

Bac. botulinus in the pemmican, 0.2 gm was incubated anaerobically for four days in dextrose broth at 37° C. and two mice were inoculated intraperitoneally with 0.2 and 0.4 cc of the broth filtered through a Berkefeld "V" filter, with entirely negative results.

It is proposed to deposit sub-cultures of these organisms with the culture collection of the Society of American Bacteriologists, under the care of Dr. Ludwig Hektoen, of the McCormick Memorial Institute, Chicago.

NORMAN MACLE HARRIS

DEPARTMENT OF HEALTH OF CANADA,
OTTAWA, CANADA

THE MICHIGAN ACADEMY OF SCIENCE, ARTS AND LETTERS

THE thirtieth annual meeting of the Michigan Academy of Science, Arts and Letters was held at Ann Arbor, April 1 to 3, 1925. The presidential address, "American botany during the colonial period," was delivered by Professor H. H. Bartlett. Dr. Edward Francis, of the United States Public Health Service, addressed the Academy on "Tularaemia."

The following program was presented:

GENERAL SESSION

Williams James Beal, 1883-1924: ERNST A. BESSEY.

Botanizing in the Himalayas: L. A. KENOYER.

American astronomical expeditions to the Southern Hemisphere: W. J. HUSSEY.

The Tanager Expedition of 1923 to Johnston and Wake Islands in the north tropical Pacific and its botanical results: JAS. B. POLLOCK.

SECTION OF ANTHROPOLOGY

E. S. McCartney, chairman

The influence of tales of the marvelous on Spanish exploration in America: A. S. AITON.

The natural science of the Australian native: E. F. GREENMAN.

Recent advances in prehistoric anthropology and archeology: E. C. CASE.

The heredity of head form: H. H. BARTLETT.

Religion at the Algonquian level: W. B. HINSDALE.

The protective power of red: H. A. KENYON

Notice of Dr. Hinsdale's "Primitive man in Michigan": E. F. GREENMAN.

Longevity and rejuvenation in Greek and Roman folklore: E. S. MCCARTNEY.

SECTIONS OF BOTANY AND ZOOLOGY

Joint Session

*Variations and mutations in *Pestalozzia guipina**:
CARL D. LA RUE.

*The proportion of exceptions in the offspring of exceptional females from x-ray treatment of *Drosophila**: E. G. ANDERSON.

A dominant brown pericarp color in maize: E. G. ANDERSON.

*A preliminary report on inheritance of fruit length in *Capsicum**: E. E. DALE.

Experiments concerning the coloration of pigeons: Read by title. JAN METZELAAR.

*Genetics of color in *Macrosiphum**: A. FRANKLIN SHULL.

*Some observations on the chondriosomes in the male germ-cells of *Belostoma flumineum**: A. M. CHICKERING.

A suggestion concerning the mode of inheritance of mental ability: H. R. HUNT.

Birth-rates in the families of the Michigan Agricultural College: C. V. GREEN and H. R. HUNT.

SECTION OF BOTANY

J. B. Pollock, chairman

The fungus flora of Mt. Hood, with some new species: C. H. KAUFFMAN.

*Cultural life-histories of certain species of *Eutypella*, *Diatrypella* and *Cryptovales**: LEWIS E. WEHMEYER.

*The life-history of *Dimerosporium collinsii**: GEO. B. SARTORIS. (Presented by C. H. Kauffman.)

*On the distribution of the water molds, with notes on the occurrence in Michigan of members of the *Leptomitaceae* and *Blastocladiaceae**: BESSIE B. KANOUSE.

The reactions of the bean rust grown on leaves in solutions: CHARLES W. WATERS.

Rhizoctonias in culture: J. E. KOTILA.

Nutritive value of the Mung Bean: H. H. M. BOWMAN.

Rate of respiration in successive leaves of corn and sorghum: J. H. HOVER.

Growth curves in fruit of cucumber, tomato, summer squash and musk melon: F. A. GUSTAFSON.

The action of nutrient ions on certain enzymes in the sugar beet: DR. G. DOBY (visiting professor from Hungary), introduced by E. A. Bessey and R. P. Hibbard.

Further studies on the yield of corn as influenced by the date of planting: R. P. HIBBARD.

Studies of seed viability through the aid of electrical conductivity measurements. Preliminary report. R. P. HIBBARD and GEO. L. FICK.

Jane Colden, a pioneer in American botany: Read by title. H. H. BARTLETT.

Algae of the Douglas Lake region: ALMA B. ACKLEY.

The wild roses on and near the shore in the Mackinac region of Michigan: EILEEN W. ERLANSON.

The vegetation of the region of Douglas Lake, Michigan: I. Introduction, factors, general features and habits of the region: FRANK C. GATES. (Abstract presented by J. H. Ehlers.)

Meteorological data, Douglas Lake, Michigan, 1924: FRANK C. GATES. (Abstract by J. H. Ehlers.)

*Enlarged bases in the black ash (*Fraxinus nigra*)*

Marsh) in Michigan: FRANK C. GATES and C. O. ERLANSON.

An ecological study of Smith's bog, Cheboygan County, Michigan: EDITH WOOLLETT, DORIS DEAN and HELEN COBURN.

Application of Gleason's formula to a Carex lasiocarpa association, an association of few species: EDITH WOOLLETT, DORIS DEAN and HELEN COBURN.

The development of vegetation in the Porcupine Mountains of Michigan: H. F. DARLINGTON.

Can America produce its own rubber? Read by title. CARL D. LA RUE.

Morphology of the seed in Claytonia virginica: E. F. WOODCOCK.

Notes on Indian ruderals: L. A. KENOYER.

The source of materials composing the coral reefs on Oahu, Johnston and Wake Islands; is it of plant or animal origin? JAS. B. POLLOCK.

Variations in fungi: G. H. COONS.

ECONOMICS SECTION

Z. C. Dickinson, chairman

The relation of the soil survey to land classification: L. R. SCHOENMANN. Discussion, J. V. Van Sickle (by invitation).

Forecasting the price of wheat: C. C. BOSLAND (by invitation). Discussion, L. R. Dewey.

Proportions of distinguished men furnished by rural and urban districts: ROY H. HOLMES (by invitation).

The recent discount and open-market policy of the federal reserve system: R. G. RODKEY (by invitation).

The trend of bond prices: L. A. MORGAN.

Competition between labor and machinery: GEORGE E. BIGGE. Discussion, L. E. DEVOL (by invitation).

The second industrial conference and the settlement of labor disputes: S. M. LEVIN.

SECTION OF GEOLOGY AND MINERALOGY

L. M. Gould, chairman

The geology of southern Mexico: W. A. VER WIEBE.

The influence of joints in the formation of the islands in the western end of Lake Erie: C. W. COOK.

The crystal structure of the pyrite group: L. S. RAMSDELL.

The evolution of the Jolly Balance: E. H. KRAUS.

Factors that determine the direction of ice movement: FRANK LEVERETT.

Preliminary statement on the relation of recessional moraines to Niagara Falls: FRANK B. TAYLOR.

The effects of high temperature and time in the production of artificial minerals: A. B. PECK.

On a specimen of Stylemys nebracensis, preserving the skull: E. C. CASE.

On a new species of the Eocene crocodilian, Allognathosuchus: A. wartheni: E. C. CASE.

The unstable middle sections of island arcs: W. H. HOBBS.

Greater Asia and isostasy: FRANK B. TAYLOR.

Geology as a factor in soil classification: J. O. VEATCH.

A preliminary report on the petrography of the Caroline and Pelew Islands: W. F. HUNT.

The petrography of some Sierra La Sal dikes: L. M. GOULD.

The pigments of amethyst and smoky quartz: A summary. E. F. HOLDEN.

Thermo-optical properties of Heulandite: C. B. SLAWSON.

Notes on a fulgurite from South Amboy, New Jersey: W. M. MYERS and A. B. PECK.

Two new crinoids from the Devonian of Michigan: G. M. EHLERS.

Some new species from the Richmond of Michigan: R. C. HUSSEY.

New brachiopods from the Mississippian of Wayne County, Kentucky: G. M. EHLERS and M. S. CHANG.

A laccolith in the air: L. M. GOULD.

On the probable cause of the earthquake in the north-eastern United States, February 28, 1925: W. H. HOBBS.

SECTION OF HISTORY AND POLITICAL SCIENCE

A. S. Aiton, chairman

The Hispanic states and papal diplomacy before the year 1213: B. W. WHEELER.

The spirit and development of British administration in Michigan: NELSON V. RUSSELL.

The first St. Lawrence deepening scheme: GEORGE W. BROWN.

A reclassification of wars: PRESTON SLOSSON.

The ordinance-making powers of the French president: JAMES HART.

SECTION OF LANGUAGE AND LITERATURE

Oscar J. Campbell, chairman

Scholarship and the national drift in American literature: H. D. WILD.

The philosophy of Theodor Storm: On death: JOHN WILLIAM SCHOLL.

Muscular movement in the interpretation of speech phenomena: J. A. MUYSKENS.

Fugitive traces of self-portraiture in Wordsworth's "Excursion": PAUL MUESCHKE.

The influence of Spain on the French "Conteurs" of the sixteenth century: G. L. MICHAUD.

Slanging English words: R. W. COWDEN.

The rôle of Solomon in "The Song of Songs": LEROY WATERMAN.

Linguistics and biology: CLARENCE MEADER.

Crevecoeur and Thoreau: J. B. MOORE.

Hauptmann's "Promethidenloos": F. B. WAHR.

James Howell and Spain: C. P. WAGNER.

Favorite words: F. N. SCOTT.

SECTION OF MATHEMATICS

E. R. Sleight, chairman

(Program presented by the Michigan Section of the Mathematical Association of America)

Some new projective differential covariants of a congruence: HORACE L. OLSON.

On the origin of our number forms: T. W. FOULE.

The asteroids: LOUIS HOPKINS.

A college course in geometry for prospective high school teachers: GUY G. SPEAKER.

On a central-difference summation formula: WILMER JENKINS.

SECTION OF PSYCHOLOGY
F. L. Dimmick, *chairman*

Experimental work on maze learning: J. F. SHEPARD.
The use of the term "dynamic" in psychological literature: C. E. RAGSDALE.

The relative desirability of personality traits in social situations: C. S. YOAKUM.

Preliminary study in reasoning: E. B. SKAGGS.

The perception of the relative movements of two points of light: H. R. MAYBERRY.

SECTION OF SANITARY AND MEDICAL SCIENCE
C. C. Young, *chairman*

Surface tension and pellicle formation: M. S. MARSHALL.

Studies in the composition of the human fat: H. C. ECKSTEIN.

Fungi in relation to disease: ADELIA MCCREA.

The immunization of guinea pigs against Brucella melitensis infection: I. F. HUDDLESON.

Antigenic value of various tissue extracts in the Kahn test: PEARL L. KENDRICK and H. G. DUNHAM.

Keeping quality of standard Kahn antigen stored at different temperatures: PEARL L. KENDRICK and DORA JENKS.

Mutation of Bacteria: R. W. PRYER.

Leishmania donovani: M. H. SOULE.

A statistical study of 60,000 cases of venereal disease: W. J. V. DEACON.

Some interesting malformations: JAMES E. DAVIS.

An epidemiological study of the routine incidence of scarlet fever in Ingham County in 1924-1925: I. M. LICKLY.

SECTION OF ZOOLOGY
H. M. MacCurdy, *chairman*

The Physidae of the Au Sable River, Michigan: W. J. CLENCH.

A collection of amphibians and reptiles from southern Indiana and adjacent Kentucky: FRANK N. BLANCHARD.

Life-history notes on fishes from southern Michigan: T. L. HANKINSON.

The metamorphosis of the California ribbon-fish, Trachypterus rex-salmonorum: CARL L. HUBBS.

The smelt: its introduction, distribution and life-history in the Great Lakes waters: CHARLES W. CREASER.

Remarks on the Genus Bachia: ALEXANDER G. RUTHVEN.

The Unione fauna of Lake Erie and its tributaries: BRYANT WALKER.

A phylogenetic and geographical study of the Gyrinidae: MELVILLE H. HATCH.

Odonata collected in Cheboygan and Emmett Counties, Michigan: C. FRANCIS BYERS.

The mammal fauna of a woodlot in Washtenaw County, Michigan: CHAS. M. DAVIS, JR.

Zoological groups in museums: H. L. WARD.

Symposium—The Zoological Resources of Michigan

Michigan's conservation fallacy: ALEXANDER G. RUTHVEN.

The inland lakes: PAUL S. WELCH.

The fishes: C. L. HUBBS and JAN METZELAAR.

The birds and mammals: L. R. DICE.

The following officers were elected for the ensuing year: *President*, Chas. H. Cooley, Ann Arbor; *Vice-president*, Frank B. Taylor, Fort Wayne, Indiana; *Secretary-Treasurer*, L. R. Dice, Ann Arbor; *Librarian*, W. W. Bishop, Ann Arbor; *Editor*, Peter Okkelberg, Ann Arbor.

Section chairmen: Anthropology, W. B. Hinsdale, Ann Arbor; Botany, L. A. Kenoyer, Kalamazoo; Economics, Z. C. Dickinson, Ann Arbor; Geology and mineralogy, L. S. Ramsdell, Ann Arbor; History and political science, S. James Hart, Ann Arbor; Language and literature, C. P. Wagner, Ann Arbor; Mathematics, E. R. Sleight, Albion; Psychology, E. C. Rowe, Mt. Pleasant; Sanitary and Medical Science, R. W. Pryer, Detroit; Zoology, H. R. Hunt, East Lansing.

L. R. DICE,
Secretary

THE OHIO ACADEMY OF SCIENCE

THE thirty-fifth annual meeting of the Ohio Academy of Science was held at the College of Wooster, Wooster, Ohio, April 3 and 4, 1925, under the presidency of Dr. Edgar N. Transeau, of the Ohio State University. More than one hundred registered as in attendance and a spirit of unusual earnestness seemed to pervade the meetings. Forty-six new members were elected and two members were made fellows in the academy, namely, Henry Curtis Beardslee, of Perry, Ohio, and Dr. Joseph H. Todd, of Wooster, Ohio.

The geology section of the academy held its usual field meeting and excursion in the vicinity of Cleveland on May 30, 31 and June 1, 1924, under the leadership of Professor J. E. Hyde, of Western Reserve University, for the purpose of studying the Devonian and Mississippian formations of northeastern Ohio, including the famous Berea and Amherst quarries, the Cleveland shale and its fossil fish and the lower part of the Waverly, especially the Berea grit.

Upon recommendation by the board of trustees of the research fund it was voted that "the income from \$1,000 of the research fund be available each year for a grant to be known as the Emerson McMillin Grant, to be used either for assistance in some research problem or given as an award in recognition of some especially noteworthy contribution to science by some member of the academy." The balance of the fund and all income derived therefrom may be used or allowed to accumulate, as the board of trustees may