ness in grapes"; Don C. Warren, professor of poultry genetics, Kansas State College, "the phenomenon of ovulation in the domestic hen"; Allyn J. Waterman, assistant professor of biology, Williams College, "heteroplastic transplantations of rabbit and rat embryos"; P. W. Whiting, guest lecturer in zoology, University of Pennsylvania, "sex-determination in the parasitic wasp Habrobracon."

Anthropology and Psychology: Fay-Cooper Cole, professor of anthropology, University of Chicago, "racial criteria in the study of hair"; Ernest R. Hilgard, assistant professor of psychology, Stanford University, "quantitative characteristics of the process of acquisition and extinction of conditioned responses in man"; William A. Hunt, assistant professor of psychology, Connecticut College, "behavioral response to a shot stimulus"; Theodore F. Karwoski, assistant professor of psychology, Dartmouth College, and Mason Crook, instructor in psychology, University of California at Los Angeles, jointly, "quantitative investigation of the sensitivity of the blind spot for spectral light"; Paul Kirchhoff, research associate in anthropology, Columbia University, "native agriculture in South America"; Karl F. Muenzinger, associate professor of psychology, University of Colorado, "analysis of the function of punishment in learning"; Sidney M. Newhall, Sterling fellow, Yale University, "imagery in recurrent vision"; Cornelius Osgood, assistant professor and curator of anthropology, Yale University, "study of the existing anthropological collections from the Athapaskan Indians of Canada and Alaska which have been deposited in museums of northeastern Europe, especially Russia"; Vincenzo Petrullo, field director for South American research, University of Pennsylvania, "ethnological studies of the Yaruro peoples in Venezuela."

There will not be another meeting of the Committee on Grants-in-Aid this year. The next meeting of the committee will be held in March, 1936. Applications to be considered at this meeting must be on file with the Secretary of the Committee, Dr. Clarence J. West, not later than February 15, 1936.

ISAIAH BOWMAN,
Chairman, National Research Council

STATE ACADEMIES

THE OHIO ACADEMY OF SCIENCE

THE forty-fifth annual meeting of the Ohio Academy of Science was held on April 19 and 20, 1935, at the Ohio State University, under the presidency of Dr. James P. Porter, of Ohio University, Athens. The attendance was good, some 200 members and a large number of visitors, the sectional programs were rich and varied, and a fine spirit of good fellowship was evident on every hand. President Rightmire, of the Ohio State University, in his usual pleasing manner bade the academy welcome to the university and made some very fine remarks on the service of science to humanity. The invitation address was given by Mr. Julius F. Stone, traveler, lecturer, capitalist, on the subject, "The Canons of the Green and Colorado Rivers," illustrated with many beautiful slides. The president of the academy, Dr. Porter, chose for the subject of his presidential address, "Our Sciences with Man Left in," which he presented in a masterly way to the delight and enrichment of a large, select audience. Two other papers of general interest were presented before a general session of the academy, namely, one on "Some Scientific and Technical Problems Met with in Investigating the Explosion of the State Office Building," by Dr. James R. Withrow, of Ohio State University, and the other on "Bobwhite: Song Bird or Game Bird," by Dr. S. Prentiss Baldwin, of the Baldwin Research Laboratory, Gates Mills, Ohio.

Other outstanding features of the meeting were a joint meeting of the section of psychology and the Ohio Association of Consulting Psychologists, and a symposium on chemistry in biology under the joint auspices of the sections of botany and chemistry. All told, about 120 papers were presented in the various sectional meetings. The exhibits and demonstrations were of unusual interest, notably the *heavy water exhibit,* the spectrographic laboratories, ceramics and metallurgy, all of the department of chemistry of the university; also the earthworm (Nephridia in vitro) by Miss Hope Hibbard, of Oberlin College, and some smaller mammals of Wayne County, Ohio, by Earl Cady, of Wooster College.

Some 22 new members were elected, and the following members were advanced to the rank of fellows in the academy: Dr. Mary Auten, Ashland College; Dr. Earl Clark Case, University of Cincinnati; Dr. Fred Foreman, Oberlin College; Dr. Reuel B. Frost, Oberlin College; Dr. Amos Henry Hersh, Western Reserve University; Dr. Herrick Lee Johnston, Ohio State University; Dr. Samuel Charles Kendeigh, Baldwin Bird Research Laboratory, Gates Mills, Ohio; Dr. Harvey V. Moyer, Ohio State University; Dr. Ira Templin Wilson, Heidelberg College.

The academy passed the following resolutions regarding the so-called "Pest Hunts": "*Resolved,* That the Ohio Academy of Science urges the State Division of Conservation to initiate a thorough, scientific study of all predatory mammals in Ohio, to determine their distribution, abundance, rate of increase, and food

species eaten at various seasons and in various sections, and their economic relationships in the several parts of the state."

The forty-fifth meeting was brought to a close by the election of the following officers for the ensuing year:

President, Dr. Walter H. Bucher; *Vice Presidents—Zoology,* Dr. David F. Miller; *Botany,* Dr. Glenn W. Blaydes; *Geology,* Dr. Grace Ann Stewart; *Medical Sciences,* Dr. Charles A. Doan; *Psychology,* Dr. James R. Patrick; *Physics and Astronomy,* Dr. Charles W. Jarvis; *Geography,* Dr. Guy-Harold Smith; *Chemistry,* Dr. K. G. Busch; *Secretary,* William H. Alexander; *Treasurer,* Dr. A. E. Waller; *Members of the Executive Committee,* Dr. James P. Porter and Dr. Eugene Van Cleef.

WILLIAM H. ALEXANDER,
Secretary

THE IOWA ACADEMY OF SCIENCE

THE forty-ninth annual meeting of the Iowa Academy of Science was held with Grinnell College at Grinnell on April 19 and 20 with 249 members and visitors in registered attendance.

The presidential address, "This Changing World," was presented by Professor Edward Bartow, of the department of chemistry of the State University of Iowa. Other papers of general interest were: "The Neural Basis for a Psychogenetic Theory of Feeling and Emotion," by Professor C. A. Ruckmick, of the department of psychology of the State University of Iowa, and "Some Factors Affecting the Circulation Time of the Blood of Dogs," by Professor E. C. McCracken, of the department of physics of Iowa State College. The annual academy lecture was presented by Dr. Leroy C. Stewart, of the Dow Chemical Company, of Midland, Michigan. His subject, "The Magic Key," described and illustrated the production of bromine from sea-water.

The following officers and section chairmen were elected for the forthcoming meeting, which is to be held at Iowa City in April, 1936: *President,* R. E. Buchanan, Iowa State College; *Vice-President,* L. P. Sherman, Grinnell College; *Secretary-Treasurer* and *Representative of the American Association for the Advancement of Science,* J. C. Gilman, Iowa State College; *Editor,* Mrs. F. W. Nichols, Ames, Iowa; *Bacteriology and Botany,* H. A. Wilson, Coe College; *Chemistry, general and physical,* William Oelke, Grinnell College; *Chemistry, organic and biological,* Rachel Edgar, Iowa State College; *Geology,* J. E. Smith, Iowa State College; *Psychology,* A. R. Lauer, Iowa State College; *Mathematics,* Julia Colpitts, Iowa State College; *Physics,* Gerald Fox, Iowa State College; *Zoology,* U. A. Hauber, St. Ambrose College.

The academy convened in eight sections for the presentation of 117 papers of special interest. The Junior Academy of Science of Iowa met with the academy with an attendance of 150 members aside from the Grinnell High School students. Dr. R. W. Getchell, of the Iowa State Teachers College, Dr. W. F. Loehwing, of the State University of Iowa, and Dr. E. W. Lindstrom, of the Iowa State College, presented talks on their program.

JOSEPH C. GILMAN,
Secretary.

SCIENTIFIC APPARATUS AND LABORATORY METHODS

AN ILLUMINATOR FOR THE BINOCULAR DISSECTING MICROSCOPE

FOR viewing a transparent object by transmitted light with a binocular dissecting microscope, the ordinary artificial light sources do not easily provide equal illumination to both eyes. This difficulty has frequently been of considerable importance in the examination of nematode larvae in uncovered drops of water, but it has been obviated by the use of the illuminator described here. The basic principle of this device consists of the use of two equal light sources placed at such a distance apart that the same mirror reflects both beams squarely into the corresponding objectives. The particular design used has several additional advantages. The entire system is enclosed as a dust-tight unit to improve its efficiency and save cleaning time. In spite of the complete enclosure, the exposed surfaces are large enough to dissipate the heat rapidly and at a sufficient distance from the operator to eliminate any discomfort even in the hottest weather. The light sources and all reflecting surfaces are entirely removed from the field of vision, an important factor in the reduction of eye strain.

The entire unit is mounted in a sheet tin box, 25 by 40 cm and 19 cm high, with a tight-fitting slip-over cover. The box is painted dull black inside and out. In the accompanying figure the component parts are shown approximately to scale in positions for a microscope placed with the center of the mirror 10 cm from the window. Two sockets with an identical pair of ordinary 25 watt, inside-frosted bulbs are mounted in

[1] The studies and observations on which this paper is based were conducted under the auspices of the Department of Public Health of the Egyptian Government and the International Health Division of The Rockefeller Foundation.