The program started with a dinner at the school on Friday evening, followed by two illustrated lectures in the Assembly Hall. Dr. William N. Fenton, associate anthropologist of the Bureau of American Ethnology, Smithsonian Institution, Washington, D. C., spoke on the subject, "Ethnobotanical Remains among the Senecas." He discussed the use of native plants in primitive medicine, religious ceremonies and aboriginal industries. A. F. Hough, assistant silviculturist of the Allegheny Forest Experiment Station, Philadelphia, Pa., delivered the second lecture, "Research Projects in the Allegheny National Forests." Both talks were based on prolonged technical studies and were greatly appreciated by the audience of about fifty persons.

Saturday morning was devoted to a foray on Jones Hill, south of Steamburg, N. Y., about fifteen miles from the school. Steamburg lies in the terminal moraine of the last glaciation, and the upper slopes of Jones Hill were unglaciated. An unusual variety of vascular plants were found in this one locality. Splendid views of the surrounding country rewarded those who reached the top.

At noon the caravan followed New York State Route 17 along the picturesque Allegheny River Valley for nearly twenty-five miles to St. Bonaventure. Arrangements for luncheon had been made through the kind offices of Professor Hubert Vecchierello, head of the biology department at the college. The medieval atmosphere of the huge refectory and the tour of the splendid romanesque library will not soon be forgotten.

Later the party returned to Steamburg to visit a bog in the terminal moraine area. All five of the native coniferous trees, tamarack, black spruce, balsam fir, white pine and hemlock, were found. Of special interest was the discovery of *Arisaema stewardsoni* at Chamberlain's Bog by Dr. Norman C. Fassett.

After dinner at the Allegany School the evening of Saturday was spent informally with the library and laboratories of the school open to the guests so that finds of the day could be examined and discussed. Some enthusiasts worked until after midnight arranging their collections.

Short forays designed to accommodate special interest groups were held on Sunday morning. W. Burdett Moose, high-school principal of Coudersport, Pa., led the Fern Foray to South Mountain and Sheffield Hill. Dr. Robert B. Gordon, of the State Teachers College at West Chester, Pa., and L. K. Henry, of the Carnegie Museum at Pittsburgh, led another foray through the mature forest area known as Big Basin for the benefit of forest ecologists and mycologists. A general botanical foray to Bear Bog was led by Homer A. Jack, of Cornell University. Dr. R. H. Goodwin, of the University of Rochester, Dr. Norman C. Fassett, of the University of Wisconsin, and Dr. Earl E. Sherff, of the Chicago Teachers College and Field Museum, were among the able participants who assisted. A fourth foray was planned for the bryologists and lichenologists, with Olean Rock City as their destination. Dr. Margaret Fulford, of the University of Cincinnati, Dr. P. Boehner, of St. Bonaventure College, and Mr. and Mrs. Warren Bleekman, of Buffalo, N. Y., furnished leadership.

The conference closed on Sunday with a dinner at the Allegany School. Chauncey J. Hamlin, president of the Buffalo Society of Natural Sciences, made a presentation speech awarding the Pugsley Bronze Medal to William P. Alexander, curator of adult education at the Buffalo Museum, for his pioneer work in establishing the first nature trail in the Allegany State Park in the summer of 1921.

ROBERT B. GORDON,
Director
ALLEGANY SCHOOL OF NATURAL HISTORY

REPORTS

THE WILLIAM JOHN GIES AWARD, RESEARCH FELLOWSHIPS AND GRANTS-IN-AID OF THE AMERICAN COLLEGE OF DENTISTS

THE Committee on Dental Research take pleasure in reporting that the accomplishment of two primary objectives, the initial bestowal of the William John Gies Award and the assignment of the first research fellowships and grants-in-aid, has coincided appropriately with the centennial of organized dentistry.

In undertaking the necessary survey of the need and opportunity for promoting dental research, our greatest encouragement and reassurance lay in the fact that we could look to the International Association for Dental Research for guidance and support, relying upon the valuable experience gained by them in their continuous efforts towards the scientific solution of dental problems and the standards of quality and intelligence which have been set by their distinguished *Journal of Dental Research*. The association listened cordially to a preliminary outline of our plans and projects and lent to our deliberations the services of a cooperative committee, whose information, advice and support have been available at all points, and, needless to say, of inestimable service in the attainment of our objectives. We are indeed most grateful to

these gentlemen. The value and significance of being in touch with minds striving toward the upbuilding of dental science, and the intrinsic worth of their assistance in setting up definite standards and regulations will be an enduring influence, we hope, in making the administration of our research funds an increasingly effective stimulus to professional and scientific growth.

In accordance with the policy of the college to give public recognition to one who in any field of science has made an outstanding contribution to the progress of dentistry, the Centennial Celebration in Baltimore was selected as a most fitting occasion for the initial William John Gies Award of the college. It was therefore bestowed, on March 17, 1940, upon Peter John Brekhus, of Minneapolis, for distinguished services in the cause of dental education and research in this country. The award, in the form of a suitably engrossed citation, was presented not only to glorify the recipient in the eyes of his fellow-workers, thus adding to the prestige of the quietly effective labors to which our research workers are faithfully devoting themselves, but also to acknowledge, as openly and strikingly as possible, the debt of all members of our profession to those who fulfil in highest measure the avowed function of us all—to enlarge the scope of dental science so far as experience, ability and opportunity will permit. It is the earnest hope of our committee that the simple ceremony at Baltimore may have impressed upon the public at large the fact that we—the whole body of our profession—are engaged upon an endless quest, to seek out the ultimate laws of health and discover more and more surely the principles which govern their application to human welfare.

Our research fellowships and grants-in-aid are intended as a practical expression of this same fundamental need in our professional life—a need not only of the results which research may produce, but also of the pervading influence of the spirit of research. We must live not only in the present, with its task and its reward; but with the zest of fresh discoveries and new insights which may lie just ahead—with the constant expectation that old difficulties will vanish as the forces of nature are better understood. Little by little we can gain upon the vast areas of the unknown; and to promote this conquest the research funds have been awarded, with our best wisdom and discrimination, after due study of the credentials and projects of the applicants by a subcommittee which had previously set up the necessary mechanism of appropriation, application, supervision and publication of results. The names of the successful applicants, with the sums awarded, the inquiries and where they are to be pursued are as follows:

Dr. Harrison R. Hunt and Dr. Carl A. Hoppert, $100.00, "Inheritance factor in resistance and susceptibility to dental caries in rats," Michigan State College.

Dr. Albert H. Kniesner, $500.00, "The factors in saliva which influence the growth of *L. acidophilus* and are indicative of the presence or absence of dental caries," School of Dentistry, Western Reserve University.

Dr. Sidney B. Finn, $1,200.00, "The effect of applications of sodium fluoride in preventing and controlling dental caries in children," School of Dentistry, University of Rochester.

Dr. Samuel Seltzer, $500.00, "The anti-bacterial action of drugs which have been recommended for cavity sterilization," Dental School, University of Pennsylvania.

Dr. M. L. Tainter, $400.00, "The general problems involved in the evaluation of the abrasiveness of dentifrices and their individual constituents," College of Physicians and Surgeons, San Francisco, Calif.

Dr. James Nuckolls, $500.00, "The primary centers of lobular development, growth and calcification in the tooth," Dental College, University of California.

Dr. B. Orban, $500.00, "Wound healing after different methods of gingivectomy and post-operative treatment," Dental School, Northwestern University.

William J. Furuta, $1,000.00, "Histologic study of the effect of various mineral deficiencies in dental and oral structures in animals," College of Dentistry, University of California.

A. L. MIDGLEY,
Chairman

COMMITTEE ON DENTAL RESEARCH OF
THE AMERICAN COLLEGE OF DENTISTS

SPECIAL ARTICLES

THE VOLTAMMETRIC DETERMINATION OF OXYGEN

BY the term "voltammetry" we mean the determination and interpretation of current-voltage curves obtained in electrolysis experiments using a suitable microelectrode as an indicator electrode. By indicator electrode we mean that the current is determined entirely by the phenomena occurring at that particular electrode, the potential of which may be varied by varying the e.m.f. applied across the electrolysis cell consisting of the indicator electrode and a depolarized reference electrode of practically constant potential. When using the dropping mercury electrode the terms "polarography" (self-registering apparatus) and "polarometry" (manual apparatus), introduced by Professor J. Heyrovsky in Prague, are synonymous with voltammetry.

Oxygen can be determined in a simple way with the dropping mercury electrode.[1,2,3] Our studies have

[1] V. Vitek, *Coll. Czech. Chem. Comm.*, 7: 537, 1935.