

PROCEEDINGS OF THE FORTIETH ANNUAL MEETING
OF THE MINERALOGICAL SOCIETY OF AMERICA
AT PITTSBURGH, PENNSYLVANIA

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

The fortieth meeting of the Society was held on November 2-4, 1959 at the Penn-Sheraton Hotel, Pittsburgh, Pennsylvania. The scientific sessions were integrated with those of the Geological Society of America and other affiliated Societies. A total of thirty-five scientific sessions were held; of these two were devoted to mineralogy, two to petrology, one to crystallography and five to geochemistry, at which 107 papers were presented.

The annual luncheon of the Society on November 3 was attended by 234 fellows, members and guests. This exceeded by two the number attending the luncheon in Atlantic City in 1957 and was thus the largest number ever to attend a Society luncheon. Following the luncheon the seventeenth presentation of the Roebling Medal was made to Felix Machatschki and the ninth presentation of the Mineralogical Society of America Award was made to Harry F. W. Taylor.

On the afternoon of November 3 the Society was addressed by the Retiring President, Ralph E. Grim, on the subject, *Some Applications of Clay Mineralogy*. The annual business meeting was held at 4:30 on the afternoon of November 3, at which brief reports were given by the Secretary, Treasurer and Editor. It was voted in response to a motion made by Professor C. W. Wolfe—that the Society spread upon its records an expression of appreciation of the services rendered the Society by Professor C. S. Hurlbut, Jr. during his fifteen years as Secretary.

COUNCIL ACTION

The 1959 Council of the Society met on the afternoon and evening of November 1 for a total of six hours and discussed 23 items of business. Although there were the usual number of items, the time needed to consider them was less than in many years. This was because of the excellence of the reports submitted by the several committees that had been at work throughout the year.

At its first meeting, in November 1958, the 1959 Council appointed a Policy Committee to consider the future financial needs of the Society and to make recommendations to the Council at its Pittsburgh meeting. Council action on certain aspects of this Committee report affects all members and fellows of the Society and is thus given below.

Publication costs of the *American Mineralogist* as well as other Society expenses have been rising continuously during the past decade while dues have remained constant. At present neither the dues of Members and Fellows nor the subscription rate of the *American Mineralogist* is sufficient to meet the publication costs of the journal. Acting on recommendations of the Policy Committee the Council voted the following:

Subscription to the American Mineralogist. That the subscription rate of the *American Mineralogist* be \$10.00 a year beginning in 1961.

Dues of Members and Fellows. That steps be taken to raise the dues of members and fellows to \$8.00 a year.

Student Members. That the dues of members who are students be set at one-half the dues of other members.

Mineralogical Abstracts to Members and Fellows. That, if dues are raised to \$8.00 a year, Mineralogical Abstracts be made available to members and fellows for \$2.00 a year additional. Note. Students paying the reduced rate will pay \$3.00 for Mineralogical Abstracts.

Change in the By-Laws. In order to effect the increase of dues of members and fellows, the Council recommends the following changes in Article II, Sections 1 and 2 of the by-laws:

From

Section 1. The annual dues for members shall be four dollars (\$4) payable in January.

Section 2. No person shall be accepted as a fellow of the Mineralogical Society of America unless he pays dues for the year within three months after notification of his election. The annual dues for fellows shall be five dollars (\$5) payable in January.

To

Section 1. The annual dues for members and fellows shall be eight dollars (\$8) payable in January. Members who are students shall pay one-half the dues of other members.

Section 2. No person shall be accepted as a fellow of the Mineralogical Society of America unless he pays dues for the year within three months after notification of his election.

The Council also recommends the following change in Article II, Section 3 of the by-laws.

From

Section 3. Fellows who have reached the age of seventy years, and who have paid dues for at least thirty (30) years, shall be exempt from further payment of dues.

To

Section 3. Fellows and *members* who have reached the age of seventy years, and who have paid dues for at least thirty (30) years, shall be exempt from further payment of dues.

The Council requests that the general membership of the Society be asked to vote on the above recommended changes in Article II of the by-laws.

International Mineralogical Association. A report was given the Council by Professor C. Frondel, delegate to the International Mineralogical Association Congress held in Zurich, Switzerland August 28-September 4, 1959. A summary of this report was printed in the *American Mineralogist* **44**, 1319 (1959). Another meeting of the International Mineralogical Association is to be held in Copenhagen, Denmark in 1960 during the meetings of the XXI International Geological Congress.

Honorary Fellows. The Council voted that Felix Machatschki, the 1959 recipient of the Roebbling Medal, be made an Honorary Fellow.

ACTION BY THE 1960 COUNCIL

The 1960 Council met on November 4, 1959 for three hours and discussed fourteen items of business.

International Mineralogical Association. The Council voted that \$150.00 be paid during 1960 as the Society's dues to the International Mineralogical Association.

Advertising in the American Mineralogist. It was agreed by the Council that it would be desirable to increase the amount of advertising carried in *American Mineralogist* in order to increase the Society's revenue. The Council voted that Martin L. Ehrmann be appointed to carry out this project.

Editor of the American Mineralogist. The Council voted that Lewis S. Ramsdell be appointed Editor of the *American Mineralogist* for the year 1960.

Articles for the Amateur. The 1958 Council appointed Richard H. Jahns to arrange for occasional articles in the *American Mineralogist* of interest to non-professional mineralogists. The 1960 Council voted that Dr. Jahns be authorized to continue with this activity.

Endowment Committee. The Council voted that this committee be reactivated.

Commercial Audit of the Society Books. Upon recommendation of the 1959 Auditing Committee, the Council voted that the Financial Advisory Committee study the possibility of having a commercial firm audit the Society books and make specific recommendations to the Council in November 1960.

Committee Appointments. President Murdoch made the following committee appointments, which were approved by the Council.

1960 COMMITTEES OF THE MINERALOGICAL SOCIETY OF AMERICA

Nominating Committee for Fellows

R. Roy, <i>Chairman</i>	1960-63
C. O. Hutton	1958-60
A. L. Anderson	1958-60
J. L. Kulp	1959-61
E. N. Cameron	1960-63
J. D. H. Donnay	1960-63

Roebling Medal Committee

J. R. Goldsmith, <i>Chairman</i>
A. F. Buddington
E. Ingerson
T. S. Lovering
G. Tunjfell
H. Strunz

Program Committee

B. Mason
H. Winchell

Nomenclature Committee

M. Fleischer, <i>Chairman</i>	1958-60
C. S. Hurlbut	1958-60
J. V. Smith	1959-61
G. Tunnell	1959-61
A. Pabst	1960-62
G. Faust	1960-62

MSA Award Committee

H. Winchell, <i>Chairman</i>
H. F. W. Taylor
J. Verhoogen
W. D. Keller
E. W. Roedder
J. B. Thompson

Financial Advisory Committee

E. P. Henderson, <i>Chairman</i>	1959-61
S. Goldich	1959-60
A. Montgomery	1960-63

Nominating Committee for Officers

V. B. Meen, <i>Chairman</i>
B. Mason
C. L. Christ
J. L. Gilson
L. Staples

Auditing Committee

G. Kullerud, <i>Chairman</i>
A. Van Valkenburg
M. L. Lindberg

Board of Associate Editors

D. J. Fisher	1958-60
G. T. Faust	1958-60
G. W. Brindley	1959-61
A. Pabst	1959-61
E. W. Roedder	1960-62
R. H. Jahns	1960-62

Mineralogical Abstracts

L. B. Berry, <i>Chairman</i>
A. Pabst
M. E. Mrose
H. Winchell
K. M. Servos

Advertising

M. L. Ehrmann

Endowment Committee

C. B. Slawson
A. O. Woodford

Representatives

American Geological Institute

Board of Directors:

J. D. Barksdale 1959-60
 R. M. Grogan 1960-61

Government Relations Committee:

P. F. Kerr 1959-61

International Mineralogical Association

Representative:

D. J. Fisher

Delegates:

C. S. Hurlbut	} Voting
C. Frondel	
J. Murdoch	
A. Pabst	
G. Switzer	
E. W. Heinrich	} Alternates
R. E. Grim	

American Association for the Advancement of Science

D. J. Fisher
 E. E. Wahlstrom

National Research Council

W. F. Bradley 1960-63

Members of Commissions:

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

Delegate to XXI International Geological Congress

—J. Murdoch
 —R. E. Grim (alternate)

REPORT OF THE SECRETARY

To the Council of the Mineralogical Society of America

ELECTION OF OFFICERS AND FELLOWS

Eight hundred and forty-four ballots were cast in the election of officers, 188 by Fellows and 656 by Members. The officers elected to serve in 1960 are:

- President:* Joseph Murdoch, University of California at Los Angeles, California.
Vice-President: E. F. Osborn, The Pennsylvania State University, University Park, Pennsylvania.
Secretary: George Switzer, U. S. National Museum, Washington 25, D. C.
Treasurer: Marjorie Hooker, U. S. Geological Survey, Washington 25, D. C.
Councilors: (1960-1962) Julian R. Goldsmith, University of Chicago, Chicago, Illinois
 Horace Winchell, Yale University, New Haven, Connecticut

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

- Robert Marshall Douglass, Los Alamos Scientific Laboratory, Los Alamos, New Mexico.
 Richard Clarkson Erd, U. S. Geological Survey, California.
 Gerald Manfred Friedman, Pan American Petroleum Company, Tulsa, Oklahoma.
 Erwin Emil Hellner, University of Chicago, Chicago, Illinois.
 Vernon James Hurst, Department of Mines, Atlanta, Georgia.
 Edward Charles Jonas, The University of Texas, Austin, Texas.
 Solomon Kaiman, Mines Branch, Ottawa, Canada.
 Donald Richard Lewis, Shell Development Company, Houston, Texas.
 Katharine Selden Kniskern Mather, U. S. Army Engineer Waterways Experiment Station, Jackson, Mississippi.

Peter Misch, University of Washington, Seattle, Washington.
 Peter Aubrey Sabine, Geological Survey of Great Britain, London, England.
 Leonard B. Sand, University of Utah, Salt Lake City, Utah.
 Robert Leland Smith, U. S. Geological Survey, Washington, D. C.
 Roland Bliss Snow, U. S. Steel Corporation, Monroeville, Pennsylvania.
 W. Ehrenreich Tröger, University of Freiburg, Germany.
 Tómas Tryggvason, University Research Institute, Reykjavik, Iceland.
 Alexis von Volborth, University of Nevada, Reno, Nevada.
 Marc Bernard Vuagnat, University of Lausanne, Switzerland.
 Donald Edward White, U. S. Geological Survey, Washington, D. C.
 Harold Douglas Wright, Pennsylvania State University, University Park, Pennsylvania.
 E-an Zen, University of North Carolina, Chapel Hill, North Carolina.

MEMBERSHIP STATISTICS

November 1, 1959

	1958	1959	Gain	Loss
Correspondents	3	0	0	3
Honorary Fellows	0	3	4	1
Fellows	360	376	21	5
Members	1,185	1,501	416	100
Subscribers	1,195	1,339	227	83

The above figures show a net gain of 16 fellows, 316 members and 144 subscribers. Considering the four groups together, there is a gain of 476 giving a total of 3219.

The accompanying Membership Chart shows graphically the growth of the Society.

With the exception of the war years 1940-'42 each year has seen an increase over the preceding year in members, fellows and subscribers to the *American Mineralogist* with 1959 showing the greatest increase in a single year.

During 1959, the Society lost through death six fellows: Charles R. Fettke, Pittsburgh, Pennsylvania; Peggy-Kay Hamilton, Bronxville, New York; Charles Mauguin, Thiais, France; James E. Maynard, Syracuse, New York; L. J. Spencer, London, England; Samuel Zerfoss, Washington, D. C.

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

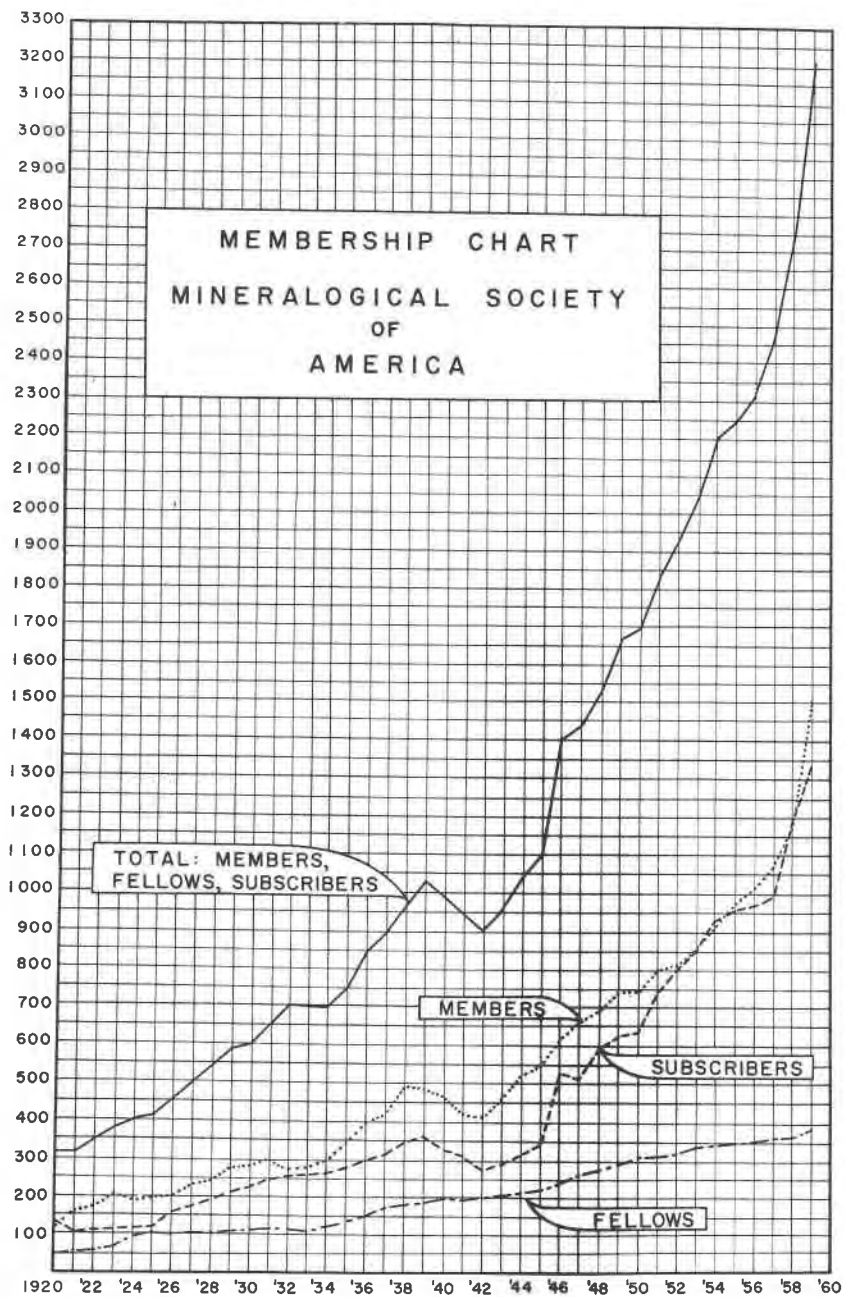
REPORT OF THE TREASURER FOR 1959

To the Council of the Mineralogical Society of America:

Your treasurer submits herewith her report for the fiscal year beginning August 1, 1958, and ending July 31, 1959.

SUMMARY STATEMENT

Cash on hand, August 1, 1958		\$ 1,599.14
Total receipts	\$ 40,855.23	
Total disbursements	35,450.46	
Net income (Receipts less disbursements)	\$ 5,404.77	\$ 5,404.77
Total income		\$ 7,003.91



Cash on hand, July 31, 1959		
Riggs National Bank	\$ 1,502.67	
Merrill Lynch, Pierce, Fenner and Smith	428.48	\$ 1,931.15
		<hr/>
Transfer to capital		5,072.76
		<hr/>
Total		\$ 7,003.91
Assets, July 31, 1959		
Cash	\$ 1,931.15	
Capital (Endowment Fund securities and cash)	148,902.50	
Total		\$150,833.65

Financially, the society has completed a year marked by progress in several respects. The figures on income, expenditures, and balances are shown in the tables. The explanatory comments that follow are to provide background information and point out some percentage relationships and trends.

Income and Expense

The effective income of the society this year can be grouped in three categories and was obtained from these sources directly or from activity concerned with them.

Dues	18.2%
Publication program	56.2
Endowment fund	25.6

Dues furnished 18.2 per cent of income, and while no comparison can be made with previous years when income from dues and subscriptions was not reported separately, it is considerably more than that calculated on the basis of membership figures. The receipt of \$1100 more than a normally expectable \$6300 is the direct result of a net gain of 275 members between January and July 1959. Income from various sources in connection with publications amounts to 56.2 per cent. The lower income from sale of reprints, compared to the previous year, is due to the difference in time of invoicing and receipt of payments in relation to fiscal year closing. The income from the sale of indexes is more than twice that received last year. Income recorded under the endowment fund made up the remaining 25.6 per cent and will be discussed separately.

Expenditures can be grouped as follows:

Officers' honoraria and office expense	12.1%
Publication program	85.3
Support of other organizations and miscellaneous	2.6

The largest portion of the publication expense is naturally that of printing and distributing the *American Mineralogist*, amounting this year to \$23,341.19 or about 77 per cent. As a result of the increased cost of our journal, the grant of \$8000 from the Geological Society of America toward its publication now defrays one-third rather than one-half of the cost. The expenditure for postage shows a large increase over last year (44 per cent), resulting from the increases in postal rates, sales of indexes, and membership.

Endowment Fund

Colonel Roebing's original gift of \$45,000 in 1926 formed the nucleus of the endowment fund which has since grown by continual investment of money from the society's operating fund. In November 1958 the Fifty-Plus Committee was initiated privately for the explicit

purpose of increasing the endowment fund by asking a minimum pledge of \$50.00 from individual members, to be contributed over a five-year period. At the close of the fiscal year, \$11,600 had been pledged and \$3719 of this had been received. Voluntary contributions during the same period supplied an additional \$240.50.

The total book value of all securities in the fund at the end of the fiscal year was \$118,956.68. Of this amount, 12.9 per cent was in bonds, 28.7 per cent in preferred stocks, and 58.4 per cent in common stocks. The approximate market value, computed on July 1, 1959, was \$147,944.00. The higher figure of the market value is accounted for entirely by the common stocks, and the good position of the society in this respect can be attributed to the recommendations of the Finance Committee in this direction and the policy of the preceding treasurer to increase the holdings in common stocks. Dividends and interest accruing from the investments amounted to \$6518.42 and accounted for 16 per cent of total income. The yield for the year at book value was 5.48 per cent; at market value, 4.41 per cent. From securities now held an income of \$6850 is estimated for 1959-1960.

To simplify the details of managing the portfolio which now numbers thirty-two securities, a custodian account was opened with Merrill Lynch, Pierce, Fenner, and Smith, Inc. of September 5, 1958.

Mineralogical Abstracts

Beginning with the issue of volume 14, number 1, March 1959, our society assumed joint responsibility with the Mineralogical Society of Great Britain and Ireland for the publication of Mineralogical Abstracts separately from the Mineralogical Magazine. As shown in the statement, the society has made an advance of funds toward initial publication expense. It remains to be seen whether the support of Mineralogical Abstracts will be a recurrent annual expense or whether the venture will become self-supporting in the near future. During the year, the treasurer also acted as agent for the collection and transfer of subscription payments from our members.

I am most fortunate in having the complete cooperation of our Finance Committee and Merrill Lynch, custodian of our securities, and it is a pleasure for me to record here my thanks to Edward P. Henderson, Samuel S. Goldich, and Arthur Montgomery of the committee, and to Stanley Carr of Merrill Lynch, for their competent advice and assistance at all times.

RECEIPTS

Dues

Fellows	\$1,485.40	
Members	5,929.91	\$ 7,415.31

Publications

Geological Society of America grant	8,000.00	
Subscriptions to American Mineralogist	7,609.29	
Sale of reprints	2,698.97	
Sale of back numbers	2,776.21	
Sale of Index, vols. 31-40	707.40	
vols. 21-30	261.00	
vols. 1-20	138.60	
Advertising	746.06	
Miscellaneous	20.02	22,957.55

Endowment Fund

Dividends and interest.....	6,518.42	
Fifty-Plus Committee.....	3,719.00	
Contributions.....	240.50	10,477.92
Exchange credits and collections.....	4.45	4.45
Total receipts.....		\$40,855.23

DISBURSEMENTS

Honoraria

Secretary (August 1, 1957–July 31, 1958).....	\$ 250.00	
Treasurer (August 1, 1957–November 15, 1958).....	322.91	
Editor (July 1, 1958–March 31, 1959).....	562.50	\$ 1,135.41

Office Expense

Clerical assistance (April 1958–July 1959).....	1,434.20	
Printing and stationery.....	979.80	
Supplies.....	70.99	
Certificates of Incorporation (3).....	10.50	
Officers' travel.....	198.26	
Committee expense.....	7.91	
Telephone and telegrams.....	5.95	
Postage.....	438.64	3,146.25

Publications

American Mineralogist (July 1958–June 1959).....	23,341.19	
Reprints.....	3,358.38	
Program and abstracts.....	400.00	
Microtext of out-of-print issues.....	590.86	
Purchase of out-of-print issues.....	88.00	
Postage and express.....	358.67	
National Science Foundation refund on index sales (May 1958–April 1959).....	693.90	
Mineralogical Abstracts (publication advance).....	1,405.38	30,236.38
International Mineralogical Association.....	120.00	
American Geological Institute.....	594.00	714.00
Roebing Medal.....	150.63	
MSA Award certificate.....	7.50	158.13
Refunds.....	42.29	
Checks returned.....	18.00	60.29
Total disbursements.....		\$35,450.46

ENDOWMENT FUND

Amount	Security	Cost	Value ¹	Income ²
	<i>Bonds</i>			
6M	Atlantic Coast Line, 4½.....	\$ 5,257.50	\$ 6,000	\$ 270.00
5M	New York Central, 5.....	4,300.00	3,600	250.00
5M	Southern Railway, 5.....	5,743.75	4,800	250.00
		\$ 15,301.25	\$ 14,400	\$ 770.00

<i>Preferred stocks</i>			
500	Union Pacific, 4.	4,570.25	4,000 200.00
200	Southern California Edison, 4.88.	5,250.00	5,000 244.00
150	Fairbanks Whitney.	4,487.50	3,450 120.00
60	Jones and Laughlin, A5.	4,987.50	5,940 300.00
55	United States Steel, 7.	6,946.20	7,865 385.00
50	Virginia Electric Power, 5.	5,942.50	5,150 250.00
40	Potomac Electric Power, 2.44.	2,000.00	1,960 97.60
	Consolidated Edison, 5.	—	— 37.50 ³
		\$ 34,183.95	\$ 33,365 \$1,634.10
<i>Common stocks</i>			
350	Potomac Electric Power.	5,066.73	9,100 415.20
261	Kroger Company.	2,034.03	7,569 219.69
249	American Telephone and Telegraph.	11,255.98	19,920 765.68
230	Columbia Gas.	3,764.56	5,060 215.00
200	Greyhound.	2,300.00	4,600 200.00
180	Diana Stores.	2,800.30	3,420 100.00 ⁴
175	Standard Oil of New Jersey.	1,761.65	9,100 393.75
150	Consolidated Denison.	3,096.00	2,250 —
100	Buckeye Steel Castings.	3,800.00	2,800 150.00
100	Columbus and Southern Ohio.	2,087.50	3,400 160.00
100	Pittsburgh and West Virginia.	2,787.50	2,100 —
100	Plymouth Cordage.	4,750.00	4,500 260.00
100	Southern Natural Gas.	3,600.00	3,900 200.00
60	United Fruit.	3,067.50	2,040 135.00
50	Chesapeake and Ohio Railway.	2,368.75	3,600 200.00
50	Phelps Dodge.	1,975.00	3,050 150.00
50	Sinclair Oil.	2,968.75	3,050 150.00
50	Public Service Electric and Gas.	1,586.40	1,950 90.00
50	Spencer Kellogg.	1,258.33	900 40.00
50	Boston Insurance.	1,500.00	1,650 90.00
50	Chase Manhattan Bank.	3,231.25	3,100 30.00 ⁵
30	U. S. Playing Card.	2,411.25	3,120 150.00
		\$ 69,471.48	\$100,179 \$4,114.32
	Total.	\$118,956.68	\$147,944 \$6,518.42
	Cash balance, Endowment Fund account, Riggs National Bank.	958.50	

¹ Approximate market value, July 1, 1959.
² Fiscal year ending July 31, 1959, except where noted.
³ Income for 3 quarters. Sold in March 1959.
⁴ Income on 100 shares. Additional shares purchased June 1959.
⁵ Income for one quarter only. Purchased in March 1959.

Respectfully submitted,
 MARJORIE HOOKER, *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, 1958, and ending July 31, 1959. 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,
G. KULLERUD
E. W. ROEDDER
M. E. MROSE, *Chairman*

REPORT OF THE EDITOR FOR 1959

The 1959 volume of *The American Mineralogist* contained 1344+vii pages. As shown in the summary, 1237 of these were devoted to articles. This figure represents an increase of nearly 200 pages over Volume 43. There were 75 major and 67 shorter articles, giving a total of 142. The authors represented 26 U. S. educational institutions, 10 government laboratories, 11 industrial laboratories, 15 foreign educational institutions and 8 foreign laboratories, giving a total of 70 institutions. This compares with 37 in 1957 and 54 in 1958. It is evident that we have an international journal.

Seven new minerals were described in detail for the first time in Volume 44. There were 7 book reviews. The very important section on New Mineral Names, so ably conducted by Dr. M. Fleischer, contained 70 entries. The value of these abstracts is greatly enhanced by his critical comments.

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.

With approximately 200 more pages devoted to articles in Volume 44, the backlog of manuscripts has been somewhat reduced. At present, most of the shorter articles appearing under Notes are printed within four months of receipt. The waiting period for major articles has varied from seven to ten months, with the majority appearing within eight months. We hope to be able to get this period down to six months.

The associate editors have been called upon to read many manuscripts, and to make recommendations to the editor and to the authors. Our thanks are extended to these individuals, Robert Garrells, Joseph Murdoch, D. Jerome Fisher, George T. Faust, George W. Brindley and Adolf Pabst. The editor has also called on others to help in evaluating manuscripts, including C. L. Christ, R. M. Denning, H. T. Evans, E. Ingerson, P. F. Kerr, B. Mason, R. S. Mitchell, J. V. Smith, O. F. Tuttle and H. Winchell.

The editor likewise wishes to express his appreciation for the splendid cooperation he receives from the publisher, The George Banta Company, Inc., and for the excellent appearance of the journal.

A summary of the contents of Vol. 44 is given in the following table.

DISTRIBUTION OF SUBJECT MATTER IN VOLUME 44

Subjects	Number	Pages	% of Total
Leading articles	75	1,040	78.2
Short articles	67	197	14.8
		1,237	93.0
Memorials	5	19	
Awards	2	9	
Proceedings of the Society	1	17	
		— 45	3.45
Book Reviews	7	9	
New Mineral Names	70	29	
Notes	12	9	
		— 47	3.55
Total		1,329	100.00
Index, Title Page, Table of Contents		22	
Grand Total		1,351	

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
1959	Ralph E. Grim

VICE-PRESIDENTS

1920	Thomas L. Walker
1921	Waldemar T. Schaller
1922	Frederick A. Canfield
1923	George F. Kunz
1924	Washington A. Roebling
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
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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 | 1959 Pittsburgh, Pennsylvania |

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|-----------------------------|----------------------------|
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| 1949 Herbert E. Merwin | 1959 Felix Machatschki |

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- | | |
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1959 ANNUAL MEETING AT PITTSBURGH, PENNSYLVANIA

The meetings of the following societies were held on November 2-4, 1959.

- The Geological Society of America—72nd
- The Paleontological Society—51st
- The Mineralogical Society of America—40th
- Society of Economic Geologists—40th
- The Geochemical Society—4th

The complete program listed titles and abstracts of 323 papers. Of these 145 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. 70, Number 12, Part 2, December 1959, pp. 1559-1706, where the abstracts of all the papers of the various societies are reprinted, arranged alphabetically by authors.

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- VICTOR T. ALLEN AND WM. D. JOHNS: *Clay-mineral environments in New England and eastern Canada*. Page 1560.
- SHIGEO ARAMAKI AND RUSTUM ROY: *Detailed x-ray data on mullites and two new anhydrous aluminosilicates AS(H)-II and high-temperature sillimanite*. Page 1562.
- SHIGEO ARAMAKI AND RUSTUM ROY: *Revision of the Al_2O_3 - SiO_2 diagram*. Page 1563.
- ROY A. BAILEY: *Contact fusion of argillaceous and arkosic sediments by an andesite intrusion, Valles Mountains, New Mexico*. Page 1565.
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