dan, John Merle Coulter and D. H. Campbell. His graduate work was completed under Strasburger at the University of Bonn, from which institution he received the Ph.D. degree in 1897. During the following year he carried on research work at the University of Leipzig and the Biological Station at Naples. He became instructor in the botany department of Indiana University in 1891, was advanced to an associate professorship in 1893, and became full professor and head of the department in 1898. Dr. Mottier occupied this post with distinction until 1937, when he became professor emeritus.

Dr. Mottier brought to his work, both as teacher and investigator, a keen mind, a highly developed critical faculty and an unusual breadth and thoroughness of training. He was steeped in the traditions of the German universities, and he carried on his classes with the same punctilious regard for the amenities which characterized these universities during his student days. Education and the training for a career were to him serious matters, and he gave of his very best to the students, expecting their best in return. In consequence, he turned out a number of excellent students.

In his investigations Dr. Mottier also showed the same thoroughness and exactitude. He was an extremely careful and painstaking worker, an artist, with a fine feeling for perfection in all the technical processes involved. Many microscopical preparations remain to testify to the excellence of fixation and the beauty of staining which characterized his technique, and many drawings are extant which show the same flair for finesse in technique and for artistic expression.

Dr. Mottier is especially well known for his work in plant cytology, in which field he published numerous papers dealing with mitosis, meiotic phenomena, sporogenesis and embryogeny in Pteridophytes and Spermatophytes. During his earlier years he was one of the leading proponents of the telosynoptic interpretation of meiotic behavior, a position from which he never publicly withdrew. In later years he was more concerned with cytoplasmic structure and with problems of growth under controlled conditions. Particularly significant was his work on fern prothallia. By preventing fertilization he kept fern gametophytes alive indefinitely. Some lived as long as ten years, and attained large sizes, closely resembling liverworts. In addition to his researches, Dr. Mottier found time to produce the widely known "College Textbook of Botany" and other books.

Dr. Mottier was a life member of the Botanical Society of America, a fellow of the American Association for the Advancement of Science, a member of the Washington Academy of Sciences, American Society of Naturalists, Indiana Academy of Science (president in 1907), Sigma Xi and Phi Beta Kappa.

The influence of Dr. Mottier will long be felt, both in Indiana University and in the wider field of botany to which he gave so unstintingly. He will be greatly missed by colleagues and students, who valued his friendship and who gained greatly from the high idealism which he manifested in all his activities.

RALPH E. CLELAND

RECENT DEATHS AND MEMORIALS

DR. MAYNARD M. METCALF, formerly professor of zoology at Goucher College and Oberlin College, later research associate at the Johns Hopkins University, died on April 19 at the age of seventy-two years.

DR. BERNARD FANTUS, professor of therapeutics at the College of Medicine of the University of Illinois in Chicago, died on April 14 in his sixty-sixth year.

DR. EDWARD JOHN ANGLE, a specialist in dermatology and genetic urinary surgery at Lincoln, Nebr., formerly a professor in the College of Medicine of the University of Nebraska, died on April 25 at the age of seventy-six years.

DR. ESTHER WADSWORTH WHEELER (née Hall) died on April 15. She was the first recipient of the D.Sc. degree from Radcliffe College (1921). Since her marriage in 1921 she had collaborated in research on ants with her husband, Dr. George C. Wheeler, of the University of North Dakota.

DR. ALFRED CORT HADDON, anthropologist and ethnologist, formerly president of the Royal Anthropological Institute, died on April 20 at Cambridge. He was eighty-four years old. Dr. Haddon served from 1880 until 1901 as professor of zoology at the Royal College of Science in Dublin, later becoming lecturer at Cambridge and the University of London. He organized and conducted scientific expeditions to the Torres Straits and New Guinea.

PROFESSOR KARL BOSCH, chairman of the I. G. Farbenindustrie A. G., died on April 26. He was sixty-five years old. In 1931 Dr. Bosch and Dr. Friedrich Bergius shared the Nobel Prize for chemistry—Dr. Bosch for his work with synthetic ammonia and Dr. Bergius for his process of making gasoline from coal.

A MEMORIAL meeting in honor of the late Margaret Floy Washburn was held at Vassar College on April 14. Representing the American Psychological Association, President Leonard Carmichael, of Tufts College, delivered the principal address. President Henry Noble MacCracken spoke in appreciation of Professor Washburn's distinguished services to Vassar College.

THE letters and papers of the late John Jacob Abel have been deposited in the Institute of the History of Medicine, the Johns Hopkins University, for cataloguing. The institute would greatly welcome any letters written by him prior to 1915. They will be transcribed and promptly returned. Please communicate with Miss Helen T. Konjias, 1900 E. Monument Street, Baltimore.

SCIENTIFIC EVENTS

THE COLORADO ROCKY MOUNTAIN OBSERVATORY OF HARVARD UNIVERSITY

HARVARD UNIVERSITY will erect the world's highest astronomical observatory this summer in the Colorado Rocky Mountains. The station will be equipped with a coronagraph, a new instrument for creating artificial solar eclipses and making possible regular observations of the corona and also of other phenomena of the sun's atmosphere.

The observatory will be located at Fremont Pass, Climax, Colorado, at an altitude of 11,318 feet. It will have the only coronagraph in the Western Hemisphere, and the third such instrument now operating in the world. The station will be built on the property of the Climax Molybdenum Company, through whose cooperation the new observatory was made possible. Harvard already has stations at Cambridge and Oak Ridge, Mass., and at Bloemfontein, South Africa. Professor Donald H. Menzel, of Harvard Observatory, is in charge of setting up the new coronagraph station.

The coronagraph studies of such solar activities as sun-spots, solar prominences and the corona and of the interrelationships of these activities, promise also to lead to greater knowledge of physical conditions on the sun and the relationships between the earth and its star neighbor.

Until the recent invention of the coronagraph by the French astronomer, Dr. Bernard Lyot, the solar corona could only be observed during total eclipses, when the moon cuts off the intense light of the sun ball. Of major importance for coronagraph observations is the selection of a high-altitude site, where the clearest possible sky prevails, free from dust and other suspended particles. Dr. Menzel spent some time last summer investigating various sites in the Rocky Mountains before selecting the location at Fremont Pass. The Harvard coronagraph, which has been under construction for three years, employs the same basic principles as Dr. Lyot's instrument. A special feature of the Harvard instrument will be the treatment of the lenses with the invisible-glass technique developed at Massachusetts Institute of Technology by Dr. C. H. Cartwright. This treatment helps to cut down reflections and scattered light in the instrument.

The coronagraph is not adapted as yet to replace natural eclipse observing altogether. For one thing there is difficulty in studying the blue and violet regions of the spectra, because the sky light is very intense in these regions. But for many purposes it provides excellent records, with the principal advantage that observations can be made every clear day, and do not have to await the eclipses.

Equipment at the Harvard station will include a powerful spectrograph for the study of the spectrum of the corona. Studies of the motions of solar prominences will be made with color filters as well as motion pictures. Movies will also be made of the corona, giving the first record of how this peculiar light structure changes from day to day and how its streamers project into space.

FELLOWS OF THE LALOR FOUNDATION

THE Board of Trustees of the Lalor Foundation has announced the names of the winners of seven awards for research in chemistry for the academic year 1940–41. These awards this year amount to $14,650. They are designed to enable men and women of outstanding ability to carry on special investigations at important research centers in the United States or abroad. The recipients of the awards were chosen from a group of forty-one candidates representing applicants working in the major fields of chemistry and related sciences.

The applications received indicate a wide-spread interest in these fellowships, 56 per cent. having come from candidates from universities in the eastern United States, 17 per cent. from the Middle West, 8 per cent. from the South, 17 per cent. from the Far West and 2 per cent. from candidates outside the boundaries of the United States.

As respects institutions where applicants elected to carry on their research, 63 per cent. selected eastern universities, 10 per cent. middle western institutions, 22 per cent. the far west and 5 per cent. chose universities outside of the United States. The fellowships include two for work at the California Institute of Technology and one each for work at the University of Chicago, Columbia University, the Johns Hopkins University, the Massachusetts Institute of Technology and Yale University.

The recipients of the awards are:

DR. ANDREW CALVIN BRATTON, instructor in pharmacology at the Johns Hopkins University Medical School, to continue work with Dr. E. K. Marshall on chemical