Dr. Joel Asaph Allen, a Founder of the American Ornithologists' Union, died after a short illness at Cornwall-on-the-Hudson, New York, on August 29, 1921, in the eighty-fourth year of his life.

Five years before his death at the urgent solicitation of the President of the American Museum of Natural History, Dr. Allen consented to prepare a brief autobiography as an introduction to a bibliography of his scientific publications. This was published in November, 1916. Only one familiar with Dr. Allen's retiring nature can realize the extreme reluctance with which he complied with President Osborn's request; but having set his hand to the task, he determined not to spare himself and with the thoroughness which marked all his work he prepared a history of his life and critical analysis of his dominant characteristic traits.

The value of this obviously authoritative document is so great

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1 Read before the thirty-ninth Meeting of the A. O. U. at Philadelphia, November 9, 1921.
that it is clearly not only the privilege but the duty of the biographer to use Dr. Allen's own words in recording the more intimate, personal side of the history of his life. Of especial interest is the account of his boyhood and the light it throws on the first manifestations of his inborn love of nature.

"I was born," Dr. Allen writes, "in Springfield, Massachusetts, July 19, 1838, the eldest son of Joel and Harriet (Trumbull) Allen, both of early New England stock. My father was a descendant in the seventh generation, of Samuel Allen who settled in Windsor, Connecticut, in 1640 . . . On the maternal side the descent is from John Trumbull, great-grandfather of Governor Jonathan Trumbull (said to have been the original of 'Brother Jonathan' and familiar friend of Washington) who was born in Newcastle-on-Tyne, and settled in Roxbury, Massachusetts, in 1639.

"My immediate progenitors were farmers. My father, however, learned the carpenter's trade and was a house-builder in his earlier days, but later bought a farm on which he spent the greater part of his life . . . My father had little appreciation for my natural history tastes, but was kind and generous, offering to share his farm with me if I would remain with him on the old homestead. My mother, on the other hand, was much in sympathy with my yearnings, and often used her influence in my favor."

Dr. Allen had a sister and three brothers. One of the latter died in infancy, a second became a moulder and the third a farmer. He therefore was the only member of his family to exhibit those traits which marked him as the born naturalist, and the possession of which are evidently not to be accounted for by direct inheritance, environment or association with others.

"My early training," Dr. Allen continues, "was rigidly puritanical. My parents were both members of the Congregational church, and strict in their religious observances. Family prayers invariably followed breakfast, and also closed the routine of Sunday, all the religious requirements of the day being strictly observed.

"My earliest recollections are naturally associated with the surroundings of my birthplace on the old farm, situated on a hill about a mile and a half east of the then thickly settled part of Springfield, known as the Watershops, where the United States
Government has for more than a century carried on the manufacture of firearms. The family home was a large two-story square-roofed house, at the time innocent of paint and unshaded by trees. One of the pleasantest memories of my younger days is of helping my father plant the row of maples and elms which long since became the prominent feature of the road frontage of the farm, and in recovering and painting the house. We were not crowded by neighbors, the nearest residence on the west being half a mile away, and there was only one house within half a mile to the eastward. Subsequently others much nearer were built in both directions, the lonely country road has become Allen Street, and a trolley car has been projected to connect the rapidly extending suburbs with the business portion of the city.

"Dandelions and daisies and other wild flowers were early attractions, the profuse gathering of which at an early age led my elders, and particularly my mother, to predict that when the toddling youngster grew up he would favor the profession of medicine, and I was often facetiously dubbed 'Dr. Sykes', in allusion to our then family physician, an herb-doctor of local reputation. In due time I was assigned a share in the household chores, and trained to perform the allotted tasks with promptness and care.

"The nearest schoolhouse was a mile distant, of the conventional red type, situated as usual on the crest of a hill. In summer the school was taught by a schoolmistress, while the winter session was conducted by a schoolmaster selected for his ability to keep the larger boys in order as well as to teach the 'three Rs.' Some years later a schoolmistress was employed for both winter and summer sessions. In those days the services of boys of even six and seven years were considered too valuable for farm-work to be sacrificed in summer for school purposes, so that to them only the winter session of the school year was available.

"Despite hard work and long hours, the farm proved attractive and satisfying for a time, but at about the age of fourteen the love inspired by this free contact with natural surroundings developed a desire to know more of the animal and plant life, the soil and the rocks, and the ever changing phenomena of sky and air, than could be gained merely by association."
“At the age of thirteen, after much pleading on my part, to my great delight, my father presented me with a gun. At first it merely afforded the pleasure all boys experience in being able to shoot something, either as game or on the pretext that certain birds and animals are destructive to crops, and that it is desirable to reduce their numbers. But very soon the destructive instinct gave place to a desire to possess specimens for study, particularly of birds, which I found were so numerous in kinds that comparatively few of them were known by name to any of the people, either of town or country, whom I met. Warblers, vireos, kinglets, sparrows and many other kinds of birds were shot, measured, weighed, described and given provisional names in my notebooks, so that I might again recognize them when met with, long before I knew that books had been written about them and that they all had names, Latin as well as English. I even made attempts to draw and color them, but entire lack of instruction in the work led only to failure and disappointment. A little later, however, I made the acquaintance of Bradford Horsford, a teacher of drawing, who was also an amateur ornithologist and taxidermist, with a good knowledge of all the commoner birds. From him I borrowed a copy of the Brewer edition of Wilson’s ‘American Ornithology,’ which, to my unspeakable delight, he later sold to me; Nuttall’s and Audubon’s works on North American birds were also found in the public library of Springfield, and a new world was opened to me.

“A little later I made the acquaintance of a man of broader education than I had ever before met, who taught our district school for several winter terms, and became a resident of the neighborhood. As he was a nature-lover himself he could appreciate my aspirations, and most generously presented me with a copy of Blythe’s ‘Cuvier’s Animal Kingdom,’ a work of which I previously had never heard. Thus equipped, and with the resources of a public library now at my command, acquaintance with not only the local birds, mammals, reptiles and fishes, but with many of the insects, became a delightful experience. Interest in farm work as an occupation as rapidly declined, but a filial desire to share fully in the family burdens led to no neglect of duties but often to excessive effort in manual labor to demonstrate an interest otherwise unfelt.”
During the winters of 1858–62, Dr. Allen attended Wilbraham Academy, working on his father’s farm in the summer and devoting all his spare time to the study of such works on natural history as were available. “During this period,” he states, “my ever present ambition was to write a history of the ‘Birds of New England’ that should be as complete and exhaustive as possible, and based on original observation, including the necessary explorations in northern New England where so many of the migratory species were supposed to pass the breeding season. Next to this I looked upon editorial work as an enviable goal. Yet at the time these aspirations began to develop composition was a slow and difficult task, and to acquire facility in writing I forced myself to keep a daily journal, in which I recorded not only the current weather conditions in detail but every incident of my daily experiences that seemed to offer a subject for comment. . . .

During the years 1859–1861, I collected and mounted (as attested by my catalogue, still extant) some 300 birds, representing nearly 100 species, and also such native mammals as I could find near my home, and I preserved in jars of alcohol specimens of all the reptiles, amphibians and fishes; such mollusks as were available were also gathered and several hundred insects. Best of all, I knew the technical names of nearly all except the insects, of which, however, I knew many. The local minerals and rocks found place on the shelves of my little museum, for which a small room was kindly provided by my parents, and which I equipped with shelves and a flat table case for insects. In addition there were rows of bottles containing the products of my boyish experiments with such cheap chemicals as I could afford to purchase at the neighboring drug store, each duly labeled with its proper chemical formula. The whole was amateurish in the extreme, and represented merely a superficial acquaintance with a wide range of subjects, but enough to add immensely to the pleasure of living, giving, as it did, the sense of being in touch with plant and animal life and the geological features of my immediate environment. My notebooks contained pages of descriptions of unusual atmospheric phenomena, from the prismatic tints of fleecy clouds floating past the midday sun, haloes, unusual storm conditions, auroral displays, and the August and November shooting-star
periods, to the varied forms of the snow crystals of a winter storm—things for the most part unobserved by my friends and neighbors, and which hence gave them no added joy to living.

"It is needless to say that my interest in every day practical affairs was limited to a conscientious and cheerful discharge of the obligations natural to my position as a helper to my father in the routine of farm work. Every spare moment of the day, when in the house, was spent in my room poring over books or specimens or jotting down things seen out of doors in the corn or hay field. These constant disappearances when off duty were naturally an annoyance to my father, who could not appreciate my absorption in such unpractical affairs. To the oft-made inquiry of my father, 'Where's Asaph?' was mother's gentle response, 'upstairs,' and the contemptuous paternal rejoinder: 'Upstairs; he's always upstairs.' Although unappreciative of his son's 'foolish notions,' he was not harsh or unkind, as an agreement, lasting for several seasons, granting one day a week for the prosecution of my hobbies is ample evidence. For these foibles my mother had always a degree of sympathy, which increased as years passed, to active influence in their behalf.

"To demonstrate my hearty interest in forwarding the farm work, I often, as I afterwards found, exerted myself beyond my proper physical endurance, which with the absorption in natural history work told heavily on my health. It was often necessary in the busy season for my father to employ day laborers and it was always my ambition to 'lead the field,' which I was always able to do except in the heavier work, even when a young boy just entering the teens. My evening task, before retiring, was to write in my journal the notes of the day and to change the dryers in my extemporized botanical press, consisting of several pieces of thick board, cut the proper length, a lot of old newspapers, and a heavy, smoothly waterworn stone for the top of the pile to afford the requisite pressure. Many, many a time this bedtime task found me almost too exhausted by the day's labor to accomplish. These long periods of overwork undoubtedly laid the foundation for much of the semi-invalidism of many later years."

In 1861 Dr. Allen reluctantly sold his beloved collections to Wilbraham Academy in order that he might raise funds to con-
continue his studies at that institution, where he formed the friendship of William Harmon Niles, a student who was planning to enter the Lawrence Scientific School to study under Louis Agassiz. Niles induced Allen to join him and, with the balance of the sum received for his collections, he went to Cambridge in 1862. Thus was begun an association which, with some breaks due to ill-health or absence on expeditions was to last until 1885 when Dr. Allen left the Museum of Comparative Zoology to enter the American Museum of Natural History.

Dr. Allen continued his studies under Agassiz for the greater part of the succeeding three years and, on March 26, 1865, sailed with his great teacher as a member of an expedition to Brazil. They arrived at Rio Janeiro April 22, and after collecting in the vicinity of that city for some weeks, Dr. Allen was detailed to join a smaller party which left June 9 for the northern provinces of Brazil. After a difficult journey of somewhat over six months he reached Bahia. Although so far from well during this period that he was obliged to abandon the plan to reach the coast at Ceará, Dr. Allen’s collections included several cases of birds, mammals, mollusks, and zoological specimens besides six or eight barrels of fishes, reptiles and other vertebrates in alcohol; and his notebooks contained many pages of detailed observations on the country through which he had passed, its flora and fauna.

On December 15, Dr. Allen sailed from Bahia on a 300 ton brigantine and after a trying voyage, during which they were blown from Cape Hatteras back to St. Thomas, they dropped anchor off Woods Hole, Massachusetts, 90 days out from Bahia;

Chronic indigestion now forced Dr. Allen to abandon museum work and return to the farm; but he had experienced the joy of exploration and as soon as his health permitted he took the field again, collecting in June, 1867, on Sodus Bay, Lake Ontario, and during the summer, in Illinois, Indiana and southern Michigan. At the end of this time he was physically so greatly improved that in October, 1867, he returned to the Museum of Comparative Zoology to act as Curator of birds and mammals in that institution.

After a year in the study, the winter of 1868–69 was devoted to zoological exploration on the headwaters of the St. John’s river,
then a primeval part of Florida. This expedition supplied in part the material on which was based Dr. Allen's classic memoir 'On the Mammals and Winter Birds of East Florida, with an examination of certain assumed specific Characters in Birds and a Sketch of the Bird-Faunae of Eastern North America.' This paper, published as a Bulletin of the Museum of Comparative Zoology in 1871, at once placed Dr. Allen in the first rank of philosophic naturalists.

The results of the Florida expedition having been reported upon, Dr. Allen started, in April, 1871, on a nine months' collecting trip to the great Plains and Rocky Mountains in the interests of the Cambridge Museum. General collections were made at intervals from the Missouri River to the Great Salt Lake, the selection of locality being largely dependent upon the movements of hostile Indians. At Fort Hays, Kansas, the arrival of a military escort being delayed, Dr. Allen and his two assistants went buffalo hunting, accompanied by only a single hunter, securing and preparing in eight days, of which thirty-six hours were occupied in traveling, fourteen complete skeletons and several additional skulls representing both sexes and various ages, from yearlings to old bulls and cows, also the skins as well as skeletons of five young calves. This collection was supplemented the following January by the skins of eight buffalo in winter pelage.

July and part of August were passed in Colorado, where *Leuco-sticta australis* was discovered on the summit of Mount Lincoln, and after ten days at Cheyenne, Dr. Allen went to Oregon, Utah, which became his base for the ensuing seven weeks. In October he worked at Green River and Fort Fred Steele, and from October 20 to December 18 at Percy. Here he secured the assistance of two native hunters and the collections, chiefly of big game, shipped from this point nearly filled a freight car. December 19 he started eastward and after a short stop in Kansas to secure buffalo he reached Cambridge on January 22, 1872. The collection made on this expedition included 200 skins, 60 skeletons and 240 additional skulls of mammals (mostly large species); 1500 birds' skins, over 100 birds in alcohol, a large number of birds' nests and eggs, recent and fossil fishes, mollusks, insects and crustaceans.

The following year Dr. Allen, representing both the Cambridge
Museum and the Smithsonian Institution, again went to our western frontier on this occasion as chief of the scientific staff attached to the survey of the Northern Pacific Railroad. Railhead on this road was then at Fargo, North Dakota, beyond which construction trains ran as far as Bismarck.

The work of the expedition lay in the country between Bismarck and a point on the Mussellshell River about fifty miles northwest of Pompey's Pillar on the Yellowstone, a distance of about 550 miles. The journey occupied some three months from June 20.

The region was infested by actively hostile Indians who had so interfered with the survey for the railroad route that an escort of 1400 troops under General Custer accompanied the expedition. It was only three years later that this officer and his entire command were killed some sixty miles south of the most western point reached by Dr. Allen.

After passing the mouth of the Powder River, the expedition was in daily contact with Indians, and twice was attacked in force. Orders were given forbidding the naturalists to use firearms or to leave the line of march, and Dr. Allen writes, "The opportunities for natural history collecting and field research on this expedition were far from ideal," but some specimens and much valuable data were secured which later formed the basis of a report of some sixty pages. With the exception of a visit to Colorado with William Brewster, in 1882, made chiefly to regain his greatly impaired health, Dr. Allen did not again enter the field. His collecting days, therefore, were ended before those of most of his colleagues were well under way, and few who knew him only in the study realized the extent of his travels, the dangers on sea and land to which he had been exposed, and the amount of material he had secured. The present day naturalist, who travels in palatial steamers or follows well-worn trails, has but faint conception of the discomforts of a 90-day voyage in a small sailing vessel, and has perhaps never experienced the risk of being himself collected.

From 1876 to 1882 Dr. Allen gave his time wholly to research, producing his monographs on the 'American Bison Living and Extinct' and 'North American Pinnipeds,' the latter a volume of 800 pages. The intensity with which he applied himself to these
and other tasks during this period overtaxed his always limited reserve powers and for long periods he was able to do little or no work.

When the trustees of the American Museum, under the presidency of Morris I. Jesup, decided to make research as well as exhibition the function of that institution, their choice naturally fell upon Dr. Allen as the head of the department of birds and mammals, a post which Dr. Allen entered on May 1, 1885.

This was the beginning of a new period in his life as well as that of the museum. Although the museum's exhibition halls had a fair representation of the leading types of birds and mammals, there was no study collection of the latter, and only about 3000 study specimens of the former. The 50,000 skins and skulls of mammals at present in the museum were all, therefore, acquired during the period of Dr. Allen's curatorship, and, to him in large measure is due the size and importance of the study collection of birds. Two years after Dr. Allen came to the museum the Lawrence Collection of 12,000 specimens was purchased and this was followed by the Herbert Smith Collection of 4000 birds from southwestern Brazil, the Scott Collection from Arizona, and the collections of Arizona birds presented by Dr. E. A. Mearns, and of Hummingbirds by D. G. Elliot. At this time also the invaluable ornithological library of Dr. Elliot was acquired. The first three years of his connection with the museum, Dr. Allen worked alone, but on March 1, 1888, the writer was appointed his assistant and today the combined staffs of the now separate departments of birds and mammals number seventeen.

Relieved now of the actual care of the growing collections, Dr. Allen devoted himself to their study, and the publications of the Museum during the succeeding third of a century bear testimony to his industry and productiveness. During this period he published 37 papers on birds and 150 on mammals, based wholly or largely on museum material. To his duties as Curator were soon added those of Editor, a post which his natural qualifications and experience especially fitted him to occupy. For thirty-two years all the zoological publications of the Museum, including 37 volumes of the Bulletin and 22 of the Memiors, passed through his hands and a regrettably large part of his time was consumed by the preparation of copy for the press and the reading of proof.
Dr. Allen was eagerly welcomed to New York by the resident naturalists of the city, and he was at once placed on the Council of the Academy of Sciences, and later was made President of the Linnaean Society, but he soon found that the duties of each day demanded all his strength and he was able to take only a small part in the scientific activities of the city. He, however, was one of the organizers of the original Audubon Society and to the end was an active director of this society and its virtual successor in New York, the National Association of Audubon Societies. But by far the greater part of the time Dr. Allen could spare from his curatorial labors was given to the American Ornithologists’ Union in the welfare of which he was as much concerned as a father in the well-being of his first-born. Indeed to Dr. Allen might well be applied the title Father of the American Ornithologists’ Union. He played a leading part in its organization, served as its President during the first seven years of its existence, and was a member of its Council until the day of his death. He edited three volumes of the Union’s ‘Check-List’ of North American Birds, and for 28 years was editor of its official organ ‘The Auk’, during which period he contributed 643 papers, reviews and obituary notices to that publication.

Only one in daily contact with Dr. Allen can realize the extent of the demands upon his time and strength made by his duties for the Union, and the loving attention he gave to its affairs. It occupied a place in his affections second only to that held by members of his family and he never spared himself in advancing its aims.

Dr. Allen was chiefly responsible for the formulation of the Union’s ‘Code of Nomenclature,’ a subject in which he took a deep interest and on which he was an authority. For years he served as Chairman of the Union’s Committee on Classification and Nomenclature, and for the last ten years of his life he was a member of the Commission on Zoological Nomenclature of the International Congress of Zoology.

In 1879, after five years of wedded life, Dr. Allen’s first wife, Mary Manning Cleveland, of Cambridge, died leaving him his only child, Cleveland Allen, now in business in New York City.

Seven years later, and a year after coming to the American Museum, Dr. Allen married Susan Augusta Taft, of Cornwall-on-
Hudson, who survives him. "I owe to her deep love and sympathy," Dr. Allen writes, "to her supreme optimism and constant watchfulness over my health, and to her inspiration, the greater part of the little I may have achieved in these last thirty years and doubtless many years of activity beyond those I otherwise would have attained."

Dr. Allen's distinguishing characteristics as a man were, modesty, sincerity, unselfishness, gentleness, consideration for others, a purity of mind and purpose which made it difficult for him to believe that anyone was not actuated by the same direct, guileless motives which ever animated him. I do not recall ever hearing him speak ill of another, but he was unsparing in his condemnation of careless work, and particularly of generalizations based on insufficient data. But so impersonal was his attitude, so impossible was it for him to cherish resentment, that while for an author he would show only helpful consideration, for his work, honesty would compel him to be merciless. I have seen him treat with fatherly kindness a man whose theories he had subjected to fatally destructive criticism.

As a student Dr. Allen was inspired by love of truth for truth's sake and by an intense absorbing interest in his work. His powers of application and concentration were phenomenal; his enthusiasm for research so unlimited that he constantly overtaxed his physical resources and the end of the day often found him on the verge of complete exhaustion. But so vitalizing was his love for his profession that, in spite of a frail physique, and the fact that he never rested from his labors when it was a possible thing to pursue them, he was actively engaged in research to within a few weeks of his death.

But he was never too absorbed in his work to be interested in that of others; an appeal to him for advice or assistance received his whole-hearted attention and he made your problem his. The writer owes him a debt which accumulated during thirty-four years of almost daily association. Coming to the museum in March, 1888, as an inexperienced assistant, he found in Dr. Allen not only a friend but a teacher to whom he might turn for instruction in even the most trivial matters with the assurance that he would meet with a sympathetic response. Dr. Allen's counsel was
always based on a logical consideration of the facts at issue; for as far as was humanly possible, he eliminated the personal equation in reaching conclusions.

The inestimable privilege of securing Dr. Allen's advice was sought, therefore, not only by members of his staff, but by workers in other departments of the museum and in other institutions. On one occasion Prof. W. B. Scott, the eminent paleontologist, came to him for an opinion on the skull of a recent fossil rodent. Dr. Allen, who remembered characteristics of quadrupeds far better than he did those of biped mammals, mistook Scott for Theodore Roosevelt, and only after expressing to me his surprise at his caller's profound knowledge of his subject did he discover that he had made an error in identification.

In spite of the physical limitations from which he suffered, and by which he was handicapped, it is impossible to consider Dr. Allen's career without feeling that few men have more nearly and more happily approached the full measure of their potential achievements.

The guiding star which rose on his youthful horizon shone brightly almost to the day of his death, and he followed it with ever increasing joy and confidence. Only a few weeks before his last illness, as he was exulting over the possibilities of the early receipt of large collections from the field, he said "I am just as enthusiastic as ever."

To the boy under the spell of the romance of a naturalist's life I commend these lines written by Dr. Allen as he approached his eightieth year: "All I aspired to was opportunity for scientific research, believing that diligence, singleness of purpose, and honest work would bring its own reward. I was content to follow my own lines of dominating interest to such limit as the circumstances of earning a living would permit. I have never had any desire for money as such, nor any interest whatever in financial projects, nor any longing for honors beyond those my colleagues in science saw fit to impose."

And with the passing years these honors came to him from every quarter of the globe. Harvard gave him the Humboldt scholarship, the University of Indiana the degree of Doctor of Philosophy, the Boston Society of Natural History, the Walker
Grand Prize, the Linnaean Society of New York its medal. He was elected a member of the National Academy of Sciences in 1876, an Honorary Member of the New York Zoological Society in 1887, an Honorary Fellow of the Zoological Society of London in 1901, and an Honorary Member of the British Ornithologists’ Union in 1907, to mention only a few of the institutions on whose rolls his name appeared. And so far was he from realizing his own worth, that always, he writes, such recognition came to him as a “surprise.”

And so in the fulness of his years and powers, honored by his colleagues, beloved by his associates, Dr. Allen’s life came to its end. For more than three score years and ten he had dedicated himself to the study of nature and he has left to the world the fruits of his labors, a marvellous record of achievement, and an inspiring example of pure, unselfish devotion to the cause of science.

AN ADVENTURE WITH A PAIR OF HARLEQUIN DUCKS IN THE YOSEMITE VALLEY.

BY CHARLES W. MICHAEL AND ENID MICHAEL.

Plates II–III.

In the Yosemite Valley, during the early spring of 1921, we had the pleasure of intimate and friendly association with the rare and little known Harlequin Duck. Although these birds have long been suspected of nesting in the mountains of California, eggs have never been taken within the confines of the State. Therefore, it was with eagerness that we searched for their nest. The search proved unsuccessful. However, we did get a great deal of pleasure in studying the habits of the birds.

The Harlequins were first noted April 6. From this date until May 10 they were daily visitors at our camp on the edge of the Merced River, where a floating lunch counter was maintained for their especial benefit. The following paragraphs, taken from notes written at the time of observation, may bring out some new points regarding the habits of these birds.