



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

Correspondence re: Michigan Academy of Science, Arts, and Letters. 1933-1948

Thwaites, F. T. (Fredrik Turville), 1883-1961
[s.l.]: [s.n.], 1933-1948

<https://digital.library.wisc.edu/1711.dl/4QKKQNPRSMX528L>

<http://rightsstatements.org/vocab/UND/1.0/>

For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

June 28, 1933

Prof. E. S. McCartney,
Graduate School Publications,
University of Michigan,
Ann Arbor, Michigan

Dear Prof. McCartney:

In reply to yours of June 24 which finds me numbered among the unemployed but not idle for the summer at least, I received a letter from A. H. Stockard, Acting Editor on May 18 saying that the paper would not be published unless I paid the dues to the Academy. Accordingly I forwarded one dollar cash to Prof. Young on May 31. I have never received any acknowledgment of this but as you do not mention the matter am presuming that it was received.

With regard to the manuscript the same was written and forwarded during the later but unlamented Moratorium. Any shortcomings which got by both me and Mrs. Thwaites who edited the publications of the Wisconsin Geological Survey for several years, can be charged to that circumstance.

My full name is Fredrik Tuxville Thwaites which can be given as Fredrik T. Thwaites. Please note the spelling of Fredrik.

Page 1, line 1. Correction approved.

Page 1, lines 5-7. I do not approve any change. We regard this wording as satisfactory.

Page 1, line 10. The terms "Eastern Sandstone" and "Western sandstone" should be quoted unless mentioned in a direct copy of the original. The same applies to "Calceiferous".

Pages 2, 4, and 5. Corrections approved.

Page 6. It seems to us that "on solution" is satisfactory.

Page 7, 10 and 12. Change second "for the most part" to "mainly".

Page 8, etc. The placing of the term "well" after the name of owner facilitates indexing and is in line with the practice of the oil companies. For instance "Continental Oil Co.'s (well) No. 1 Hove" However please be free to change if you think best.

Page 12, line 5. Change "there" to "in that region".

Page 12, Correction approved.

Page 13, last line and 14, first line. Change to "If the correlation of these beds which is suggested on the section" and change "suggestion" to "hypothesis."

Page 12. This was admittedly a bad slip of ours. Change to "reaches a maximum thickness of 210 feet and is locally absent"

Page 14. You may omit the words "seem to" if you desire.

Please do not forget note 13 which is a quotation from a letter from Dr. Hotchkiss and was sent in later than the manuscript itself.

The illustrations can be reduced very greatly. Do not attempt to fit the ends together. It would be better to put one above the other.

Any other questions you may have will be gladly taken up.

Very truly yours,

J. T. Flaxton

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. McCARTNEY
EDITOR

4201 ANGELL HALL

(MRS.) HILDA S. JACKSON
ASSISTANT EDITOR

June 24, 1933

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

Dear Professor Thwaites:

I have the job of preparing the Michigan Academy papers for the printers. Since there are eight or nine subjects and some thirty-five authors, the task of getting neatness and good form is rather onerous. I have to get in touch with almost every author.

May I ask you to fill out one or both of the initials of your name? This is to enable us to secure better and more consistent running heads. We get better balance between the running heads on facing pages. Spelling out one or both first names is fixed part of our style-sheet. It is too late to make exceptions now.

OK Page 1, line 1. Would it not be better to say that "the writer was assigned the problem," instead of being assigned to the problem?

Do not OK change 1.5-7. Is not this sentence too condensed: "It was found that the solution of this problem....does not lie in Wisconsin....? It seems to me that the things which lay not in Wisconsin but elsewhere were the rocks and formations which provided the solution. (I pride myself on not being captious.)"

OK 1.10. In such expressions as "Irving's Western Sandstone" I see nothing to do but put "Western Sandstone" in quotes.

OK 2. On this page there are two occurrences of the word "Caloiferous" without quotes. The manual of the United States Geological Survey says that this name is permissible as a subdivision of the Ordovician only if put in quotation marks. I notice that Smith conforms to this usage in Publication 24. If it is not a subdivision of the O., it should begin in lower case.

OK 4, 8 lines from bottom. "deducing rapidly varying thicknesses of the underlying formations." Would not "for" be more accurate than "of"? They are not the actual thicknesses.

OK 5. Since Section, township, and range are seldom given I should like to omit "Section, Township, and Range" from the heading, but to be specific farther down. In that case "16, 38, 26" would be expanded thus: Sec. 16, T. 38, R. 26. So many authors have used this method that I have made it a part of the style-sheet.

No change 6. "On solution in hydrochloric acid a considerable residue of shale is obtained." Do chemists use "on solution" in this way? It seems to me to be a little unnatural. At all events there is nothing for "on solution" to modify except "residue". Is not the sentence too condensed?

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. McCARTNEY
EDITOR

4201 ANGELL HALL

(MRS.) HILDA S. JACKSON
ASSISTANT EDITOR

Professor Thwaites #2

June 24, 1933

7. 12 and 10 lines from bottom. "for the most part" is repeated. It would be easy to avoid this. *change second to "namely"*

8 and elsewhere. In the headings there are several cumbersome compound adjectival expressions which modify "well"; for example:

MENOMINEE AND MARINETTE LIGHT AND TRACTION CO. WELL!!!!

change of demand May we not avoid this cumbersomeness by such expressions as:

Log of well of Menominee etc.?

12.5. "There a division is possible...." The geology editor wants to know what "there" means. Could it not be made definite?

in that region
12. I am using quotes instead of italics to call attention to special uses of words. You created two problems on page 13:

The term *quite eastern sandstone* *western sandstone* Jacobsville sandstone

termed the Bayfield group

In such expressions I can neither italicize nor quote just the proper names. I shall have to write

The term "Jacobsville sandstone" *OK*

or else use some alternative phrasing, such as

The term "Jacobsville" as applied to sandstone....

The other difficulty might be obviated as follow:

...a group which the writer termed "Bayfield."

This is not a captious criticism.

If the conclusion which was suggested in the section of these beds
13, last line, and 14, first line. The repetition in "suggested" and "suggestion" should be avoided.

hypothesis
12. "The thickness ... ranges from nothing to 210 feet." Expressions like this are severely criticized by the Government editors. The Dressbach could not separate things where it has no thickness, or--where it does not exist. The range must begin with something rather than with nothing. Some geologists never grasp the point of this criticism.

reaches a maximum of and is locally absent

The Sandstone-peridotite contact, Presque Isle, Marquette, Mich.

The exposures of the contact of the Jacobsville formation of the Lake Superior sandstone, with the peridotite on Presque Isle near Marquette (Sec. 1, T40N, R25W), Michigan were re-examined on July 30 and 31, 1951 by T. R. Walker and F. T. Thwaites. The problem is whether the contact is unconformable or intrusive. The exposures at the north end of the point were gone over briefly without finding any decisive evidence. Early on the morning of the next day the southeast cove was reached from a boat with an outboard motor and two landings were made in sea caves at the base. Photo 2465 is looking north over this cove. Photos 2466 and 2467 are both at the north end. Evidences on the nature of contact may be classified as: (1) debris of peridotite in the sandstone, (2) overlap or pinching out of sandstone strata on the underlying rock, (3) angle of dip of the sandstone, and (4) relation of veins in the peridotite to the overlying sediment.

(1) Within a few minutes of arrival a pebble of peridotite an inch in diameter was discovered in the sandstone at the end of the breakwater not far from the prominent bleached joint with slight copper carbonate mineralization. Although the upper or "mineralized" zone of the peridotite makes abundant pebbles on the modern beach such are very rare in the basal conglomerate of the sandstone. This may be due to the angular, talus-like nature of this deposit, which is probably non-marine, despite some small oscillation ripple marks, and the lack of steep cliffs in the peridotite. Abundant green-grey sandstone colored by grains of peridotite occurs in the northernmost exposure of the sandstone in the southeast cove. See photo 2472. Relations are therefore, distinctly like those of the basal Upper Cambrian sandstone of the vicinity of Nekoosa, Wisconsin.

(2) At the north end of the point there is no distinct overlap or pinching out of the conglomerate against the peridotite. However, the

relations not far north of where the sandstone reaches the water's edge in the southeastern cove are shown in Photo 2470. Here the conglomerate thins out against the underlying peridotite, a matter of two or three feet. This point could not be reached but is plainly seen from a boat.

(3) From the top of the cliff at the southeast cove the dip of the sandstone appears to be quite steep, possibly as much as 30 degrees. But from a boat as shown in Photos 2468 and 2469 the actual dip varies from 8 to 11 degrees, far less than that of many foreset beds of cross bedding. The issue is confused by two faults which strike west of north. The southern fault is shown in Photo 2471. The amount of movement is undeterminable on account of vegetation but cannot be less than 20 feet. The sandstone here shows a marked drag along the fault. The space between the two faults has sandstone which curves down below water level as shown in Photo 2472. Sandstone is absent northeast of the fault so that the displacement is at least the height of the cliff or about 100 feet as per the U.S.G.S. map. It is possible that these phenomena were mistaken for a dike by one early geologist. It is likely that the entire peridotite mass has been locally uplifted since the deposition of the sandstone so that none of the observed dips are original.

(4) Although in the exposures which can be reached from the land the veins of the serpentized peridotite are not beveled by the conglomerate Photo 2470 shows that in the southeastern cove this is not true and a pronounced erosional break is demonstrated.

Conclusion. The evidences given above leave no doubt whatever that the sandstone is unconformable on the altered peridotite. Hence, no evidence of the age of the sandstone is afforded by these phenomena. The problem here was much confused both by the rarity of peridotite debris in the sandstone and the presence of faulting which was not previously observed. The faults probably trend parallel to the bleached joint at the head of the breakwater, about course

Faults in S.S. & J. after cuts peridotite

350. This strike would bring them out close to the northeastern end of the conglomerate at the north end of the point. They are probably concealed under some of the small coves there and account for some of the peculiar features observed at that point. A dike in the peridotite is reported there but was not observed on this visit. The granite on the west side of the island was not visited.

October 19, 1948

Mr. E. S. McCartney
4201 Angell Hall
University of Michigan
Ann Arbor, Michigan

Dear Mr. McCartney:

Enclosed please find proof sent with yours of the 16th. There are two mistakes I failed to spot before.

Page 247 substitute word near for "Lake", thus avoiding having to reset any more lines.

The mistake on page 250 of 1919 for 1918 is not important and could be let go.

Very truly yours,

F. T. Thwaites

FTT:EWM
Enc.

Michigan

UNIVERSITY OF MICHIGAN
ANN ARBOR

October 16, 1948

Dear Professor Thwaites:

Please give your page proof a final check and return it to me as soon as possible. It is hardly probable that the volume will be out before January. Breaking in a new printer has been a ^{gross} source of delay, but many other delays have been both needless and exasperating.

Very truly yours,

E. M. Cartney

4201 Angell Hall,
Univ. Michigan

Enclosed please find proof
sent with yours of the 16th
There are two mistakes I failed
to spot before.

p 247 substitute word

near for "Lake" then
avoiding having to reset any more
lines.

The mistake on p 250

of 1919 for 1918 is not
important and could be let go

March 30, 1942

* Prof. G. M. Ehlers,
Dept. of Geology,
University of Michigan,
Ann Arbor, Michigan

Dear Prof. Ehlers:

In response to your request to Prof. Zinn I am enclosing manuscript copy of my paper which he read for me at the recent meeting of the Michigan Academy. You are welcome to keep this as I now have another copy. Any corrections or suggestions will be greatly appreciated.

Sincerely,

March 30, 1942

Prof. S. G. Bergquist,
Dept. of Geology,
Michigan State College,
East Lansing, Michigan

Dear Prof. Bergquist:

In response to your request to Prof. Rinn at the recent meeting of the Michigan Academy I am enclosing a manuscript copy of my paper which he read there. You may keep this as I now have another copy. If you have any corrections or suggestions I will be pleased to have them.

Sincerely,

UNIVERSITY OF MICHIGAN
ANN ARBOR
DEPARTMENT OF BOTANY

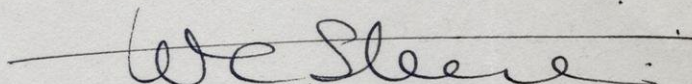
March 19, 1942

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

Dear Dr. Thwaites:

Thank you for the interesting manuscript entitled "Stratigraphic Work in Northern Michigan, 1933-1941," which has just reached me. It will be submitted at once to the other members of the Editorial Board of the Michigan Academy, and you will be notified of our decision as soon as possible.

Sincerely yours,

A handwritten signature in cursive script, reading "W. C. Steere". The signature is written in dark ink and is positioned above the typed name and title.

William C. Steere
Editor, Michigan Academy

March 17, 1942

Prof. W. C. Steere,
Dept. of Botany,
University of Michigan,
Ann Arbor, Michigan

Dear Sir:

Enclosed please find manuscript for paper which
Dr. Zinn read for me at the Academy meetings, entitled
Stratigraphic work in northern Michigan, 1933-1941.
I trust it is in shape to be received. I tried my best
to follow your typography insofar as I had examples to
show it. Figure 1 might have the title left out and
set in type instead.

Very truly yours,

March 17, 1942

Prof. Justin Zinn,
Dept. of Geology and Geography,
Michigan State College,
East Lansing, Michigan

Dear Prof. Zinn:

Yours of the 16th with enclosed ms at hand
and I wish to thank you for reading it. I will send
revised carbon to Bergquist as soon as I can. Just
now sending in the white paper copy to Prof. Steere
is at head of the "priority list."

I am glad some found the paper of interest.

Sincerely,

MICHIGAN STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
EAST LANSING

APPLIED SCIENCE DIVISION
DEPARTMENT OF GEOLOGY AND GEOGRAPHY

March 16, 1942

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

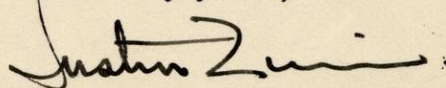
Dear Mr. Thwaites:

I read your paper before the section Saturday morning and received only favorable comment on it. Everyone appreciated the number of unsolved problems in the Upper Peninsula and were quite interested in having someone trace the better known Cambrian section of Wisconsin into the Lake Superior area.

You are to send your manuscript and plates to W. C. Steere, Department of Botany at the University before Saturday, March 21, because that is now the dead line for turning in papers to the editor. Bergquist and Ehlers are especially anxious to get copies of your paper so if you happen to have extra copies of your manuscript they would greatly appreciate receiving them. Bergquist wanted to borrow the copy you sent me long enough to have the stenographer type a copy but in all probability you wish to see it for your final draft so I am sending it on now.

I enjoy hearing from the Wisconsin group and I want you to extend to the rest of them my regards and best wishes.

Sincerely yours,



Justin Zimm

JZ:EK

Enc.

MICHIGAN STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
EAST LANSING

APPLIED SCIENCE DIVISION
DEPARTMENT OF GEOLOGY AND GEOGRAPHY

January 17, 1942

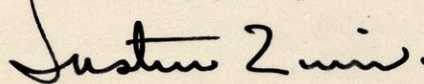
Mr. F. W. Thwaites
41 Roby Road
Madison, Wisconsin

Dear Thwaites:

I am very pleased to accept a paper from you even though it will be impossible for you to attend the meetings. It will not be difficult to have your paper read by someone else and it will be an interesting contribution. So send it along.

I trust you and your family are in good health. I would like to visit Madison again but it never seems to be possible for me to do so. However, the department undoubtedly still lives on and I imagine Science Hall still looks pretty much the same except for some new faces.

Sincerely yours,



Justin Zinn

JZ:EK

March 10, 1942

Prof. Justin Zinn,
Dept. of Geology and Geography,
Michigan State College,
East Lansing, Michigan

Dear Prof. Zinn:

Enclosed is the promised manuscript for the Academy meetings. Sorry I cannot be present but that is out of the question. This is the second draft and I would like it back if convenient. I am getting a copy made on white paper for the editor. I will also send him the originals of the two figures. It was too bad I had no time to get lantern slides. I had some ready once but when Bays left it looks as if he took them and they were broken in shipping so we could never check up.

Science Hall is thinning out fast with boys leaving every day for army or navy.

Sincerely,

progressively thinning out around the northern end of the Michigan basin.

(7) The age of the sandstone which the older geologists thought to lie unconformably on the traps of the South Range of Keweenawan ~~traps~~ may be Lower Keweenawan not ~~either~~ Jacobsville or Cambrian.

(8) The writer hopes that he may return to this long-neglected district but if not that others may conclude the work he began. If these persons find the foregoing suggestions an aid they will have filled their purpose.

Madison, Wisconsin, March 9, 1942

Jan. 15, 1942

Prof. Justin Zinn,
Dept. of Geology and Geography,
Michigan State College,
East Lansing, Michigan

Dear Sir:

I am sending in title of a paper which I started once before but could not complete. It is aimed to present information on Paleozoic stratigraphy of the Northern Peninsula which I obtained between 1933 and the present, mainly some well records and work at Limestone Mountain.

However, I cannot possibly attend the meetings so if it is not possible for someone else to present the paper please notify me and tear up the application.

Very truly yours,

Section of Geology and Mineralogy
Michigan Academy of Science
December 30, 1941

Dear Member:

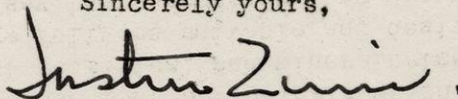
This year the meetings of the Michigan Academy of Science, Arts and Letters will be held at Ann Arbor on March 13 and 14. As chairman of the Section of Geology and Mineralogy, it is necessary for me to arrange a program for these meetings and to have that program completed and in the hands of the secretary by January 28. Therefore, it is time now that all of us consider the preparation of a paper for our portion of the Academy program. To present a full program we should have at least twenty-five papers.

Articles suitable for the Academy meetings are not limited to those prepared by members. Graduate students or other geologists and mineralogists working in the state may read their papers at the meetings. However, only those presented by members may be published by the Academy. Non-members may join up to the last day of the meetings by payment of the annual membership fee. These individuals should be urged to join this society and to take an active part in its activities.

Although there are numerous periodicals which are devoted to publishing the results of geological and mineralogical research, the Academy publications are fully as suitable and desirable for such publication. I would say that papers dealing essentially with Michigan problems, especially those of some interest outside geological circles, would be logically published in the Academy proceedings.

Inclosed is a blank for your convenience in submitting the details of your paper. Please return it as soon as convenient, preferably before the middle of January if you can.

Sincerely yours,



Justin Zinn
Chairman

JZ:EK

MICHIGAN ACADEMY OF SCIENCE, ARTS, AND LETTERS

January 21, 1942

A SPECIAL PLEA

Dear Michigan Academy Authors:

Last year I made a plea for more careful preparation of illustrative material, but the copy I received was, as a whole, the worst that has ever been submitted. Several photographs were hypo-stained, some contained smudges, some were held captive by sticky strips of cellophane that shut off essential parts of buildings. A few line drawings were too faint for reproduction, and for this reason two papers could not be published. There was careless freehand lettering, in spite of our request for mechanical lettering. Parts of two maps were in blue, a color that does not reproduce. A number of charts had irrelevant data. Names of important towns were omitted from maps. Words in legends were wrongly spaced or wrongly made solid. The photostats were lifeless and unusable.

A fault that persists year after year in maps submitted is crooked marginal lines. Last year the number of such faulty maps was larger than the number with straight lines. I shall not again use any maps with marginal lines that are not squared up.

Serious mistakes continue to crop up in bibliographies that are not checked after the completion of articles. Many authors still show implicit confidence in second-hand data, and I have spent as much as two hours in running down a reference that was misleading, inadequate, or inaccurate.

It is hardly to be expected that fifty authors working in ten or twelve different fields could prepare papers uniform enough to go to press without editing. Necessary data are omitted, and there are numerous blemishes in style and diction. Because some changes are essential in all papers it is my custom to confer with authors who are available for conferences and to return edited manuscripts to others for a final check-up before they go to the printer.

The enclosed directions are kept to a minimum. Compliance with them would save the editors much drudgery and the University much expense, as well as hasten the date of publication of the volume. Will you not study them carefully? The authors, not the editors, determine the date of publication of the volumes.

Very truly yours,

Eugene S. McCartney
University Editor

MICHIGAN ACADEMY OF SCIENCE, ARTS, AND LETTERS

January 21, 1942

Dear Author:

This letter is addressed particularly to those persons who expect to submit manuscripts for publication in the 1942 volume of the "Papers of the Michigan Academy of Science, Arts, and Letters." I earnestly request that you read the following suggestions carefully and be governed by them in the preparation of your manuscripts.

1. Only those members who shall have paid their 1942 dues before March 12, 1942, are eligible to submit manuscripts for publication. Any person wishing to become a member should consult the secretary of the Academy, Harry W. Hann, University of Michigan. Both authors of a joint paper must be members in good standing.

2. All manuscripts to be considered for publication must be in the hands of the Editor of the Academy on or before March 21, 1942.

3. Only manuscripts reporting results of original investigations which have not been published elsewhere will be considered. The titles of these papers must have appeared on the Academy program. Abstracts of papers will not be published.

4. Manuscripts must be typewritten and double-spaced, on heavy bond paper, not folded. Wide margins should be left, and the pages should be numbered. Notes should be placed at the bottom of the page. Carbon copies of articles will not be accepted.

5. Manuscripts should be clear, concise, consistent, and complete in every respect. Accuracy in subject matter, scientific names, and bibliographies is especially urgent. Authors are requested to have associates read their papers critically before the final typing and indicate possibilities for improvement. After the final typing authors should read the papers with all possible care. Each year the editors detect scores of little mistakes merely by checking one part of a paper against another. Authors annually admit that errors in their papers are due to haste. Papers which are poorly written will be rejected, regardless of the value of their contents.

6. More care should be taken in the wording of the few paragraphs that introduce lists of species. The lists do not give authors an opportunity to correct bad first impressions.

7. Papers should be concise and as brief as the subject matter will permit. Because of the large amount of material presented for publication few long manuscripts are accepted.

8. Bibliographies and descriptions of plates should follow the style of recent volumes. The names of authors should be arranged alphabetically. To avoid errors in bibliographies authors are requested to check all titles for (1) wording, (2) spelling, (3) capitalization, (4) italics, (5) diacritical marks, (6) abbreviations, and (7) page and volume numbers against their original sources, after the final typing, and to state beneath the bibliography that this has been done. The editors still find numerous errors in the work of authors who fail to comply with this request.

9. Authors are requested to write out in full either one or both of their given names, e.g., John E. Doe, J. Edward Doe, or John Edward Doe.

10. ILLUSTRATIONS. Make references in the text, in parentheses or otherwise, to all plates, figures, maps, and charts accompanying the paper. Figures, maps, and charts are to be referred to as figures. Captions for plates should be written on separate sheets of paper. When several small figures are grouped to make a plate, the figures may be neatly numbered in ink. Do not type data on figures. In general, we prefer to print captions, but mechanical lettering may be used on figures. Submit original drawings rather than photographs of them. Photostats are seldom usable. Write your name on the back of each piece of copy for illustration.

When several drawings are put on one plate, a brief caption is desirable, so that the plate will be understandable without reference to the text. Plates should come within an area of 4-1/2 by 6-1/2 inches, with room for captions if there are any. Copy for figures in the text should be so prepared that all lettering will be readily legible when the figures are reduced to a width of 4 inches. We prefer figures, including their captions, to be within a depth of 6-1/2 inches. The size of the lettering for maps and figures in the text should be carefully computed. Letters less than one millimeter high are seldom satisfactory. If your drawing is to be reduced to one-third, for example, your smallest letters should be three or four millimeters high. When there is ample space, all lettering should be higher than one millimeter in reduced size.

Care should be taken to avoid incorrect spelling and hyphenation in legends. Words which are now being written solid are incorrectly divided in legends (e.g., "pot hole" for "pothole"). Please use "percentage" rather than "per cent," unless a figure immediately precedes "per cent."

Many drawings are being submitted with marginal lines out of square. Please see that such lines are squared up.

If you wish the engraver to bring out some special feature in a photograph, please indicate that feature. Authors should not keep their special wishes a cherished secret until they receive their proof.

11. A characteristic malady of manuscripts is the needless and artless repetition of a word or a phrase in the same sentence or paragraph and even throughout an entire article. Among the worst culprits in scientific papers are "case," "collect," "found," "indicate," "make," "occur," "show," "present," "use." We are warned to beware of the man of one book. The editors are far more frightened by the man of one word. "Part" and "partly" have been replaced by "portion" and "partially." The conjunctions "while," "as," and "and" are making all other conjunctions extinct. Will you not help by using a conjunction which expresses your exact meaning?

Participles should have some noun or pronoun to modify. Those which are preceded by "thus" and "thereby" (e.g., "thus causing," "thereby making") are almost invariably left hanging. Scientific papers would be much improved by the total avoidance of the absolute construction of the participle illustrated in the following sentences: "A samurai is a member of a Japanese social class, the plural being the same;" "The paper is poorly expressed, many loose participles having been used in it."

12. If the author is associated with a college, the name of the college should be written at the end of the paper. The author's permanent address should be given. If the address is changed before proof of the paper is received, the University editor, Eugene S. McCartney, 4201 Angell Hall, University of Michigan, should be notified. Every year authors leave it to him to divine new addresses.

The date of publication of our volumes is regularly delayed by the poor condition of many of the manuscripts. Such delays may be avoided and the editorial burden and expense of publication reduced if authors will carefully observe these requests and will have really critical associates examine their papers in detail before submitting them.

Authors are expected to cooperate with the editors in making their articles ready for publication.

Slowness in answering editorial letters and in returning proof delays publication every year.

All manuscripts and communications relating to them should be sent to me at the address given below.

Sincerely yours,

William Campbell Steere
Editor, Michigan Academy
of Science, Arts, and Letters

Department of Botany
University of Michigan
Ann Arbor, Michigan

Chazy limestone and calcareous formation pp 71-71

Grand Rapids of Menominee River

7, ^{Soft}	limestone, fine-grained, crystalline, even bedded, argillaceous	4 ft
6	limestone, ^{perhaps} <u>masses of Stromatopora</u>	3 ft
5	limestone, nodular, concentrically laminated, layers of chert, nodular	3 ft
3	limestone, fine grained, shaly, sandy, bedded with red stripes	3
4	Dolomite, partly sandy, partly oolitic, compact	2 ft
2	limestone, dolomitic, oolitic, hard, sandy	4
1	Sandstone, coarse-grained, white, shale perhaps, ripple marked pebbles of sandstone and limestone, oolitic, largely cemented by carbonate	5
		<hr/> 21

White rapids p 72 -

showings of some rocks - think some beds

Exposure in sec 24-43-25 on Escanaba R. no section given

cut in ss at mp 45 of Escanaba - regaine RR

Falls of Av Train R.

Top of same above Munnery furnace

West Ancebut rapids - Ancebut I (W. shore) Escanaba d'ours

Lake Superior ss - pp 80-102

2 sections - upper white, lower red - only lower part w/ magnetics only on shore w/ good I. Bay. upper at water level E of there

So ss are not clear in correlation - December (p 84) red ss in canal

under a thin-bedded dark series, Pt. Truquor shows 300' exposed

Salt Point - outcrop - white ss - ripple marks

Taqnamewas Falls - seem to show better

no outcrop known from river to grand marsh

both ss at Munnery & on grand I.

analogous to Portage ls. dip to S

which may have been unreasonable p 96

Lane AC ad Seaman A²

Notes on the geological section of Michigan

Part I, The Precambrian

J.G. 15, 11

1907

also with geol. survey

Ann. Rept 1908, pp 38-46

diagram on p 39 show 2 interpretations

Irving RD - Upper-beavy rocks of Lake Superior

USGS Mon. 5, pp 202-3 1883

Silver Mountain SE 17, 49-36 W

NW face gradual SE steep 400-500'

Diabase probably Anomalous

proof of unconformity in 46-41 W pp 203-5

sect 11, 12, 13

Taken on S range SE of Gogebin Lake

Chap 8 pp 350-366 on relation to M

cont'd in 23, 24 of 50-39 W

- good exposure at fault in SW of 28

Irving RD ad Chamberlain T.C. observations on the junction between
the eastern side of the Keweenaw Series on Keweenaw Point,

Lake Superior USGS

Bull 23, 1885

columns pp 98-119

pebbles all from top - all kinds, some angular

There is only a little fault since deposition of ss
pebbles disappear away from fault

calls attention to superimposed drainage pp 109-110

Martin, Helen M The central geol. map of

The northern peninsula of Michigan,
with geol. survey Pub. 39, 1936

Errors in Silver Mt., T 49, R 35 & 36 W

" Grand Rapids T 34, R 27 W

Stephen Hill is 35 - 27 W

Columns Richmond or East OR

~~_____~~ Mayville - Eden - state OC

Trenton ls OT

Blue River OBR

St Peter

— not shown on maps

Hennepin (Van Hise & Bayley 1900) Ph (very poorly described and mapped there)

{ Trempealeau }
Mazonian } Thurston 1932 } ELS
Ottawa }
Berbice }

Lake Superior
50

Jacobsville - [E.S.]
Lane & Seaman 1909 } Cambrian or pre-Cambrian
(only magnetite only)



BUCYRUS-ERIE COMPANY

GENERAL OFFICE
SOUTH MILWAUKEE, WIS.

1312 Bankers Bldg.

C. B. FOSTER, CENTRAL SALES MANAGER

PLEASE ADDRESS REPLY TO
105 WEST ADAMS ST.
CHICAGO, ILL.
TELEPHONE-FRANKLIN 5321

Jan. 13, 1942

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

Dear Fred:

Replying to your letter of Jan. 9th, nothing definite had been done on the Limestone Mountain problem in the way of publication at the time I left Houghton. So far as I know now, nothing specific is being done, although you might verify this by writing to Mr. V. L. Ayers of that geology department.

I might say that it was the opinion of those of us who studied Limestone Mountain, that it is primarily a down-dropped fault block, and that similarly Silver Mountain is a upthrona fault block. Folding seems to be a secondary development possibly accompanying the faulting.

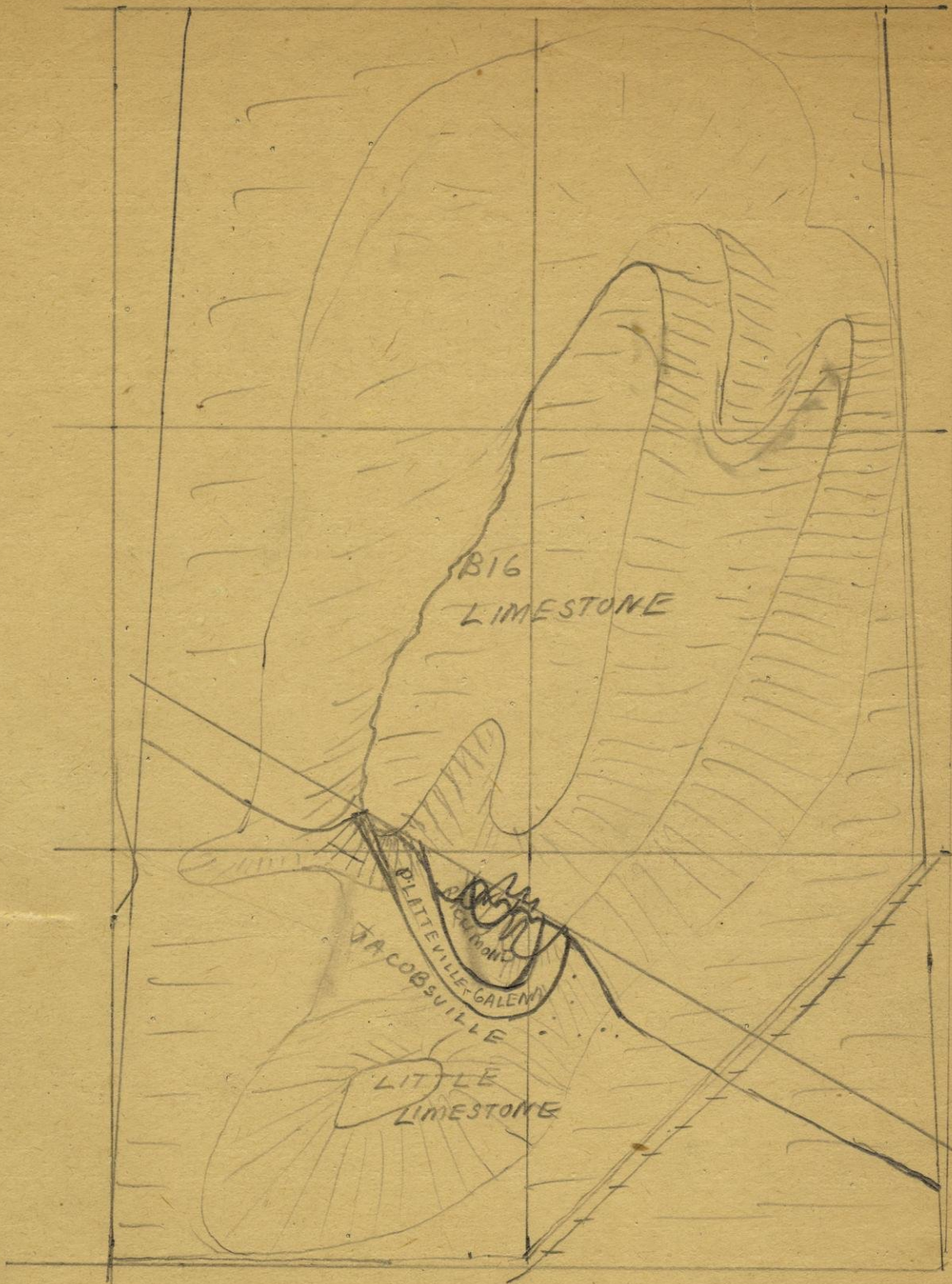
I would greatly appreciate receiving a copy of anything which you may publish on this subject.

With best regards, I am

Sincerely

R. M. Dilsen

RMD-D



Mich

To Members of the Sections of Geology and Geography of
the Michigan Academy of Sciences and other interested
persons:

The excursion on May 28, 29, and 30 will cover a variety of Pleistocene features in the southwestern part of the Southern Peninsula. Parties from various points will get together at Jackson, Michigan about 9 A.M. Saturday May 28, and leave from in front of the Michigan Central Station.

In reaching Jackson those from the east will cross the moraines and other features of the Erie lobe to Francisco and an outwash plain between the Erie and Saginaw lobes about to Jackson where the Kalamazoo moraine of the Saginaw lobe is entered. Those coming from the north will cross a series of moraines and eskers of the Saginaw lobe.

From Jackson westward to Albion the Kalamazoo moraines and drainage channels within it are traversed. From Albion to Battle Creek the highway is mainly in the outwash plain south of the Kalamazoo moraine.

At Battle Creek a comparison will be made of the size of the Kalamazoo River Valley with a much larger one occupied by Battle Creek, which is used by Kalamazoo River west from Battle Creek.

Obtain lunch in Battle Creek and assemble immediately after at Post Tavern.

From Battle Creek to the highway southwest to Climax crossing the Tekonsha moraine near the junction of the Saginaw and Lake moraine near the junction of the Saginaw and Lake Michigan ice lobes. This moraine is the outermost member of the Middle Wisconsin series and marks the limit of a pronounced readvance of the border. The till plain and drumlins south from it in the Leonidas quadrangle are of early Wisconsin age and pertain to the Saginaw lobe, and are traversed to Mendon. Here a gravel plain is entered which follows the St. Joseph River to South Bend, Indiana beyond which the glacial drainage continued westward through the Kankakee and Illinois valleys to the Mississippi.

The Lake Michigan lobe reached the borders of this valley at the time of the Tekonsha moraine from near Mendon southwestward into Indiana and covered the locality in which elephant remains were found which have been exhumed by Professor Case and brought to the University of Michigan Museum. This locality will be visited and features explained on the ground.

Returning from there to Three Rivers for the night there will be an assembly after supper to discuss the results of the days trip.

On Sunday May 29 as early a start as convenient will be made for Kalamazoo through a great outwash plain outside the Kalamazoo moraine of the Lake Michigan lobe and crossing Prairie Ranch one of the original prairies of Michigan.

The great valley of the Kalamazoo with its extensive celery gardens is entered at Kalamazoo, and is followed northward to Plainwell near which it opens out into the bed of the ancient Lake Dowagiac which had southwestward drainage to South Bend and the Kankakee valley.

Crossing this lake bed the river near Otsego goes into a narrow valley and crosses the Valparaiso Morainic system between there and Allagan. It there enters a sandy plain which extends to the Lake Border morainic system which it cuts through near Fennville.

The route taken will be westward from Allagan to the shore of Lake Michigan north of South Haven where varved clays will be examined in the bluff of the lake.

Lunch will be obtained at south Haven. From South Haven to Holland the highway leads through a strip of dunes of great prominence near the mouth of Kalamazoo River and northward to Holland.

From Holland to Grand Rapids one of the branches of Grand River outlet will be followed. Black Lake at Holland lies in this outlet and its bed is in places more than 40 feet below the level of Lake Michigan. It seems to have been cut at a time when Lake was lower than now. The highest level reached by the Glacial Lake Chicago in this part of the Lake Michigan basin is 650 to 660 feet or 70 to 80 feet above the level of Lake Michigan. Attention will be given to some of the shore features of Lake Chicago. The night of May 29 will be spent at Grand Rapids and features in that vicinity will be examined. After supper there will be a discussion of the results of the days trip.

On May 30 the route will be eastward from Grand Rapids along the Grand River outlet with a stop at Muir to compare the size of Grand River valley before the river enters the outlet with that of the outlet. The outlet will be followed to Maple Rapids where it had its head at the beginning of lake discharge through it. A system of channels south of Maple Rapids will be examined and lunch obtained at St. Johns.

From St. Johns a drive eastward to the Imlay outlet and study of its delta in Lake Saginaw at DuPlain will be made. This will be followed by a circuit designed to show the beaches of Lake Warren, Lake Arkona and Lake Saginaw. The party will then turn southward and cross a series of Saginaw moraines to the Grand River Road east of Lansing where it will disband.

The Surface Geology map of the southern peninsula published by the Michigan Geological Survey in 1924 will be of value and should be available for each auto. Persons having this map or any of the topographic maps of quadrangles in the district covered by this excursion should bring them. The following quadrangles will be traversed:

Ann Arbor, Stockbridge, Rives Jc., Springport, Marshall, Camp Custer Special (Battle Creek and Galesburg), Leonidas, Three Rivers, Schoolcraft, Kalamazoo, Breedsville, South Haven, Fennville, Holland, Grand Rapids, Cedar Springs, Lowell, Ionia, Perrinton, Elsie, Lainsburg, Dewitt, Lansing and Mason. The Camp Custer Special has a description of this part of Michigan printed on its back.

Monograph 53 U.S. Geol. Survey, The Pleistocene of Indiana and Michigan, and Publication 25 Michigan Geological Survey, The Surface Geology of Michigan also cover this area.

Drivers of cars may make whatever arrangements they desire with regard to carrying passengers. The committee feels that passengers should contribute part of the running expenses of cars (gas and oil).

Kindly fill in and return immediately the enclosed card so that arrangements for the trip may be made without delay.

Complete itineraries and field outline sheets will be available at cost at time of making the trip.

The committee asks that the announcement page of this letter be pasted in a conspicuous place for general reference

Committee:

F. Leverett
S. G. Berquist
R. B. Newcombe, Chairman

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. McCARTNEY
EDITOR

4201 ANGELL HALL

(Mrs.) HILDA S. JACKSON
ASSISTANT EDITOR

Professor Thwaites #3

June 24, 1933

14. "In the present state of knowledge the following facts ^(omit) (seem to) have been established."

Facts are facts. They are things that have been established, not seem to have been. Your conclusions may seem to have been established as facts.

I hope that you will not mind these criticisms and that you will help me to improve the form of your paper. It is not pleasant to get such a request from an editor, but it is not pleasant for an editor to have ^{to} make such requests of the majority of contributors to a volume. I do not mind the work when I get coöperation. If I am making any mistakes I shall be glad to be corrected, but the need of some change is perfectly obvious.

If this letter finds you in the field or too busy to attend to it at once I shall be glad to await your leisure, even if I have to wait till fall.

Very truly yours,

E. S. McCartney

May 31, 1933

Prof. E. J. Young, Secretary,
Michigan Academy of Science, Arts and Letters,
Natural Science Building,
University of Michigan,
Ann Arbor, Michigan

Dear Sir:

In reply to yours of the 25th enclosed please find one dollar in currency for which kindly enroll me as a member of the Michigan Academy of Science, Arts, and Letters. Let us hope that times will be kind enough to allow me to keep up this membership in the future.

Could I trouble you to inform the editor that this matter has been straightened out?

Very truly yours,

F. T. Thwaites, Lecturer in Geology

THE MICHIGAN ACADEMY
OF
SCIENCE, ARTS AND LETTERS

May 18, 1933

Mr. F. T. Thwaites
Wisc. Geol. Survey,
University of Wisconsin,
Madison, Wisconsin.

Dear Mr. Thwaites:

The Michigan Academy can consider for publication only papers submitted by its members. We find no record of your membership in the Academy. If you wish to become a member, kindly communicate with Prof. L. J. Young, Secretary of the Michigan Academy, Natural Science Building, University of Michigan.

Sincerely yours,

A. H. Stockard

A. H. Stockard
Acting Editor.

May 24, 1933

Prof. L. J. Young, Secretary,
The Michigan Academy of Science, Arts and Letters,
Natural Science Building,
University of Michigan,
Ann Arbor, Michigan

Dear Sir:

Last winter I was solicited by Mr. W. A. Thomas of the Pure Oil Co., who is Chairman of the Geology section of the Academy to prepare a paper on some of the geological work I had been doing in northern Michigan. I wrote the paper and sent it to the meeting via Dr. R. B. Newscombe of the State Geological Survey. Later they sent the manuscript to your editor. The last now informs me that I must join the Academy in order to have this published.

Will you kindly inform me the cost of this for if too great I must request the return of the manuscript which I could easily publish elsewhere without cost.

Very truly yours,

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

THE MICHIGAN ACADEMY
OF
SCIENCE, ARTS AND LETTERS

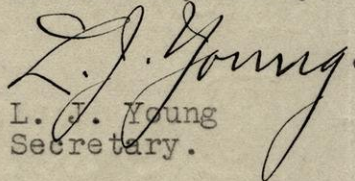
Ann Arbor, Michigan,
May 25, 1933.

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

Dear Sir:

In reply to your inquiry of May 24,
I wish to state that the annual dues of the
Michigan Academy of Science, Arts and Letters
are one dollar, and there are no other charges.

Yours very truly,


L. J. Young
Secretary.

April 11, 1933

Dr. W. O. Hotchkiss, President,
Michigan College of Mining and Technology,
Houghton, Michigan

Dear Dr. Hotchkiss:

I wish to thank you greatly for your letter of March 27.

I have often wanted to see this locality but the way things are going the last two years makes that seem a remote hope. I trust that things are not going any worse with your school than rumor says that they are with the University here!

Sincerely,

F. T. Thwaites

MICHIGAN COLLEGE OF MINING
AND TECHNOLOGY
HOUGHTON, MICHIGAN

BOARD OF CONTROL

ALBERT E. PETERMANN, CALUMET, CHAIRMAN
DR. CHARLES T. FERRIES, HOUGHTON
EDWIN J. COLLINS, CALUMET
CURRY S. PRESCOTT, MENOMINEE
STUART R. ELLIOTT, ISHPEMING
FRANK J. SMITH, CRYSTAL FALLS

PRESIDENT

WILLIAM OTIS HOTCHKISS

L. F. DUGGAN, REGISTRAR

N. F. KAISER, TREASURER AND BUSINESS MANAGER

March
27
1933

HEADS OF DEPARTMENTS

JAS. FISHER, MATHEMATICS AND PHYSICS
C. M. CARSON, CHEMISTRY
A. T. SWEET, METALLURGY AND ORE DRESSING
C. H. BAXTER, CIVIL AND MINING ENGINEERING AND
ECONOMICS
R. R. SEEBER, MECHANICAL ENGINEERING
ELLA L. WOOD, GEOGRAPHY AND MODERN LANGUAGE
C. O. SWANSON, MINERALOGY AND GEOLOGY
G. W. SWENSON, ELECTRICAL ENGINEERING
U. J. NOBLET, PHYSICAL EDUCATION
A. E. SEAMAN, CURATOR OF THE MUSEUM

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

Dear Fred:

Replying to your letter of March 23, I am afraid I will not have time to write anything to add to your paper excepting that you might make a note for it from this letter.

A short distance northwest from Munising and on Grand Island are excellent exposures of conglomerate, *up to 10ft thick,* composed of well rounded quartz pebbles principally. On Grand Island the exposure in the cliffs shows that this conglomerate lies between an upper cream to buff sandstone and a lower red and white mottled sandstone. The beds below the conglomerate dip gently in a northward direction and close above it the conglomerate dips gently in a southward direction, so that at the south end of Grand Island the conglomerate is at water level, while at the northern end it is 125 feet or more above water level. There is no basis for an assured correlation of the lower series, but my belief from its lithologic character is that it is the same as the Jacobsville. The upper sandstone grades upward into fossil-bearing beds so that we know they are paleozoic.

I am sorry I have not time to go into this a little further, but budget matters are too pressing.

With kindest regards to you and Amy, I am

Sincerely yours,

W O Hotchkiss

W. O. Hotchkiss

WOH:S

April 11, 1933

Dr. R. B. Newcombe,
State Geological Survey,
Lansing, Michigan

Dear Dr. Newcombe:

Enclosed please find two copies of part of a letter from Dr. W. O. Hotchkiss at Houghton which I felt could profitably be added as a final footnote to my recent paper. One copy is for the editor, the other for your files.

Things continue to look worse and worse here. Some even contend that there is a deliberate attempt to destroy everything so that everyone will have a chance to start now in the Russian way. I am not convinced of this as yet but they keep cutting one slice after another from the University funds. What we will be doing after the first of July still remains to be seen but we continue to hope that rumors are worse than reality as was the case last year!

Sincerely,

F. T. Thwaites

C O P Y

April 13, 1933

Prof. Peter Okkelberg, Editor
Michigan Academy of Science, Arts and Letters
University of Michigan
Ann Arbor, Michigan

Dear Prof. Okkelberg:

Prof. F. T. Fawcites, University of Wisconsin, sent me the attached addenda, which is to go with his paper read before the Academy of Science this year - "Well Logs in the Northern Peninsula of Michigan showing the Cambrian Section."

If this paper has already been sent to Dr. McCartney or someone else in the Geology Department for editorial revision, I would appreciate it if you would see that they get this additional note.

Yours very sincerely

REN:M
Enc.1

GEOLOGICAL SURVEY DIVISION
Petroleum Geologist

WM. H. LOUTIT
GRAND HAVEN, CHAIRMAN

HAROLD TITUS
TRAVERSE CITY

PHILIP SCHUMACHER
ANN ARBOR

HARRY H. WHITELEY
DOWAGIAC

W. H. NEWETT
ISHPEMING

M. J. FOX
IRON MOUNTAIN

PHILIP K. FLETCHER
ALPENA

RAY E. COTTON
SECRETARY

STATE OF MICHIGAN



DEPARTMENT OF CONSERVATION

LANSING

GEORGE R. HOGARTH, DIRECTOR

H. R. SAYRE
FIELD ADMINISTRATION
GENEVIEVE MCCANN
CHIEF CLERK
P. J. HOFFMASTER
PARKS
MARCUS SCHAAF
FORESTER
R. A. SMITH
GEOLOGICAL SURVEY
S. G. FONTANNA
LANDS
FRED A. WESTERMAN
FISH & FISHERIES
P. S. LOVEJOY
GAME
L. R. SCHOENMANN
LAND ECONOMIC SURVEY
EDWARD A. HYER
EDUCATION

March 28, 1933

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

Dear Mr. Thwaites:

In reply to your letter of March 23rd,
I was mighty interested in the copy of a letter you
wrote to Dr. Hotchkiss.

At the time the paper was read at the
Meetings, Professor Ehlers brought up the question
whether this idea had been checked with Ulrich by
studying the outcrops.

The manuscript has been sent to Prof.
Peter Okkelberg, who is editor of the Academy, and he
will probably transmit it to Mr. McCartney later on.
I told him about the way you wished to have your
sectional drawings placed one above the other, and
I think he will understand. I know Mr. McCartney and
if the opportunity arises, I shall explain it to him
sometime when I am in Ann Arbor.

Yours very sincerely

R. B. Newcombe

GEOLOGICAL SURVEY DIVISION
Petroleum Geologist

RBN:M

March 23, 1933

Dr. R. B. Newcombe,
State Geological Survey,
Lansing, Michigan

Dear Dr. Newcombe:

A letter from Mr. W. A. Thomas of the Pure Oil Co. informs me that my paper was received and was read at the meeting of the Michigan Academy of Science. I wish to thank you for reading it. He also informs me that in order to have it published it must be in the hands of Mr. McCartney at Ann Arbor within two weeks. As you have two of the three copies that I made and the originals of the drawings could you kindly send him one of the copies and the original tracings?

Dr. Loith has now returned and has read the manuscript. He was much interested and wanted me to write to Hotchkiss to get a statement from him as to the results he and Ulrich obtained in examining some of the Munising-Jacobsville contacts on their vacation trips. Copy of letter to Hotchkiss is enclosed. If he is willing to give such a statement it might be added as a note at the end of my paper to give the last work on this most interesting question.

Very truly yours,

Lecturer in Geology

March 23, 1933

Dr. W. O. Hotchkiss, President,
Michigan School of Mines,
Houghton, Michigan

Dear Dr. Hotchkiss:

At request of Mr. W. A. Thomas of the Pure Oil Company I recently wrote a paper for the Michigan Academy of Science entitled "Well logs in northern Michigan showing the Cambrian section." In discussing this matter I was obliged to mention the relation of the Munising and Jacobsville sandstones and reviewed briefly the opinions which had been given on this point and its relation to the work I did in Wisconsin in 1910-12.

The paper was rushed through during the late Moratorium and I only made three copies two of which were sent to Michigan. The paper was presented at the meeting by Dr. Newsome.

Since writing the paper Dr. Leith has returned and told me that you had made fairly complete studies of some contacts of the Munising and Jacobsville. He suggested that I write you to see if you cared to send a short statement of your results to append to my paper to make the discussion as complete as can be. I do not feel that such a statement would harm future presentation of the subject in relation to fixing the upper limit of the pre-Cambrian provided you contemplate such publication. I would greatly appreciate such a statement. The paper has to be in hands of the Academy editor in two weeks in order to be published. Any additions at the end would not involve you in responsibility for any statements of mine in the body of the paper.

Very truly yours,

F. T. Thwaites, Lecturer in Geology

THE PURE OIL COMPANY

GENERAL OFFICES, 35 EAST WACKER DRIVE, CHICAGO.

MICHIGAN PRODUCING DIVISION

SAGINAW, MICHIGAN

March 20, 1933

Mr. F. T. Thwaites
Wisconsin Geological Survey
Madison, Wisconsin

Dear Mr. Thwaites:

Mr. R. B. Newcombe gave a resumé of your paper at the Michigan Academy of Science meeting, and we enjoyed it very much. I only wish that you had been present to participate in the discussion which followed.

I think your paper is very interesting, and in case you wish it published in the Michigan Academy of Science bulletin, be sure to have it in the Editor's hands within the next two weeks for that is the deadline set for the receiving of papers.

Our Editor is Eugene S. McCartney, 4201 Angell Hall, University of Michigan, Ann Arbor, Michigan.

Thanks again for this contribution toward making our program a successful one.

Yours very truly,

W. A. Thomas

Chairman Michigan Academy of Science
Geology & Mineralogy

WAT*D

WM. H. LOUTIT
GRAND HAVEN, CHAIRMAN

HAROLD TITUS
TRAVERSE CITY

PHILIP SCHUMACHER
ANN ARBOR

HARRY H. WHITELEY
DOWAGIAC

W. H. NEWETT
ISHPEMING

M. J. FOX
IRON MOUNTAIN

PHILIP K. FLETCHER
ALPENA

RAY E. COTTON
SECRETARY

STATE OF MICHIGAN



DEPARTMENT OF CONSERVATION

LANSING

GEORGE R. HOGARTH, DIRECTOR

March 22, 1933

H. R. SAYRE
FIELD ADMINISTRATION
GENEVIEVE MCCANN
CHIEF CLERK
P. J. HOFFMASTER
PARKS
MARCUS SCHAAF
FORESTER
R. A. SMITH
GEOLOGICAL SURVEY
S. G. FONTANNA
LANDS
FRED A. WESTERMAN
FISH & FISHERIES
P. S. LOVEJOY
GAME
L. R. SCHOENMANN
LAND ECONOMIC SURVEY
EDWARD A. HYER
EDUCATION

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

Dear Mr. Thwaites:

Your letter and the original copy of your manuscript came this morning, and I will transmit this paper to the editor of the Academy as soon as possible.

I presented a resume of your conclusions before the Meetings and although some discussion resulted, in general your findings were well received. Some of our Michigan geologists are rather prone to hesitate at adopting new names for formations when fossil evidence is not available. However, a paper such as this one setting forth the comparisons with nearby sections is of considerable value in making future correlations of deep wells throughout Michigan. The editing of papers which appear in the Proceedings of the Academy of Science is rather slow so I presume you will not receive any proof until this summer at least. The Proceedings for last year's meetings are just coming out now.

Regarding conditions here on the Survey, we are going along as usual but with considerable fear and trembling as to what will happen next. The present legislature seems intent on making drastic cuts all along the line and we shall probably have to suffer our share. Fortunately, thus far we have been paid regularly, and the banking holiday has not hit us as hard as some people on the outside.

With kindest regards, I am

Yours very sincerely

R. B. Newcombe

GEOLOGICAL SURVEY DIVISION
Petroleum Geologist

RBN:M

THE PURE OIL COMPANY

GENERAL OFFICES, 35 EAST WACKER DRIVE, CHICAGO,

MICHIGAN PRODUCING DIVISION

SAGINAW, MICHIGAN

January 11, 1933

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

Dear Mr. Thwaites:

The Michigan Academy of Science have selected March 16, 17 and 18 for their meeting this year at the University of Michigan, Ann Arbor.

I wish to call your attention to the fact that the titles of all papers must be received by me or the Secretary of the Michigan Academy of Science not later than February 15, in order that these titles may be printed in the program. I have already received titles of several papers, which practically insure a successful meeting, but we still need more articles dealing with Michigan problems.

If you have some material that you think would be of interest to members in the geological and mineralogical group, please communicate with me at once in order that we can incorporate your article in our program and make this meeting of special interest to everyone concerned.

Yours very truly,

W. A. Thomas

Chairman Michigan Academy of Science
Geology & Mineralogy

WAT*D

Feb. 11, 1933

Mr. W. A. Thomas,
Pure Oil Co.,
Saginaw, Michigan

Dear Sir:

Reply to yours of Jan. 11 was delayed while I took up the matter with the State Geological Survey at Lansing. I have in mind preparing a short paper on the logs of wells in the Northern Peninsula where I have studied samples or recorrelated a log prepared by someone else. I have had sets of samples from Menominee, Escanaba, and Wells. These sections are connected by several logs in Wisconsin with the very well known section in the lower Fox Valley. I feel that the publication of this data, all of which was first released for the Cross Section of Central United States prepared by the Kansas Geological Society, will be worth while. It will also be a start toward finishing a problem I have let lie idel for over 20 years, the working out of the relation between the Eastern Lake Superior Sandstone of Irving and the known Upper Cambrian.

The title of my paper will be: "Well logs in the Northern Peninsula of Michigan showing the Cambrian section."

As I will be unable to attend the meeting I will forward the paper through Mr. Newcombe of the State Geological Survey.

Very truly yours,

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

Jan. 18, 1933

Mr. R. B. Newcombe,
State Geological Survey,
Lansing, Michigan

Dear Mr. Newcombe:

I have received a letter from Mr. W. A. Thomas, of the Pure Oil Company, asking me if I could submit a paper for the next meeting of the Michigan Academy of Science. I have not yet replied to the same.

The only thing about Michigan which occurs to me is to publish some of the logs of wells in the Northern Peninsula which I have worked out from samples with remarks on the correlation with the Wisconsin section.

What is the desire of your department as well as your personal inclination in regard to the desirability of publishing this information. It is almost impossible for me to attend the meeting.

My text of glacial geology is still being worked on but publication has been indefinitely postponed on account of the well-known Depression.

Sincerely,

WM. H. LOUTIT
GRAND HAVEN, CHAIRMAN

HAROLD TITUS
TRAVERSE CITY

PHILIP SCHUMACHER
ANN ARBOR

HARRY H. WHITELEY
DOWAGIAC

W. H. NEWETT
ISHPEMING

M. J. FOX
IRON MOUNTAIN

PHILIP K. FLETCHER
ALPENA

RAY E. COTTON
SECRETARY

STATE OF MICHIGAN



DEPARTMENT OF CONSERVATION

LANSING

GEORGE R. HOGARTH, DIRECTOR

January 20, 1933

H. R. SAYRE
FIELD ADMINISTRATION
GENEVIEVE MCCANN
CHIEF CLERK
P. J. HOFFMASTER
PARKS
MARCUS SCHAAF
FORESTER
R. A. SMITH
GEOLOGICAL SURVEY
S. G. FONTANNA
LANDS
FRED A. WESTERMAN
FISH & FISHERIES
P. S. LOVEJOY
GAME
L. R. SCHOENMANN
LAND ECONOMIC SURVEY
EDWARD A. HYER
EDUCATION

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

Dear Mr. Thwaites:

I was pleased to receive your letter of January 18th and also to know that Mr. Thomas had been in touch with you about a paper for the Academy of Science.

It seems to me that there would be no objection on the part of the Survey to your preparing such a paper as you suggest if it is agreeable with the operators who drilled the wells to release this information. Your acquaintanceship with the rocks on both sides of the State line in the Upper Peninsula would make such a correlation very desirable from the standpoint of geologists working in Michigan. We have tried to make papers of the Academy more comprehensive and relating more to Michigan geology in the last few years than was the case previously. Our desire in this particular regard is largely due to the fact that there are a large number of company geologists working in the State who are unfamiliar with many phases of Michigan geology. If you could find time to write this paper, I am sure it would be well received. We shall be glad to read it by title or read the manuscript.

I well realize the difficulties in getting the new report out as our oil and gas field report, which constitutes my thesis in part and was first written over two years ago, is just ready to go to the printers now.

With best regards, I am

Yours very sincerely

GEOLOGICAL SURVEY DIVISION
Petroleum Geologist.

REN:M

THE PURE OIL COMPANY

GENERAL OFFICES, 35 EAST WACKER DRIVE, CHICAGO.

MICHIGAN PRODUCING DIVISION

SAGINAW, MICHIGAN

February 13, 1933

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

Dear Mr. Thwaites:

I have your letter of February 11, and am glad to note that you are intending to present a paper, "Well Logs in the Northern Peninsula of Michigan Showing the Cambrian Section."

I had already sent my program to Mr. Young, Secretary of the Michigan Academy of Science, but think it is possible to have this title included. Regardless of whether it is, I am certain that the reading of it by Mr. Newcombe will make the paper eligible for publication this year.

I am very sorry that you are not going to be present at the meeting, for we have an over abundance of excellent papers--to be exact, yours makes the twenty-eighth one, and they deal with about everything concerning geology and mineralogy.

Thanks very much for this most interesting contribution toward making our program a success.

Yours very truly,

W. A. Thomas

Chairman Michigan Academy of Science
Geology & Mineralogy

WAT*D

March 14, 1933

Mr. R. B. Newcombe,
Geological Survey,
Lansing, Michigan

Dear Mr. Newcombe:

Enclosed please find manuscript for the paper which I promised to prepare for the Michigan Academy of Science. It is a bit late but you can realize the effect of the moratorium, no pay, and the prospect of tremendous salary cuts if there is any job at all next year! Many times I was tempted to send you a postcard (on account of the shortage of cash) saying that I simply could not complete it. But I kept on and you have the result, such as it is. I can vision the spasms into which some geologists will go when they see it but guess I can stand that as well as what we have undergone the past ten days!

I fully realize the shortcomings of the paper but hope that it may serve to put ideas into others heads about an important unsolved problem. It is too bad that Dr. Leith was not here to make suggestions but that also could not be helped.

My glacial geology text is now laid away "for the duration" and I will devote my attention to a series of cross sections in Wisconsin all drawn to sea level datum as that seems best for well drillers.

I might add that it was my intention to place the drawings one above the other and reduce to one page.

Hoping that you are better off than we are, that is no more worried, I am,

Sincerely,

Copy with original drawings to Ann Arbor
Copy with blueprints for survey files to Lansing

Ryft GBR ss LM T M D TD

1	Coleman Can. Co. 76444 14 m	7			70	120	255		336
2	Pestigo Pulp & Paper 54155	13	116	185-200	367	410			504
3	7 m Marmite City Pub 24 238- 1 m 239	69	224		530	560	700	795	978
4	Memorial & Man 2TDT 86432 41 m	17	192	203 20P	486	522			658 662 1/2
5	Powers - Peltin Men. Sam 16-38-26	80	77	55 370-385	HO	180			222
6	19 m DDH								
7	Pine Ridge 25-39-23	0			410	468			479 1109
8	4 m CANW shop Excavator 29-39-22 50416	106	170		(480?) 550	635	700 800		854 855
9	2 m Wells 18-39-22 84846 5	65	170	55 426- 445	(426)	605	670		760 790
10	gladstone 10	91	325			642			743
410 450	11 Rapid River 34-42-21	16	280	no?		650?	red sand 720		800
Marmite	12 Neff well 31-42-20	12	302	35 320	500	620?	red sand 675	830	1000
6	13 Nabua 20-42-19	220	355	20 40 635	920?	990	0 1155		1160
27	Marmite								
14	14 Seal Chord		1202 1/2	T 20 1292 1/2 1302 1/2	1325	1372 1/2	1500		1710

Pettiford

Boney 4-46-2	6	to red ss							300
Soo 41-1	91	to red ss							998

Wells ss 295-350

426-445

475-480

495-500

BY F. T. THWAITES MAR 1933

STRATIGRAPHIC
COMPARATIVE SECTION
NORTHERN OF MICHIGAN
FROM WELL LOGS

CORRELATION ON BASE OF TREMPEREAU

SANDSTONE

DOLOMITE

DOLOMITIC SANDSTONE

CRYSTALLINE

SANDY DOLOMITE

DEPTHS 835

CHERTY "

SEE TABLE OF
WELL LOGS

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. MCCARTNEY
EDITOR

4201 ANGELL HALL

(MRS.) HILDA S. JACKSON
ASSISTANT EDITOR

June 30, 1933

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

Dear Professor Thwaites:

I was glad to get your letter. I think that things are in good shape. I think I shall take advantage of your permission to change the position of the word "well" in the tabular material. I do not see how this would interfere with indexing. The juxtaposition of "well" and "Wells" is not ideal. I notice that the Publications of the Michigan Biological and Geological Survey follow your usage, but the editors of these publications are not always careful.

Your paper has been definitely accepted for publication.

Note 13 has been added to the paper.

I shall be glad to put one part of the figure over the other instead of trying to join them, which does not seem possible. Our type page is four inches wide. My reducing glass shows that the lettering will be legible at that width.

Since the final Academy papers did not reach me until three months after the meeting proof will be delayed. You need not worry about not seeing it. I get the approval of all authors before the volume goes to press.

Very truly yours,

E. S. McCartney

Pardon repetition of "chink" in the second line.

NOTICE TO AUTHORS

Since corrections add a great deal to the cost of the Academy volumes, the editors request that they be made with an eye to economy. The addition or deletion of a word (or words) at the beginning of a long paragraph may mean the resetting of the rest of the paragraph and is, therefore, a source of great expense. Often-times a little ingenuity in counting spaces and in varying the phraseology will enable one to replace a word or words deleted with a word or words that will take about the same amount of space. It often happens that, when a word is added, another word in the same line (or in the next one) may be replaced by a shorter one or even deleted entirely.

When spaces between words are wide, sometimes two or three letters can be added without disturbing the next line. When the spaces are close, sometimes two or three letters can be deleted without disturbing the next line.

At the ends of paragraphs it is not worth while to make a special effort to avoid resetting.

Please return original manuscript and proof of both text and illustrations. Drawings and photographs may be retained.

Eugene S. McCartney
1004 Angell Hall, U. of M.
Ann Arbor, Michigan

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. MCCARTNEY
EDITOR

4201 ANGELL HALL

(MRS.) HILDA S. JACKSON
ASSISTANT EDITOR

October 14, 1933

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

Dear Professor Thwaites:

I am inclosing the proof of your Academy paper.
It makes up very nicely.

I have thirty-five or forty papers for this year's volume. Each author used his own (or some journal's) method of giving references. In order to get results that are at all passable I have to make many little changes in methods of citation. I am trying to use the same abbreviations from paper to paper. I am also using the titles of the title-pages and not the condensations on the backstrips.

I think you will agree with me that the well logs are made up far more neatly than those in the publications of the State of Michigan.

I will send you a page proof.

Very truly yours,

E. McCartney

Oct. 24, 1933

Mr. Eugene S. McCartney,
1201 Angell Hall,
University of Michigan,
Ann Arbor, Michigan

Dear Mr. McCartney:

Yours of the 14th and enclosed proof and manuscript came some time ago but I have been so delayed by field trips that Mrs. Thwaites and I have so far been unable to read over the manuscript. I am now returning the proof and manuscript under separate cover taking advantage of the provision in the Postal regulations which allows printers proof and manuscript to be sent together at a low rate. I will not need any extra reprints.

I fully appreciate your trouble in harmonizing styles of references. We try here to follow U. S. Geological Survey style which is essentially the same as Illinois Geological Survey style.

I did not approve certain changes which were not in the copy submitted by you to the printer. I approved only those which were made necessary by discovery of certain errors in figures. I did not like to make any but absolutely needed changes after type has been set.

The drafting on the figures was done with Wrice lettering guides which enable almost anyone to do first class work. These are very widely used in the oil fields.

Very truly yours,

F. T. Thwaites,

Science Hall, University of Wisconsin

UNIVERSITY OF MICHIGAN
GRADUATE SCHOOL PUBLICATIONS
ANN ARBOR, MICHIGAN

EUGENE S. McCARTNEY
EDITOR

4201 ANGELL HALL

(MRS.) HILDA S. JACKSON
ASSISTANT EDITOR

October 30, 1933

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

Dear Mr. Thwaites:

Your proof arrived this morning. The envelope did not contain an order for reprints. Since almost all writers want more than the 75 gratis copies I am writing to make sure that you will not be disappointed.

Is there any better short running head than

Well. Logs, Northern Peninsula, Michigan?

Is the heading COMPARATIVE STRATIGRAPHIC SECTION to be put where FOREWORD now is?

It may be five weeks before I can send you the page proof.

Very truly yours,

E. McCartney

Nov. 6, 1933

Dr. Eugene S. McCartney, Editor,
Graduate School Publications,
University of Michigan,
4201 Angell Hall,
Ann Arbor, Michigan

Dear Dr. McCartney:

In reply to yours of October 30 I stated in my letter that I had concluded that the 75 reprints sent gratis will be enough. My paper will appeal to only a limited number so far as this state goes at any rate so that I did not feel that I need order more.

The short running head is all right.

The center heading next below was to be moved up to replace foreword which seemed all right as long as it was a paragraph heading as it was when we typed the manuscript.

Very truly yours,

THE MICHIGAN ACADEMY
OF
SCIENCE, ARTS AND LETTERS

Dec. 15, 1933

Dear Mr. Thwaites:

Titles of papers to be presented at the meetings of the Michigan Academy of Science, Arts, and Letters to be held next March should be in my hands before Feb. 1, 1934 in order to appear in the Announcement of the ~~General~~ Program. One of the requisites for publication is that the title appear in the Announcement. It is not necessary, however, to submit the manuscript until 10 days after the meetings.

I hope the past year has been productive of some good piece of research and that you will assist the Academy in making the program a success by submitting a title of this work for presentation next spring.

Best wishes for the New Year.

Sincerely yours,

A. J. Cardley

Chairman Section of Geology & Mineralogy

Dept. Geology, University of Michigan

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

UNIVERSITY OF MICHIGAN
ANN ARBOR
DEPARTMENT OF GEOLOGY

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

Jan. 6, 1936

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

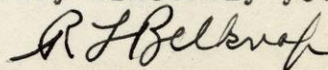
Dear Dr. Thwaites:

We are indeed glad to have your paper for the Academy meetings this year, and certainly hope that you can present it yourself. If not, I shall be glad to help in making any arrangements necessary for its presentation. As you no doubt know the Academy would be very glad to have Messrs Bays and Raash as members if they so desire.

We are attempting this year to devote considerable time to a symposium on Michigan geology with special reference to stratigraphy. I know we would benefit greatly by a discussion by you or your colleagues on some of the problems which you have been working on in the Upper Peninsula.

The printed announcement of the program should be ready before the 1st of March. The meetings as you probably know will be on the 19th and 20th of that month.

Very sincerely yours,



R. L. Belknap

RLB/CB

Jan. 4, 1936

Prof. R. L. Belknap,
Department of Geology,
University of Michigan,
Ann Arbor, Michigan

Dear Sir:

I hope to present a paper at the meeting of the Michigan Academy in March entitled : Recent study of Limestone Mountain, Houghton County, Michigan. Authorship will be shared with C. A. Bays and G. O. Raasch. The paper will be short and not take over 10 minutes to present. We may prepare one or two lantern slides. If none of us can attend the meeting will try to make arrangements to have someone else present the paper. Our intention is to present some new ideas of this locality which were obtained during a visit last summer. I think that I have kept up my membership in the Academy but the others have not joined as yet.

Very truly yours,

F. I. Thwaites

March 31, 1936

Prof. R. L. Belknap,
Dept. of Geology,
University of Michigan,
Ann Arbor, Michigan

Dear Sir:

I have been a long time in explaining my failure to send in the paper for the Academy meeting which I had promised but have been so much occupied with other matters that this non-rush job had to wait its turn.

In the first place the matter was arranged when we were in the field last fall. I then thought it would give the boys with whom I worked a chance to get into print and that the paper might provoke discussion on some very interesting matters. However, when it came to writing both of the others were so afraid to even suggest any new ideas that by the time they had gone over my manuscript all point in publishing it was gone. It was then too late to make any revision. At the last moment Rausch withdrew his name entirely. Then I asked Bays to cancel the entire matter and not to go to the meeting as he had planned. He said that he would write you to the effect that nobody would come.

The moral of the matter is that I failed to take a firm enough hand with my well-meaning but inexperienced associates. I greatly regret my failure to do what I had promised but that was the way it worked out.

Very truly yours,

F. T. Thwaites

Box 230,
East Lansing, Michigan,
November 20, 1936.

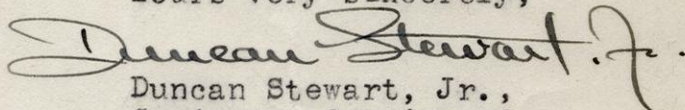
Mr. F.T.Thwaites,
University of Wisconsin,
Madison, Wisconsin.

Dear Mr. Thwaites:

Nineteen hundred and thirty-seven is the Centennial of the Michigan State Geological Survey. There is to be a symposium on Michigan geology at the Michigan Academy of Science meetings next Spring.

We hope that the majority of papers, given during the two-day sessions, aside from those of the symposium proper, will deal with Michigan geology. If you intend to read a paper at the meetings, and we hope you do, I would appreciate being informed, at your earliest convenience, of the title or general subject matter included, so that your contribution may be considered in the necessary arrangements and preliminary listing of the papers to be presented.

Yours very sincerely,



Duncan Stewart, Jr.,
Chairman, Section of
Geology and Mineralogy.

Box 230,
East Lansing, Michigan,
November 23, 1936.

The Michigan Academy of Science meetings will be held the 18, 19, and 20th of March. The Section of Geology and Mineralogy will hold its meetings the 19th and 20th.

Looking over the literature it is noted that the publications on Michigan geology are quite scattered throughout the various periodicals. A set of papers dealing with Michigan geology, under one cover, would be an asset to those interested in the geology of the State. At the recent Council meeting of the Academy, the matter of allotting more space to the geological sciences in the Papers of the Academy was considered, and the Council signified, by vote, that it would look with favor upon the devoting of more pages to geology and mineralogy in 1937, because of the interest being taken in the Centennial of the Michigan State Geological Survey. The matter is now in the hands of the Publications Committee.

It is hoped that if you present a paper at the meetings that at that time your contribution will be in a form ready for publication, and that the material will be submitted to the Editor, so that we may have this year a goodly number of pages in the Papers.

January 15, 1937 is the last day the Chairman of your Section may receive the exact titles as you wish them to appear on the program of the meetings. The titles, given in order of presentation on the program, will at that time be sent to the Secretary of the Academy. If, before that date, you send in the exact title of your paper, whether you will use lantern slides, and the number of minutes you wish to speak, it would greatly facilitate our work.

Undoubtedly, the names of a few geologists in the State are not on our mailing list. Would you be so kind as to inform them of the meetings, and send in their names, so that we may get in touch with them?

Thanking you for your cooperation, I am,

Yours very sincerely,

Duncan Stewart, Jr.

Duncan Stewart, Jr.,
Chairman, Section of
Geology and Mineralogy.

MICHIGAN STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
EAST LANSING

APPLIED SCIENCE DIVISION
DEPARTMENT OF GEOLOGY AND GEOGRAPHY

January 19, 1937.

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

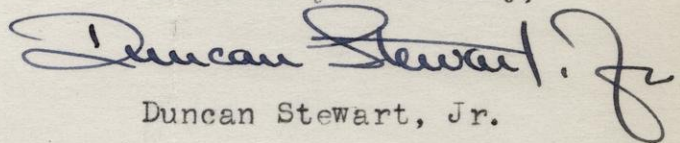
Dear Dr. Thwaites:

I am in receipt of your good letter of the 18th,
and we are truly sorry that you will not be presenting
a paper at the coming Michigan Academy meetings.

At the present writing, we have 20 papers on Michigan
geology and 9 on the geology of locations other than Michigan
lined up for the meetings.

With the kindest regards, I am,

Yours very sincerely,



Duncan Stewart, Jr.

Jan. 18, 1937

Dr. Duncan Stewart, Jr.,
Michigan State College,
East Lansing, Michigan

Dear Dr. Stewart:

Thank you for the copy of the progress
bibliography of Michigan Geology.

After discussion with Mr. Bays it was clear
that he is opposed to publishing anything on Limestone
Mountain at the present time. This ends all chance of
my being able to present a paper at the coming meetings
of the Michigan Academy of Science.

With best regards,

sincerely,

Jan. 18, 1937

Dr. Duncan Stewart, Jr.,
Michigan State

Jan. 6, 1938

Dr. R. M. Dickey,
Michigan college of Mining and Technology,
Houghton, Michigan

Dear Dickey:

Yours of Dec. 9, 1937 has been on my desk a long time while I was considering a possible paper for the Michigan Academy. After long thought I decided to prepare one if possible although it is impossible for me to attend. I thought that it would be worth while to describe some new welllogs which I have studied. These are at Powers where pre-Cambrian dolomite occurs beneath the Paleozoic section, at that place, and at Stephenson where granite was encountered. I have a new record at Marinette, also. Although these would not add much to the conclusions of my 1933 paper it seems as though they might well be placed on record. I could also make a brief mention of the structure of Limestone Mountain as surveyed by our party in 1935. Messers Bays and Raasch would not allow me to finish the paper on this which we contemplated in 1936 but I felt that despite your more detailed survey since it might not be out of place to record the fact of our visit and to compare this depressed area with several others that I know of.

If you feel that this would be all right we might introduce a paper entitled "Studies of the Cambrian section of the Northern Peninsula, 1933-1937"

With best regards,

Sincerely,

MICHIGAN
COLLEGE OF MINING AND TECHNOLOGY
HOUGHTON, MICHIGAN

Dec. 9, 1937

Mr. F. T. Thwaites
Madison
Wisconsin

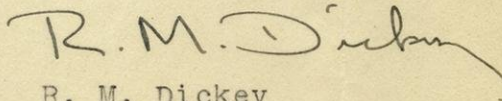
Dear Fred:

The next annual meeting of the Michigan Academy of Science, Arts, and Letters will take place at Ann Arbor, Michigan, on March 17, 18, and 19, 1938.

The section of Geology and Mineralogy will meet in the Natural Science Building; unless the scheduled program is unusually heavy, our sessions will be limited to Friday morning and afternoon, March 18, and Saturday morning, March 19.

Further details will be sent to you later. We hope you plan to attend, and that you will, if possible, present a paper before the section.

Sincerely yours,



R. M. Dickey
Chairman, Section of Geology
and Mineralogy

MICHIGAN
COLLEGE OF MINING AND TECHNOLOGY
HOUGHTON, MICHIGAN

BOARD OF CONTROL

ALBERT E. PETERMANN, CALUMET, CHAIRMAN
DR. CHARLES T. FERRIES, HOUGHTON
FRANK J. SMITH, RAMSAY
WILLIAM H. SCHACHT, PAINESDALE
FRANK J. KOHLHAAS, CALUMET
E. J. OSWALD, CRYSTAL FALLS

PRESIDENT
GROVER C. DILLMAN

L. F. DUGGAN, REGISTRAR
N. F. KAISER, TREASURER AND BUSINESS MANAGER



Jan. 10, 1938

HEADS OF DEPARTMENTS

JAS. FISHER, MATHEMATICS AND PHYSICS
C. M. CARSON, CHEMISTRY
C. H. BAXTER, CIVIL AND MINING ENGINEERING AND
ECONOMICS
R. R. SEEBER, MECHANICAL ENGINEERING
ELLA L. WOOD, GEOGRAPHY AND MODERN LANGUAGE
G. W. SWENSON, ELECTRICAL ENGINEERING
U. J. NOBLET, FORESTRY
N. H. MANDERFIELD, METALLURGY AND ORE DRESSING
D. P. SHERMAN, PHYSICAL EDUCATION
R. M. DICKEY, GEOLOGY AND MINERALOGY

Mr. F. T. Thwaites
Madison
Wisconsin

Dear Fred:

In reply to your letter of Jan. 6th, I shall be glad to include on the next Academy program your paper on "Studies of the Cambrian section of the Northern Peninsula of Michigan, 1933-1937".

How much time will be required for this paper? Final information on titles and requisite time must be in my hands by Jan. 21st.

Since you will be unable to attend the meeting, do you wish to designate anyone to read your paper? I do not feel as though I should do it, as I am giving three papers myself and everyone will probably be tired of hearing from me.

With best regards, I am

Sincerely yours,

R. M. Dickey
R. M. Dickey

Jan. 14, 1938

Prof. R. M. Dickey,
Michigan College of Mining and Technology,
Houghton, Michigan

Dear Dickey:

Yours of the 10th introduces a difficulty which I had not thought of. It is, of course, quite out of the question for me to attend the meeting both because of time and cost. Newcomb read my other paper but he was then connected with the State Survey. I do not know his present address but presume that if he is going to the meeting he might be willing to do so again. If this is not possible then maybe Prof. Bergquist might be willing to do this. However, I have never met him and feel reluctant to ask him. If you think neither of these would do then we had better drop the matter. I do not think that as much as ten minutes would be required. I may be able to furnish lantern slides. We had some made for the paper we entered for 1936 but I do not know what Bays did with them.

With best regards to everyone in the
"frozen north",

Sincerely,

MICHIGAN
COLLEGE OF MINING AND TECHNOLOGY
HOUGHTON, MICHIGAN

Jan. 15, 1938

Mr. F. T. Thwaites
Madison
Wisconsin

Dear Fred:

In reply to your letter of Jan. 14th, I think it very probable that Dr. Bergquist would be glad to read your paper in your absence, if possible. He is in charge of the general meeting this year, but could doubtless arrange to take care of the matter for you.

I do not know whether Newcomb intends to be present. His address is: 302 E. High St., Mt. Pleasant, Mich.

I would appreciate your letting me know as to what arrangements you will make.

Sincerely yours,

R. M. Dickey

R. M. Dickey



THIS SIDE OF CARD IS FOR ADDRESS

Dr Fredrik T. Thwaites
Dept of Geology
University of Wisconsin
Madison Wis

MICHIGAN
COLLEGE OF MINING AND TECHNOLOGY
HOUGHTON, MICHIGAN

Dear Dr Thwaites

~~GENTLEMEN~~

THANK YOU VERY MUCH FOR THE LITERATURE

WHICH YOU SENT ^{me} US IN ANSWER TO ^{my} OUR RECENT REQUEST.

"Stratigraphic Work in
Northern Mich 1933-41"

VERY TRULY YOURS,

AK Selgrove



THIS SIDE OF CARD IS FOR ADDRESS

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

Houghton Mich

May 3/45

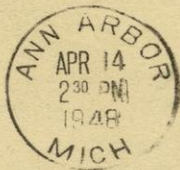
Dear Professor Thwaites

If you can spare a copy, I should appreciate very much a copy of your "Stratigraphic Work in Northern Michigan 1933-1941" Mich Acad Sci '43.

With kind regards

A. K. Snelgrove

Mich Coll Mining & Tech



THIS SIDE OF CARD IS FOR ADDRESS

Professor F. T. Thwaites

41 Roby Road

Madison 5

Wisconsin

April 7, 1948

Dear Professor Thwaites:

I have your corrected proof. I find that the loss of three letters and one space in the correction of "worthy of," which is in a line already too widely spaced, would cause the resetting of sixteen lines. May I change "In 1916 Martin presented proofs" to "In 1916 Martin was able to present proofs" or else add some adjective like "clear" before "proofs"? Either of these suggestions would enable us to make the correction in two lines.

I am relieved that the maps are satisfactory.

in "worthy of"

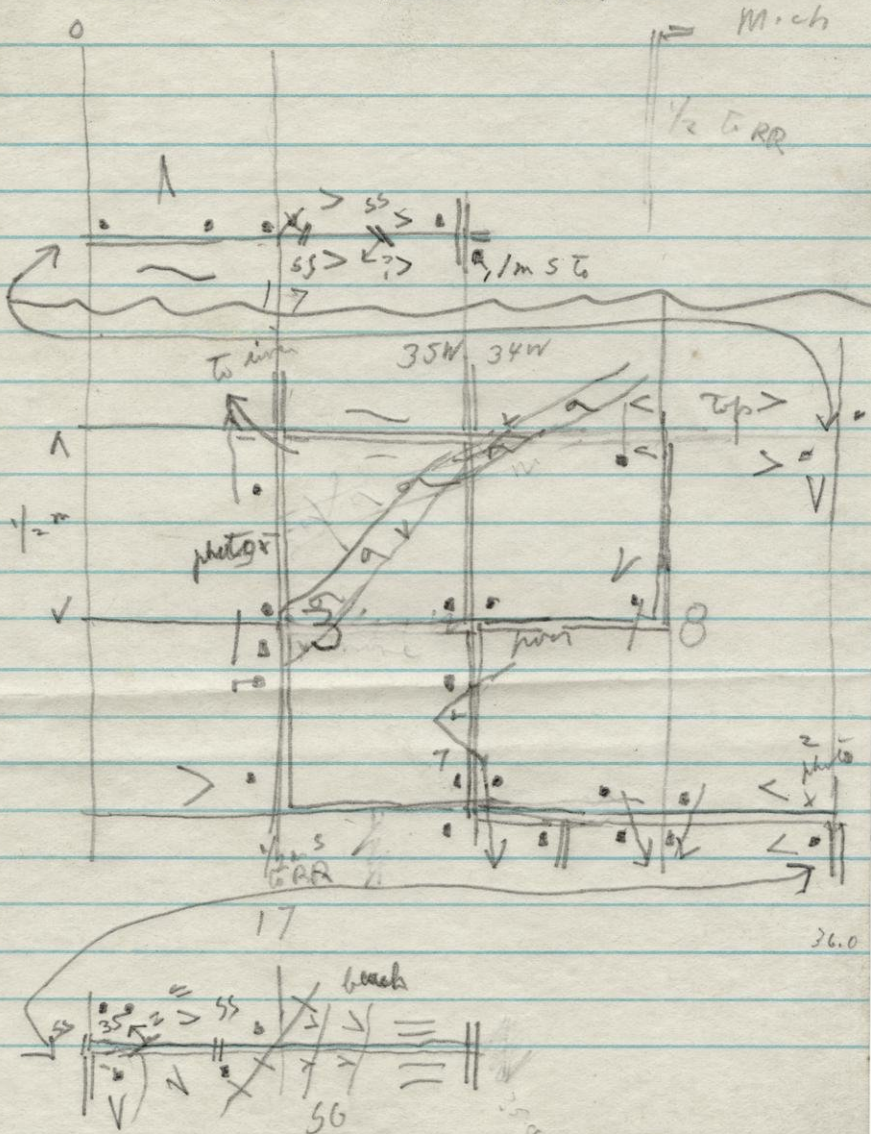
Very truly yours,

E. S. McCartney

..... CO. REPORT NO. LOCATION NO.

DATE GEOLOGIST

The 1/4 of the 1/4 of Sec. Tp. 51 R. 34-35 W.



N 60° E
red dirt
22

Feb. 8, 1938

Dr. R. M. Dickey,
Michigan College of Mining and Technology,
Houghton, Michigan

Dear Dickey:

In reply to yours of Jan. 15 the way things look now it appears that I simply cannot finish a paper for the Academy meeting in March. I am so tired nights that nothing is possible any longer at home and as for the office, well, that is hardly possible either. I will know better in a few days but classes are still large despite the present "Recession". I am sorry to reach this decision but feel that I must not attempt too much.

With best regards to all at Houghton,

Sincerely,

ANNOUNCEMENT

OF

THE NINTH ANNUAL FIELD EXCURSION OF THE MICHIGAN ACADEMY OF SCIENCE, ARTS
AND LETTERS - SECTION OF GEOLOGY AND MINERALOGY.

The excursion will start from the Headquarters Building of the Department of Conservation along the lake shore on U.S. 41 southeast of the city of Marquette, Sunday, May 28, at 8:00 o'clock in the morning. The first stop, after leaving the Conservation headquarters, will be at the Chocolay Hill quarry located where highway 41 turns south and leaves the shore of Lake Superior. The second stop will be along the shore near the original meeting place. Another forenoon stop will be made on highway 41, west of Marquette, where it cuts through a quartzite ridge just before entering the city of Negaunee. Late arrivals may thus find the group without difficulty.

It is probable that most or all of the group will travel to the Upper Peninsula and on to Marquette on Saturday or Saturday night. Plans may be made to obtain hotel accommodations in Marquette or in Ishpeming for Saturday night. The advantage of staying in Marquette is that we will be near the meeting place for Sunday morning. However, the group will meet at the Mather Inn in Ishpeming for dinner and discussion on Sunday night and will depart from this point Monday morning. It might, therefore, be best to plan on getting hotel accommodations at the Mather Inn in Ishpeming for both Saturday and Sunday nights to save having to change hotels. The Mather Inn is offering attractive rates ranging from \$1.25 to \$1.50 per person for the group, rates which probably could not be obtained in Marquette at a first-class hotel. The distance from Ishpeming to Marquette is 16 miles.

On Monday night the group will stay in Iron Mountain at Hotel Dickinson where the rates range from \$1.25 to \$2.00 per person. On Tuesday forenoon interesting points in the Menominee District will be visited and in the afternoon the drive to Menominee will be made in time to catch the train ferry which leaves Menominee at 2:00 p.m. C.S.T. for Frankfort. The ferry will arrive in Frankfort about 8:00 p.m. It has been decided that the trip back to the Lower Peninsula by ferry to Frankfort would be about as reasonable as the extra drive back to the Straits or around the lake via Chicago and would give several hours for rest or discussion while crossing the lake. The arrival in Frankfort is early enough to allow completing the trip back home that evening for those who must be on the job Wednesday. Those who do not wish to make the trip by ferry across Lake Michigan may find it most convenient to leave the group for the return home when the group leaves the Marquette District for Iron Mountain Monday afternoon.

Justin Zinn
Chairman, Field Trip Committee

The Alternate 1939 Academy Field Trip

It has been decided that in as much as a fair number of members of the Academy expressed a desire to take a field trip in the area around the southern end of Lake Michigan that such a field trip would also be taken on Memorial Day weekend. The following preliminary announcement of the essential details for this trip is submitted.

The group will meet at the Court House in Gary, Indiana, at 9:00 A.M., Saturday, May 27. Hotel accommodations for Friday night may be obtained in Gary if the trip is made to Gary on Friday afternoon. Saturday will be spent studying the area between Gary and Benton Harbor, the days jaunt ending at Benton Harbor where hotel accommodations are being arranged at Hotel Vincent. The group will dine at this place and a discussion of the geology of the area will be initiated afterward. Sunday, studies will be resumed in the area along the east shore of Lake Michigan, the trip ending in time for those who wish to drive home that evening to do so.

A detailed itinerary of this field trip is now in preparation and will be available at the time or before the trip starts.

I. D. Scott
Frank Leverett
Committee in Charge

To: Members of the Academy and to Members of the Michigan Geological Society

You have already been canvassed with respect to your desires for the location of the 1939 Academy field trip and whether you will go on either of the trips or not. Thirty-five desired to take the Marquette field trip and about half that number wished to take the glacial field trip around southern Lake Michigan. As a result, both trips are to be given this year. I. D. Scott is in charge of the Lake Michigan trip, and Justin Zinn is perfecting the plans for the Marquette trip. Included with this letter are the essential plans for each trip.

It is anticipated that since the canvass, some will have found it impossible to attend any trip while others will have decided to go after all. Will you please fill out and return the post cards at your earliest convenience? Thank you.

S. G. Bergquist
Justin Zinn

BIBLIOGRAPHY

- Van Hise, C. R., Bayley, W. S., & Smyth, H. L.; The Marquette iron-bearing district of Michigan, with atlas: U.S.G.S., Mono. 28, 1897.
- Van Hise, C. R. & Bayley, W. S., The Menominee iron-bearing district of Michigan: U.S.G.S., Mono. 46, 1904.
- Van Hise, C. R., & Leith, C. K., Geology of the Lake Superior Region: U.S.G.S., Mono. 52, 1911, pp. 251-290.
- Leith, C. K., Relations of the plane of unconformity of the base of the Cambrian to Terrestrial depositions in late Pre-cambrian time: XII Interna. Geol. Cong. 1913, Compt. Rend., 1914, pp. 335-337.
- Allen, R. C., A revision of the correlations of the Huronian group of Michigan and the Lake Superior Region: Mich. Geol. & Biol. Sur., Publ. 18, 1915, pp. 21-32
- Richarz, Stephen, Grunerite rocks of the Lake Superior Region and their origin: Jour. Geol., Vol. 35, 1927, pp. 690-707.
- Leith, C. K., Secondary concentration of Lake Superior iron ores: Econ. Geol., Vol. 26, 1931, pp. 274-288.
- Gruner, J. W., Additional notes on secondary concentration of Lake Superior iron ores: Econ. Geol., Vol. 27, 1932, pp. 189-205.
- Allen, R. C., Relative to an extension of the Menominee iron range eastward from Waucedah to Escanaba, Michigan: Econ. Geol., Vol. 9, 1914, pp. 236-238.
- Derby, E. L., Jr., Geology of ores on the Marquette Range: Min. Cong. Jour., Vol. 15, 1929, pp. 731-733.
- Butler, B. S., Burbank, W. S. & Collaborators, The copper deposits of Michigan: U.S.G.S., Prof. Paper 144, 1929. This reference is for review of the Keweenawan succession which occurs unconformably above the Huronian and below the Upper Cambrian.
- Swanson, C. O., Report on the portion of the Marquette Range covered by the Michigan Geological Survey in 1929: Mimeographed, Mich. Geol. Sur., 1930.
- Zinn, Justin, Report on the portion of the Marquette Range between Humboldt and Lake Michigan, covered by the Michigan Geological Survey in 1930, mimeographed: Mich. Geol. Surv., 1931.
- Weinert, F., Martite and other iron oxides in the Marquette district: Econ. Geol., Vol. 28, 1933, pp. 68-74.
- Lamey, C. A., The intrusive relations of the republic granite: Jour. Geol., Vol. 41, 1933, pp. 487-500.
- Zinn, Justin, Correlation of the Upper Huronian of the Marquette and Crystal Falls districts: Papers, Mich. Acad. Sc., Arts, Letters, Vol. 18, 1932, pp. 437-456.
- Atwater, G. I., and Clement, G. M., Pre-cambrian and Cambrian relations in the Upper Mississippi Valley: B.G.S.A., Vol. 46, 1935, pp. 1659-1686.
- Dickey, R. M., The granitic sequence in the southern complex of Upper Michigan: Jour. Geol., Vol. 44, 1936, pp. 317-340.

Lamey, C. A., Republic granite or basement complex?: Jour. Geol. Vol. 45, 1937, pp. 487-510.

Dickey, R. M., Present trends in studies of the Michigan Huronian: Papers, Mich. Acad. Sc., Arts, Letters, Vol. 23, 1937, pp. 419-426.

Dickey, R. M., The Ford River granite of the southern complex of Upper Michigan: Jour. Geol., Vol. 46, pp. 321-335, 1938.

UNIVERSITY OF MICHIGAN PRESS

EDITORIAL OFFICE, 4201 ANGELL HALL

Ann Arbor, Michigan

EUGENE S. McCARTNEY, *Editor*
(Miss) GRACE POTTER, *Assistant Editor*

April 20, 1942

Professor Fredrick T. Thwaites
University of Wisconsin
Madison, Wisconsin

Dear Professor Thwaites:

Since I am unable to prepare fifty miscellaneous papers for the printer without conferring with authors I am returning your paper to you with a few suggestions and criticisms.

You did not take the precaution of preparing the citations in accordance with my style, and, as I note in my comments, they contain numerous small inconsistencies. Evidently the citations were not checked after typing. They are so crowded that I cannot give clear directions to the printer. I will retype the crowded notes.

I have a style sheet to enable me to keep uniform the treatment of certain situations that occur and recur every year. My usage is not always the only correct one, but I have to make decisions and stick to them.

I shall greatly appreciate ^{it} if you will study my suggestions carefully.

Very truly yours,

E. S. McCartney

April 30, 1942

Dr. E. S. McCartney,
4201 Angell Hall,
University of Michigan,
Ann Arbor, Michigan

Dear Dr. McCartney:

In reply to yours of the 20th with enclosed ms I am sorry you had to take so much trouble in editing. One of the trials of this life is the fact that no two editors use the same system of typography, especially for footnotes. I really tried to follow yours so far as samples were available to me. This was a rush job rudely injected between other tasks so please pardon any failures or lapses into other styles.

As, the Chicago and North Western Railway Company does make northwestern into two words. See their cars, which must come through your city at times.

I followed almost all your suggestions as far as possible. With regard to the second drawing the tracing paper is cheap American paper better suited for blotting than for drawing. If you can't patch it up with enclosed new lettering please send it to me and I will have a black line print made, retouch that and return as soon as war conditions permit. I would like to retype the whole paper for the printer but that just was not possible. It is too near the end of the semester for student help and Mrs. Thwaites who was editor for our Survey once is too busy.

Sincerely,



THIS SIDE OF ~~SANITATION~~ FOR ADDRESS

Professor F. T. Thwaites

41 Roby Road

Madison, Wisconsin

May 27, 1942

Dear Professor Thwaites:

I should like to have the corrected figure next week if you can possibly get it ready. It is time for me to get an estimate from the engraver.

Very truly yours,

Wm. C. Cartney

UNIVERSITY OF MICHIGAN PRESS

EDITORIAL OFFICE, 4201 ANGELL HALL

Ann Arbor, Michigan

EUGENE S. McCARTNEY, Editor
(Miss) GRACE POTTER, Assistant Editor

May 7, 1942

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

Dear Professor Thwaites:

The manuscript arrived two or three days ago. I thank you for your patient attention to my suggestions. At the top of page 7 there occurs the following sentence: "This record appears to show a considerably greater thickness of Prairie du Chien than was concluded from other wells in the vicinity." "~~Prairie du Chien~~ is the object of "show, and hence "was concluded" has no subject. ^{"Thickness"}

I showed your long figure to the engraver. He said that the ^{faint} horizontal lines would disappear completely. Some of the diagonal are a little weak, and they are not all uniform. Since I have learned by experience that it is hard to correct figures to the entire satisfaction of an author I am returning your figure to you, together with your new sheet of lettering. This figure will be reduced to six inches and will be set lengthwise. If you are rushed I can wait three or four weeks.

Proof of the article and cuts will not be ready before late summer or early autumn. The paper will make up very nicely.

Very truly yours,

E. S. McCartney

H-20-H2

UNIVERSITY OF MICHIGAN
MUSEUM OF PALEONTOLOGY
ANN ARBOR

L. B. KELLUM, DIRECTOR, CURATOR OF
MESOZOIC AND CENOZOIC INVERTEBRATES
E. C. CASE, EMERITUS CURATOR OF
VERTEBRATES
G. M. EHLERS, CURATOR OF PALEOZOIC
INVERTEBRATES

C. A. ARNOLD, CURATOR OF FOSSIL PLANTS
J. T. GREGORY, CURATOR OF VERTEBRATES
W. H. BUETTNER, PREPARATOR
HELEN ASKREN, CATALOGER AND
LIBRARIAN

April 17, 1942.

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

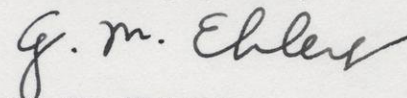
Dear Dr. Thwaites:

I wish to thank you for your letter of March 30 and a copy of your manuscript dealing with the stratigraphy of the Cambrian and Ordovician of the Northern Peninsula. I intended to acknowledge their receipt immediately but I found myself too hard pressed to edit our war delayed bulletin describing the summer field courses in geology given in Wyoming.

I regret that I am unable to give you any helpful comments on your manuscript. I have seen very little of the Cambrian and Ordovician of the Northern Peninsula. I have been hoping to go over the exposures for many years but something has always turned up to interfere with my good intentions.

I am much pleased to receive your manuscript and to learn your views regarding the correlation of the Cambrian and Ordovician of our state. The results of your study will be most helpful to me if I have an opportunity to go in the field; I have an idea this opportunity will not be presented until after the war.

Sincerely yours,



G. M. Ehlers

GME:M

MICHIGAN STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE
EAST LANSING

APPLIED SCIENCE DIVISION
DEPARTMENT OF GEOLOGY AND GEOGRAPHY

April 4, 1942

My dear Dr. Thwaites:

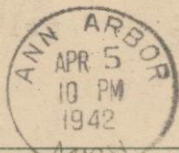
I was very pleased to receive a copy of the manuscript of your paper dealing with Stratigraphic Work in Northern Michigan, 1933-1941, which came to my desk a few days ago. Please accept my personal thanks and appreciation for the copy.

Very truly yours,

S. G. Bergquist
S. G. Bergquist
Head of Department

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

SGB:EK



THIS SIDE OF CARD IS FOR ADDRESS

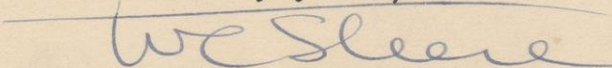
Dr. Frederik T. Thwaites,
41 Roby Road,
Madison, Wisconsin.

April 5, 1942

Dear Dr. Thwaites:

This will notify you that the Editorial Board of the Michigan Academy has recommended that your paper entitled "Stratigraphic Work in Northern Michigan, 1933-1941" be published in the annual volume of "Papers." Your manuscript is already in the hands of Dr. E. S. McCartney, the University Editor, and you will undoubtedly hear from him in the near future.

Sincerely yours,


William C. Steere

Sept. 9, 1942

Dr. Eugene S. McCartney,
4201 Angell Hall,
Ann Arbor, Michigan

Dear Dr. McCartney:

Yours of Aug. 28 and proof of paper for the Academy arrived just as I was leaving on a trip to Houghton. My oldest boy is a victim of hay fever which is what takes us on many brief visits to the Northern Peninsula.

Noobish Island is spelled with two "o's" on the coast chart and the U. S. Army sign there.

I have followed your suggestions for changes although I do not like to make many after the matter is in type as it introduces chances for other errors and increases expense. I do not recall your objection to the word "Paleozoics" but if you wish to change it that will be all right with me.

Sincerely,

UNIVERSITY OF MICHIGAN PRESS

EDITORIAL OFFICE, 4201 ANGELL HALL

Ann Arbor, Michigan

EUGENE S. McCARTNEY, Editor
(Miss) GRACE POTTER, Assistant Editor

August 28, 1942

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

Dear Professor Thwaites:

I am enclosing proof of your Academy paper. The originals of the drawings will be sent in a tube (insured). The proof that accompanies the original drawings need not be returned to me.

If you desire
"In view of" occurs once in the first paragraph and twice in the third. If we change the occurrence at the very beginning of the third paragraph the others may stand. Please be sure not to make a change that will cause the resetting of the entire paragraph. If we may substitute "because" for "in view" only one line will be affected.

As I informed you last spring, I am not using the noun "Paleozoics." It is all right in the classroom or in the field, perhaps, but it seems too casual and offhand for formal writing. There are two occurrences of this word in the paragraph that immediately precedes the CONCLUSIONS. I am not asking you to agree that anything is wrong with this use. You may make the change as a ~~favor~~ personal favor to me or as a concession to an idiosyncrasy. An editor who so much to contend with deserves a little humoring now and then.

Page proof will be submitted to you, probably in November. I hope that you can return the enclosed proof in two weeks, but I can wait until the end of September.

Very truly yours,

E. S. McCartney

UNIVERSITY OF MICHIGAN PRESS

EDITORIAL OFFICE, 4201 ANGELL HALL

Ann Arbor, Michigan

EUGENE S. McCARTNEY, Editor
(Miss) GRACE POTTER, Assistant Editor

December 14, 1942

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

Dear Professor Thwaites:

Since I have to write to you before the Academy volume appears I am enclosing proof showing the additions on page 489.

In your last letter you expressed a desire to avoid having a part of a long footnote carried over to the next page. When footnotes are numerous and some of them are long, notes very frequently have to be carried over in part to the next page. There is no way to avoid this situation. In such circumstances we use a short rule, about like this ———, to separate the note from the text.

The volume should be out in February.

I am leaving for the holidays on December 19. My holiday address will be 12 E. Mowry Street, Chester, Pa. ^(Dec. 20 - Jan. 2)

The printer is about ready to put the volume on the press. If you have any further changes in the proof I am submitting please send them at the first opportunity.

Very truly yours,

E. S. McCartney

Dec. 23, 1942

Dr. Eugene S. McCartney,
4201 Angell Hall,
University of Michigan,
Ann Arbor, Michigan

Dear Dr. McCartney:

Yours of the 14th came duly to hand but there was just too much going on at home during the early part of the holidays for me to get to sending it back.

I have no further changes to make on the enclosed proof.

Wishing you a Happy New Year,
Sincerely,

UNIVERSITY OF MICHIGAN PRESS

EDITORIAL OFFICE, 4201 ANGELL HALL

Ann Arbor, Michigan

EUGENE S. McCARTNEY, Editor
(Miss) GRACE POTTER, Assistant Editor

October 28, 1942

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

Dear Professor Thwaites:

I am enclosing the page proof of your paper. In his desire to get the first three well records on separate pages the make-up man left twelve lines blank at the bottom of page 489. It is certainly a yawning void, and it distresses me. It is by far the worst break in the entire volume. Can you possibly add twelve lines at any place or places in the first three pages? The third line of page 489 ends flush. If we may add "would" after "which" we can gain one line here. If you can add some copy you should estimate on about 62 letters (and word spaces) to a line. Perhaps a little more could be said about previous work. If you can add only seven or eight lines they would help. Perhaps you can make some generalizations about the well records. At any rate do what you can. I will send you a third proof of any page on which you may make involved changes. I ask to see revisions of all pages on which there are corrections.

I am ahead of my usual schedule. I am hoping to have the volume out in February at the latest. Paging is nearly finished.

Very truly yours,

E. S. McCartney

Nov. 4, 1942

Dr. Eugene S. McCartney,
4201 Angell Hall,
University of Michigan,
Ann Arbor, Michigan

Dear Dr. McCartney:

Yours of Oct. 26 and proof of my paper arrived but I was unable to get at them until today.

I went over the short page you mention (489) and added some data obtained on my recent lake trip to Houghton. This will at least partly fill the gap. I will not need proof on it.

Another mistake which you did not see is pages 498 and 499. There most of note 24 was carried over to the second page which makes it hard to understand. I feel that these pages should be rearranged. I also took care of page 491 which was short. I do not like to do this but it is all right with me if you want it. I ought to have typed this new copy but you can edit it first and then type it as it is not long.

Sincerely,



THIS SIDE OF CARD IS FOR ADDRESS

Mr. F. T. Thwaites
Dept. of Geology, Univ. of Wisconsin
Madison
Wisconsin

YALE UNIVERSITY

Department of Geological Sciences

New Haven, Connecticut May 6/xx

I acknowledge with thanks, receipt of your paper entitled:

Stratigraphic work in northern Michigan.

Very truly yours,

C. R. Longwell
C. R. Longwell

June 1, 1942

Prof. E. S. McCartney,
4201 Angell Hall,
University of Michigan,
Ann Arbor, Michigan

Dear Prof. McCartney:

Enclosed please find black line print of revised version of Figure 2 for my paper on part of northern Michigan. Sorry it took so long but I decided to redraft the whole thing. Hope this copy will be all right. I have had a lot of cuts made from similar copy.

Sincerely,

PROSPECTUS of the ANNUAL FIELD TRIP of
THE MICHIGAN ACADEMY OF SCIENCE, ARTS, and LETTERS
and the MICHIGAN GEOLOGICAL SOCIETY to the COPPER COUNTY

1. Assemble at the Douglass House, Houghton, or The Scott Hotel, Hancock (across the river from Houghton) Thursday night, June 19.

Send hotel reservations to G. E. Eddy prior to June 9 unless reservations were made at picnic at Grand Ledge, May 28.

2. Friday, June 20

The trip in the morning will include the A. E. Seaman Mineralogical Museum, models of mining methods, and a 60 inch shot-drill core at The College of Mines; the new South Range trap rock quarry, The Baltic Shaft dump, and the Isle Royale No. 1 shaft dump, as well as a typical section of The Flow, glacial grooves, the Isle Royale lode, and mass copper. The Keweenaw Fault zone will be observed shortly before lunch. Lunch will be at Geno's at Hancock. Geno is noted throughout the Upper Peninsula for his spaghetti and fish dinners.

After lunch the group will drive to the top of Quincy Hill for a general view of the geology and topography, and then drive from the top of the hill down across the Fault to the Lake Superior sandstone. On the route to Calumet many reclamations and mills will be observed, and the group will take a trip through the Ahmoek mill and smelter. Between Lake Linden and Calumet The Rock Wall Ravine (vertical Cambrian sandstone against the Keweenaw fault) will be visited. In Calumet an outcrop showing glacial grooves will be observed north of Calumet, near the village of Allouez. The Allouez No. 3 shaft and the Conglomerate rock dump will be visited. From here the group will drive to Keweenaw Park at Copper Harbor, passing many active as well as abandoned mines along the road, and ending the day's trip with a scenic drive to the peak of Brockway Mountain, with a return to the Park.

After supper Dr. T. M. Broderick, chief geologist of Calumet and Hecla, or his assistant, Dr. C. D. Hohl, will give an informal talk on the geology of the district.

3. Saturday, June 21

The group will leave the Park at 8:00 A. M. and drive to Eagle Harbor, observing the striking scenery and rugged shore line and reefs of conglomerate. The Devil's wash Tub, at least two tombolas, and Silver Creek will be studied. At Eagle Harbor we will stop at The Lake Breeze Hotel, which will be a coffee, doughnut, and rest stop. We will also observe an amygdaloid flow top where pipe amygdules and ropey lava structures are reported. From here we go to Eagle River, crossing the high bridge over Jacob's Falls, and will visit The Douglass Houghton monument. We leave Eagle River and drive to Phoenix, stopping enroute at the Ash Bed Mine and Ash Bed lode. Here the lode was explosive in origin and finely divided copper may be found. We will walk along the lode down to the river where excellent examples of columnar basalt can be seen. Our next stop is at the South Phoenix dump between Phoenix and Cliff, where an adit can be observed and excellent specimens of copper, chlorite, prehnite, and other minerals can be easily found. This property, as well as the Phoenix and Cliff mines, are examples of fissure deposits which were developed and mined prior to the mining of the amygdoloidal tops of flows. The next stop is at the Cliff mine where Cornish pasties with all the trimmings will be served.

After lunch those 25 members of the group who are going underground will leave for the mine. The remainder will hear a historical sketch of the Cliff Mine by Frank Pardee and a geological discussion of the fissures and the overlying Greenstone by Dr. Cornwell of the U.S.C.S. A rugged climb for those interested to the top of the Greenstone flow is scheduled. We leave the Cliff Mine and drive south to the Ahmeek No. 3 and No. 4 double shaft house where we will see a large steam hoist, air compressor, and rock or shaft house. From there we travel to the Mohawk dump, north of the village of Mohawk, which is the best location in the copper county to find copper-arsenide minerals. This is the last stop of the afternoon. Those with friends, husbands, etc., underground will drive to the mine to pick them up and drive to the Park. The remainder will drive directly to the Park.

There will be a banquet Saturday evening, followed by a talk by Prof. James Fisher, of the School of Mines on the history, folklore, and personalities connected with the history of the development and growth of the copper country. This talk should prove of interest to all, including wives, families and guests.

4. Sunday, June 22.

No trip is scheduled for Sunday, but there are many points of interest and things to do in the region, such as:

- (1) A geological trip to Manitou Island with possible deep-sea fishing enroute.
 - (2) A trip to Bete Grise.
 - (3) Fort Wilkins State Park and Lake Fanny Hooe.
 - (4) Jacobsville sandstone quarry near Portage Entry.
 - (5) Manganese mine (Clark Mine)
 - (6) Limestone Mountain
 - (7) Golf at Keweenaw Park.
- (And others which will be suggested at the Saturday night meeting)

5. At Keweenaw Park the following accommodations are available for Friday and Saturday nights:

	One Guest	Two Guests	Three or Four Guests	Five or Six Guests
A. SINGLE ROOM IN COTTAGES	\$3.50	\$4.50		
*B. °DUPLIX COTTAGES - Bedroom and Living room - Bathroom shared with adjoining apartment:	6.00	7.00	\$8.50	
*C. °DUPLIX DELUXE COTTAGES - Living room with fireplace, Bedroom and Bathroom - Complete Suite:	8.50	10.00	12.00	
D. °DUPLIX SPECIAL DELUXE COTTAGES - Living room with fireplace, Bedroom and Bathroom - Complete Suite:	12.50	12.50	15.00	
E. °DELUXE FAMILY COTTAGES - Two Bedroom connecting bathroom and large living room with fireplace:		14.00	16.00	\$18.00

°Two beds in every bedroom.

°Studio couch in living room may be converted into an extra bed.

*At the meeting at Grand Ledge, May 28, all accommodations of the "B" and "C" types shown above were reserved. Three of "A", 10 of "D", and at least 3 of "E" are available.

Send reservations to G. E. Eddy prior to June 9, unless reservations were made at picnic at Grand Ledge, May 28. Reservations will be made in the order of receipt.

6. Any reservations made after June 9 at either of the hotels at Houghton or Hancock or at Keweenaw Park must be made directly by you with the hotels or Park.

7. For those making reservations too late to be taken care of at Keweenaw Park, accommodations can be provided at the nearby New Pontiac Hotel. Reservations for the New Pontiac Hotel can be handled through the Keweenaw Park, Copper Harbor, Michigan, and requests for reservations should be so addressed.

8. A number of the group are planning to study the Silurian and Ordovician section from Manistique westward on Thursday, June 19, on the way to Houghton. It is hoped the services of Drs. R. A. Smith and R. C. Hussey as guides will be available. Headquarters for this portion of the trip will be either the Manistique Tourist Court, 1 mile east of Manistique, or the Ossawinamakee Hotel, Manistique, on Wednesday night, June 18. Those interested should make their own reservations directly to either of the above.

9. The outline for the copper country field trip will be sent to all persons making reservations for the trip and should be in their hands not later than June 17. These outlines are now in preparation and their cost will be collected from those on the trip by the Secretary. As a part of the outline, in addition to the detailed copper country itinerary, other points of geologic interest enroute to and from the copper country will be listed in the text and indicated by lettered steps on the map.

10. Complete and return the enclosed card to G. E. Eddy, prior to June 9, inasmuch as he must notify the hotels and Park on this date. Any reservations after June 9 must be made directly by you.

NOTICE CONCERNING CORRECTION OF PROOF

The cost of printing the Academy volumes has been mounting yearly, and the charges for authors' alterations have gone up correspondingly. The editors therefore have to see that changes are made with an eye to economy. By the exercise of a little ingenuity one can generally find entirely satisfactory methods of correction without causing the resetting of more than one, two, or three lines.

The addition or the deletion of a single word near the beginning of a paragraph may cause the resetting of the rest of the lines in it. The longer the paragraph, the greater the expense.

It often happens that, when a word is added, another word in the same line (or in the line above or below) can be replaced by a shorter one or even be deleted. When words are deleted, compensation may frequently be made by an addition in the same line (or in the line above or below). It is not worth while to try to apply the principle of compensation in the last two or three lines of a paragraph.

The spaces between words are to be counted, of course, in making corrections. It should be noted that wide spacing between words may permit the addition of two or three or even four letters without disturbing the next line. Similarly, close spacing may allow two or three or even four letters to be deleted without affecting the following line.

In the correction of page proof some compensation must be made for any change that would either gain or lose a line.

We do not ask authors to forgo necessary correction, but we shall appreciate your aid in keeping the charge for alterations as low as possible. Authors will be asked to meet the cost of extensive changes or revisions.

THE EDITORS

THE UNIVERSITY OF MICHIGAN PRESS



SCHOLARLY PUBLICATIONS ☞ 4201 ANGELL HALL ☞ ANN ARBOR, MICHIGAN

EUGENE S. McCARTNEY, *Editor* ☞ (Miss) GRACE E. POTTER, *Associate Editor*

April 7, 1948

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

Dear Professor Thwaites:

Finally I have proof of your Academy paper. I will mail the originals of the maps tomorrow. Most of your paragraphs are unusually long. If it is necessary to make corrections anywhere except near the end of a paragraph, please try to make them in accordance with the suggestions enclosed. The manuscript should be returned with the proof.

Twenty-five gratis reprints will be supplied. If you wish more I will get you a quotation later on.

very truly yours

E. S. McCartney

April 13, 1948

Dr. E. S. McCartney, Editor,
University of Michigan Press,
4301 Angell Hall,
Ann Arbor, Michigan

Dear Dr. McCartney:

Yours of the 7th with enclosed proof and manuscript are at hand. The maps look very fine. I made some changes in the legends. In the text the punctuation in the quotation from Smith is correct but two words were misquoted. I think they should not affect more than that single line.

Twentyfive reprints will be enough. I am returning manuscript and corrected proof herewith.

Very truly yours,