

PROCEEDINGS OF THE THIRTY-NINTH ANNUAL MEETING
OF THE MINERALOGICAL SOCIETY OF AMERICA
AT ST. LOUIS, MISSOURI

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

The thirty-ninth meeting of the Society was held on November 6-8, 1958 at the Sheraton Jefferson Hotel, St. Louis, Missouri. A total of twenty-nine scientific sessions were held by the Geological Society of America and the affiliated Societies. Of these four were devoted to geochemistry, two to mineralogy and two to petrology, at which ninety-eight papers were presented. These represented over one-third of the total number of papers presented at the combined meetings.

The annual luncheon of the Society on November 7 was attended by 212 fellows, members and guests. Following the luncheon the sixteenth presentation of the Roebling Medal was made to Martin J. Buerger and the seventh presentation of the Mineralogical Society of America Award was made to Charles E. Weaver.

The Retiring President, George E. Goodspeed, addressed the Society on the afternoon of November 7. His subject was *Some Textural Features of Magmatic and Metasomatic Rocks*. The annual business meeting was held at 4:45 on the afternoon of November 7, at which brief reports were given by the Secretary, Treasurer and Editor. Professor M. J. Buerger gave an account of the organizational meeting of the International Mineralogical Association held in Madrid in April 1958.

COUNCIL ACTION

The 1958 Council of the Society met on the afternoon and evening of November 5 and on the afternoon of November 6 for a total of eleven hours. Twenty-six items of business were discussed.

Joint meeting with G.S.A. Council. For one hour on November 5 the Council met with the Council of the Geological Society of America to discuss problems of mutual interest. G.S.A. President Moore pointed out that their Council had called for a reduction in grants to associated Societies. A 10 per cent reduction had been suggested but no reduction would be made during the current year. However, M.S.A. may well look forward to diminishing grants. For the past few years G.S.A. has given M.S.A. \$8,000 a year to help pay the cost of the *American Mineralogist*.

Careers in Mineralogy. At the request of the 1957 Council, Dr. Charles Milton prepared a pamphlet on Careers in Mineralogy which was accepted by the Council. This pamphlet will be distributed by the American Geological Institute.

Articles for the Amateur. Since a considerable proportion of the membership of the Society is made up of nonprofessional mineralogists, it was proposed that occasional papers of popular appeal be printed in the *American Mineralogist*. The Council appointed Professor Richard H. Jahns to arrange for the preparation of such articles.

The 1959 Council met for three hours on November 8 and discussed the following items of business:

Treasurer. Earl Ingerson tendered his resignation as Treasurer of the Society effective November 15, 1958. This action resulted from his recent move from the U. S. Geological Survey in Washington to a post at the University of Texas. Dr. Ingerson has for the past eighteen years served the Society faithfully and well as its Treasurer. We all owe him a great debt of gratitude for his loyal and devoted service.

The Council appointed Miss Marjorie Hooker to fill the office of Treasurer until the next annual meeting in November 1959.

International Mineralogical Association. The Council voted that \$120.00 be paid during 1959 as the Society's dues to the International Mineralogical Association.

Honorary Fellows. Because the recent revision of the Constitution eliminated the category of Correspondents, the Council voted that the three remaining Correspondents be made Honorary Fellows. These are:

Pentii Eskola

L. J. Spencer

C. E. Tilley

The Council also voted to make H. J. Buttgenbach of Belgium a Honorary Fellow.

Committee Appointments. President Grim made various committee appointments which were approved by the Council and are printed below.

1959 COMMITTEES OF THE MINERALOGICAL SOCIETY OF AMERICA

Nominating Committee for Fellows

W. R. Foster, <i>Chairman</i>	1957-59
S. E. Clabaugh	1957-59
C. O. Hutton	1958-60
A. L. Anderson	1958-60
J. L. Kulp	1959-61
E. N. Cameron	1959-61

R. R. Franco
W. K. Gummer
R. A. Hoppin
H. S. Hill
W. D. Johnston, Jr.
A. A. Levinson
R. Rowland

Roebbling Medal Committee

B. Mason, <i>Chairman</i>
M. J. Buerger
J. R. Goldsmith
H. F. McMurdie
A. Pabst
F. E. Wickman

Nominating Committee for Officers

W. F. Bradley, <i>Chairman</i>
G. C. Kennedy
E. W. Roedder
C. E. Weaver
H. Winchell

Program Committee

H. W. Fairbairn	1957-59
H. T. Evans	1957-59
O. R. Grawe	1958-60

MSA Award Committee

E. W. Nuffield, <i>Chairman</i>
J. W. Earley
A. F. Hagner
E. W. Heinrich
F. H. Stewart
O. F. Tuttle

Nomenclature Committee

C. Milton, <i>Chairman</i>	1957-59
H. Winchell	1957-59
C. S. Hurlbut	1958-60
M. Fleischer	1958-60
J. V. Smith	1959-61
C. Tunell	1959-61

Financial Advisory Committee

E. P. Henderson, <i>Chairman</i>	1959-61
S. S. Goldich	1959-60
A. Montgomery	1957-59

Membership Committee

D. J. Fisher, <i>Chairman</i>
P. B. Barton
H. Bannerman
C. W. Chesterman
G. E. Ericksen

Board of Associated Editors

J. Murdoch	1957-59
R. M. Garrels	1957-59
D. J. Fisher	1958-60
G. Faust	1958-60
G. W. Brindley	1959-61
A. Pabst	1959-61

Auditing Committee

M. E. Mrose, *Chairman*
 G. Kullerud
 E. W. Roedder

Mineralogical Abstracts

L. G. Berry, *Chairman*
 Other members to be added by chairman.

Policy Committee

J. Murdoch, *Chairman*
 S. S. Goldich
 E. W. Nuffield
 R. H. Jahns
 C. Milton
 M. Hooker, *ex officio*

Representatives

<i>A.A.A.S.</i>	C. Tolman	1957-1959
<i>American Geological Institute</i>		
<i>Board of Directors</i>	C. Frondel	1958-1959
	J. D. Barksdale	1959-1960
	R. M. Grogan	1960-1961
<i>Government Relations Committee</i>	P. F. Kerr	1957-1959
<i>National Research Council</i>	W. F. Bradley	1959-1961

International Mineralogical Association

Delegates

C. Frondel	} (voting delegate) alternates
M. J. Buerger	
E. Ingerson	
T. S. Lovering	

Members of Commissions

Abstracts	H. Winchell
Data	G. T. Faust
New Minerals	D. McConnell
Museums	G. Switzer

REPORT OF THE SECRETARY

To the Council of the Mineralogical Society of America.

ELECTION OF OFFICERS AND FELLOWS

Six hundred and seventy-three ballots were cast in the election of officers, 184 by fellows and 503 by members. In addition 26 were irregular and are not included. The officers elected to serve in 1959 are:

President: Ralph E. Grim, University of Illinois, Urbana, Illinois.

Vice-President: Joseph Murdoch, University of California at Los Angeles, Los Angeles, California

Secretary: C. S. Hurlbut, Jr., Harvard University, Cambridge, Massachusetts.

Treasurer: Earl Ingerson, U. S. Geological Survey, Washington, D. C.

Editor: Lewis S. Ramsdell, University of Michigan, Ann Arbor, Michigan.

Councilors: (1959-1961) Edward W. Nuffield, University of Toronto, Toronto, Canada.

Wilfrid R. Foster, Ohio State University, Columbus, Ohio.

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

- Philip Hauge Abelson, Geophysical Laboratory, Washington, D. C.
- Henry N. Baumann, Jr., 1275 Wyoming Avenue, Niagara Falls, New York.
- Margaret Fuller Boos, 2036 South Columbine, Denver, Colorado.
- Joan Robinson Clark, 3 Pook's Hill Road, Bethesda, Maryland.

- Theodor Ernst, University of Erlangen, Schlossgarten, Germany.
 Sydney A. Forman, Chemical Division, Dept. of Agriculture, Ottawa, Ontario.
 Albert Ronald Graham, 73 Greenland Road, Don Mills P.O., Ontario, Canada.
 Claude Jean Guy Guillemin, 6 rue Pierre Bourdan, Paris 12e, France.
 Djalma Guimaraes, Rua Gonçalves Dias, 3182, Belo Horizonte, Minas Gerais, Brazil.
 Gunnar Kullerud, Geophysical Laboratory, Washington, D. C.
 Jan Kutina, Dept. of Geochemistry, Charles University, Albertov 6, Prague II, Czechoslovakia.
 Alfred A. Levinson, Central Laboratory, The Dow Chemical Co., Freeport, Texas.
 Ivan Herbert Milne, 832 Twelfth St., Oakmont, Pennsylvania.
 Herbert O'Daniel, Mineralogisches Institut der Universität, Senckenberg Anlage 30, Frankfurt, Germany.
 Robert George Schmidt, U. S. Geological Survey, Washington, D. C.
 Ming Shan Sun, Box 26, Campus Station, Socorro, New Mexico.
 Karl Hans Wedepohl, Mineralogisch Institut der Universität, Göttingen, Germany.
 Kenzo Yagi, Institute of Earth Sciences, Tohoku University, Tomizawa, Sendai, Japan.

Revision of the Constitution

The following question appeared on the ballot sent to members and fellows in September 1958, "Shall the changes in the Constitution and By-Laws as printed in the *American Mineralogist* 43: pp. 611-614, 1958 be accepted?" Of the 617 fellows and members voting on this question, there were 585 affirmative votes and 32 negative votes.

MEMBERSHIP STATISTICS

November 1, 1958

	1957	1958	Gain	Loss
Correspondents	3	3	0	0
Fellows	356	360	18	14
Members	1,075	1,185	193	83
Subscribers	1,041	1,195	236	82

The above figures show a net gain of 4 fellows, 110 members and 154 subscribers. Considering the four groups together, there is a gain of 268 giving a total of 2743.

During 1958, the Society lost through death seven fellows: G. H. Anderson, New York, N. Y.; Oliver Bowles, Washington, D. C.; Carl Faessler, Quebec, Canada; F. F. Grout, Minneapolis, Minnesota; E. C. Jacobs, Burlington, Vermont; M. H. Stow, Lexington, Virginia; A. W. Winchell, Hamden, Connecticut.

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

REPORT OF THE TREASURER FOR 1958

To the Council of the Mineralogical Society of America:

Your Treasurer submits herewith his report for the fiscal year beginning August 1, 1957, and ending July 31, 1958.

RECEIPTS

Dues and subscriptions	\$13,756.85
Sale of back numbers	2,773.77
Authors' charges on reprints	3,759.06
Income from endowment	6,593.32
Geological Society of America aid for printing the Journal	8,000.00
Advertising	864.76
Sale of Index, vols. 31-40	409.40
Sale of Index, vols. 21-30	73.15
Sale of Index, vols. 1-20	38.70
N.S.F. grant for printing the Index to vols. 31-40	4,500.00
Harvard University grant toward printing Harvard issue	1,539.00
Sale of securities	1,312.50
Credit held in overpayment of account	7.00
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	\$43,627.51
Cash on hand, August 1, 1957	1,531.53
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	\$45,159.04

DISBURSEMENTS

Printing and distribution of the Journal (6 issues)	\$19,801.06
Printing and distribution of reprints	3,213.07
Honoraria to Editor, Secretary and Treasurer	1,250.00
Clerical assistance	1,266.65
Printing and stationery	330.29
Program and abstracts (1957)	286.75
Postage and express	550.32
Expenses of officers to 1957 meeting	25.00
New securities purchased	10,157.57
Commission on new securities	110.26
Tax on new securities	4.67
Office supplies	63.45
Safety deposit box	7.15
Refunds on subscriptions	25.55
Telephone and telegrams	4.10
Committee expenses	4.16
Roebing Medal (1957)	148.23
Mineralogical Society of America Award	7.00
Contribution to American Geological Institute	600.00
Contribution to Mineralogical Abstracts	350.00
Contribution to International Mineralogical Assoc.	120.00
Printing Index, vols. 31-40	4,679.49
Refund to N.S.F. on Index grant	323.40
Refund of dividend on stock sold	20.00
Printing micro text cards	198.73
Checks returned	13.00
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	\$43,559.90
Cash on hand, August 1, 1958	1,599.14
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	\$45,159.04

The endowment funds of the Society as of July 31, 1958, 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
	\$ 15,301.25
PREFERRED STOCKS	
500 Union Pacific, 4	\$ 4,570.25
200 Southern California Edison, 4.88	5,250.00
150 Penn-Texas, 1.60	4,487.50
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
40 Potomac Electric Power, 2.44	2,000.00
10 Consolidated Edison, 5	1,066.64
	\$ 35,250.59
COMMON STOCKS	
346 Potomac Electric Power	\$ 4,966.73
215 Columbia Gas	3,436.25
200 Greyhound Corporation	2,300.00
175 Standard Oil of New Jersey	1,761.65
150 Consolidated Denison	3,096.00
100 Buckeye Steel	3,800.00
100 Columbus and Southern Ohio Electric	2,087.50
100 Diana Stores	1,250.00
100 Pittsburgh and West Virginia	2,787.50
100 Plymouth Cordage	4,750.00
100 Southern Natural Gas	3,600.00
87 Kroger Company	2,034.03
83 American Telephone and Telegraph	11,255.98
60 United Fruit	3,067.50
50 Boston Insurance	1,500.00
50 Chesapeake and Ohio	2,368.75
50 Phelps Dodge	1,975.00
50 Public Service Electric and Gas	1,586.40
50 Sinclair Oil	2,968.75
50 Spencer Kellogg	1,258.33
30 U. S. Playing Card	2,411.25
	\$ 64,261.62
	\$114,813.46

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, 1957, and ending July 31, 1958. 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,
FRANCIS R. BOYD, JR.
MARY E. MROSE
WILLIAM T. PECORA, *Chairman*

REPORT OF THE EDITOR FOR 1958

The 1958 volume of *The American Mineralogist* contained 1247 pages, as compared with 940 and 974 for 1957 and 1956 respectively. This is an increase of about $30 \pm$. The 111 articles printed were received from 192 authors. A wide geographic distribution is shown by the fact that these authors represented 20 universities, 11 governmental agencies and 4 industrial laboratories in the United States, and 16 universities and 3 government agencies from outside the United States. This gives a total of 54 institutions, which is an increase of nearly 50% over 1957.

In spite of the increase in size, the backlog of manuscripts on hand is larger than that of a year ago, so continued larger issues will be necessary in 1959.

Five new minerals were described in detail for the first time in Volume 43. There were 25 book reviews. The section on New Mineral Names, New Data and Discredited Minerals, so ably conducted by Dr. M. Fleischer, contains 79 entries. This is an essential and valuable section, and we owe a great deal to Dr. Fleischer for this service.

As in former years, the Geological Society of America has continued its liberal financial support toward the cost of printing the Journal, and we are grateful for this assistance.

The quality of the Journal depends in large part upon the advice of the associate editors and others who read the manuscripts submitted for publication. The fields covered by our Journal are so varied that it is important that we use a wide range of talent from our memberships. The editor wishes to thank the Associate Editors, Drs. C. L. Christ, E. Wm. Heinrich, Robert Garrels, Joseph Murdoch, George T. Faust and D. Jerome Fisher, and likewise the following who have aided in reading manuscripts: Drs. W. F. Bradley, G. W. Brindley, R. M. Denning, H. T. Evans, Jr., A. Pabst, J. P. Smith and H. Winchell. The editor also wishes to express his appreciation to the George Banta Company Inc., publisher of our Journal. The excellent appearance of the Journal, and the fine cooperation received are deeply appreciated.

A summary of the contents of Vol. 43 is given in the following table.

DISTRIBUTION OF SUBJECT MATTER IN VOLUME 43

Subjects	Number	Pages	% of Total
Leading articles	70	940	79.7
Short articles	41	106	9.0
		1,046	88.7
Memorials	7	37	
Awards	2	15	
Proceedings of the Society	1	18	
		70	6.0
Book Reviews	25	20	
New Mineral Names	79	34	
Notes	19	10	
		64	5.3
Total		1,180	100.0
Membership list		45	
Index, Title Page, Table of Contents		22	
		67	
Grand Total		1,247	

Respectfully submitted,
LEWIS S. RAMSDELL, *Editor*

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
 1956 Clifford Frondel
 1957 D. Jerome Fisher
 1958 George E. Goodspeed

VICE-PRESIDENTS

1920 Thomas L. Walker
 1921 Waldemar T. Schaller
 1922 Frederick A. Canfield
 1923 George F. Kunz
 1924 Washington A. Roebing
 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
 1956 D. Jerome Fisher
 1957 George E. Goodspeed
 1958 Ralph E. Grim

SECRETARIES

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

TREASURERS

1920-1923 Albert B. Peck
 1924-1929 Alexander H. Phillips
 1929-1930 Albert B. Peck
 1930-1940 Waldemar T. Schaller
 1941-1958 Earl Ingerson

EDITORS

1920-1921 Edgar T. Wherry
 1922-1956 Walter F. Hunt
 1957—Lewis S. Ramsdell

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. Olson, George T. Faust, Victor T. Allen.
 1953 E. F. Osborn, George T. Faust, Victor T. Allen, C. Osborn Hutton.
 1954 George T. Faust, Victor T. Allen, C. Osborn Hutton, Felix Chayes

- 1955 Victor T. Allen, C. Osborne Hutton, Felix Chayes, L. G. Berry.
 1956 C. Osborne Hutton, Felix Chayes, L. G. Berry, C. B. Slawson, A. O. Woodford.
 1957 Felix Chayes, L. G. Berry, C. B. Slawson, A. O. Woodford, S. S. Goldich
 1958 L. G. Berry, C. B. Slawson, A. O. Woodford, S. S. Goldich, B. H. Mason, R. H. Jahns
 C. Milton.

Annual Meeting Places

- | | |
|-------------------------------|--------------------------------|
| 1920 Chicago, Illinois | 1940 Austin, Texas |
| 1921 Amherst, Massachusetts | 1941 Boston, Massachusetts |
| 1922 Ann Arbor, Michigan | 1942 No meeting held |
| 1923 Washington, D. C. | 1943 No meeting held |
| 1924 Ithaca, New York | 1944 No meeting held |
| 1925 New Haven, Connecticut | 1945 Pittsburgh, Pennsylvania |
| 1926 Madison, Wisconsin | 1946 Chicago, Illinois |
| 1927 Cleveland, Ohio | 1947 Ottawa, Canada |
| 1928 New York, N. Y. | 1948 New York, N. Y. |
| 1929 Washington, D. C. | 1949 El Paso, Texas |
| 1930 Toronto, Canada | 1950 Washington, D. C. |
| 1931 Tulsa, Oklahoma | 1951 Detroit, Michigan |
| 1932 Cambridge, Massachusetts | 1952 Boston, Massachusetts |
| 1933 Chicago, Illinois | 1953 Toronto, Canada |
| 1934 Rochester, New York | 1954 Los Angeles, California |
| 1935 New York, N. Y. | 1955 New Orleans, Louisiana |
| 1936 Cincinnati, Ohio | 1956 Minneapolis, Minnesota |
| 1937 Washington, D. C. | 1957 Atlantic City, New Jersey |
| 1938 New York, N. Y. | 1958 St. Louis, Missouri |
| 1939 Minneapolis, Minnesota | |

Recipients of the Roebling Medal

- | | |
|-----------------------------|----------------------------|
| 1937 Charles Palache | 1950 Normal L. Bowen |
| 1938 Waldemar T. Schaller | 1952 Fred E. Wright |
| 1940 Leonard James Spencer | 1953 William F. Foshag |
| 1941 Esper S. Larsen, Jr. | 1954 Cecil Edgar Tilley |
| 1945 Edward H. Kraus | 1955 Alexander N. Winchell |
| 1946 Clarence S. Ross | 1956 Arthur F. Buddington |
| 1947 Paul Niggli | 1957 Walter F. Hunt |
| 1948 William Lawrence Bragg | 1958 Martin J. Buerger |
| 1949 Herbert E. Merwin | |

Recipients of the Mineralogical Society of America Award

- | | |
|---------------------------|--------------------------|
| 1951 Orville F. Tuttle | 1955 Julian R. Goldsmith |
| 1952 Frederick H. Stewart | 1956 George C. Kennedy |
| 1953 L. H. Ahrens | 1957 Rustum Roy |
| 1954 Hatten S. Yoder, Jr. | 1958 Charles E. Weaver |

1958 ANNUAL MEETINGS AT ST. LOUIS, MISSOURI

The meetings of the following Societies were held on November 6-8, 1958.

The Geological Society of America—71st
 The Paleontological Society—50th
 The Mineralogical Society of America—39th
 Society of Economic Geologists—39th
 Geochemical Society—3rd
 Association of Geology Teachers

The complete program listed titles and abstracts of 323 papers. Of these 161 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. 69, Number 12, Part 2, December 1958, pp. 1527-1770, where the abstracts of all the papers of the various societies are reprinted, arranged alphabetically by authors.

PAPERS OF SPECIAL MINERALOGICAL INTEREST

- J. A. S. ADAMS, G. EDWARDS, W. HENLE, AND K. OSMOND: *Absolute dating of bentonites by strontium-rubidium isotopes*. Page 1527.
- L. T. ALDRICH: *Mineral age measurements in metamorphic zones of Iron and Dickinson counties, Michigan*. Page 1528.
- G. C. AMSTUTZ: *Origin of the Mississippi Valley type deposits*. Page 1528.
- G. C. AMSTUTZ: *Epigenetic and syngenetic theories of formation of rocks and mineral deposits*. Page 1529.
- G. C. AMSTUTZ AND ATTILIO LIGASACCHI: *Mineralization zoning based on habit changes of pyrite*. Page 1529.
- ALFRED L. ANDERSON: *Genetic aspects of the monazite and columbium-bearing rutile deposits in northern Lemhi County, Idaho*. Page 1530.
- S. ARAMAKI AND RUSTOM ROY: *Further equilibrium studies in the system $Al_2O_3-SiO_2-H_2O$ under hydrostatic and uniaxial pressure*. Page 1530.
- CARL F. AUSTIN AND MATTHEW P. NACKOWSKI: *Geochemical exploration at Darwin Mines, California*. Page 1531.
- H. L. BARNES: *Measurement of the solubility of ZnS in H_2O -saturated H_2O* . Page 1531.
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