best abstract, to be sure, falls short of the gain acquired by reading the article or book abstracted, but an abstract is better than complete ignorance of the publication concerned. Time in which to read all the originals is lacking with most teachers, who strive also to investigate. The cessation of the *Abstracts* would, therefore, mean loss to institutions and to their staffs in the value of both instruction given and research accomplished. We believe that the use of the *Abstracts* has brought home to us a realization that each volume, with all the advantages just hinted at, is really of much greater value to each of us, as individual teachers and investigators, than the nine dollars we have been paying for it each year. From the combined teacher-investigator standpoint, we, therefore, should look on the abandonment of the *Abstracts* as a distinctly backward step in biology. The wider view and the coordination of the various fields of biology which the *Abstracts* has made possible are indispensable. We trust that every effort will be made to secure adequate support for its continuance. We suggest that those who share our thoughts will, each, as far as his individual means allow, establish his own higher rate of subscription, thus showing, at the same time, his appreciation of the benefits which the *Abstracts* confers upon him. The *Abstracts* exists primarily for biologists, and it is the biologists who must largely determine whether it is to be continued or not.

PHILIP P. CALVERT
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REPORTS

APPROPRIATIONS FOR GRANTS-IN-AID BY THE NATIONAL RESEARCH COUNCIL

AT its May, 1935, meeting, the Committee on Grants-in-Aid of the National Research Council made seventy awards as follows:

Physical Sciences: Sebastian Albrecht, research associate, Dudley Observatory, "stellar wave-lengths and standard radial velocities"; J. A. Bearden, associate professor of physics, Johns Hopkins University, "a repetition of the Millikan oil-drop experiment and a redetermination of the electronic charge"; Lee A. Dubridge, professor of physics, University of Rochester, "the photoelectric effect in the extreme ultra-violet"; Joseph Kaplan, assistant professor of physics, University of California at Los Angeles, "interpretation of the Aurora spectrum"; Gleason W. Kenrick, visiting professor of physics, University of Puerto Rico, "radio transmission with particular reference to phenomena peculiar to tropical latitudes"; M. Stanley Livingston, instructor in physics, Cornell University, "nuclear investigations"; J. Rud Nielsen, professor of theoretical physics, University of Oklahoma, "Raman spectra of simple polyatomic molecules"; T. Smith Taylor, professor of physics, Washington and Jefferson College, "development of a standard method for the measurement of the power factor of insulating materials over a frequency range of one megacycle to one hundred megacycles"; Samuel R. Williams, professor of physics, Amherst College, "inter-relations of magnetism and mechanical hardness"; Richard S. Zug, assistant professor of mathematics and astronomy, Drake University, "galactic star clusters."

Chemistry: Richard McL. Badger, assistant professor of chemistry, California Institute of Technology, "the spectra of the simpler polyatomic molecules in the photographic infrared"; James A. Beattie, associate professor of physico-chemical research, Massachusetts Institute of Technology, "relation of the International Temperature Scale to the absolute scale in the range from the freezing point of water to the boiling point of sulphur"; A. Witt Hutchison, assistant professor of chemistry, Pennsylvania State College, "measurement of heat capacities at temperatures attainable with liquid helium"; H. I. Schlesinger, professor of chemistry, and W. C. Johnson, associate professor of chemistry, University of Chicago, jointly, "the hydrogen compounds of boron, silicon and arsenic, and their derivatives"; Nelson W. Taylor, professor of ceramics, Pennsylvania State College, "activation energies in solid phase reactions involving the various polymorphic forms of silica"; Arthur A. Vernon, instructor in physical chemistry, Rhode Island State College, "solubility of electrolytes in non-aqueous solvents"; Roger J. Williams, professor of chemistry, Oregon State College, "the chemical isolation and study of pantothenic acid."

Geology and Geography: Charles Deiss, associate professor of geology, University of Montana, "stratigraphic and paleontologic studies of the Cambrian formations of Montana and Wyoming"; Donald McCoy Fraser, assistant professor of geology, Lehigh University, "petrogenesis of the crystalline rocks in eastern Pennsylvania"; Elbridge C. Jacobs, professor of geology, University of Vermont, "installation of a seismograph for the completion of the seismographic station at the University of Vermont"; K. C. McMurry, professor of geography, University of Michigan, "development of methods for utilizing aerial photography in land inventory and classification"; Oscar B. Muench, professor of chemistry and physics, New Mexico Normal University, "determination of the age of samples of monazite and thucholite from Glorieta, New Mexico"; F. J. Pettijohn, assistant pro-

fessor of geology, University of Chicago, "analysis and correlation of areal mapping in the Lake Superior pre-Cambrian province"; Gordon Rittenhouse, research assistant in geology, University of Minnesota, "geology of a portion of the Savant Lake area in northwestern Ontario"; Harold W. Scott, instructor in geology, Montana School of Mines, "the micro fauna of the Carboniferous of Montana"; W. H. Twenhofel, professor of geology, and R. R. Shrock, assistant professor of geology, University of Wisconsin, jointly, "field and laboratory studies of the Silurian of Newfoundland."

Medical Sciences: M. Bodansky, professor of pathological chemistry, University of Texas Medical School, "the relation of the thyroid and adrenals to the composition and metabolism of cardiac and skeletal muscle"; S. J. Crowe, adjunct professor of laryngology and otology, Johns Hopkins University School of Medicine, "the rôle of the several parts of the middle and inner ear in hearing"; George M. Curtis, professor of surgical research, Ohio State University Medical School, "daily loss of iodine due to toxic goiter"; Harry H. Donnally, professor of pediatrics, George Washington University School of Medicine, "the use of culture-grown vaccinia virus in vaccinating newly born infants"; J. A. E. Eyster, professor of physiology, University of Wisconsin, "action potentials in heart and skeletal muscle"; Louis F. Fieser, associate professor of chemistry, Harvard University, "carcinogenic hydrocarbons and their derivatives"; E. M. K. Geiling, associate professor of pharmacology and experimental therapeutics, Johns Hopkins University Medical School, "histological and pharmacological study of the glands and other parts of whales"; Edward L. Howes, research assistant in surgery, Yale University School of Medicine, "wound healing strength"; William G. Lennox, instructor in neurology, Harvard University Medical School, "the electrical activity of the brain as related to clinical neurology"; Valy Menkin, instructor in pathology, Harvard University Medical School, "tuberculosis and inflammation in relation to bacterial invasiveness"; C. Phillip Miller, associate professor of medicine, University of Chicago Medical School, "the immunological properties and toxicity of various chemically isolated fractions of the meningococcus cell"; Mont R. Reid, professor of surgery, University of Cincinnati College of Medicine, "therapeutics of arterial disease"; B. T. Simms and J. N. Shaw, professors of veterinary medicine, Oregon State College, jointly, "lungworm infestation in sheep and goats"; Robb S. Spray, professor of bacteriology and public hygiene, West Virginia University Medical School, "taxonomic study of the sporulating anaerobes"; Charles W. Turner, associate professor of dairy husbandry, University of Missouri, "the physiology of the hypophysis in relation to lactation"; William F. Windle, associate professor of anatomy, Northwestern University Medical School, "development of behavior in the embryo correlated with development of intrinsic structure of the nervous system"; J. M. Wolfe, assistant professor of anatomy, Vanderbilt University School of Medicine, "morphologic studies on the relation of the anterior pituitary to the reproductive system"; Isolde T. Zeckwer, associate in pathology, University of Pennsylvania School of Medicine, "morphological and functional studies of the pituitaries of rats following thyroidectomy."

Biological Sciences: S. Prentiss Baldwin, director of the Baldwin Bird Research Laboratory, Cleveland, "metabolism of bird embryos during incubation"; Sherman C. Bishop, professor of zoology, University of Rochester, "the salamanders of North America north of Mexico"; H. O. Burdick, associate professor of biology, Alfred College, "the physiology of fallopian tubes and factors controlling the passage of ova through these tracts"; Charles E. Burt, professor of biology, Southwestern College, "phylogenetic study of the North American lizards"; J. F. Gates Clarke, instructor in zoology, State College of Washington, "revision of the North American moths of the Genera *Agonopteryx* and *Depressaria*"; Harry F. Clements, associate professor of botany, State College of Washington, "the freezing resistance in the needles of *Pinus ponderosa* and *Pseudotsuga taxifolia*"; Elizabeth Fekete and C. V. Green, research associates, Roscoe B. Jackson Memorial Laboratory, jointly, "the effect of the removal of the mammary glands on the incidence of tumors in a 'high tumor' strain of mice"; William R. Horsfall, professor of biology, Agricultural and Mechanical College, Arkansas, "the abundance and distribution of species of mosquitoes in southeastern Arkansas"; R. R. Huestis, professor of zoology, University of Oregon, "the inheritance of brown, silver, and flexed tail in *Peromyscus maniculatus*"; F. B. Hutt, professor of poultry husbandry and animal genetics, Cornell University, "the pathological chemical embryology associated with the occurrence of chondrodystrophy in embryos of the domesticated fowl"; Alfred C. Kinsey, professor of zoology, Indiana University, "collection and study of Mexican gall wasps and their oak hosts"; Leon H. Leonian, mycologist, West Virginia Experiment Station, "the isolation and identification of growth and sexuality promoting substances for fungi"; C. C. Little, director of the Roscoe B. Jackson Memorial Laboratory, "the transplantation of early unimplanted ova from the fallopian tube of pregnant mice of a high tumor stock to the uterus of pregnant animals from a low tumor stock, and *vice versa*"; A. B. Stout, director of the laboratories, New York Botanical Garden, "seedless-

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