

JOHN MUIR.



ENGRAVED BY M. HAIDER.

JOHN MUIR.

FROM PHOTOGRAPH BY WATKINS.

THE name of John Muir is inseparably connected with the Yosemite Valley and the alpine regions of the Sierra Nevada, and with the glaciers of Alaska, the greatest of which bears his name. When Ralph Waldo Emerson visited the Yosemite, Muir was his guide for a week, and on his return Emerson said of him, "He is more wonderful than Thoreau." Of Emerson, Muir wrote, "He is the Sequoia of the human race." When Agassiz and Joseph Leconte met in San Francisco, and were talking about the glaciers of the Pacific coast, Professor Leconte remarked that John Muir knew "more about the subject than any other man." "Yes," said Agassiz, bringing his hand down on the table by way of emphasis; "he knows *all* about it."

John Muir was born in Dunbar, Scotland, in 1836. His mother, Anne Gilrye, is a descen-

dant of the old Scotch family of Gilderoy. His father, Daniel Muir, was a grain-merchant. John was the third child in a family of eight children, three boys and five girls. At three years of age he was sent to the public school, where for eight years he was put through the ordinary English branches, Latin, French, the Catechism, and the Bible, in the old Scotch style. In spite of hard lessons and many floggings, he grew up savagely strong, healthy, and active, fond of all kinds of games and of long tramps into the country and along the sea-shore.

In 1850 his father emigrated to the United States, and settled as a pioneer in the wilderness near Fox River, Wisconsin, twelve miles from Fort Winnebago, on an uncleared section of land bordered by a beautiful stream and a small lake, white with water-lilies. Birds and flowers, game and fish, made the farm a boy's

paradise, in spite of the hardest kind of toil in chopping, grubbing, and general farm-work. At the age of fifteen John's mechanical genius stirred within his brain, and while doing a man's work on the farm he rose, for months in succession, at one o'clock in the morning and worked until daylight, inventing and making mill-wheels, wooden clocks, and various other mechanical appliances. At the same time he read every book within reach, and studied grammar, algebra, and geometry, improving every available moment, keeping an open book beside him at his meals, and working out mathematical problems on chips or on the ground while he was at work in the field. At twenty-two he entered the University of Wisconsin, where he continued for four years. He taught school one winter, and worked at harvesting during the summer vacations, to earn money to pay his college expenses. He pursued a special scientific course, and, when that was completed, went off into the wilderness on a long botanical excursion around the great lakes. While on the Canada shore he worked for a year in a mill for making hand-rakes, lathes, boring-machines, and agricultural implements. Here he set about improving the old machinery, inventing new appliances, and in many ways increasing the product of the mill. All his leisure time was given to botanizing. The mill, however, took fire and burned down, and Muir went to Indianapolis, where he worked for a year in a large manufactory of carriage and wagon material. Here he was so highly appreciated that he was offered the place of foreman, with a prospective partnership; but one of his eyes was accidentally penetrated by the sharp point of a file, and after several weeks of confinement in a dark room, to quote his own words, he "determined to get away into the flowery wilderness to enjoy and lay in as large a stock as possible of God's wild beauty before the coming on of the times of darkness." Accordingly, he had scarcely recovered from the shock of his injury when he set out on his travels, afoot and alone, going southward on a botanizing tour across Kentucky, Tennessee, North Carolina, Georgia, and Florida, reaching tide-water at Cedar Keys on the Gulf of Mexico.

In consequence of exposure in swamps, and from lying out at night on the bare ground, he was taken down with malarial fever. After partial recovery, he took passage in a schooner for Havana, intending to proceed thence to South America to explore the head waters of the Amazon and to float down the river to its mouth. But after spending a few months amid the tropical vegetation of Cuba, and finding that fever still lingered in his system, he reluctantly changed his plans, and turned his face toward California, where, going by the Panama route, he arrived in April, 1868. He at once set out on

foot for the Yosemite Valley, botanizing on his way across the broad plains of the San Joaquin Valley, then covered with flowers. He made his way into the valley without a guide, while the trails were yet deeply buried in snow, and after a stay of ten days, his money having given out, returned to the lowlands and worked as a harvest hand in the wheat-fields. The following winter, glad to find any employment that allowed contact with nature, he herded sheep to earn a living while studying the flora of that region. With a migratory sheep-camp as his headquarters, he passed the summer in botanizing, and in sketching the head waters of the Merced and Tuolumne rivers. Returning to the plains in the autumn, he worked on a ranch for a few months, breaking mustangs and running a gang-plow, and then again pushed over the mountains into the Yosemite. There he was fortunate enough to find employment, and was thus enabled to make the great valley his home.

At that time Mr. J. M. Hutchings, the Yosemite pioneer, desiring to build some cottages to accommodate the increasing travel to the valley, and finding that cutting lumber by hand with whip-saws was a slow and very expensive method, determined to build a small sawmill. The frame of the mill was already up when Mr. Muir arrived on his second visit to the valley, and Mr. Hutchings was anxiously looking for some one to put in the machinery and run it. Finding, on inquiry, that John Muir the botanist was also a millwright, he gave him the job, and thus enabled him to carry on his famous explorations in the high Sierra until he began to write and could depend on his pen for bread. But it must not be supposed that any of the trees were cut down to supply the mill. All the logs were obtained from fallen timber, mostly yellow pine blown down in a gale. John Muir, of all men, would be the last one to lift an ax against the Yosemite groves.

When the mill was completed, he hung his bed in the peak of it, beneath the rafters, for the sake of fresh air and the music of the waters. On the end of the gable overhanging the stream he built a small room for a study and as a storehouse for his collections of plants, cones, sketches, and papers. In this little study, which could be entered only by climbing a narrow, rough-hewn plank, he had the honor of several visits from Emerson. Here, too, was written his first article on the Yosemite glaciers, which was published in the "New York Tribune" in 1871.

By working in the mill, Muir soon earned a few hundred dollars, enough to buy his bread for several years, and set out in glorious independence to make a systematic survey of the mountains, tracing every river to its source,

going from cañon to cañon in regular order, noting particularly the distribution of the forests and of the flora in general, the structure of the rocks, the traces of the ancient glaciers, and the influence they exerted in sculpturing the mountains, in creating valleys and lake-basins, and in fashioning the landscape. Wherever night overtook him, he made his camp. The scope of his studies was ever increasing, but he was never in a hurry. He took no note of time, for he had all the time there was. Throughout an entire day he could sit motionless, studying the habits of squirrel, or bird, or grasshopper; and every plant and animal was his friend. How lonely and adventurous his life was is strikingly manifested by the fact that during ten years of exploration in the high Sierra, with the single exception of a band of Mono Indians, he never met a human being.

His outfit on one of his ten-day excursions was the lightest possible. It consisted of a pocket aneroid, chronometer, and thermometer, a note-book and pencil, a few pounds of bread and oatmeal, a little tea and sugar, and a small tin can. After climbing a summit during the day, he descended at night to the timber-line, built a fire, made a can of tea, ate his bread, and lay down by the side of his camp-fire, with no other covering than that which he had worn during the day. At an elevation of from nine to twelve thousand feet (the height of the timber-line in the Sierra) the nights are severe, and the fire required to be replenished at intervals of about an hour, thus making his sleep a broken one. But this hardship was not without fine compensation in enabling him to hear the many strange sounds of the night, and to see the glories of the starry mountain sky. Blankets would have been a convenience, but in the rugged regions where he climbed it was impossible to carry them. A gun was too heavy to carry, and a pistol would have been only a useless encumbrance. Bears never molested him, and other animals were his companions. In this manner for years he studied the channels of ancient glaciers, pushed through the wildest cañons, and noted the forest-covered moraines.

Muir's numerous note-books of the period are filled with sketches of forest trees, mountain meadows and lakes, glaciers and moraines, domes and pinnacles, the cleavage planes of rocks, the direction of glacial striae, and sections of mountains and valleys. So careful were his observations, so accurate his notes and sketches, that when he writes on geological subjects his statements and conclusions have the force of mathematical demonstration. He discovered and located sixty-five glaciers among mountain heights where none had been supposed to exist. From these fragmentary heads he traced the course of ancient glaciers far down the slopes

of the Sierra toward the plains, in the valleys where now flow the rivers. Probably no living geologist has recognized so fully as he the vast amount of denudation effected by ice during the glacial period, and it is doubtful if any other man has made so exhaustive a study of the subject.

In his ten years of field-work he had some narrow escapes from death. Once he was caught in a snow-storm on the summit of Mount Shasta, where he lay all night long over the jets of sulphur steam in the crater, with the thermometer at twenty degrees below zero. He was in his shirt-sleeves, without food or fire, and a less hardy or less resolute man would have perished. He escaped with frozen feet, and a back blistered by the hot steam of the fumaroles. Once, when out with a surveying party in the Great Basin, he nearly perished with thirst, and but for his endurance and will-power the whole party might have been lost. On the Muir Glacier in Alaska he had a hair-breadth escape from a tomb in a deep crevasse.

For many successive summers and for five winters Muir made his home and headquarters in the Yosemite region. He spent the summers and autumns in exploring the mountains, and the winters in writing out his notes, studying storms and avalanches, and the habits of birds and animals. During his longer trips, when the last crumbs of bread were gone, he descended the range to the nearest point on the bread-line, filled his sack, and again vanished into the wilderness, often saying, at such times, that he wished he could eat one meal in the spring that would last all summer, so that he could go on with his studies uninterrupted. During this period he met many noted scientists who became his friends—Guyot, Harrington, the Lecontes, Sir Joseph Hooker, Asa Gray, Dr. Torrey, Dr. Parry, Professor Runkle of the Boston Institute of Technology, and others.

Emerson, Gray, Professor Runkle, and others offered him flattering inducements with a view to drawing him from the obscurity of his mountain haunts; but he declined them all, heartily choosing to pursue his studies in perfect independence, saying "that there were already plenty of professors in the colleges and few observers in the wilderness; that he wanted to be more than a professor, whether noticed in the world or not."

In 1876, after his ten years' residence in the Yosemite region, Mr. Muir joined an exploring party connected with the geodetic survey in the Great Basin, chiefly on account of the opportunity it afforded to study the botany and geology of the plateau between the Sierra Nevada and the Rocky Mountains. With this party he passed three summers, during which he became familiar with the country. In 1879 he went to

Alaska, and, in a canoe manned by Indians, began a careful exploration of the rugged icy region to the north of Fort Wrangel. It was then that he discovered the now famous Glacier Bay and the great glacier that bears his name. Here he saw glaciers on a yet grander scale than those which he claims once covered the summits and plowed out the cañons of California. He also pushed inland to the head waters of the Yukon and the Mackenzie rivers. He has since made three exploring trips to that region. In 1881 he accompanied one of the search expeditions for the lost *Jeannette*, and returned with a notebook full of sketches, and with an enlarged idea of the vast scale of ice denudation in the north. The scope of his studies during this cruise of the *Corwin* may be traced in the series of twenty-one letters to the San Francisco "Bulletin," and by his paper "On the Glaciation of the Pacific Coast and the Polar Region about Behring Sea and the Arctic Ocean."

John Muir has not been a voluminous writer. He has chosen, in his enthusiastic love of nature, to be an original observer. His first notable articles appeared in the "Overland Monthly," in the form of a series of illustrated papers on mountain sculpture. Later, he contributed papers to "Harper's Magazine," which were followed in "The Century" (old series) by a number of illustrated articles on the forests, glaciers, and scenery of the Sierra. Two recent papers in *THE CENTURY* on the Yosemite Valley (August and September, 1890), and one on the great King's River Cañon (November, 1891), complete the list of his magazine articles.¹ He has also contributed from time to time many interesting articles to the San Francisco "Bulletin." For two years his leisure time was chiefly occupied in editing "Picturesque California," for which he himself wrote most of the descriptive text re-

lating to the mountain scenery of the Pacific coast. He has recently been elected first president of the Sierra Club.

As an original observer and interpreter of nature, as a hardy and enthusiastic explorer, John Muir is without a rival in California. Indeed, it is safe to say that no other geologist has ever made so exhaustive a study, in so grand a field, of the agency of glaciers. He combines scientific accuracy of statement with a poetic expression which lends a singular charm to his writings. His descriptions of "Shasta Bees," "Mount Shasta," and the "Water Ousel" are prose poems; but the facts are as accurate as they could be made by the baldest statement of the most technical scientist.

It will be pleasant for those who read this brief sketch of his early struggles to know that John Muir is now in the enjoyment of a happy home and a comfortable income. In 1879 he married the only daughter of the late Dr. John Strentzel, a wealthy fruit-grower of Contra Costa County, and since that time, when not out on exploring trips, has been kept busy in the management of a large vineyard and orchard. Though money-making has been with him altogether secondary to science, his inherited Scotch thrift and his hard training on a Western farm combine to make him a shrewd and successful man of business.

In person Muir is tall and slender, possessed of great power of enduring hunger, thirst, and fatigue. As a mountain-climber few can keep pace with him. He is unassuming in manner, and simple in his tastes and habits. He is a ready talker, and, when drawn out by an interested listener, discourses in the most charming manner about birds and flowers, glaciers and mountains. He possesses an exhaustless fund of humor, and is inclined to look on the sunny side of life as well as of nature.

John Swett.

¹ It was to one of these papers, describing the wonderful country in the neighborhood of Yosemite, and setting forth the desirability of reserving these environs for public use, that was primarily due the establishment, in October, 1890, of the great Yosemite National Park, embracing a territory almost as large as the State of Rhode Island. Mr. Muir's article on the King's River Cañon, entitled "A Rival of the Yosemite," contained a similar suggestion, which led to

the important series of forest reservations made by President Harrison and Secretary Noble in 1892-93, one of which includes the territory specifically proposed. It is not surprising that such a lover of Yosemite was also among the first to make energetic protest against the uninstructed meddling with the beauty of wildness of the valley, and to show the need of greater skill and care in the management of its affairs.—EDITOR.

