

all times. There is no evidence from our studies of a reversal of these processes or of any hydrolysis of the carbohydrate grains after they are formed. So far we have not found an intermediate polysaccharide not associated with the globules either in ordinary sweet corn, or in waxy sweet corn.

A more detailed description of carbohydrate storage in the endosperm of corn together with the experimental data will be published later.

LOIS LAMPE

MARION T. MEYERS

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OFFICE OF CEREAL INVESTIGATIONS, BUREAU
OF PLANT INDUSTRY, U. S. DEPARTMENT OF
AGRICULTURE, COOPERATING

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE ORGANIZATIONS RELATED TO BOTH ZOOLOGY AND BOTANY AT THE WASHINGTON MEETING

(Reports for Sections F and G appeared in *Science*
for February 6 and reports for the two corre-
sponding groups of societies appeared
in *Science* for February 27 and
March 6)

The American Society of Naturalists

President, William H. Howell.

Secretary, A. Franklin Shull, University of Mich-
igan, Ann Arbor, Mich.

(Report by A. Franklin Shull)

The American Society of Naturalists held sessions on only one day, Thursday. The morning session was devoted to an address by Dr. John C. Merriam, of the Carnegie Institution of Washington, on "Time and space as factors in the problem of evolution." In the afternoon was given a symposium on "Growth," participated in by Dr. Charles R. Stockard, with a paper on "The nature of growth from the standpoint of its deviations," and by Dr. D. T. MacDougal, who spoke on "Conditions of accretion and distention of plant cells." Two other papers, by Dr. Alexis Carrel and Dr. Lafayette B. Mendel, respectively, had been arranged for, but the speakers were unable to attend the meetings. The naturalists' dinner in the evening was followed by an address by the president, Professor William H. Howell, on "Theories of inhibition."

The Ecological Society of America

President, Edgar N. Transeau.

Secretary, A. O. Weese, University of Oklahoma,
Norman, Okla.

(Report by A. O. Weese)

The society held sessions on four days beginning Monday, December 29. The opening session on Monday afternoon was a symposium on "Soil reaction," the chief participants in which were Frederick V. Coville, W. P. Kelley, C. S. Scofield and E. T. Wherry. The attendance at this session taxed the capacity of the meeting room and indicated widespread interest in this comparatively new field. The Wednesday afternoon symposium on "The plant and animal ecology of the coastal plain" was the second of a series, the first (on "The ecology of the Ohio region") having been held at Cincinnati this year. The interest aroused makes it probable that the series will be continued at Kansas City next year. Joint sessions were held with the Entomological Society of America on Tuesday, with the Botanical Society of America on Wednesday, and with the American Society of Zoologists on Thursday. Among the more important reports received at the business sessions were those of the representatives of the society on the Council of the Union of Biological Societies, that of the delegate to the National Conference on Outdoor Recreation and that of the representative on the Council on National Parks, Forests and Wild Life. Report of progress was made by the Glacier Bay Committee, and the editorial committee of the *Naturalists' Guide* reported that the manuscript of this important work had been turned over to the publisher. The Committee on the Preservation of Natural Conditions will continue its efforts to establish and protect natural areas. The officers elected for the coming year are: President, A. S. Pearse, University of Wisconsin; vice-president, J. E. Weaver, University of Nebraska; secretary-treasurer, A. O. Weese, University of Oklahoma. The representatives of the society in the Council of the American Association will be E. N. Transeau and W. C. Allee.

The American Microscopical Society

President, B. H. Ransom.

Secretary, Paul S. Welch, University of Michigan,
Ann Arbor, Mich.

(Report by H. J. Van Cleave)

The forty-third annual meeting of the American Microscopical Society was held on December 31. Reports of officers comprised the chief business. Secretary Paul S. Welch tendered his resignation. In accepting the resignation, the society extended to Professor Welch a vote of appreciation. The following officers were elected: President, C. O. Esterly, Occidental College, Los Angeles; first vice-president, E. M. Gilbert, University of Wisconsin; second vice-president, A. M. Chickering, Albion College; secretary, H. J. Van Cleave, University of Illinois, for three

years; *treasurer*, Wm. F. Henderson, Mellon Institute, for one year; *custodian*, Magnus Pflaum, Philadelphia, for 2 years; *elective members of executive committee for 1925*, G. R. La Rue, University of Michigan; Z. P. Metcalf, North Carolina State College of Agriculture and Engineering; W. A. Hilton, Pomona College.

The American Nature-Study Society

President, M. R. Van Cleve.

Secretary-Editor, Mrs. Anna B. Comstock, 123 Roberts Place, Ithaca, N. Y.

(*Report by Anna B. Comstock*)

Following is a summary report of the Washington sessions. (1) Mrs. Elizabeth Peeples, director of nature study, schools of Washington, D. C., spoke on the various types of assistance which the U. S. Bureau of Forestry, the U. S. Weather Bureau, the U. S. Biological Survey and other government departments can render the nature-study teacher. Lists of bulletins and loans of slides and photographs are prepared by the department of agriculture for distribution to teachers upon request. (2) Dr. Harry Oberholser, of the U. S. Biological Survey, gave an address on conservation in which he laid down the principles of a sane conservation policy for animal life, based on exact knowledge of life habits and food, and giving due consideration to the needs of man and the balanced economy of nature. (3) Dr. Vernon Bailey, chief field naturalist, U. S. Biological Survey, gave a most valuable illustrated lecture on "Our friends and foes in the mouse world." The distinct economic value to man of some species was a revelation to many in the audience. (4) Mr. Arthur Newton Pack, associate editor, *Nature Magazine*, who was an active member of the committee on education of President Coolidge's recent Conference on Outdoor Recreation, spoke on the relation of the nature-study movement to the program of a more extensive use of outdoor recreation by the American people. A program of education in the schools which will train the children to see, understand and enjoy the phenomena of the out-of-doors will be of inestimable value. (5) Mrs. John D. Sherman, president of the General Federation of Women's Clubs of America, and intensive development of nature education in the schools, including the project of the establishment of a national normal school for the training of nature, presented the federation's plan for a more extensive and intensive development of nature education in the schools, including the project of the establishment of a national normal school for the training of nature-study teachers and supervisors. (6) Professor E. L. Palmer, professor of rural education in the New York

College of Agriculture, Cornell University, presented a study of the nature-study interests among rural children, and some preliminary studies which seem to indicate striking differences between the science interests of city and rural children. He urged the city supervisors present to conduct more surveys among city children. Reports of committee chairmen were made on the following subjects: (a) "Survey of nature-study teaching in city schools," submitted by the chairman, Miss Clelia Paroni, supervisor of nature study in the schools of Berkeley, California. (b) "Survey of teaching of nature study in statewide programs for rural schools," submitted by Professor E. L. Palmer, of Cornell University. (c) "The problem of training teachers for nature-study teaching," submitted by the chairman, Professor W. G. Vinal, of the Rhode Island School of Education. (d) "Statement of the objectives in nature education and of the principles underlying the making of a course of study," submitted by the chairman, Mrs. Susan S. Albertis, Wilson Normal School, Washington, D. C. One session was given to an open discussion of several topics among which were: the relation of nature study to gardening, to geography and to general science; nature-study readers and text-books; correlation versus a special place on the school program. Professor M. R. Van Cleve, director of nature study and general science in the schools of Toledo, Ohio, was reelected president and Mrs. Anna B. Comstock, Ithaca, N. Y., was reelected secretary-editor.

The Phi Sigma Biological Society

President, Ira E. Cutler.

Secretary, C. I. Reid, University of Chicago, Chicago, Ill.

(*Report by the secretary*)

Phi Sigma Society held its first national convention on Monday, December 29, with two sessions. Delegates from every active chapter were present. The sessions were devoted to revising the constitution and reorganizing the society with a view to rendering greater service to beginning students in biological sciences, and to the laying down of a definite program as a national organization. The outstanding point of interest is the arrangement for a scientific program in connection with the next annual meeting of the American Association for the Advancement of Science, at Kansas City. This plan is of especial interest in view of the suggestion of retiring President Walcott that a junior section of the American Association be provided. It is the aim of Phi Sigma to partially fill that need in providing a place for younger students of biological sciences to report their initial efforts in research, regardless of the elementary

nature thereof. This arrangement has been made in the belief that not enough attention has been in the past devoted to the encouragement of research among younger students. It is believed that Phi Sigma can fulfill that need for the biological sciences and it is expected that the organization will in future devote its efforts solely to that end. It is not contemplated, however, that the society will become a rival to any existing organization serving a similar purpose.

The Genetics Sections of the American Society of Zoologists and the Botanical Society of America

Chairman, W. E. Castle.

Secretary, D. F. Jones, Connecticut Agricultural Experiment Station, New Haven, Conn.

(Report by D. F. Jones)

What part heredity and environment may have in determining certain characteristics in man received a definite answer from H. J. Muller, at the meeting of the Genetics Sections at Washington, who cited a case of twins separately reared from birth under conditions which were quite dissimilar. When tested at the age of 31, they were remarkably alike in their scores in intelligence tests. In striking contrast were the results of non-intellectual mental tests; in temperament, emotion, social attitude, association and tapping tests they consistently showed great differences, apparently to be explained by their different past experiences. This single case demonstrates very clearly that intelligence may be largely independent of environment and past experiences, while psychic differences may have very little genetic basis. A hypothesis to account for "crossing-over" in the peculiar chromosome situation which exists in *Oenothera* was presented by R. E. Cleland. Certain chromosomes were shown to form in rings. The formation of these rings and the way the chromosomes separate at cell division determines the association or disassociation of factors without the interchange of parts of chromosomes. The results of cytological investigations in many species of plants and animals were presented together with detailed facts of inheritance in many special fields. The effects of external modifying agencies, such as X-rays, upon the germplasm and the chromosome mechanism were reported in detail by several investigators. That a transplantable cancer may change in its ability to grow in certain strains of mice was stated by L. C. Strong. The origin of a fertile strain of *Drosophila* which is largely sterile when crossed with other strains, thus closely approximating the conditions in which species are separated in nature, was reported by H. H. Plough. Abstracts of all the papers were published in the *Anatomical Record*, for December 25, 1924, copies of which may

be secured from the Wistar Institute as long as they are available. H. H. Bartlett was elected chairman for 1925, with F. D. Jones continuing as secretary.

ANTHROPOLOGICAL SOCIETIES AT THE WASHINGTON MEETING

(A report for Section H appeared in *Science* for February 6.)

American Anthropological Association

President, Aleš Hrdlička.

Secretary, A. V. Kidder, Andover, Mass.

(Report by A. V. Kidder)

The twenty-third annual meeting of the Anthropological Association was held in the National Museum on Thursday and Friday. In accordance with a custom that has been growing from year to year, the members confined themselves to the reading of papers on cultural subjects and presented their communications on physical anthropology at the sessions of Section H.

The retiring president, Dr. Walter Hough, opened the meeting on Thursday with an interesting paper on the distribution of an unusual type of chipped stone knife, examples of which have been found in New Mexico, Texas and other western areas. The bulk of the communications presented at this session were reports of field-work accomplished during the past year under the auspices of various institutions, such as the Smithsonian, the American School of Prehistoric Archeology in Europe, the National Geographic Society and the Museum of the American Indian. An encouraging feature was the evidently growing interest in anthropology throughout the Middle West, as evidenced by papers on Michigan archeology, and on the splendid collections of paleolithic material recently acquired by the Beloit Museum. Mr. Pond, of that museum, exhibited a series of original specimens of paleolithic carvings on stone and a magnificent necklace of Aurignacian period. On Friday there were papers of outstanding interest by Dr. E. Sapir, of the Victoria Memorial Museum, Ottawa, on "The Athabascan language;" by Dr. Elsie C. Parsons on "Tewa ceremonial," and by Dr. F. G. Speck on "The culture problems of the Northwest."

The American Folk-Lore Society

President, Elsie Clews Parsons.

Secretary, Gladys A. Reichard, Barnard College, New York City.

(Report by Gladys A. Reichard)

The annual meeting of the American Folk-Lore Society was held in the National Museum on Thursday,