# Table of Contents

Officers, Iowa Academy of Science ................................................. 8  
Members, Iowa Academy of Science ............................................. 10  
Proceedings of Annual Meeting for 1955 ...................................... 33  
Nomination for Honorary Fellow .................................................. 35  

## REPORTS

- The Secretary-Treasurer ...................................................... 36  
- Financial Statement ............................................................ 37  
- The Auditing Committee ....................................................... 38  
- The Executive Committee ..................................................... 38  
- The Librarian ................................................................. 39  
- The Committee on Finance and Endowment ............................... 40  
- The Membership Committee ................................................ 41  
- The Biological Survey Committee ......................................... 41  
- The Committee on Incorporation .......................................... 42  
- The High School Relations Committee .................................. 43  
- The Committee on Science Talent Search ............................... 46  
- The Committee on Conservation .......................................... 47  
  Burning in the Management of Prairie in Iowa,  
  J. M. Aikman ........................................................................... 53  
- The Resolutions Committee ................................................ 62  
- The Necrology Committee ................................................. 63  

## IN MEMORIAM

- Joseph Hall Bodine ............................................................ 64  
- Harold Burr Bryant ............................................................ 68  
- Dio Lewis Holl ................................................................. 71  
- John Milton Lindly ............................................................ 75  
- Herbert Osborn ...................................................................... 79  
- Oscar Wallace Park ............................................................. 82  
- Harold Stiles ........................................................................ 86  
- A. Milton Weidman ............................................................. 90  
- Frank Gary Brooks ............................................................. 66  
- Philip Greeley Clapp ........................................................... 69  
- William Henry Kadesch ....................................................... 73  
- Bradford Kuhns MacGaw ...................................................... 76  
- Jessie A. Parish ..................................................................... 81  
- Ralph M. Robinson ............................................................. 84  
- Reuel Hull Sylvester ............................................................ 88  
- Otis R. Wolfe ....................................................................... 91  

## BOTANY

- A Note on the Origin of “Blue Rain.” James M. Vinje and  
  Mary M. Vinje ........................................................................ 92  
- Notes on Iowa Rusts. John W. Baxter ..................................... 94  

Published by UNI ScholarWorks, 1955
A Fungal Infection of the Blue-Green Alga, *Chroococcus tur-gidus*. John D. Dodd

Susceptibility of Soybean Petioles to Attack By *Diaporthe phase-olorum* var. *caulivora*. John Dunleavy

Growth, Form and Survival of Plantation-grown Broadleaf and Coniferous Trees in Southeastern Iowa. Norman J. Hansen and A. L. McComb

Photoperiodism in Oats. S. C. Wiggans and K. J. Frey

Growth of Kidney Beans after Cotyledon Pruning. B. E. Michel

Distribution of Pteridophytes in Iowa. Tom S. Cooperider

Observations on Seeds of the Leguminosae: Mimosoideae and Caesalpinioideae. Duane Isely

Key to Seeds of Caesalpinioideae and Mimosoideae of North-Central States. Duane Isely

An Endospermmous Dicotyledon Seed for Botanical Instruction. Richard W. Pohl

*Thymelaea passerina*, A New Weed in the United States. Richard W. Pohl

The Flora of Johnson County, Iowa. Robert F. Thorne

Discovery and Description of a Sphagnum Bog in Iowa, With Notes on the Distribution of Bog Plants in the State. Martin L. Grant and Robert F. Thorne

The Genus *Asclepias* in Iowa. Dan Nicolson and Norman H. Russell

A Revision of the Gasteromycetes of Iowa. Jasper H. B. Garner


Natural Succession in Planted Conifer Forests in Eastern New York. Norman H. Russell


The Ecology of Balsa (*Ochroma lagopus* Swartz) in Ecuador. J. M. Aikman

CHEMISTRY

Science Courses Offered in the Parochial High Schools of Iowa. James W. Kercheval

Oxygen as Tracer in the Catalytic Decomposition of Potassium Chlorate. F. E. Brown and J. D. Woods


B-Vitamins Stimulatory to Cellulose Digestion by Washed Suspensions of Rumen Microorganisms. Glen Hall, Edmund W. Cheng and Wise Burroughs

GEOLGY

Comparisons of Petrographic and Engineering Properties of Loess in Southwest, East-Central, and Northeast Iowa. R. L. Handy, C. A. Lyon, and D. T. Davidson

Fine Sands in East-Central Iowa. A. E. Wickstrom, K. A. Riggs, Jr., and D. T. Davidson

Relation of Taintor and Haig Soil Series to Microrelief of the Buried Kansan Till Surface In Jefferson County, Iowa. George M. Schafer

Coal Spoil-Bank Materials as a Medium for Plant Growth. Dean W. Einspahr, A. L. McComb, F. F. Riecken and W. D. Shrader

The Iowan Terrace and Terrace Soils of the Nishnabotna Valley in Western Iowa. J. F. Corliss and R. V. Ruhe

A Drunlinoid Hill, Story County, Iowa. L. A. Thomas, K. M. Hussey, and C. J. Roy

A New Outcrop of the Rockville Conglomerate. Sherwood D. Tuttle and Richard C. Northup

MATHMATICS

A Network Representing Elastic Bodies in Spherical Coordinates. William A. Gross

Beams of Uniform Strength Subjected to Uniformly Distributed Load. J. P. Li and W. A. Gross

Bending of a Rectangular Plate with Even and Odd Order of Boundary Conditions. J. P. Li

PHYSICS

An Electronic Analog Computer for the General Physics Laboratory. H. H. Helmick and P. S. Helmick

PSYCHOLOGY

The Relationship Between “Achievement Imagery” and Stuttering Behavior in College Males. Leonard D. Goodstein, John G. Martire and Charles D. Spielberger

The Relationship Between Manifest Anxiety and Test Anxiety. William H. Lyle and Charles D. Smock

Proactive Interference as a Function of Amount of Original Training. Alfred Castaneda

The Generality of Level of Aspiration in Three Areas of Endeavor. Mary Catherine Hampton and Charles F. Haner
The Effects of Frequency of Usage on Pre-recognition Responses and Recognition Thresholds of Words. Charles D. Smock ................................................................. 421
The Bender Visual-Motor Gestalt Test as a Measure of Aggression in Children. James R. Taylor and Lowell W. Schenke ........................................................................ 426
A Re-Evaluation of the Auditory “Dead Time Constant.” Charles D. Parker and Earl D. Schubert .......................................................... 433
Response Strength as a Function of Delay of Reward and Physical Confinement. Peter Lynn Carlton ............................................... 438
Is Academic Survival in Engineering Related to Freshman Speed and Comprehension in Reading? James E. McCoy and Martin F. Fritz ........................................................................ 445
The Role of Different Sets of Verbal Cues in Six-Choice Reaction Time. William Lowe ........................................................................ 452
Distribution of Traffic Accident Problems With Respect to Certain Geographical Patterns. Elmer B. Siebrecht and Carl J. Eigenauer ........................................................................ 468
A Comparison of Methods for Handling Extreme Values in Experimental Procedure. Virtus W. Suhr ........................................................................ 473
Evaluation of Driver Education. Elmer B. Siebrecht .................. 479
Socio-Economic Status of a Sample of Rural Future Teachers Compared with Status of Rural Pupils in School. William H. Dreier .............................................................. 485

ZOOGOLOGY

The Influence of Growth Rate Upon Brain Development in Rana pipiens Tadpoles. Jerry J. Kolloos and Stephanie Henoch Barch ................................................................. 489
Evaluation of Techniques in Estimating a Mearns Cottontail Population. Charles W. Crunden and George O. Hendrickson ........................................................................ 498
French Zoology in the Twentieth Century. Louis Gallien .................. 502
Winged Workers in the Ant, Formica obscuriventris clivia Creighton. Robert L. King ........................................................................ 509
Notes on the Morphology and Classification of the Sarcophagidae and Other Calyptrates (Diptera). William L. Downes, Jr. .............................................................. 514

https://scholarworks.uni.edu/pias/vol62/iss1/2
Some Responses Made by Ten Duck Hosts Inoculated with Phanerozoite Stages of Plasmodium lophurae. Delma E. Harding ............................................................. 539

Some Responses of Chickens to Infection with Plasmodium lophurae. Delma E. Harding ........................................................................................................ 543

Notes on Tetracotyles within Echinostome Rediae from the Okoboji Region. Martin J. Ulmer ............................................................................................ 550

Fishes of Little Wall Lake, Iowa Prior to Dredging. Kenneth D. Carlander and George Sprugel, Jr. ................................................................................ 555

The Fluctuation in Abundance of Walleyes in Spirit Lake, Iowa. Earl T. Rose ........................................................................................................ 567

Food and Feeding Habits of Some Fishes in a Dredged Iowa Lake. Joseph H. Kutkuhn .............................................................................................. 576

Food of the Freshwater Drum, Aplodinotis grunniens Rafinesque in Four Dickinson County, Iowa Lakes. Tom Moen ................................................................. 589

Toxicity of Seven Different Insecticides to Rainbow Trout Salmo Gairdnerii (Richardson). James Mayhew ................................................................. 599


Variation in Length of Songs of the Black-headed Grosbeak During the Breeding Season. Henry G. Weston, Jr ............................................................... 618

Pheasant Nesting and Production in Winnebago County, Iowa, 1954. Eugene D. Kloglan ......................................................................................... 626

Notes on the Life Cycle of Bunodera eucaliae Miller (Trematoda, Allocreadiidae) of the Stickleback, Eucalia inconstans. Glenn L. Hoffman .................................................. 638


Phototropic Responses of Bugula Larvae in the Presence of Stimulating and Anaesthetic Agents. William F. Lynch ................................................................. 652

Observations on Eimeria from Ambystoma tigrinum, with Descriptions of Four New Species. L. H. Saxe ................................................................................. 663

Author Index ........................................................................................................ 674

Subject Index ...................................................................................................... 675