission  
Milwaukee, Wisconsin

Dear Sir:

In reply to yours of the 5th, the samples from Silver Spring Park arrived in very poor condition last winter. At last they have been straightened out as well as possible, but it was a hard job, as labels were almost unreadable. I had to do it myself whenever time allowed. I will soon be able to examine them.

The shale is from 440 feet to 620 feet. There is also some shaly rock within 150 feet from the top. Will have blue print ready before long.

Yours very truly,  
WISCONSIN GEOLOGICAL SURVEY

FTT:JH

In Charge of Well Records

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

Nov. 22, 1935

DEPARTMENT OF GEOLOGY AND MINERALOGY

Dear Mr. Thwaites:-

about a year ago I sent you a blue print of the wells at South Saint Paul. This summer I found that the elevations were confused some being referred to sea level, some to Memphis datum etc. I have worked these all over and they are now probably correctly referred to sea level. I am enclosing the new diagram and a map showing the location of each well. Will you please destroy the old print and substitute this one in your file.

Sincerely yours,

G. M. Schwarz

post card  
Nov 27, 35

UNIVERSITY OF ILLINOIS  
DEPARTMENT OF GEOLOGY AND GEOGRAPHY  
URBANA, ILLINOIS

November 21, 1935

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

Dear Mr. Thwaites:

Thank you for returning my manuscript. I shall probably get around to putting it in shape some time after Christmas. I shall change the references so that they refer to your more recent "Outline" and to the 1935 Guide Book. Our library has a copy of both of these. Thank you for the comments on the manuscript and I shall seriously consider them before putting it in its final shape.

Sincerely yours,

*Francis P. Shepard*

F.P.S.:BM

Francis P. Shepard

Nov. 5, 1935

Prof. Francis P. Shepard,  
Dept. of Geology,  
University of Illinois,  
Urbana, Illinois

Dear Prof. Shepard:

In reply to yours of October 23 misssent to Berkeley, California,

I am very sorry I had not written you before.

I got as far with the proposed article as to prepare an outline and list of illustrations. When I sent for a new chart of Lake Superior and contoured the bottom. I also looked up Howcombe's revised map of the bed rock in lower Michigan.

When that was done the preparation for the guidebook of the Kansas Geological Society demanded so much time that my entry "Great Lakes" on my job sheet had to be marked "abandoned." You will find from my paper on Lake Superior in the Guidebook that my ideas on the importance of glacial erosion have been greatly changed. This change in opinion came as a result of study of the chart. I did not intend at first to publish the contours of the lake bottom but they telephoned me from Wichita to forward the map so I did so.

The only point on which we now differ is the relative importance of glacial and preglacial erosion. I still point to the Apostle Islands, the deep "holes" in the Fox and Wolf Valleys, the cuesta southeast of Lake Superior, and the peculiar miniature Appalachian topography of Limestone Mountain which I visited this fall, as evidences of little glacial erosion at these particular points. However, I admit several hundred feet of excavation in the deepest parts of the Great Lakes.

If you publish your paper I would prefer that you omit all reference to the old mimeographed "Outline" and confine reference to my 1934 and 1935 editions and to the 1935 Guidebook. You can get this book at the Geological Survey if your library has no copy.

I would like very much to carry through my part of the project anyway, especially to draw some geological cross sections of Lake Michigan to connect the sublacustrine topography with the logs of deep wells. Also I would like to consider the possibility that Trowbridge is right in ascribing an interglacial age to the deeper valleys of the Driftless Area. But I am so pressed for time this year with a large class and many interruptions to my evening work at home that I am afraid that this project will simply have to wait over.

I am returning herewith your manuscript with regrets for the long delay.

Sincerely,

UNIVERSITY OF ILLINOIS  
DEPARTMENT OF GEOLOGY AND GEOGRAPHY  
URBANA, ILLINOIS

October 23, 1935

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

Dear Mr. Thwaites:

I wonder if you have ever finished the article about the glacial erosion of the Great Lakes. I think I might as well publish mine separately, unless you expect to get around to writing your article in the very near future. I noted with some surprise that in a recent article about the Great Lakes there was no mention at all of the possibility of glaciers having eroded them, and the only alternatives considered were stream valleys and fault valleys.

Sincerely yours,

*Francis P. Shepard*

F.P.S.:BM

Francis P. Shepard

August 12, 1935.  
Baraboo, Wis.

F. T. Thwaites  
Science Hall, Madison.

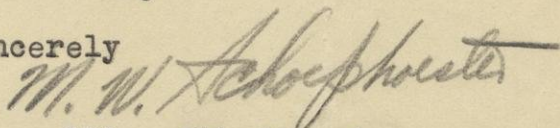
Mr. Thwaites,

I am giving the opportunity to work with you in the northern part of the State a great deal of consideration and as a result would like to have information about it. The way things have been breaking to date, it would seem that the trip to the Parks was going to fall through. Should this happen, I would be very much interested to work with you for the remainder of the summer.

As I understood you last Saturday, you were planning to make two trips each of about a weeks duration. Will you kindly inform me as to the tentative dates, kind of work, etc.

Unless my plans are again changed, I will not be down to Madison for a week or ten days.

Sincerely



121 - 5th Street  
Baraboo, Wis.

Aug. 16, 1935

Mr. M. W. Schoophaester,  
121 5th St.,  
Baraboo, Wisconsin

Dear Schoop:

Thank you for yours of the 12th. Owing to the fact that Tommy picked up a skin infection last week as well as other unexpected duties in regard to the K. G. S. trip it does not look as though I could get out on the proposed trip to northern Wisconsin before the start of that long-heralded expedition.

After the K. G. S. ends on Labor Day Bays, Raasch and I plan a trip to Limestone Mountain, Grand Island and other important stratigraphic points in northern Michigan. After this is over I may be able to consider another trip and would be glad if you could go. The trip will be paid for out of a Peabody grant so that it would cost you nothing but, as with me, there is no money for salaries.

I am now writing Ableman to obtain official permission to visit some of the places.

Sincerely,



QUOTATIONS SUBJECT TO CHANGE  
WITHOUT NOTICE



# SHELL PETROLEUM CORPORATION

SHELL BUILDING

ST. LOUIS, MO.

June 21, 1935

Mr. F. T. Thwaites  
Geologist  
R. F. D. No. 4  
Madison, Wisconsin

Dear Mr. Thwaites:

We have your letter withdrawing your name from consideration for our geomorphological work.

We appreciate your sending the reprints of your published articles which with your kind permission we should like to keep. We are returning today by parcel post your copy of "Outline of Glacial Geology."

Yours very truly,

SHELL PETROLEUM CORPORATION

By *Ernest J. Robinson*

Office Vice Pres. Exploration

EGR:IP

Oct. 11, 1934

Dr. G. M. Schwartz,  
Department of Geology and Mineralogy,  
University of Minnesota,  
Minneapolis, Minnesota

Dear Dr. Schwartz:

I wish to thank you for your letter of the 3rd and the  
bulletin which just came.

Enclosed please find blueprint logs of the two wells  
at South St. Paul from which I have samples. Hope you may find them of  
some value despite their obvious shortcomings which I explained before.  
The tracings are old and did not print well.

I am sure you are right about the water supply reports.  
I have a copy of the report of the Layne-Northwest Co. but not of that for  
the city. Will have to try to get one if printed.

With best regards,

Sincerely,

F. T. Thwaites

June 4, 1935  
June 4, 1935

Mr. E. C. Robinson,  
Shell Petroleum Corporation,  
Shell Building,  
St. Louis, Missouri

Dear Mr. Robinson:

After more mature consideration of your suggestion of making geomorphic studies of your airplane photographs I have decided to withdraw my name. This decision is based primarily upon the serious risk to health of work in the South during the summer but also took into consideration the improbability of my being able to help you within a reasonable length of time by reason of the fact that I am unfamiliar with the region which has already been studied by many highly trained geologists.

Thanking you for considering me,

Sincerely,

F. T. Thwaites

May 28, 1935

Mr. W. V. Sleske,  
Box 44,  
Wilmot, Wisconsin

Dear Sir:

Yours of the 24th to Mr. Bean was given to me for reply. The phenomenon of blowing wells is the same as that of blowing caves. It is the equalization of air pressures above and below ground and occurs whenever there is a change in atmospheric pressure. This is most common during the approach of a storm. Wells which blow commonly have no airtight casing to below the water level. Air in dry openings above the water level then enters the hole

Very truly yours,

F. T. Thwaites

RESULTS OF SOIL EROSION EXPERIMENT

Missouri Experiment Station

Soil - Shelby Loam

May 1, 1927<sup>17</sup> - May 1, 1921<sup>23</sup>

Slope = 3.7%

Plots 6 ft. wide - 90.75 ft. long

Treatment	% Rainfall running off surface	Tons soil eroded per A. (1) in 6 years	Time required to erode top 7" Soil yrs.	Percent of total lost in 16 rains
Uncultivated				
Weeds pulled	48.92	207.8	29	41.84
Plowed 4 in. in Spring. Fallowed in Summer	31.26	247.3	24	65.53
Plowed 8 in. in Spring. Fallowed in Summer	28.36	214.2	28	69.79
Sod - continuously	11.55	1.7	3,547	58.38
Wheat - annually	25.19	39.9	150	55.09
Rotation - Corn, Wheat, Clover	14.14	13.7	437	11.67
Corn - annually	27.38	106.5	56	61.21

(1) Total rainfall during the 4 years = 133.83 in.

The character of the rainfall has been one of greatest factors in causing erosion. During the four years of this experiment the seven heaviest rains caused about 60% of the erosion from the plowed land and also from the sod land.

About 60% of the erosion has occurred during the months of August & September, while over 80% occurs during the 5 months May to September.

TABLE OF RAINFALL \* MAR. - OCT.

Month:	1st year	2nd year	3rd year	4th year	5th year	6th year
Mar.	0.74	1.17	4.16	3.20	8.68	3.62
Apr.	4.97	2.83	4.06	5.25	9.73	4.10
May	4.55	4.09	6.56	4.17	3.85	4.32
June	2.60	3.25	4.10	1.20	3.05	1.17
July	0.88	0.73	2.30	2.69	2.11	4.03
Aug.	5.17	6.96	5.30	3.31	5.44	2.90
Sept.	2.18	9.51	3.46	4.02	10.03	3.85
Oct.	0.65	1.88	7.91	2.61	2.31	1.57

Sept. 19, 1938

Dean Sellery: Mr. Gaylord Mickelson has completed almost all of the field work for his thesis (Geology 100) and all that remains is to check up in the field and to write the report. The four credits do not, therefore, represent the actual amount of work to be done this semester.

F. T. Thwaites

# RESULTS OF SOIL EROSION EXPERIMENT

Missouri Experiment Station

Soil - Shelby Loam

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**STANDARD OIL COMPANY**

(INDIANA)

**MILWAUKEE BRANCH  
AND AGENCIES****J. H. BUDDE, MANAGER  
R. E. LEE, ASST. MANAGER  
C. H. LAMOREAUX, ASST. MANAGER****SALES DEPARTMENT****MILWAUKEE, WIS.****Aug. 24, 1938**ALL QUOTATIONS  
SUBJECT TO  
IMMEDIATE ACCEPTANCE  
AND SPECIAL CONDITIONS  
NOTED ON BACK HEREOFFILE **C-9**

SUBJECT

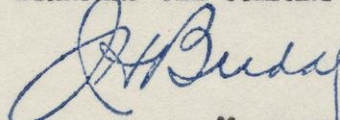
**Mr. F. T. Thwaites,  
Route #4,  
Madison, Wis.****Dear Sir:**

We are pleased to return your copy of the Stanolex Fuel Oil Agreement which you signed, covering your requirements of heating oil during the season ending May 31, 1939.

The Heating Oil which you will receive under this agreement will be uniform and of the highest quality. Stanolex Fuel Oil is made in our own refinery at Whiting, Indiana, under constant and very exacting control and contains those characteristics which insure efficient, dependable and economical operation of your burner.

You will like the performance of our Stanolex Fuel and we also know that our representatives will give you excellent delivery service.

We wish you to feel that we appreciate your business and that it will be a genuine pleasure for our organization to serve you well during the entire heating season.

**Yours truly,****STANDARD OIL COMPANY**  
**Manager**



STANDARD OIL COMPANY

(INDIANA)

SALES DEPARTMENT

MILWAUKEE BRANCH

SALES OFFICER

J. H. HUBBARD, MANAGER

W. H. KERR, ASSISTANT MANAGER

G. H. LAMON, SALES MANAGER

ALL QUOTATIONS  
SUBJECT TO  
IMMEDIATE ACCEPTANCE  
AND SPECIAL CONDITIONS  
NOTED ON BACK HEREON

Aug. 24, 1938

MILWAUKEE, WIS.

0-2

ANY QUOTATIONS ON PROSPECTIVE SALES, AND PRICES NAMED BY THIS COMPANY FOR CURRENT OR FUTURE DELIVERY ON ANY PRODUCT DELIVERED WITHIN THE UNITED STATES, ARE MADE WITH THE UNDERSTANDING THAT ANY INTERNAL REVENUE TAX, WAR TAX, EXCISE TAX, SALES TAX, IMPORT, EXPORT, IMPOST, TONNAGE, SHIPPING OR OTHER CHARGE, OR TAX OF ANY KIND, EFFECTIVE AT THE PRESENT TIME OR HEREAFTER MADE EFFECTIVE AND LEVIED BY ANY GOVERNMENTAL AUTHORITY ON THE PRODUCT, ON THE "PRODUCT" CONTAINER, ON THE MANUFACTURE, TRANSPORTATION AND/OR SALE OF THE PRODUCT, OR ON THE CONTRACT OR AGREEMENT, CONTRACT OR AGREEMENT PRICE, PROFITS, OR ANY MATTER CONNECTED THEREWITH, SHALL BE ADDED TO THE PRICE FURNISHED, AND PAID BY THE PURCHASER; UNLESS PURCHASER ELECTS TO WAIVE THE RIGHT TO DEMAND DELIVERY OF THE PRODUCT, OR UNLESS THIS COMPANY ELECTS TO PAY THE SAME, AND THAT IN THE EVENT THAT THIS COMPANY IS PREVENTED FROM MAKING DELIVERY BY PARTIAL OR TOTAL INTERRUPTION OF TRANSPORTATION FACILITIES, OR BY FIRES, OR STRIKES, OR BY ANY INTERFERENCE OF CIVIL OR MILITARY AUTHORITY, OR FOR ANY CAUSE BEYOND ITS CONTROL, THIS COMPANY CANNOT DELIVER SAID PRODUCT UNDER NORMAL FREIGHTS, INSURANCE AND OTHER COSTS. THIS COMPANY WILL NOT BE OBLIGATED TO MAKE THE DELIVERY OF THE SAID PRODUCT.

QUOTATIONS ARE LIKEWISE SUBJECT TO THE CONDITION THAT IF ANY LAW, FEDERAL, STATE OR LOCAL, OR ANY REGULATIONS OR RULES ISSUED THEREUNDER, OR ANY ACTION OF ANY FEDERAL, STATE OR LOCAL AUTHORITY, AND/OR THE DEPRECIATION OF THE CURRENCY OF THE UNITED STATES BY THE REDUCTION IN THE GOLD CONTENT OF THE DOLLAR, THE ISSUE OF FIAT MONEY, INFLATION, EXPANSION OF CREDIT, OR OTHERWISE, SHALL, IN THE JUDGMENT OF THE SELLER, REQUIRE ANY CHANGE IN THE PRICES, TERMS, AND/OR CONDITIONS HEREIN QUOTED, THEN IT SHALL BE UNDERSTOOD THAT SUCH CHANGES MAY BE MADE BY THIS COMPANY UPON NOTICE TO THE PURCHASER.

STANDARD OIL COMPANY  
(INDIANA)

The Heating Oil which you will receive under this agreement will be uniform and of the highest quality. Standard Fuel Oil is made in our own refinery at Whiting, Indiana, under constant and very exacting control and contains those characteristics which insure efficient, dependable and economical operation of your burner.

You will like the performance of our Standard Fuel and we also know that our representatives will give you excellent delivery service.

We wish you to feel that we appreciate your business and that it will be a genuine pleasure for our organization to serve you well during the entire heating season.

Yours truly,

STANDARD OIL COMPANY

*J. H. Hubbard*  
Manager

H. W. SEAMAN  
ROOM 509  
THE WESTON  
CLINTON, IOWA

Clinton, Iowa.  
March 26, 1938.

Mr. F. T. Thwaites, Geologist,  
R. F. D. No. 4  
Madison, Wisconsin.

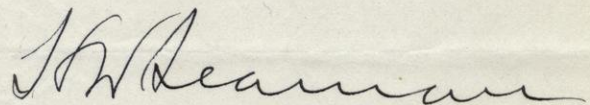
Dear Mr. Thwaites:

I am enclosing my check for \$2.50  
in payment of copy of "Outline of Glacial Geology".

Am rather surprised at your statement that you "do  
not know of any features in the inner valley of the  
Mississippi which might be due to glacial erosion."

Am sure you are incorrect in this statement. Under  
pressure, ice flows like thick molasses. The glacial  
sheet simply drops down in this river bed and along with  
the movement of the upper section it carried the plough  
with its worse than manganese teeth, and which dug out  
these glacial lakes, as Lake Pipin  
and the many deep sections such as just above Clinton.  
At the Clinton lake it is close to 300 ft. below the  
present channel bed until you strike rock, whereas on  
either side it is solid rock. I can see no escape from  
this conclusion but am very anxious to read your explanation.

Very truly yours,



H. W. SEAMAN

HWS:JH  
Encl.

She wrote frequently  
about your boys - and  
took great pleasure  
in watching them  
grow and develop.

I hear that your  
wife is not well -

I am so sorry  
and hope the

Dear Fred:-

It was ever so good  
of you to send me  
the clipping about  
your Mother's passing -  
She wrote me in June  
that she wanted to go  
but I shall miss her -  
more than I can tell.

coming years will hold  
many blessings for you  
and your family -

Sincerely yours

Mrs Harriet P. Sawyer

4401

McPherson Ave

St Louis, Mo

Harvey Hills  
Foxburg, Pa -  
September first.

H. W. SEAMAN  
ROOM 509  
THE WESTON  
CLINTON, IOWA

Clinton, Iowa.  
March 23, 1938.

Dr. F. D. Thwaite  
University, of Wisconsin,  
Madison, Wisconsin.

My dear Dr.:

In a letter from Mr. M. M. Leighton, Chief of State Geological Survey Division at Urbana, he advises me that you have issued a mimeographed report on the glaciation of the United States, and suggests I write you for a copy if you have an extra copy on hand.

At present I am very much interested in the question of the origin of the sausage-links along the upper Mississippi, which have since been filled with sand but formerly were lakes 200 or 300 feet in depth, similar to Lake Pipin. These, in my judgment, were all dug by the glacial plough.

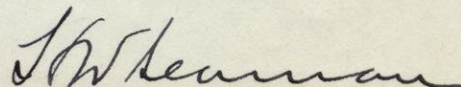
Am very well acquainted with Dr. Trowbridge of Iowa City, but he does not seem to warm up to the subject as much as I believe he should. When I was in college at Iowa City I had very close relations with Dr. Calvin and he was rather inclined to the views I have expressed as above. Am looking into this matter merely as a matter of self satisfaction, but my business duties are of such nature that I can spare but odds and ends of time for the work.

Certainly will be pleased to have copy of your report. I have for long years been identified as a Director of the Mississippi Valley Association of St. Louis, and also occupy a similar position on the Upper Mississippi Waterway Association with headquarters at Minneapolis. Was formerly a member of the Inland Waterways Corporation and am now busily engaged in writing a brief on the favorable report of the U. S. District Engineer at Rock Island, and the unfavorable report of Col. Hodges, Division Engineer at St. Louis, on the need for the reconditioning of the Hennepin Canal. Will present this brief before the Board of Engineers for Rivers and Harbors at Washington on April 4th.

Am thoroughly disgusted with the intense <sup>underhanded</sup> opposition of our railroads, both eastern and western, to the development of any waterway projects that will in any way provide inherently cheaper water rates than the rails can afford to make. Having been 30 odd years in the railroad business as an engineer and chief executive, I believe I know the reasons that motivate this opposition.

Excuse this explanation but it throws some light on my interest in the geology of the Mississippi Valley section. I was born at Clinton, Iowa, on the west bank of the Mississippi and my home has always been at this point.

Very truly yours,



H. W. SEAMAN

HWS:JH

March 25, 1938

Mr. H. W. Seaman,  
Room 509,  
The Weston,  
Clinton, Iowa

Mr. H. W. Seaman,  
Room 509,  
The Weston,  
Clinton, Iowa

Dear Sir:

The "Outline of Glacial Geology" (lithoprinted,  
116 pages) is sent, transportation paid, on receipt of  
\$2.50

I do not know of any features in the inner valley  
of the Mississippi which might be due to glacial  
erosion. Conditions there were much different from  
those which caused the large rock basins of the Great  
Lakes.

Very truly yours,

March 23, 1938

March 25, 1938

Mr. H. W. Seaman,  
Room 509  
The Weston  
Clinton, Iowa

Mr. H. W. Seaman,  
Room 509  
The Weston  
Clinton, Iowa

Dear Sir:

The "Outline of Glacial Geology" (1937) is  
116 pages (in text, transportation paid, on receipt of  
\$2.50)

In reply to yours of March 23 the cost  
of the Misakapok which might be due to glacial  
erosion. Conditions there were much different from  
those which caused the large rock basins of the Great  
Lakes.

Very truly yours,

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON

DEC 13 1937

Hon. Harry Sauthoff,

House of Representatives.

My dear Mr. Sauthoff:

In response to your recent telephone request:

I take pleasure in sending you under separate cover,  
a copy each of Water Supply Papers 679-b, 817 and 819 which have  
been withdrawn from the small stocks reserved for official and special  
uses.

Cordially yours, *W. Mendenhall*

Director.



# THE UNIVERSITY OF WISCONSIN

## SUMMER SESSION

Madison, Wisconsin,

January 20, 1938

Dear Mr. Thwaites

You have been recommended by the Department of Geology

for a part time position as Lecturer in the six week

Summer Session of 1938. Your remuneration will be \$ Fee basis. In case of error

or inability to accept appointment, kindly notify the Dean at once. If you will accept appointment, please sign and return the attached agreement.

Very truly yours,

Director

(Over)

(Any staff member eligible to earn leave-of-absence credit in lieu of salary for summer session teaching—see reverse side of this sheet—may receive it by transferring his cash salary immediately upon receipt of his check to the Summer Session Trust Fund under Secretary McCaffrey, Administration Bldg.)

**Extracts from the By-Laws and Laws of the Regents Governing the Summer Session, as Revised by the Regents, June 21, 1920.**

For full service in the summer session rendered by a member of the regular faculty of the University, compensation for the six weeks session shall be fifteen per cent of the salary for the academic year preceding the summer session, with a minimum of \$180 for instructors, \$225 for assistant professors, and \$300 for associate professors and professors, and with a maximum of \$750; and for the ten weeks session, twenty-five per cent of said salary for the preceding academic year with proportionate minimums and maximums.

For full service in the summer session in lieu of money compensation, there will be allowed to members of the instructional force, of the rank of assistant professor or of a higher rank, one semester's leave of absence on full salary for teaching in two summer sessions in the colleges or schools having sessions of six weeks in length, and one year of absence for two and one-half summers teaching in the law school, the session of which is ten weeks. An instructor who teaches in the summer session and desires leave of absence in lieu of salary may be permitted to elect leave of absence, provided he has been an instructor in the University three or more years, and provided that when he shall receive his leave the total sum paid to him and his substitutes shall not exceed the sum of his salary for the semester or year in which leave is given plus the amount that he would have received for teaching in the summer sessions.

Research or agricultural extension work may be assigned during the summer to members of the staff by the Dean of the college, school or division concerned, in consultation with the president, subject to the approval of the Regents, to the extent of six weeks in any one year. The money compensation for such services shall be one-eighth of the salary for the academic year next preceding the summer session in which such work is done. Leave of absence for summer research and agricultural extension will be given in lieu of money compensation to assistant professors and those of higher rank, and to instructors of three years' standing, but not to those of lower rank. For any case such leave of absence shall be for a time equal to that which has been given to summer research or extension work, viz., absence during one semester for three full periods of summer service.

It is not the policy of the University to permit members of the staff to earn leave of absence on the Summer Session basis to a greater extent than one semester in three and one-half years, or to grant leave of absence on salary when the leave of absence is to be used for teaching elsewhere or for engaging in other salaried occupations, or to allow leave of absence privilege for anyone to accumulate to a greater extent than one year. No leave of absence will be granted unless an arrangement, satisfactory to the President and Regents, providing for the work of the officer during his absence shall have been made in advance.

A faculty member may upon due notice in writing withdraw his deposits in cash, thus cancelling his leave-of-absence credit. In the event he has several deposits and desires to withdraw only part of them, they will be paid him in the order of their age, the oldest being paid first.

Feb. 2, 1938

Hon. Harry Sauthoff,  
Member of Congress,  
House Office Bldg.,  
Washington, D. C.

Dear Mr. Sauthoff:

I will greatly appreciate it if you can obtain  
me a copy of U. S. Geological Survey Bulletin 892,  
"Bibliography of North American geology for 1935 and 1936."  
This is out although not yet officially announced.

Thanking you for past favors,

Sincerely,

Dec. 6, 1937

Hon. Harry Searthoff,  
House Office Building,  
Washington, D. C.

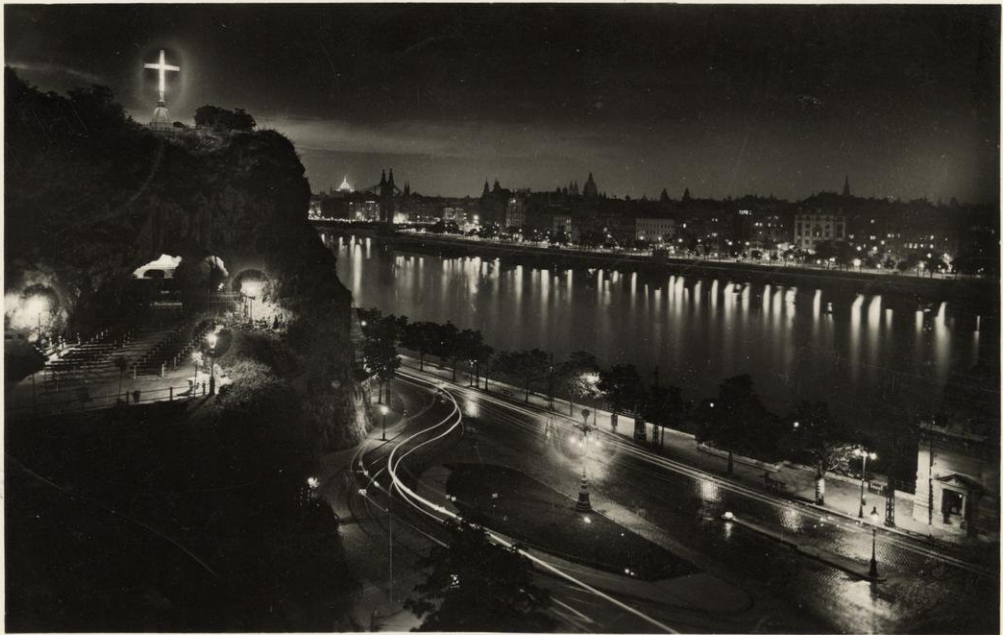
Dear Mr. Searthoff:

Could you please secure for me copies of the  
following publications of the U. S. Geological Survey:

Water Supply Papers, 679-B, 817, 819

These will be greatly appreciated,

Sincerely,



Aug. 2, Hungary.

BUDAPEST

Látkép a kivilágított Barlangkapolnával.  
Ansicht mit der beleuchteten Felsenkapelle.  
Panorama avec la Chapelle en Rocher illuminée  
View with the illuminated Roch-Chapel.  
Veduta colla Cappella-Roccie illuminata.



Dear Amy,

Here is your choice! And I wish you could be here to enjoy it! This is a view from the out-door terrace where we had dinner to-night.

The Danube is only slightly blue. Natives try to explain its muddy shade! Our room, with balcony, over-looks the river. Our hotels are very often most palatial. In Vienna, the gleaming corridors were a block long. And huge rooms, <sup>B. J.</sup> <sup>Ep.</sup> always with turn beds. The time is going much too fast. Love, Idelle.

Mrs. F. Thwaites

P. O. 4.

Madison, Wis.

U. S. A.

Date \_\_\_\_\_ Geologist \_\_\_\_\_ Tp. \_\_\_\_\_ Range \_\_\_\_\_ Sec. \_\_\_\_\_ Page \_\_\_\_\_

Use this sheet for one Sec. only

Sum received \$ 900 <sup>00</sup>	
Florence Whitbeck - clerical services & drafting	\$ 57 <sup>00</sup>
R. C. Lentz (sal. 35 <sup>00</sup> exp. 486)	39 <sup>86</sup>
573 miles field work @ .5¢ (actual expense)	28 <sup>65</sup>
Expenses on field trip. meals & supplies (not for car)	10 <sup>94</sup>
O. N. Rowe drafting	22.80
Constance Bunker typewriting	19. <sup>00</sup>
Prints for illustrations	18 <sup>19</sup>
Bilmer - photo of gravel	2.00
1 Stern - drafting	72. <sup>00</sup> <sup>443</sup>
Lobeck - block diagrams	150. <sup>00</sup> <sup>253.06</sup>
Marta typewriting	11.25
Miscellaneous	3.75 <sup>15</sup>
Contingent fund reserved	25. <sup>00</sup>
change over 750	
	<hr/> 443.06

April 7, 1937

Sears Roebuck and Co.,  
Chicago, Illinois

Gentlemen:

In sending the enclosed order we made an error in one of the numbers and as the result got salad forks when we desired knives. Corrected number is put on orders in red.

The forks are returned herewith and we would like to have them exchanged. Ten cents is enclosed for postage as this was our error.

Very truly yours,



March 9, 1937

Professor George B. Cressy  
Department of Geology  
Syracuse University  
Syracuse, N. Y.


Dear Professor Cressy:

Mr. R. W. Stauff has asked me to write you in regard to his application for an assistantship in your department. He has taken Physiography of the United States with me and is now taking Mapping, and Glacial Geology. I found that he was a very good student and has made excellent grades up to date. I think you will find that he is a hard worker.

Very truly yours,

FTT:N

F. T. Thwaites



February 8, 1937

Dean G. C. Sellery

South Hall

Dear Dean Sellery:

In reference to the grade of Mr. A. K. Pease in Geology 130 which was "C", - his work showed a very marked improvement in the last third of the semester. He obtained a grade of "B" on both the final examination and the last term examination in December. This was pulled down by the low grades earlier in the semester. I feel sure that if the work had lasted longer he would have been able to raise the grade to "B".

Very truly yours,

P.T.T:H

F. T. Thwaites

October 12, 1936

Mr. W. N. Smith  
Vinegar Hill Zinc Co.,  
Platteville, Wis.

Dear Sir:

A letter from Mr. David M. Delo of the Department of Geology at Lawrence College informs me that he is bringing a class of six to visit some of the mines this next week end. At suggestion of Dr. Leith I am referring him to your office for suggestions as to what to visit.

Yours sincerely,

VINEGAR HILL ZINC COMPANY  
PLATTEVILLE, WISCONSIN

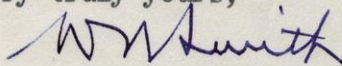
October the 13th, 1936

Prof. F. T. Thwaiter,  
Dept. of Geology,  
University of Wisconsin,  
Madison, Wisconsin

Dear Sir:--

Referring to your letter of October 12th, if Mr. Delo brings his Lawrence College class to the office here we will be glad to give them such suggestions as we can concerning their visit in this district.

Very truly yours,



GENERAL MANAGER

WNS-S

HARRY SAUTHOFF  
2D DISTRICT WISCONSIN

HOME ADDRESS:  
MADISON, WISCONSIN

JULIAN S. EGRE  
SECRETARY

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

COMMITTEES:  
INSULAR AFFAIRS  
PENSIONS  
WORLD WAR VETERANS'  
LEGISLATION

August 17, 1936.

Mr. F. T. Thwaites  
R.F.D. No. 4  
Madison, Wisconsin.

Dear Sir:

In compliance with your recent request I am pleased to send you under separate cover as many as I have been able to secure of the publications listed. The Director of the Geological Survey advises me that most of these publications are no longer available for general distribution, the copies furnished having been withdrawn from a small stock reserved for official use.

I assure you Mr. Sauthoff is happy to be of service whenever possible and it is hoped you will feel free to call upon this office at any time.

Very truly yours,

*Mary F. Lane*

Secretary.

HS:L

Hon. Harry Southoff,  
Member of Congress,  
House Office Bldg.,  
Washington, D. C.

Dear Sir:

I wish to thank you for the last publications  
which you had sent to me.

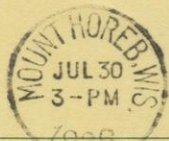
Could you kindly secure for me the following  
publications of the U. S. Geological Survey:

Bulletins 852, 855, 863, 865, and 867.

Water Supply Papers 677 and 679-A, and 680

These will be very greatly appreciated.

Very truly yours,



THIS SIDE OF CARD IS FOR ADDRESS



Mrs. F. T. Thwaites,  
R. F. D. 4,  
Madison, Wisconsin.

Dear Mrs. Thwaites: —

I won't be in town until to-morrow (Friday). But will call you then.

Miss Garfath's address is Pleasantville  
Wis. 70 W<sup>m</sup> Garfath. Her telephone  
number is Cross Plains.

Yours sincerely  
Machilde Schwarz





DEPARTMENT OF STATE  
WASHINGTON

In reply refer to  
PC 592.4 E 3/

July 23, 1936

My dear Mr. Thwaites:

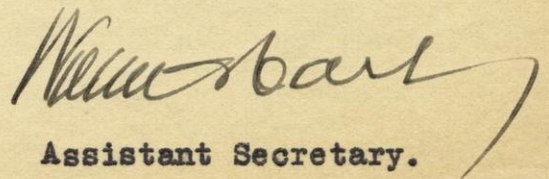
This Government has accepted the invitation of the Austrian Government to participate in the First Conference of the International Quaternary Association which will be held in Vienna early in September 1936.

Consideration is now being given to the composition of the American delegation, and inquiry is being made of several persons whose names have been suggested as to whether they would be prepared to act as official delegates to the Conference without expense to this Government.

It would be appreciated if you would be good enough to inform me by return mail as to whether, in the circumstances, you wish your name to be considered. If so, will you kindly advise me where you may be addressed when the delegation has been organized.

Sincerely yours,

For the Secretary of State:

  
Assistant Secretary.

Frederik T. Thwaites, M.A.,  
Lecturer in Geology,  
University of Wisconsin,  
Madison, Wisconsin.

August 4, 1936

The Secretary of State,  
Washington, D. C.

Refer to PG 592.4 E 3/

Dear Sir:

Reply to yours of July 23 was delayed by the fact that I have been in the field for the past month.

I regret to state that it is quite out of the question for me to attend the First Conference of the International Quaternary Association in Vienna.

I wish to thank you for the opportunity.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

Mr F T Thwaites  
Science Hall

My dear Thwaites: The enclosed papers came while I was out of the city. I judge that there is hope for support for field work and laboratory work in this field of hydrology. I hope such can be brought to pass. I have no suggestion except that if this much desired scheme of cooperation between the several departments interested can be brought about, then I think that the courses offered on page 13 might well be revised so as to dovetail together better and bring about a much closer plan of cooperation and coordination in the instructional program in this field.

Very truly,  
Charles S. Slichter

Charles S. Slichter



*The Angel on Mt. San Jacinto, Palm Springs, California*

© WILLARD

8A-H97

This queer formation of granite, lighter in color than the mountain, may be seen for miles.

November 25<sup>th</sup> 38

Am spending my  
Thanksgiving  
weekend among  
the block mountains  
and filled basins  
of the Southern Cal.  
Desert. Thanks to  
Physiography, the  
season's enjoyment is  
increased 200% - Sanderson



POST CARD

THIS SPACE FOR ADDRESS ONLY



Mr. F. J. Thwaites  
Geology Dept.  
University of Wis.  
Madison, Wis.

COPYRIGHT PHOTOGRAPH BY STEPHEN W. WILLIAMS, PALM SPRINGS, CALIFORNIA

UNIVERSITY MUSEUMS  
UNIVERSITY OF MICHIGAN  
ANN ARBOR, MICHIGAN, U. S. A.

MUSEUM OF ZOOLOGY

January 17, 1939

Dr. F.T.Thwaites  
Madison, Wisconsin.

Dear Dr.Thwaites:

It was kind of you to respond so promptly to my recent request for aid in the solution of a zoogeographical problem. I am glad to inform you that with the help of Dr.Frank Leverett and Dr.Geo.Stanley I have been able to work out a plausible explanation for the conditions revealed by the mussels I am studying.

It was a genuine treat to have occasion to visit with Dr.Leverett who has <sup>a</sup>surprisingly clear and keen mind on matters geological, particularly in view of the fact that physically he is showing age.

When the paper I have just finished is in print I shall send a copy your way. With sincere best wishes, I remain,

Very truly yours,

*Verny van der Schalie*

Jan. 16, 1939

Dr. Henry van der Schalie,  
Museum of Zoology,  
University of Michigan,  
Ann Arbor, Michigan

Dear Dr. van der Schalie:

In reply to yours of Jan. 9, my work has not reached as far west as the headwaters of the Wisconsin River. It is well known, however, that until the ice melted enough to allow of drainage of the Fox River, Green Bay lowland via Lake Michigan to the Chicago outlet, marginal drainage escaped south into Glacial Lake Oshkosh with its outlet at Portage to Wisconsin River. The Peshtigo, Menominee, etc. are very late developments where drainage found new and steeper outlets directly to the very low level of Lake Michigan. However, I have never seen any evidence of life in the Lake Oshkosh sediments except at Shawano where wood is reported. But it is quite likely that life was present in the lake or on its banks long before glacial drainage from the northeast ceased. Another thing to consider is the extensive swamps which have never yet been mapped in detail. Connection between streams through headwater swampy areas, possibly at first shallow lakes, should also be considered. The soils map of northeastern Wisconsin might help in this matter.

I will keep your letter with the manuscript for my report on northeastern Wisconsin and will send you copies of the block diagram historical maps showing stages of ice recession. These have not been started as yet for I lost two months this winter through illness and am not yet able to carry a full schedule of work. However, I have hopes of starting these sometime soon.

Sincerely,

UNIVERSITY OF MICHIGAN  
ANN ARBOR, MICHIGAN, U. S. A.

MUSEUM OF ZOOLOGY

January 9, 1939

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

Dear Dr. Thwaites:

This morning I spoke to Mr. George Stanley of our Geology Department and requested some information about a problem concerning the glacial geology of northeastern Wisconsin. On his suggestion I am writing to you to ask whether there is any information available along the line I am about to suggest.

Recent studies of the fresh-water mussels of Menominee and Dickinson counties have convinced me that in the glacial period there must have been a connection between the waters of the Menominee River drainage and certain headwater streams as we now know them in northeastern Wisconsin. As you perhaps know, such information regarding similar connections between the Mississippi and certain streams such as the Maumee River and perhaps others in western Michigan is now common knowledge. Walker and Ortmann have each contributed toward giving us the faunal significance in the case of the invasion of Mississippian species into southern Michigan.

Though I am convinced that there was a connection between the Menominee drainage (now St. Lawrence drainage) and the headwaters of the Mississippi in northeastern Wisconsin, I would very much appreciate knowing whether the glacial geologists have ever shown that such a connection actually took place in glacial times. Any reference or other information that you could give me regarding this situation would be very much appreciated. I have almost completed my paper discussing the faunal evidence for the invasion of Mississippian species into the Menominee River. Consequently, I would appreciate very much a prompt reply, if this would be convenient for you.

With sincere best wishes, I am,

Very truly yours,

*Henry van der Schalie*

Henry van der Schalie  
Assistant Curator of Molluscs

HvdS:hj



E. C. CASE CHAIRMAN  
HISTORICAL GEOLOGY AND PALEONTOLOGY  
WM. H. HOBBS, PROFESSOR EMERITUS  
I. D. SCOTT, PHYSIOGRAPHICAL GEOLOGY  
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UNIVERSITY OF MICHIGAN  
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DEPARTMENT OF GEOLOGY

L. B. KELLUM, INVERTEBRATE PALEONTOLOGY  
M. W. SENSTIUS, SOIL GEOLOGY  
RALPH L. BELKNAP, GENERAL GEOLOGY  
A. J. EARDLEY, ECONOMIC GEOLOGY  
G. M. STANLEY, GENERAL GEOLOGY  
MARY CALWELL, CUSTODIAN AND SECRETARY

January 3, 1939

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

Dear Professor Thwaites:

Your mention of Caribous Island, Lake Superior and the difficulty of obtaining data prompts me to write again. I was there in 1931. The island exposes no bed rock that I saw evidence of, though I didn't go completely around the shore. I very much doubt if there are any outcroppings anywhere. The people who put in the lighthouse might know better, though. Caribou Island is low and marshy in many places. The highest points are the peaks of small, arrested dunes, only 25 to 30 feet above the lake, as I recall. I was interested in determining that no point was anywhere near high enough to have been even awash in the Nipissing stage of the lake. Possibly I should say only that the Nipissing water plane passes 20 or 30 feet above the peaks of the dunes mentioned. We found frogs there which have somehow arrived at this truly desolate spot since its post-Nipissing emergence.

I am very sorry indeed about your long illness and hope you <sup>will be</sup> rapidly well again.

Sincerely yours,

*George M. Stanley*

----- 41 Roby Road

Jan 7, 1939

Prof. George M. Stanley,  
University of Michigan,  
Ann Arbor, Michigan

Dear Prof. Stanley:

I wish to thank you for yours of the third. The data on Caribou Island will save a long and expensive journey there. Irving mapped it as sandstone, Leith as trap. I had him change it back as information from a Canadian student was that it is underlain by St. Marys sandstone. I take it this is the red sandstone in which it is commonly hard to find the true dip. I expect to have a student start his doctors thesis on the relation of this red sandstone to the known Cambrian next summer. This will be a continuation of work started by me in Wisconsin in 1910. I understand from Bergquist that none of the Michigan people are working on this problem.

I went back to work this week although I must be careful not to overdo for a long time yet.

Sincerely,

E. C. CASE CHAIRMAN  
HISTORICAL GEOLOGY AND PALEONTOLOGY  
WM. H. HOBBS, PROFESSOR EMERITUS  
I. D. SCOTT, PHYSIOGRAPHICAL GEOLOGY  
T. S. LOVERING, ECONOMIC GEOLOGY  
R. C. HUSSEY, HISTORICAL GEOLOGY  
G. M. EHLERS, INVERTEBRATE PALEONTOLOGY

UNIVERSITY OF MICHIGAN  
ANN ARBOR  
DEPARTMENT OF GEOLOGY

L. B. KELLUM, INVERTEBRATE PALEONTOLOGY  
M. W. SENSTIUS, SOIL GEOLOGY  
RALPH L. BELKNAP, GENERAL GEOLOGY  
A. J. EARDLEY, ECONOMIC GEOLOGY  
G. M. STANLEY, GENERAL GEOLOGY  
MARY CALWELL, CUSTODIAN AND SECRETARY

December 28, 1938

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

Dear Professor Thwaites:

Answering your question in the letter of December 22nd, no one that I know could feel slighted by your publishing on the sub-lacustrine physiography of the upper lakes. I am sure that I will be very interested although I don't clearly understand from your letter whether or not you include topography of drift-buried bed rock, since you mention well records. Concerning sub-lacustrine matters in Lake Superior - I have traced an old beach surface on Isle Royale which must be well beneath lake level in western Lake Superior. Its elevation over northeastern Isle Royale is 775 and it declines 2.6 feet per mile to el. 682 at the southwest end of the island where it is only 30 feet above the Nipissing (tilt 0.5 ft./ml.). I will call this beach and waterplane "Minong" when I publish on it. It seems almost a certainty that, if traced farther west, this beach would pass beneath the Nipissing and beneath the present lake. It probably figures somewhere with Wilson's "Nipissing" flora of the Apostle Islands, where I estimate the Minong beach would be between 100 and 150 feet below present lake level. The tracing mentioned on Isle Royale was done with great care and innumerable levelling trips, and was checked by similar studies on Keweenaw and Thunder Bay shores.

Bill Powers when here last year was asking about a possible connection of my Mackinac valley with the low stage implied by Two Creeks. According to Taylor's history I don't see ~~where~~ a corresponding stage of low water and ice retreat existed in the Huron basin. As I understand it, the Two Creeks forest bed interval came about the time of Lake Arkona in the Huron basin. None of the three described stages of L. Arkona were low enough to anywhere near accommodate the forest bed low level. It quite puzzles me. Possibly you may be able to enlighten me with some hunches, if not by additional facts. Possibly the submerged Mackinac valley was in fluvial operation during the Two Creeks interval. It would have been better to mention it as a possibility. Thanks for your reminder and for your welcome letter.

With most sincere regards,

*George M. Stanley*

George M. Stanley

----- 41 Roby Road

Prof. George M. Stanley,  
University of Michigan,  
Ann Arbor, Michigan

Dec. 30, 1938

Dear Prof. Stanley:

I wish to thank you for yours of Dec. 28

The paper which I had in mind would deal with the submerged coasts of Lakes Huron and Michigan. The former have been known for a long time although I never found any mention in print. Michigan is much more complicated due to the Devonian and Mississippian overlaps. You know the paleontologists claim that the Mississippian is present at Milwaukee. I was counting on using Neil Roberts to identify the strata below the lakes. Lake Superior maybe had better wait until I get more data on Caribou Island. I just can't find out anything about that isolate spot, that is about its geology and structure. But the peculiar holes and knobs of the eastern syncline are remarkably like those on the Salina in both Michigan and Huron. I often wonder if there may be late Keeweenaw salt beds.

However, I am just recovering from a two months illness which set back all projects terribly so I do not have any idea when I can get at this project.

With regard to the Forest Bed I wonder if you have read all of Wilson's and my papers on it. It is overlain by red till which is covered by lake sediments some of which may be as old as the Calumet beach (have not leveled the supposed beach gravel yet.) The age must be pre-red till and post-Gary. This entire matter has been confused in the past by the old idea that all glaciers deposited moraines. Up to date I have not yet found a red till moraine; all ridges are buried Gary moraines. So I wonder about the Port Huron moraine etc. Anyhow, the deep drowned valleys of southeastern Wisconsin seem to be post-Gary and pre-red drift. (I do not call this Markato for it may be either younger or older) The buried forest extends down to or below the present level of Lake Michigan. So I feel that it is assured that during this recession (pre-red till) the Straits were free of ice and very likely the water level was low there.

I could ramble on indefinitely but the doctor tells me to "take it easy" for some time to come besides the revision of the "Outline" for a new edition and a lot of other pressing matters still wait. School begins Tuesday and I should save my strength for that.

With best regards,  
Sincerely,

# SOCONY-VACUUM OIL COMPANY

INCORPORATED

26 BROADWAY

NEW YORK October 31, 1938

INDUSTRIAL RELATIONS  
C. R. DOOLEY, MANAGER

Subject: Joseph T. Drindak,  
1226 West Dayton Street,  
Madison, Wis.

Dr. F. T. Thwaites,  
Science Hall,  
University of Wisconsin,  
Madison, Wis.

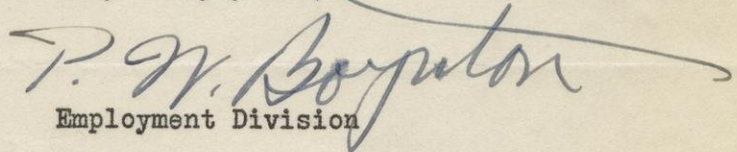
Dear Dr. Thwaites:

In applying for a position with this Company, the above person has given your name as a personal reference.

We shall be grateful for your opinion as to the ability, personality, character, general background, and any special points of strength or weakness, which should be taken into consideration in placing this applicant in our organization.

Any information which you offer will, of course, be treated as strictly confidential and we shall appreciate your frank reply in the enclosed stamped envelope.

Very truly yours,

  
Employment Division

In reply to yours of Oct 31  
Mr. Boudak has a good record here for  
faithful and dependable work. I have no hesitation in  
recommending him very highly. His personality is good  
and he seems to get along well with others both in the office and in the  
field.

Subject: Joseph T. Boudak  
1330 West Dayton Street,  
Madison, Wis.

Dr. F. T. Twissler,  
Science Hall,  
University of Wisconsin,  
Madison, Wis.

Dear Dr. Twissler:

In applying for a position with this Company, the  
above person has given your name as a personal reference.

We shall be grateful for your opinion as to the  
ability, personality, character, general background, and any  
special points of strength or weakness, which should be taken  
into consideration in placing this applicant in our organiza-  
tion.

Any information which you offer will, of course,  
be treated as strictly confidential and we shall appreciate  
your frank reply in the enclosed stamped envelope.

Very truly yours,

J. M. Boudak  
Employment Division

November 3, 1938

Mr. P. W. Boynton  
Employment Division  
Socony-Vacuum Oil Company  
26 Broadway  
New York, New York

Dear Sir:

In reply to yours of October 31, Mr. Drindak has a good record here for faithful and dependable work. I have no hesitation in recommending him very highly. His personality is good and he seems to get along well with the others both in the office and in the field.

Very truly yours,

Dr. F. T. Thwaites

ftt/ed

----- 41 Roby Road

Dec. 22, 1938

Prof. George M. Stanley,  
University of Michigan,  
Ann Arbor, Michigan

Dear Prof. Stanley:

I wish to thank you for the copy of "The submerged valley through Mackinac Straits" which came recently, and I read with great interest. I had recently spotted this valley while contouring charts of Lakes Huron and Michigan.

May I suggest that there was another low water stage at the time of the Two Creeks Forest Bed. The valley might have survived the rather thin drift deposited since.

I have been wondering about a paper on the sublacustrine physiography of Lakes Superior, Huron, and Michigan. The submerged escarpments would be worked out by my well records in Wisconsin plus deep tests in Michigan. Would I be treading on anyone's toes to undertake such a paper?

Sincerely,



Feb. 11, 1939

Mr. Clyde Strachan,  
1632 S. Troost St.,  
Tulsa, Oklahoma

Dear Clyde:

"We have been intending to write you for over a year and offer congratulations on the new member of your family.

But my mother was very ill for many months and passed away last August. Right after that it became evident that secret moves were being made to oust us from control in the corporation which owned the place at Turvillwood. It ended in Harry Turvill buying us out. Apparently our absence was worth a lot of money to him!

Just as we started to move to town, for we closed a deal for this house at once, I was taken ill and missed six weeks of classes. Amy had to attend to all the moving and buying the house.

But now I am feeling much better and the house is paid for. We really find so much more time and effort available here that we can actually begin answering letters!

Best regards from both of us,

Sincerely,

~~XXXXXX~~ 41 Roby Road

May 17, 1939

Mr. Gordon N. Mackenzie, Director,  
Summer Laboratory School,  
Department of Education,  
University of Wisconsin,  
Madison, Wisconsin.

Dear Sir:

Inclosed please find check in  
the amount of \$15.00 in payment of the  
fee for Thomas and William Thwaites.

Yours very truly,

Amy M. Thwaites.

GOVERNOR'S MANSION, BATON ROUGE, LA.—1



Tues. Eve.

Greetings:

Have just  
visited Huey  
Long's beautiful  
memorial grave  
in front of the  
new capital.

Having a most  
interesting trip —  
Edelle <sup>Stinson</sup> Margaret



PHOTO BY GARRIS NEWS AGENCY, BATON ROUGE, LA.

POST  
CARD



Mrs. Fred. Thwaites  
Summit Ave.  
Madison, Wis.

41 Roby Road

Standard Oil Co. (Indiana,  
910 S. Michigan Ave.,  
Chicago, Illinois

Attention Mr. F. T. Graham, Secretary.

Gentlemen:

In reply to yours of the 11th the two certificates belong to the same persons. The "Mrs." was omitted on the first one we purchased.

We will greatly appreciate having only one check.

Our certificates are numbered 0188718 for 14 shares, bought Sept. 29, 1937 and rescued May 8, 1939 with correction to spelling and ~~87/8~~ 0193232 for 11 shares bought July 31, 1939

# STANDARD OIL COMPANY

(INDIANA)

910 SOUTH MICHIGAN AVENUE

F. T. GRAHAM,  
SECRETARY

CHICAGO, ILL. August 11, 1939

Fredrik T. Thwaites and Amy M.  
Thwaites as joint tenants, etc.,  
41 Roby Road,  
Madison, Wis.

Dear Sir and Madam:

Our records of registered holders of capital stock of this company indicate we are carrying an account for Fredrik T. Thwaites and Amy M. Thwaites as joint tenants with right of survivorship, etc., with an address as shown above.

On a recent stock transfer we were given the name of Fredrik T. Thwaites and Mrs. Amy M. Thwaites as jt. ten. etc., at the same address. Will you kindly advise if this is one and the same account?

To obviate the possibility of error, verify our records and eliminate the necessity of issuing two dividend checks each dividend period, for your account, kindly advise us the numbers of your stock certificates and the respective number of shares of each.

We will appreciate an early reply which will enable us to protect your interests as a stockholder of this company.

Yours very truly,

*F. T. Graham*  
Secretary

REF:k

Oct. 16, 1939

Prof. C. R. Stauffer,  
Dept. of Geology,  
University of Minnesota,  
Minneapolis, Minnesota

Dear Prof. Stauffer:

I have been meaning for several days to thank you for the separate of your paper on the St. Croixian Classification of Minnesota. However, I wanted to discuss certain statements therein so waited until I had more time.

In the first place I am much pleased with the essential unity of opinion as to formational names which now seems to prevail throughout four states. I want also to say that certain of the views in the paper I wrote with Messrs. Trenchard and Raasch were forced on me against my personal judgment. I simply HAD to agree to go anything published and so kept still.

I want to make it clear that the Minnesota names for formations were forced on the Wisconsin people as a result of a very brief field conference of Ulrich, Sardeson, Weidman and Hotchkiss in the fall of 1913. He alone was responsible for fixing the line of division between what he called Franconia and what he then called St. Lawrence, also for the apparent misunderstanding of the limits of the Drosbach as first defined. This is the explanation of some of the statements on pp. 1231 and 1232.

In respect to the column ascribed by me to the 1932 geological map of Minnesota it should be realized that any errors of interpretation I may have made were entirely unintentional. It was our understanding at that time that the term Hinckley was a synonym for Mt. Simon. I am glad to see that we are now in agreement and wish to express regrets for any misinterpretation of the column which I made.

In regard to the subsurface correlation in the Twin City district, however, I am confident that the term Franconia has been applied to beds which we would call Galesville farther southeast. It is true that original Franconia is free of glauconite and is white. Also the Galesville seems to be thin or absent although present at New Richmond and I think to the west of there. But I feel that the type locality is a shore phase and it certainly is far too thick to be normal. For this and other reasons I would have preferred the abandonment of the name Franconia. You should be able to place the base in wells by the coarse, ill-assorted character of the Ironston member. I use this in many places where there is little or no glauconite in the basal Franconia.

I quite agree with your desire to keep the term Jordan. I never did like the extension of the name Trempealeau upward to include beds not intended by the original definition although it is true that in the subsurface extension down the dip this entire interval becomes so dolomitic that subdivision is very difficult.

On well record logs I now give alternative names at the bottom. Let's hope this can soon be abandoned. Above all I want to congratulate you on the wise decision not to rush into print long ago.

Sincerely,

UNIVERSITY OF MINNESOTA  
COLLEGE OF SCIENCE, LITERATURE, AND THE ARTS  
MINNEAPOLIS

DEPARTMENT OF GEOLOGY AND MINERALOGY

October 18, 1939

Dr. F. T. Thwaites  
Department of Geology  
University of Wisconsin  
Madison, Wisconsin

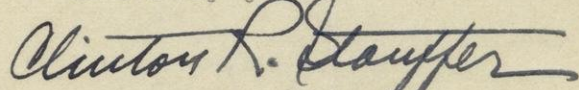
Dear Dr. Thwaites:

We appreciate your kind letter of recent date and are glad you feel as we do, that every effort should be made to keep the classification of our St. Croixian series in the Upper Mississippi as nearly uniform as possible. It has been our opinion too that Dr. Ulrich was responsible for confusing the classification by introducing variations and misusing terms with insufficient support for the innovations. Of course, we all recognize the experience and respect the judgement of Dr. Ulrich. That is what has made it so difficult to oppose the changes. Some of them, however, we just cannot use and others that might do seem to us without sufficient justification.

The Kansas Geological Society Guide Book dealt as harshly as possible with the raw materials we supplied them. It was not possible for me to prepare it at the time and we never had an opportunity to check their manuscript after it had been prepared; consequently we do not regard ourselves responsible for any part of the stratigraphy pertaining to Minnesota.

In regard to subsurface correlation in the Twin City district where Dr. Thiel has been applying the new classification to well cuttings he now places the coarse grained white sandstone, formerly included in the Franconia by Dr. Schwartz, in the Galesville. This, I think, is in agreement with your usage. Down the river there are excellent outcrops, up to twenty or more feet, of Galesville but we are suspicious that much or all of it is fossiliferous. We have found fossil fragments in the Galesville <sup>at the</sup> type locality.

Sincerely yours

  
Clinton R. Stauffer

CRS/LB



~~41 Roby Road~~ 41 Roby Road

Nov. 3, 1939

Miss Lucile Smith,  
28 or 38 S. Marquette St.,  
Madison, Wisconsin

Dear Peggy:

Fern's operation has been postponed to the middle of next week but I will make it all right with you for waiting. Will let you know just when it will be. She will undoubtedly be away until after the first of the year.

Sincerely,

*Thos. J. Harter*

XXXXXXX 41 Roby Road

October 31, 1939

Miss Lucille Smith,  
38 or 28 South Marquette Street,  
Madison, Wisconsin.

Dear Peggy:

A few minutes ago I learned that you were looking for a job. It so happens that Fern is to have an operation next week and I am looking for some one to help me while she is gone. Would you be interested in the position? If so, please call me and tell me what salary you would expect. I shall be at the dentist tomorrow morning and shall have to leave the house a little before nine.

Yours very truly,

Mrs. F. T. Thwaites

Phone: Gifford 1178

Osage, Iowa  
Aug. 8, 1939

My dear Mrs. Thwaites.

I tried to get in touch with you before leaving Madison, but was unable to do so.

I promised to call & tell you about Thomas' test results. He met down about  $\frac{1}{2}$  to 1 point in 2 of the tests, but came

others about him.

Tommy is highly intelligent and if his interest in reading can be increased and if he will feel the need to read I'm sure he will get along very well.

We enjoyed working with him and were only sorry the time was so short.

Sincerely yours,  
Ruby Schuyler

up in the last test, which is paragraph meaning. This made his final score about the same as the first test.

Needless to say we were disappointed in the results as we had felt we could see improvement in Tommy's work. He does not do so well in a test situation, because of poor concentration in a group. He is easily distracted by

~~ADDRESS~~ 41 Roby Road,

Jan. 13, 1940

Sears, Roebuck and Co.,  
925 So. Woman Ave.,  
Chicago, Illinois

Gentlemen:

I am returning herewith papers in re my order of  
Dec. 20, 1939

You will please note that although 35 cents was  
retained for postage the table was not knocked down  
for shipment but was sent by express in a large carton.

Will you please adjust the matter.

Very truly yours,

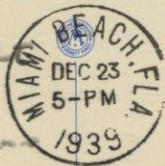
*Shipped from Batavia - Geneva*

*Order # 4774/*

D6 MOONLIGHT OVER BISCAYNE BAY MIAMI, FLORIDA



# POST CARD



MADE IN U.S.A.

Mrs. Fred Thwaites  
41 Roly Rd  
Madison, Wis.

We drove up here  
with the car last night  
and watched the  
moon light - Virginia  
car on the beach this  
morning - so many  
children with their  
walking suits or sand pants -  
and "you all" were here.  
Ed has gone deep sea  
fishing - we saw the  
Governor - British battleship  
when he was in Ft. Lauderdale -  
are in Miami.

45156 THIS SPACE FOR WRITING

THIS SIDE IS FOR THE ADDRESS

PRINTED BY THE DADE COUNTY NEWSDEALERS SUPPLY CO., MIAMI, FLA.

XXXXXXXX 41 Roby Road,

Jan. 23, 1940

Sears, Roebuck and Co.,  
Chicago, Illinois

Gentlemen:

It looks as though I had mixed up things by writing too soon about the refund of 35 cents for I then received two checks for it.

Enclosed please find one of the checks and both of the letters.

Very truly yours,





# Cradle Roll Promotion Certificate

*This Certifies That*

**Robert Gerald Thwaites**

*is promoted from the Cradle Roll Department to the*

**Beginners Department**

*of the Christ Presbyterian Church School of Madison, Wis. Date October 2, 1939*

*Mrs. Richard M. Rhode*  
Superintendent Cradle Roll Department

*Louise Benckenstein*  
Superintendent

*Edwin O. Kennedy*  
Pastor

