

PROMINENT MEN I HAVE MET

E. W. D. HOLWAY

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PROF. E. W. D. HOLWAY

By L. H. Pammel

I am sure that many of the readers who are interested in Iowa State college may want to know something about the men and women who contributed to the institution. Many fine eulogies have been paid to Professor Holway, and I might mention here the eulogy by J. C. Arthur in *Mycologia* (Volume XV, No. 5); eulogy by Howard Palmer, read at the annual meeting of the American Alpine club, January 25, 1924; the fine eulogy by Prof. Frederick K. Butters in the *Botanical Gazette*, March 1924, and the account by the same author in the *Canadian Alpine Journal* for 1923, and the resolution adopted by the senate of the University of Minnesota, February 14, 1924, and the fine tribute paid by Dr. J. Arthur Harris on the E. W. D. Holway herbarium and library, and also the announcement under the head of Mycology, statement by Dr. J. Arthur Harris which appeared in 1925; the introductory statement made in *Reliquiae Holwayanae*, and the fine statement by Dr. J. C. Arthur in "Grass Rusts of South America" based on the Holway collection. All of these give us an insight into the strenuous work of Professor Holway.

Nearly 40 years ago the writer of this sketch started a correspondence with E. W. D. Holway of Decorah, Ia., who was at that time connected with the Winneshiek County bank. It was my pleasure to secure for the college Professor Holway's large collection of plants, except the rusts, which he had been accumulating for more than 35 years while a banker at Decorah.

Some friends of the institution may be interested to know something about the herbarium of Iowa State college, and something about the personalities of those who contributed to make this collection, and it is for this reason that I am preparing this sketch of Professor Holway, and because of his fine contribution to botanical science. Moreover my long and uninterrupted friendship with him started when I was a neophyte in botanical work.

The great service which E. W. D. Holway gave to botanical science, particularly in connection with the study of North American rusts, makes his work of particular value to the students of rusts. Moreover, Iowa State college has an interest in Professor Holway because of his intimate connection and personal relationship with one of the early graduates of Iowa State

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college, namely, Dr. J. C. Arthur, who graduated in 1872, and who like Professor Holway has rendered botanical science a great service in connection with the study of rusts. Certainly no one in the United States, or for that matter in the world, has made a more thorough study of this group of plants than Dr. J. C. Arthur, and, therefore, this association with Professor Holway is of special interest to many readers of *The Tribune*. Professional botanists will remember the name E. W. D. Holway, but his full name was Edward Willet Dorland Holway. He was born of Quaker ancestry in Adrian, Mich., February 13, 1853, and when about one year old moved with his parents to a farm in northeastern Iowa near the little village of Hesper. He attended the public schools of that vicinity, and had intended to prepare himself for the profession of civil engineering, but owing to severe illness it was necessary for him to change his plans. It was during his convalescence that he received an offer from the Winneshiek County bank of Decorah to become connected with that institution, a position which he accepted. He remained with this bank for 35 years, and his name was a synonym for honesty and integrity, and he did much to place this bank on a firm sound financial basis.

One is curious to know why and how he became interested in the subject of botany. In the first place from childhood he was interested in flowers and the great out-of-doors. The region about Hesper with its hills and prairies and fine flowers gives us an interesting background for his study, and again the region about Decorah gives us another interesting background. The wonderful scenic Oneota river with its limestone cliffs and rugged hills covered with trees and flowers, the interesting ice cave, one of the marvelous natural and curious formations of that region must have incited into the young man a desire to know something about geology and plants.

I know that for many years while in the banking business that he roamed the Decorah hills and became familiar with every foot of the ground, and no doubt found here and there many interesting plants and also some diseased plants which incited his curiosity.

He was largely a self-made man, never having had the college contact with specialists in botany, zoology or geology. Like Hugh Miller, he read, absorbed and studied in the field and became great because of his power of concentration and an effort to give something to science. I recall other men, also, who rendered great scientific service and acquired their knowledge thru their initiative and own efforts; men like Hugh Miller and Dr. Charles Wachsmuth.

Because he was a keen observer of plant life he was led to seek information from others like Dr. C. E. Bessey and Dr. J. C. Arthur, then at Ames. Dr. Arthur has told us that for many

years "Professor Holway was a banker of Decorah, Ia., during which time his avocation was collecting. In his youth it was coins, then insects and various natural history objects. Along with these he secured books dealing with different specialties, and took personal delight in early and rare volumes.

"During the seventies he turned to the collecting of flowering plants, and in the eighties took up fungi; eventually the plant rusts engaged the chief part of his attention."

Recently in looking over the many specimens of flowering plants in our herbarium, collected by Professor Holway chiefly in the vicinity of Decorah, I am impressed with the neatness of his specimens and the accuracy of the determinations showing a thoro study of the types of plants he collected.

On several different occasions while Professor Holway lived in Decorah it was my pleasure to have been a guest in his home where I had the privilege of meeting his family and his first wife, Effie Aiken, who died in 1917. The family had a splendid home life, Mrs. Holway showing fine taste along many different lines. It was also my pleasure to have made a little trip with him in the field studying the plant life in the vicinity of Decorah. I remember at that time I was particularly interested in the study of ferns of the state. I was interested in his finding the Beech fern (*Phegopteris calcarea*) in shaded limestone rocks, an extremely rare fern which occurs far northward in Labrador. At this time, too, I was especially interested in a specimen that he had in his collection of the balsam fir, which he found near Decorah, probably only a waif here. It so happens that he knew, also, of two interesting localities of the fir in Winneshiek county, one near Kendallville. Other interesting flowering plants were found by Professor Holway, which no doubt gave him a zest to study plants, one of these was the water Pennywort (*Hydrocotyle*).

Dr. J. C. Arthur pays this tribute to Prof. E. W. D. Holway:

"Even a long life is never long enough to complete all the large projects begun by an active and resourceful person. Such a person was Prof. E. W. D. Holway, as the writer knows from nearly a half century of co-operation in scientific labors. His varied interests embraced such diverse pursuits as banking, expert accounting, book collecting, mountain climbing, artistic and scientific photography, botanical exploration and, as a passionate avocation, the study of plant-rusts. In none of these lines was he content to become simply efficient but made himself master of methods and by a habit of critical inspection thereby advanced knowledge.

Dr. J. C. Arthur in his article, "The Grass Rusts of South America," makes the following statement: "Professor Holway was a man of diversified tastes and superior ability. Whatever he undertook he did unusually well. Beginning his career as a

banker, in which occupation he laid the foundation of the competence which enabled him in after years to defray the expenses of collection and publication of botanical data, he became noted as an ardent mountain climber and a successful botanical explorer. His contributions to the critical identification and delineation of the rusts also were by no means insignificant.

The following fine estimate was given by Dr. J. Arthur Harris:

"E. W. D. Holway was one of those men altogether too rare in this country who, because of his innate love for botanical work, was impelled to turn aside, in the prime of his physical and mental vigor, from a highly successful business career to devote the remainder of his active life to the botanical exploration and study which had always held a dominant place among his varied interests.

"This is neither the occasion nor is there adequate space, for a detailed portrayal of Professor Holway's personality or manifold activities. Brief biographical notices are available in the official minutes of the senate of the University of Minnesota, in the *Canadian Alpine Journal*, in the *Botanical Gazette* and in *Mycologia*, in the "*Geographical Journal*" of the Royal Geographical society, of which he was a fellow, and elsewhere. Much light is thrown on his pioneer work in the exploration of the heights of the Canadian Rockies by Howard Palmer's scholarly and fascinating volume on the Selkirks. The amount and character of his botanical work is suggested by the amassing of his great herbarium of plant rusts thru his personal botanical explorations not merely in the United States, Canada and the West Indies, but in Mexico, Central America, Chile, Peru, Bolivia, Ecuador, Brazil, Uruguay and Argentina. In a number of the regions visited no collections of rusts had ever been made. Wherever he went he left the beaten paths, often depending solely upon the simple necessities that he could carry with him.

The senate of the University of Minnesota adopted a fine and feeling memorial and resolution on Prof. E. W. D. Holway, in part as follows:

"During his long and successful career as a banker he became interested in botany, eventually specializing in the rust fungi and while still actually engaged in the banking business he built up a very extensive collection and valuable library along his chosen field. Feeling that he wished all his time for his botanical researches and traveling he retired from active connection with the bank in 1904 and moved to Minneapolis in order to be in closer touch with academic life. Here he presented his collections and library to the University of Minnesota and accepted the position of assistant professor of botany which he held until his death."

(Signed) L. D. COFFMAN.

The scientific work of Professor Holway will always be known thru his work in connection with the rusts. Had he chosen he might have made equally important taxonomic contributions along other lines. Dr. J. C. Arthur in a paper on the grass rusts of South America based on the Holway collections (Contribution Bot. Dept. Purdue university, Agricultural Experiment station) makes the following interesting statement: "For 50 years the writer was intimately associated with the late Prof. E. W. D. Holway in botanical activities. For the first five years, between 1875 and 1880, we directed our attention chiefly to the identification and distribution of the flowering plants of Iowa, of which state we were both residents. After that period the fungi began to receive attention, especially the smaller forms and particularly the parasitic ones. As we became more familiar with the botanical field, our activities were gradually narrowed and intensified until in 1895 we began the publication of "Descriptions of American Uredineae," and from that time onward the rusts were our chief concern."

A background for Professor Holway's work on rusts was important. His thoro study and knowledge of flowering plants was essential and he had this.

I recall an interesting incident. One of my assistants discovered what he thought to be a new rust on a plant which I found near Dome lake, Sheridan, Wyo. The leaf looked something like one of the sorrels. Prof. H. H. Hume who studied the fungi of this collection gave it a new name, *Puccinia uniflorus* Pammel and Hume.

When Professor Holway was issuing his North American Uredineae he had occasion to make a study of the fungus. He at once recognized that it was not one of the sorrels but a species of *Polygonum* (*P. bistortoides*). He wrote me a letter about it. A further study of the plant by myself caused me to correct the error. The rust was *Puccinia bistortoides*. His knowledge of flowering plants was of great value in a study of rusts. For instance in South America he made a good collection of flowering plants so that there might be no mistake about the host plants. In his grass rusts work he had the assistance of two of our best and well-known North American specialists of this group, namely: Dr. A. S. Hitchcock and Mrs. Agnes Chase, and earlier the help of Prof. F. Lamson-Scribner. Other specialists assisted in the determination of plants like our best authority on bonesets and *Mikania*, namely: Dr. B. L. Robinson and F. S. Blake, an authority on Compositae, and other material was identified by authorities in the United States national herbarium. These eminent botanists praise this phanerogamic collection in the highest terms. He also had the assistance of C. G. Pringle, the well-known collector of plants in Mexico on the Mexican flora; and such well-known authorities as L. M.

Underwood and J. N. Rose assisted him in the identification of other groups of flowering plants.

Professor Holway made extensive trips in search for fungi and especially rusts, all at his own expense. Large extensive collections were made at an early day in Decorah and vicinity, and with J. C. Arthur at Vermillion Lake, Minnesota in 1886. Professor Holway in the 80's spent a few weeks with Drs. J. C. Arthur, L. H. Bailey at Lake Vermillion camping for two weeks on the south shore of this lake. The introduction to the paper "Plants Collected Between Lake Superior and the International Boundary" by Arthur, Bailey and Holway (Bull. Geol. and Natural Hist. Survey Minn. 3:5-43, 1887) states that Professor Holway is an acute observer, and especially interested in Pyrenomycetous fungi (for my lay readers represented by black knot of the plum), and slime molds. Nine new species of fungi were described by Ellis and Holway and two rusts by Arthur and Holway. It is apparent that Professor Holway was a many-sided man. Later much collecting at Minneapolis, Minn. and vicinity. Also Ann Arbor, Mich., Laggan, Banff as early as 1901, Lake Louise and Glacier, British America. Some of his early trips in 1888 were to Manitou, Colorado Springs, Grand Lake, and this part of the Rockies in Colorado, northern and southern California at Dunsmuir, Ukiah, King's River canon; Austin, Tex.; Hot Spring, N. M.; Seattle and Mt. Ranier, Wash.

Four vacation trips were made by Holway into Mexico, 1896, 1898, 1899 and 1903. He has given us an account of these explorations in the Botanical Gazette (31:326; 24:23, 1897). I am probably correct in saying that he discovered more new rusts than any other botanist. Seventy-six alone were discovered in Mexico when he explored that region in 1896, 1898 and 1899.

He collected at Morelia, Toluca, Zapotlan, Tula, Dos Rios, Santa Fe, Rio Hondo, Guadalajara (Oaxaca), Cuaputla (Morelos) Mexico, Nevada de Toluca, Cuernavaca, Patzcuaro, Cardenas (San Luis Potosi) Mexico City and near there, Escalava Amecameca, Jalapa Orizaba, Chapala Jalisco, 1899, and in Cuba near Havana and Aguacate in the province of Havana, Cuba, Costa Rica, Guatemala. He collected also in Switzerland, and in Alberta, British Columbia.

In order to make a comprehensive study of rusts, Prof. E. W. D. Holway made two trips to South America for new material. The first to the Andean region of Chile, Bolivia, Peru and Ecuador; the second to the eastern portions of the South American continent including the countries of Brazil, Uruguay and Argentina. On these South American trips he was accompanied by his second wife, Mary Ellen Mortenson, a woman of splendid physique, rare ability and fine poise, to whom he was married on December 12, 1918.

Dr. Arthur says, "In recent years he found an enthusiastic and intrepid companion for his travels in Mrs. Mary M. Holway, his wife, who has shared the discomforts and the joys of his explorations, and to whom much credit is due for the extent and value of the results. Since the death of Professor Holway on March 31, 1923, Mrs. Holway has supervised the completion of his important publication, 'The North American Uredineae,' and the assembling and the transfer of his library and specimens to the University of Minnesota."

Professor Holway spent something over a year, September 4, 1919 to October 6, 1920 to the Andean region and about the same length of time, August 8, 1921 to August 31, 1922 to eastern South America. The botanical exploration of Professor and Mrs. Holway in South America were most important ones in a study of rusts. Dr. J. C. Arthur who published a paper on these collections (Am. Phil. Soc. 64:131-223, f1-10, 1925), states that they secured 1,002 numbers of rusts in the western region (Ecuador), 216 of these from Ecuador, 266 were on grasses. In the second journey in eastern South America (Brazil), 1,047 specimens were secured, of these 182 were on grasses.

Dr. J. Arthur Harris in a fine comment on the value of the work of Dr. J. C. Arthur and E. W. D. Holway says: "Those who because of their different interests are inclined to consider taxonomy more lightly than other and more modern developments of science may properly be reminded that such work must not merely largely precede other kinds of research, but that it represents one of our best opportunities for co-operation in the development of South American science. Such labors as those of Holway and Arthur will do much to lay the foundation in the United States for work which has heretofore been largely done in Europe. Nor is it too much to say that the friendly relations between the two Americas may be far better fostered by the development of such scientific service than by many of the supposedly more direct means."

Professor Holway was not a voluminous writer but everything he published was thoro. In some papers he was associated with J. C. Arthur, J. B. Ellis and other co-workers. His own large contribution is the "North American Uredineae" and for my lay readers may I say this means rusts. This fine monograph of 131 pages is beautifully illustrated with photomicrographic studies of rusts, 54 plates and 181 figures, and no one knew better how to take these photographs than Professor Holway. He has given us a splendid account of the method he used to make these fine photographs in the Journal of Applied Microscopy.

The descriptions are drawn for the specimens which later were photographed. This work consists of four parts, four of these under his own supervision; the last, part five, was ready

for the printer at the time of his death, March, 1923. It was thru the devotion of Mrs. Holway, Dr. J. C. Arthur and staff of the University of Minnesota that it was published in December, 1923. Every portion of the five parts is a finished product. Dr. J. C. Arthur says, "The whole represents in one volume a highly valuable contribution to the intricate subject of uredinology by one imbued with a favorable predeliction and an unbounded zeal." The synonyms and the identification of hosts will always make this an invaluable contribution.

Dr. J. C. Arthur and E. W. D. Holway issued a set of dried rusts under the title *Uredineae Exsiccatae et Icones*, and for my lay reader this means a set of dried rust specimens with illustrations. This set is valuable for students to use in making a comparison of rust types.

Arthur and Holway are joint authors of papers under the title: Descriptions of North American Uredineae, I, II, III, IV, V published by the state University of Iowa: (I) *Bul. Lab. Nat. Hist.* 3:44-58 pl 1-3 pl 2; (II) 4:377-402 pl 1-12; (III) 5:171-193 pl; (IV) 1-4, 5:311-334; (V) July 2, 1924. The Violet rusts of North America (*Minn. Bot. Studies* 2:631 *Bot. Ser.* 4, pl 47.)

The above papers took up the rusts of ragweed, corn, blue joint, violets, etc. In each case a good description, the synonym and a good bibliography make these papers valuable. Dietel and Holway described many new species based on the Holway collection (*Erythea* 3:81).

A few other papers were published on other fungi with other botanists like J. B. Ellis, *New Iowa Fungi* (*Bul. Lab. Nat. Hist.* 3:41 pl II). He published a paper dealing with new California rusts. Other scientific papers are *Some Erroneous References* (*Bot. Gaz.* 32:421); *Mexican Uredineae, 1904*, (*Annales Mycol.* 5:391); *North American Salvia Rusts* (*Jour. of Myc.* 11:156); *Some Anemone Rusts* (*The Gard. Chron.* Jan. 29, 1910); *Notes on Uredineae I* (*Jour. of Myc.* 8:171); *Notes on Uredineae III* (*Jour. of Myc.* 10:228); *Notes on Uredineae V* (*Mycologia* 2, No. 1).

J. C. Arthur made use of the material collected by Holway in the publication of a number of papers as the *Leguminous Rusts of New Mexico* (*Bot. Gaz.* 39:385-396), and in new species of Uredineae (*Bull. Torrey Bot. Club* 24:227; 28:661; 31:11; 46:107; 33:27-34; 33:513). Frequent references to Holway may be found in J. C. Arthur's taxonomic paper on the *North American Rusts in Britton's Great American Flora*.

Several rusts are named after Holway as *Skierka Holwayi* Arthur, which he found in Guatemala on one of the maple-like plants, and *Baeodromas Holwayi* Arthur which he found on one of the ragworts in Mexico. His name appears after some twenty-seven plants.

Dr. J. Arthur Harris says in regard to the collection of

rusts: "In 1904 Mr. Holway brought his library and herbarium of plant rusts to the department of botany of the University of Minnesota, with which he was connected as a volunteer assistant professor until his death on March 31, 1923. During this period he prosecuted indefatigably the collection of plant rusts. At his death his unique personal herbarium of plant rusts came to this department. Some time thereafter Mrs. Holway presented to the department all of the duplicate materials. A count of the herbarium as he left it shows that it contains over nineteen thousand specimens. Of these about ten thousand are from North America, over three thousand five hundred are from Central and South America, and over five thousand two hundred are from Europe, Asia and Africa. This does not include the two South American collections made by Mr. and Mrs. Holway. The earlier collections of plants, except the rusts, are in the herbarium of Iowa State college.

"The completion of Professor Holway's own exquisitely illustrated volume on the North American Uredineae by the University of Minnesota completed the work of his own pen. While Mr. Holway's personal writings were never voluminous, he was widely known for the critical nature of his collecting, for his skill in the photomicrographic illustration of the rusts, and for his keen personal judgment of the species of Uredineae. Formal publication he gladly turned over to others, in order to set more of his own time free for work in the open.

"During his lifetime, Professor Holway distributed his collections widely by exchange. It has seemed desirable to arrange the duplicates of such of his materials as are represented by fairly large numbers of specimens into sets for distribution. These sets constitute the fascicles to be issued as *Reliquiae Holwayanae*.

Holway an Explorer and Mountain Climber

Professor Holway was an indefatigable explorer, a great walker. A walk with him was an inspiration. I took several walks with him in the vicinity of Decorah, Ia. In these walks he called my attention to some interesting plants like the Beech fern, how it differed from others. He could collect rare things and made fine herbarium specimens, and in an article on collecting and preserving of fungi he told us how this should be done (*Jour. Apl. Mic.* 5:2075). In a neat hand he wrote the label in the lower right hand corner of the sheet.

I recall my pleasant visit with him and a short trip in the woods far removed from Iowa, in the Selkirk country in British Columbia with three of my students, A. L. Bakke, L. S. Parke and B. Athanassiou; we were studying the botany of the region.

I was delighted and surprised to find that Holway was a guest at the hotel in Glacier where we had registered. He had spent some time climbing the mountains in the region. We, a few days previously had spent two delightful days at Banff and Lake Louise, some 40 miles from Banff. It was crisp in the morning for Lake Louise has an altitude of 5,050 feet and Stephen near Laggan, 5,332 feet.

We enjoyed the attraction of this wonderful Lake Louise with wooded slopes and the green of the coniferous woods, Mt. Victoria beyond the lake and a part of this water shed. A wonderful array of wild flowers ran riot, Labrador tea, cotton grass, scrub birch line the shores of the lake, a wonderful sight. Walter Dwight Wilcox's account in the Rockies of Canada is not overdrawn. No wonder these mountains had an allurements for Holway. An entirely new scene greets the visitor at Glacier. We were quite unfamiliar with much of the flora. I made the remark to Professor Holway, "What a wonderfully fine spruce next to the hotel." "Why, that is not a spruce but one of the hemlocks." I then examined it more closely and found it to be Patton's spruce, so-called, but one of the hemlocks (*Tsuga mertensiana*), a magnificent spruce-like looking tree. Our conversation drifted to Alpine climbing. Rising abruptly from the valley before us was quite an eminence, I thought at least a half day's work, but Professor Holway said, "You can make it in an hour and a half." To prove it he actually performed the feat while it took us about four hours the next day. Spread before us in every direction were the wonderful snow-capped Selkirk mountains, many of them had been climbed by Professor Holway. He became one of the great mountain climbers of the country. Frank K. Butters has said it so much better than I can. I will quote:

"His interest in the mountains was first aroused during a visit to Switzerland and seems to have become crystallized during two short visits to the Canadian Rockies in 1901 and 1902. In 1901, after spending most of his short vacation at Banff, he went up to Lake Louise and climbed Mt. Victoria with Hans Kaufmann as guide—his first high climb. They experienced a blizzard at the summit and had considerable difficulty in returning to Abbott Pass. Nothing daunted by this adventure he returned to Lake Louise the following year and met the guide, Jacob Muller, to whose example and advice he always attributed much of his skill as a mountaineer. A record of his trips this year may serve as an example of his great energy and the thoroughness of his conversion to the mountaineering craft. With Muller he crossed Abbott Pass and returned via Hector the same night. The next day they walked to Moraine Lake, bivouacked high above the lake, and the following day climbed Mt. Temple,

directly up the southeast side, cutting a hole in the cornice to reach the summit.

"So well did he learn his lesson that after his first two or three years in the mountains he became one of the most daring and successful climbers. His record in the Selkirks alone is remarkable—23 summits over 10,000 feet, several of them climbed more than once, 13 of them first ascents, and nine of them made without guides. Besides his climbing and exploration in the Selkirks he climbed Mt. Longstaff, made the first ascent of Mt. Edith Cavell, and conducted a notable pioneer exploring and climbing expedition into the Cariboo range, all without guides.

"During his last few years he was not in his beloved Canadian mountains, as his time was largely taken up by two long botanical trips to South America. Tho he saw the finest parts of the Andes from southern Chile to Ecuador, he confided to me that none of them were really as beautiful as the Selkirks, and just before he was taken ill last October he was talking of his hopes that he might be able to take another long trip in that supremely lovely range."

Howard Palmer has told us in his address at the annual meeting of the American Alpine club in 1924:

"The Canadian Alps were his especial field, altho he had climbed in Switzerland, in Mexico, in the western United States, and in Central and South America. Snow mountains and particularly glaciers, exerted an irresistible appeal, and wherever these were finest, there he returned again and again. For this reason it was that the Selkirks of Canada lured him to their uttermost recesses, and to the tops of their most reluctant peaks. Combine with the snow work a dash of exploration, and he was completely happy—no matter how harrowing the physical obstacles in the shape of torrents, tedious climb, and trackless forest.

"Undoubtedly this scientific bent had much to do with his love of mountain travel, altho it did not enter into his zest for climbing proper, which always stood upon its own feet. His interest in the mountains first manifested itself during a visit to Switzerland, where he climbed the Breithorn and minor peaks and passed around Zermatt sometime before 1901.

"During the years 1906-1912 Mr. Holway traveled and climbed in the Selkirks with remarkable enthusiasm and activity. He ascended over a score of first-class peaks, 13 of them for the first time and nine without guides. In 1912 he walked out from Mt. Sir Sandford to Donald on the railway in 18¼ hours, a distance of 46 miles, carrying a light pack and spending one night on the way. About one-third of this distance was over a very poor trail. In this period he made, with a com-

panion, the first ascent of Grand Mt.—a five-day expedition covering about 40 miles and involving climbing of some 18,000 feet. He also carried out a six-day expedition up the Beaver Valley, going to the foot of Grand Glaciers in a day and a half. He ascended Mt. Sugarloaf alone and then on the following day walked all the way back to Glacier House—a distance of 33.3 miles.

“In the years 1915 to 1918 he traveled in the northern Rockies, making the first ascents of Mt. Edith Cavel, Mt. Longstaff and Mt. Resolution, all without guides. With Dr. Gilmour he made the first mountaineering expedition into the unknown Cariboo range.

“Wherever he went he was almost uniformly successful, for he was a capable organizer and his wide experience had developed a rare mountaineering skill. In traveling on glaciers he particularly excelled, and it is doubtful whether in this he was surpassed by any amateur climber to make records.

“He loved to linger on a mountain top until late in the day so as to enjoy the rewards of the climb to the fullest extent. He was a delightful companion under all circumstances, no matter how gloomy the outlook or adverse the weather.”

There are some interesting comments from South America in letters he wrote to Dr. J. C. Arthur:

From San Felipe Professor Holway wrote to Dr. Arthur: “Every inch pastured, and mists hang low all day. *Puccinia Malvacearum* flourishes as never before seen, but nothing else found today.” Chile was the original home of *P. Malvacearum*, the mallow rust, from which it has spread to all parts of the world during the last 50 years. A letter from San Jose de Maipo says: “We are still in semi-desert regions; cacti cover the hills. This fine valley is pastured closely. Since leaving Papudo we have been looking for a place where something grew. Sheep, goats, cattle, etc., eat everything to a half inch. *Pichilemu* was very barren, but we got one new grass rust.

“Bolivia is very charming. New grass rusts every day. I have found an *Aecidium* on *Stevia* (afterward determined as the similar but less known *Ophryosoporus*) and the grass rust going with it—proof perfect—everywhere that I found the *Aecidium* there was the *Puccinia* (*P. Poarum*).” Still two days later he reports discovering “a very grand *Aecidium* on a malvaceous host—clusters of four or five cups, very large. Looking for the grass rust belonging to it, I found great quantities of a remarkable *Puccinia*, with brown sori up to an inch long, and with yellow spores, looking more like a malvaceous rust than a grass rust. It’s a grand thing and absolutely no question about the connection.”

“Sorata is a glorious place, 2,500 population, they say,

seems smaller, 7,800 feet elevation, a few hundred feet above the bottom of a narrow canyon. At the head of the canyon, close by, is the glacier covered Illampu, said here to be 25,000 feet high (in fact, 21,290 feet). All around the mountains rise to 15,000 feet or more. One of the passes is 18,000 feet. It's all straight up and down. I have been going down and the climb back at night was tough. So today I climbed and it's much easier to walk down after a day's work. I do not call the collecting first class, still I have added a dozen species of grass rusts not before seen.

"Belle Horizonte is a charming city with a most beautiful country around it. It is early spring, too early for rusts, altho there is a wonderful flora now in flower. However, fires have run around all the country and in my experience that eliminates most of the rusts."

From Sao Paulo he wrote: "It is still early for rusts, everything very young and fresh. The climate is splendid and I am feeling wonderfully well. I have covered pretty well all the Santos-Jundiahy railway, 140 kilometers, walking between stations."

"May 9, 1922. A glorious hurricane in the mountains yesterday: trees crashing down the mountain sides and branches flying thru the air. Finally they began falling across my trail and I beat it! See no rusts. Today was still and splendid and I put a hunk of bread in my pocket and was out until dark, coming in with a lot of fine stuff, including one of the finest new grass rusts that I have seen." At La Falda, Argentina, he wrote: "There was not an inch of wild land. The hotel is on an estancia where the cattle eat the mountain tops bare as a board."

J. C. Arthur says: "In this regard he succeeded in carrying out his ambition to secure 'the greatest collection of grass rusts ever made' on the southern continent. He knew how this was to be accomplished, for in one of his letters he wrote: 'The only way one gets a collection is to keep his seven league boots on all the time'."

Friendly comments from neighbors are always valuable. H. A. Bailey in the Decorah Republican of April 5, 1923, made some fine comments on Mr. Holway.

"We in Decorah who knew him as a young man, thought of him more as a banker because in his early manhood he entered the Winneshiek County State bank, first as a teller when it was a private bank, later to be its cashier and finally, upon his retirement, to retain official connection as vice president for several years. But during the years of his activity in finance, firmly imbedded in his heart was a love for nature—particularly a love for the high and remote places where he

could find rare and unusual forms of plant life, which he collected with the interest and skill of the trained botanist to take home to his laboratory and classify."

Many readers of the Decorah Republican enjoyed the many letters that were sent to the Decorah Republican and published in that paper. The comment that Mr. Bailey makes speaking of the trips he made to different parts of the world is as follows:

"Of these trips the readers of the Republican have had glimpses thru the very interesting letters that Mr. Holway sent us from time to time. These letters disclosed him in a spirit that was so different from what most of our citizens knew of him that it was often a matter of comment. He was never happier than when climbing mountains that offered the most obstacles, and to this trait is ascribed a feat of locating a glacier in the Canadian northwest that had not heretofore been charted."

And Mrs. Edith U. Simmons, an old friend, writes as follows:

"Mr. Holway was unique in this, that he was a very safe and successful banker, but as soon as he had made enough money to live upon his investments, he devoted his entire time to higher intellectual lines, and so contributed much to scientific knowledge. It seems that the love of scientific research must have been the one great urge in the man's life. Mr. Holway was a man of cold reserve but of great charm when known intimately."

Professor Holway has left his indelible impress in the botany of this country. Those who knew him intimately loved, honored and revered him. To me, he was always the same kind, helpful man.