

PROCEEDINGS OF THE THIRTY-SIXTH ANNUAL MEETING OF THE MINERALOGICAL SOCIETY OF AMERICA AT NEW ORLEANS, LOUISIANA

C. S. HURLBUT, JR., *Secretary*

The thirty-sixth annual meeting of the Society held on November 7-9, 1955, at the Roosevelt Hotel New Orleans, Louisiana, was attended by 185 fellows and members. Seventy-three scientific sessions were held at which eighty-two papers were presented.

The annual luncheon of the Society on November 8 was attended by 179 fellows, members and guests. Following the luncheon, the fourteenth presentation of the Roebling Medal was made to A. N. Winchell and the fifth presentation of the Mineralogical Society of America Award was made to Julian H. Goldsmith.

On the afternoon of November 8 the Society was addressed by the Retiring President, Harry H. Hess, on *Some mineralogical and petrological problems of the Stillwater complex*. At the business meeting preceding the presidential address, brief reports were read by the Secretary, Treasurer and Editor.

The 1955 Council of the Society met for seven hours on November 6, the 1956 Council met for three hours on November 9.

For the first time in many years the Mineralogical Society of America did not have its own printed program but the program of the Geological Society of America was sent to all fellows and members. This resulted in a substantial saving to the Society and, from reports so far received, little inconvenience resulted.

The 1954 Council felt that the specifications of the Mineralogical Society of America Award were not stated in a rigorous enough manner and sections 3 and 4 have been revised. The conditions, including the recent changes, under which the award is to be given are as follows:

1. The name of the award shall be the Mineralogical Society of America Award.
2. The award shall be life membership in the Mineralogical Society of America. A certificate as evidence of the award, signed by the President and Secretary of the Society, shall be presented to the recipient at the annual meeting.
3. The award shall be given to an individual for published results of original research constituting an outstanding contribution or series of contributions within the fields of interest of the Society. The candidate's current activity in research shall be taken into account in assessing such contributions.
4. The work for which the award is given must have been published prior to the month in which the candidate's 35th birthday falls. Candidates are limited to persons who shall not have reached the age of 37 before January 1 of the year in which the award is decided upon by the Council.
5. The award shall be made without regard to nationality. Membership in the Mineralogical Society of America is not a necessary prerequisite.
6. The President shall appoint a committee to nominate a recipient. The selection, however, shall be subject to the approval of the Council.
7. The award shall be given annually only if a suitable candidate can be selected by the Council.

COMMITTEES OF THE MINERALOGICAL SOCIETY OF AMERICA FOR 1956

Nominating Committee for Officers

B. H. Mason *Chairman*
 E. S. Larsen III
 A. Pabst,
 J. D. Barksdale
 W. D. Keller
 E. N. Cameron

E. W. Heinrich 56-58
 C. L. Christ 56-58

Program Committee

H. S. Yoder, Jr., *Chairman*
 (M.S.A. representative on G.S.A. Committee)

Nominating Committee for Fellows

T. F. Bates, *Chairman* 56
 J. J. Runner 56
 A. E. Engel 56-57
 R. J. Holmes 56-57
 G. Switzer 56-58
 A. W. Jolliffe 56-58

Mineralogical Society of America Award Committee

R. H. Jahns, *Chairman*
 H. T. Evans
 E. E. Wahlstrom
 J. W. Gruner
 O. F. Tuttle
 R. A. Rowland

Roebling Medal Committee

G. Tunnell, *Chairman*
 P. F. Kerr
 C. B. Slawson

Financial Advisory Committee

E. P. Henderson, *Chairman*
 R. E. Fuller
 (A third member to be appointed by the President)

Nomenclature Committee

G. T. Faust, *Chairman* 56
 G. Tunell 56
 C. O. Hutton 56-57
 E. E. Wahlstrom 56-57
 R. S. Cannon, Jr. 56-58
 H. S. Yoder, Jr. 56-58

Auditing Committee

J. C. Rabbitt, *Chairman*
 K. J. Murata
 S. Zerfoss

Board of Associate Editors

I. Campbell 56
 B. H. Mason 56
 W. F. Bradley 56-57
 F. J. Turner 56-57

Representatives

National Research Council
 J. D. H. Donnay
American Geological Institute
 A. Montgomery
 E. Ingerson

REPORT OF THE SECRETARY

To the Council of the Mineralogical Society of America:

ELECTION OF OFFICERS AND FELLOWS

Five hundred and five ballots were cast in the election of officers, 146 by fellows and 359 by members of the Society. The officers elected to serve in 1956 are:

President: Clifford Frondel, Harvard University, Cambridge, Massachusetts.
Vice-President: D. Jerome Fisher, University of Chicago, Chicago, Illinois.
Secretary: C. S. Hurlbut, Jr., Harvard University, Cambridge, Massachusetts.
Treasurer: Earl Ingerson, U. S. Geological Survey, Washington, D. C.
Editor: Walter F. Hunt, University of Michigan, Ann Arbor, Michigan.
Councilors (1956-58): Chester B. Slawson, University of Michigan, Ann Arbor, Michigan.
 Alfred O. Woodford, Pomona College, Claremont, California.

According to the provisions of the Constitution, the following have been elected to fellowship:

Jose Luis Amoros, University of Barcelona, Barcelona, Spain.
 George William Brindley, Pennsylvania State University, University Park, Pennsylvania.
 Charles Wesley Chesterman, California State Division of Mines, San Francisco, California.
 Stephen Edmund Clabaugh, University of Texas, Austin, Texas.
 James William Earley, Gulf Research & Development Co., Pittsburgh, Pennsylvania.
 Hugh Richard Gault, Lehigh University, Bethlehem, Pennsylvania.
 William Thomas Holser, Battelle Memorial Institute, Columbus, Ohio.
 Howard Francis McMurdie, National Bureau of Standards, Washington, D. C.
 George Joseph Neuerburg, U. S. Geological Survey, Menlo Park, California.
 Francisco Pardillo, University of Barcelona, Barcelona, Spain.
 Rustum Roy, Pennsylvania State University, University Park, Pennsylvania.
 Robert LeGrande Stone, University of Texas, Austin, Texas.
 John Verhoogen, University of California, Berkeley, California.
 Alice Mary Dowse Weeks, U. S. Geological Survey, Washington, D. C.

MEMBERSHIP STATISTICS

November 1, 1955

	1954	1955	Gain	Loss
Correspondents	4	4	0	0
Fellows	329	338	14	5
Members	931	957	143	117
Subscribers	934	952	101	83
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	2,198	2,251	258	205

The above figures show a net gain of 9 fellows, 26 members and 18 subscribers. Considering the four groups together, there is a gain of 53, giving a total of 2,251.

During 1955, the Society lost through death three fellows: John P. Marble of Washington, D. C., Charles Palache of Charlottesville, Virginia, and Robert C. Wallace of Ontario, Canada.

Respectfully submitted,
 C. S. HURLBUT, JR., *Secretary*

REPORT OF THE TREASURER FOR 1955

To the Council of the Mineralogical Society of America:

Your Treasurer submits herewith his report for the fiscal year beginning August 1, 1954, and ending July 31, 1955.

RECEIPTS

Dues and subscriptions	\$11,335.25
Sale of back numbers	3,203.80
Authors' charges on reprints	1,553.43
Interest and dividends from endowment	5,086.78
Geological Society of America aid for printing the Journal	8,000.00
Advertising	780.36
Sale of Index, volumes 21-30	22.80
Sale of Index, volumes 1-20	15.50
Contributions to Ross-Schaller volume	102.00
Premium on check41
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	\$30,100.33
Cash on hand, August 1, 1954	10,544.58
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	\$40,644.91

DISBURSEMENTS

Printing and distribution of the Journal (7 issues)	\$18,613.75
Printing and distribution of reprints.	1,350.44
Honorariums to Editor, Secretary, and Treasurer.	1,437.50
Clerical assistance.	1,271.49
Postage and express.	599.82
Printing and stationery.	338.93
Office supplies and equipment.	17.17
Program and abstracts (1954)	695.28
Roebing Medal (1954)	131.44
New securities purchased.	7,591.25
Commission on securities.	74.28
Tax on securities.18
Committee expenses.	4.27
Expenses of officers to 1954 meetings.	394.74
Safety deposit box.	7.15
Refunds.	16.20
Checks returned.	17.00
Mineralogical Society of America Award certificate.	8.00
Reprinting back issues in microtext.	144.68
Mineralogical Society of America luncheon.	4.50
Service charges on checks.40
Contributions to American Geological Institute.	105.00
Telephone and telegrams.	2.86
Back numbers purchased.	71.00
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Cash on hand, July 31, 1955.	\$32,897.33
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	7,747.58
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	\$40,644.91

The endowment funds of the Society as of July 31, 1955, consist of the following securities:

BONDS

6M Atlantic Coast Line, 4½.	\$5,257.50
5M New York Central, 5.	4,300.00
5M Southern Railway, 5.	5,743.75
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	\$15,301.25

PREFERRED STOCKS

200 Southern California Edison, 4.88.	\$5,250.00
100 Union Pacific, 4.	4,570.25
60 Jones and Laughlin, A, 5.	4,987.50
55 United States Steel, 7.	6,946.20
50 Virginia Electric and Power, 5.	5,942.50
10 Consolidated Edison, 5.	1,066.64
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	\$28,763.09

COMMON STOCKS

330 Potomac Electric Power	\$4,642.73
200 Greyhound Corporation	2,300.00
150 Spancer Kellogg	3,775.00
100 Columbus and Southern Ohio Electric	2,087.50
100 Diana Stores	1,250.00
100 Pittsburgh and West Virginia	2,787.50
80 Kroger Company	1,990.00
60 United Fruit	3,067.50
56 Standard Oil of New Jersey	1,444.84
60 American Telephone and Telegraph	8,195.32
50 Chesapeake and Ohio	2,368.75
50 Phelps Dodge	1,975.00
50 Sinclair Oil	2,968.75
40 Plymouth Cordage	2,050.00
30 U. S. Playing Card	2,411.25
24 Public Service Electric and Gas	728.40
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	44,042.54
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	\$88,106.88

Respectfully submitted,
EARL INGERSON, *Treasurer*

DANA FUND

No disbursements were made during the fiscal year.	
Available balance, August 1, 1954	\$99.13
Interest recorded, July 25, 195512
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Available balance, July 31, 1955	\$99.25

Respectfully submitted,
EARL INGERSON, *Treasurer*

REPORT OF THE AUDITING COMMITTEE

To the President of the Mineralogical Society of America:

The Auditing Committee has examined and verified the accounts of the Treasurer of the Mineralogical Society of America for the fiscal year beginning August 1, 1954 and ending July 31, 1955. The securities listed in the Treasurer's report, with all future coupons on the coupon bonds attached, are in the safety deposit box at the 17th and G Street Branch of the Riggs National Bank in Washington, D. C.

Respectfully submitted,
CHARLES L. CHRIST
JOHN C. RABBITT
HOWARD F. McMURDIE, *Chairman*

REPORT OF THE EDITOR FOR 1955

To the Council of the Mineralogical Society of America:

In order that there might be continuity and direct comparison with reports of previous years, the editor's report for 1955 will follow in general the same plan and procedure of

previous years. With five issues published and distributed and the November-December in galley form sufficient data are now available to give a reasonably accurate general survey of the year's activity. When the editor's report appears in print in the March-April issue certain details incomplete and not available at the present time will be included in the final printed report.

In general, it may be stated that the accomplishments represent what might be termed the work of a good normal year with a volume of approximately 1175 pages—about 120 pages larger than the volume for 1954. Two innovations in connection with the 1955 issues might be briefly recalled to mind. The July-August number was shared with our Canadian friends. Part I of that issue contained "Contributions to Canadian Mineralogy" under the able editorship of Professor L. G. Berry of Queen's University. In this section the guest editor assembled 17 interesting papers on various mineralogical subjects and assumed full responsibility for their selection and in seeing the contributions through the press. In Part II of the same issue, 6 other papers were selected from the editor's files. Then, by Council action, the November-December number was dedicated by his colleagues and friends to Professor Emeritus Edward H. Kraus on the occasion of his eightieth birthday (Dec. 1, 1955). This issue contains 18 major and 6 shorter contributions. To those who entertained the view that this action might further delay the printing of manuscripts already on file, I may add that some of the articles from close friends of Dean Kraus that had previously been received were transferred to this number with the hearty approval of the authors concerned.

The current volume, as indicated, will run about 1175 pages—averaging nearly 200 pages for each of the six issues, and contains 85 leading articles. Forty-one additional short papers, appearing under Notes and News, give an overall total of 126 published manuscripts for the year. These contributions were received from 140 contributors associated with 55 different universities, research bureaus and technical laboratories. Forty-six critical book reviews and 11 new minerals described in detail for the first time are a few of the other items of special mineralogical interest.

As in previous years our service during 1955 has extended far beyond our own borders. During the current year 28 manuscripts came from six countries: Australia, Canada, England, Japan, New Zealand and South Africa.

As in the past the Geological Society of America has continued its liberal financial support toward defraying a substantial portion of the printing cost of the Journal. For this assistance the Society is indeed very grateful and expresses its deep appreciation.

And finally a word as to the prospects for 1956. The January-February manuscripts containing 13 main articles and 7 shorter papers are in the hands of the printer at present. In addition at the present time there are on file 16 major and 24 shorter contributions, or a total of 40 papers, aggregating about 425 typed pages, as compared with 66 papers a year ago at this time, aggregating about 900 typed pages, so that substantial progress has been achieved in decreasing the heavy back-log that has caused considerable concern in the past.

It may be recalled that the Council a year ago, in an effort to reduce the period between acceptance and publication, stressed the importance of condensation and rigid critical examination, especially of all major contributions. Your editor in pursuance with this action, in addition to his Board of Associate Editors, called upon 19 readers during the past year. I wish at this time to publicly express my appreciation of this service to the following: L. E. Alexander, G. W. Brindley, R. Denning, J. D. H. Donnay, G. T. Faust, M. Fleischer, C. Frondel, J. W. Gruner, E. W. Heinrich, S. B. Hendricks, H. H. Hess, C. O. Hutton, Earl Ingerson, F. C. Kracek, D. McConnell, A. Poldervaart, L. S. Ramsdell, W. T. Schaller, and R. E. Stevens.

This procedure of very critical inspection has proven very effective in reducing our back-log. To date the critics mentioned and the Board of Associate Editors have examined

56 papers submitted during the year. Twenty-two manuscripts were returned for one reason or another, and 34 accepted, which accounts for the smaller number now on hand compared with the report a year ago at this time.

The accompanying Table 1 summarizes in more detail the distribution of subject matter in Volume 40.

Respectfully submitted,
WALTER F. HUNT, *Editor*

TABLE 1. DISTRIBUTION OF SUBJECT MATTER IN VOLUME 40

Subjects	Articles	Pages	Per Cent of Total
Leading articles*			
Descriptive mineralogy and paragenesis	21		
Chemical mineralogy and geochemistry	21		
Structural crystallography	20		
Optical crystallography	9		
Geometrical crystallography	2		
Petrography	3		
Memorials	2		
Miscellaneous	7		
	85	920	79.6
Short articles	41	112	20.4
Notes and news	30	7½	
Proceedings of Societies	6	58½	
Book reviews	46	41	
Abstracts of new mineral names	49	17	
Total entries	257	1156	100.0
Illustrations	249		
Index, Title page, Table of contents		27	
Grand total		1183	

* Leading articles average 10.8 printed pages.

LIST OF FORMER OFFICERS AND MEETING PLACES

By recommendation of the Council, a complete list of past officers is printed in the proceedings of the annual meeting of the Society:

HONORARY PRESIDENTS

Edward S. Dana 1925-1935

Charles Palache 1949-1954

Edward H. Kraus 1955-

PRESIDENTS

1920 Edward H. Kraus

1921 Charles Palache

1922 Thomas L. Walker

1923 Edgar T. Wherry

1924 Henry S. Washington

1925 Arthur S. Eakle

1926 Waldemar T. Schaller

- 1927 Austin F. Rogers
- 1928 Esper S. Larsen
- 1929 Arthur L. Parsons
- 1930 Herbert E. Merwin
- 1931 Alexander H. Phillips
- 1932 Alexander N. Winchell
- 1933 Herbert P. Whitlock
- 1934 John W. Wolff
- 1935 Clarence S. Ross
- 1936 William S. Bayley
- 1937 Norman L. Bowen
- 1938 Ellis Thomson
- 1939 Max N. Short
- 1940 William F. Foshag
- 1941 Frederick E. Wright
- 1942 Arthur F. Buddington
- 1943 John F. Schairer
- 1944 R. C. Emmons
- 1945 Kenneth K. Landes
- 1946 Paul F. Kerr
- 1947 M. J. Buerger
- 1948 M. A. Peacock
- 1949 John W. Gruner
- 1950 George Tunell
- 1951 A. Pabst
- 1952 Michael Fleischer
- 1953 J. D. H. Donnay
- 1954 Sterling B. Hendricks
- 1955 Harry H. Hess

SECRETARIES

- 1920-1922 Herbert P. Whitlock
- 1923-1933 Frank R. Van Horn
- 1933-1934 Albert B. Peck
- 1934-1944 Paul F. Kerr
- 1944- C. S. Hurlbut, Jr.

VICE-PRESIDENTS

- 1920 Thomas L. Walker
- 1921 Waldemar T. Schaller
- 1922 Frederick A. Canfield

- 1923 George F. Kunz
- 1924 Washington A. Roebbling
- 1925 Herbert P. Whitlock
- 1926 George Vaux, Jr.
- 1927 George L. English
- 1928 Lazard Cahn
- 1929 Edward Wigglesworth
- 1930 John E. Wolff
- 1931 William F. Foshag
- 1932 Joseph L. Gillson
- 1933 Frank B. Guild
- 1934 William A. Tarr
- 1935 Ellis Thomson
- 1936 Harold L. Alling
- 1937 H. V. Ellsworth
- 1938 Kenneth K. Landes
- 1939 Burnham S. Colburn
- 1940 Ian Campbell
- 1941 William J. McCaughey
- 1942 Martin J. Buerger
- 1943 John W. Gruner
- 1944 Harry Berman
- 1945 George Tunell
- 1946 S. B. Hendricks
- 1947 Carl Tolman
- 1948 Adolf Pabst
- 1949 J. D. H. Donnay
- 1950 Ralph E. Grim
- 1951 Michael Fleischer
- 1952 J. D. H. Donnay
- 1953 Sterling B. Hendricks
- 1954 Harry H. Hess
- 1955 Clifford Frondel

TREASURERS

- 1920-1923 Albert B. Peck
- 1924-1929 Alexander H. Phillips
- 1929-1930 Albert B. Peck
- 1930-1940 Waldemar T. Schaller
- 1941- Earl Ingerson

EDITORS

- 1920-1921 Edgar T. Wherry

- 1922- Walter F. Hunt

COUNCILORS

- 1920 Arthur S. Eakle, Frank R. Van Horn, Fred E. Wright, Alexander H. Phillips.
- 1921 Frank R. Van Horn, Fred E. Wright, Alexander H. Phillips, Austin F. Rogers.
- 1922 Fred E. Wright, Alexander H. Phillips, Austin F. Rogers, Thomas L. Watson.
- 1923 Alexander H. Phillips, Austin F. Rogers, Thomas L. Watson, Esper S. Larsen.
- 1924 Austin F. Rogers, Thomas L. Watson, Esper S. Larsen, Arthur L. Parsons.

- 1925 Thomas L. Watson, Esper S. Larsen, Arthur L. Parsons, William F. Foshag.
 1926 Esper S. Larsen, Arthur L. Parsons, William F. Foshag, William A. Tarr.
 1927 Arthur L. Parsons, William F. Foshag, William A. Tarr, Alexander N. Winchell.
 1928 William F. Foshag, William A. Tarr, Alexander N. Winchell, Ellis Thomson.
 1929 William A. Tarr, Alexander N. Winchell, Ellis Thomson, Clarence S. Ross.
 1930 Alexander N. Winchell, Ellis Thomson, Clarence S. Ross, Paul F. Kerr.
 1931 Ellis Thomson, Clarence S. Ross, Paul F. Kerr, William S. Bayley.
 1932 Clarence S. Ross, Paul F. Kerr, William S. Bayley, William M. McCaughey.
 1933 Paul F. Kerr, William S. Bayley, William J. McCaughey, Kenneth K. Landes.
 1934 William S. Bayley, William J. McCaughey, Kenneth K. Landes, E. P. Henderson.
 1935 William J. McCaughey, Kenneth K. Landes, E. P. Henderson, J. F. Schairer.
 1936 Kenneth K. Landes, E. P. Henderson, J. F. Schairer, Arthur F. Buddington.
 1937 E. P. Henderson, J. F. Schairer, Arthur F. Buddington, Arthur P. Honess.
 1938 J. F. Schairer, Arthur F. Buddington, Arthur P. Honess, R. C. Emmons.
 1939 Arthur F. Buddington, Arthur P. Honess, R. C. Emmons, Carl Tolman.
 1940 Arthur P. Honess, R. C. Emmons, Carl Tolman, D. Jerome Fisher.
 1941 R. C. Emmons, Carl Tolman, D. Jerome Fisher, Martin A. Peacock.
 1942 Carl Tolman, D. Jerome Fisher, Martin A. Peacock, Adolf Pabst.
 1943 D. Jerome Fisher, Martin A. Peacock, Adolf Pabst, C. S. Hurlbut, Jr.
 1944 Martin A. Peacock, Adolf Pabst, Michael Fleischer, S. J. Shand.
 1945 Adolf Pabst, Michael Fleischer, S. J. Shand, R. E. Grim.
 1946 Michael Fleischer, S. J. Shand, R. E. Grim, Joseph Murdoch.
 1947 S. J. Shand, R. E. Grim, Joseph Murdoch, H. H. Hess.
 1948 R. E. Grim, Joseph Murdoch, H. H. Hess, Clifford Frondel.
 1949 Joseph Murdoch, H. H. Hess, Clifford Frondel, Lewis S. Ramsdell.
 1950 H. H. Hess, Clifford Frondel, Lewis S. Ramsdell, E. F. Osborn.
 1951 Clifford Frondel, Lewis S. Ramsdell, E. F. Osborn, George T. Faust.
 1952 Lewis S. Ramsdell, E. F. Osborn, George T. Faust, Victor T. Allen.
 1953 E. F. Osborn, George T. Faust, Victor T. Allen, C. Osborne Hutton.
 1954 George T. Faust, Victor T. Allen, C. Osborne Hutton, Felix Chayes
 1955 Victor T. Allen, C. Osborne Hutton, Felix Chayes, L. G. Berry.

Annual Meeting Places

- | | |
|-------------------------------|-------------------------------|
| 1920 Chicago, Illinois | 1938 New York, N. Y. |
| 1921 Amherst, Massachusetts | 1939 Minneapolis, Minnesota |
| 1922 Ann Arbor, Michigan | 1940 Austin, Texas |
| 1923 Washington, D. C. | 1941 Boston, Massachusetts |
| 1924 Ithaca, New York | 1942 No meeting held |
| 1925 New Haven, Connecticut | 1943 No meeting held |
| 1926 Madison, Wisconsin | 1944 No meeting held |
| 1927 Cleveland, Ohio | 1945 Pittsburgh, Pennsylvania |
| 1928 New York, N. Y. | 1946 Chicago, Illinois |
| 1929 Washington, D. C. | 1947 Ottawa, Canada |
| 1930 Toronto, Canada | 1948 New York, N. Y. |
| 1931 Tulsa, Oklahoma | 1949 El Paso, Texas |
| 1932 Cambridge, Massachusetts | 1950 Washington, D. C. |
| 1933 Chicago, Illinois | 1951 Detroit, Michigan |
| 1934 Rochester, New York | 1952 Boston, Mass. |
| 1935 New York, N. Y. | 1953 Toronto, Canada |
| 1936 Cincinnati, Ohio | 1954 Los Angeles, California |
| 1937 Washington, D. C. | 1955 New Orleans, Louisiana |

RECIPIENTS OF THE ROEBLING MEDAL

Charles Palache, December 1937	William Lawrence Bragg, November 1948
Waldemar T. Schaller, December 1938	Herbert E. Merwin, November 1949
Leonard James Spencer, December 1940	Norman L. Bowen, November 1950
Esper S. Larsen, Jr., December 1941	Fred E. Wright, November 1952
Edward H. Kraus, February 1945	William F. Foshag, November 1953
Clarence S. Ross, December 1946	Cecil Edgar Tilley, November 1954
Paul Niggli, December 1947	Alexander N. Winchell, November 1955

RECIPIENTS OF THE MINERALOGICAL SOCIETY OF AMERICA AWARD

Orville Frank Tuttle, November 1951	Hatten S. Yoder, Jr., November 1954
Frederick H. Stewart, November 1952	Julian R. Goldsmith, November 1955
L. H. Ahrens, November 1953	

1955 ANNUAL MEETINGS AT NEW ORLEANS, LOUISIANA

The meetings of the following Societies were held on Nov. 7, 8, 9, 1955.

- The Geological Society of America—68th
- The Paleontological Society—47th
- The Mineralogical Society of America—36th
- Society of Economic Geologists—36th
- Society of Vertebrate Paleontology—15th
- Association of Geology Teachers

The complete program listed titles and abstracts of 265 papers. Of these 106 seemed to be of special interest to members of The Mineralogical Society of America. Authors and titles of these papers are listed below. Since by Council action the abstracts will not be reprinted in *The American Mineralogist*, references are given to the *Bulletin of the Geological Society of America*, Vol. 66, Number 12, Part 2, December 1955, pp. 1525-1640, where the abstracts of all the papers of the various societies are reprinted, arranged alphabetically by authors.

PAPERS OF SPECIAL MINERALOGICAL INTEREST

- ISIDORE ADLER AND J. M. AXELROD: *Application of fluorescent x-ray spectroscopy in geochemistry*. Page 1525.
- N. L. ARCHBOLD: *Relationships of calcium carbonate to lithology and vanadium-uranium deposits in the Salt Wash sandstone member of the Morrison formation*. Page 1526.
- WAYNE U. AULT: *Variations of sulfur isotopes in sulfide minerals*. Page 1526.
- ALLAN AUSKERN AND REX W. GRIMSHAW: *Changes to the absorption spectra of kaolinite and montmorillonite during dehydration*. Page 1527.
- PAUL A. BAILLY AND ROBERT R. COMPTON: *Precambrian plutonism at Mineral Ridge, Esmeralda County, Nevada*. Page 1528.
- DONALD R. BAKER: *Stability of magnetite and hematite in a hydrothermal environment from thermodynamic calculations*. Page 1528.
- C. K. BELL: *Some aspects of the geochemistry of gallium*. Page 1529.
- JOSEPH BERMAN AND WILLIAM J. CAMPBELL: *Relationship of composition to thermal stability in the huebnerite-ferberite series*. Page 1530.
- F. DONALD BLOSS: *Further study of the cleavage tendencies in quartz*. Page 1531.
- F. R. BOYD: *Experimental study of the calciferous amphiboles*. Page 1533.
- LOUIS I. BRIGGS, JR.: *Magmatic differentiation in the Franciscan-Knoxville group of the California Coast Ranges*, Page 1535.
- W. S. BROECKER AND J. L. KULP: *Lamont C¹⁴ Studies*. Page 1535.

- D. BUCKNER AND R. ROY: *Phase equilibria in the system CaO-Al₂O₃-SiO₂-H₂O. II. System CaSiO₃-H₂O and the influence of Sr⁺⁺ in solid solution.* Page 1536.
- WAYNE M. BUNDY: *Petrology of gypsum-anhydrite deposits in southwestern Indiana.* Page 1537.
- F. C. CANNEY, A. T. MYERS, AND F. N. WARD: *Truck-mounted spectrographic laboratory for use in geochemical exploration—a preliminary report.* Page 1538.
- D. R. CARR AND J. L. KULP: *Development in potassium-argon dating.* Page 1540.
- JAIR CARVALHO DA SILVA, JOAN R. CLARK, AND C. L. CHRIST: *Crystal structure of ludwigite, Mg₂Fe^{'''}BO₃O₂.* Page 1540.
- CARLETON A. CHAPMAN: *Pillow breccia and its significance, Mt. Desert Island, Maine.* Page 1541.
- C. L. CHRIST AND JOAN R. CLARK: *Crystal chemical studies of uranium oxide hydrates.* Page 1542.
- ALVIN J. COHEN: *Color centers in α-quartz called amethyst.* Page 1543.
- EARL FERGUSON COOK: *Nomenclature and recognition of ignimbrites.* Page 1544.
- GARNISH H. CURTIS: *Importance of Novarupta during eruption of Mt. Katmai in 1912.* Page 1547.
- E. C. DAPPLES AND R. M. MITCHUM: *Petrographic characteristics of sandstones of the Pennsylvanian of the Central Appalachian coal field.* Page 1547.
- MAURICE DEUL: *Mode of occurrence of uranium in the Chattanooga shale.* Page 1549.
- GEORGE W. DEVORE: *Si-Al association in ordered plagioclases.* Page 1549.
- R. C. DEVRIES AND RUSTUM ROY: *Influence of ionic substitution on the stability of micas and chlorites.* Page 1550.
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