

September 18, 1961.

Dr. E. T. Hall,
The Littlemore Scientific Engineering Co.
Railway Lane,
Littlemore, Oxford.

Dear Dr. Hall:

In regard to our order (U. of Pa.No. 63437) for two Proton Magnetometer Detector Bottles, a strange thing has occurred. A box with the following label:

1 Deseeser Head for Magnetometer, value £22/10/0
has arrived empty.

I was somewhat puzzled to read that it was one instead of two, but more surprised when I opened the box and found nothing in it.

The original lid appeared to have been replaced with cardboard, but the box was wrapped firmly with "machine-type" wiring when received. The box was stamped "received in bad condition at Pennsylvania Terminal", N. Y. so that the wiring might have been done there.

It was unusual also that it was shipped directly to us without any notice from customs. For this reason, I suspect that the box was empty when it arrived in New York.

The box was labeled "from R. E. Blazey" and if he is the one to whom this matter should be referred, I shall appreciate it very much if you will pass this on to him.

I am sorry to cause you this trouble, but hope that something can be done about the lost coil and bottle. We are anxious to receive two of these detectors to use in gradiometer arrangements as soon as possible.

In the meantime, we are writing to the Customs Office in New York, but have little hope for success there.

Sincerely yours,

Elizabeth K. Ralph
Carbon - 14 Laboratory

ekr;lf

C
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P
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20 September, 1961

Dr. E.T. Hall
The Littlemore Scientific Engineering Co. R
Railway Lane
Littlemore, Oxford
England

Dear Dr. Hall:

Since writing to you on September 18th, a second box has arrived which does contain a proton magnetometer detector bottle. There is still the problem, however, of the first box which arrived empty.

I hope that the first detector bottle can be located.

I have enclosed the receipt for the second one.

Sincerely yours,

Elizabeth K. Ralph

Elizabeth K. Ralph
Carbon-14 Laboratory

THE LITTLEMORE SCIENTIFIC ENGINEERING CO.
RAILWAY LANE,
LITTLEMORE, OXFORD.

Telephone: Oxford 78563.

E. T. Hall, D.Phil.

ETH/REB/LSEC

23rd September 1961.


Miss E. K. Ralph,
Carbon - 14 Laboratory,
Department of Physics,
University of Pennsylvania,
Philadelphia, 4.

Dear Madam,

We are devastated to hear about the Magnetometer Detector Head, in fact two of these were despatched at the same time, in different cases. We thought adequately packed. We will be interested to hear the fate of the second Detector Head, and are arranging to send off another one during the next two weeks. We are out of stock at the moment.

Please let us know at once whether either the missing bottle, or the second parcel arrive.

Yours faithfully


E. T. Hall.

PRESERVATION COPY 09/12/2014

OFFICE OF
Claims & Inquiry

United States Post Office

PHILADELPHIA 4, PENNSYLVANIA

IN REPLY REFER TO
JWC/f

September 29, 1961

Miss Geraldine Bruckner, Registrar
The University Museum
33rd and Spruce Streets
Philadelphia 4, Pa.

Dear Miss Bruckner:

Reference is made to your letter of September 15, concerning receipt of a box by your Mr. R. E. Linington, which box was received empty, and damaged.

A thorough search has been made in the "Loose in Mails" sections both in New York, N.Y., and in Philadelphia, but the contents of the box, a detector bottle for a proton magnetometer, could not be found.

It is therefore suggested that you request the sender, Littlemore Scientific Engineering Company, Oxford, England, to start tracing procedures through their post office.

Sincerely yours

Anthony I. Lambert
Postmaster

UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 4

The College

DEPARTMENT OF PHYSICS

October 5, 1961

Dr. E.T. Hall
The Littlemore Scientific Engineering Co.
Railway Lane
Littlemore, Oxford
England

Dear Dr. Hall:

The mystery of the missing detector bottle is still unsolved. I have enclosed the reply which we received from the U.S. Post Office, which isn't very encouraging.

Thank you for your letter of 23rd September, and for your help in this matter.

Sincerely yours,

Elizabeth K. Ralph

ER/ic

THE LITTLEMORE SCIENTIFIC ENGINEERING Co.

RAILWAY LANE,
LITTLEMORE, OXFORD.

Telephone: Oxford 78563.

E. T. Hall, D.Phil.

ETH/REB/LSEC

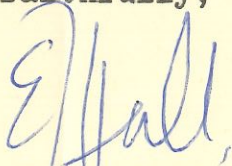
10th October 1961.

Miss Elizabeth K. Ralph,
Department of Physics,
University of Pennsylvania,
Philadelphia 4.
U.S.A.

Dear Madam,

Thank you for your letter of 5th October, and it is sad that the bottle has disappeared. We will of course accept responsibility for this, and will let you have a replacement as soon as possible.

Yours faithfully,



E. T. Hall.

November 22, 1961

Dr. E.T. Hall
The Littlemore Scientific Engineering Co.
Railway Lane
Littlemore, Oxford
England

Dear Dr. Hall:

Thank you for your letters and concern about the missing detector bottle. The replacement hasn't yet arrived, but our need for it won't be urgent for several weeks.

It has occurred to me that it would be helpful to have a duplicate set of instruction books, circuit diagrams, and dimensions of the proton magnetometer. These, we should keep here in the laboratory so that we can order spare batteries, cables, or any parts that are needed to prepare the instrument for its next trip while waiting for it to arrive.

The reports from Italy indicate that it worked beautifully in locating buried tombs, a long wall, and so forth at the sites tested there.

Shall I send a purchase order for a duplicate set of instruction books, or what is the easiest procedure?

Sincerely yours,

Elizabeth K. Ralph

EKR/ic

C
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P
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THE LITTLEMORE SCIENTIFIC ENGINEERING CO.

RAILWAY LANE
LITTLEMORE, OXFORD.

Telephone: Oxford 78563.

ETH/REB/LSEC

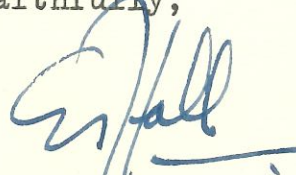
4th December 1961

Miss Elizabeth K. Ralph,
Department of Physics,
University of Pennsylvania,
Philadelphia 4.
Pennsylvania.
U.S.A.

Dear Madam,

Thank you for your letter, and I hope by now you have received the extra bottle. We enclose a set of instruction leaflets, circuit diagrams etc. for your Proton Magnetometer. We are sending these with our compliments.

Yours faithfully,



E. T. Hall.

Battery problem

RESEARCH LABORATORY FOR ARCHAEOLOGY
AND THE HISTORY OF ART

TEL. 55211

6 KEBLE ROAD
OXFORD

Dr. Rainey
He

ETH/JMR

24th August, 1965.

Miss E. K. Ralph,
Department of Physics,
University of Pennsylvania,
Philadelphia 4,
Pennsylvania, U.S.A.

ASCA

Dear Beth,

I am coming to Philadelphia on 21st/22nd September.
Is there any chance of seeing you and your outfit? Will
George Bass - or indeed any of his colleagues - be back by
then? If so, perhaps we could arrange a meeting.

I shall be leaving here on 7th September and so an
early reply would be necessary to reach me in time.

Yours sincerely,

Unsigned owing to ~~xxx~~ absence.

PPE. T. Hall. *JMR*

*replied that
Fro & George
will be here.
Beth*

Techniques

September 881965

Dear Dr. Hall:

Beth Ralph tells me that you expect to be in Philadelphia on the 21st and 22nd of September, and I just want to urge you to put up with us at the house at Valley Forge while you are here. If you can let me know when you will be arriving and how you are getting to Philadelphia, I will have our museum station wagon meet you.

George Bass will be here, but I am afraid Beth will be back in Italy by that time. In any case we would be very pleased to have you look over our "shop" here.

Very best wishes,

Froelich Rainey
Director

Dr. E. T. Hall
c/o Seminar on the Application of Science
in Examination of Works of Art
Research Laboratory
Museum of Fine Arts
Boston, Massachusetts 02115

FGR/vg

December 8, 1965

Dr. E. T. Hall
Research Laboratory for Archaeology
and the History of Art
6 Keble Road
Oxford, England

Dear Dr. Hall:

It was fun to have a chance to talk to you in Boston and I regret that I wasn't able to stay longer.

I am sorry too that I was unable to keep my promise and bring the cesium magnetometer to England. I paid so much for overweight when I went to Italy by air that Fro Rainey ordered me to come home by ship. Since I was impatient to get back, I just couldn't face a sea journey to England and then another to the U.S.A. Also, in Calabria it was difficult to find out about possible ships, connections, etc.

With the cesium magnetometer, we were able to detect structures at depths of 5 to 6 meters. We used two sensors-- one fixed in the middle of the field with a long cable leading from it. By putting a small anomaly near the fixed sensor, we could relate one field to the next, that is, a reading of 15 units (about 8 gammas) in one spot would represent the same magnetic conditions as in another spot kilometers away. We recorded our readings in a notebook directly to scale (1:400), then pasted the pages together, drew the magnetic contours and there was the completed grid with no need for corrections, etc. In about 10 grids (roughly 150 by 100 meters each) pasted together, there are indications that we have found a good part of the eastern limit of Sybaris and a few isolated parts to the north and south. Things were going so well that I had wanted to keep on until the weather became too bad, but finally a cow kicked the fixed sensor and put us out of business.

Dr. E. T. Hall

-2-

December 8, 1965

I plan to return to Italy in April, and I hope that I'll be able to go via England or that you or Martin will have time to come to Italy.

I have enclosed a few pictures taken by Jim Delmege.

Sincerely yours,

Elizabeth K. Ralph

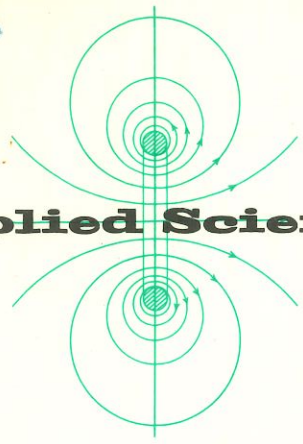
EKR/mhr
enc.

battery
case = 9kg

c/o Enrico Mueller
Cassano Ionio
(Cosenza)

14 November 1965

Applied Science Center for Archaeology



THE UNIVERSITY MUSEUM • UNIVERSITY OF PENNSYLVANIA
33rd & SPRUCE STREETS • PHILADELPHIA 4, PENNSYLVANIA
Froelich Rainey, Director EVERgreen 6-7400 (Area code 215)
Elizabeth K. Ralph, Associate Director
EVERgreen 6-0100 Ext. 8168 (Area code 215)
Cable Address "Antique"

Mr. Robert E. Morris

Dear Bob,

Many thanks for your letter of Nov. 9th and for the photo of "la vecchia." Giacinto, Nuncio, and I returned on Friday from Metaponto after three successful days there. At Metaponto there are many walls and structures that show in aerial photographs that are buried much less deeply than those at Sybaris. They start at 1/2 to 1 meter but no one knows how deep they go. In two big grids, we had anomalies that corresponded precisely (anti-magnetic lines) with the aerial anomalies & in one we even detected additional structures - a whedline of them that didn't show in the photos. In a third grid, we had a bit of confusion because there was too much archaeological debris on the surface. Before leaving I wrote a small report & the architect there is making copies of the grids, so that this will be ready to send to you as soon as I return. While it has been raining this weekend, I have made a start with the Sybaris paperwork, but there is still much to put together. We hope to continue the field work either here or at Sale next week - depending upon the weather.

About the batteries, I'll try the new KOH when it arrives but we are getting along fine with my big lead acid bank, unless we're moving from station to station (the small ones last long enough for this). The boys are happier with the big batteries. We park them in the middle of the grid that we plan to do, near the fixed sensor, and no one has to carry them thereafter. The only nuisance is the extra cable. We wrap the two cables around whoever is carrying the instrument and he chugs along like a mule pulling the cables behind.

November 13, 1970

Dear Ted:

I have just noted that George Bass answered your letter of October 21 and it just now has come to my desk. George probably has answered the question about Jeremy Green. This has to do with projected employment in the Laboratory here. I talked with you about getting someone from England and Mike Tight seemed to be the right person. He couldn't leave for a least a year and at the end of that year, we got into some subget squeezes here and I really couldn't find the money for somebody at his level. In the meantime, we brought in three Graduate students who are working for their degrees, as well as working in the Laboratory. I hope that this is going to work out, but I am not at all sure of it. Replacement problems, as you know, are always with us.

For the moment, we are much involved in aerial photography, or remote sensing and a number of experiments with survey instruments. Also with the reinforced Geology Department here recently, we have two or three people working on fission track dating, Potassium Argon, U-238 dating and so forth. For me, it is still the most exciting development in archaeology these days.

All the very best,

Froelich Rainey
Director

Mr. E. T. Hall
Research Laboratory for Archaeology
and the History of Art
6 Keble Road
Oxford, ENGLAND

RESEARCH LABORATORY FOR ARCHAEOLOGY
AND THE HISTORY OF ART

TEL. 55211

6 KEBLE ROAD
OXFORD
OX1 3QJ

ETH/WJC

21 October 1970

Dr. F. Rainey,
The University Museum,
33rd and Spruce Streets,
Philadelphia 4,
Pennsylvania, U.S.A.

Mr. Rainey

Dear Fro,

I am dropping you a line in case you may be thinking still of undertaking work underwater. This is because we have been employing for the last four years an underwater physicist - Jeremy Green - whom we cannot pay any longer due to the research grant with which he was occupied having come to an end. I thought it just possible that Penn might be considering further underwater activities and you might be able to find a job for Green who is pretty well qualified both as a scientist and underwater worker.

I expect this is quite a vain hope but I would like to help him if I can. I have written to George in the same vein.

I wonder what happened about your projected Laboratory director or whether you dropped the idea of a change.

With kind regards.

E.T. Hall

E.T. Hall

RESEARCH LABORATORY FOR ARCHAEOLOGY
AND THE HISTORY OF ART

TEL. 55211

6 KEBLE ROAD
OXFORD

ETH/JMR

14th December, 1965.

Miss E. K. Ralph,
Applied Science Center for Archaeology,
33rd and Spruce Streets,
Philadelphia 4,
Pennsylvania,
U.S.A.

Dear Beth,

Many thanks for your letter together with photographs etc. I am so glad that you had a successful trip and don't blame you for wanting to get back to America at once.

I suppose when you go back in April you will also be doing some digging to see what your results meant? I will be interested to hear what emerges.

Yours sincerely,



E. T. Hall. ✓

December 30, 1965

Dr. E. T. Hall
Research Laboratory for Archaeology
and the History of Art
6 Keble Road
Oxford, England

Dear Dr. Hall,

Thank you for your letter of December 14th. Our proton magnetometer was just returned from Peru where a Mr. Beer used it at various sites. He had a terrible struggle with diurnal changes of 200 P.M.U., but managed to get some good results. He reported that there are many underwater lake sites to be investigated at depths of approximately 50 feet. I mentioned that you were thinking of designing a workable fin for the detectors, and we are both hoping that you haven't lost interest in it.

Yesterday a Miss Joan Taylor visited us. She was formerly a student here but is now at Newnham College, Cambridge and is doing a thesis in collaboration with Stuttgart on trace analyses of gold objects. I realize how you feel about trace analyses of metals, but if there is any hope for them, it is probably with gold. She hopes to visit your laboratory in January and I have suggested that she could sample the same objects that you have for your electron microprobe analyses. If it is agreeable with you, she has our permission to sample them, take them away briefly for sampling, or whatever is most convenient for you.

With best wishes for the New Year,

E. K. Ralph

EKR:LF

WJL

January 10, 1973

Dr. Edwin S. Hall, Jr.
Department of Anthropology
State University College at Brockport
Brockport, N. Y. 14420

Dear Dr. Hall:

In regard to your request to date some samples from Alaska, I am writing to say that we shall be glad to accept them, subject to Dr. Rainey's approval.

For dating uncharred bones we now know that it is essential to extract the organic collagen fraction. This is usually a very small part of the whole bone, and we may, therefore, need as much as a kilogram.

The requirements for wood, charcoal, etc., are listed on the enclosed sheet, and on the second enclosure, the items of information that we require for each sample are specified.

Because of our large backlog of samples, we cannot promise the results in less than one year.

Sincerely yours,

Elizabeth K. Ralph

EKR:w

cc. Dr. Rainey

March 14, 1973

Dear Prof. Hall:

Yes, we will be glad to run the dates.

Please send them along.

Sincerely,

(Miss) Linda S. Young
Secretary to Director

Prof. Edwin S. Hall, Jr.
State University College at Brockport
State University of New York
Brockport, New York 14420



Department of Anthropology

*yes - will
do them -
please send
them on -
E.S.H.*

1 March 1973

Dr. Froelich Rainey
Department of Anthropology
University Museum
University of Pennsylvania
33rd & Spruce Streets
Philadelphia, Pennsylvania 19104

Dear Dr. Rainey:

Some time ago I wrote concerning the possibility of running dates on three organic samples from Northern Alaska. Dr. Ralph said she'd be willing to run the samples if it was acceptable to you. If you are agreeable, I will send the material along post haste.

Sincerely,

Edwin S. Hall, Jr.

Edwin S. Hall, Jr.
Associate Professor

ESH/pmj

yes - will do them - please send them on - E.S.H.

THE UNIVERSITY MUSEUM



UNIVERSITY OF PENNSYLVANIA

THIRTY-THIRD AND SPRUCE STREETS
PHILADELPHIA, PA. 19104

CABLE ADDRESS "ANTIQUE"
TELEPHONE: EVERGREEN 6-7400
(AREA CODE 215)

Me

January 9, 1972

Dear Mr. Hall:

Dr. Rainey is out of the country until the end of the month, you will hear from him regarding your letter of January 4th upon his return.

Sincerely,

(Miss) Linda S. Young
Secretary to Dr. Rainey

Mr. Edwin S. Hall, Jr.
Associate Professor
State University College at Brockport
State University of New York
Brockport, New York 14420

copies to Beth Ralston 1/9/72

STATE UNIVERSITY COLLEGE AT BROCKPORT / state university of new york
brockport, new york 14420



Department of Anthropology

4 January 1973

*copy to
Beth R.*

Dr. Froelich Rainey
Director
University Museum
The University of Pennsylvania
33rd & Spruce Sts.
Philadelphia, Pa. 19104

Dear Dr. Rainey,

Bob McKennan has written that he talked to you in Calgary about the possibility of running some radio carbon dates for us. I believe I sent you a copy of the preliminary results of our work in Northern Alaska last summer. The sample McKennan mentioned, of caribou bone, comes from a site near Old John Lake, in the eastern Brooks Range, and was found in direct association with microblades and "fish-tail" projectile points. This material may compare with Gidding's Lower Bench finds.

As noted in the report, I also excavated an Ipiutak house in the middle Noatak Drainage, from which I collected a considerable amount of wood.

Unfortunately, it was a shoestring summer and neither McKennan nor I have extra funds for radio-carbon dating. In view of the probable importance of the two sites, would the Applied Science Center for Archaeology be willing to run the Old John Lake sample and, perhaps, a couple of samples from the Ipiutak site? If so, we would be very appreciative.

Sincerely,

Edwin S. Hall, Jr.

Edwin S. Hall, Jr.
Associate Professor

ESH/dl

January 7, 1974

Professor Edwin S. Hall, Jr.
Department of Anthropology
State University College at
Brockport
Brockport, New York 14420

Dear Professor Hall:

The C^{14} dates for your samples from the Ipiutak House at Feniak Lake are listed on the enclosed table. I have also listed Ipiutak dates obtained previously, probably all by the less reliable solid carbon method.

Of interest is the fact that the only sample (P-2056) that was given the NaOH pretreatment produced the earliest C^{14} date. This treatment removes possible humic acid contamination which might make the C^{14} dates erroneously young. However, samples twice as large are required (P-2057 and P-2058 were not sufficiently large). We did not know about the NaOH pretreatment in the early 1950's when the samples were dated by solid carbon.

If more material representative of Ipiutak is available, I think that it would be worthwhile to date more samples after pretreating them with NaOH. We prefer to have charcoal or wood rather than antlers which also may be unreliable.

Sincerely yours,

Elizabeth K. Ralph

EKR:emd
CC: Dr. Froelich Rainey
University Museum
Enclosure

UNIVERSITY OF PENNSYLVANIA C¹⁴ DATES FOR FENIAK LAKE (ALASKA) IPIUTAK HOUSE

Lab No.	Excavator's Sample No.	Material & Location	Pretreatment	5568 Half-Life		5730 Half-Life	
				B.P. 1950	A.D./B.C.	A.D./B.C.	With MASCA Correction
P-2056	A	Flooring composed of small twigs, probably <u>Salix</u>	NaOH	2217 ± 48	267 B.C.	334 ± 49 B.C.	400 B.C.
P-2058	C	Flooring composed of small twigs, probably <u>Salix</u> Located 6 ft. from Sample A		1572 ± 51	A.D. 378	A.D. 331 ± 53	A.D. 400
P-2057	B	House Wall post F, probably <u>Picea</u>		1961 ± 46	11 B.C.	70 ± 47 B.C.	A.D. 50 to A.D. 30

Note: The MASCA - corrected C¹⁴ dates (right-hand column) are our best estimates of the true ages of the samples. These correction factors have been published in MASCA Newsletter, Vol. 9, No. 1 (August 1973).

Samples Representative of Ipiutak Culture Dated Previously

P-98	Caribou antler, N. Shore of Pt. Hope Spit	1619 ± 210 (B.P. 1958)	A.D. 339	A.D. 290	A.D. 390-370
C-266	Wood from Grave 51 (Ipiutak II) (Pt. Hope?)	912 ± 270	A.D. 1038	A.D. 1010	A.D. 1050
C-260	Wood from Ipiutak site at Deering, Seward Peninsula	973 ± 170	A.D. 977	A.D. 950	A.D. 1010
K-109	Charcoal related to Ipiutak and Near Ipiutak from Platinum Village Site	1500 ± 120	A.D. 450	A.D. 410	A.D. 510-490
K-532	Birch bark from Deering	1380 ± 200	A.D. 570	A.D. 530	A.D. 600
K-537	Dog faeces from Deering	1290 ± 200	A.D. 660	A.D. 620	A.D. 670