

## Proceedings of the Fifty-third Annual Meeting of The Mineralogical Society of America in Minneapolis, Minnesota

JOAN R. CLARK, *Secretary*

The fifty-third annual meeting of the Society was held on November 12–15, 1972, at the Convention Center and the Leamington and Curtis Hotels in Minneapolis, Minnesota. There were two technical sessions in mineralogy, five in petrology, and a Symposium on Exsolution and Domain Structure in Minerals arranged by Subrata Ghose and Malcolm Ross. All these sessions were, as usual, integrated with those of the Geological Society of America and its other affiliated societies.

The retiring President, Hatten S. Yoder, Jr., addressed the Society on the morning of November 14th on the subject "Contemporaneous Basaltic and Rhyolitic Magmas." The annual luncheon of the Society was held in the Leamington Hotel on November 14th. In addition to the presentations of the Roebling Medal to Elbert F. Osborn and of the Mineralogical Society of America Award to Arthur L. Boettcher, a special award of Life Fellowship was given to William T. Holser, retiring Editor of *The American Mineralogist*, together with a scroll reading as follows: "In recognition and appreciation of his exceptional service as Editor of *The American Mineralogist* from 1967 to 1972. His high standards and personal efforts have contributed greatly to the editing and publication of mineralogical achievements of outstanding quality and lasting value to the scientific community."

The annual business meeting of the Society was held on the morning of November 14th, at which time reports were presented by the Secretary, the Treasurer, and the Editors of *The American Mineralogist*.

### Actions of the 1972 Council

The second meeting of the 1972 Council was held on April 21, 1972, at the Geophysical Laboratory, Washington, D. C. The third meeting was held on November 12, 1972, in the Leamington Hotel, Minneapolis, Minnesota. The principal actions taken by the Council at these two meetings are summarized below.

### Awards

The Council voted to award the Roebling Medal for 1973 to George Tunell, and the Mineralogical Society of America Award for 1973 to Paul B. Moore.

### Nominations of Officers for 1974

The following slate of elective officers for 1974, based on recommendations from the Nominating Committee for Officers (Ian MacGregor, Chairman), was chosen by the Council and will appear on the ballot to be submitted to the membership in September, 1973:

*President*—S. W. Bailey, University of Wisconsin, Madison.

*Vice-President*—Arnulf Muan, The Pennsylvania State University.

*Secretary*—Joan R. Clark, U. S. Geological Survey, Washington, D. C.

*Treasurer*—not on the 1974 ballot

*Councilors* (1974–1976)—Two of the four to be elected—

Arthur L. Boettcher, The Pennsylvania State University

Klaus Keil, University of New Mexico, Albuquerque

Philip M. Orville, Yale University, New Haven, Connecticut

Deane K. Smith, The Pennsylvania State University

### Councilor for 1973

The election of S. W. Bailey, currently a Councilor for the term 1971–1973, to the Vice-Presidency left a vacancy on the Council for 1973. Therefore a candidate in the last election, Donald H. Lindsley, was appointed by the Council to serve in 1973.

### Fellowship

The Council approved the election of the entire list of 26 members recommended for Fellowship by the Committee on Membership Status (W. G.

Ernst, Chairman). They are as follows:

Egon Althaus  
 Orson L. Anderson  
 John W. Anthony  
 Ken-ichiro Aoki  
 Shigeo Aramaki  
 Gustaf Arrhenius  
 Daniel Stephen Barker  
 Milton Clark Blake, Jr.  
 Peter R. Buseck  
 Niranjan Deb Chatterjee  
 Graham Alan Chinner  
 Gerald K. Czamanske  
 George W. Fisher  
 Friedemann Freund  
 Edward Dale Ghent  
 James Fred Hays  
 Odette B. James  
 Fred T. Mackenzie  
 Levi Gordon Medaris, Jr.  
 Walter M. Meier  
 Douglas Rumble III  
 Richard A. Sheppard  
 Michael F. Sheridan  
 James H. Stout  
 Hugh P. Taylor  
 Hans-Rudolf Wenk

#### *Change of Business Office of the Society*

At the second meeting the Council voted to transfer the business office of the Society to the auspices of the American Geophysical Union, Sixth Floor, 1707 L Street, N.W., Washington, D. C. 20036, following considerable discussion of a comprehensive report by the Committee on Management (Daniel E. Appleman, Chairman). The move took place during June and by the time of the third Council meeting, Appleman reported that the business office is functioning well and the initial turmoil caused by the move is almost over. New membership record procedures have been set up, and there is now a computer-based system for billing and generating mailing labels. Under the new office system we will have much more rapid and detailed accounting for all transactions and provide better service to our members and subscribers at the same time. The Council unanimously voted a resolution of appreciation to Dr. A. F. Spilhaus, Jr., Executive Director of the American Geophysical Union, and to the members of his staff who are highly commended for their marvelous cooperation and the

long hours of extra work they have put in for the Society. The Secretary and Treasurer are continuing to monitor the daily operations, together with the Chairman of the Committee on Management, and request that the members let one of them know personally if any problems occur in connection with the business office.

#### *Ad-Hoc Committee on Constitution and By-Laws*

As authorized by the Council at its second meeting, the proposed revision of the Constitution and By-Laws prepared by this Committee (S. W. Bailey, Chairman) was published in *The American Mineralogist*, **57**, nos. 5-6, 1016-1026, together with the present Constitution and By-Laws and a discussion of the principal changes. Comments were solicited from all members, but, at the third Council meeting, Bailey reported that only one letter had been received; it was highly complimentary. Councilor Brindley pointed out the ambiguity of language in the proposed By-Laws, Article II, Section 2. The Council voted to amend this section to read as follows: *Fellows and Members who have reached the age of sixty-five years and who have paid annual dues for thirty years shall be exempt from further payment of dues but shall retain all rights and privileges of membership.* The Council then authorized a ballot of the membership early in 1973 on the proposed Constitution and By-Laws as amended, and discharged the Ad-Hoc Committee with appreciation for their special contribution.

#### *Report of the Publications Committee*

At the request of the President, the Chairman, E-an Zen, had prepared a special report on our relationship to *Mineralogical Abstracts*. The Council voted to reaffirm our interest in supporting the publication of *Mineralogical Abstracts* and authorized the President and the Publications Committee to enter into negotiations with the Mineralogical Society of Great Britain with the intent of preparing a proper legal contract for Council action. The Council also voted to dissolve the Committee on Management for *Mineralogical Abstracts* and to let its functions be handled in the future by the Publications Committee.

Following the recommendation of the Editors and the Committee, the Council decided to make no change in the page charge for publication in *The American Mineralogist*, thus effectively reducing the page charge for the new format to the former

\$20 rate. Papers are handled alike without reference to payment of page charges. Meanwhile new procedures have been initiated to collect page charges more promptly.

The disposal of a large stock of back issues of the journal was settled by authorization of a contract with the Kraus Reprint Corp. to handle all back issues through volume 48 (1963); later volumes are to be sold by the Society at prices to be determined jointly by the Editor and the Publications Committee.

A member's request that publications of the Society which were lost during the Agnes flood disaster in Harrisburg, Pennsylvania, be replaced by the Society was considered. The Council voted to replace those lost by the Pennsylvania State Geological Survey Library, but not those lost by individuals; it was emphasized that no precedent is intended by this action.

#### *Report of the Committee on Nomenclature*

Much of the report by this Committee (Louis Moyd, Chairman) concerned the consideration of its purposes and usefulness. The Committee concluded that a further lease on life was warranted because the present situation with the International Mineralogical Association Commission on New Minerals and New Mineral Names could change, nomenclature other than for minerals could be examined, and the Committee could plan and organize sessions on nomenclature and related subjects at meetings. After some discussion, the Council passed the following motion: That, because the IMA Commission on New Minerals and New Mineral Names is now handling the problems of nomenclature and the Society has a Representative to this Commission, the Committee on Nomenclature be discharged from its duties with the appreciation of the Council for its past services. The Council emphasized that should our Representative require advice or assistance at any time the President would be glad to consider establishing an Ad-Hoc Committee to meet the situation.

#### *Report of the Representative to the Mineral Museums Council*

The Council unanimously concurred in a statement of strong, eager, and continuing support for the objectives of the Mineral Museums Council as presented, and invited them, through our Represent-

ative, D. V. Manson, to inform the Society of specific ways in which we could assist their objectives.

#### *Report of the Representative to the American Geological Institute*

The Council unanimously ratified the new Constitution of the American Geological Institute and released the Representative, George T. Faust, with thanks for his services. The new AGI Constitution requires that the President or a member selected by the President and on the governing board of the member society serve as Representative.

#### **Actions of the 1973 Council**

The first meeting of the 1973 Council was held at noon Wednesday, November 15, 1972, in the Curtis Hotel, Minneapolis, Minnesota.

#### *Spring Council Meeting*

The 1973 Council will hold its second meeting in Washington, D. C., during the fifty-fourth annual meeting of the American Geophysical Union April 16-20, 1973.

#### *Financial Transactions*

The Council unanimously authorized the Treasurer to handle the financial affairs of the Society, including buying and selling stocks and signing contracts; in the event the Treasurer is unavailable or incapacitated, the President is authorized to sign checks subject to receiving sufficient documentation.

The Past President agreed to accept the Chairmanship of the Financial Advisory Committee with the intent of moving towards professional management of the Endowment Fund. The Council instructed the Committee to have a report recommending specific actions ready for distribution to the Council by March 15, 1973.

The Council authorized the purchase of fidelity bonds for the officers and fire insurance for the Society's records. The budget presented by the Treasurer was approved with the proviso that quarterly reports be provided to the Council.

#### *Publications*

The honorarium for the Editor was continued at \$1500. The appointment of Mrs. Mary Holliman as Managing Editor was reaffirmed with warm appreciation for her excellent and enthusiastic work. The Council decided that responsibility for determining the advertising rates in the journal should be

left to the discretion of the Treasurer, the Editor, and the Publications Committee.

The Council authorized the publication of a newsletter for distribution to all members early in 1973. A member's request that there be a poll taken on the policies and character of *The American Mineralogist* was considered, but the Council felt that due to the change in format this is not an appropriate time for such a poll. However, comments on this subject are to be solicited in the newsletter.

General suggestions for closer cooperation with amateur mineralogical groups were discussed. The Council instructed the Publications Committee to prepare a report with specific proposals in time for consideration at the next Council meeting.

#### *Mineral Museums Council*

The Council granted the request of the Mineral Museums Council for \$200 to be used to defray postage and other mailing expenses.

#### *Travel Expenses for Officers and Councilors*

Because of the current difficulties in obtaining travel expenses from institutions, the Council authorized the Treasurer to pay transportation expenses only, for Officers and Councilors to attend official meetings called by the Executive Committee, provided the money is requested, the amount is reasonable, and personal expenses would otherwise be incurred.

#### *Committees and Other Appointive Officers*

A list of appointive officers, prepared by the President and his Committee on Committees, was presented to the Council and, with minor changes, was unanimously approved. This list is published in each issue of *The American Mineralogist*. Our Representative to the American Geological Institute Translations Committee, David B. Stewart, reported that there had been no activity of the Committee since his term began. The Council therefore abolished this post.

#### *Annual Meeting in 1973*

The regular sessions of the annual meeting of the Mineralogical Society of America will be held in conjunction with those of the Geological Society of America and affiliated societies in Dallas, Texas, November 12-14, 1973.

### **Report of the Secretary for 1972**

#### *Results of the Election*

The ballots were counted on October 18, 1972, with the help of Ralph Christian. A total of 980 ballots was received, including three blanks; 48 ballots had votes for more than two Councilors and could not be counted. Those elected are as follows:

<i>President</i> . . . . .	Joseph V. Smith	(1973)
<i>Vice-President</i> ..	S. W. Bailey	(1973)
<i>Treasurer</i> . . . . .	Philip M. Bethke	(1973-1974)
<i>Councilors</i> . . . . .	Daniel E. Appleman	(1973-1975)
	David B. Stewart	(1973-1975)

#### *Membership Statistics*

The number of members as of October 15, 1972, is compared below with the numbers for the previous three years.

	1972	1971	1970	1969
Members	1,701	2,135	2,161	1,833
Student Members	389			
Fellows	572	530	509	462
Honorary Fellows	10	10	10	11
Total	2,672	2,675	2,680	2,306

#### *Necrology*

The following Fellows and Members are known to have been lost to the Society by death since the last report.

#### Members

Sarah M. Berthold	John D. Noblet
R. P. Cargille	Howard Pate
John Arthur Gower	John Kent Perry
Larry M. Hammond	A. C. Shea

#### Fellows

Martin L. Ehrmann  
C. Osborne Hutton  
William T. Pecora

All efforts to date to find authors for Memorials of the following late Fellows of the Society have failed. The Secretary would be pleased to hear from anyone able to volunteer to write a Memorial.

Joseph L. Gillson (1964)  
Joseph S. Lukesh (1968)

#### *Acknowledgments*

During the year help and advice have been given on a continuing basis by Daniel E. Appleman,

Chairman of the Committee on Management, and by E-an Zen, Chairman of the Publications Committee. The President, Hatten S. Yoder, Jr., gave time and counsel generously. Other Officers, Councilors, and members have responded cheerfully and promptly to requests for information and assistance, and sincere appreciation goes to all.

Respectfully submitted,  
 JOAN R. CLARK, *Secretary*

**Report of the Treasurer**

The report of the treasurer covers the period from August 1, 1971 to July 31, 1972. Although Council action on November 3rd, 1971, changed the fiscal year to begin July 1st instead of the usual August 1st date, the change could not be implemented as permission had not previously been obtained from the U. S. Internal Revenue Service. The treasurer is happy to report that the Society's financial status

CONSOLIDATED BALANCE SHEET  
 July 31, 1972

**Assets**

Cash.....		\$ 20,206
Endowment Fund:		
Investments, at Cost (Approximate		
Market Value \$259,374).....	\$200,967	
Accounts Receivable from Broker.....	1,570	202,537
Edward H. Kraus Crystallographic Research Fund:		
Cash.....	\$ 1,733	
Investments at Cost (Approximate		
Market Value \$11,800).....	10,950	12,683
Mineralogical Abstracts.....		186
TOTAL ASSETS.....		<u>\$235,612</u>

**Liabilities**

Accounts Payable.....	\$ 12,750	
Payroll Taxes Payable.....	8	
TOTAL LIABILITIES.....		\$ 12,758

**Surplus**

	Balance August 1, 1971	Net Income (Loss) From Operations	Balance July 31, 1972
General and Administrative Fund.....	\$ 20,484	\$ (3,817)	\$ 16,667
Endowment Fund.....	197,185	16,408	213,593
American Mineralogist.....	(8,409)	6,788	(1,621)
Special Paper # 1.....	1,210	618	1,828
Special Paper # 2.....	(6,005)	1,426	(4,579)
Special Paper # 3.....	(18,383)	2,666	(15,717)
Edward H. Kraus Crystallographic Research Fund	12,359	324	12,683
	<u>\$198,441</u>	<u>\$24,413</u>	
TOTAL SURPLUS.....			<u>222,854</u>
TOTAL LIABILITIES AND SURPLUS.....			<u>\$235,612</u>

MINERALOGICAL SOCIETY OF AMERICA  
CONSOLIDATED STATEMENT OF OPERATIONS  
FOR THE YEAR ENDED JULY 31, 1972

	General and Administrative Fund	Endowment Fund	American Mineralogist	Special Paper #1	Special Paper #2	Special Paper #3	Edward H. Kraus Crystallographic Research Fund	Consolidated Operations
<b>INCOME:</b>								
Dues	\$	\$	\$ 34,633	\$	\$	\$	\$	\$ 34,633
Publications			59,632	618	1,748	3,460		65,458
Reprints			8,461					8,461
Royalties			870					870
Advertising			1,374					1,374
Page Charges			25,471					25,471
Mailing List, Contri- butions and Other On Investments	566		182					748
		16,408					324	16,732
<b>TOTAL INCOME</b>	<b>\$ 566</b>	<b>\$16,408</b>	<b>\$ 130,623</b>	<b>\$ 618</b>	<b>\$ 1,748</b>	<b>\$ 3,460</b>	<b>\$ 324</b>	<b>\$153,747</b>
<b>COST AND EXPENSES:</b>								
Salaries and Employee Benefits	\$ 13,363	\$	\$ 6,240	\$	\$	\$	\$	\$ 19,603
Honoraria			1,500					1,500
Materials and Supplies	592		964					1,556
Rent and Telephone	1,963		176					2,139
Postage and Freight	2,394		4,091					6,485
Printing and Duplicating	2,313		83,547					85,860
Advertising and Entertainment	43							43
Dues and Contributions	2,650							2,650
Travel and Subsistence	1,263							1,263
Awards and Miscellaneous	958							958
Mailing List Printouts			41					41
Interest on Note						156		156
Overhead (AGI)	4,080							4,080
Advances for Expenses - Editor			3,000					3,000
Allocation of Indirect Costs	(25,236)		24,276		322	638		
<b>TOTAL COST AND EXPENSES</b>	<b>\$ 4,383</b>	<b>\$ -</b>	<b>\$ 123,835</b>	<b>\$ -</b>	<b>\$ 322</b>	<b>\$ 794</b>	<b>\$ -</b>	<b>\$129,334</b>
<b>NET SURPLUS (LOSS) FROM OPERATIONS</b>	<b>\$ (3,817)</b>	<b>\$16,408</b>	<b>\$ 6,788</b>	<b>\$ 618</b>	<b>\$ 1,426</b>	<b>\$ 2,666</b>	<b>\$ 324</b>	<b>\$ 24,413</b>

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION FOR THE YEAR ENDED JULY 31, 1972

CASH IN BANKS, AUGUST 1, 1971.....	\$13,954
<b>FUNDS PROVIDED:</b>	
Operations—Net Surplus for the Year Ended July 31, 1972	\$24,413
Increase in Accounts Payable	6,110
Increase in Payroll Taxes Payable	8
Decrease in Accounts Receivable from Broker	11,140
Decrease in Prepaid Payroll Taxes	47
<b>TOTAL FUNDS PROVIDED.....</b>	<b>41,718</b>
	<u>\$55,672</u>
<b>FUNDS APPLIED:</b>	
Increase in Investments	27,083
Curtailment of Note Payable to Riggs National Bank	6,115
Decrease in Mineralogical Abstracts	535
<b>TOTAL FUNDS APPLIED.....</b>	<b>33,733</b>
CASH IN BANKS, JULY 31, 1972.....	<u>\$21,939</u>
Mineralogical Society of America—Operating Account	\$ 2,985
Mineralogical Society of America—Contingency Funds	17,221
	<u>\$20,206</u>
Edward H. Kraus Crystallographic Research Fund Account	1,733
	<u>\$21,939</u>

is sound and we closed our books this year with a surplus of \$24,413.

The Council at its November 3rd meeting in 1971 approved the submitted budget for the fiscal year 1971-1972 with the proviso that actual expenditures would not exceed the budgeted amounts by more than 5 percent. Expenditures were exceeded by an amount of 8.7 percent since a publishing bill in the previous fiscal year was held up for clarification and subsequently paid in this last fiscal year.

The Jewell Glass Fund which unfortunately was not identified in our savings account at the Columbia Federal Savings and Loan Association amounted to \$4,700 as of December 8, 1971, and with a yield of 5 percent interest will have a total value of \$4,935 by December 8, 1972.

As your retiring treasurer, I wish to express my sincere thanks to all the people who helped me during my term of office. The past four years have seen many changes in our society which directly involved the treasurer's office, such as: changes in location, change of printers, internal reorganization, etc. Without the help and counselling of the Management Committee, the Finance Committee, members of both the American Geological Institute and the American Geophysical Union, and officers within our Society, it would have been impossible to carry out the duties of the treasurer. Your new treasurer, Philip Bethke, who has worked with me for the past few months, is well qualified for his job and I wish him every success in his endeavors.

Respectfully submitted,  
ALVIN VAN VALKENBURG, *Treasurer*

**Report of Audit**

*To The Council of the Mineralogical Society of America:*

We have examined the consolidated balance sheet of The Mineralogical Society of America as of July 31, 1972, and the related consolidated statements of operations and changes in financial position for the year then ended prepared on the modified cash basis. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. It was not practicable to extend our examination of dues and other income received beyond accounting for amounts so recorded.

The Society has kept its records on a modified cash basis wherein income is recognized only when received, but major costs and expenses are recorded when incurred.

In our opinion the statements mentioned above present fairly the consolidated financial position of the Society at July 31, 1972, and the results of its operations for the year then ended, as prepared on the modified cash basis.

BROWN, DAKES AND HOKE

**Report of the Financial Advisory Committee for 1972**

The portfolio's year-end value was 21 percent above its cost. Securities in the portfolio are detailed in Table 1 (overleaf). The income received from securities represents a 5.41 percent return on the cost of the portfolio, and a 4.47 percent return on its market value.

A summary of the securities bought and sold during the year is given in Table 2, and the ten-year performance of the endowment fund is shown in Table 3.

Respectfully submitted,  
EDWARD P. HENDERSON, *Chairman*  
THOMAS W. STERN

TABLE 2. SECURITIES BOUGHT AND SOLD IN FY 1972

<i>Securities sold</i>		
147	Marriott	10,029.51
60	Jones and Laughlin pfd.	3,560.44
20	Virginia El. Power \$4.8 pfd.	1,367.67
50	Virginia El. Power \$5.0 pfd.	3,607.39
	Total securities sold	18,565.01
<i>Securities purchased</i>		
50	Columbia Gas System	1,462.50
200	Continental Oil	7,113.12
85	General Motors	6,880.07
300	General Tel. & El. 5% CV pfd	12,584.25
200	Greyhound	3,716.85
100	Kimberly Clark	3,439.99
200	Tenneco	5,580.50
13	Emhart Corp. (div. + fraction)	30.58
	Total securities purchased	40,807.86

TABLE 1. ENDOWMENT FUND, July 31, 1972

	Market* value	Costs	Dividends	Capital Gain (Loss)
<i>Bonds</i>				
17 American Tel & Teg. 8 3/4	1,884.87	1,719.16	148.76	
<i>Preferred Stock</i>				
260 City Investing C. V. \$2 B	8,385.00	10,202.59	520.00	
150 F.M.C. Corp \$2.25 Cu.	6,337.50	4,792.90	337.52	
300 Gen. Tel & Elect 5 Cu	11,175.00	12,584.25	375.00	
Jones & Laughlin			150.00	(1,427.06)
100 Sun Oil Co \$2.25 Cu	3,962.50	2,342.62	225.00	
Virginia El. Power \$4.8			48.00	( 755.28)
Virginia El. Power \$5			125.00	(2,335.11)
Total	\$29,860.00	\$29,922.37	1,780.52	(4,517.45)
<i>Common Stocks</i>				
570 Amer. Tel. & Teg.	\$23,726.25	\$14,880.93	1,482.00	
34 Amer. Tel. & Teg. Wts.	208.25			
Buckeye International			40.05	
450 Chase Manhattan Corp.	24,356.25	12,682.91	900.00	
150 Chesapeake & Ohio Rry	7,106.25	8,643.57	375.00	
450 Columbia Gas	12,712.50	9,520.47	716.00	
250 Columbus & S. Ohio	6,562.50	3,815.56	457.50	
225 Continental Can	6,553.12	4,051.56	360.00	
600 Continental Oil	15,675.06	28,826.93	900.00	
150 Denison Mines	5,175.00	3,096.00	189.29	
220 Detroit Edison	4,345.00	5,720.00	308.00	
316 Emhart Corp.	10,665.00	4,744.75	371.40	
185 General Motors	13,851.87	16,561.42	458.50	
150 General Portland Inc.	3,562.50	2,934.69	120.00	
708 Greyhound Corp.	12,832.50	6,017.10	513.08	
100 Indianapolis Power & Light	2,500.00	3,084.25	154.50	
300 Kimberly Clark	9,562.50	8,841.49	270.00	
300 Kroger	6,712.50	3,245.25	390.00	
800 Marriott Corp.	28,500.00	1,828.39	—	9,357.72
101 Occidental Pet. Corp.	1,022.62	4,453.06	37.88	
220 P.P.G.	10,010.00	6,312.83	311.30	
500 Tenneco	11,562.50	19,772.57	660.00	
175 Union Carbide	8,028.12	10,719.41	350.00	
100 Wisconsin Power Lt.	2,037.50	2,304.75	140.00	
Interest for Borker			3.05	
Total	\$227,267.79	\$182,057.89	9,507.55	9,357.72
<i>Summary</i>				
Bonds	1,884.87	1,719.16	148.76	
Preferred Stocks	29,860.00	29,922.37	1,780.52	(4,517.45)
Common Stocks	227,267.79	182,057.89	9,507.55	9,357.72
Sale of Rights			131.10	
GRAND TOTAL	259,012.66	213,699.42	11,567.93	4,840.27

\* Market value as of July 1, 1972

TABLE 3. TEN YEAR PERFORMANCE RECORD FOR THE ENDOWMENT FUND

Fiscal Year	Income	Cost of Securities	Market value
1963	\$ 7,456.27	\$136,280.54	\$189,037.00
1964	7,587.14	142,152.60	222,717.00
1965	8,019.98	147,603.15	227,583.00
1966	8,636.72	155,574.33	218,430.00
1967	9,327.15	160,183.86	254,008.00
1968	9,584.40	160,196.99	281,437.00
1969	10,392.75	182,793.38	255,747.00
1970	10,927.03	173,639.69	217,335.00
1971	10,858.72	186,577.52	252,916.00
1972	11,567.93	213,699.42	259,012.00

Costs of securities does not represent the Society's investments because profits derived from sales have been reinvested in securities which are then carried on our books at their purchase price. When a portion of any holding is sold, the costs of the remaining shares are adjusted.

**Report of the Editors for 1972**

This is a joint report of the outgoing and incoming editors. The transfer of duties, perhaps the most notable event of the publishing year, was smoothly accomplished in mid-August with sighs of relief from Bill Holser and of trepidation from Don Bloss and Mary Holliman (the new Managing Editor).

*Publication Results*

Volume 57 for 1972 will total about 2000 pages, including 116 major articles and 41 notes. Although the size of the issues was not restricted by financial limitations as in 1971, a shortage of manuscripts ready for publication during the summer months led to two thin issues and the low total pages for the volume compared with recent years. Consequently we enter 1973 with virtually no backlog. Production figures for the year are given in the tables.

This was the first year that most of the handling of manuscripts with authors was done by the Associate Editors. The Associate Editors, expanded this year to ten, are to be commended for their efforts during a period of some disorganization—and the figures suggest that the new system may have speeded up the editing process in addition to spreading a great deal of the Editor's burden. This was also the first year of printing with The William

Byrd Press, and it has been a pleasure for us to work with them. Although their production schedule has not been completely met, a few problems arising from the changeover have now been resolved, and there is every indication that the schedule will be met or bettered in 1973.

**PUBLISHING OPERATIONS IN 1972**

	Major	Notes	Total
<i>Status as of January 1, 1972</i>			
In press (56, nos. 11-12; 57, nos. 1-4)	63	29	92
Accepted manuscripts, awaiting press			15
Manuscripts in process			65
Total manuscripts on hand			80
<i>Operations, January 1 to December 31, 1972</i>			
Published (56, nos. 11-12; 57, nos. 1-10)	117	50	167
Sent to press (57, nos. 5-12; 58, nos. 1-4)			
	111	54	165
Manuscripts received			245
Manuscripts accepted			159
Manuscripts rejected			57
<i>Status as of December 31, 1972</i>			
In press (57, nos. 11-12; 58, nos. 1-4)	57	36	93
Accepted and awaiting press			18
In process, Editor's office			0
In process, Associate Editor*			98
Total manuscripts on hand			116

\* Includes manuscripts with Associate Editor, referee, or author.

**New Format**

By authority of Council action of October 31, 1971, a new format was adopted for *The American Mineralogist* to begin with the January-February, 1973 issue. The type area will be 39 × 53 picas overall (as two 19 pica columns) on a 7 3/4 × 10 1/4 inch page. The 10-on-12 Times Roman font is similar to but easier to read than our present font, yet maintains the economy of linotype-monotype interchangeability. The new paper (50-basis Commodity Opaque) is whiter, more resistant to age-yellowing, and dull-coated to be less glossy than the present paper. The William Byrd Press assures us that it takes half tones well. Printing will be by offset on web press instead of letter press. The offset process should also insure better halftone reproduction because 133-line screens will be used instead of the present 110-line screen. The cover page retains the same paper stock and the present listing of authors and titles. Perfect binding will be retained.

By changing from the old to the new format, we

will save at least \$4200 in printing the 1973 *American Mineralogist*. Moreover, the cost difference between web press and letter press would have grown with time; thus economy would eventually have forced a new format. *The American Mineralogist* will now stand a bit taller on your shelves but will take less space and will bind as thinner yearly volumes. The new double-column format adds flexibility in reproducing illustrations and tables. They can now be 3 1/6 inches wide (single column width), 6 1/2 inches wide (double column width), or almost 9 inches wide (as a broadside illustration). All around, the new contract with The William Byrd Press is a most favorable contract in respect to both cost and quality.

### Looking Back (WTH)

*As in Thurber's Secret Life of Walter Mitty, there are some battles that go on here behind the scenes, generally unheralded in either Newsweek or in Geotimes. The outgoing Editor waves the flag with some pride for victories over backlogs and for his assistance to allies in putting two Special Papers into the field. The operations have succeeded in partly living off the country, with the imposition of taxation in the form of page charges. Planning begun several years ago has now resulted in two important reorganization campaigns under the incoming Editor: a new larger format, and a new position of Managing Editor. But it has been a difficult fight to gain the little that we have on the central objective of a shorter publication time. And the battle we lost was for an easier and better Index; we twice started in new directions with high hopes but eventually met disappointment and retreat. There were many skirmishes over single papers—strangely enough the bitterest were concerned with some Mineralogical Notes, one of which took a couple of years and a thick sheaf of correspondence to bring to final publication. And I do take some pride in discipline imposed: the adoption of standards from the USA Standards Institute and other authorities when such were available, and the fashioning of our own when necessary. Many of these are now regularly and hopefully directed to the attention of authors in each January issue, others are a part of the mechanics in the Editor's office; all contribute to the accuracy and appearance of the journal.*

*The thing that seems somehow anomalous is the series of ominous warnings I had six years ago, as to what a thick skin was required for this command. Looking back it seems that nearly everyone has been very patient or even complimentary. The authors who seemed to think they had been wronged by decisions were very few, and even these I believe I can still count as my friends. Contrary to popular myth, a significant number of authors and readers do express their appreciation of the journal. I particularly treasure a letter of a couple of years ago that said simply, "Thank you: Dear William T. Holser, Dr., the Editor of the American Mineralogist. I AM NOW VERY HAPPY. Yours truly, . . ."*

*When you think about the number of people that help to get The American Mineralogist to its readers, the list is long. A large number of you have served as referees, and usually with grace and dispatch—and this pool of referees is really the heart of the system. The Associate Editors take on a larger and no more thankful job, especially this past year. When I became Editor, the Council generously granted my request for a half-time Editorial Assistant to work with copy and proof. Through the years this job has been well done by three people of rather diverse talents, whom many of you have encountered by correspondence or frantic telephone calls: Ms. Elizabeth Paine, Mr. Joseph Feinblatt, and Ms. Helen Hollyer. Without competent printing an Editor's job would be a nightmare, and one of the things he has to learn is what a good printer can do, and cheaply, and what he can't do or can do only at inordinate expense. Both Al Lang at George Banta Company and Butch Burton at The William Byrd Press have patiently held my hand and explained the realities of the business. We left Banta with regret after a half-century association, and although the printers and the Editor have not always seen eye-to-eye on printing schedules, both printers have always worked with us in a spirit of friendly cooperation. Distribution and accounting for The American Mineralogist has been handled by the successive Treasurers, and their offices at the AGI and now the AGU.*

*I am often asked, in an incredulous tone, "Do you read everything in the American Mineralogist?!" The answer must be, although apparently not obviously, "No, but. . ." All papers in which problems are recognizable (the errata testify that all are not recognized) get various degrees of attention, and some a great deal of it. But I do try to get a clear idea of the intent, content, and contribution of nearly every paper, from abstract, scanned text, figures, and especially the referee reports and replies from the authors, all of which are read. And the impression I do get in looking back is that mineralogy, at least as published here, has been changing. As a science it continues to embrace new technology, and this is a good thing only because it really has been applied to increase understanding. Obviously the only credit that the American Mineralogist can take for this is the atmosphere of acceptance and encouragement: no theory or technique is too "far out" to be considered on its merits for publication. In the end, however, the policy only succeeds because this is the stuff that mineralogists are working on and writing about these days. Ultimately and primarily the journal is a product of its authors.*

### Acknowledgments

The Associate Editors—Arden L. Albee, Arthur Boettcher, J. Jeffrey Fawcett, Donald M. Henderson, Robert E. Newnham, Paul H. Ribbe, Peter Robinson, Hugo Steinfink, David R. Waldbaum, and William B. White—have served well under the new system that has shifted to them much of the correspondence and responsibility of dealing with referees and authors. In spite of some confusion and false starts, the system seems, from this end,

to be working well. We have had excellent cooperation from The William Byrd Press of Richmond, Virginia, under their Vice-President, David Wilson, Jr., in working out problems of transfer to a new printer. Michael Fleischer and his correspondents continue their useful contribution of the department New Mineral Names. This year's list of referees is as long and distinguished as ever, and they have the sincere thanks of the Associate Editors that recruited them, of the Editor, and of the profession.

Respectfully submitted,  
F. DONALD BLOSS  
WILLIAM T. HOLSER

### Referees, 1972

- |                       |                       |                       |                        |
|-----------------------|-----------------------|-----------------------|------------------------|
| Adler, Isidore A.     | Cromer, Don T.        | Guidotti, Charles V.  | Presnall, D. C.        |
| Albee, Arden L.       | Denver, W. H.         | Haas, John L.         | Ribbe, Paul H.         |
| Alietti, Andrea       | Desborough, George A. | Harker, Ian           | Robie, Richard A.      |
| Anderson, Orson L.    | Dickey, John S. Jr.   | Hafner, Stefan S.     | Robinson, Paul D.      |
| Appleman, Daniel E.   | Donnay, Gabrielle     | Hagner, Arthur F.     | Robinson, Peter        |
| Apps, J. A.           | Donnay, J. D. H.      | Hall, Leo M.          | Rosenberg, Phillip E.  |
| Bailey, S. W.         | Dowty, Eric           | Heald, Emerson F.     | Rosenzweig, Abraham    |
| Bancroft, Michael     | Duncan, Andrew R.     | Helz, Rosalind T.     | Ross, Malcolm          |
| Barker, Fred          | Eanes, David          | Henderson, Donald M.  | Sands, L. B.           |
| Barnes, H. L.         | Eckelmann, F. Donald  | Hess, Paul C.         | Sadanaga, Ryoichi      |
| Baur, Werner H.       | Ehmann, M. F.         | Hewins, R.            | Sanero, Edoardo        |
| Beeson, M. H.         | Erd, Richard C. Jr.   | Hewitt, David A.      | Saxena, Surendra K.    |
| Bence, A. E.          | Ernst, W. Gary        | Hobbs, Bruce          | Schmidt, Paul W.       |
| Berner, R. A.         | Essene, Eric          | Holland, H. D.        | Servos, Kurt           |
| Boettcher, Arthur     | Eugster, H. P.        | Hood, D. W.           | Schlichta, Paul        |
| Bollmann, W.          | Evans, Howard T.      | Huebner, J. Stephen   | Shaw, Herbert R.       |
| Boyd, F. R. Jr.       | Fahey, Joseph J.      | Hurlbut, C. S. Jr.    | Shepard, Anna O.       |
| Bradley, William F.   | Fang, Jen-ho          | Jonas, Ed             | Sheppard, Richard A.   |
| Bray, P. J.           | Fawcett, J. Jeffrey   | Kamb, W. Barkley      | Skinner, Brian J.      |
| Breger, Irving A.     | Finger, L. W.         | Kastner, M.           | Smith, Deane K.        |
| Bricker, Owen P.      | Fisher, D. Jerome     | Kerrick, D. M.        | Smith, Joseph V.       |
| Brindley, G. W.       | Fisher, James R.      | Kingston, Gordon A.   | Snetsinger, Kenneth G. |
| Brown, Gordon E., Jr. | Fleischer, Michael    | Klein, Cornelis       | Spear, Karl E.         |
| Brown, G. M.          | Foit, F. F., III      | Kretz, Ralph          | Springer, G.           |
| Brunton, George       | Foster, W. Ray        | Kudo, Albert M.       | Staples, Lloyd W.      |
| Burns, John           | Friedman, G. M.       | Kullerud, Gunnar      | Steinfink, Hugo        |
| Burns, Roger G.       | Frondel, Clifford     | Kurtz, T. D.          | Stewart, David B.      |
| Butler, John C.       | Frye, Keith           | Kwak, Teunis A. P.    | Sudmann, Ralph         |
| Campbell, Frank H.    | Gaffney, E. S.        | Lapham, D. M.         | Suhr, Norman           |
| Carmichael, Ian S. E. | Gast, R. G.           | Levinson, Alfred A.   | Surdam, Ronald         |
| Chao, G. Y.           | Ghose, Subrata        | Lohr, Lawrence L. Jr. | Taft, William H.       |
| Christie, John        | Gibbs, G. V.          | Louisnathan, S. John  | Taylor, P. C.          |
| Cinnamon, C. G.       | Giese, R. F.          | Luth, William C.      | Thompson, James B. Jr. |
| Clark, Alan H.        | Gilbert, M. Charles   | Lyon, Ronald J. P.    | Thraillkill, J.        |
| Clark, Joan R.        | Graeber, Edward J.    | Mariano, A. N.        | Ulmer, Gene            |
| Clark, Michael        | Graf, D. L.           | McAtee, James L.      | Uricks, F.             |
| Coleman, R. G.        | Green, Edward J.      | McCarthy, Gregory J.  | Waff, Harve            |
| Corlett, Mabel        | Griffin, W. L.        | McConnell, J. D. C.   | Wahl, Victor           |
| Craig, James R.       | Gude, Arthur J. III   | McDowell, Fred        | Wahlstrom, Ernest E.   |
|                       |                       | Meyer, Henry          | Waldbaum, David R.     |
|                       |                       | Moore, Paul B.        | Walker, D.             |
|                       |                       | Morse, Stearns A.     | Weaver, C. E.          |
|                       |                       | Mrose, Mary E.        | Weill, Daniel F.       |
|                       |                       | Muan, Arnulf          | Wendlandt, W. W.       |
|                       |                       | Muffer, L. J. P.      | Wenk, H. R., Jr.       |
|                       |                       | Muir, A. Jr.          | Westbrook, J. H.       |
|                       |                       | Muir, D.              | White, John            |
|                       |                       | Mysen, Bjørn          | White, William B.      |
|                       |                       | Naldrett, A. J.       | Wilkov, Melvin         |
|                       |                       | Nash, William P.      | Williams, Sidney A.    |
|                       |                       | Navrotsky, A.         | Wise, W. S.            |
|                       |                       | Newnham, Robert E.    | Woessner, D. E.        |
|                       |                       | Niggli, A.            | Wright, Thomas L.      |
|                       |                       | Nuffield, E. W.       | Wuensch, Bernhardt J.  |
|                       |                       | Papike, James J.      | Wuensch, C. I.         |
|                       |                       | Parrish, William      | Yoder, Hatten S. Jr.   |
|                       |                       | Peacor, Donald R.     | Zak, Lubor             |
|                       |                       | Phillips, Michael W.  | Zeck, Hubert           |
|                       |                       | Piller, Horst         | Zen, E-an              |

**List of Former Officers and Meeting Places****Honorary Presidents**

Edward S. Dana 1925–1935

Charles Palache 1949–1954

Edward H. Kraus 1955–

**Presidents**

1920 Edward H. Kraus	1934 John E. Wolff	1947 M. J. Buerger	1960 Joseph Murdoch
1921 Charles Palache	1935 Clarence S. Ross	1948 M. A. Peacock	1961 E. F. Osborn
1922 Thomas L. Walker	1936 William S. Bayley	1949 John W. Gruner	1962 Ian Campbell
1923 Edgar T. Wherry	1937 Norman L. Bowen	1950 George Tunell	1963 C. S. Hurlbut, Jr.
1924 Henry S. Washington	1938 Ellis Thomson	1951 A. Pabst	1964 Leonard G. Berry
1925 Arthur S. Eakle	1939 Max N. Short	1952 Michael Fleischer	1965 George T. Faust
1926 Waldemar T. Schaller	1940 William F. Foshag	1953 J. D. H. Donnay	1966 Brian H. Mason
1927 Austin F. Rogers	1941 Frederick E. Wright	1954 Sterling B. Hendricks	1967 Felix Chayes
1928 Esper S. Larsen	1942 Arthur F. Buddington	1955 Harry H. Hess	1968 James B. Thompson
1929 Arthur L. Parsons	1943 John F. Schairer	1956 Clifford Frondel	1969 Francis J. Turner
1930 Herbert E. Merwin	1944 R. C. Emmons	1957 D. Jerome Fisher	1970 William F. Bradley
1931 Alexander H. Phillips	1945 Kenneth K. Landes	1958 George E. Goodspeed	1971 Julian R. Goldsmith
1932 Alexander N. Winchell	1946 Paul F. Kerr	1959 Ralph E. Grim	1972 Hatten S. Yoder, Jr.
1933 Herbert P. Whitlock			

**Vice Presidents**

1920 Thomas L. Walker	1934 William A. Tarr	1947 Carl Tolman	1960 E. F. Osborn
1921 Waldemar T. Schaller	1935 Ellis Thomson	1948 A. Pabst	1961 Ian Campbell
1922 Frederick A. Canfield	1936 Harold L. Alling	1949 J. D. H. Donnay	1962 C. S. Hurlbut, Jr.
1923 George F. Kunz	1937 H. V. Ellsworth	1950 Ralph E. Grim	1963 Leonard G. Berry
1924 Washington A. Roebling	1938 Kenneth K. Landes	1951 Michael Fleischer	1964 George T. Faust
1925 Herbert P. Whitlock	1939 Burnham S. Colburn	1952 J. D. H. Donnay	1965 Brian H. Mason
1926 George Vaux, Jr.	1940 Ian Campbell	1953 Sterling B. Hendricks	1966 Felix Chayes
1927 George L. English	1941 William J. McCaughey	1954 Harry H. Hess	1967 James B. Thompson
1928 Lazard Cahn	1942 Martin J. Buerger	1955 Clifford Frondel	1968 Francis J. Turner
1929 Edward Wigglesworth	1943 John W. Gruner	1956 D. Jerome Fisher	1969 William F. Bradley
1930 John E. Wolff	1944 Harry Berman	1957 George E. Goodspeed	1970 Julian R. Goldsmith
1931 William F. Foshag	1945 George Tunell	1958 Ralph E. Grim	1971 Hatten S. Yoder, Jr.
1932 Joseph L. Gillson	1946 S. B. Hendricks	1959 Joseph Murdoch	1972 Joseph V. Smith
1933 Frank B. Guild			

**Secretaries**

1920–1922 Herbert P. Whitlock
1923–1933 Frank R. Van Horn
1933–1934 Albert B. Peck
1934–1944 Paul F. Kerr
1944–1959 C. S. Hurlbut, Jr.
1959–1966 George Switzer
1966–1969 Ralph J. Holmes
1970–1971 Arnulf Muan
1972– Joan R. Clark

**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
1958–1968 Marjorie Hooker
1969–1972 Alvin Van Valkenburg, Jr.
1973– Philip M. Bethke

**Editors**

1920–1921 Edgar T. Wherry
1922–1956 Walter F. Hunt
1957–1961 Lewis S. Ramsdell
1961–1966 E. Wm. Heinrich
1966–1972 William T. Holser
1973 F. Donald Bloss

## Councilors

- 1920 Arthur S. Eakle, Frank R. Van Horn, Frederick E. Wright, Alexander H. Phillips.
- 1921 Frank R. Van Horn, Frederick E. Wright, Alexander H. Phillips, Austin F. Rogers.
- 1922 Frederick 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 J. 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.
- 1962 J. R. Goldsmith, Horace Winchell, R. M. Garrels, O. F. Tuttle, Francis J. Turner, Hatten S. Yoder, Jr.
- 1963 R. M. Garrels, O. F. Tuttle, Francis J. Turner, Hatten S. Yoder, Jr., W. F. Bradley, Howard T. Evans, Jr.
- 1964 Francis J. Turner, Hatten S. Yoder, Jr., W. F. Bradley, Howard T. Evans, Jr., Harold L. James, Joseph V. Smith.
- 1965 W. F. Bradley, Howard T. Evans, Jr., Harold L. James, Joseph V. Smith, William T. Pecora, William S. Fyfe, Walter D. Keller.
- 1966 Harold L. James, Joseph V. Smith, William S. Fyfe, Walter D. Keller, Eugene N. Cameron, William S. MacKenzie.
- 1967 Eugene N. Cameron, Robert G. Coleman, William S. Fyfe, Donald L. Graf, Walter D. Keller, William S. MacKenzie.
- 1968 F. Donald Bloss, Eugene N. Cameron, Charles L. Christ, Robert G. Coleman, Donald L. Graf, William S. MacKenzie.
- 1969 Robert G. Coleman, Donald L. Graf, F. Donald Bloss, Charles L. Christ, W. Gary Ernst, Gunnar Kullerud.
- 1970 F. Donald Bloss, Charles L. Christ, W. Gary Ernst, Gunnar Kullerud, David R. Wones, Peter J. Wyllie.
- 1971 W. Gary Ernst, Gunnar Kullerud, David R. Wones, Peter J. Wyllie, Sturges W. Bailey, George Switzer.
- 1972 David R. Wones, Peter J. Wyllie, Sturges W. Bailey, George Switzer, George W. Brindley, Edwin Roedder.

**Annual Meeting Places**

1920 Chicago, Illinois	1938 New York, New York	1956 Minneapolis, Minnesota
1921 Amherst, Massachusetts	1939 Minneapolis, Minnesota	1957 Atlantic City, New Jersey
1922 Ann Arbor, Michigan	1940 Austin, Texas	1958 St. Louis, Missouri
1923 Washington, D. C.	1941 Boston, Massachusetts	1959 Pittsburgh, Pennsylvania
1924 Ithaca, New York	1942 No meeting held	1960 Denver, Colorado
1925 New Haven, Connecticut	1943 No meeting held	1961 Cincinnati, Ohio
1926 Madison, Wisconsin	1944 No meeting held	1962 Houston, Texas
1927 Cleveland, Ohio	1945 Pittsburgh, Pennsylvania	1963 New York, New York
1928 New York, New York	1946 Chicago, Illinois	1964 Miami Beach, Florida
1929 Washington, D. C.	1947 Ottawa, Canada	1965 Kansas City, Missouri
1930 Toronto, Canada	1948 New York, New York	1966 San Francisco, California
1931 Tulsa, Oklahoma	1949 El Paso, Texas	1967 New Orleans, Louisiana
1932 Cambridge, Massachusetts	1950 Washington, D. C.	1968 Mexico City, Mexico
1933 Chicago, Illinois	1951 Detroit, Michigan	1969 Atlantic City, New Jersey
1934 Rochester, New York	1952 Boston, Massachusetts	1970 Milwaukee, Wisconsin
1935 New York, New York	1953 Toronto, Canada	1971 Washington, D. C.
1936 Cincinnati, Ohio	1954 Los Angeles, California	1972 Minneapolis, Minnesota
1937 Washington, D. C.	1955 New Orleans, Louisiana	

**Recipients of the Roebling Medal**

1937 Charles Palache	1953 William F. Foshag	1963 John Frank Schairer
1938 Waldemar T. Schaller	1954 Cecil Edgar Tilley	1964 Clifford Frondel
1940 Leonard James Spencer	1955 Alexander N. Winchell	1965 Adolf Pabst
1941 Esper S. Larsen, Jr.	1956 Arthur F. Buddington	1966 Max H. Hey
1945 Edward H. Kraus	1957 Walter F. Hunt	1967 Linus Pauling
1946 Clarence S. Ross	1958 Martin J. Buerger	1968 Tei-ichi Ito
1947 Paul Niggli	1959 Felix Machatschki	1969 Fritz Laves
1948 William Lawrence Bragg	1960 Tom F. W. Barth	1970 George W. Brindley
1949 Herbert E. Merwin	1961 Paul Ramdohr	1971 J. D. H. Donnay
1950 Norman L. Bowen	1962 John W. Gruner	1972 Elburt F. Osborn
1952 Frederick E. Wright		

**Recipients of the Mineralogical Society of America Award**

1951 Orville G. Tuttle	1959 Harry F. W. Taylor	1966 David B. Stewart
1952 Frederick H. Stewart	1960 Donald L. Graf	1967 Alfred E. Ringwood
1953 L. H. Ahrens	1961 Joseph V. Smith	1968 Barclay Kamb
1954 Hatten S. Yoder, Jr.	1962 Douglas S. Coombs	1969 W. Gary Ernst
1955 Julian R. Goldsmith	1963 Nobuo Morimoto	1970 Bernard W. Evans
1956 George C. Kennedy	1964 William S. Fyfe	1971 Robert A. Berner
1957 Rustum Roy	1965 Peter J. Wyllie	1972 Arthur L. Boettcher
1958 Charles E. Weaver		

## List of Officers and Committees

### Mineralogical Society of America

Sixth Floor, 1707 L St. N. W., Washington, D. C. 20036, U. S. A.

Membership in the Mineralogical Society of America is open to persons interested in the fields of mineralogy, petrology, crystallography, and allied sciences. Membership application forms may be obtained from the Washington office.

Annual dues are \$20.00 (\$6.00 for students) including subscription to **The American Mineralogist**, and a reduced rate on subscriptions to **Mineralogical Abstracts**.

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*Secretary* **Joan R. Clark**, U. S. Geological Survey, Washington, D. C.  
*Treasurer\** **Philip M. Bethke**, U. S. Geological Survey, Washington, D. C.

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\*(1973) **Donald H. Lindsley**, State University of New York, Stony Brook, N. Y.  
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(1972-1974) **George W. Brindley**, The Pennsylvania State University Park, Pennsylvania  
(1972-1974) **Edwin Roedder**, U. S. Geological Survey, Washington, D. C.  
\*(1973-1975) **Daniel E. Appleman**, U. S. Geological Survey, Washington, D. C.  
\*(1973-1975) **David B. Stewart**, U. S. Geological Survey, Washington, D. C.

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##### Archivist

George Phair

##### Committee on Committees

\*S. W. Bailey, Chairman (1973)  
\*Arnulf Muan (1973-1974)  
Joan R. Clark (1973)  
Arden L. Albee (1972-1974)  
\*Gary M. Boone (1973-1975)

##### Ad-Hoc Committee on Endowment and Funds

\*J. V. Smith, Chairman  
\*Joan R. Clark  
\*Philip M. Bethke  
\*Daniel E. Appleman

##### \*Committee on External Medals and Awards

\*Richard A. Yund, Chairman  
\*James L. Munoz  
\*Douglas Rumble III  
\*Charles A. Salotti

##### Financial Advisory Committee

\*H. S. Yoder, Jr., Chairman  
\*Priestley Toulmin III

##### MSA Delegates to the Joint Technical Program Committee of the Geological Society of America

Thomas L. Wright (Representative, 1973)  
\*Deane K. Smith (Conferee, 1973)  
\*Daniel S. Barker (1973-1975)  
Joan R. Clark (1973)

\* Newly elected or appointed, 1973.

† Deceased

##### Committee on Management

Daniel E. Appleman, Chairman  
L. W. Finger  
Louis S. Walter  
Joan R. Clark (ex. officio)  
\*Philip M. Bethke (ex. officio)

##### Committee on Membership Status

\*Robert E. Newnham, Chairman  
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