It is now recognized that laboratory estimations of feeding value of forage crops may be inadequate. A discussion of the interpretation of variations in plant composition in relation to feeding value by Dr. L. A. Maynard, of the Animal Husbandry Department of Cornell, is, therefore, the fitting climax for the discussions.

The American Society of Agronomy will meet jointly with the Section on Agriculture and participate in the symposium just described.

The American Society for Horticultural Science will hold sessions on Tuesday, Wednesday and Thursday. This society will hold a joint meeting with the Potato Association of America on Tuesday afternoon, and a joint meeting with the American Society of Plant Physiologists and the physiology section of the Botanical Society of America on Wednesday forenoon for a symposium on the general theme of minor elements, under the chairmanship of Dr. E. J. Kraus, of the University of Chicago. Papers will be presented at this meeting by Dr. W. H. Chandler, of the University of California; Dr. O. F. Curtis, of Cornell University; Dr. G. T. Nightingale, of Honolulu, Hawaii, and Dr. J. E. McMurtrey, of Washington, D. C.

The banquet will be held on Wednesday evening, at which Professor Alex Laurie, of Ohio State University, will give the address of the president of the society, and at which a special moving picture film of interest to the scientific group will be shown.

The Potato Association of America plans joint sessions with other organizations as follows: (1) with the American Society for Horticultural Science on Tuesday afternoon; (2) with the American Phytopathological Society on Thursday afternoon. The committees on Nomenclature, Certification, Breeding, Standardization of Field Plot Technic, Standardization of Cooking Tests, Culture and Storage, Fertilizer Investigations, Virus Diseases and Insects will present reports. Among those who will take part in the program are E. V. Hardenburg, C. F. Clark, Ora Smith, G. F. MacLeod, Julian C. Miller, J. R. Livermore, F. A. Krantz, F. J. Stevenson, B. E. Brown, H. A. Jones, Donald Reddick, L. M. Ware, C. L. Fitch, E. O. Mader.

The Section on Education (Q) plans three sectional meetings, a joint program and the annual dinner with the Section on Psychology. The central theme of the program on Monday morning will be "Individual Differences and Provisions for Them," and of the afternoon program "Current Curriculum Problems." In the case of each program, two major papers will be presented, followed by briefer reports of studies by fellows and members. The Tuesday morning program will be devoted entirely to reports of experimental studies by fellows and members. On Tuesday afternoon, a joint meeting will be held with the Section on Chemistry and the Division of Chemical Education of the American Chemical Society on the topic, "The Preparation of Teachers of Chemistry." Papers will be presented by J. H. Simons, secretary of the Section on Chemistry, and William S. Gray, secretary of the Section on Education, reflecting the points of view of both chemists and professional educators. The discussion of these papers will be introduced by Professor Ralph Powers, of Teachers College, Columbia University, and Professor Ross A. Baker, of the College of the City of New York. The annual dinner of the Section on Psychology and the Section on Education will be held on Tuesday evening, at which time the retiring vice-presidents of the two sections will present papers: "Data Related to Classroom Learning," by F. B. Knight, and "The Psychology of Art: Naïve Geometry," by Robert M. Ogden.

General Announcements

The Society of the Sigma Xi will hold its thirty-seventh annual convention on Tuesday. The executive committee will meet at two o'clock. The business session will convene at four o'clock and the fifteenth annual lecture, given under the joint auspices of the association and the society, will be the address of the Tuesday evening general session. Dr. Henry G. Knight is the speaker.

The American Association of Science Teachers will meet on Thursday morning and afternoon.

Announcements regarding places and hours of various events will be given in the printed program of the meeting. This pamphlet will be distributed on registration at Atlantic City.

OBITUARY

HOWARD McCLENAHAN

Among those to whose lot it falls to form and guide the policies of men, few have that opportunity, which is afforded the dean of a great college, to combine the abstract expression of their ideals with the influence of personal contact. It is the happy lot of such men to see their cherished ideals born and reborn of their teaching in an ever-widening field of influence, extending even beyond the generation in which they live.

Many there were to whom the death of Howard McClenahan on December 17, 1935, came as a loss which was not merely that of a teacher from whom they had learned much in their earlier days; for in his death they saw the passing of that fountain of influence whose loss was more for the generations to come than for themselves, in whom the fruits of his example had already spread their foliage as a lasting memorial.

Howard McClenahan was born on October 19, 1872, at Port Deposit, Maryland. He was the son of John Megredy McClenahan and Laura Jane (Farrow). He graduated from Princeton University with the degree of E.E. in 1895 and the degree of M.S. in 1897. He received honorary degrees from Washington College, Maryland (LL.D., 1907), from Swarthmore College (LL.D., 1929), from Franklin and Marshall College (Litt.D., 1929), from Union College, Schenectady (Sc.D., 1931) and from the University of Pennsylvania (D.Sc., 1931). He became instructor in physics at Princeton University in 1897, assistant professor of physics in 1902 and full professor in 1906, which position he occupied until he left Princeton in 1925. In 1912 he was appointed dean of the College of Princeton University. He resigned the deanship in 1925 to assume the secretaryship of The Franklin Institute, which position he occupied until his death, combining with it in the last two years of his life the directorship of the Benjamin Franklin Memorial and Franklin Institute Museum.

The two phases of Howard McClenahan's life for which he will be chiefly remembered are those associated with his deanship at Princeton University and those having to do with his work in The Franklin Institute. As a dean, he was characterized by those who knew him as a man of particularly broad sympathies in understanding the weaknesses as well as the strengths of those with whom he had to deal. He had the characteristics of an Irishman in not shrinking from the fight when the cause was well deserved. He always struck fairly and was in an unusual degree free of prejudice and influence by personal feelings rather than the logic of the situation. He was a good strategist, but while adaptable in matters of policy, he was fearless in those of principle.

In the administration of his deanship, he came up against those situations in which he had to weigh the dignity and ethical principles at stake in matters pertaining to collegiate athletics against the powerful influence of alumni whose love for their university was perhaps no less than his but who thought to demonstrate it through channels which he could not approve. In these matters he proved stronger in his principles and in the recognized principles of intercollegiate athletics than the administration found it expedient to be. Although, therefore, his formal association with Princeton became severed, his love for his alma mater never weakened, and he was always ready with his influence and support for all that tended to her good.

A former close associate of McClenahan describes one of his finest attributes as his continuing faith in young men, and his striving to help them develop their own powers of self-confidence, judgment and especially integrity of character. He was strict in discipline, but he tempered judgment with understanding. He was regarded with affection by his old students and, even to the day of his death, he was known to most of them as "the Dean."

Howard McClenahan came to The Franklin Institute at that critical period when, having built up a long tradition of valuable service to science through its *Journal,* its lectures and other activities, the institute was feeling the urge to expand its activities and increase its potentialities. A priceless library had been accumulated, and McClenahan early saw the need of housing these precious books in more suitable quarters than those of the institute's old building at Seventh Street. The idea, already in the minds of the officers of the institute, of a new building centering upon the Parkway began to take form; but McClenahan visioned something far more ambitious than a mere transference of the institute activities to another center. It became his earnest ambition to create in Philadelphia a great museum of science after the pattern of the Deutsches Museum of Munich. The undertaking was one of stupendous proportions, not only financially but administratively. It was McClenahan who built up the friendly relations with the Poor Richard Club, through the Benjamin Franklin Memorial Incorporated, in its efforts to build a memorial to Benjamin Franklin, and it was his idea that the museum which he had so vividly in mind should become an important part of this memorial. With untiring energy, McClenahan succeeded in presenting his views to the public with such success as to result in raising five million dollars, so that he was enabled to put his ideas into operation and bring to a successful completion that monument of science which now adorns the Parkway. In an incredibly short period, the personnel of the new museum was chosen, the plan of procedure formulated, the details of all the various exhibits were worked out, first in broad and then in detailed manner, until finally the dream of a working entity serving the needs not only of Philadelphia but of the nation was realized.

At the time when Howard McClenahan came to The Franklin Institute, the Bartol Research Foundation was housed in temporary quarters on North Nineteenth Street, but was without a director and no systematic work had been started in its laboratories. A committee had been created to formulate the policy of the foundation, and McClenahan, in cooperation with this committee, was largely responsible for bringing the Bartol Foundation into a condition of a working entity, by the appointment of a director and by the subsequent erection of a suitable laboratory quarters at Swarthmore.

While engaged upon these newer activities of the institute, McClenahan continued to guide, foster and develop all those older activities which had become

traditionally associated with the institute's work. He was editor of the institute's *Journal,* and worked ceaselessly to improve its standards. He reorganized the institute's technique for the award of honors in such manner that a single Medal Day was designated for the year, on which occasion all the honors were bestowed. This act served to increase the importance and value of the occasion, and to create one day in the year when the institute has an opportunity to review its activities, cement acquaintanceship among its members and bring its works before the public eye.

Soon after McClenahan took up his duties at Philadelphia, the Mapes Dodge Lectures were founded. These lectures, which are given at Christmas, and are intended primarily for children, have come to be an annual event of a most pleasing, entertaining and instructive kind. In these lectures doubtless many a youth has received his first inspiration in the mysteries of science.

A man of McClenahan's background could not lose interest in scholastic affairs, even with the severance of his official relation with his old university; and Philadelphia found the benefit of his experience in his activities on the school board and as a member of the board of trustees of the University of Pennsylvania.

McClenahan married Bessie L. Lee, in 1899. He had three children, John Megredy, Richard Lee and Elizabeth Lee. During the last year of his life he suffered in health; and it is undoubtedly as a result of his untiring and enthusiastic devotion to the ideals of his work at The Franklin Institute that his end was hastened. Happily he lived to see the realization of those ideals and the creation of a monument, which will always remain in part a monument to his memory.

W. F. G. SWANN

HENRY BENJAMIN HEDRICK

DR. HENRY B. HEDRICK, astronomer and mathematician, died suddenly of a heart attack at his home in Washington, D. C., on October 6, 1936. Dr. Hedrick was born in Washington on July 22, 1865, and attended school there, taking his A.B. degree at Columbian College, now George Washington University, in 1886. In November of that year he was appointed to the staff of the Nautical Almanac Office in the Navy Department.

While in the Almanac Office, which became a part of the U. S. Naval Observatory organization after 1894, he assisted Professor Simon Newcomb in the preparation of his "Catalogue of Fundamental Stars," and was highly commended for the valuable assistance he gave that work. The major work of Dr. Hedrick, and the one most associated with his name, was a Catalogue of Zodiacal Stars. This had the distinction of being the only one of its kind to be adopted by all national almanacs, and it has been used as a standard for over 30 years.

In 1910 Dr. Hedrick was called to Yale University to assist Professor E. W. Brown in preparing the "Tables of the Motion of the Moon," a monumental project upon which he was engaged for nine years. In the introduction to the Tables Professor Brown states: "He (Dr. Hedrick) has prepared and tested all calculations which were performed by others. Many of the devices which have been employed to simplify the use of the Tables are due to him, and no decisions have been made without frequent discussions in which his suggestions have given valuable aid. His familiarity with known methods of computation and ability to devise new ones have contributed in no small degree to such novel and useful features as the Tables may be found to possess."

While at Yale Dr. Hedrick received the degrees of A.M. and Ph.D. During the world war he acted as navigating officer in the Yale Naval Training Unit. He was elected to the honorary society of Sigma Xi in recognition of his scientific achievements.

Returning to Washington at the close of the war, he spent two years with the Department of Terrestrial Magnetism of the Carnegie Institution of Washington. In 1920 he became chief ballistician at the Army Proving Ground, Aberdeen, Maryland, where he prepared several volumes of ballistic tables. He retired in 1932.

Dr. Hedrick was the author of several mathematical tables, notably "Tables of Interpolation," published by the Carnegie Institution, and of many articles in *Monthly Notices* and the *Coast Artillery Journal.* He was a member of the American Association for the Advancement of Science, the American Astronomical Society, the Washington Philosophical Society, the Yale Club of Washington, the District of Columbia Chapter of the Sigma Xi and several civic and social organizations.

Dr. Hedrick was a scholar unassuming as to his achievements; a friend sincere and true; and a good man, of kindly disposition, appreciating the essentials of life.

He is survived by his widow, Hannah F. (Mace) Hedrick, who has been a member of the staff of the Nautical Almanac Office since 1894. They were married in 1896 and have a son and two daughters.

H. R. MORGAN

U. S. NAVAL OBSERVATORY

RECENT DEATHS

DR. STARR FORD, professor of medicine at the University of Cincinnati Medical College, died on November 17 at the age of seventy-one years.

MONTROSE W. HAYES, principal meteorologist and head of the River and Flood Division of the Weather