

# Proceedings of the Iowa Academy of Science

---

Volume 69 | Annual Issue

Article 2

---

1962

## Table of Contents

Copyright ©1962 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

---

### Recommended Citation

(1962) "Table of Contents," *Proceedings of the Iowa Academy of Science*, 69(1).

Available at: <https://scholarworks.uni.edu/pias/vol69/iss1/2>

This Front Matter is brought to you for free and open access by the Iowa Academy of Science at 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](mailto:scholarworks@uni.edu).

## Table of Contents

Officers, Iowa Academy of Science .....	11
Proceedings of Annual Meeting for 1962 .....	13

### REPORTS

The Board of Directors .....	14
Financial Statement .....	15
The Auditing Committee .....	16
The Editor .....	17
The Librarian .....	17
The Committee on Finance and Endowment .....	18
The Membership Committee .....	19
The Committee on Science Talent Search .....	22
The High School Relations Committee .....	23
The Committee on Conservation .....	26
The Resolutions Committee .....	35
Changes in the By Laws .....	37

### IN MEMORIAM

Gustav A. Platz .....	38
-----------------------	----

### BOTANY

A Post-Kansan Peat at Grinnell, Iowa: A Preliminary Report. BEN F. GRAHAM, JR. ....	39
The Williams Prairie: A Prairie Relict in Johnson County. PAUL D. SORENSEN .....	45
Discovery of a Calcareous Fen Complex in Northwest Iowa. KARL E. HOLTE AND ROBERT F. THORNE .....	54
The Vascular Flora of Cherokee County. JACK L. CARTER .....	60
Quantitative Studies in Angiosperm Taxonomy. VI. <i>Pontentilla</i> . VII. <i>Pedicularis</i> . NORMAN H. RUSSELL .....	71

Notes on Iowa Diatoms. I. An Interesting Collection from a Moss-Lichen Habitat. JOHN D. DODD AND EUGENE F. STOERMER .....	83
Notes on Iowa Diatoms. II. Species Distribution in a Sub- aerial Habitat. EUGENE F. STOERMER .....	87
Notes on Iowa Diatoms. III. Occurrence of the Genus <i>Pleurosigma</i> in the Des Moines River. RYAN W. DRUM. . . .	96
Preliminary Aspects of an Ecological Investigation of Lake East Okoboji, Iowa. ROGER VOLKER .....	99
Iowa Fungi Parasitic on Nematodes. DON C. NORTON .....	108
Inhibition of Germination of Oospores of <i>Peronospora</i> <i>Manshurica</i> . JOHN DUNLEAVY AND GLANN SNYDER .....	118
Infection of <i>Quercus Macrocarpa</i> by White and Gray Isolates of <i>Ceratocystis fagacearm</i> . M. A. MARCHETTI. . . .	122
Retention of Chlorophyll in Lesions Produced by Tobacco Ringspot Virus. JOHN DUNLEAVY .....	128
Measurement of Xylary Fluid Movement in Elm by the Thermoelectric Method. HAROLD S. McNABB, JR. AND JOHN H. HART .....	132
Culture of Excised Embryos of <i>Pinus ponderosa</i> . VIRGIL K. HOWE .....	137
Development of Axillary Buds of the Tillers of <i>Zea</i> . JOHN E. SASS .....	142
The Latex System of some Native Spurges. ROBERT C. LOMMASSON .....	147
Chromosome Study of <i>Arisaema</i> of Taiwan. TSENG-CHIENG Huang .....	152
B-Chromosomes and Pollen Size in Maize. PETER A. PETER- SON AND ALAN MUNSON .....	155
Yield Components in Oats. VI. Their Value in Selecting for Yield. K. J. FREY .....	160
Inheritance of Seed Weegiht and its Relation to Grain Yield in Oats. K. J. FREY .....	165
A Useful Planting-Jig and Plot Design for Experimental Planting. BEN F. GRAHAM, JR. ....	170

A Preliminary Survey of the Iowa Species of Hypocreaceae and Clavicipitaceae. LOIS H. TIFFANY AND JOSEPH C. GILMAN .....	173
--	-----

### CHEMISTRY

Gas Chromatography for the Undergraduate Student. ALEXANDER MACDONALD, JR. AND RONALD T. PFLAUM .....	178
The Direct Spectrophotometric Determination of Fluoride Ion. GERALD F. BRUNZIE AND RONALD T. PFLAUM .....	186
Anomalous Gas Exchange in Ascorbate Oxidation by the Myrothecium Enzyme. E. B. LILLEHOJ AND F. G. SMITH .....	193
Antibiotics Stimulating or Inhibiting Germination and Growth of Rice. ROBERT C. GOSS .....	199
A study of the Electrophoretic Mobilities of Multiple Myeloma Proteins. EMILIO ARREDONDO, W. D. PAUL AND J. I. ROUTH .....	205
Identification of Basic Concepts of Chemistry Appropriate for Grade Seven. PATRICIA SCHWIRLIAN .....	211

### CONSERVATION

The County Conservation Program in Iowa. J. HAROLD ENNIS	218
A Conserved Natural Area in Warren County. JACK L. CARTER .....	222
Scheming for Resource Management. LESTER F. FABER .....	225
Ovarian Analysis for Data on Corpora Lutea Changes in White-Tailed Deer. ARNOLD O. HAUGEN AND DAVID L. TRAUGER .....	229
Blood Parasites in Relation to Pheasants and Quail in Iowa. DAVID J. ROSLIEN, PAUL L. FORE, AND ARNOLD O. HAUGEN .....	237
Vernal Breeding of Cottontails in Iowa. PAUL D. KLINE .....	243
A Central Iowa Pheasant Nesting Study, 1961. VERNON WRIGHT AND PAUL OTTE .....	251
Bobwhite, Quail, Winter Weather, and Agriculture. M. E. STEMPEL .....	258

Semi-Controlled Hunting of Waterfowl at Lake Odessa, Louisa County, Iowa — 1960 and 1961. JAMES G. SIEH and WILLIAM ASPELMEIER .....	264
Notes on the First Rearing and Introduction of <i>Esox Mas-</i> <i>quinongy</i> in Iowa Waters. K. M. MADDEN AND A. D. LYNCH .....	272
Creel Census of Des Moines River Fishermen in Boone, Dallas, and Polk Counties, Iowa. HARRY M. HARRISON .....	277
Summer Food Habits of Yellow Bass and Black Bullheads in Clear Lake. BILL DEAN WELKER .....	286
Life History of the Creek Chub, with Emphasis on Growth. JAMES J. DINSMORE .....	296
The Control of Nuisance Aquatic Vegetation with Black Polyethylene Plastic. J. K. MAYHEW AND SYLVAN T. RUNKEL .....	302
Protection of Soil from Erosion by Swiftly Flowing Water. C. J. POSEY .....	307

PUBLISHED BY TITLE

Ancient Indians had Conservation Problems Too. MAR- SHALL MCKUSICK	
A Critical Analysis of Pest Control. HAROLD S. McNABB AND JOHN H. HART	
Some Physical Characteristics of Quail Eggs. EUGENE D. KLONGLAN	

GEOLOGY

Alluvial Fan Development at Franklin Bluffs Alaska. GARY S. ANDERSON AND KEITH M. HUSSEY .....	310
An Unusual Case of Stream Piracy. FRANK RECKENDORF AND KEITH HUSSEY .....	322
The Structure and Stratigraphy of the Skvor-Hartl Area, Southeast Linn County, Iowa. VERNE E. DOW AND STEWART D. METTLER .....	326
Ground Patterns as Keys to Photointerpretation of Arctic Terrain. KEITH M. HUSSEY .....	332

Unusual Exposure of Silurian-Devonian Unconformity in Loomis Quarry Near Denver, Iowa. FRED H. DORHEIN AND DON L. KOCH .....	341
A Late Wisconsin Giant Beaver in Northern Iowa. W. D. FRANKFORTER .....	350
Foraminiferal Paleoecology of the Gubik (Pleistocene) Formation of the Barrow Area, Northern Alaska. RICHARD W. FAAS .....	354
Cementitious Properties of Some Iowa Fly Ashes Without Lime Additives. MANUEL MATEOS AND DONALD T. DAVIDSON .....	362
Use of Phosphoric Acid and Furfuryl Alcohol for Soil Stabilization. G. L. RODERICK, T. DEMIREL, AND D. T. DAVIDSON .....	370
Destructive Distillation Products of Certain Iowa Carbonaceous Shales. LIONEL K. ARNOLD .....	379
X-Ray Diffraction Studies of Quaternary Ammonium Treated Montmorillonite. M. KERAREE, T. DEMIREL AND E. ROSAUER .....	384
Unit Cell Parameters of a Pozzolanic Reaction Product. GEORGE R. GLENN AND R. L. HANDY .....	390
Radiochemistry and Removal Characteristics of Radium Isotopes in Iowa Well Waters. R. L. MORRIS AND J. W. KLINSY .....	396
Conodont Zonation of the Early Upper Devonian in Eastern Iowa. GILBERT KLAPPER AND W. M. FURNISH .....	400
Regional Aspects of the Muddy Formation in the Windy River Basin, Wyoming. STANLEY D. WHITFORD, JR. ....	411

### MATHEMATICS

Newtonian Gravitational Potential for An Oblate Spheroid. KEMPTON L. HUEHN .....	431
Application of the Mellem Transform to Boundary Value Problems. DAVID LEMON .....	436
A Class of Vector Functions with Linear Norms. GEORGE SEIFERT .....	442

On the Construction of Measurable Sets. DONOVAN F.  
SANDERSON ..... 444

**PHYSICS**

Detection and Measurement of Air-Borne Radiation at  
Grinnell, Iowa. MICHAEL P. SCHULOFF AND JAMES  
WOLFSON ..... 446

Bismuth-Antimony Thermojunctions. DAVID C. KANE ..... 451

A Simple Transistor Characteristic Curve Tracer. EDWARD  
J. HILL ..... 455

**PSYCHOLOGY**

Motor Performance After Four Kinds of Verbal Pretrain-  
ing. MARILYN E. MARSHALL AND DON LEWIS ..... 459

Error Trends in Paired-Associates Learning After Response  
Familiarization. MARYHELEN HART AND MARILYN E.  
MARSHALL ..... 472

An Investigation of the Judged Complexity Stimuli with  
High Information Content. STEVE J. ZYZANSK, SHEL-  
DON K. EDELMAN, AND GEORGE G. KARAS ..... 479

Dial Legibility as a Function of Scale Graduation and  
Dial Shape. BRUCE B. BLACK, DOROTHY FLUGER, AND  
GEORGE G. KARAS ..... 486

The Value of Demonstration in Human Maze Learning.  
RICHARD A. PANMAN, SIDNEY J. ARENSON, AND MILTON  
E. ROSENBAUM ..... 490

Equal Rest-Work Ratios Under Massed and Distributed  
Conditions of Practice. B. L. KINTZ ..... 496

Explorations in the Measurement of Empathy as Analytical  
Predictive Ability. CALVIN J. DAANE AND GORDON J.  
RHUM ..... 502

**ZOOLOGY**

Lakeside Laboratory Publications 1960-1961. MARTIN J.  
ULMER ..... 513

Accurate Measurement of Relative Humidity in Field  
Biology. ROBER E. HENSHAW, DONALD G. LAUGHLIN,  
AND ALVIN WILCOX ..... 522

Distribution of the Blacknose Shiner, <i>Notropis heterolepis</i> Eigenmann and and Eigenmann, in Clay, Dickinson and Osceola Counties, Iowa. VIRGIL E. DOWELL . . . . .	529
Further Studies on Mixed Colonies in Ants. R. L. KING AND R. M. SALLEE . . . . .	531
Spiders of Dubuque County. GERALD W. KAUFMANN . . . . .	539
An Analysis of Mite Populations in Muskrat Houses. ROBERT A. BUCKLEY AND ELLIS A. HICKS . . . . .	541
Effects of Continued Selfing on <i>Hymenolepis Nana</i> (Cestoda). WALLACE A. ROGERS AND MARTIN J. ULMER . . . . .	557
Development and Comparative Morphology of the Gonopodium of Goodeid Fishes. CLARENCE L. TURNER, GUILLERMO MENDOZE AND REBECCA REITER . . . . .	571
Turtle Blood Cell Morphology. JUDITH M. HEADY AND T. EDWIN ROGERS . . . . .	587
A Test for the Identity of "Dysoptic" with "Blind" in Mice. MARGARET L. WATSON . . . . .	591
Growth of Turtles During Continual Centrifugation. CHRISTOPHER H. DODGE AND CHARLES C. WUNDER . . . . .	594
Active Transport of D-galactose and 3-0-methylglucose by Turtle Intestine. SISTER ALICE MARIE FOX . . . . .	600
Immunological Comparison of Rat Liver Tumors with Normal Rat Livers. R. A. FLICKINGER . . . . .	606
The Effect of Kinetin on the Multiplication Rate of <i>Blepharisma undulans</i> . MARY ANNUNCIATA McMANUS, AND SISTER MARY SHARON GERAGHTY . . . . .	610
Effects of the Antithyroid Drug, Propylthiouracil on Organ Weights, NaCl Intake, and Blood Glucose Levels of Adrenalectomized White Rats. ROSS A. MADDEN . . . . .	616
The Influence of the Antithyroid Drug, Propylthiouracil, on Gestation and Lactation in Rats. KENNETH M. COOK . . . . .	624
Periodicity and Synchronicity of <i>Plasmodium relictum</i> in the Pigeon. JOHN N. FARMER AND A. KENNETH MOORE . . . . .	636
Information for Authors . . . . .	645