cheerful even to hilarity, and never was his conversation more sprightly or more entertaining.—DR. T. E. THORPE.

READERS' AND STUDENTS' NOTES

1. Sir Humphry Davy has very frequently been made the subject of popular biography; especially of popular biography intended for young people. A work of this sort is *"The Wonders of Science, or Young Humphry Davy, the Cornish Apothecary's Boy"* by Henry Mayhew (New York: Harper & Brothers, $1.25). Another popular account of Davy will be found in Sarah K. Bolton's *"Famous Men of Science,"* already mentioned.

2. Dr. T. E. Thorpe's *"Humphry Davy, Poet and Philosopher"* in *"The Century Science Series"* is the latest biography of Davy. It is a sympathetic and appreciative, and yet a just and impartial, account of the life of a great man who, notwithstanding his greatness, was not without his weaknesses. (New York: The Macmillan Co., $1.25.)

John James Audubon

poverty, could alienate him from the objects he had most at heart—the observation of the habits, the portraiture of the forms and the colors, of birds. So that in all those eighteen years of business misadventure the naturalist was constantly at his other work—constantly tramping through forests, and over prairies, and along water-courses, and on mountain sides, and in swamps and thickets, gun in hand, accompanied only by his dog, searching out the ways of birds, obtaining new specimens, writing down what he observed, and making drawings and paintings of his findings.

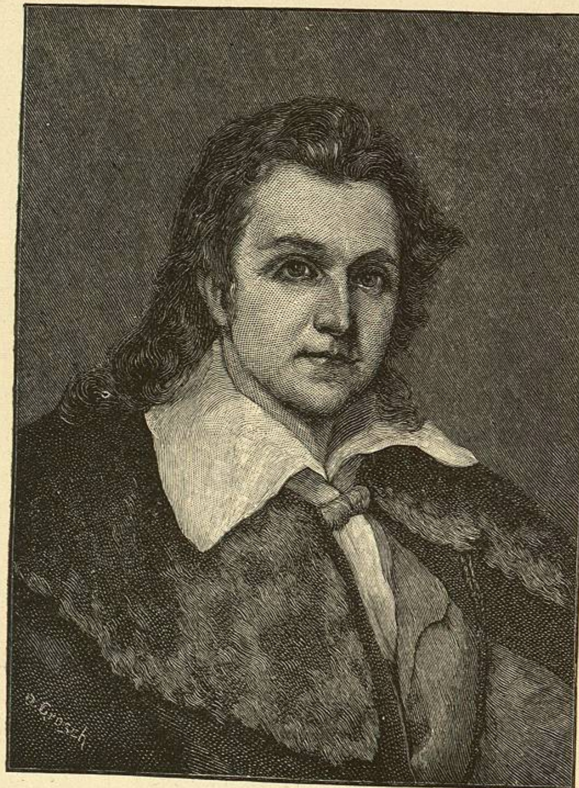
Audubon's principal title to fame is the beauty and accuracy of his ornithological portraiture. Even before he was seventeen he had made 200 drawings of the birds of France. And, not satisfied with mere facility, he aimed at perfection. In his younger years, with each returning anniversary of his birth, he would burn the drawings he had done, deeming them not good enough. And in later years he was always striving after greater and greater perfection. In time he reached a point when he was satisfied, and then he thought that he would make his portfolio represent a complete collection of the birds of the continent, and later, that he would publish this collection in a book. Thus arose within him the ambition to be what he afterwards became, the portrait painter and biographer of the birds of America. And in the pursuance of this idea, all labor or business that did not bear directly upon it was deemed a hindrance. He admits that his business affairs would have prospered had he attended to them, but birds were the only things that could claim his attention. "I shot, I drew, I looked on nature only, and I was happy

beyond conception." And no matter how precarious his affairs might be, in birds he found his unfailing delight.

"In all my adverse circumstances, I never for a day gave up listening to the songs of our birds, or watching their peculiar habits, or delineating them the best way I could. Nay, during my deepest troubles, I would frequently wrench myself from the persons around me, and retire to some secluded part of our noble forests, and many a time at the sound of the wood-thrush's melodies have I fallen on my knees and there prayed earnestly to God."

Audubon's nature was intrinsically devout and reverential, and the wood-thrush's notes always incited it to thanksgiving and prayer. But his mind, apart from its special pursuit, was essentially impractical, and he never would have become known to fame, had it not been for the devotion and self-sacrifice of his wife. Her own people could see in her husband only the improvident and the visionary enthusiast, but she had faith in him always; and so soon as the idea of publishing the "*Birds of America*" came into being she, in spite of the opposition of her friends, encouraged him to carry it out. Encouragement and advice, however, could do little for so impracticable a soul, beyond sustaining him in his woodcraft work. So to support herself and her children, and to obtain money that would make publication possible, she set to work herself. First in Natchez, and then in Bayou Sara, near New Orleans, she obtained employment as a governess or teacher, and by 1826 had $3,000 saved up. Then she assisted her husband to organize a dancing school, by which $2,000 more was obtained. Finally, in April, 1826, Audubon was able to sail for England.

Audubon's going to England was for a double purpose. Publishers and printers, both in Philadelphia and in New York, had apprised him that to reproduce his drawings in America would be impossible—the engraving and the printing of them could be done only in Europe. Besides it was thought that it would be easier in England than in America to obtain subscribers for so expensive a work as his proposed publication would be. Audubon's hopes in these respects were not disappointed. In time, indeed, they were all gloriously fulfilled. His colored portraits of the birds of the new world excited an interest in the great cities of Britain that might almost be called a furore. At Liverpool, at Manchester, and at Edinburgh and other places where he exhibited them, he not only made a good deal of money by the admission fee that he was able to charge, but he was at once recognized as a scientific observer of the rarest ability and experience. Remaining in Edinburgh for some time he was able, in 1827, to issue his prospectus for his great work, and at once he began the preparation of the first volume. He had not gone on with it far, however, before he determined to bring out his work on a scale of magnificence greater than ever before attempted in any scientific publication in the world; and so he began it anew and made arrangements to publish it in London. It was to be printed in elephant folio, and the four volumes were to be sold at $1,000 (£200). The attentions that Audubon received from scientific and other learned men in England aided him in obtaining subscriptions for the book. But few scientific men could of themselves afford to buy so expensive a work. Audubon had himself to solicit subscriptions. This he did, and in the meantime supported himself and partly paid his engravers,



JOHN JAMES AUDUBON.

by painting and selling fanciful pictures of birds. He was often reduced to great straits for money; but he made friends in plenty, some of whom were very helpful to him. Among these may be mentioned "Christopher North," Sir Thomas Lawrence, the painter, and Lord Stanley.

Finally, in 1831 the first volume of the great work appeared. He had been issuing it in parts, 2 guineas a part, and in this way had been able to keep printers and engravers going. But the task of securing subscribers, attending to the business of printing and publication, and collecting subscriptions and settling accounts, was enormous, and only a man with consummate faith in his work could have carried it through. However, he was at last able to write as follows:

> "I have balanced my accounts with the '*Birds of America,*' and the whole business is really wonderful; forty thousand dollars have passed through my hands for the completion of the first volume. Who would believe that a lonely individual, who landed in England without a friend in the whole country, and with only sufficient pecuniary means to travel through it as a visitor, could have accomplished such a task as this publication! Who would believe that once, in London, Audubon had only one sovereign left in his pocket, and did not know of a single individual to whom he could apply to borrow another, when he was on the verge of failure in the very beginning of his undertaking! And above all, who would believe that he extricated himself from all his difficulties, not by borrowing money, but by rising at four o'clock in the morning, working hard all day, and disposing of his works at a price which a common laborer would have thought little more than sufficient remuneration for his work!"

In the meantime he had gone home to New Orleans for Mrs. Audubon and had brought her to England. Her health was impaired and she needed careful medical at-

tendance, and he left her there. Then he made two long sojourns in America, searching for new birds in Florida, and in New Brunswick, Newfoundland and Labrador, with which to complete his work. Between whiles, in England, he supervised the bringing out of the second, third and fourth volumes of the work. He also had the task of obtaining new subscribers to take the place of those who during the long period of publication had withdrawn their subscriptions—fifty-six of them, meaning $56,000. In all, his work brought him in $100,000, but this only paid expenses. It was a mammoth undertaking. There were 435 colored plates with 1,055 bird portraits, every one in life size. In 1839 he returned to America to remain there till the end. Europe, however, had been kind to him. The most famous learned societies, including the Royal Society of London and the Academy of Sciences of France, had honored him with membership or medals or diplomas. Nor had he been lacking in personal attentions. Cuvier, Humboldt, Saint-Hilaire, the most celebrated scientists then living, all sought his acquaintance. Cuvier called his work "the most magnificent monument that art had ever raised to nature." Gérard, the famous French painter, called him "the king of ornithological artists."

The road for Audubon was now smoothed. His two sons had grown up to have similar tastes with his own, and they were also good men of business. By their aid a home was purchased on Manhattan island, near New York, in gratitude called "Minniesland," in honor of the mother, her name to her children being "Minnie," a diminutive for "mother." The "*Birds of America*" was brought out in octavo form, the engravings being reduced, and pub-

lished at a price within the reach of persons of moderate means. Two other great works were projected and partly completed—the "*Quadrupeds of America*," portraits, in atlas folio, and the "*Biography of American Quadrupeds*." For the production of these works more long trips through primeval wildernesses were necessary, but in these a son was always a companion. Audubon's powers of endurance were remarkable. He was a true woodsman. His eyesight was like an eagle's. He could notice a squirrel sitting upon a fence 200 yards away, and even recognize its variety, and this when he was long past sixty. But at last, in his sixty-eighth year, he began to fail. His physical deterioration then was rapid. His ever faithful wife first used to read to him, and otherwise amuse him. Then she had even to give him his food. But the end came gently. He put one hand into that of his wife, he gave another to his sons, and so he passed away. It was sunset, January 27, 1851. He was buried in the cemetery of Trinity church.

X. JOHN JAMES AUDUBON

1780-1851

BIOGRAPHICAL STUDY

BY JOHN EBENEZER BRYANT, M. A.

Audubon, the greatest of American ornithologists, and one of the most remarkable of original ornithological observers, has an interest for the lover of science quite apart from his merits as a scientist. Indeed, as a scientist, strictly speaking, he does not stand in the highest rank. Neither by education nor by self-training was he fitted to become a lawgiver or a law-maker in the realm of scientific investigation. His great merit is the accuracy and the extent of his original observations. He had the ambition to become the most extensive ornithological observer of his time, and despite a thousand obstacles, he had the good fortune to succeed in this ambition. He had, further, the ambition to become for the world its most splendid ornithological portrait painter, and, despite a thousand even greater obstacles, he became that also. For the patient prosecution of a cherished pursuit throughout a lifetime, and for achieving success in that pursuit, although for

years and years success seemed utterly impossible, Audubon is an example worthy the emulation of every one.

Audubon's career had an element of romance in it. Indeed, if its history were properly told, few lives as portrayed in works of imagination would be able to show more strange vicissitudes of good fortune and ill fortune, more startling contrasts of difficulties and dangers rising up for encounter, and difficulties and dangers successfully met, with love as a pole-star, directing and illuminating all, than Audubon's real life actually showed. In this brief sketch, this romantic phase of Audubon's life can be only indicated. Nor can we do more here than allude to the exalted character of the man—his loving kindness, his tender-heartedness, his fidelity, trust and love, his singleness of aim, his faith in providence, his faith in divine justice, his sincerity, his real humility. It was a character, too, with many weaknesses; but these also can be only alluded to here.

John James Audubon was born in New Orleans, May 4 (or 5), 1780. His father was a remarkable man before him—one who, a poor French fisherman's son, the youngest of twenty-one children, with only a suit of clothes, a shirt, and a father's blessing as his patrimony, had gone out into the world at twelve years of age and had become a sailor, a ship-owner, a commodore in the French navy, and finally an admiral, the owner of estates in France, the West Indies, Louisiana, Virginia, and Pennsylvania, and had married, too, in Louisiana, a lady of wealth and beauty, who was the mother of his famous son. But this lady was not spared to rear the child she bore, being killed in a negro insurrection in San Domingo. Audubon, therefore, was brought up in France—by his father's second

wife, a woman who loved him as tenderly as if he were her own son, and indulged him in all his precocious fondness for making " collections " of birds' nests, birds' eggs, butterflies, beetles, etc., and everything else connected with natural history. His father, too, indulged this fondness, and gave him a set of ornithological plates, a present infinitely prized. But he also sent him to a good school, and had him take lessons in drawing and painting, the celebrated David being his instructor. He was instructed also in music and dancing, and became proficient on the violin, flute, flageolet, and guitar.

Audubon's father wished him to become a soldier or a sailor or an engineer. But the young lad's tastes were averse to every kind of business or profession. His father, therefore, sent him to America to look after one of his estates. This estate happened to be at Mill Grove, near the Schuylkill Falls, Pennsylvania. At Mill Grove Audubon lived a life that was to him ideal. He was surrounded by nature in its primeval freshness; and he was able to indulge his fondness for hunting, fishing, and making collections of birds and animals, to his heart's content. He also reared and kept innumerable kinds of fowl. He was young, handsome, and in perfect health. And as he had plenty of money and was fond of dress, he became, what he afterwards described himself to be, " a dandy of the woods: "—

" I went shooting in black satin small clothes or breeches, with silk stockings and the finest ruffled shirts that Philadelphia could afford. I purchased the best horses in the country. My guns and fishing tackle were equally good, always expensive, and richly ornamented, often with silver. I rode well and felt proud of it. I was as fair and rosy as a girl, though as strong, indeed stronger

than, most young men, and as active as a deer. . . . . I was extremely fond of music, dancing, and drawing. In all I had been well instructed, and not an opportunity was lost to confirm my propensities in these accomplishments. I was like most young men, filled with the love of amusement, and not a ball, a skating-match, a house or riding-party, took place without me. Withal, and fortunately for me, I was not addicted to gambling. Cards I disliked, and I had no other evil practices. I was besides temperate to an intemperate degree. I lived on milk, fruit, and vegetables, with the addition of fish and game at times, and never swallowed a single glass of wine or spirits until the day of my wedding. The result has been my uncommon, indeed iron constitution."

Such a life was indeed too ideal to last—and yet there was an interest in it sweeter than any above recorded. Upon an adjoining estate lived an English gentleman, a Mr. Bakewell, whose daughter, Lucy, a "being radiant with beauty," the young Frenchman came to know and love. She taught him English. He taught her French. They became engaged. Difficulties arose. The elder Audubon's agent in America did not countenance the match, and refused further supplies of money. Audubon walked to New York, borrowed some money, went home to France, explained matters to his father, and obtained his father's consent. Then, after spending a year at his father's home, "shooting birds and stuffing them," he returned to America again, and as a preparation for the serious affairs of life, entered a counting-house in New York. Here, however, he lost a large sum of money in an unfortunate indigo speculation. He then returned to Mill Grove, sold his estate and invested the money in goods with which to start business in Louisville. On April 8, 1808, he and Miss Bakewell were married. The happy

couple then set out for Louisville. Audubon was just twenty-eight.

This marriage was Audubon's one fortunate venture. Everything else that he essayed, apart from his work as a naturalist, was ill-fortuned. His life now for eighteen years was a series of misadventures. First his enterprise at Louisville failed. He then moved to Hendersonville, Kentucky, where failure again took place. Then, after one or two efforts elsewhere, he moved to New Orleans, and entered into a business there, embarking all his fortune in it, but only to lose it all. In the meantime his father had died and had left him an estate in France, and a business investment to the amount of $17,000 in Virginia. The estate in France he never looked after; the investment in Virginia was lost by insolvency. Children now were born to him and matters began to look serious. He made one more attempt at business—this time in Hendersonville again—a steam mill. But failure again resulted, and Audubon was left with but his dogs and his gun. Then for a number of years a wandering life ensued—Louisville, New Orleans, Cincinnati, and New Orleans again, being the principal places of abode. In these years he supported himself mainly by drawing and selling crayon portraits, though he also at times gave lessons in drawing, in French, and even in dancing. But as he traveled about much he was often in great straits for money—so much so that a night's lodging, a steamboat passage, and even a pair of boots or trousers, could at times be paid for only by the making of a portrait.

These eighteen years, however, were the years when Audubon's principal work as a naturalist was done. No pressure of business, no disaster of fortune, no distress of