

ANNUAL REPORT OF THE OHIO ACADEMY OF SCIENCE
1954

Organized 1891
Incorporated 1892
Affiliated with the American Association for the Advancement of Science

OFFICERS AND COMMITTEES FOR 1954—1955

President

RUSH ELLIOTT

Secretary

R. W. DEXTER

Treasurer

R. M. GEIST

Executive Secretary, Junior Academy

R. E. MCKAY

Executive Vice-Presidents

- | | |
|---|---|
| A. <i>Zoology</i> : J. A. MILLER | F. <i>Geography</i> : MILDRED DANKLEFSEN |
| B. <i>Plant Sciences</i> : A. H. BLICKLE | G. <i>Chemistry</i> : W. F. KIEFFER |
| C. <i>Geology</i> : J. M. SCHOFF | H. <i>Science Education</i> : VIOLET R. STRAHLER |
| D. <i>Medical Sciences</i> : E. H. ELLISON | I. <i>Anthropology and Sociology</i> : R. S. BABY |
| E. <i>Physics and Astronomy</i> : L. R. WYLIE | J. <i>Conservation</i> : K. W. HUNT |

Membership Vice-Presidents

- | | |
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| A. <i>Zoology</i> : T. H. LANGLOIS | F. <i>Geography</i> : J. T. MADDOX |
| B. <i>Plant Sciences</i> : R. L. WALP | G. <i>Chemistry</i> : J. F. CORWIN |
| C. <i>Geology</i> : J. H. MELVIN | H. <i>Science Education</i> : J. W. WARGO |
| D. <i>Medical Sciences</i> : R. W. STACY | I. <i>Anthropology and Sociology</i> : MENO LOVENSTEIN |
| E. <i>Physics and Astronomy</i> : W. E. SINGER | J. <i>Conservation</i> : R. R. FINLAY |

COMMITTEES

Executive

Ex-officio: RUSH ELLIOTT, R. W. DEXTER, R. M. GEIST, R. E. MCKAY, R. A. POPHAM
Elective: R. A. HEFNER, W. F. KIEFFER

Nominating

THE EXECUTIVE COMMITTEE

Program

EXECUTIVE VICE-PRESIDENTS AND SECRETARY

Library

ACADEMY LIBRARIAN, MORTON COBURN, Chairman

W. C. BEAVER..... Term expires 1955 A. W. LINDSEY..... Term expires 1957

Publications

SECRETARY, Chairman

W. C. BEAVER..... Term expires 1955
A. W. LINDSEY..... Term expires 1957

Resolutions

W. A. MANUEL, Chairman... Term expires 1955
J. W. GEBHART..... Term expires 1956
W. H. SHIDELER..... Term expires 1957

Necrology

J. H. MELVIN..... Term expires 1955
H. H. M. BOWMAN, Chairman
Term expires 1956
PAUL ROTHMUND..... Term expires 1957

Trustees of Research Fund

E. S. THOMAS, Chairman... Term expires 1955
G. W. BLAYDES..... Term expires 1956
R. P. GOLDTHWAIT..... Term expires 1957

THE OHIO JOURNAL OF SCIENCE 54(4): 281, July, 1954.

Academy Representatives

- On the Joint Administrative Board of the Ohio Journal of Science:
 - W. C. BEAVER..... Term expires 1955
 - A. W. LINDSEY..... Term expires 1957
- On the Council of the A.A.A.S.: R. W. DEXTER

The Council for 1954-1955

R. S. BABY	R. R. FINLAY	J. A. MILLER
W. C. BEAVER	R. M. Geist	R. A. POPHAM
A. H. BLICKLE	R. A. HEFNER	PAUL ROTHMUND
R. H. BÖHNING	K. W. HUNT	J. M. SCHOPF
H. H. M. BOWMAN	W. F. KIEFFER	W. E. SINGER
E. LUCY BRAUN	T. H. LANGLOS	R. W. STACY
MORTON COBURN	A. W. LINDSEY	VIOLET R. STRAHLER
J. F. CORWIN	MENO LOVENSTEIN	E. S. THOMAS
MILDRED DANKLEFSEN	R. E. MCKAY	R. L. WALP
R. W. DEXTER	J. T. MADDOX	J. W. WARGO
RUSH ELLIOTT	W. A. MANUEL	L. R. WYLIE
E. H. ELLISON	J. H. MELVIN	

REPORT OF THE SIXTY-THIRD ANNUAL MEETING OF THE OHIO ACADEMY OF SCIENCE

The sixty-third annual meeting was held on the Ohio University campus on April 15, 16 and 17. This was part of the Sesquicentennial Program of the University. This meeting occurred during a vacation period so that all facilities of the University were available to the members of the Academy and all needs had been anticipated and well planned for.

The sixth annual State Science Day of the Ohio Junior Academy of Science was held on April 16 with the largest number of projects and largest attendance in the history of the organization. 286 projects were entered with 246 exhibits being presented by approximately 275 Junior Academy members.

Well organized and well attended programs were presented by the sections in Zoology, Plant Sciences, Subsection in Genetics, Geology, Medical Sciences, Physics and Astronomy, Geography, Chemistry, Science Education, Anthropology and Sociology, and Conservation. The Ohio Section of the American Physical Society met in joint session with the section in Physics and Astronomy. Commercial exhibits were presented by six companies. The University sponsored a tea for all ladies in attendance at which the wives of the Science faculty members of Ohio University served as hostesses.

The annual banquet and business meeting were held in the Ballroom of the Ohio University Center on Friday evening at 6:00 P.M. Dr. F. H. Kreckler, a past president of the Academy and retiring secretary of the Junior Academy of Science, served as toastmaster. Greetings from Ohio University were extended by Dr. W. S. Gamertsfelder and the response of the Academy by Dr. W. H. Shideler. The presidential address given by Dr. R. A. Hefner was titled, "Selective Factors in Human Survival".

The following persons were announced as newly elected fellows of the Academy:

R. S. BABY	J. F. HALL	S. M. Mayfield
J. F. BUCKINGHAM	MRS. CLARA KENNEY	G. W. SINCLAIR
J. R. COASH	A. G. LINSCHIED	W. E. SINGER
A. N. DINGLE	MENO LOVENSTEIN	E. E. TERRELL
FRANK DUDLEY	DUNCAN McCONNELL	MRS. BERTHA WHITMORE

Dr. F. H. Kreckler announced that awards to outstanding high school teachers were presented to Mrs. Clara Kenney, Hunington Rural; Miss Phyllis Read, Mogadore; Mrs. Bertha Whitmore, Columbus West; Floyd Combs, Cambridge Junior High; Gerald Ernst, Zone School; and H. R. Hornbrook, Eaton. The Kroger award for outstanding work in sciences in the high schools was presented to Mogadore High School.

The membership approved the acceptance of the revised constitution. The report of the Nominating Committee was presented by Dr. R. P. Goldthwait and for the Resolutions Committee by Dr. E. S. Thomas.

Respectfully submitted,

RUSH ELLIOTT, *Secretary*

REPORT OF THE EXECUTIVE COMMITTEE AND COUNCIL

The Executive Committee met on December 4, 1953, and again on April 15, 1954, and the Council on December 5, 1953, and again on April 15, 1954.

The report of a special committee to revise the constitution was received and approved subject to final approval of the members of the Academy at the Annual Business Meeting.

A plan was approved for rotation of replacements of the University and/or College District Representatives on the Council of the Junior Academy of Science. The resignation of Dr.

F. H. Kreckler as Executive Secretary of the Junior Academy of Science was accepted and Professor R. E. McKay was appointed to the position effective immediately following the Annual Meeting.

The Section in Psychology (E), and Section in Mathematics (I) were dissolved according to the provisions of the Constitution and the remaining sections are to be labeled alphabetically and consecutively from A through J.

The 1955 Annual Meeting is to be held at Ohio Wesleyan University on April 21, 22 and 23, and the 1956 meeting at Bowling Green State University.

Respectfully submitted,

RUSH ELLIOTT, *Secretary.*

REPORT OF THE TREASURER

CURRENT EXPENSE FUND Fiscal Year 1953

RECEIPTS:

Bank Balance, January 1, 1953.....	\$1,821.92
Membership dues.....	4,444.00
Sale of Publications.....	30.23
Interest U.S. Bonds.....	47.50
Grant. Chas. F. Kettering Foundation.....	500.00
Ohio Psychological Association.....	25.00
Miscellaneous.....	.50
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	\$6,869.15

EXPENDITURES:

Subscriptions and Engraving Ohio Journal of Science.....	\$2,307.34
Printing Annual Report.....	136.28
Printing News Letter, Junior Academy.....	124.00
Programs for Annual Meeting.....	172.00
Postage, office supplies, bank charges and other administrative expense.....	732.49
Academy Conference.....	5.00
Signs for Annual Meeting, (Ohio State).....	12.00
Bank Balance December 31, 1953.....	3,380.04
	<hr/>
	\$ 6,869.15

OHIO ACADEMY OF SCIENCE RESEARCH FUND Fiscal Year 1953

RECEIPTS:

Bank Balance, January 1, 1953.....	\$ 230.21
Interest U.S. Bonds.....	7.50
Interest Fort Hayes Hotel Bonds.....	26.00
Dividends, Banc-Ohio Stock.....	31.25
Grant A. A. A. S.....	195.00
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	\$ 489.96

EXPENDITURES:

Grant. Cecil Riser.....	50.00
Grant. Elizabeth W. Smith.....	100.00
Grant. Janice C. Beatley.....	140.00
Bank Charges.....	2.63
Bank Balance, December 31, 1953.....	197.33
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	\$ 489.96

Excess Expense over Income.....\$ 32.88

Fort Hayes Hotel Bonds have been called.

Respectfully submitted,

R. M. GEIST, *Treasurer.*

REPORT OF THE TRUSTEES OF THE RESEARCH FUND Fiscal Year 1953

RECEIPTS:

Bank Balance.....	\$ 230.21
Interest U.S. Bonds.....	7.50
Interest Fort Hayes Hotel Bonds.....	26.00
Dividends Banc-Ohio Stock.....	31.25
Grant A. A. A. S.....	195.00
	<hr/>
	\$ 489.96

Total Receipts.....\$ 489.96

EXPENDITURES:

Grant, Cecil Riser.....	\$ 50.00
Grant, Elizabeth W. Smith.....	100.00
Grant, Janice C. Beatley.....	140.00
Bank Charges.....	2.63
Bank Balance December 31, 1953.....	197.33

Total Expenditures.....	\$ 489.96
Examination will show excess expense over income.....	\$ 32.88

Fort Hayes Hotel Bonds were called.

1954

Cash in Bank January 1, 1954.....	197.33
Fort Hayes Hotel Bonds cashed.....	1,300.00
Deposit January 9, 1954.....	13.75
Deposit April 6, 1954.....	7.50

Cash in Bank April 15, 1954.....	\$1,518.58
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Respectfully submitted,

E. S. THOMAS,
G. W. Blaydes,
K. G. A. BUSCH, *Chairman*

REPORT OF THE LIBRARIAN

The librarian is pleased to inform the Academy that its official journal is used in four hundred and ninety-eight exchanges. Seventy-one percent of these exchanges are with public and private institutions located abroad. Twenty-nine percent of these exchanges are with domestic institutions.

There has been a 10.5% increase in the number of exchanges since the librarian's previous report.

EXCHANGE AGREEMENTS CONCLUDED BETWEEN THE O.A.S. AND DOMESTIC AND FOREIGN INSTITUTIONS

	April 1953	April 1954	Numerical Gain	Percent increase over 1953
Domestic exchanges.....	134	144	10	10.7
Foreign exchanges.....	337	354	17	10.5
Total number of exchanges.....	471	498	27	10.5

Sales of the Academy's publications for the period, July, 1953 through December, 1953, amounted to ten dollars and forty-nine cents (\$10.49). Seventy-five cents was withheld for the purchase of tax stamps; the remainder of the money, nine dollars and seventy-four cents (\$9.74), was turned over to the Treasurer of the Academy.

Respectfully submitted,

MORTON COBURN, *Librarian*

REPORT OF THE JOINT ADMINISTRATIVE BOARD OF THE OHIO JOURNAL OF SCIENCE

The annual meeting of the Joint Administrative Board of the Ohio Journal of Science was held at Columbus on April 3, 1954. The meeting was called to order by Board Chairman Spieker. Present were Drs. Spieker and Meyer representing the Ohio State University, Drs. Lindsey and Beaver representing the Ohio Academy of Science, and Drs. Böhning, Popham, and Fisk of the Ohio Journal of Science staff.

Dr. Spieker was elected chairman of the board for the year 1954-55.

Minutes of the last meeting were approved as read.

The report of the business manager was approved as read. This report, which accompanies these minutes, is mainly in the form of a financial statement for Volume 53. Dr. Popham announced the favorable action of the Executive Committee of the Academy to transfer the \$500 gift by the Kettering Foundation to the Journal. The money is being used to enlarge certain numbers of the Journal in order to reduce the very large backlog of papers awaiting publication. He also announced that Journal funds would be used to continue the publication of enlarged issues of the Journal until the backlog of papers is reduced to reasonable size. Dr. Popham called attention to the fact that the \$250 allowance of the Academy for the purpose of paying one-half of the cost of plates for the Journal has proved inadequate to meet this expense during the past three years. After some discussion of this matter the board instructed the business manager to request the Council of the Academy to annually allot a sum of money sufficient to pay for one-half the cost of plates appearing in the last completed volume of the Journal.

The report of the editor was approved as read. The editor indicated that the Journal was, in April, 1953, 12 months behind in the publication of papers. It is now only about 10 months behind. He expects this period of delay to be reduced to the minimum practicable working period within the next year. The editor initiated a discussion concerning the desirability of establishing a policy limiting the length of papers to be published in the Journal. It was decided by the board that each paper should be considered on its merits and with respect to the size of the backlog of papers awaiting publication but that the editor should have power to act as he sees fit in limiting the length of papers submitted.

Dr. Fisk presented the report of the book review editor which was approved as read. He indicated that the very large backlog of book reviews which existed a year ago no longer exists and that book reviews are now being published about as fast as practicable. One reason for the improved condition with respect to the publication of the book reviews is that a policy has been instituted limiting the length of book reviews to 150 words except in cases of books of unusual merit.

Dr. Spieker was instructed to appoint a committee to audit the books of the business manager for Volume 53.

The editor reported that the award committee of the geology section has decided not to grant The Ohio Journal of Science Award for Excellence in Research this year. The board decided not to offer The Ohio Journal of Science Award for Excellence in Research in the year 1955.

The board elected Dr. Böhning editor, Dr. Popham business manager, and Dr. Fisk book review editor for the year 1954-55.

Respectfully submitted,

RICHARD A. POPHAM
Secretary of the Board

THE OHIO JOURNAL OF SCIENCE

Volume 53—Fiscal Year 1953

BALANCE SHEET

(With comparison with previous Two Years)

	Volume 51 Fiscal Year Jan. 18, 1951 Dec. 25, 1951	Volume 52 Fiscal Year Jan. 1, 1952 Dec. 31, 1952	Volume 53 Fiscal Year Jan. 1, 1953 Dec. 31, 1953
RECEIPTS:			
Bank balance at beginning of period.....	\$1,107.19	\$1,370.64	\$1,566.51
O.S.U. paid for subscriptions.....	1,800.00	2,000.00	2,500.00
O.A.S. paid for subscriptions.....	1,807.50	2,135.00	2,069.50
Non-members—paid for subscriptions.....	404.50	386.00	432.50
Separate numbers, volumes and reprints sold..	514.48	222.30	657.15
50 year index sold.....	0.00	0.00	555.00
O.A.S.—paid ½ cost of plates.....	421.63	231.14	237.84
O.A.S.—paid for Annual Report.....	101.88	103.32	136.28
Miscellaneous.....	0.00	17.50	34.94
Advertisements.....	1,116.97	737.52	387.00
	<u>\$7,274.15</u>	<u>\$7,203.42</u>	<u>\$8,576.72</u>
EXPENDITURES:			
Spahr and Glenn—printing O.J.S.....	\$4,326.61	\$4,544.00	\$4,843.80
Bucher Engraving—Plates.....	832.41	585.20	624.86
Postage and Express.....	211.99	214.57	281.50
Secretary and labor.....	118.86	48.50	125.06
Office supplies and bank charges.....	108.67	94.64	61.86
Advertising the O.J.S.....	75.00	150.00	213.89
Spahr and Glenn—reprints.....	46.06	0.00	236.89
Mailing envelopes.....	180.91	0.00	225.77
Refunds.....	3.00	0.00	0.00
Miscellaneous.....	0.00	0.00	34.44
Bank balance at end of period.....	1,370.64	1,566.51	1,928.65
	<u>\$7,274.15</u>	<u>\$7,203.42</u>	<u>\$8,576.72</u>
Cost of supplying one volume of six numbers.....	\$3.204	\$2.891	\$3.085
Subscription price to Academy Members.....	\$1.50	\$1.50	\$1.50
Approximate number of Academy Members.....	1150	1250	1250

THE OHIO JOURNAL OF SCIENCE
REPORT OF THE EDITOR OF VOLUME 53, 1953;
TO THE JOINT ADMINISTRATIVE BOARD

Volume 53 of The Ohio Journal of Science contained 384 pages of text and 4 pages of index, not including 24 pages of cover. The text pages were devoted to 57 articles in eight fields of science (as represented by sections of the Ohio Academy of Science), to 53 book notices, and to various announcements and advertisements. Among the articles was one symposium on "The Trapping of Solar Energy".

Respectfully submitted,

R. H. BÖHNING, *Editor*

REPORT OF COMMITTEE ON RESOLUTIONS

Be it Resolved that the membership of the Ohio Academy of Science in session at Athens, Ohio, place on record its sense of sincere gratitude and appreciation for the generous welcome extended by its hosts on the campus of Ohio University, for the foresight and attention to detail which led to the meeting being one of the most rewarding and satisfying within memory. In the notable success of the meeting, the scientists here assembled believe they can trace the imaginative brain and resourceful hand of its own distinguished secretary. If this hypothesis be only partially correct the credit must be prorated among the team of his collaborators whose loyal help he enlisted with such particular effectiveness. It is further resolved that the secretary be instructed to convey to himself and to his colleagues the words of thanks which he is hereby requested to spread on the minutes of the transactions of the Academy.

Be it further Resolved, that the members of this Academy express their appreciation and best wishes to Dr. F. H. Krecker, who has been Executive Secretary of the Junior Academy since its founding and who is now retiring, for his keen foresight and dynamic leadership in that important work.

Respectfully submitted,

W. A. MANUEL
J. B. GEBHART
G. B. BARBOUR, *Chairman*