Pennsylvania State College; *Vice-president,* Dr. C. A. Horn, Albright College; *Secretary-Treasurer,* Dr. V. Earl Light, Lebanon Valley College; *Press Secretary,* Dr. Bradford Willard, Pennsylvania Topographic and Geologic Survey.

Simultaneously with the meeting of the academy, 210 members of the Junior Academy met under the direction of Professor Karl F. Oerlein, Pennsylvania State Teachers College at California. It is planned to hold the 1939 summer meeting at Laporte, Pa., when geologic and biologic field trips will be arranged. The regular meting for 1940 is to take place at Washington and Jefferson College, Washington, Pa. The dates of these meetings are to be determined and announced later.

BRADFORD WILLARD,
Press Secretary

THE OKLAHOMA ACADEMY OF SCIENCE

THE twenty-seventh annual meeting of the Oklahoma Academy of Science was held at Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma, on December 2 and 3, 1938. Of the 478 members, 275 attended the meeting. One hundred and twenty-five papers were presented in the various sections.

President Charles M. Perry presented the annual presidential address on Friday noon, December 2. The title of his talk was "The Doctrine of Levels Applied to the Sciences." Dr. Howard Odum, professor of sociology at the University of North Carolina, gave the annual address on Friday evening. The title of his lecture was "Social Conditions in the South." Another outstanding event of the meeting was an address by Dr. W. B. Bizzell, president of the University of Oklahoma at Norman. Dr. Bizzell spoke on "Regionalism in Public Life."

A research award of $50 for 1938, financed by the American Association for the Advancement of Science, was made to Dr. Henry Artis Miley, of Oklahoma A. and M. College. Dr. Miley is investigating tarnish films on copper. L. D. Alley of Enid and Oneta Carroll of Newkirk, two outstanding students from the state high school science clubs, were elected for honorary membership in the American Association for the Advancement of Science. The annual business meeting was held on Saturday, December 3. The following officers were elected for 1939:

President: H. D. Chase, University of Tulsa.
Vice-President, Section A: Roy M. Jones, Central State Teachers College.
Vice-President, Section B: Hugh M. Eley, University of Oklahoma.
Vice-President, Section C: Mark R. Everett, Medical School of the University of Oklahoma.
Vice-President, Section D: S. L. Reed, Oklahoma A. and M. College.
High School Relations Committee: Ora M. Clark, Bristow, and James G. Harlow, Oklahoma City.
Secretary-Treasurer: G. L. Cross, University of Oklahoma.
Assistant Secretary-Treasurer: H. I. Featherly, Oklahoma A. and M. College.

G. L. CROSS
Secretary-Treasurer

ACTIVITIES OF THE CUBAN SOCIETY OF NATURAL HISTORY

THE Cuban Society of Natural History (Sociedad Cubana de Historia Natural "Felipe Poey") held a memorial session on the one hundredth anniversary of the arrival in Cuba of three noted German naturalists: John Gundlach, Louis Pfeiffer and Edward Otto.

These three scientists, who had planned to go on to Central and South America, landed in Havana on the 5th of January, 1839. Gundlach, being unable to continue his trip to Surinam, Dutch Guiana, stayed in Cuba for the rest of his life and worked intensively on the Cuban fauna, building up a museum, the collections of which are to-day kept at the Instituto de la Habana. Pfeiffer, during his short stay, collected many mollusks and later was in constant correspondence with Gundlach, who supplied him with much material, enabling him to work extensively on the Cuban shells. Pfeiffer, due to his knowledge of mollusks, was called the "prince of malacology." Otto, botanist, collected a great number of plants from this tropical island. As a result of the work done by these scientists during the past century, the Cuban society rendered a hearty tribute to them at the University Museum (Museo Poey) in the University of Havana. This session, under the direction of Dr. Carlos de la Torre, president of the society, at the same time inaugurated its new board of governors, which had been elected last December to serve during 1939.

LUIS HOWELL RIVERO
UNIVERSITY OF HAVANA

REPORTS

FINANCIAL STATUS OF THE BIOLOGICAL STAIN COMMISSION

THE Commission on Standardization of Biological Stains was organized nearly 20 years ago under the auspices of the National Research Council. The expenses in connection with organizing the work were borne by the Chemical Foundation. Later, as the work developed and as its possibilities for service to biologists became more and more evident, increasing support was obtained through the generosity of the foundation, until about 1928 one or two annual appropriations of roughly $10,000 were thus granted the

commission. Up to date, the total of such appropriations has been slightly over $100,000. This continued support over a period of at least 18 years, during much of which time the income of the Chemical Foundation has been steadily decreasing, is evidence of the interest of that body in the work of the Stain Commission. Biologists who feel that this work has been of any value in assuring them reliable stains must acknowledge a decided debt of gratitude to the Chemical Foundation and to its president, the late Mr. Francis P. Garvin.

Up to 1931 the entire cost of administering the Stain Commission was borne by the foundation. By this time, however, the commission was beginning to earn some income of its own: Its publication work, which had been self-supporting from the beginning, was by that time realizing a small profit, and an appreciable income was being received from the stain companies through fees charged for testing their products and through the sale of certification labels. Inasmuch as the income of the Chemical Foundation, derived chiefly from royalties on patents, was then decreasing, it was decided that the commission must be made as nearly self-supporting as possible. As a result the foundation's appropriations were progressively decreased, and all possible efforts were made to increase the commission's earned income.

By 1933 the appropriations had been cut down to $3,200 a year and have remained approximately at that figure ever since. The balance was at first made up partly by current earned income and partly by using publication profits which had been put aside during the more prosperous years. During the last two or three years current earned income together with the foundation's contribution has been sufficient. The latter has amounted to only about 45 per cent. of the entire budget. Although efforts have continually been made to increase the earned income, it has not yet become sufficient to balance the budget completely. In a sense the stain testing is self-supporting, for it yields sufficient income to pay for all the time actually spent on routine testing. Unfortunately, however, the rest of the time of the assistants doing the work must be paid for, and the present earned income does not cover that. Since the balance of their time is largely spent on investigation, it can be said that it is only the research of the Stain Commission that must be supported by some outside organization. As the last year has seen a noticeable increase in the earned income, probably $2,000 annually from such outside source would now be sufficient.

At present, when such is the financial situation of the commission, the support of the Chemical Foundation must be entirely withdrawn. This comes about through no lack of interest on the part of the officers of the foundation, but merely because its patents are expiring and its income accordingly diminishing rapidly. It raises the question, however, whether the work of the Stain Commission must be stopped or so seriously curtailed as to destroy its efficiency, merely because of the lack of the comparatively small sum of money mentioned above.

This matter is now called to the attention of biologists. The executive committee feels that the work of the commission is of some use to biologists and that it would be unfortunate if it should have to stop or to be badly crippled when it lacks so little of being self-supporting and its need is probably only temporary. If any users of stains feel similarly on the subject and have any practical suggestions to make, communications from them in regard to the matter would be greatly appreciated.

E. V. COWDRY
LOUIS GERSHENFELD
H. E. JORDAN
S. I. KORNHOUSER
F. B. MALLORY
J. T. SCANLON
W. D. STOVALL
H. J. CONN, *Chairman*,
Executive Committee of Commission on Standardization of Biological Stains

SPECIAL ARTICLES

THE LOSS OF RESISTANCE TO MURINE TYPHUS INFECTION RESULTING FROM RIBOFLAVIN DEFICIENCY IN RATS[1]

FROM observations on the intracellular behavior of typhus rickettsiae at various temperatures in plasma tissue cultures and in Maitland cultures, one of us[2] concluded that the unrestricted multiplication of these organisms, resulting in distention of infected cells, might be dependent upon a lowering of intracellular metabolic activity.

In view of the fact that the essential feature of riboflavin deficiency is believed to be interference with intracellular oxidation processes[3] it seemed, on theoretical grounds, that the susceptibility of experimental animals to typhus infection might be greatly enhanced by this type of dietary deficiency. The preliminary

[1] From the Department of Pathology, Harvard Medical School, and the Harvard Dental School, Boston, Massachusetts.

[2] Henry Pinkerton, *Arch. Exp. Zellforsch.*, 15: 425, 1934.

[3] A. G. Hogan, *Jour. Am. Med. Assn.*, 110: 1188, 1938.