with special attention to digestive organs—stomach, pancreas (including islets of Langerhans), and liver —and to their reciprocal relations in hematopoiesis and hemolysis with the spleen. In connection with the histological studies, the osmotic phenomena and histology of the blood itself was investigated. Mrs. Hemmeter aided in histologic work and in preparing drawings from microscopic preparations.

Miss Catherine Indorf, of the University of Missouri, studied with Dr. Cobb the structure and habits of nemas, and the technique of their investigation, with the special view of obtaining a knowledge of the technique to be applied in the investigation of a serious agricultural pest in northern Missouri, *Heterodera radicicola.*

Dr. Edwin Linton, of Augusta, Georgia, continued his systematic studies of the internal parasites of fishes, giving attention not only to the final hosts of the parasites but also to intermediate carriers as well, including invertebrates, fish-eating birds and fishes.

Dr. G. A. MacCallum, of Baltimore, investigated parasites of fishes, chiefly sharks, with special reference to trematodes of the gills and nasal glands. He also collected parasites from turtles and other reptiles, obtaining some new forms, which will be studied and reported upon at a later time.

Thomas F. Morrison, of Princeton University, examined many different forms of marine animals for fluorescence. It was found that the phenomenon of fluorescence is very widespread, but, due to pigmentation present, it is not perceptible in all cases. Clear protoplasm, such as is found in the embryonic tissues, exhibits a light blue fluorescence, while similar tissues from adults exhibits a greater variety of fluorescent colors. Various body fluids were found to be fluorescent, the fluorescence of the decomposition products being especially marked. The chemical nature of these substances was studied, and it was found that practically all groups of biochemical compounds contain fluorescent members. The source of light used in these experiments was a carbon arc and glass filter. The incident light was rich in ultraviolet to 350 μμ but weak beyond 300 μμ. The upper limit was 425 μμ.

During a brief stay at the laboratory, Professor A. M. Reese, of West Virginia University, worked upon the structure and development of the oral glands of certain pit vipers.

L. R. Safir, of Columbia University, continued genetic researches with the use of *Drosophila melanogaster.* His particular problem was to locate more definitely in the third chromosome the loci of some 8 or 10 factors. Crosses involving upward of 30,000 offspring were carried out. He also studied the effect of X-rays on the offspring derived from a Mendelian cross, arriving at the general conclusion from genetic evidence that the X-raying of the flies caused a disturbance in the sex or X chromosomes so that they do not disjoin.

Dr. Henry C. Tracy, of the University of Kansas, studied the development of reactions in teleost embryos and larvae, with particular reference to chemical and physical factors influencing the early movements of teleost larvae.

Professor H. V. Wilson, of the University of North Carolina, with Henry V. Wilson, Jr., was at the laboratory for a few days obtaining material for histological studies of sponges.

R. E. COKER,
Director

UNIVERSITY OF NORTH CAROLINA

SCIENTIFIC EVENTS

THE NATIONAL MUSEUM OF ENGINEERING AND INDUSTRY

ONE million dollars has been assured towards the establishment of the National Museum of Engineering and Industry, Incorporated, with headquarters in the Engineering Societies building. A campaign to raise an additional nine million dollars has been started. The president of the new organization is Dr. Elihu Thomson, who recently received the Kelvin Gold Medal from the Royal Society at the Kelvin centenary in London. The vice-presidents are Dr. Edward G. Acheson, one of the creators of the modern abrasive industry, Dr. Leo H. Baekeland, inventor of velox paper and bakelite and president of the American Chemical Society, and Dr. Edward Weston, creator of the Weston type of electrical instruments. Its trustees are Mr. Philip T. Dodge, chairman of the International Paper Company; Mr. Howard Elliott, chairman of the Northern Pacific Railroad; Dr. Ira N. Hollis, president of the Worcester Polytechnic Institute; Dr. Elmer A. Sperry, president of the Sperry Gyroscope Company, and Mr. Worcester R. Warner, of Warner & Swasey, Cleveland, Ohio, makers of telescopes. Mr. George E. Roberts, vice-president of the National City Bank, is treasurer and Mr. H. F. J. Porter, industrial engineer, is secretary.

In cooperation with the Smithsonian Institution the new organization is planning to erect on its grounds in Washington a building to house the original models of early inventions and the records of constructive achievement of pioneers, inventors and engineers in the development of transportation and industry. In this way the United States will be given the kind of institution which all the great European nations have possessed for years, and in the layout of the proposed museum use will be made of the data collected by an expert who has recently returned from a year's survey of museum practice abroad. An important de-

parture in the American scheme is proposed, however, made necessary by the vastness of the country. In addition to the central collection at Washington special collections such as replicas of the historical exhibits will be carried to the people, also the machinery of modern processes will be placed in affiliated museums in industrial centers of every state.

Incorporation was effected in March last under the laws of the District of Columbia by the "Organizing Committee of 100" composed of chairmen of boards of directors, presidents and chief engineers of industries and railroads, and professors of engineering and history in universities and colleges.

HELMHOLTZ'S PHYSIOLOGICAL OPTICS

IT is announced that the first volume of the English translation of Helmholtz's *Handbuch der Physiologischen Optik*, prepared under the editorship of Professor Southall, of Columbia University, and published by the Optical Society of America, is now ready for distribution. The importance of this work as one of the monuments of scientific creation is universally recognized, but this translation is inspired by a realization of its present value to scientific workers and not merely of its historical significance. Although of course many things in it have become antiquated, there are also many that have been overlooked or neglected, and whose value has not been diminished by subsequent research. Moreover, there is no other book, nor even any combination of books, in which anything comparable to it as a conspectus of the whole subject can be found.

In selecting for translation the third (and latest) edition, 1909–10, the editor has in large measure been influenced by the incorporation in that edition of most valuable appendices by v. Kries, Nagel and Gullstrand; and besides these appendices the English translation will include (in the first volume) an entirely new chapter on ophthalmoscopy taken from Professor Gullstrand's *Einführung in die Methoden der Dioptik des Auges des Menschen*. Since, on the other hand, the third edition (based by v. Kries and Nagel on the first) omitted the very important work of König, done in direct development of Helmholtz's ideas and incorporated in the second edition, this phase of the subject is briefly treated in an appendix (to appear in the second volume) by Christine Ladd-Franklin, which will also contain a critical examination of the Helmholtz and Hering theories of color vision and a concise exposition of her own theory. The time of the publication of the second and third volumes is not yet fixed. The edition is limited to one thousand copies. Orders should be placed with F. K. Richtmyer, Cornell University, Ithaca, N. Y.

THE SECTION OF PHYSIOLOGY OF THE BRITISH ASSOCIATION

OVERSEA members of the British Association for the Advancement of Science coming to the Toronto meeting, beginning August 6, include the following:

President of Section I—H. H. Dale, head of the department of biochemistry and pharmacology, Medical Research Council, London. Former director of the Wellcome Physiological Research Laboratories. His presidential address will deal with "Progress and prospects in chemotherapy."

Vice-president—G. H. F. Nuttall, Quick professor of biology, Cambridge. Editor and founder of the *Journal of Hygiene* and the *Journal of Parasitology*.

Recorder—Dr. C. Lovatt Evans, of the department of physiology, St. Bartholomew's Hospital Medical College, London, will discuss "The physiology of muscular contraction in relation to efficiency and fatigue."

Secretary—E. P. Cathcart, Gardiner professor of chemical physiology, University of Glasgow, and adviser in physiology to the War Office, will deliver a paper on the "Respiratory quotient," and a popular lecture on "Seeing is believing" and will discuss "Energy exchange in relation to muscular performance in laboratory investigations."

J. H. Burn, of the biochemistry department of the Medical Research Council, London, will speak on "The factors controlling the normal output of sugar from the liver."

S. Monckton Copeman, medical officer, Ministry of Health.

J. C. Drummond, of University College, London, will give a popular lecture on the "Importance of the infinitely small in nutrition," and will speak also on "Modern tendencies of vitamine research."

Sir Henry Gauvain, medical superintendent to Lord Mayor Treloar's Cripples' Hospital and College, will discuss light therapy in the symposium on "Vitamines and the relation of light to their action."

E. Mellanby, St. Thomas Hospital, London.

J. S. Owens.

Sir J. Herbert Parsons, surgeon of the Royal London Ophthalmic Hospital, optical surgeon in University College Hospital and a member of various government committees.

H. E. Roaf, professor of physiology, London Hospital Medical College, will give papers on "Color vision" and on "Urinary pigments."

Alfred Herbert Tubby, consulting surgeon, especially on diseases of children.

THE EDWARD HART CELEBRATION AT LAFAYETTE COLLEGE

DR. EDWARD HART has now completed fifty years of service in connection with the chemistry department of Lafayette College and it is proposed to cele-