

THE OHIO JOURNAL OF

SCIENCE

JULY
1961

Structure of Liquids and Solutions <i>Glenn H. Brown</i>	193
Behavioural Effects of Temperature on Insects <i>Mohammad Abdullah</i>	212
Additional Studies of Dispersion Patterns of American Cockroaches from Sewer Man- holes in Phoenix, Arizona <i>William B. Jackson and Paul P. Maier</i>	220
The Clay Mineralogy of the Shaly Portions of the Brassfield Limestone <i>Ernest G. Ehlers and Karl V. Hoover</i>	227
Science Education and The Ohio Academy of Science—An Historical Review <i>Ralph W. Dexter</i>	235
Annual Report of The Ohio Academy of Science.....	242
Book Notice.....	234
Announcement.....	256

THE OHIO JOURNAL OF SCIENCE

Published jointly by The Ohio State University and The Ohio Academy of Science.

EDITORIAL STAFF

HENRY L. PLAINE.....	Editor-in-Chief
DAVID H. STANSBERY.....	Associate Editor
RICHARD A. POPHAM.....	Business Manager
THOMAS H. LANGLOIS.....	Book Review Editor
D. G. DEAN	E. W. E. SCHEAR... Medical Sciences
Anthropology and Sociology	C. A. RANDALL
R. G. JOHNSTON.....	Physics and Astronomy
Chemistry	W. G. GAMBILL..... Plant Sciences
R. B. REDETT.....	Science Education
Conservation	PHYLLIS READ..... Zoology
E. H. BUSH.....	L. S. PUTNAM..... Zoology
Geography	E. F. PADDOCK..... Genetics
JANE FORSYTH.....	Geology

JOINT ADMINISTRATIVE BOARD

For Ohio State University:	RALPH H. DAVIDSON, ROBERT L. BATES
For Ohio Academy of Science:	W. G. GAMBILL, JACOB VERDUIN

MANUSCRIPTS. THE OHIO JOURNAL OF SCIENCE accepts manuscripts on any scientific subject from contributors anywhere. The manuscripts may be reports of recent research, review or expository articles, or part of a symposium on a subject of general scientific interest. Every paper is critically reviewed by a referee, and all manuscripts are subject to approval by the editorial staff. The original typed manuscript and the *first* carbon copy should be submitted to the Editor. A carbon copy should be retained by the author for reading the galley proof. Galley proof and engraver's proof but not original manuscript will be sent to authors. Care should be taken to furnish a correct mailing address. See cover page 3 for detailed instructions concerning the preparation of manuscripts.

REPRINTS: A price list for reprints and an order form are sent with proof. Authors should allow about sixty days after publication for receipt of reprints.

SUBSCRIPTIONS. Annual subscription, \$6.00 (foreign countries, \$6.50). Single numbers, \$1.00. Issued bimonthly, January to November, six issues per volume. THE OHIO JOURNAL OF SCIENCE is sent without additional expense to all paid-up members of THE OHIO ACADEMY OF SCIENCE.

MAILING ADDRESS: The Ohio Journal of Science, Botany and Zoology Building, 1735 Neil Avenue, The Ohio State University, Columbus 10, Ohio. All manuscripts, illustrations, proofs, and correspondence dealing with editorial matters should be addressed to the editor, Dr. Henry L. Plaine. All remittances and correspondence dealing with subscriptions and other business matters should be addressed to the business manager, Dr. Richard A. Popham. Failure to receive any number of the JOURNAL must be reported within three months of date of issue if claim is to be recognized.

Printed by the Spahr & Glenn Company, Columbus, Ohio U. S. A.

Entered as second-class matter November 1, 1915, at the post office at Columbus, Ohio under the Act of March 3, 1879.

Date of Issue—July 25, 1961