

UNIVERSITY OF ILLINOIS

DEPARTMENT OF ANTHROPOLOGY  
109 Davenport Hall, Urbana, Illinois 61803

Oct. 28 - 1965

Dr. Froelich Rainey, Director  
University Museum  
University of Pennsylvania  
Philadelphia, Penna.

PROF DEV  
RE- RALPH

ASCA

*Journal  
this is for  
Beets &  
think.  
Will you  
advise  
McGregor.  
JCG*

Dear Dr. Rainey;

We are undertaking the editing here of a handbook on archaeological field methods, particularly new ones. In the recent article in Science on the use of the rubidium magnetometer I notice you have had a part in the testing of it. We want someone to write on the geophysical methods developed in electronic and magnetic surveys, one important aspect of which is cost.

In your opinion should we contact Sheldon Bernier for such an article, or could Elizabeth Ralph of your staff, or someone else do the best job of it. We want something written for the archaeologist, telling the procedures, problems, application, limitations, etc. We feel there is a real need for such a guide for the field archaeologist, and the response we have had so far is enthusiastic about it.

Your ideas of someone who can and would write this chapter will be greatly appreciated.

Sincerely;

*John C. McGregor*  
John C. McGregor

109 b Davenport Hall

November 2, 1965

Dr. John C. McGregor  
University of Illinois  
Department of Anthropology  
109 Davenport Hall  
Urbana, Illinois 61803

Dear Dr. McGregor:

Dr. Rainey has asked us to respond to your letter of October 28. He feels that Miss Ralph could best write the article you requested. She is presently in Europe and upon her return, at the end of November, you can contact her directly.

Thank you for your interest.

Sincerely yours,

Beannette M. Flamm

JMF/mhr

Prof. Dev.

December 7, 1965

Dr. John C. McGregor  
Department of Anthropology  
199 Davenport Hall  
University of Illinois  
Urbana, Illinois 61803

Dear Dr. McGregor:

It was good news to learn, upon my return from Italy, that you are editing a handbook on archaeological field methods. There certainly is a need for one.

I should like to tackle the chapter on geophysical methods and instruments, but my problem is when to find time to do it. Hopefully, it might be in January or February, but I hesitate to make this a definite commitment. Dr. Martin Aitken (Research Laboratory for Archaeology and the History of Art, 6 Keble Road, Oxford, England) would be better qualified to write about the Elsec proton magnetometer, proton gradiometer, and fluxgate magnetometer and especially, their applications at sites in the British Isles. If you could persuade him to do this part, I could then concentrate on resistivity surveying, the new, more sensitive rubidium and cesium magnetometers, metal detectors, etc. and a discussion of applications and limitations on alluvial plains and other sites in Italy and in Turkey, plus historical and other sites in the U.S.A.

Sincerely yours,

Elizabeth K. Ralph

EKR/mhr

**MARCEL DEKKER, INC.**

95 MADISON AVENUE • NEW YORK, NEW YORK 10016 • 212-679-3991

*publishers in science and technology*



October 24, 1966

Dr. Froelich Rainey  
Professor of Anthropology  
University of Pennsylvania  
Philadelphia, Pa.

Dear Dr. Rainey:

Your contribution in "Science" of September 23 (with Dr. Ralph) and the lucid demonstration of the present interdisciplinary approach, was very impressive indeed.

Just because we specialize in publishing research monographs and advanced textbooks in chemistry and physics (please find enclosed Forecast No. 3), we would like to invite you to write a modern fundamental textbook "Advanced Archeology" in which all branches of modern research put their contributions. What we would like to have is not a symposium type of book, but a well-integrated and well-coordinated advanced textbook, which could be used by archeologists and anthropologists on one side, and by chemists-physicists on the other.

Hoping to hear from you, we remain

Sincerely,

*Maurits Dekker*

Maurits Dekker, \*  
Chairman of the Board

MD:rt  
Enc.

\* Founder and president of Interscience until its merger with John Wiley.

*Ralph!!!  
ASCA*

*For you  
Jo*

RALPH:  
PROF - DEVELOP

October 27, 1966

Mr. Maurits Dekker, Chairman of the Board  
Mareel Dekker, Inc.  
95 Madison Ave.  
New York, N.Y. 10016

Dear Mr. Dekker:

Dr. Rainey has referred your kind letter of October 24th to me. Since I am the physicist in the Rainey-Ralph team, he thinks that it would be more appropriate for me to write the textbook entitled "Advanced Archaeology" which you suggested. I am not sure that I agree with him.

For one thing, it would be difficult to improve upon Physics And Archaeology by M.J. Aitken (Interscience, 1961) except to add a few chapters on some subjects not covered. Secondly, it seems to me that it would be extremely hard, if not impossible, to write an advanced textbook that would appeal both to archaeologists-anthropologists and to chemists-physicists. From my experience with the former, they are glad to have the physical scientists work out a new technique for them but they couldn't care less how it works and won't use it if it is too much trouble for them. Thirdly, there is always the difficulty of finding time to write a book.

There is a great need for an archaeometric handbook or manual, but this, I suspect, would appeal only to archaeologists and anthropologists. I have enclosed a draft of a chapter written for this type of book as an illustration.

Sincerely yours,

EKR:amg  
encl. 1

Elizabeth K. Ralph

ASCA

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## PUBLICATION FORECAST

NUMBER 3  
(In 4 parts)

AUGUST 1966

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July 1967	pp. 1-7
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Carlin	Transition Metal Chemistry 2
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Dasent	Nonexistent Compounds
Giddings	Dynamics of Chromatography 1.1
Giddings/Keller	Advances in Chromatography 1
Giddings/Keller	Advances in Chromatography 2
Levine	Lasers 1
McIntosh	Dielectric Behavior of Physically Adsorbed Gases
Robinson	Atomic-Absorption Spectroscopy
Walker	Chemistry and Physics of Carbon 1
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## PUBLICATION FORECAST

NUMBER 3

August 1966

Part 1: *Published books*  
Part 2: *September 1966 to  
July 1967*  
Part 3: *Journals*  
Part 4: *Encyclopedia*

Part 1: PUBLISHED BOOKS

*Further information for published books mentioned  
in the Table of Contents is available upon request.*

Part 2: September 1966 - July 1967 Publications

### ELECTROANALYTICAL CHEMISTRY: A Series of Advances

Edited by Allen J. Bard, The University of Texas, Austin

Volume 1

September 1966

pp. 440

\$15.75

CONTRIBUTORS: D. Smith, Northwestern University; D. G. Davis, Louisiana State University; D. M. Mohilner, Mellon Institute; T. Kuwana, University of California

### TRANSITION METAL CHEMISTRY: A Series of Advances

Edited by Richard L. Carlin, Brown University

Volume 3

September 1966

pp. 374

\$15.75

CONTRIBUTORS: D. A. Brown, University College, Dublin; B. R. McGarvey, Polytechnic Institute of Brooklyn; L. I. Katzin, Argonne National Laboratory; A. Sargeson, The Australian National University; G. Peterson, Bell Telephone Laboratories

### CHEMICAL RELAXATION: An Introduction to the Theory and Application of Stepwise Perturbation

By George Czerlinski, University of Pennsylvania

September 1966

pp. 328

\$14.50

For biochemists, biophysicists, physical chemists  
and physicists interested in chemical kinetics,  
thermodynamics and instrumentation.

METHODS OF POLYMER EVALUATION (In 3 Volumes)

Edited by Philip E. Slade, Jr. and Lloyd T. Jenkins, Chemstrand Research Center  
September 1966 pp. 264 \$10.75

Volume 1: Thermal Analysis

Instrumentation, Techniques, and Applications of DTA, E. M. Barrall and J. F. Johnson; Transition Temperatures by DTA, D. J. David; Instrumentation Techniques and Applications of Thermogravimetry, H. C. Anderson; Quantitative Calculations in Thermogravimetric Analysis, C. D. Doyle; Effluent Gas Analysis, A. S. Kenyon

ADVANCES IN CHROMATOGRAPHY

Edited by J. C. Giddings, University of Utah and Roy A. Keller, University of Arizona

Volume 3 October 1966 pp. 286 \$11.50

CONTRIBUTORS: P. D. Klein; C. H. Giles and I. A. Easton; H. Pelick, H. R. Bolliger, H. K. Mangold; A. S. Ritchie; D. M. Ottenstein; D. M. Coulson; G. W. A. Rijnders

MOLECULAR FORCES

Based on the Baker Lectures of Peter J. W. Debye  
By Benjamin Chu, University of Kansas

November 1966 pp. 192 \$10.75

"The lectures have been partially preserved so that readers may enjoy some of the penetrating remarks and insight from one of the great masters of the field."

For all scientists interested in the application of molecular forces to problems in chemistry and physics.

ORGANIC PHOTOCHEMISTRY

Edited by Orville Chapman, Iowa State University

Volume 1 December 1966 Approx. pp. 264 About \$12.50

CONTRIBUTORS: Photochemistry of Dienones, P. J. Kropp; Photochemical Transformations of Small Ring Carbonyl Compounds, A. Padwa; Tropolons Photochemistry, D. J. Pasto; Photochemistry of Olefins, C. J. Fonken; Photocyclization of Stilbenes, F. R. Stermitz; Photo-Fries Reaction and Related Rearrangements, V. I. Stenberg; Photochemical Cycloaddition Reactions, O. L. Chapman and G. Lenz

TREATISE ON ADHESION AND ADHESIVES

Edited by Robert L. Patrick, Alpha Research and Development, Inc.

Volume 1: Theory            December 1966            Approx. pp. 448            About \$16.50

CONTRIBUTORS: R. L. Patrick, R. J. Good, R. R. Stromberg, J. Huntsberger, T. Alfrey, Jr., D. Kaelble, G. Irwin, J. L. Gardon, F. M. Fowkes

For polymer and surface chemists interested in the phenomenon of adhesion and understanding of adhesive requirements.

SURFACTANTS SCIENCE SERIES

Consulting editors: Martin J. Schick and Frederick M. Fowkes

VOLUME 1: NONIONIC SURFACTANTS

Edited by Martin J. Schick, Lever Bros.            (6-3/8 x 9-3/8)  
December 1966            Approx. pp. 1024            About \$38.00

This is a treatise in four (4) parts: Part 1: Organic Chemistry; Part 2: Physical Chemistry; Part 3: Analytical Chemistry; Part 4: Biology

This book fills the need of academic and industrial research workers.

MEDICINAL RESEARCH

Edited by Alfred Burger, University of Virginia

VOLUME 1: DRUGS AFFECTING THE PERIPHERAL NERVOUS SYSTEM

January 1967            Approx. pp. 640            About \$23.50

CONTRIBUTORS: Mrs. J. Schueler, S. Ehrenpreis, H. L. Friedman, J. P. Long and J. G. Cannon, L. Gyermak, J. P. Long and C. J. Evans, A. M. Landis and T. G. Brown, Jr., M. B. Chapman and J. D. P. Graham, C. M. Smith, J. J. Lewis and T. C. Muir, A. Burger and S. Ehrenpreis, I. B. Wilson

For pharmacologists, biochemists, and all scientists interested in the chemical and biological activity of drugs.

GLASS ELECTRODES FOR HYDROGEN AND OTHER CATIONS - Principles and Practice  
Edited by George Eisenman, University of Chicago

January 1967

Approx. pp. 592

About \$17.50

This is a treatise in five (5) parts: Introduction, Fundamentals, Applications, Methodology, and other types of ionic specific electrodes.

Valuable for chemists, medical researchers, biologists, and engineers interested in the electrometric measurements of ion activities.

ION EXCHANGE

Edited by Jacob A. Marinsky, University of New York, at Buffalo

Volume 1

January 1967

Approx. pp. 416

About \$14.75

CONTRIBUTORS: S. R. Caplan and D. C. Mikulecky, F. Helfferich, Y. Marcus, E. Hogfeldt, D. A. Freeman, L. S. Goldring, D. Reichenberg, R. M. Diamond and D. Whitney, J. A. Marinsky and A. Katchalsky

For biochemists, biologists, biophysicists, and physical chemists.

SOIL BIOCHEMISTRY

Edited by A. D. McLaren, University of California, Berkeley and  
George H. Peterson, California State College, Hayward

January 1967

Approx. pp. 496

About \$17.00

This treatise is in four (4) parts: Isolation and Characterization of Soil Biochemicals, Metabolism of Soil Biochemicals, Soil Microbe Relationships, Surface Exploration of the Planets - for scientists working in agronomy, biochemistry, botany, soil nutrition, and related fields.

FRACTIONAL SOLIDIFICATION

Edited by Morris Zief, J. T. Baker Chemical Co. and William R. Wilcox, Aerospace Corp.

January 1967

Approx. pp. 664

About \$21.00

This book is valuable for the chemist, chemical engineer, and metallurgist, serving the needs of both the researcher and the engineer.

THE SOLID-GAS INTERFACE ( In 2 volumes)

Edited by E. A. Flood, National Research Council of Canada  
Volume 1 February 1967 pp. 608 About \$19.00

A must for scientists interested in surface science. Complete and authoritative coverage of all modern developments.

THEORETICAL AND EXPERIMENTAL BIOPHYSICS

A Series of Advances

Edited by Arthur Cole, The University of Texas, Houston  
Volume 1 April 1967 Approx. pp. 300 About \$9.75

CONTRIBUTORS: Mechanism of Action of Different Ionizing Radiations on the Proliferative Capacity of Mammalian Cells, G. W. Barendsen; Water Structure, H. J. C. Berendsen; Chromosome Structure, A. Cole; Biological Control Mechanisms, L. Stark; Mechanisms of Biological Motility, W. Thornburg; The Genetic Code, C. R. Woese

PRINCIPLES OF FIBROUS COMPOSITE MATERIALS

Edited by H. T. Corten, University of Illinois  
April 1967 Approx. pp. 200 About \$7.75

For chemists, physicists, engineers, metallurgists interested in materials such as metals, plastics, glass, ceramics, concrete, rocks, wood, and coal.

POLY- $\alpha$ -AMINO ACIDS

Edited by Gerald D. Fasman, Brandeis University  
April 1967 Approx. pp. 784 About \$24.00

CONTRIBUTORS: W. B. Gratzer; A. Elliot; H. I. Silman and M. Sela; L. Mandelkern; S. W. Englander; D. Poland and H. A. Scheraga; A. Wada; T. Miyazawa; W. Luzzati and P. Saludjian; S. Beychok; J. T. Yang; H. Benoit, L. Freund, and G. Spach; G. Fasman

THE SOLID-GAS INTERFACE

Edited by E. A. Flood, National Research Council of Canada  
Volume 2 April 1967 Approx. pp. 640 About \$19.50

This treatise (in 2 volumes) of over 1,200 pages is written by leading experts and is the only complete up-to-date coverage of the field. A valuable book for all surface chemists.

KINETICS AND MECHANISMS OF POLYMERIZATION REACTIONS (In 3 volumes)

Volume 1 VINYL POLYMERIZATION

Edited by George Ham, Geigy Chemical Corp.

May 1967

Approx. pp. 592

About \$18.75

For all polymer chemists.

ELECTROANALYTICAL CHEMISTRY A Series of Advances

Edited by Allen J. Bard, The University of Texas

Vol. 2 June 1967

Approx. pp. 304

About \$12.00

CONTRIBUTORS: M. E. Peover, E. Barendrecht, S. Gilman, M. Heyrovsky, K. Micka

CHELATES IN ANALYTICAL CHEMISTRY A Collection of Monographs

Edited by H. A. Flaschka, Georgia Institute of Technology and

A. J. Barnard, Jr., J. T. Baker Chemical Company

June 1967

Approx. pp. 300

About \$11.25

CONTRIBUTORS: F. Szabadvary and M. T. Beck; B. Budesinsky; E. Blasius and B. Brozio; F. Vydra and K. Stulik; W. W. Wendlandt; M. Kopanica, J. Dolezal and J. Zyka

ADVANCES IN CHROMATOGRAPHY A Series of Advances

Edited by J. C. Giddings, University of Utah and

Roy A. Keller, University of Arizona

Volume 4 June 1967

Approx. pp. 416

About \$14.50

CONTRIBUTORS: L. R. Snyder; R. Neher; C. S. Knight; A. V. Kiselev; I. Halasz and E. Heine; W. H. McFadden; L. Rohrschneider

TREATISE ON COATINGS (In 12 volumes)

Edited by Raymond R. Myers, Kent State University and

J. S. Long

VOLUME 2 VEHICLES (In 2 parts)

VOLUME 2 - Part 1

July 1967

Approx. pp. 500

About \$16.00

This treatise is a comprehensive treatment of the chemistry, manufacture, and applications for the raw materials and finished products of the coatings industry.

ORGANIC CHEMISTRY OF MACROMOLECULES An Introductory Textbook

By Abraham Ravve, Continental Can Co.

July 1967

Approx. pp. 496

About \$12.75

The only textbook available covering the complete organic chemistry of polymers on an introductory level.

ORGANIC SUBSTANCES OF NATURAL ORIGIN A Series of Monographs

Edited by W. I. Taylor, CIBA Pharmaceutical Co., Summit, N.J., and

Alan R. Battersby, University of Liverpool

Volume 1: PHENOL OXIDATIVE COUPLING

July 1967

Approx. pp. 432

About \$16.00

For all organic and biochemists interested in natural substances.

Part 3: JOURNAL PUBLICATIONS

JOURNAL OF MACROMOLECULAR CHEMISTRY

Edited by George Ham, Geigy Chemical Corp.

This journal, which is publishing one quarterly volume in 1966, will expand to two volumes in 1967.

1966 - Volume 1 - \$35.00 Outside U.S.A. - \$37.00

1967 - 2 Volumes (4 issues each volume) - \$70.00

Outside U.S.A. - \$74.00

Volume 1, Number 1 and Number 2 are published. Volume 1, Number 3 will be published in September 1966 and Volume 1, Number 4 will be published in November 1966.

REVIEWS IN MACROMOLECULAR CHEMISTRY

Edited by George B. Butler, University of Florida and

Kenneth F. O'Driscoll, State University of New York at Buffalo

Semi-Annually - \$14.50

Outside U.S.A. - \$15.50

Volume 1, Number 1 is published. Volume 1, Number 2 will be published in December 1966. Complete bound copies (\$16.00) will be published in February 1967.

Part 3: JOURNAL PUBLICATIONS

SEPARATION SCIENCE

Edited by J. Calvin Giddings, University of Utah, Salt Lake City, Utah.

Quarterly - \$35.00 .... Outside U.S.A. - \$38.00

1966 - Volume 1, No. 1 is published.

Volume 1, No. 2, 3 and 4 will be published in October.

Volume 1, No. 5 and 6 will be published in November.

1967 - Volume 2, No. 1 will be published in January.

NEW 1967 JOURNALS

JOURNAL OF MACROMOLECULAR PHYSICS

Edited by Phillip H. Geil, Case Institute of Technology, Cleveland, Ohio.

Quarterly - \$45.00 .... Outside U.S.A. - \$47.00

REVIEWS IN POLYMER PROCESSING AND TECHNOLOGY

Edited by Robert L. Patrick, Alpha R&D Corporation, Blue Island, Illinois.

Semi-Annual - \$14.50 .... Outside U.S.A. - \$15.50

Partial list of contents:

Extrusion and Screw Design; Silanes in Polymer Processing; Plastics Processing and Fabricating in Japan; Polymers in Applications; Blow Molding; Processing Thermally Stable Polymers; Glass Reinforced Systems; Diffusion in Semi and Permeable Membranes.

APPLIED SPECTROSCOPY REVIEWS

An International Journal of Principles, Methods, and Applications.

Edited by Edward G. Brame, Jr., E. I. DuPont de Nemours & Company, Wilmington, Delaware.

Semi-Annual - \$14.50 .... Outside U.S.A. - \$15.50

Board of Editors: W. J. Campbell, R. A. Friedel, K. Nakanishi, C. N. R. Rao, W. D. Phillips, J. W. Robinson, N. Sheppard.

Partial list of contents:

R. Teranishi and R. E. Lundin, "Examination of Small Samples by NMR"; Paul A. Wilks, Jr., "Internal Reflection Spectroscopy"; Charles W. Wilson, "Wide Line NMR"; A. S. Wexler, "Infrared Intensities of Absorption Bands in Infrared Spectroscopy"; J.W. Brasch, Y. Mikawa, and R. J. Jakobsen, "FAR IR"; J. D. Winefordner and J. Mansfield; "Atomic Fluorescence Flame Spectrometry"; K. Biemann, "High Resolution Mass Spectrometry"; J. R. Zimmerman, "Pulse NMR".

CATALYSIS REVIEWS

Edited by Heinz Heinemann, The M. W. Kellogg Co., Piscataway, N. J.

Semi-Annual - \$14.50 .... Outside U.S.A. - \$15.50

Board of Editors: Garcia de la Banda, Norman Hackerman, Jack Halpern, Richard Wilhelm.

Partial list of contents:

Fuel Cell Catalysis; Homogeneous Reactions of Unsaturated Compounds in the Presence of Palladium Salts; Mathematical and Computer Treatment of Catalytic Reactions and Processes; Catalytic Action of Molecular Sieves; Photo-Induced Chemisorption; Electronic Theories of Chemisorption.

MEDICAL AND BIOCHEMICAL HEMATOLOGY REVIEWS

Edited by Julian Ambrus, Roswell Park Memorial Institute.

Semi-Annual - \$14.50 .... Outside U.S.A. - \$15.50

Partial list of contents:

Cancer Cells in the Bone Marrow; Chromosomes in Human Leukemias and Lymphomas, Platelets in Hemostasis; Thrombosis and Vascular Disease; Platelet Transfusions; Red Cell Preservation by Freezing; Hereditary Anemias of Mice; Thalassemia.

Part 4: ENCYCLOPEDIAS

ENCYCLOPEDIA OF LIBRARY AND INFORMATION SCIENCE (in twelve volumes)

Executive Editors: Allen Kent and Harold Lancour, Graduate School of Library and Information Science, University of Pittsburgh.

Volume 1                      April, 1967                      pp. 700                      \$35.00

This twelve-volume Encyclopedia is the first complete and authoritative work on the subject, combining both theory and practice in the United States and abroad. A thirty-two member international advisory board has been formed. The title underscores the belief that a new Science has grown out of traditional librarianship as incorporated with the most recent discoveries of vast amounts of information.

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SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF MINERAL TECHNOLOGY  
CERAMIC ENGINEERING  
METALLURGY  
ENGINEERING GEOSCIENCE

BERKELEY, CALIFORNIA 94720

February 14, 1967

Elizabeth K. Ralph  
Associate Director  
Applied Science Center for Archaeology  
The University Museum  
University of Pennsylvania  
33rd & Spruce Streets  
Philadelphia 4, Pennsylvania

*Author?  
Where to publish?*

Dear Beth:

Here, finally, is the report. We have referenced your work with the Cesium system in 1965 and the proton magnetometer work on the wall by Ralph (1965), without actually knowing the reference. If you could put that reference in the bibliography that will finish the paper.

We have included xerox copies of the drawings. Proper photo originals are being prepared should the paper be accepted for publication. In the meantime most journals will review the xerox versions with a reminder to supply the originals.

Unless you have any major revisions you could submit the paper directly. After much discussion we feel that the paper has an excellent chance of being accepted in 'Geophysics' and a lesser, though good, chance in the European journal 'Geophysical Prospecting'. The paper is entirely too applied for J. G. R. If you agree with the choice of 'Geophysics', you must forward three copies of the paper to them. Their mailing address is:

Dr. R. G. Van Nostrand  
Manager, Research Department  
UED, Earth Sciences Division  
Teledyne, Inc.  
300 North Washington Street  
Alexandria, Virginia 22313

*changed editors*

The only real disadvantage with 'Geophysics' is the rather long lead time between acceptance and publication. We submitted another paper and it was accepted in December and is due to be published in August of this year! Since we haven't any experience in submitting manuscripts to 'Geophysical Prospecting', perhaps you know something about its lead time.

Elizabeth K. Ralph

-2-

February 14, 1967


One more point about the paper. After all these months we are still not really certain about the building material of the Roman wall excavated in Q30. We have stated in the report that its magnetic signature was that of a negative anomaly (verified in profile C-C'), and also that it was constructed of weakly magnetic sandstone. Please make suitable changes if we are in error.

May the Greek gods smile on this paper. See you soon.

Sincerely,



Frank Morrison



Doug O'Brien

FM/DO'B:sw

Enclosures

P. S. Any word about that proposed Egyptian venture?

UNIVERSITY INTRAMURAL CORRESPONDENCE

PHYSICS DEPARTMENT

February 21, 1967

Dr. Henry Faul, Chairman  
Department of Geology

Dear Dr. Faul:

Morrison, O'Brien, and I have assembled a paper on last summer's work with magnetometers.

Could I trouble you to see what you think of it.<sup>?</sup>  
I have enclosed also a copy of Frank and Doug's letter to ask if you agree with their ideas about publication, if you think that it should be published.

Thank you,

Beth

Elizabeth K. Ralph

EKR/deh

Encl.

On second look it's not  
as bad - just wordy. With  
a little cutting it could  
be made to read quite  
well. It needs a stirring  
final "conclusion" paragraph.  
Cordially  
Lfr

March 8, 1967

Mr. Frank Morrison  
Dr. Douglas O'Brien  
Dept. of Mineral Technology  
University of California  
Berkeley, Calif. 94720

Dear Frank and Doug:

This old sybarite has been very naughty as you will see from the enclosed messed-up paper. I liked the paper as it was, especially because it was different from my usual dull style of writing.

This revision came about mostly as a result of Dr. Faul's comment. He said that since we are practically alone in this very specialized field of archaeological magnetics that no one will be interested in the article except as an odd-bod thing. Therefore, we should make it as readable as possible. I'm not sure that I've done this.

If you don't want to decipher this scribble copy, I'll send along the retyped one as soon as it is ready. I've sent this along for speed and also so that you can see the suggested changes more clearly. If you don't like any or all of these, please don't hesitate to say so.

Dr. Faul thinks that Geophysics would be an appropriate place for it.

Whether or not we keep the paper your way or the revised way, there are a few changes for you to make in the figures. I have changed the numbers to make them appear in sequence, and on nos. 1, 2, and 4, I have marked what else needs to be done.

I suspect that the Roman Gods will frown upon my revision.

With best regards,

Elizabeth K. Ralph

EKR/deh

Encl.

April 27, 1967

Dr. R. G. Van Nostrand, Editor  
Earth Sciences Division  
Teledyne, Inc., P.O.Box 334  
Alexandria, Virginia 22313

Dear Dr. Van Nostrand:

Professor Morrison, Dr. O'Brien, and I have prepared an article which we are submitting for your consideration for publication in Geophysics.

I have enclosed three copies and will forward photostatic copies of the figures in the near future.

Sincerely yours,

Elizabeth K. Ralph

EKR:lm  
Enc.



# SOCIETY OF EXPLORATION *Geophysicists*

May 1, 1967

Re: Paper 483: "A high-sensitivity difference magnetometer: An archaeological application," by E. K. Ralph, F. Morrison, and D. P. O'Brien

1966-1967

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## BUSINESS OFFICE

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P. O. Box 1067  
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Phone: (918) RI 3-1365

Dr. Elizabeth K. Ralph  
Applied Science Center for Archaeology  
The University Museum  
University of Pennsylvania  
33rd & Spruce Streets  
Philadelphia 4, Pennsylvania

Dear Dr. Ralph:

We have received the paper which you have submitted for possible publication in **GEOPHYSICS**. A copy of the manuscript has been sent to a qualified referee and you will be notified of our decision as soon as possible.

On behalf of the Society, I extend my sincere thanks to you and your co-authors for this contribution.

Very truly yours,

Robert Van Nostrand  
Editor

RVN/kt



# SOCIETY OF EXPLORATION *Geophysicists*

May 31, 1967

Re: Paper 483: "A high-sensitivity difference magnetometer: An archaeological application," by E.K. Ralph, F. Morrison, and D.P. O'Brien

1966-1967

## OFFICERS

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## BUSINESS OFFICE

Executive Secretary

Howard Breck  
P. O. Box 1067  
Tulsa, Oklahoma 74101  
Phone: (918) RI 3-1365

Miss Elizabeth K. Ralph  
Applied Science Center for Archaeology  
The University Museum  
University of Pennsylvania  
33rd and Spruce Streets  
Philadelphia 4, Pennsylvania

Dear Miss Ralph:

We have read the subject manuscript with great interest. Although an article of this sort would be quite desirable in *GEOPHYSICS*, we feel it should take on one of two possible forms in order to be acceptable. Either the paper should be a short note to bring this unique use of magnetometers to the attention of exploration geophysicists, or it should be a report on a fairly complete project.

The usual criterion to test the acceptability of papers for *GEOPHYSICS* is originality - either in theory, in application, or in interpretation. Your study seems to fall into the categories of application or interpretation. However, you have inferred that it is more or less a progress report and thus does not cover a completed study as we would like it to. The instruments, this particular use of them, and the specific archeological setting have all been previously published in one or more places. Hence, we regret that we cannot accept this paper for publication in its present form.

Sincerely yours,

Robert Van Nostrand  
Editor

RVN/kt



THE M.I.T. PRESS  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
CAMBRIDGE, MASSACHUSETTS, 02142  
864-6900 AREA CODE 617

PROFESSIONAL ACTIVITIES

February 15, 1968

Miss Elizabeth K. Ralph  
Museum Applied Science Center  
for Archaeology  
The University Museum  
334d and Spruce Streets  
University of Pennsylvania  
Philadelphia, Pennsylvania 19104

Dear Miss Ralph:

I was indeed anxious to put together a volume of the subject of the application of techniques from the physical sciences to archaeology, and I hasten to respond to your letter with enclosures of February 9 by asking if you would care to undertake to bring into existence what Mr. McGregor failed to, namely a volume that would suitably cover the existing techniques. I take it that his letter of October 15 of last year is a clear abandonment of the project, but I'm seeing the Director of the University of Illinois Press next week and I'll ask him to be sure.

I note in recent literature a paper by Michaels on dating by hydration of obsidian and there may be a good many others that need to be pulled together. But I would like very much to have you commence from this moment forward constructing and assigning a hypothetical table of contents and the fewer contributors the better.

Last, the chapter you sent as sample seems to me just right in its level of technicality and very much within the grasp of the potential user.

Let me hear from you, by phone or by mail, if questions arise, but I am definitely interested in such a book for this Press.

With best wishes,

Carroll G. Bowen  
Director

CGB/kr

July 17, 1968

Dr. Colin Platt  
Executive Director, World Archaeology  
Faculty of Arts  
The University  
Southampton, England

Dear Dr. Platt:

Mark Han and I have just received a request from B.G.J. Elias of Bussum, Netherlands to write an article on thermoluminescence for publication in their magazine Spiegel Historiae.

Since we are not eager to write an article so soon after sending you our one entitled "Potential of Thermoluminescence in Supplementing Radiocarbon Dating," I am wondering if you would be willing to have it republished and possibly translated for Spiegel Historiae?

If you do not approve of this, please do not hesitate to say so.

Sincerely yours,

Elizabeth K. Ralph

EKR:kw

July 17, 1968

Dr. B.G.J. Elias  
Van Dishoeck. Van Holkema en Warendorf NV  
Nieuwe - Gravelandseweg 19  
Bussum, Netherlands

Onze ref: SH-0/1474/BEcl

Dear Dr. Elias:

Dr. Kohler has referred your letter of July 12 to Mark Han and me with the assumption that you would like a slightly more technical article about thermoluminescence dating of pottery.

Mr. Han and I have recently written an article to be published in World Archaeology (England), and we are not eager to write another immediately. Therefore, I am writing to the editor of World Archaeology to ask if he would be willing to have it republished and possibly translated for Spiegel Historiae. The article is 14 double-spaced type-written pages long and contains 8 figures.

If this is too long or not suitable, please let me know as soon as possible.

Sincerely yours,

Elizabeth K. Ralph

EKR:kw



AMERICAN BOOK COMPANY

55 FIFTH AVENUE, NEW YORK, N. Y. 10003

Aug 2/68

Dear Miss Ralph:

Herewith am returning  
your slides + B/W photos  
loaned for possible use in  
our *Alweiss: New Dimensions*  
in *World History*

Also enclosed are  
color proofs of 2 items  
used. The originals of  
these will be returned when  
the book is printed.

Thank you for your  
Cooperation

Best Wishes

Jim Fox

Art Editor



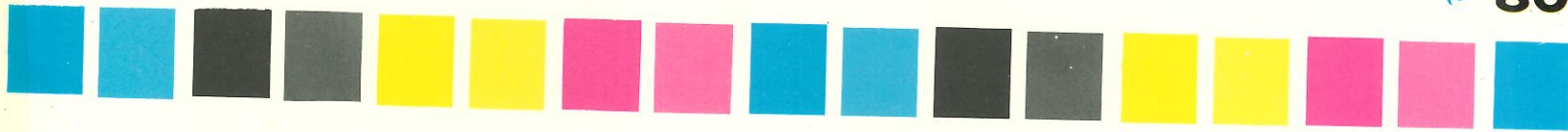
AMERICAN BOOK COMPANY

55 FIFTH AVENUE, NEW YORK, N.Y. 10003



P.10

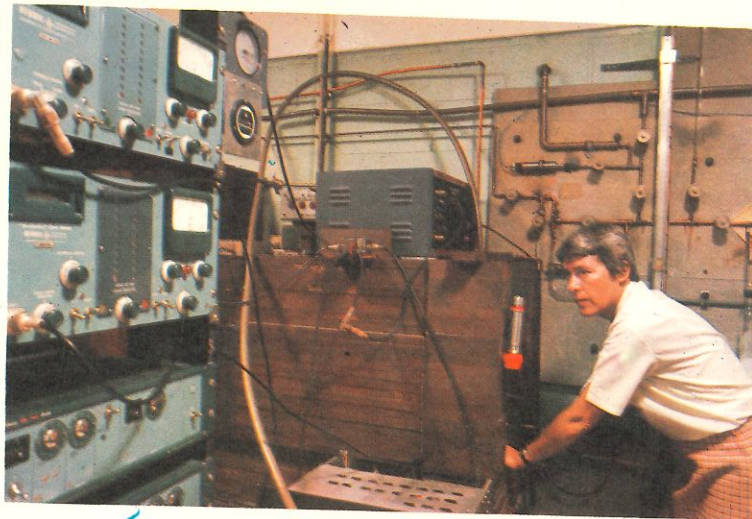
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# AMERICAN BOOK COMPANY

55 FIFTH AVENUE, NEW YORK, N. Y. 10003



P15

OK

PROFESSIONAL ACTIVITY

October 2, 1968

Prof. Edward S. Deevey  
Amer. J. Sci. Radiocarbon  
Box 2161, Yale Station  
New Haven, Conn. 06520

Dear Prof. Deevey:

We are starting to assemble next date list which will include the results of our samples of known age that we have determined since the publication of our Date List VII.

I am wondering if we should prepare the tables in the same form as we did before. For example, see Table 1, p. 181, Vol. 7. If you would like to have a column of C-14 ages included as well, please let me know whether they should be B.P. or A.D.-B.C. I suppose that you prefer that they be calculated with the 5568 half-life.

With best regards,

Elizabeth K. Ralph

EKR/smg

C  
O  
P  
Y

May 22, 1973

Ms. Helen Osborne  
M.I.T. Press  
28 Carlton St.  
Cambridge, Mass.  
02142

Dear Ms. Osborne:

Our first book entitled Dating Techniques for the Archaeologist (Michael and Ralph, Coeditors) came about in a circuitous way. In 1966, I had written the enclosed chapter for someone who was going to edit a book on field techniques such as magnetic prospecting, etc. That book fell through, but someone at the Oriental Institute in Chicago read it, and suggested that I forward it to Carroll G. Bowen, then Director of the M.I.T. Press.

When we were composing our book on dating techniques, we had intended to do one on field techniques as well, but we did not get prompt responses from possible contributors. Therefore, dating techniques came first.

If you are interested in a second book on the subject of techniques that can be done in the field, we should plan to include a long or several chapters on the development and use of instruments for archaeological prospecting. This old chapter of mine will now have to be revised

considerably. We intend to include shorter chapters on specific methods of cleaning and preservation that can also be done at archaeological sites.

Sincerely yours,

Elizabeth K. Ralph

August 3, 1973

Dr. Elizabeth K. Ralph  
Museum of Applied Science Center  
for Archaeology  
University of Pennsylvania  
33rd and Spruce Streets  
Philadelphia, Pennsylvania 19104

Dear Dr. Ralph:

We have now had an opportunity to obtain some outside reactions to your proposed volume on GEOPHYSICAL SURVEYING TECHNIQUES IN ARCHAEOLOGY. One of the reviewers said the following:

"The topic of archaeological field techniques is currently covered in some half dozen volumes. The best known are Heizer and Hole's 'An Introduction to Prehistoric Archaeology' (3rd edition) and Heizer and Cook's 'A Guide to Field Methods in Archaeology' (3rd edition). Both are American-oriented books and both quite deadly dull to read, but useful. I've used both in classroom situations.


"Then there are a series of English volumes including Pydoke's 'The Scientist and Archaeology' and Biek's 'Archaeology and the Microscope' both of which focus on the contributions of natural science.

"Turning to Ralph's volume it seems to be a little redundant in the face of the two Heizer volumes. The present chapter is a mixture of an order catalogue for new equipment and anecdotes about field use of the techniques. I realize that as a handbook it is hardly to be judged as a finely constructed novel, but I must say I found it rather hard going. She has the ability to describe difficult or complex situations and techniques but I'm not sure it's enough to carry a whole volume.

"To relent a bit, I do believe that a listing of such techniques and equipment would be useful; how to achieve it in the best fashion is not too clear to me."

In view of these comments we cannot make any firm commitment with you at this time. We would, however, be interested in examining a larger portion of your manuscript if you indeed plan to proceed with the work. We trust this arrangement will be satisfactory to you.

Sincerely yours,

  
Yale Altman  
Senior Editor

BRITISH MUSEUM (NATURAL HISTORY)

Cromwell Road,

London, S.W.7

Telegrams: NATHISMUS, LONDON, S.W.7

Our reference: DRB/PL

18th July 1973

Dr E K Ralph  
Museum Applied Science Centre  
for Archaeology  
The University Museum  
University of Pennsylvania  
33rd & Spruce Streets  
Philadelphia  
Pennsylvania 19104

Dear Dr Ralph

I was delighted to get your letter, and have your favourable response to our projected new Journal of Archaeological Science. An expanded version of the article you plan for the MASCA Newsletter sounds a good idea, and if it could be produced some time between September and December it could go in an early issue of the journal. You also mention possible articles on a cesium magnetometer survey in Egypt, and another on TL dating. All I can say is, that it would be very nice to have them offered for the new publication!

With best wishes

Yours sincerely

Don Brothwell

D R Brothwell

TO OPEN SLIT HERE

SENDER'S NAME AND ADDRESS

BRITISH MUSEUM (NATURAL HISTORY)

CROMWELL ROAD,

LONDON, S.W.7.

Mr D R Brothwell

AN AIR LETTER SHOULD  
NOT CONTAIN ANY ENCLOSURE;  
IF IT DOES IT WILL BE SURCHARGED  
OR SENT BY ORDINARY MAIL

SECOND FOLD HERE

**BY AIR MAIL**  
**AIR LETTER**  
PAR AVION AEROGamme

ON HER BRITANNIC MAJESTY'S SERVICE



Dr R K Ralph

Museum Applied Science Centre for  
The University Museum Archaeology

University of Pennsylvania

33rd & Spruce Streets

Philadelphia Pennsylvania 19104

DB

[1975]

F. A. COOPER  
LOCAL COMMITTEE  
MIDWEST ART HISTORY SOCIETY  
108 JONES HALL  
UNIVERSITY OF MINNESOTA  
MINNEAPOLIS, MN. 55455'

Elizabeth Ralph  
Calibration of Radiocarbon Dates  
20 Minutes  
Sec. V, Morning, Auditorium, MIA  
11 April, 9:30-11:30 A.M.

24 FEBRUARY 1975

Dear Colleague:

The heading of this letter lists: 1) the title of your paper, 2) allotted reading time, 3) section number and place and room of the section, 4) the date and hours of your section.

The agenda for the April Meetings depends on each session beginning and ending precisely at the appointed hours. By necessity the length of presentations will be strictly observed.

Projection equipment for all sessions will be limited to dual automatic Kodak Carousel projectors. These machines only receive properly-mounted 2x2 (35mm) slides. To ensure maximum efficiency and to prevent errors in projection we require that each speaker bring his or her slides already loaded in his or her own Carousel trays.

Lecterns are equiped with advance and reverse buttons for each of the Kodak Carousel projectors. Skeakers who are unfamiliar with this type of arrangement are urged to practice beforehand.

In special cases a projectionist can be provided, but only upon written petition to the Local Committee no less than 2 weeks in advance of the Meetings.

Funds permitting, those abstracts submitted prior to March 21, 1975 might be published for distribution at the Meetings.

Finally, I want to thank you in advance for your willing and appreciated contribution to the Minneapolis convention of MAHS.

Yours sincerely,



Frederick A. Cooper  
for the Local Committee

From Breckinridge  
Inst. for Advanced Study  
School of Historical Studies  
Princeton 08540

# Midwest Art History Society

Second Annual Meeting: Minneapolis, Minnesota

## PROGRAM

1975

THURSDAY, APRIL 10

MINNEAPOLIS INSTITUTE OF ART

1:00 - 2:15 P.M. SECTION I

YELLOW ROOM, #211 M.I.A.

STATE OF RESEARCH, Lauren Soth, Carleton College Presiding

1. EARLY CHRISTIAN PAINTING, Inabelle Levin, Case Western Reserve University
2. QUATTROCENTO PAINTING AND SCULPTURE, Debra Pincus, Sarah Lawrence College
3. NINETEENTH CENTURY PAINTING, Melvin Waldfogel, University of Minnesota

2:30 - 4:15 P.M. SECTION II

STUDIO ONE, #105, M.I.A.

CLASSICAL AND MEDIEVAL ART, Ilene Forsyth, University of Michigan Presiding

1. VASE PAINTINGS ILLUSTRATIVE OF EARLY TRAGEDY IN ATHENS, Warren G. Moon, University of Wisconsin-Madison
2. ROMAN-POMPEIAN TRADITIONS IN THE FOURTH AND FIFTH CENTURIES A.D., Inabelle Levin, Case Western Reserve
3. THE DEPOSITION AT COUDRES (EURE), William W. Clark, Queens College, CUNY
4. WELLS CATHEDRAL AND SHERBORNE ABBEY: WORKSHOP CONNECTIONS IN THE LATE FIFTEENTH CENTURY, Walter C. Leedy, Jr., Cleveland State University
5. CHRIST'S ENTRY INTO JERUSALEM IN ETHIOPIA, Marilyn E. Heldman, Washington University

4:30 - 6:00 P.M.

RECEPTION GIVEN BY THE MINNEAPOLIS INSTITUTE OF ARTS  
(Badges must be worn for admittance)

TEMPORARY EXHIBITION GALLERY  
(2nd Floor West Wing), M.I.A.

6:00 - 7:30 P.M.

MEMBER'S DINNER  
By ticket only

RESTAURANT 2400, BANQUET ROOM  
In the Minneapolis Institute of Arts

A subscription dinner will be served to holders of tickets which must be purchased in advance. Seating is limited and tickets will be sold in the order of receipt of payments. Full-course dinner includes a choice of two entrees at a cost of \$8.00 (see Information Sheet).

ACKNOWLEDGMENT: THIS MEETING WAS MADE POSSIBLE THROUGH THE GENEROUS PARTICIPATION OF THE MINNEAPOLIS INSTITUTE OF ARTS, THE UNIVERSITY GALLERY AND THE WALKER ART CENTER. THE STAFF OF THESE INSTITUTIONS AND THE SECRETARIES IN THE DEPARTMENT OF ART HISTORY, UNIVERSITY OF MINNESOTA CONTRIBUTED BOTH TIME AND EXPERTISE TO ALL STAGES OF PLANNING.

THURSDAY, NIGHT

MINNEAPOLIS INSTITUTE OF ARTS

7:45 - 9:00 P.M. SECTION III

STUDIO ONE, #105, M.I.A.

GRADUATE STUDENT PAPERS, Robynne Schanck, University of Minnesota presiding

1. THE EVOLUTION OF THE FRONTAL FACE VIEW AND ITS RELATIONSHIP WITH THE SOLE IN THE PAINTINGS AT THEBES, Hugo Ruiz-Avila, The University of Iowa
2. ABSTRACT EXPRESSIONISM: FROM PROTEST TO PALACE ART, Lisa Lyons, Wayne State University
3. ART DECO TO ART MODERNE: SKYSCRAPER DESIGN IN THE 1920'S, Bob Aumann, Northwestern University
4. THE TOURNAI ANNUNCIATION, Sue Brauer, University of Minnesota

FRIDAY, APRIL 11

MINNEAPOLIS INSTITUTE OF ARTS

9:30 - 11:30 A.M. SECTION IV

YELLOW ROOM #211, M.I.A.

(9:00 a.m. admission for members wearing badges)

ART LIBRARIES: POSSIBILITIES OF COOPERATION, William C. Bunce, University of Wisconsin-Madison presiding

PANEL DISCUSSION

Jean Finch, Art Institute of Chicago  
Valerie Meyer, University of Michigan  
Harold Peterson, Minneapolis Institute of Arts  
Herbert Scherer, University of Minnesota  
Virginia Secrest, Washington University  
Harlan Siffold, The University of Iowa

9:30 - 11:30 A.M. SECTION V, MORNING

AUDITORIUM, M.I.A.

ART, SCIENCE AND TECHNOLOGY, J. D. Breckenridge, Northwestern University and George Rapp, Jr. presiding

1. INTRODUCTION, J. D. Breckenridge
2. INSTRUMENTAL METHODS FOR ELEMENTAL ANALYSIS, J. B. Lambert, Northwestern University
3. MICROANALYSIS OF ART OBJECTS, Walter C. McCrone, McCrone Associates, Chicago
4. THE COMPOSITION OF BRASSES FROM IFE AND BENIN, NIGERIA, Frank Willett, Northwestern University
5. CALIBRATION OF RADIOCARBON DATES, Elizabeth Ralph, University Museum, University of Pennsylvania

DISCUSSION

1:00 - 2:45 P.M. SECTION V, AFTERNOON

AUDITORIUM, M.I.A.

ART, SCIENCE AND TECHNOLOGY, Continued

6. POTTERS IN GREECE, EGYPT AND AFGHANISTAN: TECHNOLOGICAL STUDIES AND THEIR ARCHAEOLOGICAL MEANING, Frederick Matson, Pennsylvania State University
7. TRACE ELEMENT FINGERPRINTING FOR PROVENANCE AND AUTHENTICITY, George Rapp, University of Minnesota
8. THE VINLAND MAP AND OTHER MICROANALYTICAL PROBLEMS, Walter McCrone, McCrone Associates, Chicago
9. ART HISTORY - TECHNOLOGY, STUDIES IN CHINESE BRONZES, Robert Poor, University of Minnesota

DISCUSSION

FRIDAY, APRIL 11

MINNEAPOLIS INSTITUTE OF ARTS

1:00 - 2:00 P.M. SECTION VI

YELLOW ROOM #211, M.I.A.

ROMANTICISM, Jerrold Ziff, University of Illinois-Urbana presiding

1. THE NAZARENES, FORD MADOX BROWN, AND THE PRE-RAPHAELITE BROTHERHOOD, David Sokol, University of Illinois-Chicago
2. TURNER, REMBRANDT, AND THE DISCOURSES OF SIR JOSHUA REYNOLDS, Evan Maurer, Art Institute of Chicago
3. CANOVA'S TOMB, Philipp Fehl, University of Illinois-Urbana

2:00 - 3:30 P.M.

Limosine service to campus of the University of Minnesota departs from entrance to Fair Oaks Motel. Available only to holders of transportation passes, 50¢ in advance.

FRIDAY, LATE AFTERNOON

UNIVERSITY OF MINNESOTA

2:30 - 4:15 P.M. SECTION VII

JONES 207B, U. OF M.

GRADUATE STUDENT PAPERS, Robynne Schanck, University of Minnesota presiding

1. CASPAR DAVID FRIEDRICH: VIEWPOINTS OF HIS TIME, John Hoffman, The University of Iowa
2. FROM CLASSICAL TEMPLE TO PRAIRIE SCHOOL: THE LIBRARIES OF CLAUDE AND STARCK, Rosemary A. Svoboda, University of Minnesota
3. JAPANESE KANA CALLIGRAPHY: AN ART HISTORIAN ANALYSIS, Melinda Takeuchi, University of Michigan
4. ARCH AND VAULT IN GREEK ARCHITECTURE, Thomas Boyd, Indiana University
5. IMAGE OF THE BIRD IN THE PAINTING OF KARL APPEL, Edward Aiken, Northwestern University
6. AN INVESTIGATION OF FRA FILIPPO LIPPI'S "BARBADORI ALTARPIECE," Susan Behrends, The University of Iowa
7. VICTORIAN FAIRY PAINTING: SWAN SONG OF BRITISH ROMANTICISM, Meg Ostrum, University of Minnesota

4:30 - 6:00 P.M. SECTION VIII

UNIVERSITY GALLERY, NORTHRUP 404, U. OF M.

PRESENT STATUS OF DOCTORAL PROGRAMS IN THE MIDWEST, Eugene Kleinbauer, Indiana University presiding

PANEL DISCUSSION

Ilene Forsyth, University of Michigan  
Frank Horlbeck, University of Wisconsin-Madison  
Wallace Tomasini, The University of Iowa  
Walter Aumann, Northwestern University

6:00 - 7:00 P.M.

RECEPTION GIVEN BY THE UNIVERSITY GALLERY

FOYER, 3RD FLOOR, NORTHRUP, U. OF M.

6:45 - 7:15 P.M.

Limosine service to Fair Oaks Motel departs from Jones Hall. Available only to holders of transportation passes.

8:30 P.M.

BUSINESS MEETING, MEMBERS

RED ROOM, FAIR OAKS MOTEL  
(Cash Bar)

AGENDA Reports of the Officers and Board of Directors  
Planning of future meetings  
General Discussion

SATURDAY, APRIL 12

WALKER ART CENTER

9:00 - 10:00 A.M.

Limosine service to Walker Art Center departs from entrance to Fair Oaks Motel. Available only to holders of transportation passes.

10:00 - 11:30 A.M. SECTION IX

AUDITORIUM, WALKER ART CENTER  
(9:30 a.m. admission for members wearing badges)

GENERAL SESSION, Mira Merriman, Wichita State University presiding

1. AN IMPERIAL HITTITE RELIEF AND THE LEGITIMACY OF RULE, Robert Alexander, The University of Iowa
2. MANTAGNA'S "BATTLE OF SEA MONSTERS" AND ENVY AMONG ARTISTS, Michael A. Jacobsen, Cleveland State University
3. BOTTICELLI'S PRIMAVERA: ALCHEMY, ASTROLOGY AND SPIRITUAL REBIRTH, Jean Gillies, Northeastern Illinois University
4. A RECONSIDERATION OF PICASSO'S OVERTURE CURTAIN FOR "PARADE", Richard Axsom, University of Michigan-Dearborn
5. THE UNICORN IN THE GARDEN: A MEDIEVAL INCARNATION IMAGE EROTICIZED, Judith Testa, Northern Illinois University

10:00 - 12:00 A.M. SECTION X

INFORMATION ROOM, WALKER ART CENTER

MUSEOLOGY PROGRAMS: PROFESSIONAL STANDARDS AND PRACTICAL CONSIDERATIONS,  
Edward J. Olszewski, Case Western Reserve University presiding

1. THE MUSEUM AND THE MUSEOLOGY STUDENT: AN EXPERIENCE IN THE POLITICS OF MUSEUM REALITY, Ralph F. Bogardus, Walker Art Center
  2. A PHILOSOPHY AND CURRICULUM FOR EDUCATING MUSEUM EDUCATORS, Dolores Brooking, University of Kansas Museum of Art
  3. A RATIONALE AND PLAN FOR MINORITY TRAINING PROGRAMS, Richard C. Muhlberger, The Detroit Institute of Arts
  4. MUSEUM INTERNSHIPS: SMALLER ART MUSEUMS, ART CENTERS AND HISTORICAL SOCIETIES, Charles H. Sayer, University of Michigan
  5. ON THE EVOLUTION OF EDUCATIONAL PROGRAMS AND THE MAINTENANCE OF PROFESSIONAL STANDARDS, Gabriel Weisberg, The Cleveland Museum of Art
- DISCUSSION

10:00 - 11:30 A.M.

ENTRANCE HALL, WALKER ART CENTER

Coffee and donuts available to members wearing badges (please do not take food into the galleries).

12:30 - 4:30 P.M.

ARCHITECTURAL TOUR OF TWIN CITIES, organized by the Minnesota Chapter of the Society of Architectural Historians, Kate Johnson, President. Luncheon is scheduled en route. Bus leaves from the entrance to the Walker Art Center. Tickets at \$4.00 must be purchased in advance and includes a box lunch.

PLEASE RETAIN AND BRING THIS COPY OF THE PROGRAM  
TO THE MEETING.

THE INSTITUTE FOR ADVANCED STUDY

PRINCETON, NEW JERSEY 08540

SCHOOL OF HISTORICAL STUDIES

15 March 1975

Dr. Elizabeth K. Ralph  
Applied Science Center for Archaeology  
The University Museum  
University of Pennsylvania  
33rd and Spruce Streets  
Philadelphia, Pennsylvania 19104

Dear Dr. Ralph:

Please accept the deep appreciation of all of us--officers, members of the Midwest Art History Society, and the organizers of the panel--for your splendid contribution to our meeting last Friday in Minneapolis.

For myself, there is sincere regret that I had no more chance to discuss the matters opened up there; but I know you had many other things to do, and I can only hope you found your visit as satisfying as we did. I might say that I particularly appreciated your care in making a rather intimidating subject (for us of the humanities) meaningful and comprehensible.

As you know, we are an infant organization--obviously with growing pains, after the unexpected size of the turn-out in Minneapolis. There is already much interest in following up this subject, with variations, special foci, and so forth, at a later date. I should appreciate the privilege of consulting you for advice when that time comes.

Thank you again for your great kindness,

Sincerely,



J. D. Breckenridge

WOMEN'S  
BOOK  
OF



WORLD  
RECORDS  
AND  
ACHIEVEMENTS

172 West 109th Street  
Apt. 5-E  
New York, NY 10025

November 26, 1976

Ms. Elizabeth K. Ralph  
Box 357  
Weesamensa Road  
Pennington, NJ

Dear Elizabeth Ralph,

Your work in archaeology has been brought to my attention by Barbara Tufty of the National Science Foundation in connection with research I am doing for the WOMEN'S BOOK OF WORLD RECORDS & ACHIEVEMENTS, to be published in early 1978 by Doubleday. Material for the project is being prepared by Information House Books, as shown at the bottom of this letterhead, under the direction of Lois Decker O'Neill, editor, and Elaine Romanelli, assistant editor.

We would like to consider writing up your achievements for inclusion in the chapter on science and technology. Inasmuch as this chapter will cover not more than 250 women around the world in all kinds of chemistry, physics, earth science, mathematics, and engineering, among other fields, we cannot guarantee that your name will appear in the completed book. However, we do wish to learn some more about you.

We would appreciate very much your taking the time to write us a short letter describing the highlights of your career, particularly the search for the buried city of Sybaris, Italy.

If you could spare us copies of any pertinent clippings or informal photographs of yourself at work (not portraits or posed group pictures), which we might consider using, please include them with your reply to me at the above address. I would be most grateful for a quick response, since we are working towards an early deadline for completion of our research.

Thank you very much.

Yours sincerely,

Anne Brink

# Delaware Valley Society for Radiation Safety



a chapter of the

## HEALTH PHYSICS SOCIETY

October 28, 1977

Dr. Elizabeth Ralph  
Head, Radiocarbon Laboratory and Applied  
Science Center for Archaeology  
University of Pennsylvania Museum  
33rd and Spruce Streets  
Philadelphia, PA 19104

Dear Dr. Ralph,

Thank you for agreeing to speak at our November 30, 1977 dinner meeting on "Problems of the Radiocarbon Dating Method". The meeting is planned for the Open Hearth at King of Prussia and will begin with a social hour at 6:00 PM, followed by dinner at 7:00 PM, and your talk at 8:00 PM. The society will, of course, pay for your dinner and any reasonable expenses you might incur as a result of your presentation.

The Open Hearth may be reached by traveling west on the Schuylkill Expressway to south on Route 202, then leaving 202 at the second (Devon) exit, turning right and entering the shopping center on the immediate right. The Open Hearth is in the northeast section of the shopping center. A copy of the meeting notice, complete with map, menu, and schedule will be sent to you shortly. If you wish, door to door transportation will be provided for you.

Please call me at 896-5353 if you wish transportation or if you have any questions. I, and the society, look forward to your presentation.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Steven M. Gertz', written in a cursive style.

Steven M. Gertz, Ph.D.  
President  
c/o Porter-Gertz Consultants, Inc.  
76 Rittenhouse Place  
Ardmore, PA 19003

# MUSEUM OF FINE ARTS

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Office of Publications

June 15, 1978

Dr. Elizabeth K. Ralph  
University Museum  
University of Pennsylvania  
Philadelphia, Pennsylvania 19174

Dear Dr. Ralph:

Herewith I am returning to you for your approval the galley proofs of your article Calibration of radiocarbon dates, to appear in our forthcoming publication APPLICATION OF SCIENCE TO THE DATING OF WORKS OF ART.

Please read these proofs carefully, making sure at this time that they are exactly as you wish them to appear.

We would appreciate it very much if you would return these proofs to us, with any corrections that you may wish clearly marked on them, by Friday June 30. If this date is not possible, please let us know at once.

Very sincerely yours,

*Katharine O. Parker*

Katharine O. Parker  
Manuscripts Editor

O.K.  
EK Ralph

9

ELIZABETH K. RALPH

[Calibration of Radiocarbon Dates]

At the University of Pennsylvania we have now had a radiocarbon laboratory for 23 years. In 1952, we found that "modern" wood was depleted in  $^{14}\text{C}$  [1]. This depletion was later measured and interpreted by Hans Suess [2] to be the result of the combustion of fossil fuels over the past 100 years. However, because of the finding that very young trees growing in 1952 were depleted, we turned to the dating of samples which had been dated by archaeologists and Egyptologists. We soon detected that  $^{14}\text{C}$  dates for samples representative of the early Egyptian dynasties were about 500 years too young. We then tested other chronologies and found the results to be similar.

Because of our limited thinking in the 1950s and our faith in  $^{14}\text{C}$  dating, we assumed that the archaeologists must be wrong. However, to confirm or negate our suspicions we turned to tree ring dating. With the collaboration of the Laboratory of Tree-Ring Research, University of Arizona, we began the dating of sections of *Sequoia gigantea* that span 3,000 years. With the discovery by Schulman [3] of the longevity of *Pinus aristata* (bristlecone pine) and the subsequent work of Ferguson [4, 5], this range of dendro-dated samples has been extended to 7350 BP.

For the past 15 years, three laboratories have been obtaining  $^{14}\text{C}$  dates from samples (spanning about 10 years each) of these long-lived dendro-dated trees. The three laboratories are at the University of Arizona in Tucson, the University of California at San Diego in La Jolla, and the University of Pennsylvania in Philadelphia. All three presented results individually, in one form or another at the Twelfth Nobel Symposium held in Uppsala, Sweden in 1969 [6, 7, 8]. At Uppsala, it was clear that the  $^{14}\text{C}$  dates of all three laboratories were in excellent agreement on the average, but that there were differences between individual or small groups of dates (see [9], pp. 110, 597, 615-618, 619-624, and separate plates I and II).

At the more recent international  $^{14}\text{C}$  conference in Lower Hutt, New Zealand, in October 1972, it was anticipated that after three more years spent in obtaining greater numbers of  $^{14}\text{C}$  dates, from precisely dated wood samples, better agreement could be achieved. With this in mind, the laboratories of Arizona [10] and Pennsylvania [11] are

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type

Climatic changes should not be emphasized too strongly because it seems more likely that the major cause of the long-term deviation in  $^{14}\text{C}$  content (with a possible period of more than 9,000 years) was due to the change in the Earth's magnetic field, that is, the main dipole moment. The correlation between  $^{14}\text{C}$  and magnetic changes may be observed by a comparison of figures 1 and 2. However, these two parallels are now subject to question, and it appears to me that the basic cause of the increase in  $^{14}\text{C}$  inventory in the B.C. millennia was a pole reversal that occurred about 13,000 years ago [14]. The length of duration of a pole reversal is not yet known (it may be  $10^3$  to  $10^4$  years, but not instantaneous [15]), but we do conjecture that during a pole reversal, the Earth's magnetic field would be at minimum intensity; consequently, the cosmic ray intensity would be at maximum, and as a result, the  $^{14}\text{C}$  inventory could be twice as great. If this did happen 13,000 years ago, the Earth's inventory of  $^{14}\text{C}$  may just be recovering from this upheaval.

At the moment, these are conjectures only, but as the tree-ring chronology is pushed back another 3,000 to 4,000 years, more will be learned about "recent" pole reversals, and the questions will be answered.

At the present the causes of the smaller oscillations of shorter duration are still unclear.

**Acknowledgments**

I acknowledge with gratitude financial support from the National Science Foundation, Earth Sciences Section, for our known-age dating program. This has been supported since 1957 with NSF grants G-3281, G-5608, G-14094, GP-405, GP-3778, GA-993, and GA-12,572. Also with gratitude I acknowledge the Samuel S. Kress Foundation, which supported the seminar.

**References**

1. Personal communication to W. F. Libby, July 1952.
2. H. E. Suess, Radiocarbon concentration in modern wood, *Science*, 122 (1955): 415-417.
3. E. Schulman, *Dendroclimatic changes in semiarid America* (Tucson: University of Arizona Press, 1956), 142 p.
4. C. W. Ferguson, Dendrochronology of Bristlecone Pine, *Pinus aristata*: establishment of a 7,484-year chronology in the White Mountains, in I. U. Olsson, ed., *Radiocarbon Variations and Absolute Chronology*, Proceedings of the Twelfth Nobel Symposium, Uppsala, Sweden, August 11-15, 1969 (Stockholm: Almqvist and Wiksell: New York: Wiley, 1970) pp. 237-245.

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Prof. Kerns

# ENVIRONMENT INTERNATIONAL

A JOURNAL OF SCIENCE, TECHNOLOGY, HEALTH, MONITORING AND POLICY

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K. Z. Morgan  
G. Mueller  
R. O. Ojikutu  
R. G. Ryan

July 5, 1978

Dr. Elizabeth Ralph  
Department of Physics, DRL/E1  
University of Pennsylvania  
Philadelphia, Pennsylvania 19174

Dear Dr. Ralph:

We plan to devote an entire issue of our Journal to the subject of carbon dioxide and its environmental impact. The coverage will be comprehensive and will include topics such as those described in the enclosed table of content. Note that the table of content is preliminary and will undoubtedly undergo substantial changes. Both review papers and original findings will be included in this issue.

I would like to extend a warm invitation to you to contribute to this issue. I believe your contribution along with those from others will make this issue a significant source of information for the scientific community, regulatory agencies, and legislative bodies on an international basis.

Please let me know as soon as possible, preferably before 1 August 1978, the title and approximate content of your paper. The completed manuscripts should be available by early October, 1978.

Several authors have indicated an interest to dedicate their articles to W. F. Libby and/or Hans Suess on the occasion of the retirement of these two notable scientists. This option is open to all authors.

We already have a large number of requests for this issue from a variety of individuals and organizations. Considering the fact that we are only in the planning stage, the reception of the scientific community seems to be very gratifying.

Sincerely,

A. Alan Moghissi, PhD  
Editor-in-Chief

AAM/js  
Enclosure

*I am looking forward to your manuscript*



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## INSTRUCTIONS FOR AUTHORS

The Journal is a forum for presentation of information encompassing essentially the entire field of environmental protection. Contributions containing information in the following areas will be considered for publication:

- \* Concentration of elements and compounds, notably pollutants, in the environment
- \* release rates of pollutants from various sources
- \* transport of pollutants in the environmental media
- \* health and ecological effects of pollutants
- \* control technologies in environmental protection
- \* description and interpretation of laws, regulations and standards
- \* information which will contribute to the understanding of environmental behavior of pollutants or promote environmental protection

Certain issues will be devoted to the review of a pollutant; covering environmental concentration, health and ecological effects, environmental kinetics, production and release rates, legislative and regulatory aspects, control technologies and other pertinent data. Other issues will be devoted to the description of the state of the environment of a country, a state, or a province. Reader participation is encouraged in the selection of articles, presentation of information, choice of subjects for topical issues and overall Journal policies.

Because the Journal serves a multidisciplinary audience, the authors are urged to write for non-specialists. In particular, they are discouraged from using expressions which are understandable to a select audience of specialists. All contributions will be subjected to peer review; however, a concentrated effort will be made to reduce the undue delay often associated with the peer review process. Owing to the broad coverage of the Journal, no single format can accommodate all contributions; however, clarity should be the guide in preparing the manuscripts. Manuscripts must be submitted in English. The following categories of contributions will be considered for publication.

Papers: Previously unpublished information including data from routine monitoring operations will be published in this category. Papers dealing with new analytical techniques should contain data indicating their usefulness in the environmental measurements. Similarly, basic biological effects data should be related to environmental pollutants.

Discussions: This section is intended as a forum for the readers to express their views on environmental problems on a global basis. Letters to the editors, editorials, contributions containing personal opinions and comments on articles published in the Journal or elsewhere will be included in this section.

Book Reviews: Solicited or unsolicited reviews of relevant books will be considered for inclusion in this section.

News: This section contains newsworthy items in the scientific, technological, governmental and political areas relating to the environment. The readers are encouraged to suggest subjects for inclusion in this section. The inclusion of the source of the news item is an important factor for the publication.



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## PREPARATION OF MANUSCRIPTS

Title: The title should be as short as possible but fully descriptive.

Tables and Figures: Figures and tables should be understandable without excessive reference to the text, particularly units and quantities should be clearly identified. Owing to the cost of reproduction of photographs they should be kept to an absolute minimum. Use arabic numerals when numbering tables and figures.

Equations: All equations should be typewritten. Mathematical notations should be simple and suitable for a multidisciplinary audience. For example, fractions within fractions and subscripts within subscripts should be avoided.

Units, quantities and abbreviations: Use SI (metric) units and international quantities and abbreviations. Equivalent values in other systems may be used provided their metric equivalents are included in every case.

Footnotes: Most footnote material can be incorporated in the text to the benefit of the readers, editors and printers. Avoid footnotes.

Acknowledgement: If an acknowledgement is necessary it should avoid lengthy descriptions of the reason for acknowledgement.

References: Prepare a list containing all literature cited in alphabetical order. In the text refer to the first author and the last two digits of the year, e.g (Dow 75). If there is more than one listing of the same author and year, use a, b, c, etc. In the list of references include initials and surnames of the authors, title of the papers, name of the journal using World List of Scientific Periodicals abbreviations, volume number and page number. Please note that et al is not acceptable in the reference list unless the publication contains more than six authors.

Example of an Article: C. O. Wirsen and H. W. Hannash, (1977) "Decomposition of solid organic materials in the deep sea", Env. Sci. Technol., 10, 880-886.

Example of a Report: J. F. Karubin, (1974) "Polluted ground water: Estimating the effects of man's activity", EPA 680/4-74-002, U.S. Environmental Protection Agency, Las Vegas, NV.

Example of a Book: G. L. Waldlott, (1973) "Health effects of environmental pollutants", C. V. Mosby Co., St. Louis, MO.

Example of a Chapter in a Book: C. A. Pelletier, (1970) "Performance and design of an environmental survey", W. C. R Reinig, Ed. "Environmental surveillance in the vicinity of nuclear facilities", Charles C. Thomas, Publisher, Springfield, IL. pp 55-56.

## FORMAT AND TYPING

Manuscripts should be typed, double-spaced, on 22 x 28 cm (8½ x 11") paper with 3 cm (1¼") margins at top, sides and bottom of the page. One original and at least two legible copies are required.

Papers: The title page should be devoted to the title, in caps, the initials and the name(s) of the author(s), the institution where the work was done, the city, and the country. The second page should be devoted to the abstract of about 200 words. The text should start on the third page. If an acknowledgement is necessary, it should be placed at the end of the text and just before the list of references. References should be typed on a separate page and numbered following the text. Use a separate page for the captions of figures and tables. Place figures and tables at the end of the manuscript. Use a soft pencil to label the back of the figures with their respective numbers. Because tables and figures are reproduced by the photo offset process, they should be of high quality. All figures should be prepared using black ink (no typed lettering please) or should be submitted as glossy photographs.

Book Reviews: Start with the author(s) of the book, other information shown in the reference section and the price of the book. The reviewer's name should appear as a signature along with other information required from the authors as shown above.

Other Contributions: News items, letters to the editors, editorials and other contributions should follow the format of a letter.

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R. G. Ryan

## TOPICAL ISSUE ON CO<sub>2</sub>

This issue will contain papers on the following subjects:

1. History of carbon-14 dating.
2. Natural production of carbon-14 during the last decamillennium.
3. Production of carbon dioxide in the last century and the SUESS effect.
4. Production and environmental release of carbon-14 in nuclear power reactors.
5. Predicted fossil fuel combustion and production of CO<sub>2</sub> for the next century.
6. Predicted atmospheric concentration of carbon dioxide.
7. Impact of increased carbon dioxide concentration on climate.
8. Impact of increased carbon dioxide concentration on the acidity of the oceans and its consequences.
9. Analytical methods for the measurement of carbon dioxide in various media.
10. Application of bomb carbon-14 as a tracer to study mixing rates of carbon dioxide in the atmosphere, ocean-atmosphere interface and various layers of the ocean.
11. Analytical methods for the measurement of carbon-14 around nuclear installations and for carbon-14 dating.
12. Other relevant subjects.



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*The Faculty of Arts and Sciences*

DEPARTMENT OF PHYSICS

August 30, 1978

Dr. A. Alan Moghissi  
Environment International  
P.O. Box 7166  
Alexandria, Va. 22307

Dear Dr. Moghissi:

Thank you for your letter of July 5 about the issue of your Journal devoted to carbon dioxide and its environment impact. I am very much interested, but have just emerged from a four-month stay in the hospital. Therefore, I have missed your August 1 deadline. I hope that you will devote another issue at some time in the future when I can participate.

We are very much interested in subscribing to your Journal.

Sincerely yours,

Elizabeth K. Ralph

EKR/bac

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R. G. Ryan

October 3, 1978

Dr. Elizabeth K. Ralph  
University of Pennsylvania  
Department of Physics  
Philadelphia  
Pennsylvania 19104

Dear Elizabeth:

Thank you so much for your letter of 30 August. I certainly remember you well from our discussions in Los Angeles and LaJolla. Our interest in your work is great. Because of the significance of your work, I would certainly consider a paper from you for inclusion in the special issue. I recall your special interest was the correction curve for C-14 dating.

Under separate cover, a sample copy of the Journal is being mailed to you.

Sincerely yours,

  
A. Alan Moghissi, PhD  
Editor-in-Chief

AAM:js

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