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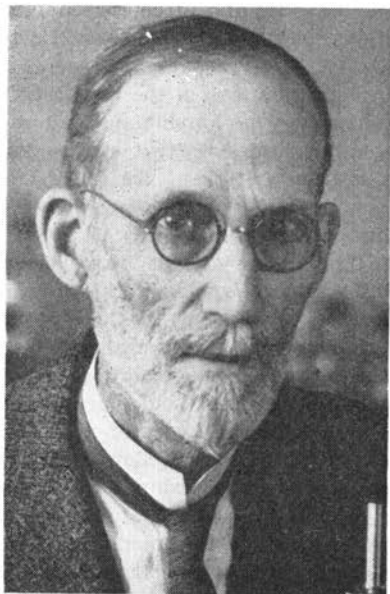
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Authors

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Hayden, Henry S. Conard, and Lyle R. Fletcher

In Memoriam



HENRY LANE BRUNER
1861-1945

Dr. Bruner belonged to that group of young men of the middle-west who entered European universities for advanced training toward the close of the last century, and returned to aid in the advancement of American colleges and universities to the high level they have attained today.

Born of pioneer parentage in Knox County, Illinois, January 10, 1861, his elementary and college education were received in that state. After graduation from Abingdon College in 1880 with the A. B. degree and a year in Sheffield Scientific School of Yale College, five years were spent as Professor of Natural Science in Abingdon and Eureka Colleges. During the summers of 1881-84 valuable experience was gained as Assistant to the United States Fish Commission, Woods Hole, Mass. After a year as Professor of Biology and Geology at Drake University Dr. Bruner became a professor at Butler College in 1892. Soon after becoming a professor at Butler he went to Germany for advanced training and became a student of comparative anatomy under Wiedersheim in the University of Freiburg earning the Ph.D degree in 1896. Later, 1910-11, a year was devoted to investigation and writing as Harrison Research Fel-

low in Zoology at Pennsylvania University. Dr. Bruner retained his connections with Butler University from 1892 until the end of his life March 17, 1945, as Professor of Biology and Geology until 1919, Professor and Head of the Department of Zoology 1919-38, Director of Graduate Studies 1932-38, and after 1938 as Professor Emeritus of Zoology. Butler awarded him the honorary Doctor of Science degree in 1932.

Seven outstanding contributions in the research fields of comparative anatomy and physiology of amphibians and reptiles were made by him. They showed the results of greatest care, keen interpretation, and clear expression. Some of them are recognized as classical in their fields. The counsel and guidance given by Wiedersheim were clearly reflected in his research work. Although morphology and physiology became his major interest he never lost his early enthusiasm for teaching general zoology. This interest was shown in his manual, "Laboratory Directions in College Zoology", which is widely used in beginning courses. Several articles of lesser importance were published. True to the tradition of all great teachers, many of his former students now hold places of distinction in colleges, universities, and in related types of professional life.

At the time of his death he was fellow emeritus Iowa Academy of Science in which he held membership since 1890; fellow A.A.A.S., Indiana Academy of Science (president 1919); member emeritus Amer. Assoc. Univ. Prof.; member Amer. Soc. Zool., Eugenics Soc., Sons Amer. Revolution, Phi Kappa Phi; assoc. member New York Academy of Sciences; member Professional Men's Forum.

He was a life-long and active member of the Disciples of Christ church. All of his major teaching positions were in colleges sponsored by that denomination.

In 1890 he married Carolyn Aumock who died in 1894. In 1897 he married Emma Pfeiffer whom he had met while a student at Freiburg. She, a son and a daughter together with a son by the first marriage survive.

NATHAN E. PEARSON



LOWELL HOLBROOK CHAMBERLAIN

On July 22, 1945, Dr. Lowell Holbrook Chamberlain, President of the Chamberlain Laboratories of Des Moines, died at the Methodist hospital. He had long been a member of the Iowa Academy of Science and, while his loss to us will be severely felt, his great work will continue and his inspiration will remain.

Born at Los Angeles, California, in 1876, he with his family later came to Des Moines where he spent most of his life.

He matriculated in Electrical Engineering at Iowa State College and graduated in 1895. He was one of the ends on the famous Cyclone team and his death prevented his attending the fifty-year reunion of the small group of players still living.

While at Ames he became interested in medicine and during vacations and spare time he read medicine and studied with an Iowa doctor. This interest resulted in his attending Jefferson Medical College in Philadelphia, where at the same time he studied pharmacy at the Philadelphia College of Pharmacy. He received his degree in Pharmacy in 1899 and in 1900 received the Doctor's degree. His internship was served at the Philadelphia General Hospital during 1900 and 1901, whereupon he entered the practice of Medicine at Cripple Creek, Colorado, and served as surgeon for the Colorado Midland and the Shortland railroads. The assignment was a stiff one, he lived in a cabin with a group of railroad men, practically all of whom later became high executives in American railroads.

At this time he returned to Philadelphia to claim for his bride Miss Gertrude Moritz, whom he had met while a student.

He left Cripple Creek and entered practice in Denver, Colorado. Here was born a daughter, Juliette, now Mrs. Horace Haight of Wrightsville Beach, North Carolina, and a son, Davis, now Sales Manager of the Chamberlain Laboratories in Des Moines.

In 1905 Dr. Chamberlain returned to Des Moines to enter the Chamberlain Medicine Company with his father. The company produced proprietary medical products. He here developed cosmetic products which were then manufactured and marketed by the Chamberlain Laboratories. He was president of this company and one of the pioneers of the cosmetic industry in Iowa. Together with the Pfeiffer's, of the Standard Laboratories, the Richard Hudnut Company and the E. C. DeWitt Company, the important Iowa cosmetic industry was developed to its present position as one of the nation's great chemical industries.

During his busy life as a physician and industrialist he found time to do many valuable things of a civic nature. During World War I he served as a Captain in Chemical Warfare and, at the time of his death, was Instructor in Poison Gas technique in helping World War II effort.

In addition to the Academy of Science, he was a member of a great host of scientific and professional societies and was active in scientific work to the end.

To have known this great and inspiring personality during his lifetime goes far to compensate for the great loss his passing occasioned to his friends.

O. R. SWEENEY



CLYDE W. EMMONS

1881-1945

Professor Clyde W. Emmons was born June 6, 1881, near Grand Rapids, Michigan, and died December 29, 1945, at Indianola, Iowa. For thirty-five years he was professor of mathematics and astronomy at Simpson College, and until two years before his death, he was registrar. During the entire time of his residence in Iowa, he was active in educational and scientific circles and was popular and highly respected by all who came to know him.

Professor Emmons received his early training at Evanston, Illinois, while his father was a ministerial student in Northwestern University, and at various cities of Michigan where his father was stationed as a pastor in the Michigan Conference of the Methodist Church. He was graduated from high school at Paw Paw, Michigan, in 1898. After teaching one year in the public schools, Professor Emmons entered Albion College, Albion, Michigan, and received the bachelor degree in 1903.

Following his graduation he continued at Albion College for two years as assistant professor of mathematics and Greek. He had shown exceptional ability in both of these fields while a student, and during the last two years of his undergraduate course he had served as a teacher in the college. In 1905, the University of Illinois granted him a teaching fellowship which made it possible for him to carry on graduate work in mathematics and he received the degree Master of Arts from the institution in 1907. He remained at the University as a graduate student and teacher of mathematics until his appointment to Simpson College in 1910. While a member of the staff of Simpson College he continued his graduate work at the University of Iowa during the summers of 1921, 1923, and 1932.

Professor Emmons took a deep interest in civic, religious, and educational affairs. He was an active member of the Methodist Church, the Lions Club, the Mathematical Association of America, Lamda Chi Alpha College social fraternity, and a member of other organizations of a vocational or philanthropic character. He served his community in many ways as an outstanding citizen and efficient leader includ-

ing a period of service on the Warren County selective service board.

Simpson College leaned heavily on Professor Emmons in administrative affairs. He was responsible for many important functions of the college and possessed an unusual ability to get along harmoniously with his associates. He was highly esteemed by the students, his colleagues on the faculty, and by the alumni. With all his other duties and interests he was an outstanding teacher of mathematics. He had unusual ability in leading students to an appreciation and understanding of mathematics and inspired an exceptionally large number of them to continue graduate work in the subject.

Professor Emmons married Miss Fadge King in 1904 who survives him together with three daughters, three grandchildren and one brother, Dr. Owen A. Emmons, principal of Cooley High School, Detroit, Michigan.



ANNIE WILSON FLEMING

1871-1945

Annie Wilson Fleming, a member of the Iowa Academy of Science for 21 years passed away at the Mary Greeley hospital, Ames, Iowa, September 18, 1945. She had been in ill health for a year. Burial was at Traer, Iowa.

A native of Iowa, Miss Fleming gave her life to the profession of teaching in that state. She was born at Traer November 26, 1871, and received her early schooling there. She entered Iowa State College in 1891 and was granted the Bachelor of Science degree in Mathematics in three years. During her vacations while in college and following her graduation she taught in rural schools and in the high school at Washington, Iowa. She returned to Iowa State College January 1, 1900, to teach Mathematics and continued her connection with that institution till the time of her death. She was made assistant professor of Mathematics in 1915.

In 1921 she received the degree of Master of Science in Mathematics from the University of California.

She was a thorough student herself, making a brilliant record in her undergraduate and graduate training, and she expected much from her students. She gave unstintingly of her time and effort to careful, thorough teaching of her classes, spending much time in conference with individual students. Those who completed her courses successfully were always well prepared for their future work in Mathematics.

In 1941 the department of Mathematics of Iowa State College gave a dinner to honor Miss Fleming for the forty years of service she had given to the college. Many tokens of respect, appreciation, and affection came from her former students as well as from her colleagues in her profession.

She had a great appreciation for beauty and contributed much to the pleasure of her friends and co-workers by her frequent gifts of flowers and her remarkable remembrance of special anniversaries. She was a generous, loyal friend, and excellent teacher, and a thorough student.

She joined the Iowa Academy of Science in 1924 and frequently attended its meetings. She was also a member of A.A.U.P., A.A.U.W., Mathematics Association, D.A.R., π .M ϵ . Σ . Δ .E., π . β . ϕ . and the Congregational church of Ames.

She is survived by a brother, J. M. Fleming of Grand View, Washington, and by a sister, Mabel A. Fleming, instructor in the department of English, Iowa State College.

GERTRUDE A. HERR

HELEN F. SMITH



WILLIAM HEADRICK GEMMILL

1871-1945

The death of William H. Gemmill on May 22, 1945, brought to a close a notable career in educational administration. Mr. Gemmill was born at White Lake, Ontario, Canada, and was brought to the United States in infancy. He prepared for a teaching career at the Iowa State College, graduating in the class of 1894 which included such well-known scientific workers as George W. Carver, Charles D. Reed, and Annie W. Fleming. His undergraduate training was supplemented and extended by study at Des Moines College, Drake University, and at Highland Park College where he received the degree of M.A. in 1911.

In 1895 he was married to Berdie D. Richards who with their three daughters and a son survives. The son, John D. Gemmill, is a professor of government in the College of the City of New York.

Mr. Gemmill's public school work included the superintendency of the schools of Keokuk County (1898-1902) of Dallas Center (1902-1911) and Carroll (1911-1913).

In 1913 he became secretary of the Iowa State Board of Education and continued in this service until his retirement in December, 1936. Next to Mr. William R. Boyd, Mr. Gemmill probably made the most definite contribution to the efficiency of method and the continuity of policy of this pioneering experiment in the administration of higher education. He was an understanding and impartial adviser

of successive presidents and supported consistently progressive programs for all three of the institutions.

Following his retirement from the Board, he was appointed Superintendent of Documents in the Agricultural Experiment Station at Iowa State College. In this position he was tireless in plans for the widest distribution of the bulletins and periodicals of the Station and the Extension Service, and in effective advice on the style and form of presentation. Such contacts with applied science Mr. Gemmill found congenial both from his social and scholarly interests. His appreciation of scientific endeavor was shown in his membership in the Iowa Academy of Science, the National Geographical Society, and the American Museum of Natural History.

EARLE D. ROSS



THOMAS J. MANEY

1888-1945

In the passing of Thomas J. Maney, Iowa State College lost one of her highly respected staff members. Tom, as he was known to his colleagues, was an inspiration to his associates, to students in horticulture, and to many others who sought his council.

Professor Maney had an unusually broad knowledge of the science of horticulture and a keen ability to evaluate results of horticultural research. Tom Maney had many friends in the horticultural field and in its allied departments and industries. His was a happy life. Although troubled in late years by a physical ailment, his life was that of an optimist, being always ready to give advice freely and cheerfully to both scientist and layman.

Professor Maney was an outstanding horticulturist in the special field of pomology. He became known nationally and internationally because of research on hardy fruit tree stocks. His early educational training was at Geneva, New York, where he became interested in the research carried on at the Geneva Agricultural Experiment Station. As a young man, he worked at the Geneva Experiment Station and learned the skills of plant propagation and nursery practice. He came to Iowa State College as a student in 1908 and studied under the able leadership of the late Professor S. A. Beach. Upon graduation in 1912, he was employed by the Agricultural Experiment Station at Ames and became interested in research of hardy apple tree stocks. Professor Maney had various interests in the pomological field. He carried on and directed research in fruit breeding, refrigerated stor-

age, orchard and vineyard management, and plant propagation. In 1917, he was appointed head of the Pomology Section of the Agricultural Experiment Station. This position, he held until the time of his death which occurred in October, 1945. As head of the section, he directed research investigations carried on by staff members and many graduate students who now fill responsible positions with the U. S. Department of Agriculture and State Experiment Stations.

Through contacts with earlier horticulturists in the Midwest, Professor Maney became thoroughly convinced that the successful growing of fruit trees in Iowa and adjacent areas could only be brought about by the use of hardy fruit tree stocks and the hardier tree materials developed by plant breeding. The severe winter weather that prevailed in the years, 1917, 1925, and 1940, injured or destroyed many fruit trees in the Midwest and gave direct evidence of the soundness of such a program. Professor Maney was one of the first to realize the nature and extent of the winter injury that fruit trees suffered from the Armistice Day storm of 1940 when midwinter temperatures occurred, while trees were still in an active growing condition. Apple trees on hardy stocks in Central Iowa survived this extreme test while standard trees were killed completely. These experiences have made horticulturists and orchardists of the Midwest and other states cognizant of the advantages of hardy apple tree stocks, and Professor Maney will long be remembered for his contribution of hardy apple stocks to horticulture. He also developed a hardy dwarf apple tree stock, the first that is truly hardy for Midwestern conditions.

Professor Maney's interest in horticulture extended into the small fruit and ornamental fields. During recent years, he developed some new black raspberry and strawberry varieties. Due to their better adaptability to Iowa, these give excellent promise of supplanting older varieties that have been grown many years.

Professor Maney's interest in ornamental plants included roses, dwarf juniper cedars and hardy chrysanthemums. He was active and successful in these different lines of work from which came a spineless or smooth stemmed rose, valuable for the propagation of roses, various dwarf types of junipers and new strains of hardy chrysanthemums.

Thomas J. Maney was born in Geneva, New York, April 24, 1888, where he obtained his early education. In 1922, he married Lois M. Rath of Dubuque, Iowa, a graduate and former staff member of Iowa State College. He is survived by Mrs. Maney, 3 sons, Thomas J. Maney, Jr., recently discharged from the air service, and David and John, all of Ames, Iowa. Professor Maney took an active part in his church. As a citizen, he was highly respected because of his uniform courtesy and understanding and his intelligent interest in public affairs. He is greatly missed by his family, his church, his colleagues, and many friends from far and near.

Professor Maney was a fellow of the Iowa Academy of Science,

and a member of the American Society for Horticultural Science, the Iowa State Horticultural Society, and the honor societies, Sigma Xi, Alpha Zeta, and Gamma Sigma Delta. He was a member of the Alpha Sigma Phi social fraternity, the Benevolent and Protective Order of Elks and The Knights of Columbus.

Professor Maney was author and co-author of many scientific articles which have been published in various scientific journals and experiment station bulletins. The bibliography below does not include the popular educational papers written by Professor Maney.

H. H. PLAGGE,
Iowa State College.

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FLORENCE WILLEY NICHOLS

1892-1945

On July 5, 1945, death came to Florence Willey Nichols; yet through her radiant and friendly personality she continues to exist in the consciousness of those who knew her.

Florence was born at Delmar, Iowa, in 1892. Three years later she came with her parents, Frederick Washburn Willey and Hattie Elizabeth Brewster Willey, to live in Ames. With her sister, Cora, and brother, Lou, she attended both the Ames High School and the Iowa State College. She was a graduate of the class of 1911 in the Ames High School and completed her work in the Iowa State College for the bachelor of science degree in 1915. The next year Florence taught in the high school at Red Oak, Iowa, after which she returned to Iowa State College. There she held a teaching assistantship in botany while pursuing research leading to the master's degree, which was received in 1918. Her thesis was entitled *A Study of the Vegetative Organs of Some Perennial Grasses*. This was one of the early contributions to a subject which has since received increasing attention, for the identification of grasses by their vegetative characters has a practical bearing upon agronomy.

In 1918, Miss Willey accepted an appointment as Plant Pathologist in the Bureau of Plant Industry of the United States Department of Agriculture. While pursuing this work, she had a laboratory in the department of Botany, at Ames, though the field work required some travel outside of the state. For several years she collaborated on

investigations relating to the crown rust problem and its control, with reference to the common grass hosts of crown rust growing in oat producing sections of the United States. Concerning the work of Florence Willey Nichols, Dr. Harry B. Humphrey, formerly Principal Pathologist, Division of Cereal Crops and Diseases, Bureau of Plant Industry, of the United States Department of Agriculture, recently made the following comment:

"To me, she seemed always to be a person of unusual ability in research, guided at all times by a true scientific attitude toward whatever problem was assigned to her. Her loyalty, her trustworthiness, and her enthusiasm endeared her to all who knew her; and her scientific attainments won for her the confidence and respect of those qualified to appraise the soundness of her accomplishment in research."

On June 21, 1921, Florence Willey was married in Ames to William P. Nichols, a member of the staff of the Iowa State Highway Commission. Their daughter, Lynne Brewster Nichols, is a graduate of Iowa State College in sociology. Cora Brewster Willey (Mrs. Harmon B. Deal), the only sister of Mrs. Nichols, lives in Bloomington, Indiana, and her brother, Dr. Louis Earl Willey, resides in Sioux City, Iowa.

Mrs. Nichols made many personal contributions to the community in which most of her life was spent. Her home, with its atmosphere of simplicity and well-being, was a center of hospitality. Among her fraternal affiliations were Pi Beta Phi, Eastern Star, P.E.O., the Iowa Society of Mayflower Descendants, and the Sun Dial Chapter of the Daughters of the American Revolution. The local chapter was named Sun Dial in commemoration of the sun dial which was brought over on the Mayflower by the Reverend William Brewster, the paternal ancestor of the descendants of the Brewster family. Mrs. Nichols also held the office of Assistant District Governor of the Iowa Society of Mayflower Descendants. The church which she attended was Saint John's, by the Campus; and in its work she actively participated.

Election to membership in the Iowa Academy of Science followed the completion of the work for the master's degree, in 1918; and, in 1922, Mrs. Nichols was elected a fellow of the Academy. She was a member of Sigma Delta Epsilon, Women's Graduate Fraternity; and Gamma Sigma Delta, Agricultural Honorary Fraternity.

Supplementary to her occupation of homemaking, Mrs. Nichols found time to use her talents in several fields of public service. She was a member of the City Library Board for a period of twelve years, from 1933 to 1945; and throughout that time she was active and devoted to improving the facilities of the library. She was secretary of the Alumni Association of Iowa State College from 1937 to 1948. The Alumni Offices states that perhaps no one received more inquiries from returning alumni than Florence Willey Nichols.

In an editorial capacity, Mrs. Nichols was associated with the Iowa Academy of Science as its editor from 1931 to 1939. Later, she became assistant editor of the Iowa State College Journal of Science

from 1938 to 1940; and of the Journal of Farm Economics, from 1938 to 1941.

The span of life of Florence Willey Nichols was comparatively short; yet she lived abundantly and gave freely of her constructive faculties and good will. Her search for knowledge and the ability to organize it constituted a contribution to science; her participation in service to the community, as well as her friendliness, gentleness, and integrity, inspired an appreciative response from her associates.

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ADA HAYDEN



HENRY WALDO NORRIS

(1862-1946)

Professor Henry Waldo Norris, son of Mosses Leavitt and Lydia Ann Joy Norris, was born at Pittsfield, N. H., September 11, 1862, and died at his home in Grinnell, Iowa, January 15, 1946.

The family came to Iowa in December, 1870. Henry attended a country district school in Jasper County, Rock Creek Township, and later Grinnell College Academy (1880-1862) and College (1882-1886). He received the B. S. degree from Grinnell (then Iowa) College in 1886, M. A. in 1889, and Sc.D. (honorary) in 1924. He had graduate work at Cornell University (Fellow, January 1889-June 1890), Woods Hole (summer 1890), University of Nebraska (1890-1891; ear vesicle of *Amblystoma*, embryo sac of *Grindelia*), and Freiburg, Germany (1901-02).

In 1893, Professor Norris married Harriet Victoria Ruliffson of Lincoln, Nebraska, an alumna of the University of Nebraska. Their children are: Waldo Willard (B.S. Grinnell 1917), Genevieve Eugenia, R. N. (Mrs. Fielding G. Barnett), and Selden Harmon (G.A. Grinnell 1926), now an officer on the Administrative staff of Grinnell College. The family resided first at 1301 Broad Street, later at 1015 Elm Street, and since 1903 at 816 East Street, Grinnell.

In 1886-87 Mr. Norris taught in public school at Lynnville, Iowa. In 1887-88 he taught at Cullison, Pratt County, Kansas, at the same time running the local paper. In autumn of 1888 he became instructor in Natural History at Iowa College, in the absence of Professor

Henry W. Parker. In 1891 he became Stone Professor of Biology and Geology and Curator of the Museum at Iowa College, in 1903 Professor of Zoology, in 1932 Research Professor, and in 1941 Professor Emeritus of Zoology, after fifty years of distinguished teaching in the one institution.

In the spring of 1914 Dr. Norris was Exchange Professor at Harvard University, where he gave a course of lectures on comparative neurology. At various times he taught summer courses at the Universities of Iowa, Illinois and Minnesota.

At Iowa College in 1888 he had classes in botany, microscopy, zoology and mineralogy. In 1895 he offered zoology, botany, physiology, histology, embryology, animal and plant morphology and experimental physiology, and directed a biological club for review of literature. In 1901 were offered geology, elementary zoology, elementary botany, mammalian anatomy, physiology, histology and embryology. After the division of the department and the appointment of Bruce Fink as Professor of Botany and Geology, Professor Norris offered (in 1910) general zoology (vertebrate and invertebrate), physiology, comparative anatomy of vertebrates, histology, embryology, neurology and evolution. In 1920 were offered general zoology, vertebrate zoology, histology, embryology, comparative anatomy of vertebrates and neurology. In 1930 were offered general biology, histology, embryology, comparative anatomy of vertebrates and invertebrates, and laboratory technique. In 1920 and thereafter, an assistant professor or instructor conducted the physiology course, and after 1935 Professor Norris taught only histology and embryology.

H. W. Norris was always an investigator. Beginning as a lad breaking prairie sod in Section 35 of Rock Creek Township, Jasper County, or riding the unfenced prairie each evening with horse and dog to fetch the cows, later walking the five miles across country week-ends between home and college; then as teacher of botany, he critically studied and collected the flora of the vicinity of Grinnell. In this he was aided and abetted by Frank Johnson, publisher. Thus many records were preserved of plants now extinct in this area. For many years the Norrises summered in a cabin near Estes Park, Colorado. Professor Norris made extensive collections of plants in that region.

When the biology department was divided in 1903, Professor Norris retained botany as a hobby and chose zoology for his profession. Looking for a field for research he conferred with Professor Frank Stromsten of the State University of Iowa, and accepted the suggestion to work on the lateral line organs and nervation of amphibians. This led on to the lateral line and cranial nerves of fishes and sharks, and finally to his monumental work on the hypophysis of Plagiostomes, wherein he studied this organ in every genus and in many of the species of sharks and rays.

Professor Norris was active in the Congregational Church, a deacon for many years, and for a long time teacher of a men's class in bible and bible history in the Church School. This was a course of carefully prepared lectures, with maps and charts.

In politics he was a liberal republican, independent but progressive. He was a Fellow of the American Association for the Advancement of Science and of the Iowa Academy of Science; president of the latter, elected December 28, 1894, retired January 3, 1896, with an address on "Needed Changes in Scientific Methods". He was a member of the American Society of Zoologists, American Society of Anatomists, American Society of Naturalists, American Society of Ichthyologists and Herpetologists, American Microscopical Society, American Association of University Professors, Phi Beta Kappa, Sigma Xi, Fortnightly Club (Grinnell), Science Club (students and faculty of Grinnell College).

At Grinnell his chief sport was gardening. At 1301 Broad Street he had a notable rose garden. In Colorado he reveled in trout fishing, botanizing and mountain climbing—up to age 72 and beyond. At middle age, however, he felt that rainbow and speckled trout were too beautiful and wonderful to be wilfully destroyed. He never fished again.

Professor Norris had brought together a good library, both technical and literary. The scientific journals which he received either by subscription or through membership in organizations were donated to Grinnell College Library. So also, was his extensive collection of reprints. Some of his books were similarly placed. Others were divided amongst his heirs or sold, or given away. His collection of local plants was mostly sent away by Professor Fink, in exchange for collections from elsewhere. His Colorado plants are in the herbarium of Grinnell College. His research slides, mostly serial celloidin sections on $3\frac{1}{4} \times 4$ inch glass, and his reconstructions of brains, phyophyses and cranial nerves, are in the zoological Laboratory of Grinnell College. As a teacher he amassed an immense amount of well selected charts and specimens to illustrate his courses.

Professor Norris was a man of strong convictions and few words. His wisdom was often sought by his colleagues. For many years he was annually elected Chairman of the Faculty. He was always uncompromisingly honest in all his relations, and was quite capable of righteous indignation, expressed with characteristic frankness, when he encountered evasion or subterfuge. A devotion to the truth was the central and dominating loyalty in all his thinking and doing. His many kind and generous acts, toward persons or organizations, were done silently, almost stealthily.

Professor Norris's service as an educator went far beyond the limits of the classroom and laboratory. He was a liberally cultivated man, endowed with spiritual insight, broad knowledge, human sympathy, poetic imagination and the gift of style, and blessed with a sense of humor. He was thus able to make a contribution of unusual value to the life of the College, through his addresses at Chapel and Vespers and on other academic occasions.

He was an inspiring teacher as well as a productive scholar. By his example and encouragement he led many of his students to engage in scientific research, and influenced hundreds in the direction

of service and fidelity. He was a tireless searcher for the facts in the case, and often succeeded more careful work and more accurate observation in correcting the errors of others who had preceded him in the same field. He was admired and respected by all who knew of him, and beloved by all who knew him well.

The scientific papers of Professor Norris were published variously. The Proceedings of the Iowa Academy of Science contain 23 titles. (see volume 51:651-2. 1944-46). In the library of Grinnell College are two volumes of "Collected Papers; Chiefly Researches on Comparative Anatomy, 1890-1924". Volume 1 contains 36 titles; volume 2 has two titles. After 1924 his most important papers were:

Observations upon the peripheral distribution of the cranial nerves of certain ganoid fishes. *Journ. Compar. Neurol.*, 39 (3):345-416. Pl. 1-7 No. 3, December 15, 1925;

The distribution and innervation of the ampulla of Lorenzini of the dogfish, *Squalus acanthias*. *Journ. Compar. Neurol.*, 47, 1929;

The Parietal fossa and related structures in the Plagiostome fishes. *Journ. of Morphol. and Physiol.*, 48, 1929;

The Plagiostome hypophysis; general morphology and types of structure. Published by the author, with the aid of The Hendrixson Memorial Research Foundation of Grinnell College, Grinnell, Iowa, 1941. Pp. 1-22.

HENRY S. CONARD



CHARLES DANA REED

(1875-1945)

Charles Dana Reed, for 28 years Federal meteorologist in Iowa, died at the home of his son, Dana, Jr., in Des Moines on Friday, October 26, 1945, at the age of 70, and thereby the Academy lost one of its most widely known and respected members. Mr. Reed was born on a farm near Coon Rapids, Carroll County, Iowa, on February 27, 1875, the son of Dana and Alice Webber Reed. He was reared on the farm and learned early in life the tremendous influence of climate on man's economic activities, particularly farming. He graduated from the Coon Rapids schools in 1892 matriculated at Iowa State College at the age of 15, graduating in 1896 in the same class with the late George W. Carver, noted Negro scientist. In 1898 he took the degree of Master of Science in Agriculture from Ames and also selected the daughter of an Ames merchant, Miss Elmata McGuire, for his wife. They settled down to practice scientific farming in Carroll County. Two children, Charles Dana, Jr., and Charlotte Elmata (Mrs. Edward Twomey) were born to them. A heat stroke caused him to be advised to give up outdoor work and he took and passed the Federal examination for meteorologist.

He found his life work at that time (1900) by entering the U. S. Weather Bureau, being assigned successively to Vicksburg, Miss., Columbus, Omaha, Sioux City, and New York, before returning to Iowa at Des Moines in 1916. He assumed the duties of Climatic Section Director for his native state upon the retirement of Dr. George

M. Chappel in 1918 and served continuously until his retirement in 1945.

His principal achievements in meteorology was in forecasting and in discovering long-range weather probabilities. He discovered the high probability relationship between June weather and that of the following May. His studies of Iowa weather in relation to the corn crop led to long-range predictions on the probable extent of frost damage, enabling farmers to prepare for handling the injured crop. His river forecasts saved hundreds of thousands of dollars through the years for the Des Moines River valley. It was largely through the work of Mr. Reed that the Iowa Section became the largest and most progressive section in the Federal network.

Mr. Reed's interests were widespread. Early in life, while a student at Ames, he joined the Church of Christ and was an active church worker and leader throughout his life. He was an elder and served as chairman of the church board of the College Avenue Church of Christ in Des Moines. He was also active in the Student Centers Foundation of the church. He was a member and national past vice-president of the Sons of the American Revolution, at 32nd-degree Mason, Kiwanian, and a charter member and past president of the Des Moines Economic Club. His professional memberships included the American Meteorological Society, (president of the Iowa Chapter) the American Association for the Advancement of Science, the Iowa Academy of Science, the Professional Employees of the U. S. Department of Agriculture, and the Des Moines River Improvement Association. He was an active leader of his fellow Federal employees, serving as President of Local 53 of the National Federation of Federal Employees for several years. The high esteem in which he was held by his fellow workers was evidenced on the day of his retirement when 250 of them attended a testimonial dinner in his honor, sponsored by Local 53.

At the time of his death he was a Research Professor in Agronomy at the Iowa State College where he was attempting to correlate the effect of immediate past weather on the phenological development of various Iowa crops, a task left unfinished by his sudden death. Mr. Reed was a man with a keen sense of humor and took the good natured "kidding" that is part of the life of a weather forecaster with more than the usual forbearance. His long service to his fellow Iowans, both professionally and as a friend and counselor, will be remembered through the years.

LYLE R. FLETCHER