cators as well as with the quinhydrone electrode showed that the pH of the solution from which the insulin separated in crystalline form was 5.55–5.65. After centrifuging off the "ammonia precipitate" it may be necessary to add a little more ammonia to the fluid to bring it to the proper hydrogen-ion concentration before setting it aside to crystallize. The accompanying curve shows how the pH of a mixture of acetic acid and brucine, made up in the proportions employed in this method, varies with the gradual addition of the usual amounts of pyridine and ammonia.

The crystals are apparently dimorphous and fall into two general groups: (1) Crystals with well-defined double refraction, of negative character, with several habits, in the rhombohedral class; (2) crystals of a more equant habit, often with clearly defined crystal edges and no double refraction.

They give the Pauly, Millon, biuret and ninhydrin reactions but not the Voisonet, Hopkins-Cole or Acree tests for tryptophan or the Sullivan test for free cystine and cysteine.

The many solutions (in acetic acid, hydrochloric acid and ammonia) examined polarimetrically were always found to be laevo-rotatory, the magnitude of the rotation varying widely with the concentration and pH of the solution and with the nature of the solvent. For example, one preparation in hydrochloric acid showed a specific rotation of $-40°$; another, twice recrystallized, gave $-30°$ in N/6 acetic acid and $-17°$ in 0.011 N hydrochloric acid; with another in 0.65 per cent. ammonia the rotation was $-48°$ and changed in the course of several days through a maximum at $-63°$.

Numerous microanalyses on various preparations gave very concordant results agreeing closely with the empirical formula $C_{45}H_{69}O_{14}N_{11}S$ in the case of material dried at 105–20° in nitrogen under low pressure and $C_{45}H_{75}O_{17}N_{11}S$ (or $C_{45}H_{69}O_{14}N_{11}S \cdot 3H_2O$) for air-dried preparations; the labile or so-called "carbonate" sulphur content of the latter is about 1.10 per cent. or approximately 37.5 per cent. of the total sulphur. No satisfactory solvent for molecular weight determinations has yet been found.

No evidence has ever been obtained which would indicate that the crystals are not a homogeneous substance crystallizing in different types but a mixture of two substances, only one of which is physiologically active but both having the same solubilities and identical or nearly identical empirical compositions.

JOHN J. ABEL

THE JOHNS HOPKINS UNIVERSITY

SCIENTIFIC EVENTS

A STUDY OF ASCARIASIS

THE American Child Health Association has arranged to furnish support for an extended investigation of ascariasis, an infestation widely prevalent especially in children. Through the courtesy of the Johns Hopkins University, the work will be conducted under the direction of Professor W. W. Cort, of the department of helminthology of the School of Hygiene and Public Health, under the auspices of the division of medical sciences, National Research Council, through its Committee on Medical Problems of Animal Parasitology.

Professor Cort and his selected staff will investigate the life history of the parasite, its mode of transmission, the incidence of infestation, the effects upon infested animals and man and the methods of treatment and control. The central feature of the program will be the relation of this parasite to the health and development of children, since it is in young children that the infestation is the heaviest and the injury produced the greatest. Studies are to be undertaken in the School of Hygiene and Public Health, with the admirable facilities there available. Most of the investigations, however, will be in the field for which stations will be established at strategic points in the United States and their territories and insular possessions. The information and material yielded by the field work will be further studied, amplified and extended by, and correlated with, the investigations in Baltimore.

HOWARD T. KARSNER, *Chairman,*
Division of Medical Sciences,
National Research Council

GIFT OF WARD'S NATURAL SCIENCE ESTABLISHMENT TO THE UNIVERSITY OF ROCHESTER

THROUGH the gift of members of the Ward family, ownership of Ward's Natural Science Establishment, Rochester, N. Y., passes to the University of Rochester under conditions enabling its museum features to be preserved and its scientific work carried on.

Founded in 1862 by Professor Henry A. Ward, then holding the chair of geology in the University of Rochester, the establishment was carried on from the early eighties by the late Frank A. Ward, son of Levi A. Ward, who had largely financed the undertaking. Professor Henry A. Ward spent a large part of the year in travel in all parts of the world in search of specimens which were assembled and arranged at the workshops.

The following paragraphs are taken from a statement on the gift made by Raymond N. Ball, treasurer of the University of Rochester:

> The University of Rochester feels greatly honored in being asked to accept the splendid foundation which the Ward family proposes to found in memory of Frank A. Ward.
>
> It was the energies and business ability of Frank A.

Ward in financing and managing Ward's Natural Science Establishment from the early eighties until the time of his death that permitted Professor Henry A. Ward while alive to devote his full time and experience in the field, supplying the establishment with materials and thereby making such materials available for distribution to the scientific world. The university cherishes the memory of both of these eminent men who have contributed so much to the field of science. It accepts with a sense of keen responsibility the trusteeship of the Frank A. Ward Foundation, which is being founded so unselfishly by the living members of the Ward family.

In accepting this trust the university recognizes the obvious advantage which will accrue to its own scientific departments, both instructors and students, in continuing and controlling such a vast collection of scientific materials gathered from all parts of the world. It will also bring the university into intimate association with the leading scientific establishments both in this country and abroad. Furthermore, the university appreciates Mr. Hawley Ward's willingness to remain as director of the business interests of the institution.

Professor Henry A. Ward, the founder of the museum, was the second instructor in our geology department, succeeding Professor Chester Dewey in 1861 and serving in that capacity until 1875. The University of Rochester, chiefly because of Professor Ward, attracted considerable attention by its scientific offerings at that time, since it was the first college in America, if not in the world, to establish a course in science on an equality with the classical course. Furthermore, the university's museum collection of about 40,000 specimens purchased in 1862 was made by Professor Ward and was at that time the largest collection in geology, mineralogy, petrography and paleontology in America. In fact, few colleges at the present time are said to possess as good display and teaching collections. That this early tradition may be revived and our present facilities further strengthened by the permanent acquisition of the Ward's Establishment is naturally very gratifying.

The success of the greater university campaign in 1924 makes it possible for the university to accept this foundation in that the collection, now owned by the university, and such specimens from the present collection of the Ward's Natural Science Museum which are and can be used for teaching purposes will be most effectively used in the new museum which it is planned to build in connection with the biology and geology building on the new site for the college for men. This museum will be open to the public.

SCIENTIFIC LECTURES AT THE FRANKLIN INSTITUTE, THE CALIFORNIA ACADEMY OF SCIENCES AND THE UNIVERSITY OF CHICAGO

FOLLOWING is the schedule to January, 1928, of lectures to be given at the Franklin Institute, Philadelphia:

October 19—*Engineering contributions of the gyroscope:* ELMER A. SPERRY, Esq., president, Sperry Gyroscope Company, Brooklyn, New York.

October 27—*Animal mechanics:* PROFESSOR ULRIC DAHLGREN, department of biology, Princeton University.

November 10—*Modern research on the structures of metals:* PROFESSOR WHEELER P. DAVEY, department of chemistry, Pennsylvania State College.

November 16—*Automatic train control:* A. H. RUDD, Esq., chief signal engineer, The Pennsylvania Railroad.

December 1—*The design, construction and equipment of the Broad Street subway:* H. E. EHLERS, Esq., director, department of city transit, City of Philadelphia.

December 8—*Illumination in the industries:* PROFESSOR DUGALD C. JACKSON, department of electrical engineering, Massachusetts Institute of Technology.

December 21—*Talking and synchronized motion pictures:* WILLIAM H. BRISTOL, Esq., president, The Bristol Company, Waterbury, Connecticut.

The California Academy of Sciences has announced lectures to be given in the auditorium of the academy's museum in Golden Gate Park, at three o'clock on Sunday afternoons as follows:

October 2—*Popularizing science through the public press:* DR. WILLIAM EMERSON RITTER, president, Science Service, Washington, D. C. Illustrated.

October 9—*Golden Gate park as a botanical garden:* MISS ALICE EASTWOOD, curator, department of botany, California Academy of Sciences, San Francisco. Illustrated.

October 16—*Home life of the Alaska willow ptarmigan:* JOSEPH DIXON, economic mammalogist, museum of vertebrate zoology, University of California, Berkeley. Illustrated.

October 23—*California's forest resources:* J. W. NELSON, assistant district forester, United States Forest Service, San Francisco. Illustrated.

October 30—*The work of "The Save the Redwoods League":* JOSEPH D. GRANT, vice-president board of trustees, California Academy of Sciences, San Francisco. Illustrated.

At the close of each lecture a moving picture film will be shown illustrating some phase of natural history.

On Friday evenings members of the scientific departments of the University of Chicago will give a series of lectures in the Lake View Building lecture room on the general subject: "The Nature of the World and Man," as follows:

October 14 and 21—*Astronomy:* WILLIAM DUNCAN MACMILLAN, department of astronomy.

October 28 and November 4—*The origin and early stages of the earth:* ROLLIN T. CHAMBERLIN, department of geology.

November 11 and 18—*Geological problems of the earth's history:* J HARLEN BRETZ, department of geology.

December 2—*The message of a beam of light:* HARVEY BRACE LEMON, department of physics.

December 9—*The dance of molecules and flight of electrons:* PROFESSOR LEMON.

December 16 and 23—*The nature of chemical processes:* JULIUS STIEGLITZ, department of chemistry.