At about this time it was decided to initiate work in plant physiology in the Bureau of Science at Manila, and the undersigned made a survey of available candidates, the result being the selection of Dr. Brown for appointment in the Philippine service. It was in Manila, in a decidedly stimulating, even although a tropical environment, that Dr. Brown established himself as a productive scientist, for his work there added distinctly to the prestige of the small group of individuals on whose shoulders fell the responsibility of developing and maintaining the scientific work fostered and supported by the Philippine Government.

It soon became apparent that Dr. Brown's interests were by no means confined to plant physiology, and gradually he entered the field of ecology, the result being the publication in 1919 of his monographic "Vegetation of Philippine Mountains," based on a long, arduous and critical series of field studies in the primary forests of Mount Maquiling. He retained his Bureau of Science appointment from 1911 to 1923, but in this period acted as associate (later professor) of botany, in the University of the Philippines from 1919 to 1924, and as chief of the Division of Investigations in the Philippine Bureau of Forestry from 1919 to 1920.

His teaching experience led him into the text-book field, for he soon found that there were no properly balanced botanical text-books available for instruction in the subject for students resident in the tropics. Most texts had previously been prepared by individuals familiar from long residence with the vegetation of the temperate zone, but with little or no tropical experience. The result of Dr. Brown's efforts here was his very excellent "Textbook of General Botany," published in 1925, a text characterized by its balance, remarkable for its excellent illustrations and for its adaptability to the actual teaching of the subject in any climate. Ten years later this was followed by his equally excellent and authoritative "Plant Kingdom."

With an active and inquiring mind, fully at home in several diverse fields of botanical science, including plant physiology, ecology, morphology and economic botany, for in the latter field Dr. Brown was also a productive worker, his actual botanical output was limited for the next nine years, from 1924 to 1933, for in the former year he was selected to succeed the undersigned in the distinctly exacting position as director of the Bureau of Science in Manila. Here he proved himself as an administrator, his work involving the general supervision of an enormously wide range of subject-matter as well as the editorship of the *Philippine Journal of Science*. In this position Dr. Brown's period of service was longer than that of any of his three predecessors, except that of the first incumbent, Dr. Paul C. Freer.

Retirement from administrative work and from the Philippine service in 1933 gave Dr. Brown the opportunity of devoting practically full time to the advancement of research in the field that now claimed his attention, that of general morphology, with special reference to the significance of the floral nectaries as indicators of broad relationships of the major groups of plants. He elected to remain in Manila after his retirement from the government service, where he had access to a wealth of fresh material essential to the proper prosecution of his special studies. As the work developed he commenced to feel the need of access to other than tropical types, and in the latter part of 1936 correspondence was initiated between himself and the late Dr. Duncan S. Johnson, tentative plans being then made for him to locate in or near Baltimore or Washington, where he could have access to ample herbarium and library facilities. At the time of Dr. Johnson's death in February, 1937, laboratory space had been made available to Dr. Brown in Johns Hopkins University. It was then learned that Dr. Brown was about ready to transfer his botanical activities from the Philippines to the United States, whereupon he was offered a lectureship in botany at Johns Hopkins University. He took up his residence in Baltimore in February, 1938, having charge of the botanical laboratory and of the botanical garden at the university.

Here in addition to his teaching duties he concentrated on his studies of the significance of the floral nectaries, having in mind the ultimate production of a major work, planned to cover all possible groups (families) of flowering plants. His untimely death leaves this culminating task incomplete, although it is hoped that ways and means may be devised to continue the work.

Dr. Brown's botanical interests were unusually wide, and he fortunately had exceptional opportunities available to him through a very long period of service in a tropical environment. Taking advantage of these opportunities, his published results were uniformly excellent, no matter in what field he worked. He was a member of numerous organizations, including the American Ecological, Meteorological and Botanical Societies, a fellow of the American Association for the Advancement of Science and a member of Phi Beta Kappa. He married Mary Angus Blythe in Manila, on June 3, 1927, who with two sons survive him. His loss is a serious one to America and to world botany.

E. D. MERRILL

RECENT DEATHS AND MEMORIALS

DR. CHARLES SKEELE PALMER, consulting chemical engineer, inventor of a gasoline-cracking process that separated mineral oil into gasoline, fuel oil and gas, previously professor of chemistry at the Univer-

sity of Colorado, died on November 30 at the age of eighty-one years.

PROFESSOR FREDERICK NEWTON WILLSON, emeritus professor of descriptive geometry, stereotomy and technical drawing at Princeton University, died on November 15. He was eighty-three years old.

PROFESSOR R. V. WHEELER, professor of fuel technology in the University of Sheffield, died on October 28 at the age of fifty-three years.

DR. WILFRED TROTTER, professor of surgery at the University College Hospital Medical School and surgeon to the University College Hospital, London, died on November 25 at the age of sixty-seven years.

A PORTRAIT of the late Professor Henry Smith, formerly dean of the School of Mines of Columbia University, painted by H. E. Ogden Campbell, was unveiled in the Low Memorial Library on November 27.

A MEETING dedicated to the memory of Dr. William Hallock Park, emeritus professor of medicine in the New York University College of Medicine until his retirement in 1936 and director of the Bureau of Laboratories of the New York City Department of Health, was held on November 28 at the New York Academy of Medicine. The speakers included: Mayor La Guardia; Dr. Harry Woodburn Chase, chancellor of New York University; Dr. Malcolm Goodridge, president of the academy; Dr. Anna W. Williams, formerly assistant director of the Health Department Bacteriology Laboratories under Dr. Park, and Dr. Augustus B. Wadsworth, director of laboratories and research for the New York State Department of Health.

SCIENTIFIC EVENTS

ENGINEERING EDUCATION

A REPORT on "Present Status and Trends of Engineering Education in the United States," by Dr. Dugald C. Jackson, emeritus professor of engineering at the Massachusetts Institute of Technology, has been issued by the Engineers' Council for Professional Development, with the aid of funds supplied by the Carnegie Foundation for the Advancement of Teaching. The report is one of the valuable by-products of the task of accrediting curricula in engineering undertaken by the Committee on Engineering Schools of the Engineers' Council for Professional Development.

Dr. Jackson's report may be divided roughly into four parts. An appendix has been provided by Allen W. Horton, Jr., who acted as secretary to the committee during the period in which the accrediting procedure was developed and put to the test, and the data collected. In the early chapters of the report Dr. Jackson traces the history of developments that led up to the accrediting program, summarizes the well-known Mann, Wickenden and Potter reports that have played important roles in that development, and sketches briefly the status of engineering education in America in 1939. He next turns his attention to the Committee on Engineering Schools of the Engineers' Council for Professional Development, to the procedure it adopted in its task of accrediting curricula and to comments on some of the perplexing problems it had to face and the progress of the committee's own thinking and methods that resulted from actually coming to grips with these problems.

The data themselves, which cover 679 curricula in 139 institutions, assembled, coordinated and analyzed in the form of tables and charts, with Dr. Jackson's comments, occupy the third portion of the report. These data were gathered for the purpose of the accrediting program, which they usefully served, but they constituted a store of information of value to engineers and educators, and were so fruitful for the improvement of engineering education that the committee was able to secure from the Carnegie Foundation for the Advancement of Teaching the funds necessary to put them in shape for public use.

As to the present status, Dr. Jackson provides a convenient summary in the following passages quoted from the report:

> It is reasonable to say that the majority of the substantially one hundred and sixty engineering schools in the United States are now in a sound status and are wide-awake to improve their effectiveness. The principal defects in the quality of faculties are perhaps a lack of recognition of the unity of learning in science and in political economy as applied in engineering, an inadequate espousal of professional ideals as distinguished from either craftsmanship or speculative philosophy, a failure to impress on all students that a successful engineer's life demands continuous study throughout its length, and a failure to dovetail the curricula into political economy on one side as thoroughly as they are dovetailed into physical science on the other. . . . Part of the onus for the defects named may be appropriately laid at the doors of administrative officers. . . . There is an additional fault . . . which is the failure to recognize that the proper use of research vitalizes all levels of engineering education, from the sophomore undergraduate level to the most advanced levels, which makes it a requisite and important factor in such education.

THE ALASKA FISHERIES EXPERIMENTAL COMMISSION

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