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## CHARLES CHRISTOPHER PARRY.

Illustrious American Botanist. He was connected as botanist with the Mexican Boundary Survey and the U.S. Agricultural Department, and was one of the founders of the Davenport Academy of Sciences. Dr. Parry's publications were numerous, giving him high rank in this science in America and Europe.

## BIOGRAPHICAL MEMOIR OF CHARLES CHRISTO-PHER PARRY.

## BY CHARLES A. WHITE.

Among the names of those citizens of Iowa who have borne an active and honorable part in original scientific research, none is more worthy than that of Dr. Charles Christopher Parry to be commemorated in this official publication of the state of which he was a loyal citizen for more than forty years. He died at his suburban home at Davenport, Iowa, on February 20, 1890, and that sad loss to Iowa and to the scientific world was duly chronicled in various publications.\* Its tardy publication here is not an indication of any lack of appreciation of Dr. Parry's eminent worth, but is a result of the difficulty which often occurs in promptly securing for The Annals the biographical memoirs which it is desired they should contain.

Dr. Parry was born in the hamlet of Admington, Gloucestershire, England, on August 28, 1823, and was brought to America by his parents, both natives of Gloucestershire, who settled on a farm in Washington county, New York, in 1832. The father, Rev. Joseph Parry, was a clergyman of the Established Church of England, and was married to Eliza Elliott in 1819. She had two brothers who were also clergymen of that church, and her son's habit of quiet seriousness was doubtless a consequence of such prevailing family influences. There were nine children in the family, of whom Charles Christopher was the third. All are now dead except two, Joseph Parry and Mrs. Charles Pickering, both of Pasadena, California. Dr. Parry left no children and his living kindred in America are therefore few.

For many boys of superior mental force it would have been thought a hardship to be confined to farm life, away from the world's urban activities, but to young Parry it proved to be a fortunate circumstance. It brought him into immediate contact with nature in a region whose biological resources stimu-

<sup>\*</sup> See, for example, the sketch by Dr. C. H. Preston in the Proceedings of the Davenport Academy of Sciences, Sept., 1893; and that of Dr. F. H. Knowlton in the Bulletin of the Washington Philosophical Society, October, 1892.

lated his native talent, and which was the scene of much of the work of that venerated Nestor of botanical science, Dr. John Torrey. Even as a boy, Parry made the acquaintance, on botanical ground, of Dr. Torrey, and of his no less famous coworker and friend, Dr. Asa Gray; and this acquaintance ripened into life-long friendship and collaboration with both of those masters of their chosen science.

The paternal farm was young Parry's home until the completion of his boyhood, and he bore his full share of its labors and duties. In the intervals of those labors he found time to acquaint himself with all the plants of his neighborhood, and he also made such good use of his local educational opportunities that in due time he entered Union College at Schenectady, from which institution he graduated with honor. He continued his botanical studies in addition to those of his college course, giving special attention to medical botany. This special study, and also the fact that both his mentor-friends, Torrey and Gray, as well as most of the naturalists of that time, were Doctors of Medicine, evidently influenced him in the choice of medicine as a profession. Therefore, upon the completion of his studies at Union College he entered the medical department of Columbia University in New York City, where, after the prescribed course of study, he received the degree of Doctor of Medicine. He was then about twentythree years old and eager to enter upon a suitable career. Like many other young men of the eastern states at that time, he decided to go west, and chose Davenport, Iowa, as his future home. He reached that thriving town in the autumn of 1846, after a slow and toilsome journey, for there were then no railroads west of Buffalo, N. Y.

Doctor Parry began the practice of medicine upon his arrival at Davenport, but the allurements of his favorite science were so great, and opportunities so favorable for its cultivation, that he soon gave up his professional practice for his more congenial scientific pursuits. The flora of his eastern home was largely new to science when he began to study it, and when he went to his new home upon the banks of the Mississippi river he found the flora of that great region in its primeval condition, and his desire to explore it extensively

became irrepressible. Opportunities for gratifying that desire soon presented themselves, the first one having been offered in 1847 by a land surveying party of the General Government in charge of Lieut. J. Morehead. With this party he explored the botany of Iowa as far west as the Raccoon Fork of the Des Moines river, the site of the then lately established Fort Des Moines, and that of the present State capital, arriving there just after the final removal of the Indians, by treaty stipulation, from that part of central Iowa. His second opportunity came in the following year, when he joined the then newly organized geological survey authorized by the General Government and placed in charge of Dr. D. D. Owen. This was the first expeditionary geological and biological work of many of its kind which have been authorized by the General Government, and which have finally culminated in the present United States Geological and Biological Surveys. It is an interesting fact that from time to time in subsequent years Dr. Parry was officially connected with a large number of those exploring parties.

From his boyhood to the end of his life Dr. Parry was an industrious collector of plants, and his collections all possess unusual value because of their completeness and their discriminating illustration of structural relationships and floral groupings. Moreover, they were the credentials of his scientific labors in the field. He supplied a large number of scientific and educational institutions with duplicate specimens of his collections, but he always retained for his own use and reference a large private herbarium. In October, 1878, he generously deposited his entire private herbarium with the Davenport Academy of Sciences, of which he was one of the founders and its second president. In connection with this generous act he presented to the Academy a written account of the gradual accumulation of those floral treasures which is so largely autobiographical that its insertion here is especially appropriate. It is as follows:

My earliest gatherings in the botanical field were begun in 1842, while residing in the attractive floral district of northeastern New York, and continued more or less actively for five years, while occupied in a course of medical studies. During this interval I spent one season in

central New York, including a trip to Niagara Falls. The two last years of this period were especially memorable by being favored with the personal acquaintance of the distinguished American botanist, Dr. John Torrey, to whose assistance and encouragement, equally shared by nearly all active American botanists of this generation, I am largely indebted for whatever success I may have attained.

In the fall of 1846 I removed to Davenport, Iowa, and in the following season, 1847, I was actively engaged in securing the flora of this district, including a summer excursion to central Iowa, in the vicinity of the present State capital, Des Moines, with a United States land surveying party under the charge of Lieut. J. Morehead.

In 1848 I was connected with Dr. D. D. Owen's geological survey of the Northwest, making botanical collections along the course of St. Peter's river, and up the St. Croix as far as Lake Superior. A list of the plants collected during this and the preceding season was included in Dr. Owen's report, published in 1852.

In 1849 I was appointed botanist to the Mexican Boundary Survey, going by way of the Isthmus of Panama to San Diego, California, which latter place was reached in July. In September of the same year I accompanied an astronomical party to the junction of the Gila and Colorado rivers, returning to San Diego in December. The important collections of this season were unfortunately lost in crossing the Isthmus of Panama while in charge of the late Gen. A. W. Whipple, being probably involved in a disastrous fire while stored in Panama, awaiting transportation. In the subsequent year, 1850, this loss was partially made up by somewhat extensive collections in the vicinity of the Southern Boundary line, and including a land trip up the coast as far as Monterey.

In the year 1851 I was ordered to Washington to make up my report, but before concluding it I was unexpectedly summoned to join the field party on the survey of the boundary, then transferred to El Paso, on the Rio Grande. This point was reached by an overland trip, via San Antonio, Texas, late in the fall of that year, 1851. In January of the succeeding year, 1852, I was connected with a small detailed party of exploration across the country west of El Paso, extending as far as the Pimo settlements on the Gila river, returning by the same route to El Paso in April. Subsequently I was connected with various surveying parties on the line of the Rio Grande, south of El Paso, including late in the season the section of the river below Presidio del Norte, comprising a succession of gigantic chasms, which never before or since have been visited by any botanist.

In the winter of 1852-3 I returned to Washington and made up my report, since published in the bulky volumes of the Mexican Boundary Survey. The interval from 1854 to 1860 was spent mainly in Davenport, not actively engaged in botanical work.

In the spring of 1861 the culmination of the "Pike's Peak" fever again opened the way for western exploration, and in a private collecting trip to the Rocky Mountains, I secured a rare collection of Alpine

plants, including, among many novelties, some of the early discoveries of Dr. James on Long's Expedition, in 1820. In the following season I was associated with E. Hall and J. P. Harbour in further exploration of the Rocky Mountain district, the botanical results of which were published in the Proceedings of the Philadelphia Academy for 1863.

In 1864, in company with Dr. J. W. Velie, then of Rock Island, Ill., I continued my Rocky Mountain collections, embracing the district of Long's Peak and Middle Park.

In 1867 I accompanied a railroad surveying party in the interests of the Pacific Railway Company, across the continent, on the line of the 35th parallel of north latitude. The most valuable part of my collections during that season were made in western Kansas and southeastern Colorado, passing by the Sangre de Cristo Pass to northern New Mexico; thence late in the winter season through Arizona, crossing the Sierra Nevada at Tehachapi Pass, and through the Tulare and San Joaquin valleys to San Francisco. A list of the plants comprised in this collection was subsequently published in Dr. W. A. Bell's work entitled, "New Tracks in North America," but without an opportunity for personal revision by the collector.

An interval of several years subsequent to the latter trip was occupied in filling the position of Botanist to the Agricultural Department at Washington. The principal work there devolving upon me was that of arranging the extensive botanical collections which, as the result of various government explorations, had accumulated at the Smithsonian Institution. The bulk of these had previously passed through the hands of Dr. Torrey, whose gratuitous labors in reducing this mass of raw botanical material to systematic shape has never been properly acknowledged.

On being relieved from this position in the fall of 1871, the season following I again revisited the Rocky Mountain alpine district, being then accompanied by Mr. J. Duncan Putnam. In 1873 I was attached to the Northwestern Wyoming Expedition under Capt. W. A. Jones, extending through the Wind river district to the Yellowstone National Park, Mr. Putnam being assigned as my meteorological assistant.

In 1874 I made a private collecting tour to South Utah, securing a valuable collection of the flora of the singular desert district in the valley of the Virgen, near St. George. In 1875, again accompanied by Mr. Putnam, I spent the summer in central Utah, in the vicinity of Mt. Nebo. In the fall of that year I continued my collecting trip to southern California, and in the season of 1876, in connection with Prof. J. G. Lemmon, the enthusiastic California botanist, I made a very full collection of the plants in the vicinity of San Bernardino, including the high mountain district adjoining, and the desert stretches lying east of the Sierra Nevada.

My last and closing labors as a botanical collector were made during the present season [1878], mainly in the vicinity of San Luis Potosi, Mexico, extending on my return trip by way of Saltillo and Monterey

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to the more familiar botanical district of western Texas, which I had partially explored twenty-six years previously.

From all these various sources collections, more or less complete, have accumulated on my hands, the great bulk being fortunately distributed far and wide to the various herbaria of America and Europe. An active correspondence with the principal American botanists during the past thirty years has added largely, in the way of exchanges, to the material for illustrating western American botany. Hoping only for an opportunity to reduce this scattered material to systematic order, and to see it safely deposited in some scientific institution in the West, where it properly belongs, I gladly avail myself of the invitation extended to me by the Trustees of the Davenport Academy of Sciences.

In fully realizing the fact that with advancing years my active labors as an explorer and collector are virtually finished, it is a pleasant reflection that some of the results of my labors, here deposited in the Academy of Sciences with which I have been from the first identified, and located in my adopted home on the west bank of the Mississippi, may perchance prove a source of assistance and encouragement to future botanists long after the "gathering hand" shall be itself gathered.

Doctor Parry was not so near the close of his active labors as he seems to have supposed himself to be in 1878, when he wrote the foregoing autobiographical notes, and he soon showed himself to be still ready to respond to all proper demands of humanity and of scientific progress. His father sickened and died in 1879, and the son hastened to the paternal home to attend to duties required by that closing scene of a long and useful life. These and other duties claimed his time for the remainder of that year to the exclusion of scientific work.

When, in 1880, Prof. C. S. Sargent organized his field parties for work pertaining to the Forestry Division of the United States Census, he desired the aid and counsel of the wisest American botanists then living, and he accordingly called upon Doctors George Engelmann and C. C. Parry to personally accompany him on his journeys of observation and to assist him in his official work. Notwithstanding his advanced age, Dr. Engelmann took an active part in that work, and Dr. Parry bore a still more laborious part in it. He thus spent most of the time from the spring of 1880 to the autumn of 1882, his explorations ranging from the Columbia river region to southern California and through portions of the Rocky Mountain region.

The spirit of botanical exploration was again upon him, and in the autumn of 1882 he returned to San Francisco, from which city as a center he prosecuted his self-imposed labors. During the following winter, spring and summer he made numerous journeys of exploration, some of them extending into the peninsula of Lower California; and in the autumn of 1883 he returned to his home at Davenport with his collections.

While he held the position of Botanist to the United States Department of Agriculture he made a journey to Europe in his official capacity, visiting the Royal Gardens at Kew and other famous gardens and collections in various cities of the continent. At Kew he made the personal acquaintance of Sir Joseph Hooker, of world-wide fame, who, like Torrey and Gray, became his life-long admiring friend. In June of 1884 he went a second time to Europe, spending more than a year studying the collections at the gardens and herbaria of the various great institutions of England and the continent, and consulting the great libraries there. Returning to his home in 1885, he spent the time until the following summer in arranging his collections and writing up his notes concerning them.

The year 1886 was spent at his home in occasional journeys into neighboring states, his labors with his collections and the special studies connected with them fully employing his time, according to his long settled habit, when not engaged in field exploration. Most of his time from the autumn of 1886 to the summer of 1889 was spent in California perfecting his field studies of the floras which he had explored in former years. He returned to his home in the summer of the last named year, and in the following autumn he journeyed through Canada and New England, and visited New York, Philadelphia and Washington. From this journey, which proved to be his last one, he returned to his home only a few weeks before his death.

The foregoing remarks give, at best, only a brief cursory review of the life work of Dr. Parry, for it would require many pages to record an adequate account of its scientific character and importance. Many persons learn to collect plants and to prepare them skilfully for preservation in herbaria and for scientific investigation by others. Although Dr. Parry placed hundreds of his newly discovered species of

plants in the hands of special investigators for scientific description, and although no one ever exceeded him in the amount of his personal collections, his work is in no way to be compared with that of the ordinary collector. When he turned over such plants to other investigators he did so knowing them to be hitherto unpublished and also knowing their important relation to other plants and to the progress of botanical science. He felt obliged to thus relieve himself of constantly accumulating material which required scientific investigation that, if prosecuted by himself, would impede his chosen work of systematic exploration. His special object in field exploration was to study the living plants in their native habitats, to observe the full course of their growth from germination to maturity, the effects of physical environment upon species, and their association in native floral groups. He was unwilling to yield this special object for any other branch of the science, however attractive it might be.

While botany was the chief subject of Dr. Parry's scientific investigation it was by no means the only one in which his ability was manifested. He was a broad-minded naturalist: and while engaged upon his botanical explorations he made many valuable observations upon other subjects. The two following examples are mentioned only to show the breadth of range of those observations. His field-notes, recorded in the Report of the Mexican Boundary Survey, contain the best account of the geology of a part of the region traversed by that expedition which had been published up to that time; and he was the first to publish an account of the peculiar form of boomerang used by the Pueblo Indians in their rabbit hunts. At the end of this memoir is reproduced the list of Dr. Parry's published writings, which was prepared by his helpful wife, and after his death presented by her to Dr. Preston to accompany his sketch which was published in the Proceedings of the Davenport Academy of Sciences, as already mentioned. One must refer to the publications enumerated in this list to form even an approximate idea of the character and extent of Dr. Parry's scientific and economic labors.

The teaching of an old proverb is to the effect that a man's character is known by that of his associates, and it may be

applied to Dr. Parry with peculiar significance. There are no names more profoundly revered in connection with botanical science than those of Doctors John Torrey, Asa Gray, and George Engelmann. All three of these great naturalists had unlimited confidence in the scientific accuracy of Dr. Parry's labors and held him in the warmest personal esteem, evidences of which they were not slow to manifest. On his part Dr. Parry responded with all the geniality of his kindly nature and omitted no suitable opportunity to do honor to his distinguished friends. Among the opportunities which he thus improved was that of the application of their names to some of the grand and graceful trees which he discovered, and to some of the impressive physical features of the regions which he explored when they were almost new to the vision of civilized men.

While making special studies of high mountain floras Dr. Parry built for the protection of himself and his collections a cabin in the recesses of the complex Rocky Mountain ranges of Colorado. In full view of the site of his solitary abode two adjacent mountain peaks, and not far away another, rise from their massive bases into the cold thin atmosphere, while their sides are covered with nature's own mantle of floral texture. Dr. Parry labored many months upon, and around, those mountains and made choice collections from their vegetal wealth. To the two mountains first mentioned he gave the names of Mount Gray and Mount Torrey, respectively, and to the third the name of Mount Engelmann. These names are now recognized and used by the residents of that region, and also in various publications. Also, while studying the flora of Pike's Peak, a well known mountain mass of Colorado, he gave the name of Engelmann's Canon to the large and picturesque gorge which nature has excavated into the base of that mountain, and through which the cog-wheel railroad now runs to reach the summit. To Dr. Parry's great gratification he was, in after years, privileged to revisit those grand scenes in company with each of the three distinguished friends with whose names he has inseparably connected them. It were well if one of the peaks in the vicinity of Mounts Gray, Torrey and Engelmann could have borne the name of Parry, but as that act of recognition was delayed too long, the United States Land and Geological Surveyors have agreed in bestowing Dr. Parry's name upon a peak of the Snowy Range, in an adjacent district.

Perhaps no portion of Dr. Parry's work illustrates more forcibly his extraordinary devotion to it than does that which he performed upon the mountains just mentioned. The summit of Mount Gray is 14,341 feet above sea-level; that of Mount Torrey, 14,336 feet; that of Mount Engelmann, about 14,000 feet, and that of Mount Parry, 13,133 feet. The "timber line," that is, the extreme upper limit of the growth of trees of any kind, upon the mountains then visited by Dr. Parry is about 11,600 feet above sea-level. Upon their summit portions, which rise from a few hundred feet to nearly 3,000 feet above the timber line, grows the so-called alpine flora which Dr. Parry went to study. This stunted plant-life prevails over the whole of those summit portions except where the rocks are too bare for root-hold, or where patches of perpetual snow fill the hollows. One who has never visited such mountain peaks can hardly realize the chilling and oppressive loneliness which prevails there, even in the summer months, nor the excessive physical exertion required to accomplish the long continued task which Dr. Parry set for himself. Still. it was while living and working alone under such circumstances that he conceived the admirable idea of connecting the names of his already famous friends with some of the grandest mountain scenery of our country.

It was not only those persons whose scientific pursuits were identical with those of Dr. Parry who held him in the high esteem that has been mentioned, for that sentiment was fully shared by those who were associated with him in citizenship and in the ordinary affairs of life. The esteem of his home associates is shown in the fact that the Davenport Academy of Sciences elected him its president for seven successive years, until his long absences in the field made it imperative that he should decline further election.

One of the principal personal traits of Dr. Parry, next to his truthful sincerity, was an indisposition to struggle for either popular or posthumous recognition; and it is because of this trait that many of his labors have not been sufficiently recorded. It is a natural wish of his friends that he might, himself, have described and discussed all the new forms which he discovered, but, as already shown, he found this impracticable, and we see that he chose wisely as to the scope of his labors. It was this choice of scope that made his labors unique among those of botanists, and few men have conferred more important benefits upon botanical science than he did by his chosen methods of work.

Another characteristic trait of Dr. Parry was his practical sense, which was manifested not only in the prudent management of his personal affairs, but in his professional work. He strictly followed scientific methods in all that work and spared no pains to arrive at scientific truth; and yet he gave much study to plant industry and was quick to perceive both the industrial and aesthetic value that any of his newly discovered plants might possess under cultivation or protective preservation. He thus not only enriched forestry and horticulture with a large number of new and valuable forms, but he did much in the interest of general agriculture. Indeed, he gave much more attention to these economic features of his work than is generally known; and his labors in that respect alone, if properly recorded, would be sufficient to establish an enviable reputation.

Doctor Parry was, to a marked degree, self-reliant, self-respecting, thoughtful and undemonstrative. And yet his manner was so frank and sincere that he quickly secured the confidence of all with whom he came in contact, from the highly cultured citizen to the woodmen and hunters with whom he often of necessity consorted in his wild journeys. These frontiersmen habitually spoke of him as "the good doctor," and often sought his professional aid in their ailments and accidents. Although he was so often a wanderer and so much alone in his wanderings, he greatly enjoyed the fellowship of his friends and dearly loved his home and all that made it a home. He was twice married, first, in 1853, to Miss Sarah M. Dalzell, of Davenport. She died in 1858, leaving an only child, a daughter, who, in her childhood, also died. His second marriage was in 1859, to Mrs. E. R. Preston, of

Westford, Connecticut. For more than thirty years this devoted wife was the faithful and able helper of her distinguished husband, often accompanying him in his journeyings, and often patiently waiting his return from long absences; always acquainting herself with the progress of his work and keeping a memorandum of his writings and labors. She still lives to mourn him who, while he was passionately devoted to his scientific studies, was faithful in friendship, constant in love, and exceptionally kind to all those who could claim his consideration.

The accompanying portrait represents quite well the facial features of Dr. Parry, but it of course gives no indication of his bodily form. This was of virile mold, without superfluous flesh, and in all respects well adapted to endure the fatigue and privations of his exploring work. His hair and beard, before the silvering touch of time, were dark in color, but his eyes always retained the clear blue of his youth. Upon the occasion of his last visit to Washington he called upon me, as had long been his habit. His vigor then seemed unimpaired. but I was a little surprised to observe that the grev threads of his hair had considerably increased since I had last seen him. Still, I did not suppose this change to be an indication of failing health or energy, and I little thought I should never see him again. This small portrait will be viewed with peculiar pleasure by those who knew the genial original in life, and future students of botany will look with interest on this representation of the features of one whose name and achievements have become a part of the floral history of this continent.

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Bremer County.—We have been informed by a gentleman from Bremer that that county is settling up rapidly with an intelligent and industrious population. The County Seat has been located at Waverly, seventeen miles north of Cedar Falls. At the latter place there are now six stores, all doing a good, and we trust profitable business. The counties of Buchanan, Black Hawk and Bremer are among the best in the State, and emigrants will not be disappointed in finding good locations in those counties unless they be very hard to please.—Dubuque Daily Herald, January 17, 1854.

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