

Proceedings of the Iowa Academy of Science

Volume 68 | Annual Issue

Article 2

1961

Table of Contents

Copyright © Copyright 1961 by the Iowa Academy of Science, Inc.
Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

(1961) "Table of Contents," *Proceedings of the Iowa Academy of Science*: Vol. 68: No. 1 , Article 2.
Available at: <https://scholarworks.uni.edu/pias/vol68/iss1/2>

This Front Matter is brought to you for free and open access by UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Table of Contents

Officers, Iowa Academy of Science	12
Proceedings of Annual Meeting for 1961	15

REPORTS

The Board of Directors	17
Financial Statement	18
The Auditing Committee	20
The Editor	20
The Librarian	20
The Committee on Finance and Endowment	21
The Membership Committee	22
The Committee on Science Talent Search	26
The High School Relations Committee	28
The Science Teaching Committee and the Committee on Preparation and Certification of Teachers	32
The Committee on Conservation	36
The Special Interim Committee for the Parish Farm	46
The Iowa Visiting Scientist Program	47
The Resolutions Committee	49

IN MEMORIAM

Arthur Harold Blue	50
Ernest Straign Haber	51
George B. Hartman	52
George Oscar Hendrickson	53
William Kunerth	54
Walter F. Lochwing	55

William F. Lynch	56
Gilmour Beyers MacDonald	57
William B. Zuker	58

BOTANY

The Design of Inexpensive Plant Growth Chambers. D. C. FOLEY AND J. C. HORTON	60
Problems in the Use of Plant Growth Chambers. J. C. HORTON AND D. C. FOLEY	67
Some Observations on the Plasmodia of <i>Myxomycetes</i> . SISTER MARY ANNUNCIATA McMANUS, RSM, AND MARY KATHRYN TAYLOR	72
Cytological Studies of the Thread Phase of <i>Ceratiomyxa</i> . SISTER MARY ANNUNCIATA McMANUS, RSM, AND FERRELL McDADE	79
Organization of the Centrioplasm in <i>Nostoc pruniforme</i> . T. C. JENSEN AND C. C. BOWEN	86
A Cytoplasmically Inherited Abnormality in Maize. WILLIAM L. BROWN	90
Genetic Effects in the Control of Floral Abscission in <i>Nicotiana</i> . ROBERT E. YAGER	95
The Isolation of <i>Fusarium moniliforme</i> Sheld. from Corn Kernels. RICHARD W. IKENBERRY	100
Isolation of <i>Pyrenochaeta terrestris</i> from Onion Roots. ROBERT P. BORGMAN AND J. C. HORTON	103
Fusarium Blight of Soybeans. JOHN DUNLEAVY	106
Seed Weight as a Measure of Response of Oats to Crown Rust Infection. M. D. SIMONS AND J. A. BROWNING	114
Testing Oats in the Field with Specific Races of Crown Rust. M. D. SIMONS	119
The Effect of Variety and Depth of Sowing on Depth of Secondary Root Zone in Oats. P. L. RODGERS	124
The Algae from the Warm Pools of Silver Lake Fen. KETURAH GASHWILER AND JOHN D. DODD	129

A Preliminary Survey of the Lichens of Central Iowa.
KAREN JUHL 132

Fungus Flora of *Panicum virgatum* L. J. A. HELIN 139

Bryophytes of Des Moines County, Iowa. ROSEMARY THELE 144

A Preliminary Report on the Vascular Flora of North-
western Iowa. JACK L. CARTER 146

Control of Herbaceous Vegetation in Forest Plantings.
EMERSON W. PRUETT AND GORDON E. GATHERUM 153

Hill Prairies within the City of Dubuque, Iowa. HOWARD
W. HINTZ 162

Fossil Plants from Cave Deposits near Pella, Marion
County, Iowa. M. D. HUFFMAN AND CHARLES HENKEL ... 167

CHEMISTRY

Studies of Complexes of the Transition Metals. V. Copper
Complex with Dithiolmalonate. WILLIAM A. DESKIN
AND PERRY L. WEIGEL 170

A New Sensitive Reagent for the Spectrophotometric
Determination of Copper. H. WELDON BAKER AND
RONALD T. PFLAUM 174

Effect of Negative Ions Upon Rates of Reaction of Zinc
with Hydrochloric and Perchloric Acids. JOE D.
WOODS AND THOMAS J. RIDER 182

The Preparation of Tantalum Metal by the Carbon Reduc-
tion of Tantalum Pentoxide. C. B. HAMILTON AND H.
A. WILHELM 189

The Jolt-Pack Fabrication of Special Ceramic Ware. F. W.
CALDERWOOD, D. R. WILDER, AND H. A. WILHELM 202

Modification of a Potentiometer Recorder for Polaro-
graphic Purposes. WILLIAM C. OELKE 222

Some Observations on the Handling of Adams' Platinum-
Oxide Hydrogenation Catalyst. LYMAN R. CASWELL
AND ROBERT D. SCHUETZ 223

Electrophoretic Analysis of the Proteins of Body Fluids in
Various Disease States. J. I. ROUTH AND W. D. PAUL 229

CONSERVATION

Life History of the Quillback and Highfin Carpsuckers in the Des Moines River. DAVID VANICEK	238
White and Black Crappies in Clear Lake, Summer, 1960. RICHARD A. NEAL	247
An Analysis of an Alternate-Year Walleye Fry Stocking Program in the Cedar River in Iowa. R. E. CLEARY AND J. K. MAYHEW	254
Effects of Floods on Mammal Distribution. SHERMAN HOSLETT	260
Wood Duck Roosting Flights at Paint Creek, Iowa. DALE HEIN	264
Results of Semi-Controlled Hunting Upon the Harvest of Waterfowl at Lake Odessa, Iowa, 1960. JAMES G. SIEH AND WILLIAM ASPELMEIER	271
Results of the 1958 and 1959 Pheasant Hunter Survey. RICHARD C. NOMSEN	281
Wildlife Habitats on Iowa Farms Following Application of Soil Conservation Practices. SYLVAN T. RUNKEL	284
Evaluation of the Multiflora Rose Seed Planting Program for Wildlife in Iowa. PAUL LEAVERTON	288
Field Biology at Algona High School, Summer, 1960. JOE E. COLLIER AND GEORGE J. BALLUFF	290
The American School of Wildlife Protection, McGregor, Iowa, 1919-1941. HARRIET BELL CARLANDER	294
The Bounty System in Iowa. DAVID W. WALLER AND PAUL L. ERRINGTON	301
History of Prairie Chickens in Iowa. M. E. STEMPEL AND SAM RODGERS, JR.	314
Conserving Iowa's Prehistoric Heritage. MARSHALL MCKUSICK	323
Problems of Paleontological Preservation in Iowa. W. D. FRANKFORTER	328
Conservation of Geologic Features in Iowa. C. S. GWYNNE ..	337

GEOLOGY

Relationship between the California Bearing Ratio and the Unconfined Compressive Strength of Sand-Cement Mixtures. C. A. O'FLAHERTY, H. T. DAVID, AND D. T. DAVIDSON	341
Crystallite-Size Determination of MgO by X-Ray Diffraction Line Broadening. E. A. ROSAUER AND R. L. HANDY	357
Stone Lines on Cary Till. R. W. WALLACE AND R. L. HANDY	372
Extent and Distribution of Soils in Depressional Areas in the Clarion-Nicollet-Webster Soil Association in Iowa. D. F. SLUSHER, R. W. ARNOLD, AND R. PROTZ	380
Background Radioactivity in the Decorah Fault Region. PHILIP J. LORENZ, ORVILLE E. RODENBURG, LARRY G. SHADLE, ALAN C. ANTES, AND WILLIAM D. HESS	397
Geomorphology and Quaternary History of Shell Valley, Bighorn County, Wyoming. GARY HAUSER, FRANK RECKENDORF, AND DALE SMITH	404

MATHEMATICS

Evaluation of $\int \cot x \sin \ln(\sin x/\sin a) dx$, etc. DON KIRKHAM	416
A Thin Cylindrical Shell Problem. THOMAS R. ROGGE	427
Proof of the Remainder Theorem. HAROLD A. HECKERT	437

PHYSICS

The Measurement of Temperature Change in an Adiabatic Expansion. STEPHEN A. SCHOOLMAN AND DAVID A. MCBLAIN	439
The Hilsch Tube: Low-Pressure Effects. PHILIP J. LORENZ, GERALD D. ERICSON, AND JAMES D. HAYES	443
Air Ion Densities in a Smoke-Filled Room. PHILIP J. LORENZ	452
Stationary Dislocations in Sodium Chloride as Possible Vehicles for the Electrical Conductivity Mechanism. WENDELL GAYLE BRADLEY	461

The Iowa State University 1.5 Mev Undergraduate Cyclotron. DANIEL J. MCGUIRE	474
Experimental Program with the Iowa State University Undergraduate 1.5 Mev Cyclotron. RONNIE R. BURNS	483
Proton Orbit Calculations for the Iowa State University Cyclotron. ALFRED H. MUELLER	492
Liquid Level Sensor. JOHN M. MUNSON	502
Oxygen Partial Pressure Sensor. GEORGE M. HEENAN	504
Ultrasonic Standing Wave Investigations. WILLIAM R. BROOKS	506
The Physical Science Course: Past, Present, and Future. R. RAY HAUN	509

PSYCHOLOGY

The Association Value of Thirty Meaningful Words. PAUL R. HAGER AND MARILYN E. MARSHALL	517
The Relative Discriminability of Twelve Random Shapes. L. E. CARVER AND MARILYN E. MARSHALL	522
An Analysis of the Content of Perceptual Responses to Randomly Derived Stimuli. GEORGE G. KARAS, SHELDON K. EDELMAN, STEVE ZYZANSKI, AND DON GOODRICH	529
An Experimental Comparison of Associative Responses to Two Types of Randomly Derived Stimuli. GEORGE G. KARAS, SHELDON K. EDELMAN, RICHARD J. FARRELL, AND THOMAS E. DUBOIS	535
Reliability of the Taylor Lie Scale. DANIEL J. KORTENKAMP	543
Student Counseling Program in Twenty Iowa Colleges. LYLE K. HENRY AND DONALD R. ORTNER	548

ZOOLOGY

Distribution of <i>Trichinella spiralis</i> Larvae in Tissues of Swine. W. J. ZIMMERMANN AND L. H. SCHWARTE	553
A Study of Blindness in the House Mouse. MARGARET L. WATSON, ALAN ORR, AND THEODORE D. MCCLURE	558

Electron Microscope Observations of Intracellular Responses to Immobilization Antibody in <i>Tetrahymena pyriformis</i> . ROBERT E. HENSHAW	562
Electron and Light Microscope Studies of <i>Endamoeba terrapinae</i> . MARILYN DRIML	581
Celestine Blue B as a Nuclear Stain in Vaginal Exfoliative Cytology. A. R. DZMURA, S. D. MIROYIANNIS, AND E. A. BURROWS	586
Day-Night Changes After Exercise in Body Temperatures and Heart Rates of Hamsters. G. EDGAR FOLK, JR., RICHARD R. SCHELLINGER, AND DELBERT SNYDER	594
Experimental and Mathematical Techniques for Kinetic Studies of Larval Fruit Fly Growth. WILLIAM J. MORESSI, WILLIAM F. HERRIN, AND CHARLES C. WUNDER	603
Food Consumption of Mice During Continual Centrifugation. CHARLES C. WUNDER	616
A Survey of Reptiles and Amphibians of Buena Vista County, Iowa. JAMES L. CHRISTIANSEN	625
Some Effects of Thyroxine-Reserpine Treatment on Growth of Mice. LESTER C. SHELL, LOUIS FERRUGIA, DENZIL HAWES-DAVIS, ALEXANDER PHILIP, TOM MERRITT, AND DAN LOCK	635
Information for Authors	640