MINERALOGICAL SOCIETY OF AMERICA
PROCEEDINGS FOR 1942

PAUL F. KERR, *Secretary.*

It has been customary at this time, for a period of twenty-two years, to present the proceedings of the annual meeting of the Mineralogical Society of America. Since the initial annual meeting in Chicago in 1920 this is the first year in which the mineralogists of the United States and Canada have not held an official gathering. In the absence of a report on the annual meeting, the officers of the society submit at this time the various items of information which it is felt should be placed on record for the benefit of the society. These are:

ABSTRACTS OF PAPERS PRESENTED BY TITLE.
REPORT ON THE ELECTION OF OFFICERS AND FELLOWS FOR 1943.
REPORTS OF THE SECRETARY, EDITOR, TREASURER, AND AUDITING COMMITTEE.
MEMORIALS TO ARTHUR P. HONESS, JOSEPH HYDE PRATT, AND THOMAS L. WALKER.
LIST OF FORMER OFFICERS AND MEETING PLACES OF THE SOCIETY.
CORRESPONDENTS, FELLOWS, MEMBERS, AND SUBSCRIBERS OF THE MINERALOGICAL SOCIETY OF AMERICA.

ABSTRACTS OF PAPERS PRESENTED BY TITLE

MASSIVE BIXBYITE $(Mn, Fe)_2O_3$ OF LOW IRON CONTENT

JOHN W. GRUNER, *University of Minnesota, Minneapolis, Minnesota.*

About 10 years ago the writer obtained two hand specimens from Ward's Natural Science Establishment labelled "Braunite, Postmasburg District, Cape Province, South Africa." The specimens are dense, massive, and look metallic like magnetite. The streak is dark brown. *X*-rays show that the mineral is bixbyite. The small amount of other material associated with the mineral is dull black and contains small stringers of bixbyite. There are also flakes of a shiny, dark gray mineral present which look like molybdenite. Hand picked flakes were *x*-rayed and the pattern corresponds to a new manganese mineral called oakite by W. E. Richmond. Oakite is found at White Oak Mountain, Tenn.

The bixbyite contains 17.25% Fe_2O_3 and 0.9% SiO_2. This means that it is the lowest in Fe_2O_3 ever found. It contains less than half as much Fe_2O_3 as any of the other three occurrences reported. It is the only massive variety recorded. Bixbyite is cubic. The edge of its unit cell as measured by Pauling is 9.35 Å. This material measures 9.39 Å, while artificial Mn_2O_3 as measured by the writer gave 9.42 Å. Such an increase in the size would be expected as Fe_2O_3 decreases. The writer has tried to obtain more of this mineral from Postmasburg but so far without success. A large number of specimens must be in various collections under the name "braunite."

IRIDESCENT GARNET FROM THE ADELAIDE MINING DISTRICT, NEVADA

EARL INGERSON AND JULIAN D. BARKSDALE,
Geophysical Laboratory, Washington, D. C.

Garnets from a lime-rich layer in the contact zone of a granodiorite stock show brilliant iridescence, both on striated faces and in thin section. They are birefringent and show, superposed on the triangular segments that are common in lime contact garnets, lamellae

that look like polysynthetic twinning. Universal stage measurements show that the lamellae are parallel to {110} and {111}. It appears that the iridescence is due to the very fine {111} lamellae and that it is more intense where the individual lamellae are finer.

ON THE CRYSTALLOGRAPHY OF PYROSTILPNITE

M. A. PEACOCK, *University of Toronto, Toronto, Canada.*

Crystals of pyrostilpnite (fireblende) from Andreasberg, Harz, are monoclinic, elongated with [001], flattened on {010}, and striated parallel to [100]. The observed forms are {010}, {110}, {021}, {031} new, {041}, with reference to:

$$a:b:c=0.4318:1:0.3941;\ \beta=117°09'$$

given by the unit cell dimensions. The (010)-centred lattice has $a'=12.15$, $b'=15.81$, $c'=6.23$ Å, $\beta=90°$, space-group $B2_1/c-C_{2h}^5$, giving the unit cell with $a=6.83$, $b=15.81$, $c=6.23$ Å, $\beta=117°09'$, space-group $P2_1/c-C_{2h}^5$. The unit cell contains $Ag_{12}Sb_4S_{12}=2[3Ag_2S\cdot Sb_2S_3]$; calculated density 5.97, measured 5.94 (Berman, priv. com.). The monoclinic prismatic class $(2/m)$ is directly established by the x-ray effects. The optical behavior, which has suggested triclinic symmetry, is due to twinning on the vertical axis with composition on a vertical plane, usually {010} (Carlsbad law).

On minute crystals of pyrostilpnite from Randsburg, California (*Am. Mineral.*, **26**, 130, 1941), Murdoch (priv. com.) has noted the forms {010}, {130} new, {110}, {011}, {021}, {031}, {041}, {051}, in P-notation, and has obtained the cell dimensions $a'=12.2$, $b'=15.87$, $c'=6.28$ Å, $\beta=90°\pm30'$, in close agreement with the values for Andreasberg.

TRIDYMITE LATITE FROM SODA CREEK, BRITISH COLUMBIA

LOUISE STEVENS STEVENSON, *Victoria, B. C.*

The Cariboo district of west central British Columbia has long been known to contain numerous Tertiary basalt flows and great thicknesses of ash beds, but the Soda Creek latite is unique in being the first siliceous lava to be described from this area. It occurs as a plug-like outcrop of grayish-white vesicular rock. A detailed petrographic description is given, including optical constants of the principal minerals and results of Rosiwal determinations.

ELECTION OF OFFICERS AND FELLOWS FOR 1943

The secretary announces that 325 ballots have been cast for the officers of the society as nominated by the Council. Officers for 1943 are:

President: J. F. Schairer, Geophysical Laboratory, Washington, D. C.
Vice-President: John W. Gruner, University of Minnesota, Minneapolis, Minnesota.
Secretary: Paul F. Kerr, Columbia University, New York, N. Y.
Treasurer: Earl Ingerson, Geophysical Laboratory, Washington, D. C.
Editor: Walter F. Hunt, University of Michigan, Ann Arbor, Michigan.
Councilor, 1943–1946: C. S. Hurlbut, Jr., Harvard University, Cambridge, Massachusetts.

The secretary announces that according to the provisions of the constitution the following have been elected to fellowship:

Bandy, Mark C., Patino Mines and Enterprises, Llallagua, Bolivia.
Berry, Leonard G., Research Enterprises, Ltd., Leaside, Ontario, Canada.

Bannerman, Harold M., Dartmouth College, Hanover, New Hampshire.
Fahey, Joseph J., U. S. Geological Survey, Washington, D. C.
Ford, Hugh A., British Consul General, Boston, Massachusetts.
Lee, Harley C., Basic Magnesium, Inc., Las Vegas, Nevada.
Lopez, Victor M., Servicio Tecnico de Mineria y Geologia, Caracas, Venezuela.
Merritt, Clifford A., University of Oklahoma, Norman, Oklahoma.
Merritt, Phillip L., American Cyanamid Company, Stamford, Connecticut.
Mertie, John B., Jr., U. S. Geological Survey, Washington, D. C.
Richmond, Wallace E., U. S. Geological Survey, Washington, D. C.
Stevens, Rollin E., U. S. Geological Survey, Washington, D. C.
Stevenson, John S., Department of Mines, Victoria, British Columbia, Canada.
Wolfe, C. W., Boston University, Boston, Massachusetts.

REPORT OF THE SECRETARY, 1942

Membership Statistics

	1941	1942	Gain	Loss	Removals due to war causes
Correspondents	6	6	0	0	0
Fellows	193	199	14	8	5
Members	426	418	85	93	47
Subscribers	314	268	30	76	132
	939	891	129	177	184

During 1942, the net loss in total membership has been 48, a figure very close to the net loss of 50 in 1941, and once again a 5% decrease on the basis of the previous year's total membership. In 1941, a major part of the decrease resulted from the removal of practically all members and subscribers in Germany; in 1942, suspension of mail service to Japan and the U.S.S.R. accounted for the greater part of the decrease. In spite of the removal of many foreign members outside of the western hemisphere, enough new members have been obtained from the United States, Canada, and South America to counterbalance the effect from the standpoint of membership alone.

It is known that at least 3 fellows and 22 members are serving in the armed forces in various capacities. In addition, more than 70 fellows and members are serving with government agencies in the prosecution of work on strategic minerals.

It is impossible to indicate definitely the number of members and subscribers removed solely because of the war. In many cases, no word has come through at all; in others, word has been received to the effect that money cannot be sent out of the country until the present conflict is over; in others, temporary arrangements have been made for subscriptions. In a column under the membership statistics, an attempt has been made to indicate the approximate loss of fellows, members and subscribers from this cause.

Respectfully submitted,

Paul F. Kerr, *Secretary*

REPORT OF THE EDITOR FOR 1942

To the Council, Fellows and Members of the Mineralogical Society of America:

When one considers the many disturbing factors that have altered all normal procedure for the past twelve months, it is gratifying to report that in spite of these ever-changing

conditions which have affected every business and profession, we have, thus far, carried on our assigned task in a satisfactory manner. It is perfectly true that some delay has been experienced at times in releasing issues, due to the fact that we must now secure the approval of the Board of Economic Warfare for every issue of the Journal before final printing and distribution are permitted. While this permission is needed for export only, we still have at present about 110 names on our mailing list to which this edict directly applies. No license permit is required to export copies to Canada or to the insular possessions of the United States. The examination of the proof material is for the purpose of determining whether or not the issue should be exported. Thus far no issue of *The American Mineralogist* has been refused this privilege, but an additional ten days to two weeks are required to clear this hurdle and this ruling is largely responsible for the delay our readers have experienced in recent months in receiving their issues.

Printing costs of our Journal have advanced somewhat during the past year but thus far the increase has been slight and affects the item of labor, but not materials used. With increased printing costs and reduced revenues from dues and subscriptions, the Society would have been forced to retrench by reducing the size of the Journal except for the generous action taken by the Council of the Geological Society of America. That body very graciously voted to increase their contribution for 1942 from $1500 to $2000. This additional $500 is reflected in the *90 page increase* in size of volume 27 over that of the previous year.

During 1942 the number of manuscripts received has been unusually large and this in spite of the fact that many students of geology and mineralogy were transferring from scientific and academic pursuits to work directly connected with the war effort. Perhaps the large number of papers received represents a final effort on the part of many to complete manuscripts on hand before entering upon their new duties. Just to what extent this dislocation of normal research in mineralogical and geological fields will affect papers submitted to our Journal during 1943 and subsequent years cannot at present be foretold. At the present writing sufficient manuscripts are on hand to carry us through the spring and early summer issues.

Summarizing the factual data for the year, we find that volume 27 contains 826 pages, exclusive of index. This represents a 90 page increase (12.2%) over the preceding year. Approximately 84.4% of the total space of the Journal is devoted to leading articles which number 55. A few of these major contributions are rather long so that the *average* length per article has risen to 12.7 printed pages. Table 1 which accompanies this report indicates the distribution of the leading articles in the nine fields covered by the Journal. Over one-half of the papers (64%) printed this year fall in the three divisions of descriptive and chemical mineralogy and petrography. If to the main articles we add 18 shorter papers, appearing under the heading of Notes and News, we obtain a total of 73 published manuscripts for the calendar year. These contributions were received from 89 contributors associated with 45 different universities, research bureaus and technical laboratories. *The American Mineralogist* for 1942 carries detailed descriptions of two new minerals: sampleite and cryptomelane. 195 illustrations of various types make it possible to follow more intelligently the descriptive portions of the text. As in previous years this liberal use of cuts has been made possible in numerous instances by financial aid received from authors or institutions when the cost of cuts for any single article would have placed too heavy a burden upon the Society.

The accompanying table of contents summarizes in detail the distribution of subject matter in Volume 27.

TABLE 1. DISTRIBUTION OF SUBJECT MATTER IN VOLUME 27

Subjects	*Articles*	*Pages*	*Per Cent of Total*
Leading articles*			
Descriptive mineralogy	12		
Chemical mineralogy	11		
Structural crystallography	7		
Geometrical crystallography	3		
Petrography	12		
Optical mineralogy	2		
Mineralography	1		
Memorials	4		
Miscellaneous	3		
	55	697	84.4
Short articles	18	48½	
Proceedings of societies	21	59	
Notes and news	15	5	15.6
Abstracts of new mineral names	19	10	
Book reviews	8	6½	
Total entries	136	826	100.0
Illustrations	195		
Index, title page, table of contents		15	
Grand total		841	

* (Average length of leading articles, 12.7 printed pages)

Respectfully submitted
WALTER F. HUNT, *Editor*

REPORT OF THE TREASURER FOR 1942

To the Council of the Mineralogical Society of America:

Your treasurer submits herewith his annual report for the year beginning December 1, 1941 and ending November 30, 1942.

Receipts

Cash on hand December 1, 1941	$ 1,899.46
Dues and subscriptions	2,803.62
Sale of back numbers	437.37
Authors' charges on separates	697.59
Sale of 20-volume index	26.00
Interest and dividends from endowment	2,544.50
Partial payments (1942) on principal of Trenton Mortgage Service Company's preferred stock	187.57
Geological Society of America Grant for 1942	2,000.00
Advertisements	311.18
Aid in publishing long papers	298.92
Postage refund for numbers returned	1.92
	$11,208.13

DISBURSEMENTS

Printing and distribution of the Journal (12 issues)	$ 5,591.73
Printing and distribution of separates	758.56
To the Editor, Secretary, and Treasurer	970.00
Postage	104.15
Printing and stationery	177.58
Office equipment	20.76
Clerical help	384.25
Committee expenses	3.00
Safety deposit box	9.60
Roebling Medal, 1941	110.32
Telegrams	1.36
Refunds on dues and subscriptions	3.21
Notary fees; applications for license to export Journal	1.50
Investment of accumulated endowment funds	1,107.50
Service charge on purchase of stock	2.34
Returned checks	9.00
	$ 9,254.86
Cash balance November 30, 1942	1,953.27
	$11,208.13

The endowment funds of the Society as of November 30, 1942, consist of the following securities:

45 $1,000 bonds, City and County of Honolulu, Territory of Hawaii, Water Works, 5%, due April 15, 1954	$45,000.00
4 $100 bonds, Great Northern Railway Company, Genl. Mtg., 5½%, due January 1, 1952	400.00
37–514/1000 shares, Trenton Mortgage Service Company, Trenton, N. J., preferred stock	2,584.76
15 shares, American Telephone and Telegraph Company, common stock	1,728.07*
5 shares, Public Service of New Jersey, 8% preferred stock	702.00*
5 shares, United States Steel, 7% preferred stock	502.45*
10 shares, Consolidated Edison, 5% preferred stock	1,066.64*
20 shares, Union Pacific Railroad Co., 4% preferred stock	1,607.75*
	$53,591.67

* Purchase price.

Respectfully submitted,
EARL INGERSON, *Treasurer*

REPORT OF THE AUDITING COMMITTEE

To the President of the Mineralogical Society of America:

The Auditing Committee has examined and verified the accounts of the Treasurer of the Mineralogical Society of America, for the fiscal year ending November 30, 1942. The securities listed in the Treasurer's report, with all future coupons on the coupon bonds attached, are in the safety deposit box at the Friendship Branch of the Riggs National Bank of Washington, D. C.

Respectfully submitted,
MICHAEL FLEISCHER, *Chairman*
JOHN P. MARBLE
R. E. STEVENS

DANA FUND

No disbursement made during the fiscal year 1942. Interested received = $17.95. Available balance, November 30, 1942, = $913.43.

Respectfully submitted,
WALDEMAR T. SCHALLER

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:

PRESIDENTS

1920 Edward H. Kraus
1921 Charles Palache
1922 Thomas L. Walker
1923 Edgar T. Wherry
1924 Henry S. Washington
1925 Arthur S. Eakle
1926 Waldemar T. Schaller
1927 Austin F. Rogers
1928 Esper S. Larsen
1929 Arthur L. Parsons
1930 Herbert E. Merwin
1931 Alexander H. Phillips
1932 Alexander N. Winchell
1933 Herbert P. Whitlock
1934 John 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

VICE-PRESIDENTS

Thomas L. Walker
Waldemar T. Schaller
Frederick A. Canfield
George F. Kunz
Washington A. Roebling
Herbert P. Whitlock
George Vaux, Jr.
George L. English
Lazard Cahn
Edward Wigglesworth
John E. Wolff
William F. Foshag
Joseph L. Gillson
Frank N. Guild
William A. Tarr
Ellis Thomson
Harold L. Alling
H. V. Ellsworth
Kenneth K. Landes
Burnham S. Colburn
Ian Campbell
William J. McCaughey
Martin J. Buerger

SECRETARIES

1920–1922 Herbert P. Whitlock
1923–1933 Frank R. Van Horn
1933–1934 Albert B. Peck
1934– Paul F. Kerr

TREASURERS

1920–1923 Albert B. Peck
1924–1929 Alexander H. Phillips
1929–1930 Albert B. Peck
1931–1940 Waldemar T. Schaller
1941– Earl Ingerson

EDITORS

1920–1921 Edgar T. Wherry
1922– Walter F. Hunt