

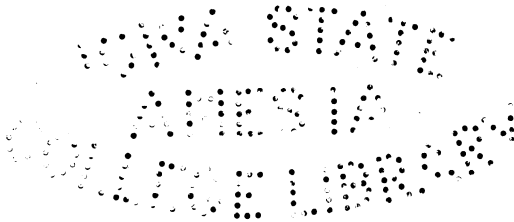
PROMINENT MEN I HAVE MET

By

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PREFACE

In writing this series of articles on "Prominent Men I Have Met" for the *Ames Daily Tribune*, I had in mind short biographical sketches of men who have had an influence on the world in a scientific, political, professional, and religious life. The lives of men and women influence us in many ways. I may say in a large way. This contact helps to guide us in our chosen field of work.

I know that the sketches I read of eminent men had an influence on my life work. I was always interested in them. I want especially to add here that the personal contact with such men as Dr. William Trelease of the University of Wisconsin, who started me along botanical lines, had a great influence on my botanical career. He was a man with a large vision, a wonderfully fine teacher and an investigator of high order. The same may be said of Dr. E. A. Birge in zoology, who had an equally fine perspective and was a great teacher. In chemistry and geology Dr. C. R. Van Hise and Roland D. Irving, and John Bascom the psychologist, also great teachers; Frederick B. Power, the phytochemist, a fine teacher and research man; Dr. H. P. Arnesby, well known for his contributions to agricultural chemistry; W. A. Henry, the director of the station, a fine teacher who exerted a large influence on agricultural work of this country, helped me in many ways. All of these men influenced my future work.

The contact at Madison was followed later by the acquaintance with such men as Dr. W. G. Farlow, a wonderfully able teacher and an investigator, a man with a broad training in general botany. My slight contact with such men as Dr. Asa Gray, the greatest of American botanists of his generation, and another great Harvard botanist, Dr. Sereno Watson; Dr. Wm. H. Brewer; of Yale, President Charles W. Eliot, Dr. E. L. Mark, and Wm. M.

Davis and Dr. N. S. Shaler, all of Harvard, and others helped to shape my career as a botanist. What I have to say in these sketches are in part reminiscences of these men and others I have met.

In this number I have given sketches of Alfred Russell Wallace, J. L. Budd, S. A. Knapp, Asa Gray, Millikan Stalker, and James Wilson.

ALFRED RUSSELL WALLACE

During the latter part of April, 1887, while I was connected with the Shaw School of Botany, Washington University, St. Louis, I had the great pleasure of meeting one of the most distinguished English scientists, Alfred Russell Wallace, who was filling lecture engagements in this country on the subject of evolution and zoological subjects. The circumstances of meeting him have always been of interest to me.

I was alone in the botanical laboratory at 1724 Washington avenue. About nine o'clock in the morning a tall and distinguished looking gentleman with a long flowing beard came to the door of the laboratory and asked if he might see Dr. Wm. Trelease, who was Englemann Professor of Botany of Washington University. I told him he was not in, but that he might find him at the Missouri Botanical Garden, commonly called Shaw's Garden. I gave him directions how to reach the garden. I was quite surprised the next morning to learn from Dr. Trelease that I had directed this distinguished scientist.

It so happens Dr. Trelease was not at the garden. Mr. Wallace looked over the garden and returned to the LaCledé hotel. Dr. Trelease at once went down to have a talk with Mr. Wallace. Mr. Wallace had come from the university of Indiana where he had gone to visit with Dr. John C. Branner, the geologist, who had spent some time in Brazil. What impressed me most was the modesty of the man. He did not even give me his name when he called at the laboratory. He had a kindly face.

From St. Louis, Mr. Wallace went to Sioux City via Kansas City. In his two-volume work "My Life, a Record of Events and Opinions," he mentions stopping at Council Bluffs and Missouri Valley. The Sioux City Natural History society sponsored three lectures on "Colors of Animals," "Mimicry" and "Oceanic Islands." He was much interested in the animals of "Mr. Talbot's zoological farm" and the pretty flowers painted by Miss Bandusia Wakefield, whose list of plants subsequently was a basis for one of my papers. Mr. Wallace describes the loess and other features of the region. He tells us nothing in his autobiography, about his interest in spiritualism. Undoubtedly those of kindred thought in Sioux City were to some extent responsible for his going to Sioux City. One chapter in his autobiography is given to mesmerism and spiritualism, and in

another chapter he discusses "Spiritualistic experiences in England and America."

What impresses me most in the reading of Mr. Wallace's autobiography and especially in his trip to the United States, is the accurate account of plant life. The plant life must have been new to him. Think of giving an account of such common prairie plants as the horse mint (*Monarda fistulosa*), and the beautiful service berry (*Amelanchier canadensis*), and our sweet william of the wood (*Phlox divaricata*), and the pretty false indigo of Kansas (*Baptisia australis*), to say nothing of the description of the fine alpine flora of the Rockies described by him, and later the Sequoias and other California plants.

Some years later when I came to Ames I had an opportunity to open a correspondence with him and I prize highly a letter he wrote to me at the age of 90 years. This interesting letter hangs in my office. He was a man still interested in the growing of flowers, especially orchids. He wrote me under date of Nov. 20th, 1911, as follows:

Old Orchard, Broadstone, Dorset.

"Prof. L. H. Pammel.

Dear Sir:

Thanks for your kind letter of April, last. Since receiving it I have been suffering from eczema and some other diseases, which has made me unable to cope with my ever growing correspondence. I am afraid I have mislaid the paper on the Bog Flora of Iowa. I amuse myself with growing plants, especially shrubs, Alpine and Bog plants. Perhaps you could get for me Primulas from the Rock Mts. of P. Parryi, P. Rusbyi, or P. suffrutescens. To grow such plants is now one of my chief pleasures.

Yours very truly,

Alfred R. Wallace.

For those who may chance to read this series "Prominent Men I Have Met," I should like to invite your attention to his remarkable autobiography. He tells us about his birth at Monmouthshire on the 8th day of January, 1823. He became a land surveyor and architect, moving to South Wales in 1840. He began to take an interest in botany. In 1847, he visited Paris, became an English master in the Collegiate school, Leicester, where he met H. W. Bates the naturalist, and through whose influence he became a collector of beetles, and with whom in 1848, he made an expedition to the Amazon. He wrote a wonderful book, "Travels on the Amazon and the Rio Negro." He took a walking tour in Switzerland; published a remarkable book on the palm trees of the Amazon. Between 1854 and 1862 he visited

the Maylay Archipelago, publishing in 1869 "The Maylay Archipelago," which has passed through ten editions.

It was one of my delights as a college student to have read this wonderful book of travel. The account of the bamboo, one of the most wonderful and most beautiful productions of the tropics, and one of nature's most valuable gifts to uncivilized man, left an indelible impression on me; to say nothing of the superb description of plant and animal life of this wonderful region. It was while Wallace was in Borneo that he wrote a paper on "The Law Which Has Regulated the Introduction of New Species," published in 1855. Every species, he says, has come into existence, coincident both in time and space with a pre-existing closely allied species. While sick with ague at Ternate in the Moluccas, he wrote an essay on "The Survival of the Fittest," which was dispatched to Charles Darwin.

The Darwin paper on the origin of species and the Wallace paper were read by Sir Joseph Dalton Hooker at a meeting of the Linnaean Society of London, July 1, 1858. The two Wallace essays written at Sarawak and Ternate with other essays are contributions to the theory of natural selection. These are remarkable essays, and I realize there are many who deny the theory of evolution. These essays had a remarkable influence on a clear and good understanding on evolutionary subjects. No doubt his belief in spiritualism somewhat modified his later views on evolution. Wallace believed in the theory of Weissman on hereditary transmission.

Wallace did not have the training of a zoologist but his university course was largely in the field. It was the practical contact with the animal and plant life everywhere that gave to him that training which made him rank among the great men of science. The paper on the distribution of animals is a remarkable one. Nothing has ever been published that quite equals "The Geographical Distribution of Animals." This book of 1000 pages in two volumes appeared in 1876. It was called to our attention as students in zoology in the eighties. I sometimes wonder how many of our undergraduate students today are familiar with the "Maylay Archipelago." Take that entertaining book "Island Life," "on the phenomenon and cause of insular floras including a revision and an attempted solution on the problem of geological climates," which ran through several editions. This work is quite as interesting to the layman as it is to the specialist.

The layman will find the work "Natural Selection and Tropical Nature, Essays on Descriptive and Theoretical Biology," of much interest, especially those topics that have to do with the geographical distribution of plants, variation in animal and plant forms, colors of animals, etc. Another remarkable book is "Darwinism, an Exposition of the Theory of Natu-

ral Selection with Some of its Applications," published in 1901, when he was 75 years old. In the preface to this work he said: "Darwin wrote for a generation which had not accepted evolution and which poured contempt on those who upheld the derivation of species by any natural law of descent. He did his work so well that "descent with modification," is now universally accepted as the order of nature in the organic world; and the rising generation of naturalists can hardly realize the novelty of this idea, or that their fathers considered it a scientific heresy to be condemned rather than seriously discussed."

The objections now made to Darwin's theory apply solely to the particular means by which the change of species has been brought about, not to the fact of that change. The objectors seek to minimize the agency of natural selection and to subordinate it to the laws of variation, of use and disuse, of intelligence, and of heredity. Wallace intimately studied the variation of animals and plants in a state of nature. There is much of interest in this volume for the layman as well as the specialist.

Wallace was interested in the every day life as he found it. He was a believer in land nationalization and published a book by that title, and republished it a few years before his death, in 1912, which was dedicated to the working men of England. He thought this plan would stop poverty. In it he gives his reason for landlordism. It is a curious fact that Wallace did not know of Henry George's Progress and Poverty when his own book was first published. Another remarkable book, is *The Wonderful Century*, 1899, Scientific and Social Studies.

Wallace lived in an age that produced great pioneer men of science, and of these some of the greatest the world has produced. It was the century of exploration, of such men as Charles Darwin, Alphonse and A. P. DeCandolle, Louis Agassiz, Alexander von Humboldt, Stephanius Endlicher, Robert Brown, Asa Gray, who have left an indelible impression on the science of the age.

J. L. BUDD

One of the first men I met in Ames after my arrival in February, 1889, was Prof. J. L. Budd, who had long held a prominent place in the faculty of I. S. C. and was well known throughout the country as one of the leading horticulturists. So well was he thought of that Charles Downing, the pomologist, willed his letters and correspondence to him. These are now a part of the I. S. C. collection.

Prof. Budd early became identified with the horticultural interests of Iowa, settling at Shellsburg, Iowa, in 1862, where he operated a nursery until coming to Ames. His college training in Union college and normal training in one of the normal schools of New York, fitted him for the task as a ready writer, and one who was capable of presenting horticultural matters in a forceful way before the then recently organized State Horticultural society. When the secretary of the society, a Mr. Adams of Waukon, resigned, J. L. Budd naturally was elected. He held this position for many years and ably edited the reports of this society. He threw himself at once in everything that was of interest to Iowa horticulture. Tree planting was the slogan of the pioneers of Iowa. The early settlers coming from the east looked over the great prairies of Iowa and saw only a little fringe of trees along the borders of streams. These pioneers longed for the trees which were a part of their home surroundings in the east. The honorable J. Sterling Morton of Nebraska, conceived the idea of an Arbor day so that the prairies of that state might be dotted with trees, and so Arbor day of Nebraska was launched on the 10th day of April, 1872. A year later, 1873, the Iowa State Horticultural society started the movement in Iowa and it was largely through the efforts of Judge Whiting of Monona county, J. L. Budd of Shellsburg, and a few others that such fine work was done. In 1873, Prof. Budd, Judge Whiting and others issued a tree planting circular to be used on this Arbor day, April 20, 1873. For several years this society gave premiums for tree planting and assisted in this worthy movement, in other ways. It was while Prof. Budd was active in the early deliberation of this society that the suggestion was made by him that the college should grow these forest trees and send them to the farmers of the state to use for wind breaks and tree planting. During his professorship at I. S. C. he lectured on forestry and helped the forestry movement.

When the chair of horticulture at Ames became vacant it was only natural that the trustees should turn to the most

prominent man in the State Horticultural society for this place. A writer said of him in this connection: "It was not merely a financial project with him but the love of his life to plant, to study, to bring to perfection the fruit of the tree and the vine and it was but natural that when the trustees of the Iowa Agricultural college cast about for a head for the department of horticulture that they should select one whose ripe scholarship and deep love of his work entitled him to pre-eminence in the profession. This position was held by him from 1877 to 1899 when he retired with honors, having the title of professor emeritus bestowed upon him."

Horticulture was still new and untried in the prairie states. There was little exact knowledge of the adaptation of plants to the prairie environment. Most of the plants used in the prairies of Iowa were then commonly cultivated in the east. What was true of ornamental plants was equally true of fruit trees. Dr. N. E. Hansen, one of his outstanding students, has well said: "Professor Budd was truly a Columbus on the uncharted sea of western horticulture. His crew rebellious at times, he steadfastly pursued his course undisturbed by popular clamor, at peace in the serene consciousness that he was right. As a result he discovered rock bound continents of truth upon which are now building temples defying the tooth of time. Some of these innovations in horticultural practice jarred at first upon the case-hardened sensibilities of commercial interests, but they have now become generally accepted by all true lovers of the gentle art and science of horticulture." And Prof. A. T. Erwin, a colleague and another outstanding horticulturist of Iowa, and friend said: "In many respects his work was peculiarly that of a pioneer leader. He accepted the chair of horticulture at the Iowa State college at a day when the word horticulture was little more than a name—it was not a science. The old world text books were worthless for the new conditions of America and American books had not yet been written. The fundamental principles governing our conditions had not been worked out as yet. In addition to this it fell to his lot to take up the leadership in one of the most difficult horticultural sections of the United States."

Prof. Budd was, at all times, a loyal friend of Iowa State college and did everything he could through the press and by personal conversation with others to promote the interests of the college. He helped to cement the rebellious insurgents of the state to Iowa State college. He distributed through the college nursery thousands of new plants to persons in the state for trial purposes and though there may have been, here and there, those who criticized this distribution, the state has been richer for the material scattered to every part of the state. As I go over the state now I can see the influence of material sent out by Prof. Budd. Such trees as the May day tree, the Russian

oleaster, the lilacs, caraganas, or Siberian pea trees, the Colorado blue spruce, the Douglas fir, white fir, the laurel willow of Europe, are but a few of the illustrations of the types he sent out to be used for ornamenting our homes and make the state more beautiful.

Prof. Budd was genial and was always glad to make and discuss problems not only from a professional standpoint but topics of general interest. He was unusually well informed. To all he always gave the right hand of good fellowship.

His was an active life. He knew no rest—always active in mind and body. He was superintendent of his work, teacher, correspondent and writer. He looked after his outdoor work and then took up his large correspondence; then go to his office and write his contributions for the press. Prof. Budd was a frequent contributor to the agricultural press; his versatile and easy style made what he said most interesting. The old weekly Des Moines Register published hundreds of articles from his pen. Many horticultural subjects were taken up. Such subjects as hardy plants, trees for shelter belts and forest plantations. The subjects discussed were invariably well put together, and convincing arguments presented why the advice should be followed. Through the columns of the Register Prof. Budd came to have a large influence on the horticulture of Iowa. I may add that the weekly Register was largely taken into farm homes because of the splendid articles by Prof. Budd and Father Clarkson. These columns contained much on the Russian apple, which he defended. While Prof. Budd made his trip to Russia to get first hand information about the plants of their country, he wrote for the weekly Register a most interesting series of letters on the countries visited by him, a fine literary contribution. Dr. Hansen has remarked on this great work as follows: "Professor Budd was a wonderfully prolific writer, never hesitating for a thought or word, and always with a lesson to impart. He did this extra work as a labor of love, considering it as a means to reach the vast public outside the walls of his class room. So, week by week, for a generation past, he added line upon line and precept upon precept in the Weekly Iowa Register until his circle of loyal friends grew so large that the work became too great for his declining strength. The present writer has tried for many years to make as complete a collection as possible of his writings, mindful of the fact that he was careless in keeping copies for himself. The spirit of optimism, of altruism, of public spirit, of unselfishness, of brotherly love, pervades and illumines all writings. He esteemed one man as good as another, and had a cordial greeting and word of cheer for everyone. He kept his force of helpers as many years as possible, rewarding loyalty with friendship shown in many ways." Few men equaled him in rapidity of writing, and yet he seldom made many corrections in his manuscript.

Prof. Budd, after his return from Europe, became very enthusiastic about the Russian apples, perhaps sometimes a little over-enthusiastic, but there is no question in my mind that the Russian contribution to the apples and fruits of this country has been large and valuable. When I came to Ames in 1889, there was still considerable discussion. There were two animated horticultural camps, one Russian and one anti-Russian, but considerable of the earlier somewhat animated disputes had very much subsided. The horticultural and agricultural press took part in these discussions and an agricultural paper of Chicago, I think either the *Prairie Farmer* or the *Orange Judd Farmer*, published a cartoon depicting the czar of Russia and Uncle Sam with Uncle Sam looking down on Russia. In other words, the argument was in favor of the American type of apple. This was the outcome of a lengthy discussion of the subject in this agricultural paper. Time has only proved that our fruits, as Prof. Budd, before he died, realized, would come from the hybrids of our American stock and the European types. Prof. Budd was not so conservative but what he could see the changing conditions of the time and he was quick to take up the things of importance in connection with horticulture and plant breeding, and I recall that he was one of the strongest advocates of plant breeding in the later years of his life as shown by the encouragement he gave to this work at Iowa State college and in connection with his papers before the State Horticultural society.

Prof. Budd was a popular instructor; few men have equalled him in the happy faculty of creating an enthusiasm for his subject. One of his students once told me that "when we started in Freshman horticulture all decided to go into the horticultural business." Many a young man has received his inspiration from Prof. Budd; several of the most prominent horticulturists owe their inspiration and guidance to their early training under his tutelage. His influence on the horticulture in this country was great. Dr. L. H. Bailey, who ranks as one of the great horticulturists of the country, in an address, I heard him deliver at Ames, spoke of the inspiration he received from Prof. Budd. Prof. Erwin has given this so well, I will quote from him: In this address L. H. Bailey "remarked that his first love for this subject was directly due to Professor Budd. It was the interest and enthusiasm of this man more than that of any other one person which caused him to take up horticulture as his life's work. In checking over the list of horticultural workers at the various state experiment stations it is surprising to note what a large number of them have received their early training under Professor Budd. His students are widely represented, both in the professional and industrial fields of horticulture." He had the one great essential to make a success as a teacher—enthusiasm, and coupled with it, implicit faith in

what he said. He talked freely and easily to his students, generally without notes or notes written on scraps of paper.

I recall a very interesting incident that occurred during one of his courses in general horticulture. Prof. Budd had read and frequently mentioned Prof. Marsh's "Man and Nature," a classic book, and in a general course in horticulture discussed all kinds of problems, one of these was drainage and at this particular time he discussed the drainage of the systems of the Mississippi valley and the arctic regions and in a general way said to his class that a part of Iowa was drained into the Arctic ocean. Of course, this was incorrect, because the drainage, so far as Iowa is concerned, is either to the Missouri or the Mississippi river but he was not so far out of the way. As a matter of fact if you take a map of Minnesota and Dakota you will find that the dividing drainage basin for the Red river of the North is within 200 miles from the Iowa line, but some of the students were very much perturbed at the inaccuracy of the statement. Prof. Budd dealt in generalities. He had the big things in mind so this little slip might better have been overlooked by the students. They commented sarcastically on this statement.

He was well read from a scientific standpoint. Though perhaps, not always quite up to date, he did consult many of the early scientific treatises concerning botany and horticulture. When it came to discriminating between plants he showed unusual power of picking out differences. In other words this faculty had much to do with success in life in a business way. He was an astute observer of men and things. His published notes in the Weekly Register show that he had at his command a great fund of general information.

To many a student he gave a helping hand when they needed financial aid. Many a student has expressed deep gratitude to him for his kind assistance.

To Prof. Budd we owe, in part, some of the beautiful trees that grace the college campus. I recall the grove that surrounds the campanile, the birches and oleasters in front of Margaret hall. Throughout the state of Iowa and the northwest in general the fine blooming *Rosa rugosa*, the Russian oleaster, the fragrant lilacs and honeysuckles are a reminder of one of Iowa's great men, the father of Iowa horticulture. At one time Prof. Budd had one of the leading collections of woody plants in this country on the campus, now only a memory for some. First the old nursery near the campanile, mostly native American plants, then the nursery where Margaret hall is located, the white birches and oleasters are reminders. Then let us recall the little nursery, started back of the present green house where there are a few remnants of the old trees left such as the white poplar now badly diseased. Norway maple, and back near the veterinary buildings only a few of the very fine things

are left such as the yellow wood, the black ash, the red oak, the blue ash, the Russian oak, European elm, quaking asp, large tooth aspen and a number of other plants. A little earlier than this planting Prof. Budd started a nursery which later developed into his arboretum. This is where the physics and science buildings are located. This arboretum contained many interesting American, Russian and Asiatic plants, not many of which are left. There are several species of pear from Asia and Europe, black birch, and a service berry. Prof. Budd had an interesting lot of Asiatic barberry, one of the largest cultivated collections in this country. This interesting collection of plants had to make way for the building operations of the campus. Prof. Budd felt sorry that these plants had to be removed. It seems to me that somewhere on this college campus we should start a collection of plants that Prof. Budd cultivated on the campus, and the offspring of which was distributed to the people of Iowa. It would be a reminder of the great work that Prof. Budd did for the state of Iowa.

Prof. Budd was born in Peekskill, N. Y., in 1835, attended Union college, Schenectady, three years, and the state normal school of New York two years. He came west and located at Rockford, Ill., where he was principal of Rockford academy for two years and then settled at Shellsburg, Iowa in 1862, was elected professor of horticulture, May, 1877, and president pro tem of the college, December, 1884. He died December 20, 1904, at Phoenix, Arizona.

SEAMAN ASAHEL KNAPP

It is fitting that I should include in this series of short sketches an account of Dr. Seaman A. Knapp who won for himself an enduring place in the educational and agricultural fields of this country. Lester S. Ivins and A. E. Winship in "Fifty Famous Farmers" say: "No American has had a greater agricultural influence over wide territory and over so many years than had Seaman A. Knapp. O. B. Martin in "The Demonstration Work" quoting from an address made by Dr. Knapp in 1906 before the Ninth Conference for Education in the South at Lexington, Kentucky: "We then learned the philosophy and power of agricultural demonstration." Mr. Martin says: "It is good that this man, who was literally the first demonstrator of the great movement as now constituted throughout the country, should have realized that he was furnishing object lessons not solely for the benefit of himself and family, but also for his neighbors. Thousands have followed in his footsteps and have been actuated and inspired by the same motive. It is almost superfluous to say that the bankers and business men did not have to indemnify him for failure."

Mr. Wallace Buttrick, secretary of the General Education Board, in an article on Seaman A. Knapp's work as an agricultural statesman in Review of Reviews, quotes F. C. Gates as saying: "There is abundant knowledge of the science of agriculture; if these people could have that knowledge in some practical form there would be no limit to the output of southern agriculture."

It was during the study of southern economic conditions and education that Mr. Gates and Mr. Ogden found Dr. Knapp. Later the General Education Board made a small contribution for this extension work in the state of Mississippi. This was in 1906. From this little beginning there developed wonderful work in connection with the boys' corn crops clubs, canning and poultry clubs which has been of tremendous importance not only in the south but in the country as a whole. Walter H. Page, our ambassador to Great Britain, was greatly interested in the development of the south economically and educationally. Mr. Page's work in behalf of this better educational system is interestingly brought out by Burton J. Hendrick in "The Life and Letters of Walter H. Page." Mr. Page often regretted that the south did not have the comprehensive system of education that the north and west had. He soon found that

in order to bring about the educational system that agriculture would have to be taken into consideration. Dr. Buttrick set to work to devise a plan but found little that could be done until his attention was drawn to Dr. Knapp in the words of Burton J. Hendrick: "A quaint and bucolic Ben Franklin—who was rather obscurely working in the cotton lands of Louisiana, making warfare on the boll weevil in a way of his own."

Yet he had evolved a plan for retaining country life and making American farms more fruitful. It was Dr. Knapp's contention the only way to improve agricultural conditions was not to talk but to select a farmer, persuade him to work his fields according to the best methods which can be prescribed for him. It was further interestingly related by Mr. Hendrick that Mr. Burton brought Dr. Knapp and presented him to Page. This was precisely the kind of man that appealed to Page's sympathies. Mr. Page regarded Dr. Knapp as one of the greatest men of the time. Page pleaded his cause with great eloquence before the Education Board. At the funeral service in Washington he said that Dr. Knapp would outrank the statesmen and politicians that received the world's plaudits because Dr. Knapp had devoted his life to a really great purpose; his inspiration had been a love of the common people; his faith, his sympathy had all been expended in an effort to brighten the life of the neglected masses.

Dr. Knapp not only had a great mind but he was a man of great vision and he could eloquently plead for the right thing. At the Mississippi A. & M. College he said: "For once in the history of civilization let us have a common people thoroughly trained within the lines of their duties, full of science of how to get a living, refined, courageous, and loyal to government and to God."

It was evident from his addresses that he was a lover of the great "out-of-doors," and in order to develop a virile manhood and womanhood it would be necessary to bring this contact with country life. Not only did he want to develop the economic side of agriculture but he wanted to see a fine and full rounded life and that, he thought, could only be developed through the heart, mind, and body. It was in the city he felt that the dense population was a menace to this kind of development. In an address delivered at the Mississippi A. & M. College in 1884, he said: "Each square mile of dense city population should occupy in the future one hundred square miles of territory." In other words it was this rural contact that would make for a better civilization.

What led up to his great constructive work is an interesting story. He had a good, strong background. His father was a physician and a man of fine culture, his mother also was a woman of generous impulses and was broadly educated. It was

in the little village of Schroon near Lakke Champlain in Essex county, New York state, where he received his early training. This village had the finest kind of traditions. He was born on December 16, 1833, and died in Washington, April 1, 1911. His early education was at the Troy Conference Academy, located at Poultney, Vt., and finished at Union College, Schenectady, New York, receiving the degree in A. B. in 1856, under the presidency of Eliphalet Nott. He received a classical education. An interesting story is related therewith. On one occasion, Dr. Knapp was with three distinguished educators, college presidents. These men noticed he was wearing a Phi Beta Kappa key. One of the educators said, "I notice that you are wearing the key of a classical honor society. How did you get it?" Dr. Knapp promptly responded, "I got it by the same hard work you did to get your key." Quite a number of institutions conferred the Doctor of Laws and the Doctor of Science degrees on him. From Iowa State College, he received the Doctor of Science degree in 1909. After graduation from Union College he was professor and associate president of the Fort Edwards Collegiate Institute, later becoming connected with the Ripley Female College, formerly Troy Conference Academy at Poultney, Rutland county, Vermont.

In 1866 he moved to Big Grove Township, Benton County, not far from Vinton, Iowa. He became superintendent of the State College for the Blind at Vinton in 1869, resigning in 1876, returning to the farm. During his residence at Vinton he was in constant demand as a lecturer on agricultural topics. He became a breeder of Berkshire hogs and Shorthorn cattle, and thus became a charter member of Iowa Improved Stock Breeders' association. Dr. Knapp had so impressed his services on the agriculture of Iowa that in the fall of 1879 he was elected professor of agriculture and came to Ames in February, 1880. He served in the capacity of professor of agriculture until 1883, when he was elected president, serving until December, 1884. Dr. Knapp was elected dean of agriculture, serving until 1886, when he accepted a position with the Agricultural Development company of Louisiana. He was busy with his pen and was a frequent contributor to the Western Stock Journal and Farmer of Cedar Rapids. It was in this way that he became acquainted with James Wilson. They became life long friends.

It was my pleasure to have met Dr. Knapp a great many times. He was a man of pleasing and compelling personality, an outstanding figure in every way. When in his presence you felt that you were talking to an extraordinary man. St. Clair McKelway, editor of the Brooklyn Eagle after hearing one of his addresses said: "That man is a combination of Socrates, Horace Greeley, and Gladstone."

At fifty-three years of age we see Dr. Knapp starting out

on a new enterprise in Louisiana to improve farm conditions. The boll weevil was the opportunity to open the door of great possibilities to educate the planters to follow a better system of agriculture. He was seventy years old when the boll weevil appeared. Most people say old but he was young and vigorous. Some of his real life work was done at this time. Dr. Knapp for seven years had charge of this extension work in the south. In 1905 an appropriation of \$40,000 by the United States government was made to carry on this extension work. Today it is more than \$15,000,000 and an untold amount of good is accomplished.

Dr. Knapp at Iowa State College was not only a fine and worthy companion, but an able member of the faculty, always initiating some things worthy of note. We note now the experiments with grasses. He was trying to see if orchard grass, and tall meadow oats might not prove of some value for Iowa agriculture. The idea of making the agricultural colleges great agencies in agricultural research was an idea that he fostered. The wisdom of national legislation for experiment station work is now generally recognized. Much credit is of course given to the Hatch Act which was introduced in the house of representatives by Congressman Hatch of Missouri. Dr. S. A. Knapp is responsible for drafting the original Hatch Act. This was drafted by him in 1882 and it became a law in 1887. As finally passed only a few minor changes were made from the original draft of Dr. Knapp.

I cannot, of course, speak much about his ability as a teacher. But those who had him in classes mention his precision and clearness in presenting a topic. Many able men were turned out, some of them are conspicuous in agricultural work. I may mention in this connection the late Prof. S. A. Beach, late assistant secretary of agriculture, W. M. Hays, Dr. C. F. Curtiss, Dean of Agriculture at Iowa State College, G. W. Curtiss at one time professor of agriculture at Texas A. & M. College E. S. Richman, O. W. Rich, Chas. A. Keffer, Dr. N. E. Hansen, Brookings, South Dakota, Dr. Myron H. Reynolds. Prof. Hays has said of him:

“James Wilson gave larger official service than any other Iowan. Henry Wallace, Sr., preacher, agriculturist and religious agricultural editor, was Iowa’s greatest private citizen. And Dr. Seaman A. Knapp, founder of America’s system of county farm bureaus, merited the tribute given in Walter Hines Page’s address at his funeral: “He was the greatest educator among us’.”

At the dedication of the Knapp memorial group of oaks on the campus, another of his students, Dr. C. F. Curtiss, said:

“This institution is blessed today, and in the generations to come, by the love and veneration of its founders for trees, and

by the love for trees which these men imparted to their students. One of these early students has rendered a signal service to this institution in the planting, which he has generously donated and for which he has provided skillful direction. A higher or more appropriate service could hardly be rendered by any alumnus to his alma mater.

"When he gave up his work here, he entered upon a work that gave him, in a way, a broader field. He rendered a service to the people of the southern states that made him an emancipator for a better agriculture and for better citizenship. The people of the south have erected a monument to his memory, but the greatest monument that he has, or that any man can have, is the place he holds in the hearts of a grateful people."

Much has been said about the influence of Dr. Knapp in the class room and the farm but we must also recognize the influence of another person on the campus, Mrs. Maria Knapp. Those who knew her realize that she must have had a wonderful influence on the life of the man who did so much for the cause of agriculture and education in this country. Dr. E. W. Stanton has said: "Gracious, tactful, tender, she instinctively knew the right word to use, the right advice to offer, and always, the particular way in which the strength needed could be given. Mrs. Knapp was not only a woman of culture but she used her intellectual attainments in a way to command the respect and honor of all her associates."

In one of his addresses delivered in 1883 when a professor of agriculture, he said: "Nothing upon the crust of the earth, or in the depth of the sea, or in boundless space is exempt from the scrutiny of the scientists. He has cultivated the organs of sense to the uttermost and then added to them. To the eye he has added lenses and tubes until he can look at his atom or survey a star. He has multiplied the sound receiving capacity of his ear and has drawn his tongue into a copper wire until he can converse indefinite miles. He has lengthened his fingers to pick up shells on the bottom of the ocean. We owe to science, also, a debt of gratitude for teaching men to tell the truth. It scrutinizes, and sifts, and refines till it arrives at the fundamental facts of truths. This is a kind of personal training necessary for men of business.

"The great need of the many is a more scientific and practical knowledge of the common things of life; to the masses the philosophy of the cottage is more important than that of the palace, and the result of the battle between force and matter of deeper moment than one hundred Waterloos. The great captains of the future must marshal the hosts of industry upon the farm and in the workshop."

And again in an address in 1884 delivered at Ames, he says: "The whistle of the plow-boy, the tumult of trade, the

rumblings of engines, the music of the water wheel, the din of hammers, the rattle of looms, rise in a grand chorus of industry all over the land. These are the living evidences of the power of faith and hope.

"The broad statesman, the profound scholar, the zealous reformer, the men who organize liberty and found republics, who plan moral revolutions and lead the forces, have positive convictions. They believe in mankind, in the great future, in the enduring character of God. It does not require any great strength of intellect to destroy or to doubt."

Dr. Knapp said: "The farm must be made a place of beauty so attractive that every passing stranger inquires: 'Who lives in that lovely home?' The home is of minor consideration, the gorgeous setting of trees and shrubbery holds the eye."

Dr. Knapp had a large influence in shaping agricultural teaching and experimental work at Ames. When I came here in 1889 my attention was frequently called to the grass plots located not far from where the present creamery stands. I referred to the Hatch act which had its inspiration here.

He was a close student in matters pertaining to agriculture. Some of the early experiments conducted on the campus of Iowa State College had to do with grasses and these were reported in 1882. As professor of agriculture at Iowa State College he became interested in the treatment of fence posts

Dr. Knapp resigned the professorship of Agriculture at Iowa Agricultural College to go to Louisiana in 1886—he was then fifty-three years of age. He devoted his attention to improving the conditions of Louisiana. He brought northern progressive farm settlers to live among the inhabitants to give them instruction in how to manage farms and make money. He studied farm conditions and from it came the idea of co-operative extension work.

It was my pleasure in November, 1892, to have been one of a party of agriculturists and scientists to attend the sixth annual convention of American Agricultural Colleges and Experiment Stations held at New Orleans. The delegates from the north and west chartered several Pullman coaches in Chicago. The Illinois Central railroad was anxious that we should have the best of service and therefore Captain J. F. Merry of Manchester, Iowa, special passenger agent of the Illinois Central, was on the train to make things pleasant for us. I had many interesting chats with Mr. Merry who spoke about the agricultural development of the south and laid stress on the fact that Dr. Seaman A. Knapp of Louisiana was doing a great work for the south, and it would be through his initiative that the south would be born anew. His words were prophetic. It was through the organization of boys' clubs, and farmers' clubs, and wo-

men's and girls' clubs, that the system of agriculture became changed.

Dr. Knapp, as manager of the problems of the Agricultural Development Company of Louisiana, had a tremendous responsibility. The scattered farmers of this region were not successful as agriculturists. It was one vast cattle range in a country not really adapted to the raising of cattle. Dr. Knapp made a study of the agricultural problems and decided that rice growing had greater possibilities in that and the neighboring state of Texas, and so Dr. Knapp really became an authority on the subject of rice. He did much for the rice country of Louisiana and his wide experience led him in the year of 1910 to prepare a paper on rice culture, issued by the United States Department of Agriculture as Farmers' Bulletin number 417. When Secretary Wilson in 1898, wanted a man to study the rice problem in our recent possessions Porto Rico and the Philippines, he called on Dr. Knapp to make a study of the agriculture of tropical regions including Japan and China and to give special attention to rice culture. The result was that Dr. Knapp brought back with him a wealth of information on the subject. Dr. Knapp not only understood the commercial aspect but he was familiar with the scientific and botanical aspects of the question. His associates felt that he was the one man capable of looking after the interests in America and therefore elected him president of the Rice Growers' Association in America.

Many years ago the writer of this note was called to investigate a cotton disease, the cotton root, in Texas. It seemed to me that the only remedy would be in rotation of crops. Cotton was the staple crop. Merchants, bankers, and laborers all adjusted their business to the cotton crop. It was a one crop country. Along in 1902 the boll weevil appeared. It was a Mexican insect. Ordinary methods of insect control were of no avail. The insect was spreading over the state. A panic followed. The boll weevil was a blessing in disguise. The entomologists found the remedy to be diversified crops. But it needed a leader, and that leader was Dr. Seaman A. Knapp who gave directions for the use of better seed, more space for the cotton plant to grow, more and cleaner cultivation, and above all to alternate with corn and other crops in order to combat the weevil.

It is interesting now to look back and see that his study of the cotton boll weevil began to bear fruit when Secretary James Wilson and the Chief of the Bureau of Plant Industry, Dr. B. T. Galloway, made a request to have an appropriation of \$500,000 set aside to meet the ravages of the boll weevil. Half of this sum was appropriated and half of the \$250,000 went to the Bureau of Entomology and half to the Bureau of Plant Industry.

To work out the problem of how to combat this great evil,

there was organized the farmers' cooperative demonstration work with Dr. Knapp in charge. Later when the success of this work was demonstrated, it was not difficult to get appropriations for this work.

Dr. Knapp's experience in organizing this work on southern farms led him in 1910 to publish a Farmers' Bulletin number 422, issued by the United States Department of Agriculture in which he gave his rich experience in contact with southern agriculture. Speaking of the boll weevil, he estimated that it was annually invading new territory six miles long and in sufficient numbers to cover each stock for a mile in width. "A cotton crop can be produced in spite of the boll weevil and the sooner the farmers realize it the better. The demonstration of the effectiveness of these methods is one of the objects of the farmers' cooperative demonstration work."

Dr. Knapp made a general study of how best to deliver the knowledge of agricultural science to present farmers. In the course of that study we learned of Dr. Knapp and his success in helping present farmers. Dr. Knapp came to Washington for a conference. The question was asked: "Why cannot your method, so successful in boll weevil states, be introduced in all the states of the south?" The answer was: "Federal money cannot be used except to fight an interstate evil, like the boll weevil, for example."

After conference with Secretary Wilson and Dr. Knapp, the General Education Board made a small contribution for the extension of this work into the state of Mississippi. This was in 1906. In 1907 the work was extended to Alabama and to Virginia; the latter state presenting conditions radically different from those existing in the cotton-growing sections. So successful was this work of demonstration farms that in the following year the General Education Board supplied funds for the extension of the work to all the southern states.

At the fourteenth annual conference for education in the south held at Jacksonville, Florida, on April 19, 1911, Dr. J. H. Dillard said: "In pausing thus to pay our tribute of respect to his private life, exalted character and public service, we mingle without mourning the triumph of the victor. No note of failure or defeat attaches to our expression concerning him. It is true that death has claimed him, but the lessons that he taught and the victories over the forces of nature won by his intelligence and imparted by his patriotic humanity to his fellow craftsmen of the farm, will not only remain but will grow in the power of great achievement even after the name of their author shall have faded out of human memory. Dr. S. C. Mitchell called him two years ago the Benjamin Franklin of American Agriculture.

“In earlier life his service was given to the north and northwest, but since 1902 his entire time has been given to the farm demonstration work of the southern states.

“This great life has gone out with only a slight recognition in the newspaper press, so strangely are the real values of life misinterpreted. The nation is poorer for the loss of Dr. Knapp, but the plain people, hundreds of thousands of them, are richer materially, mentally, spiritually, because of his missionary work on and for the land. May other hands grasp the torch that he has dropped and carry his unfinished work forward with ever growing light and power and with ever increasing blessing to the people he so nobly served!”

DR. ASA GRAY

Dr. Robinson states "that the career of Dr. Asa Gray is one of great beauty; indeed, it has the dramatic quality which comes from humble origin, far seeing ambition, persistent effort, large accomplishment and wide recognition. He was born in 1810 at Sauquoit, Oneida County, New York, of English and Scotch Irish ancestors. His father was a tanner and a farmer."

Dr. Gray in his boyhood days was occupied in duties connected with the tannery and the farm. He entered a country medical school at the age of 16 and became interested in botany, using the work, *The Manual of Botany*, of Amos Eaton. At 17 he assisted a country doctor. He graduated from medical course at the age of 20. Dr. Robinson tells us that he wrote *The Elements of Botany* at the age of 25 and conducted a course in botany at Hamilton college. "At 28 he was appointed to the professorship of botany at the University of Michigan, and in 1842 was chosen to fill the newly created professorship of natural history at Harvard."

In this country the great exploring age, though it began earlier in the century, continued at intervals up to the sixties. Many of the great expeditions were made after the forties and many of the plants collected on these expeditions naturally went to Dr. Asa Gray, who named many of the new species, and there were hundreds of them. It was a gigantic undertaking but Dr. Gray did his work well. He had the respect and esteem of all the great botanists of Europe for his profound research in botany.

On May 21, 1925, in the City of New York, Dr. Robinson gave an address at the unveiling of the bust of the great American botanist, Dr. Asa Gray, in the Hall of Fame. It was very appropriate indeed that the present curator of the Gray Herbarium at Harvard university should have made the address. In the brief time allotted to him it was hardly possible to review at length the great services that Dr. Gray performed to botany and science in this country. He surely ranks among the great scientists this country has produced and his name will find a place with such men as Alexander Agassiz, Benjamin Silliman, Spencer F. Baird, Joseph Henry, and men of that type; yet I presume in the eyes of the reading public Agassiz is placed first. While there is no doubt that Agassiz made many important contributions, none have a more permanent and abiding place in our literature than the work of Dr. Asa Gray.

My interest in Dr. Gray began while a student at the University of Wisconsin. My instructor in botany, Dr. Wm. Trelease, had been a student of Dr. Gray and consequently gave to his special students

at the University of Wisconsin an insight into the character of the man, his methods of work, and his greatness as a botanist. When therefore, in the fall of 1885, Dr. W. G. Farlow invited me to become his private assistant, I had an opportunity to make the acquaintance of Dr. Asa Gray. Dr. Farlow, the great scholar and student of lower forms of plant life in this country, had been a warm and intimate friend, and student, of Dr. Gray.

He said, "You must, of course, meet Dr. Gray," which I did at my earliest opportunity. This was soon after my arrival in Cambridge toward the latter part of December, 1885. I arrived at the herbarium at 8 in the morning. The door was open and I walked in, looked over the literature and marvelled at the great library of botanical works. Along about 9 o'clock in the morning Dr. Gray came down and introduced himself to me. I told him I had come to work with Dr. Farlow. "Yes, yes," he said. "I know about it." He said that Dr. Trelease had written him about me and also that Dr. Farlow spoke to him concerning my work in the cryptogrammic herbarium. Then Dr. Gray went on to tell me that he saw my first published paper in the Torrey Botanical Club on "Seed Coats of Some Leguminosae." He said he was interested in it.

I had never met so distinguished a man before and naturally the little remark by Dr. Gray encouraged me. I frequently saw him later when I went to the library. He was always willing to help the young men interested in botany and was able to talk most illuminatingly on a variety of subjects related to botany. As an illustration of the helpfulness of Dr. Gray to young men the recently published note by Prof. H. W. Wiley, formerly chemist of the U. S. Department of Agriculture, in *Science* of September 4, 1925, will be of interest.

Dr. Asa Gray came to Dubuque, Iowa, to deliver his address as retiring president of the A. A. A. S. in August, 1872. The title of this address was "Sequoia and its History." Dr. Gray had a peculiar interest in the American lotus which was so abundant at McGregor, Iowa. Quite a number of scientists accompanied Dr. Gray to McGregor to see the American lotus. Among these I may mention Dr. T. H. MacBride. Dr. Harvey W. Wiley, mentioning the trip to McGregor, says:

"During this meeting we had an excursion up the river. A large party of scientific men was walking along the bank, among them Asa Gray. We came across a pool of still water connected with the river, in which there were some beautiful water lilies, very large. Professor Gray pointed to a mass of flowers which were particularly beautiful, growing near the edge, but too far from shore to be reached, and expressed a desire to possess them. I, at that time, was not afraid of getting wet, so I plunged into the pool, plucked the lilies and presented them to him. He expressed to me his very great joy in having them.

"I think that this meeting with Asa Gray was the deciding factor in my going to Harvard the next year for a special course in chemistry. Professor Gray belonged to that group of great men mentioned by Professor Robinson, composed of Longfellow, Norton, Agassiz, James Russell Lowell and Oliver Wendell

Holmes. It was my good fortune within a year or two of my meeting with Asa Gray to meet all these worthies. I greatly appreciate the tribute paid to Asa Gray by Professor Robinson."

In my address to students in systematic botany, I have made this reference to Dr. Gray's work and in the general introduction to this course I said:

"A course in taxonomic botany would not be complete without some reference to the men and women who have enriched this phase of botanical work. Many of the present day tendencies in scientific work is to deal only with the present; the future, these students say, will take care of itself, and what does it matter? The average student, and for that matter many a teacher, only considers the present state of science. They care little for the past. I think it is a mistake. The present age is indebted to the past for many of its discoveries and achievements. Therefore, let us take a little time to consider these men, whether they lived in France, England, Germany, Sweden, or any other country, we are indebted to them.

"It is worth while to refer to such men as Linnaeus, Bentham and Hooker, Endlicher, DeCandolle, Braun, Ray, Morrison, Caesalpinus, John Torrey Asa Gray, Watson, Brewer, Michaux, Nuttall, Pursh, etc.

"Dr. Gray accomplished great things in botany, I need only mention his North American Flora with Torrey, Synoptical Flora, never completed because too many new plants were coming in. Many monographs had to be prepared before the Synoptical Flora could be completed. Gray's textbooks in botany had a wonderful influence on the botany of North America. I wish I could give you details of his many contributions. You should not go through college without reading some of his popular discourses gathered together in Life and Letters, and a collection of Essays on Evolution. Then let me refer you to a beautiful tribute in an address by Dr. B. L. Robinson of Gray Herbarium, a worthy successor to Gray and Watson, in Science of July 17, 1925. This address will give you a bird's-eye view of the distinguished botanist, Asa Gray."

Dr. Gray had a wonderful influence on the science of this country and the public at large. He was respected everywhere for his opinions. It was largely through his transcendent qualities as a Christian that the theory of evolution was generally accepted in this country. Every student of natural history should scan the remarkable series of essays and reviews pertaining to Darwin, published in 1876.

In this work he says that "two hypotheses divide the scientific world very unequally on the origin of the existing diversity of plants and animals which surround us; one, that all kinds originate supernaturally and directly as such, and have continued unchanged in the order of nature; the other, that the present kinds appeared in some sort of geological connection with other and earlier kinds, that they became what they now are in the course of time and in the order of nature."

In his address at Dubuque on the subject, "Sequoia and its

History," the relation of East North American to Northeast Asian tertiary vegetation traced out the connection between the plants of that geological period and the present distribution. This was based of course, largely on the valuable geological work of several European and American geologists.

It was possible now also for him to correctly interpret the distribution of present day plants in Eastern North America, Japan and China, from the collections made by Commodore Perry's expedition to Japan; the Williams and Morrow collection and the collection of Charles Wright of Commodore Rogers' expedition. This made it possible for Dr. Gray to interpret the geological history of the plants of eastern North America and eastern Asia. The work *Darwiniana* referred to above contains philosophical essays on evolution insectivorous plants, climbing plants duration and origination of racial species, and essays of geographical distribution of plants.

Dr. Asa Gray was a very consistent and faithful member of the Congregational church at Cambridge, Massachusetts, and I frequently saw him in his pew. He was invited to address the students of Yale college, and delivered two fine lectures on natural science and religion. He was glad to avail himself of this privilege, and makes this statement:

"While listening weekly—I hope with edification—to the sermons which it is my privilege and duty to hear, it has now and then occurred to me that it might be well if an occasional discourse could be addressed from the pews to the pulpit. But, until your invitation reached me, I had no idea that I should ever be called upon to put this passing thought into practice. I am sufficiently convinced already that the members of a profession know their own calling better than any one else can know it; and in respect to the debatable land which lies along the borders of theology and natural science, and which has been harried by many a raid from both sides, I am not confident that I can be helpful in composing strifes or in the fixing of boundaries; nor that you will agree with me that some of the encounters were inevitable, and some of the alarm groundless. Indeed upon much that I may have to say, I expect rather the charitable judgment than the full assent of those whose approbation I could most wish to win."

"Among the questions which disquieted pious souls in my younger days, but which have ceased to disquiet any of us, are those respecting the age and gradual development of the earth and of the solar system, which came in with geology and modern astronomy. I remember the time when it was a mooted question whether geology and orthodox Christianity were compatible; and I suppose that then, in these quarters, the balance inclined to the affirmative, it was owing quite as much to Professor Silliman's transparent Christian character as to his scientific ability."

Then he adds in another connection, speaking of the Old Testament, "for its fundamental note is the declaration of one God, maker of heaven and earth, and of all things, visible and invisible—a declaration which, if physical science is unable to establish, it is

equally unable to overthrow." He concludes his address by saying: "We students of natural science and of theology have a very similar task. Nature is a complex of which the human race, through investigation, is learning more and more the meaning and the uses. The Scriptures are a complex, an accumulation of a long series of records, which are to be well understood only by investigation. It cannot be that in all these years we have learned nothing new of their meaning and uses to us, and have nothing still to learn. Nor can it be that we are not free to use what we learn in one line of study to limit correct, or remodel the ideas which we obtain from another."

DR. MILLIKAN STALKER

The pioneers of every country have always been very substantial men and women. They have contributed to the foundations of state and nation, and every nation owes to these plain men and women a substantial gratitude. Iowa State college, on June 6th, 1917, desiring to remember some of the pioneers in Iowa educational work, dedicated memorial groups of trees to these men. A group of hard maples on the south side of the campus is the site of the proposed memorial building and near it is the group of trees commemorating Dr. Millikan Stalker, one of the pioneers in veterinary education in this country. At these exercises General James Rush Lincoln paid the following tribute to Dr. Stalker:

"Perhaps a man's character and work, when his life has closed, may be best judged by the answer to the question, "Is he missed?" No one who knew Dr. Stalker has other than pleasant memories of the man, and reminiscences of delightful experience with an always agreeable companion; and again they hear his voice in pleasing conversation, which was always interesting and instructive and ever enlivened by sparkling wit. As a social companion he was unrivaled. Being a great traveler he would command the attention of any group in which he might be thrown, and give experiences and observations, oftentimes unique, and always interesting and full of instruction.

"He was a pioneer in his profession in Iowa, and had high ideals towards which he worked. He believed thoroughly that the veterinary profession was destined to be looked upon as one of the most useful to man, as a profession whose work was to bless the whole human family.

"Today no one but recognizes the vast importance of this profession and among its early scientists and laborers, the splendid personality of this leader will continue to exert an influence for greater achievements. He saw his profession grow from a weak and lowly place in the scale of educational endeavors to its present proud place as a profession among the most beneficent to man."

Dr. Stalker was one of the most remarkable men ever connected with the Iowa State college; he was a brilliant student, a superb lecturer, a charming conversationalist, and an exemplary citizen. These characteristics, in brief, were some of the remarkable traits of this pioneer of veterinary education in the United States.

Dr. Stalker came of Quaker ancestors who lived in North Carolina. His father and mother, at an early stage in their married life, left the Carolinas and came to Plainfield, Indiana, where Millikan was born on the 6th day of August, 1841. Not long afterward, the Stalker family moved to Richland, Iowa, where his youth and young manhood were spent. There were no idle moments in this frontier life on a farm. He was diligent and faithful; he attended district

schools and academies in Oskaloosa and Springdale in this state and was also a teacher in the district school.

At the age of 28, he was graduated in 1873 with the second class from the general course which corresponded with the present general science course. His tastes were literary and he had intended to study law but his plans were changed because of a vacancy occurring in the college faculty through the election of Prof. I. P. Roberts to the chair of agriculture in Cornell university. Because of his maturity and experience on the farm, Dr. Stalker was offered the position thus left vacant and creditably filled the chair of agriculture here, giving all of the instruction and acting as farm superintendent as well. From November, 1873 to November 1876, he also acted as secretary of the board of trustees. In 1876 Dr. Welch recommended that instruction in veterinary science be added to the curriculum. There were then few teachers of adequate experience on that subject anywhere in this country. There were several brilliant exceptions to this rule among whom we may mention Dr. Law of Cornell university, a Scotchman who came here through the influence of President White, and Dr. Liautard of France, who later became connected with the New York College of Veterinary Surgeons, while the teaching force of the veterinary school in Toronto was made up almost entirely of men from abroad.

Dr. Stalker attended the veterinary schools of New York and Toronto, receiving his degree from the latter. He was made professor of agricultural and veterinary science at Iowa Agricultural College in 1876, his work to begin in 1877. Thus there was organized the first school of veterinary science in the west, when in 1878, this department was separated from that of agriculture. A two years' course covering the entire school year was insisted upon from the first, and later, at the suggestion of Dr. Stalker, the course was lengthened to three years. There were few students at first but the attendance increased steadily.

Prof. L. B. Schmidt in an historical sketch of Iowa State college, says:

Considerable veterinary work was included in the agricultural course and in 1877, the records show that a department of veterinary science was recognized. On May 23, 1879, authority was granted for the addition of one year of veterinary work to that already offered and the granting of degrees and diplomas to those who completed such course. Thus the official establishment of a veterinary school was accomplished May 23, 1879. On November 12, 1879, \$4,000 was appropriated for the building of a veterinary hospital. The first class to graduate from a state institution in America graduated from the Iowa State College in 1880. During the first 10 years 43 men were graduated as veterinarians. During the next 10 years (1890 to 1900) 58 veterinarians were graduated."

During the early days of the veterinary work in the college the classes were small and the work was divided between Dr. D. S. Fairchild and Dr. Stalker and sciences taught by various men in the departments of the college. The real veterinary work of the college

including the clinics fell to the lot of Dr. Stalker. When the work increased a house surgeon and an assistant professorship followed. Other men were later added to the staff. During the early days of the veterinary course, students from the course in general science were permitted to elect some of the veterinary studies.

A large number of the science students availed themselves of the opportunity to listen to the lectures of Dr. Stalker. It is probably not saying too much when I make the statement that no one has ever given instruction in the difficult subject of anatomy who was better able to secure the undivided attention of students than Dr. Stalker, and that no student could learn his anatomy more easily than he could under the wonderful and charming personality of this prince of lecturers. He had such a unique way of presenting the subject that the subject remained with his students. Many have told me this.

The writer heard Dr. Stalker give several of his lectures, one on his trip to Alaska and in this he told many stories and incidents of the trip. These were so interwoven with the scenery and other matters that they were highly polished pieces of literary work. Dr. Stalker was at his best as an entertainer. I have never heard a man who could equal him as a conversationalist. I remember well his first trip to the Lake Mohonk conference in New York. The beauties of the scenery were described to me, and he marvelled at how the people were made comfortable while the peace conference was in session.

At one time he delivered a lecture on the camel which was indeed a rare treat to those who heard it. After giving an account of the anatomy of the camel, he proceeded to tell in his own unique way, the use of the camel as a beast of burden in the countries of the old world.

It was my pleasure to have known Dr. Stalker intimately and personally from the very day I arrived on the campus. In fact the first year of my stay, Dr. Stalker took his meals at our home and I was able to thus become acquainted more intimately than I would otherwise have done, especially with his charming manners. A friend of mine in a neighboring state, on whom Dr. Stalker happened to call, invited him in to dinner. A stranger to be sure, but the friend afterwards told me that Dr. Stalker entertained for two hours in his own inimitable way.

Dr. Stalker left little in the way of published papers, except as they appeared in the reports of the state veterinary surgeon. The reports that he made are commendable for the terse English and the breadth of vision. A number of substantial contributions to science were made in these reports.

It is, moreover, pleasing to note that Dr. Stalker gave to the veterinary profession a number of very strong men like Dr. Reynolds of Minnesota, W. B. Niles of our city, Dr. Faville of Washington, Dr. S. B. Nelson, Dr. Norton of Arizona, Dr. Stewart of Kansas City, Dr. Carey of Alabama, and others who have impressed their strong

individuality upon their work and that these men have an endearing and fond recollection of their beloved instructor. Some of the work these men have done has had a large value for the veterinary profession.

Dr. Stalker was responsible for the first veterinary practice act in Iowa. He had a strong personal following in the legislature. His advice was much sought. During the winter he made his home at the Savery hotel, so that he might be in close touch with the legislature. The state of Iowa owes Dr. Stalker a debt of gratitude for his work in connection with the suppression of contagious diseases in the state.

Iowa was one of the first states in the union to take advanced ground on the suppression of contagious diseases among domestic animals. It was largely through his efforts that the law creating the office of state veterinary surgeon was passed in 1884. This law gave the veterinary surgeon general powers to enforce regulations in regard to contagious diseases of domestic animals "within or that may be in transit through the state." It placed this work in the hands of a graduate of some regular and established veterinary college. It provided, moreover, that the rules and regulations should meet with the approval of the state board of health, the governor and the executive council. Subsequently, Dr. Stalker succeeded in having the law amended to strengthen its provisions. He served faithfully as state veterinarian from the 28th of April, 1884, until 1895, when a change was made by Governor Shaw.

We can hardly realize how great a task it was to organize the work of the state veterinarian during the early days in Iowa. There were hostilities to overcome among the farmers, stock shippers and transportation companies. The public needed instruction upon the subject of contagious diseases of animals and no one could give this information in a better or more lucid way than Dr. Stalker. The state was organized into districts and assistant veterinarians were appointed most of whom had been under his tutelage. The veterinary profession throughout the state had confidence in his ripe and sound judgment on all problems connected with the health and diseases of animals. The veterinary profession, the farmers and this college in particular should dedicate a monument to his untiring work in behalf of the great live stock industry of the state. Beyond his own profession, he saw that some of the contagious diseases of animals were communicable to man and in his first report as state veterinarian, in 1885, this significant statement was made: "The fact that the milk of tubercular cows is charged with the poison germs should cause it to be rejected in every instance as an article of food. As tuberculosis in man and in the bovine species is identical, the conclusion is inevitable that a similar experiment on man could be followed by a similar result. The fact that consumption prevails to an alarming extent in this country, and that this same disease is frequently seen in cows that contribute to the milk and

beef supply of our people renders the subject worthy of the most careful investigation by sanitarians." He recognized that such contagious diseases as glanders and anthrax could be communicated to man and that care should be used in disposing of and isolating such cases in lower animals. Admirable quarantine regulations were put forth in the rules and regulations issued by the state board of health.

His suggestion that the state veterinarian should be a member of the state board of health was a wise provision of the law creating the office of state veterinarian. This law has of course been changed and we now have a board of animal health.

lege. Prof. Wilson told me these men elected would give strength and stability to the agriculture work of Iowa State college.

Prof. James Wilson writes me as follows:

"My father served six years as director of the experiment station and professor of agriculture in the Iowa State college. When he came there, there was one student taking agriculture. This I believe was in 1891. This student's name was James H. Shepperd, who has since been connected with the North Dakota Agricultural college at Fargo. In those days everything seemed to be popular on the Ames campus except agriculture. A few of the old hard headed farmers met at the State Stock Breeders' association meeting and passed resolutions to have agriculture at Ames as provided in the original act creating the institution."

It is always interesting to follow the career of a man. There is an unsigned editorial article in Volume 42 of the Experiment Station Record (1925), concerning Honorable James Wilson, presumably written by Dr. E. W. Allen, which sums up admirably some of the characteristics of our friend and colleague:

"A great man is a product of opportunity, but not wholly of circumstance. He waits not for opportunity to come to him but himself helps to make it, and a part of his genius is his ability to see an opening and to broaden it so that he may have the chance to carry forward his aims and purposes.

"This was characteristic of James Wilson, late secretary of agriculture. He believed in agriculture as an enlightened occupation, and in the force of science to advance it to the standing and the efficient position it must ultimately occupy in the nation's life. He worked in a period when changes were beginning to come rapidly, and he took advantage of this to broaden the opportunity for accomplishing the things he believed in and to build up an enlightened public sentiment in support of it. He made agriculture recognized as it had not been before. He gave it a larger place in the public mind and in constructive legislation; and perhaps greatest of all, he developed a broad public consciousness of the need for aid to the farming industry and confidence in technical investigation to render such aid."

His interest in everything pertaining to farm life is admirably shown in an article on James Wilson by L. S. Ivins and A. E. Winship, "Fifty Famous Farmers." Rufus Stanley tells the following story when he went to call on the secretary with a party of Boy's club champions, the Omega club of Elmira, New York. The secretary asked Mr. Stanley, "What is the object of this Omega club?" "Mr. Stanley replied, 'To give city boys the advantages of country boys.'" With a twinkle in his eye, the secretary said, 'Do you think that country boys have more advantages than city boys?' Mr. Stanley's face beamed with a noncommittal smile, and the secretary turned to Dr. Galloway, his assistant, and said, 'Please see that these boys have the use of our carriage while here; we can walk!' Thus the carriage provided by the congress of the United States for the uses of the secretary was placed at the disposal of the club champions, and, as they rode about the beautiful streets of Washington, there was gratitude in their hearts to the distinguished man whom the people of the nation learned to know so well."

Secretary James Wilson served longer than any other secretary

—from 1897 to 1913. Beginning with the McKinley administration serving through the Roosevelt administration. It was unprecedented.

The United States department of agriculture was put on a sound basis. I recall calling on Prof. James Wilson in the same old office in agricultural hall, when the papers talked about making him secretary of agriculture. I received a letter one morning from F. Lamson-Scribner who was connected with the U. S. department of agriculture as agrostologist asking me to send his greeting to the Prof. Wilson who was to be the new secretary of agriculture in the McKinley administration. "Yes," he said, "I have been offered the place by my old friend, Wm. McKinley, with whom I served in congress and for whom I have the highest admiration. It is a duty for me to accept." I then tendered him my congratulations.

James Wilson, or "Tama Jim" Wilson, was a success because the farmers believed in him. I had many conversations with southern people who swore by Secretary Wilson because of what he had done for the south. When it came to an appropriation, the democrats were quite willing always to grant it because Secretary Wilson had a wonderful grasp on the agricultural and scientific problems affecting agriculture.

It was during this administration that the various phases of agricultural work were laid down. The personnel greatly increased as well as the appropriation. The policies were mapped out by him. One of the most important steps taken while he was secretary was to give to forestry a larger aspect. Gifford Pinchot was the forester. The national forests were still in the department of the interior. It was to study some of the problems of grazing in these forests that I was asked to investigate grazing conditions in the Utah forests. During the following winter Theodore Roosevelt, greatly interested in this problem, called a forest congress to meet in Washington. Some of these sessions were presided over by Major John F. Lacey. I was pleased to have received an invitation to dine at the home of the secretary, presided over by the charming and talented daughter, Miss Flora Wilson. Other guests on this occasion were Dr. N. E. Hansen, Brookings, South Dakota, the well known Seth Bullock of South Dakota, an old friend of Theodore Roosevelt. I changed completely my opinion of Seth Bullock. I thought he was one of the rough and ready men, but he was a mild mannered man, and a most delightful entertainer. Cornelius Bliss of New York had been invited but could not come. Mr. Wilson was a generous host, and to have been a guest at his home was the occasion for an enjoyable time. It was always a pleasure to have him as a guest, as we did quite frequently, because of the little nice things he would do for the children, his charming manner, and genuine and wholesome individuality.

Secretary Wilson was interested in many big problems, some of them directly concerning the college and station work, like the Adams act, agricultural extension, cooperative work of stations. Some of the important things accomplished are the Act for the Suppression

of Contagious, Infectious and Communicable Diseases of Live Stock; the Food and Drugs Act; the Meat Inspection Law; the Insecticide and Fungicide Act; the Plant Quarantine Act; the Forest Conservation Act; Predatory Bird and Animal Act, and the Farmers' Cooperative Demonstration Act, which has revolutionized the agriculture of the south and which was the beginning of our great system of cooperative extension work in agriculture and home economics.

He was greatly interested in exploration and sent Dr. N. E. Hansen to Russia and Siberia to bring back valuable plants. The growing of figs and dates in California was not successful and so he sent an explorer to the regions of the old world to get the right kind of insect to pollinate the fig and the right kind of date for Arizona.

Tama Jim Wilson was elected to the Iowa state legislature in 1867 and served in the 12th, 13th and 14th. He was speaker of the house of the fourteenth general assembly. At the close of the session the house presented him with an office chair, a gold headed cane, and a speaker's gavel. In addition to his service in the legislature he was railroad commissioner of Iowa. To get an idea of his constructive work one should read his first report and through the final and last report as secretary of agriculture, as it is the natural reflection of one of the most notable figures in American agriculture. As he there wrote, the department during sixteen years "has progressed from the kindergarten through the primary, middle, and upper grades of development until now it has a thousand tongues that speak with authority. Its teachings, its discoveries, and its improvements are permeating the national agricultural life. The forces that are at work must cause ever increasing results."

He was elected to congress in 1872 and served in the 43rd and 44th congress. It was in congress he received the name of "Tama Jim" to distinguish him from another James Wilson, U. S. senator from Iowa.

The following unpublished facts are of interest in his service on the agricultural committee of the house. They are given to me by Prof. James Wilson:

"For several years he was railroad commissioner of Iowa. While a member of congress there was nothing beneath him in the line of duty to his constituents. There was an out-break of pluro-pneumonia among the purebred herds of the state and he, as a member of congress, introduced a bill to stamp out this disease. He went to Chicago and bought two buckets, in one he put the diseased lung and in the other he put the healthy lung. He paraded with these two buckets in the halls of congress to show his fellow workers what might happen if something was not done. He had no trouble in having his bill passed.

"At another time he rode from Chicago to some eastern point with a load of cattle on the stock train to see how these cattle acted in transit. The question was up at that time as to whether it was not cruelty to animals to haul them without rest, feed and water. He had legislation passed regulating this and it is still in force today."

I am indebted to Prof. James Wilson for the following facts. On

December 3rd, 1883, James Wilson presented credentials as the member elect from the Iowa district in which he lived.

"The house was democratic at this time. Mr. Wilson had a contest, having defeated his opponent, Ben Frederick of Marshalltown by thirty-two votes. McKinley also had a contest in the same house. This is where Mr. Wilson became intimately acquainted with McKinley. They both had contestants' seats in the democratic house and met frequently and consoled each other. McKinley's contest was decided against him but Mr. Wilson held out until one hour before adjournment of the full two years. At this time he gained recognition from the speaker by standing up on his desk and making the statement that if this congress, before adjournment, would consider the bill then before congress for placing General Grant on the retired list, he would willingly give up his seat to his opponent, Ben Frederick of Marshalltown. This was done. Of course, Mr. Wilson had drawn his pay for the two years since he had the thirty-two votes to the good from the fifth district of Iowa and by passing this bill Ben Frederick also drew his pay for the entire two years. This was brought about by a cleverly arranged filibuster."

Previous to this time he had been the whip of the house and understood well the handling of men. The present Senator Cummins was his attorney and it required some money to pay for legal advise, etc., in this contest. The contest broke Ben Frederick financially and physically and had it not been for the Iowa land it would also have broken Jim Wilson.

An appreciative note in volume I. was sent to James Wilson by a son of General Grant, namely, Frederick. He sent a copy of the Grant Memoirs to him.

James Wilson was born in Ayrshire, Scotland, August 16, 1835, and died August 28, 1920, in Traer. A few months earlier the writer, passing through Traer, called on the former secretary. He was not the same in body but intellectually he was alert. He had not forgotten his old friends in the department of agriculture or his friends at Ames. He spoke kindly of them. His was a remarkable life, a full life, a life of great achievement. His life illustrates what a poor boy may do. The following story is of interest: He came from Scotland in a sail boat and worked in Connecticut peddling milk. Shortly afterwards he moved to Iowa with the rest of the family, there being fourteen children and he being the oldest, and settled on a farm in northern Tama county. He worked by the month in a saw mill and a flour mill for the purpose of getting some money to keep the big family alive. He became popular in the locality because he was always a student. He knew more about things in general than the average Scotch boy and, therefore, became a leader. He was the county superintendent of schools, held township offices and at the outbreak of the war it was either he or his brother, Peter, should enlist and the other one should stay at home. Since he had always taken the lead in everything else Peter convinced him that it was his turn, so Peter went to war; but it was agreed that upon his return

everything should be divided half and half. During the absence of Peter, James Wilson accumulated considerable land and on Peter's return everything was divided half and half as agreed upon. These original farms adjoin each other today and they are owned by Peter's widow and James Wilson's oldest son. Dr. Wilson in early life learned that in order to make a success of anything it was necessary to advertise. Even when he was in congress and all through his political life the newspaper correspondents had access to him. As secretary of agriculture he was compelled to receive callers only at stated times although reluctant to do this.

W. M. Hays who was his assistant secretary of agriculture has truly depicted the greatness of the man. Let me quote from him:

"The nearness of his worth to first rank among the men of his time is not realized. Historians have the task of finding his rank among the men and women who were his contemporaries. When properly set forth, his achievements will be given rank which will surprise his friends.

"As John Marshall led in putting the supreme court of the United States forward as the type for national supreme courts of constitutional forms of republican governments, so James Wilson led in placing the full power of democracy behind research and education in agriculture.

"James Wilson has no rival in leadership in laying the foundation upon which recent legislation favorable to agriculture is built.

"After serving sixteen years, three years longer than any other cabinet member. Secretary Wilson was honored by the employees of his department, who gave him a marble bust of himself. In responding to the speech of presentation, with raised index finger, he recognized the likeness by saying: 'It is I.' 'Your eloquent speaker has been so good as to give to me the credit for causing the department to grow from its small beginnings sixteen years ago to its present greater place in our government. I would change that statement. These brilliant men round about us have done the work of creating a great department. Their faith, and genius, and industry are the cause of this growth, and of the now recognized service of the department to the farmers and to all the people of this great republic, and to the world. But I do claim that I chose the men.'

"Iowa had, as a pioneer agrarian triumvirate (the men referred to by Hays, were Henry Wallace and Seaman Knapp), three truly great men, who, in a lifetime of cooperation, led in building up agriculture and the country life of their state, of the nation, and of the world, as no other three associated men of any state."