

PROCEEDINGS OF THE FORTY-SECOND ANNUAL  
MEETING OF THE MINERALOGICAL SOCIETY OF  
AMERICA AT CINCINNATI, OHIO

GEORGE SWITZER, *Secretary*

The forty-second meeting of the Society was held on November 2-4, 1961 at the Netherland Hilton Hotel, Cincinnati, Ohio. The scientific sessions were integrated with those of the Geological Society of America and other affiliated societies. A total of 39 scientific sessions were held. Of these two were devoted to mineralogy, two to petrology, one to crystallography, four to inorganic geochemistry, and three to organic geochemistry. In these sessions a total of 102 papers was presented.

The annual luncheon of the Society on November 3 was attended by 220 fellows, members, and guests. Following the luncheon the nineteenth presentation of the Roebling Medal was made to Paul Ramdohr and the eleventh presentation of the Mineralogical Society of America Award was made to Joseph V. Smith.

On the afternoon of November 3 the Society was addressed by Retiring President E. F. Osborn on the subject *Two Reaction Series*. The annual business meeting was held on the morning of November 4, at which reports were given by the Secretary, Treasurer, and Editor of *The American Mineralogist*.

ACTION OF THE 1961 COUNCIL

The 1961 Council of the Society met on the afternoon and evening of October 31 and the morning of November 1 for a total of eight hours.

*Awards.* The Council voted that in 1962 the Roebling Medal be awarded to John W. Gruner, and the Mineralogical Society of America Award be presented to Douglas Saxon Coombs.

*Funds for Travel to Annual Meetings.* The Council voted that travel expenses for the Secretary, Treasurer, and Editor to attend the annual meeting of the Society be increased from five cents per mile to six cents per mile, effective beginning with the 1961 annual meeting in Cincinnati.

*Instructions to Authors.* The Council voted that instructions to authors submitting papers for publication in *The American Mineralogist* be published once a year in the journal, and that the Editor be empowered to draw up minimum specifications to be met by authors.

*Board of Past Presidents.* The Council discussed the suggestion made by D. J. Fisher that a Board of Past Presidents be established, whose purpose would be to discuss Society affairs and make recommendations to the Council for its consideration that would advance the interest of the society and the science. The Council went on record as recognizing this as an idea of merit and suggests that Dr. Fisher proceed with its organization.

*Distinguished Service Award.* The Council discussed a suggestion made by D. J. Fisher that the Society establish a distinguished service award. The following motion was passed: The Council appreciates the suggestion but does not approve the establishment of a distinguished service award.

*Review Articles in the American Mineralogist.* The following motion was passed: The Council recommends that the Society does not consider at this time a program of soliciting review articles in *The American Mineralogist*.

*American Mineralogist Editorial Policy.* The Council passed the following resolution: The Council of the Mineralogical Society of America recognizes in publishing *The American*

*Mineralogist* the Society's basic obligation to publish papers in topical mineralogy, but every effort should be made to obtain more papers in the broader aspects of new mineralogy. To this end the Editor and Associate Editors should encourage authors to submit for publication manuscripts of this type.

*Change in By-Laws.* Treasurer Hooker pointed out that two sections of the By Laws, Article I, Section 3 and Article II, Section 4 are unrealistic in their application to current situations and procedures, and that the membership of the society has become so large, and varied, and widespread that we are increasingly faced with situations concerning dues delinquency, membership termination, and membership reinstatement for which there are no provisions in the By-Laws.

The Council felt that the following suggested changes provide a framework for these situations and are not so stringent that they will work a hardship on our many absent-minded members. The Council voted that these following suggested changes be submitted to the membership for vote in October 1962.

The suggested changes are as follows:

#### By-Laws<sup>1</sup>

##### Article I. Membership

Section 1. Retain

Section 2. Retain

Section 3. Termination and Reinstatement of Membership.

A fellow or member may withdraw without prejudice on submitting a resignation in writing to either the Secretary or Treasurer on or before February 1st of the year with which the resignation will be effective, provided that he is not in arrears for any previous year(s). A fellow or member who does not indicate his intention to resign by February 1st shall be held liable for dues for the year and subject to removal from the mailing list after April 1st. Membership will terminate at the end of the year.

If a fellow or member has previously resigned without prejudice, he may be reinstated in any subsequent year on payment of dues for the year in which reinstatement is requested. If a fellow or member has had his membership terminated, he may be reinstated on payment of dues for the year in which reinstatement is requested and any outstanding arrearage.

Issues of the *Journal* will be supplied for the year in which a fellow or member is reinstated. Issues for prior years may be purchased at current back issue rates, and payment of outstanding dues may be counted toward the cost of back issues for any one year.

##### Article II. Dues

Delete Section 4.

Action by the 1962 Council

*Editor of The American Mineralogist.* The Council appointed E. W. Heinrich Editor of *The American Mineralogist* for the year 1962.

*Past Editor of The American Mineralogist.* The Council voted that Lewis S. Ramsdell be designated as Past Editor of *The American Mineralogist*.

*American Geological Institute.* The Council voted that the Mineralogical Society of

<sup>1</sup> For a statement of the By-Laws as now worded see the complete Constitution and By-Laws of the society published in this number (pp. 487-489).

America contribute to the *American Geological Institute* in 1962 a sum not to exceed \$500, the exact amount to be determined by the Executive Committee.

*International Mineralogical Association.* The Council voted that \$150.00 be paid during 1962 as the Society's dues to the *International Mineralogical Association*.

*Editorial Policy Committee.* The Council voted that a committee consisting of E. W. Heinrich, Chairman, Hatten S. Yoder, Jr., and Francis J. Turner be appointed to formulate a statement of editorial policy of *The American Mineralogist*, to be submitted to the Council for approval.

*Nominations for Councilor.* The Council voted the following resolution: If one of the nominees for Councilor submitted by the Nominating Committee for Officers has already served as Councilor, his name shall be removed and replaced by an alternate named by the Nominating Committee.

*Notification of results to Roebling Medal and MSA Award Committees.* The Council voted that it shall be one of the duties of the Secretary to each year notify all members of the Roebling Medal and Mineralogical Society of America Award Committees as to the final selection made for these awards.

*Committee Appointments.* President Campbell made the following committee appointments, which were approved by the Council:

1962 COMMITTEES OF THE MINERALOGICAL SOCIETY OF AMERICA

*Nominating Committee for Fellows*

R. Roy, <i>Chairman</i>	1960-62
C. F. Park, Jr.	1960-62
W. S. MacKenzie	1961-63
R. S. Cannon	1961-63
C. W. Chesterman	1962-64
A. J. Frueh	1962-64

*Nominating Committee for Officers*

R. H. Jahns, <i>Chairman</i>
C. L. Christ
E. H. Bailey
D. L. Graf
K. Mather
J. A. Noble

*Roebling Medal Committee*

H. S. Yoder, <i>Chairman</i>
D. F. Hewett
T. F. W. Barth
D. J. Fisher
S. S. Goldich
A. O. Woodford

*Financial Advisory Committee*

E. P. Henderson, <i>Chairman</i>	1962-64
A. Montgomery	1960-62
W. T. Pecora	1961-63

*Program Committee*

J. W. Peoples
L. R. Page

*Auditing Committee*

G. L. Davis, <i>Chairman</i>
A. Van Valkenburg
D. Gottfried

*Nomenclature Committee*

G. T. Faust, <i>Chairman</i>
A. Pabst
M. Fleischer
C. Frondel
A. Poldervaart
A. Von Volborth

*MSA Award Committee*

O. F. Tuttle, <i>Chairman</i>
W. F. Bradley
L. G. Berry
C. Meyer
W. T. Pecora
T. C. Phemister

*Editorial Policy Committee*

E. W. Heinrich, <i>Chairman</i>
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H. S. Yoder, Jr.  
F. J. Turner

M. Mrose  
K. Servos  
H. Winchell

*Mineralogical Abstracts*

L. G. Berry, *Chairman*  
A. Pabst

*Archivist*

G. T. Faust

REPRESENTATIVES

*American Geological Institute*

Board of Directors:

J. F. Schairer 1961-62  
W. D. Keller 1962-63

Government Relations Committee:

P. F. Kerr

Translations Committee

M. Fleischer

*International Mineralogical Association*

Representative:

E. F. Osborn

Members of Commissions:

Abstracts—H. Winchell  
Data—G. T. Faust

New Minerals and New Mineral

Names—D. McConnell

Museums—G. Switzer

Teaching of Mineralogy—C. S. Hurlbut, Jr.

*American Association for the Advancement of Science*

E. E. Wahlstrom

C. S. Hurlbut, Jr.

*National Research Council*

W. F. Bradley 1960-63

G. T. Faust (Advisory Board to Office of Critical Tables)

*Nominations for Officers for 1963.* The following slate was proposed by the Nominating Committee and approved by the Council:

President: Cornelius S. Hurlbut, Jr.

Vice-President: Leonard G. Berry

Secretary: George Switzer

Treasurer: Marjorie Hooker

Councilors: (1963-65, two to be elected)

William F. Bradley

Howard T. Evans, Jr.

Lloyd W. Staples

Donald L. Graf

REPORT OF THE SECRETARY FOR 1961

*To the Council of the Mineralogical Society of America*

ELECTION OF OFFICERS AND FELLOWS

Eight hundred and seventy-five ballots were cast in the election of officers. The officers elected to serve in 1962 are:

*President:* Ian Campbell, State Division of Mines and Geology, San Francisco, Calif.

*Vice-President:* Cornelius S. Hurlbut, Jr., Harvard University, Cambridge, Mass.

*Secretary:* George Switzer, U. S. National Museum, Washington, D. C.

*Treasurer:* Marjorie Hooker, U. S. Geological Survey, Washington, D. C.

*Councilors:* (1962-1964) Francis J. Turner, University of California, Berkeley, Calif.

Hatten S. Yoder, Jr., Geophysical Laboratory, Washington, D. C.

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

- Zalman Samuel Altschuler, U. S. Geological Survey, Washington, D. C.  
 G. Christian Amstutz, Missouri School of Mines, Rolla, Mo.  
 Daniel E. Appleman, U. S. Geological Survey, Washington, D. C.  
 Paul B. Barton, Jr., U. S. Geological Survey, Washington, D. C.  
 Horace R. Blank, Texas A. and M. College, College Station, Texas.  
 Clifford Wayne Burnham, The Pennsylvania State University, University Park, Pa.  
 Edward C. T. Chao, U. S. Geological Survey, Washington, D. C.  
 Loring Coes, Jr., The Norton Company, Worcester, Mass.  
 Douglas Saxon Coombs, University of Otago, Dunedin, New Zealand.  
 Henry Rowland Cornwall, U. S. Geological Survey, Menlo Park, Calif.  
 William J. Croft, Sperry Rand Research Center, Sudbury, Mass.  
 Dirk Jacobus Doeglas, Agricultural University, Wageningen, The Netherlands.  
 Kingsley Charles Dunham, University of Durham, Durham, England.  
 Martin L. Ehrmann, Martin L. Ehrmann Co., Los Angeles, Calif.  
 Gustavo Fagnani, University of Milan, Milan, Italy.  
 Elliot Gillerman, University of Kansas, Lawrence, Kansas.  
 David Gottfried, U. S. Geological Survey, Washington, D. C.  
 Jack Green, North American Aviation Co., Downey, Calif.  
 Zyunpei Harada, Hokkaido University, Sapporo, Japan.  
 Max Hutchinson Hey, British Museum (Natural History), London, England.  
 Otto Charles Kopp, University of Tennessee, Knoxville, Tenn.  
 Friedrich Karl Franz Liebau, German Academy of Sciences, Berlin-Adlershof, Germany.  
 Gordon James Fraser MacDonald, University of California, Los Angeles, Calif.  
 Akiho Miyashiro, University of Tokyo, Tokyo, Japan.  
 James Jennings Norton, U. S. Geological Survey, Washington, D. C.  
 Linus Pauling, California Institute of Technology, Pasadena, Calif.  
 George Phair, U. S. Geological Survey, Washington, D. C.  
 Sir Chandrasekhara Venkatu Raman, Raman Research Institute, Bangalore, India.  
 John Lang Rosenfeld, University of California, Los Angeles, Calif.  
 Charles Bertram Sclar, Battelle Memorial Institute, Columbus, Ohio.  
 Brian John Skinner, U. S. Geological Survey, Washington, D. C.  
 Mortimer Hay Staatz, U. S. Geological Survey, Denver, Colo.  
 Toshio Sudo, Tokyo University of Education, Tokyo, Japan.  
 George Forbes Walker, Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia.  
 Matt Savage Walton, Jr., Yale University, New Haven, Conn.  
 Josef Zemann, University of Göttingen, Göttingen, Germany.

#### CHANGE IN BY-LAWS

The proposed change in Article II, Section 3 of the By-Laws was passed by a vote of 804 for, 12 against. Article II, Section 3 of the By-Laws now stands as follows:

#### Article II—Dues

- Section 3. Fellows and members who have reached the age of 70 years, or have reached the official retirement age of the institution in which they have been serving, and have paid annual dues for 30 years, shall be exempt from further payment of dues but retain all rights and privileges.

MEMBERSHIP STATISTICS

The membership of the society remained practically unchanged in 1961 as compared with 1960. Membership statistics for the past three years are given in the following table:

November 1, 1961

	1959	1960	1961
Honorary Fellows. . . . .	3	4	4
Fellows. . . . .	376	419	448
Members. . . . .	1,501	1,623	1,587
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	1,880	2,046	2,039

During the year the society lost through death five Fellows: G. Montague Butler, Hugh Richard Gault, Esper S. Larsen, Jr., Esper S. Larsen, 3rd, and Hugh E. McKinstry.

Respectfully submitted,  
 GEORGE SWITZER, *Secretary*

REPORT OF THE TREASURER FOR 1961

(Year ending July 31, 1961)

To the Council of the Mineralogical Society of America:

SUMMARY STATEMENT

Operating cash, August 1, 1960. . . . .	\$ 7,058.29	
Receipts, August 1, 1960-July 31, 1961. . . . .	54,565.26	\$ 61,623.55
Disbursements, August 1, 1960-July 31, 1961. . . . .	43,979.25	
Transfer to capital. . . . .	11,000.00	
Operating cash, July 31, 1961. . . . .	6,644.30	61,623.55
Assets, July 31, 1961		
Capital: Endowment Fund (Securities at market value). . . . .		174,783.00
includes Fifty-Plus Fund. . . . . \$8,694.00		
Museum Fund. . . . . 100.00		
Endowment Fund (Cash reserve). . . . .		11,425.50
Operating cash. . . . .		6,644.30
Total. . . . .		192,852.80

RECEIPTS

Dues		
Fellows. . . . .	\$ 2,640.70	
Members. . . . .	10,675.79	
Student members. . . . .	880.00	\$ 14,196.49
Publications		
<i>The American Mineralogist</i> subscriptions. . . . .	13,436.45	
Geological Society of America grant. . . . .	6,400.00	
Sale of reprints. . . . .	3,406.90	
Sale of back numbers. . . . .	2,732.63	
Sale of Index, vols. 31-40. . . . .	535.00	
Sale of Index, vols. 21-30. . . . .	252.50	

Sale of Index, vols. 1-20.....	\$ 135.00	
Advertising.....	2,022.10	
Mailing list rental.....	98.89	\$ 29,019.47
<b>Investments</b>		
Dividends.....	7,307.22	
Interest.....	260.90	7,568.12
<b>Income for Investment</b>		
Fifty-Plus Committee.....	2,050.00	
Contributions.....	231.00	
Life memberships.....	1,000.00	
Securities transfer.....	480.76	3,761.76
Miscellaneous.....	19.42	19.42
Total receipts.....		\$ 54,565.26

## DISBURSEMENTS

<b>Publications</b>		
<i>The American Mineralogist</i> (May 1960-April 1961).....	\$ 27,243.43	
Reprints (March 1960-April 1961).....	4,248.20	
Program and abstracts.....	612.96	
Microtext and purchase of out-of-print issues.....	262.40	
National Science Foundation, refund on index sales, May-August 1960 (final payment).....	250.50	
Mailing list charges.....	24.77	
Refunds.....	30.00	
Back issue sales expense.....	580.37	
Back issue stock, moving expense.....	415.50	
Back issue stock, storage expense.....	490.44	\$ 34,158.57
<b>Mineralogical Abstracts</b>		
Deficit, 1959 and 1960.....	1,890.00	
Estimated deficit, 1961, advance payment.....	560.00	
MSA contribution, 1961 members.....	423.00	2,873.00
<b>Office Expense</b>		
Editor: Secretarial assistance.....	130.00	
Postage, supplies, etc.....	42.09	172.09
Secretary: Secretarial assistance.....	321.00	
Equipment.....	261.75	
Printing.....	771.80	
Supplies.....	193.80	
Postage and telephone.....	182.05	1,730.40
Treasurer: Secretarial assistance.....	373.50	
Equipment.....	395.34	
Printing.....	715.53	

Supplies.....	\$ 111.21	
Postage.....	347.29	
Travel.....	114.87	\$ 2,057.74
Officers' honoraria		
Editor (April 1, 1960-June 30, 1961).....	937.50	
Secretary (August 1, 1960-July 31, 1961).....	500.00	
Treasurer (August 1, 1960-July 31, 1961).....	500.00	1,937.50
International Mineralogical Association, 1961-1962, dues :	150.00	
Third General Meeting, April 1962, expense advance....	241.49	
American Geological Institute, 1960-1961.....	500.00	891.49
Roebling Medal (1960).....	136.44	
MSA Award certificate.....	12.50	148.94
Check charges, etc.....	9.52	9.52
Total disbursements.....		\$ 43,979.25

ENDOWMENT FUND

Amount	Security	Cost	Value <sup>1</sup>	Income <sup>2</sup>
<i>Bonds</i>				
6M	Atlantic Coast Line, 4½.....	\$ 5,257.50	\$ 6,000	\$ 270.00
5M	New York Central, 5.....	4,300.00	6,100	250.00
5M	Southern Railway, 5.....	5,743.75	5,000	250.00
		<hr/>	<hr/>	<hr/>
		\$15,301.25	\$ 17,160	\$ 770.00
<i>Preferred stocks</i>				
150	Fairbanks Whitney.....	\$ 4,487.50	\$ 3,450	\$ 300.00
60	Jones & Laughlin, A5.....	4,987.50	6,000	300.00
40	Potomac Electric Power, 2.44.....	2,000.00	1,960	97.60
200	Southern California Edison, 4.88.....	5,250.00	5,000	244.00
500	Union Pacific, 4.....	4,570.25	4,000	200.00
55	United States Steel, 7.....	6,946.20	7,765	385.00
50	Virginia Electric Power, 5.....	5,942.50	5,250	250.00
		<hr/>	<hr/>	<hr/>
		\$34,183.95	\$ 33,425	\$1,776.60
<i>Common stocks</i>				
262	American Telephone & Telegraph.....	\$12,391.83	\$ 32,488	\$ 852.09 <sup>3</sup>
50	Boston Insurance.....	1,500.00	1,850	90.00
100	Buckeye Steel Castings.....	3,800.00	2,400	150.00
185	Chase Manhattan Bank.....	11,344.04	15,540	438.66 <sup>4</sup>
50	Chesapeake & Ohio Railroad.....	2,368.75	2,900	200.00

<sup>1</sup> Approximate market value, August 1, 1961.

<sup>2</sup> Fiscal year ending July 31, 1961, except where noted.

<sup>3</sup> Additional shares purchased, March 1961.

<sup>4</sup> Stock dividend and purchase, March 1961.



300	Columbia Gas Systems.....	\$ 5,174.72	\$ 7,800	\$ 322.50
100	Columbus & Southern Ohio Electric...	2,087.50	6,200	185.00
100	Continental Can.....	4,051.56	4,400	45.00 <sup>5</sup>
150	Denison Mines, Ltd.....	3,096.00	1,395	195.47
180	Diana Stores.....	2,800.30	3,420	180.00
231	Greyhound Corporation.....	2,300.00	5,775	231.53 <sup>6</sup>
261	Kroger Company.....	2,034.03	7,830	287.12
50	Phelps Dodge Corporation.....	1,975.00	3,050	150.00
100	Pittsburgh & West Virginia.....	2,787.50	1,300	—
100	Plymouth Cordage.....	4,750.00	6,100	320.00
—	Potomac Electric Power Company.....	—	—	231.00 <sup>7</sup>
50	Public Service Electric & Gas.....	1,586.40	2,850	97.50
200	Richfield Oil.....	8,697.65	8,800	180.00 <sup>8</sup>
100	Southern Natural Gas.....	3,600.00	4,300	200.00
—	Spencer Kellogg.....	—	—	30.00 <sup>9</sup>
—	Standard Oil of New Jersey.....	—	—	201.25 <sup>10</sup>
200	Sunray Mid-Continent Oil.....	4,685.26	5,800	136.00 <sup>11</sup>
—	United Fruit.....	—	—	37.50 <sup>12</sup>
		\$81,030.54	\$124,198	\$4,760.62
	Merrill Lynch (interest).....			19.90
	Columbia Federal Savings & Loan (interest).....			241.00
	Total.....	\$130,515.74	\$174,783	\$7,568.12
	Endowment Fund			
	Riggs National Bank, cash balance..		184.50	
	Columbia Federal Savings and Loan Assoc., cash balance.....		11,241	

The preceding tables give the details of the society finances and indicate both the completion of a successful year and a currently satisfactory position. The comments that follow will point out and discuss certain details and relationships of income and expense, the Endowment Fund investment, and our joint publication responsibility for *Mineralogical Abstracts*.

#### *Income and Expense*

The income can be grouped according to four sources, being derived either directly or from activity related to them. Table 1 shows the source, the amount, the relative percentage, and comparative percentage for last year.

<sup>5</sup> One quarter dividend. Purchased in April 1961.

<sup>6</sup> Stock dividend, October 1960.

<sup>7</sup> Two quarter dividend. Sold in December 1960.

<sup>8</sup> Two quarter dividend. Purchased in December 1960.

<sup>9</sup> Three quarter dividend. Sold in April 1961.

<sup>10</sup> Two quarter dividend. Sold in December 1960.

<sup>11</sup> Two quarter dividend. Purchased in December 1960.

<sup>12</sup> Four quarter dividend. Sold in April 1961.

TABLE 1

Source	Amount	1960-1961 Per Cent	1959-1960 Per Cent
Dues.....	\$14,196.49	26.0	19.4
Publication program.....	29,019.47	53.1	57.2
Investments.....	7,568.12	14.0	16.6
Contributions, life memberships, etc....	3,781.18	6.9	6.8

The higher percentage of income from dues and the concomitant changes in the other percentages reflect the change in the dues rate that became effective during the year. The percentage of income from the publication program reflects, in addition, the change in the subscription rate and the beginning of the withdrawal of our annual grant from the Geological Society of America. Within the publication program, there have been variations with last year. The income from the sale of subscriptions has risen from 30% to 46% of the total, resulting both from the higher rate and a substantial increase in the number. At the present time, 1,445 copies are distributed on a paid basis, of which 537 are delivered within the United States to all fifty states and Puerto Rico, and 908 are dispatched to 78 countries on all continents. The income from the sale of back numbers and reprints is of the same order as last year, while that from the sale of the cumulative indexes has dropped an expectable amount.

With his appointment by the Council in November 1959 as Advertising Manager for *The American Mineralogist*, Martin L. Ehrmann took on the assignment of raising the income from advertising placed in the *Journal*. The income this year, \$2,022.10, is more than twice the average annual income from this source in other years. It is a real pleasure to express the society's thanks to both Mr. and Mrs. Ehrmann.

The income derived from the Endowment Fund investments and that received for investment will be discussed in a separate section.

Grouped expenditures and relative and comparative percentages are shown in Table 2.

TABLE 2

Group	Amount	1960-1961 Per Cent	1959-1960 Per Cent
Publication program.....		84.2	82.3
<i>The American Mineralogist</i> .....	\$34,158.57	(77.7)	(82.3)
<i>Mineralogical Abstracts</i> .....	2,873.00	(6.5)	(—)
Office expense.....	3,960.23	9.0	9.2
Officers' honoraria.....	1,937.50	4.4	6.2
Support of other organizations, etc.....	1,049.95	2.4	2.3

The expenditure percentages are substantially the same as last year, with publication and related items accounting for 84.2% of the total. This year, the payment of MSA's 50 per cent share of the deficit incurred in the publication of *Mineralogical Abstracts* for 1959 and 1960, an advance payment on the estimated deficit for 1961, and the society's contribution toward members' 1961 subscriptions, have added up to \$2,873.00, representing 6.5% of the annual expense, but actually covering expense for portions of three years.

Certain portions of this year's publication and office expense are non-recurrent. These are the moving of the stock of *The American Mineralogist*, the final payment on the National Science Foundation grant, and office equipment. The amount is about \$2,000.00, 4.7% of total expenditure. Office expense, even with the increased work in all three of the society's offices as a result of normal growth and additional activities, has been kept at a lower figure than was anticipated. For example, clerical and secretarial help for the three offices totaled \$824.50. The amount of incoming and outgoing mail has risen steadily, with the Treasurer's office alone recording more than 5,200 pieces incoming and an even higher number going out. The figures involved in maintaining an up-to-date mailing list for *The American Mineralogist* typify and emphasize the growth and the work load. Between September 1960 and August 1961, 258 new members were added, 441 members changed their addresses (22% of total membership), and 292 members were removed, making a total of 991 changes, or a 50% turnover in the mailing list. For the same period in 1955-1956, five years ago, there were 450 changes, or less than half as many. For the library subscribers to the *Journal*, there were 343 changes in 1960-1961 compared to 197 for 1955-1956.

#### *Endowment Fund*

The book value of the Endowment Fund securities was \$130,515.74 on August 1, 1961. Of this amount, 11.7% is in bonds, 26.2% in preferred stock, and 62.1% in common stock. The market value, computed on August 1, 1961, was \$174,783.00. Dividends and interest accruing from the securities totaled \$7,307.22, close to the estimated figure of \$7,200. From securities now held, an income of \$7,400 is estimated for 1961-1962. The percentage yield of the portfolio, and of each type of security, at both book and market value, is given in Table 3.

TABLE 3

	Total	Bonds	Preferred stock	Common stock
Book value.....	5.60	5.03	5.20	5.75
Market value.....	4.18	4.49	5.31	3.83

The recommendation of the Financial Advisory Committee to establish and build up a cash reserve has been followed, and the details of this and of the portfolio can be found in the Endowment Fund listing on pages 478-479.

The *Fifty-Plus Committee* was initiated in November 1958 to encourage additions to the investment funds from individuals. Members and friends of the society were asked to pledge an amount of \$10 or more a year for a five-year period. Approximately 10 per cent of the membership responded immediately and generously, realizing full well the urgent need to increase our investments as a source of income. The pledges of the Fifty-Plus Committee amount to approximately \$12,000. Table 4 shows the growth and present status of this fund, at the end of the third year. The Committee welcomes new members at any time, and a note to the Treasurer stating your intention is sufficient to add your name to the growing list.

Other amounts of income used only for investment are the individual voluntary contributions received from members and payments for life memberships.

#### *Mineralogical Abstracts*

At the close of 1960, seven numbers of volume 14 of *Mineralogical Abstracts* had been issued, and the eighth and final number, the index, was in preparation. During 1960,

TABLE 4

Year	Amount Paid In	Cumulative Total (including interest)
1958-1959	3,719.00	3,719.00
1959-1960	2,520.00	6,389.00
1960-1961	2,050.00	8,694.00

copies were distributed to 698 members of the British society, 227 members of our society (in addition to about 275 included in the 698 who receive their copies as members of the British society) and 535 library subscribers. Total income from 1960 subscriptions and sales was about \$8,000.00. Publication costs for 1960, because of delays caused by the 1959 printing strike, include a part of 1959. Considering the costs of the two years together, however, the total deficit at the end of 1960 was \$6,580.00. Of this amount, \$2,800.00 was covered by the original sum paid in by the two societies; the remainder, \$3,780.00, was shared equally. The number of individual members receiving the abstracts has risen from 925 in 1960 to 1,200 in 1961, but the number of library subscribers remains almost the same. Publication costs cannot be reduced below the present level, and if the number of library subscriptions cannot be increased substantially, other measures must be taken to insure meeting production costs. It is hoped that the subscription list can be expanded so that the cost to individual members can be kept at the present amount.

The Treasurer's office depends on several individuals for continuity of operation and I should like to place on record my thanks to Harriet Evans and Catherine W. Skinner for capable assistance; Edward P. Henderson, Arthur Montgomery, and William T. Pecora, of the Financial Advisory Committee, for their cooperation and competent advice; Stanly Carr and Herbert Allen, of Merrill Lynch, custodian of our portfolio; Irwin H. Wensink and Alvin A. Lang, of George Banta Company, Inc., printer of *The American Mineralogist*. I should like also to express my appreciation to the membership in general for cooperation throughout the year, and to many individual members who have responded generously when called on for advice and assistance.

Respectfully submitted,  
MARJORIE HOOKER, *Treasurer*

#### REPORT OF THE AUDITING COMMITTEE

*To the President of the Mineralogical Society of America:*

On October 6, 1961, the Auditing Committee examined the accounts of the Treasurer of the Society and found them in excellent order for the fiscal year August 1960-July 1961.

The Committee again wishes to commend the Treasurer for the admirable manner in which she has kept the Society's books and accounts.

Respectfully Submitted,  
GORDON L. DAVIS  
ALVIN VAN VALKENBURG, *Chairman*

#### REPORT OF THE EDITOR FOR 1961

The 1961 volume of *The American Mineralogist* contained 1,543 pages, and is the largest volume to date. This was an increase of 200 pages over that of 1960, in accordance with instructions received from the Council at the 1960 Denver meeting of the Society.

There were 91 leading articles in Vol. 46, compared with 74 for Vol. 45, and these resulted in an increase of 338 printed pages, and helped materially to reduce the backlog

of major articles awaiting publication. Only 36 short articles were published, compared to 65 in 1960. This meant a decrease of 91 pages, which is of minor importance, since there is usually a much shorter waiting period for these. Almost all leading articles received by March 15, 1961, were published in Vol. 46.

As in previous years, about 20% of the articles printed were from authors outside the United States. Six new minerals were described in Vol. 46, and there were 20 book reviews. It is quite fitting to again note our indebtedness to Dr. Michael Fleischer for his section "New Mineral Names," which is such an important feature of our *Journal*.

A significant event was the appointment of Dr. E. Wm. Heinrich as Co-Editor. In 1961 he took over the acknowledgment and processing of all incoming manuscripts, which represents an important part of the editorial work. During the year he reorganized the handling of these manuscripts. We wish to express our thanks to the Associate Editors and other referees, for all incoming manuscripts are assigned to them for evaluation. It is this procedure that determines the scientific quality of our *Journal*.

We are proud of the appearance of *The American Mineralogist*. The George Banta Company, Inc., has been our publisher for 40 years, and the technical excellence of our *Journal* and their cooperation have been very gratifying. We extend our sincere thanks to the Company, and to Mr. A. A. Lang, who is in immediate charge of the printing of *The American Mineralogist*.

A summary of the contents of Volume 46 follows:

DISTRIBUTION OF SUBJECT MATTER IN VOL. 46

Subjects	Number	Pages	% of Total
Leading articles .....	91	1,287	84.7
Short articles .....	36	120	7.8
		1,407	
Memorials .....	7	34	
Awards .....	2	11	
Society proceedings .....	1	17	
		62	4.2
Book reviews .....	20	15	
New Mineral Names .....	66	32	
Notes .....	7	4	
		51	3.3
Total .....		1,520	100.0
Index .....		16	
Title Page, Table of Contents .....		7	
Grand Total .....		1,543	

Respectfully submitted,  
LEWIS S. RAMSDALL, *Editor*

REPORT OF THE CO-EDITOR FOR 1961

During 1961, the Editor's office received 124 manuscripts, of which 79 represented major articles, and 45 were of the size and nature to qualify for consideration under "Notes and News." Two additional major manuscripts had been held over from late 1960. The disposition of these manuscripts has been:

1. Accepted directly or with minor changes.....	83
2. Rejected, returned for major revision, or withdrawn.....	34
3. Accepted after major revision.....	9
	126

Of all manuscripts received, 22 per cent were from sources outside of the United States (only a few were Canadian).

In addition to the Associate Editors—Herbert Insley, Edwin W. Roedder, Richard H. Jahns, George W. Brindley, and Adolf Pabst—the following have acted as referees: A. L. Anderson, T. F. Bates, C. W. Beck, W. F. Bradley, E. N. Cameron, C. A. Chapman, Felix Chayes, C. L. Christ, P. L. Cloke, R. M. Denning, J. W. Earley, H. T. Evans, Jr., G. T. Faust, D. J. Fisher, M. Fleischer, M. D. Foster, W. R. Foster, A. J. Fruch, R. M. Garrels, J. R. Goldsmith, R. E. Grim, C. H. Hewitt, C. S. Hurlbut, Jr., Earl Ingerson, W. D. Keller, Wm. C. Kelly, A. A. Levinson, Wm. T. Pecora, E. W. Poindexter, Rustum Roy, S. C. Robinson, D. M. Shaw, J. B. Thompson, George Tunell, C. J. Vitaliano, R. E. Wilcox, Horace Winchell, and H. S. Yoder, Jr.

The assumption has been that any Fellow of the Society is sufficiently interested in the Society's affairs so that he will, if not gladly at least without major protest, act as a manuscript referee from time to time without prior inquiry from the Editor's office. So far this assumption has been accepted cheerfully by those selected as referees, almost without exception. The Associate Editors are still reviewing the larger number of manuscripts.

Respectfully submitted,  
E. WM. HEINRICH, *Co-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. Finkle
1926	Waldemar T. Schaller
1927	Austin F. Rogers
1928	Esper S. Larsen
1929	Arthur L. Parsons
1930	Herbert E. Merwin

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

PRESIDENTS (*Cont.*)

1931 Alexander H. Phillips  
 1932 Alexander N. Winchell  
 1933 Herbert P. Whitlock  
 1934 John E. 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  
 1960 Joseph Murdoch  
 1961 E. F. Osborn

## SECRETARIES

1920-1922 Herbert P. Whitlock  
 1923-1933 Frank R. Van Horn  
 1933-1934 Albert P. Peck  
 1934-1944 Paul F. Kerr  
 1944-1959 C. S. Hurlbut, Jr.  
 1959- George Switzer

VICE-PRESIDENTS (*Cont.*)

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 A. 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  
 1959 Joseph Murdoch  
 1960 E. F. Osborn  
 1961 Ian Campbell

## 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  
 1958- Marjorie Hooker

## EDITORS

1920-1921 Edgar T. Wherry  
 1922-1956 Walter F. Hunt  
 1957-1961 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. 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.  
 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.  
 1959 S. S. Goldich, B. H. Mason, R. H. Jahns, C. Milton, W. R. Foster, E. W. Nuffield.  
 1960 R. H. Jahns, C. Milton, W. R. Foster, E. W. Nuffield, J. R. Goldsmith, Horace Winchell.  
 1961 W. R. Foster, E. W. Nuffield, J. R. Goldsmith, Horace Winchell, R. M. Garrels, O. F. Tuttle.

Annual Meeting Places

- |                             |                         |
|-----------------------------|-------------------------|
| 1920 Chicago, Illinois      | 1926 Madison, Wisconsin |
| 1921 Amherst, Massachusetts | 1927 Cleveland, Ohio    |
| 1922 Ann Arbor, Michigan    | 1928 New York, New York |
| 1923 Washington, D. C.      | 1929 Washington, D. C.  |
| 1924 Ithaca, New York       | 1930 Toronto, Canada    |
| 1925 New Haven, Connecticut | 1931 Tulsa, Oklahoma    |



1932 Cambridge, Massachusetts	1947 Ottawa, Canada
1933 Chicago, Illinois	1948 New York, New York
1934 Rochester, New York	1949 El Paso, Texas
1935 New York, New York	1950 Washington, D. C.
1936 Cincinnati, Ohio	1951 Detroit, Michigan
1937 Washington, D. C.	1952 Boston, Massachusetts
1938 New York, New York	1953 Toronto, Canada
1939 Minneapolis, Minnesota	1954 Los Angeles, California
1940 Austin, Texas	1955 New Orleans, Louisiana
1941 Boston, Massachusetts	1956 Minneapolis, Minnesota
1942 No meeting held	1957 Atlantic City, New Jersey
1943 No meeting held	1958 St. Louis, Missouri
1944 No meeting held	1959 Pittsburgh, Pennsylvania
1945 Pittsburgh, Pennsylvania	1960 Denver, Colorado
1946 Chicago, Illinois	1961 Cincinnati, Ohio

#### Recipients of the Roebling Medal

1937 Charles Palache	1952 Fred E. Wright
1938 Waldemar T. Schaller	1953 William F. Foshag
1940 Leonard James Spencer	1954 Cecil Edgar Tilley
1941 Esper S. Larsen, Jr.	1955 Alexander N. Winchell
1945 Edward H. Kraus	1956 Arthur F. Buddington
1946 Clarence S. Ross	1957 Walter F. Hunt
1947 Paul Niggli	1958 Martin J. Buerger
1948 William Lawrence Bragg	1959 Felix Machatschki
1949 Herbert E. Merwin	1960 Tom F. W. Barth
1950 Norman L. Bowen	1961 Paul Ramdohr

#### Recipients of the Mineralogical Society of America Award

1951 Orville F. Tuttle	1957 Rustum Roy
1952 Frederick H. Stewart	1958 Charles E. Weaver
1953 L. H. Ahrens	1959 Harry F. W. Taylor
1954 Hatten S. Yoder, Jr.	1960 Donald L. Graf
1955 Julian R. Goldsmith	1961 Joseph V. Smith
1956 George C. Kennedy	

#### 1960 ANNUAL MEETING AT CINCINNATI, OHIO

The meetings of the following societies were held November 2-4, 1960.

- The Geological Society of America—74th
- The Paleontological Society—53rd
- The Mineralogical Society of America—42nd
- Society of Economic Geologist—42nd
- The Geochemical Society—6th

Abstracts of the papers presented are printed in the *Geological Society of America, Special Papers*, No. 68, 125-307, 1962.