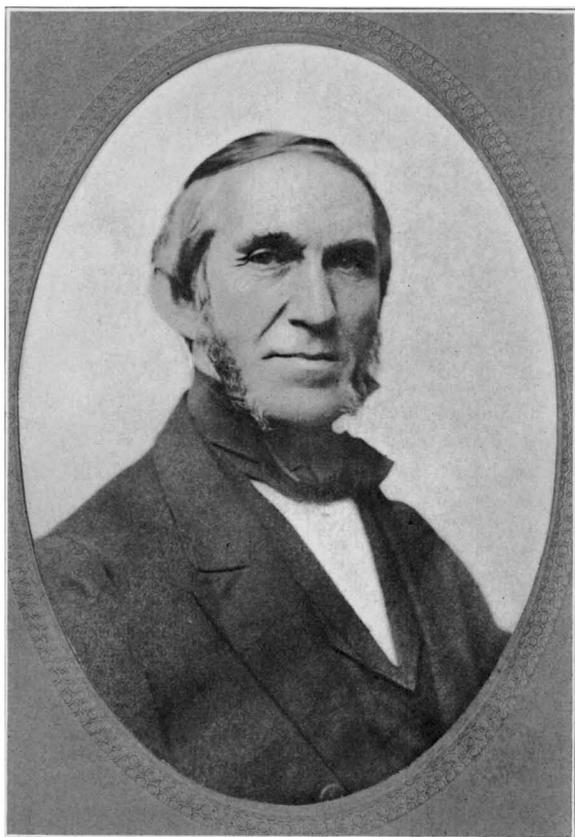


BIOGRAPHICAL MEMOIR
OF
AUGUSTUS ADDISON GOULD.
1805-1866.

BY
JEFFRIES WYMAN.

WITH ADDITIONS BY WILLIAM HEALEY DALL.

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Aug A. Gould

BIOGRAPHICAL MEMOIR OF AUGUSTUS ADDISON GOULD.

The subject of this memoir descended from true pioneer stock and since heredity, especially of men of eminence, has a scientific as well as a personal interest, it is well to include here a brief notice of his lineage, derived from family documents.

The earliest ancestors noted are Zaccheus Gould, of Bovingdon, Herts, England, who emigrated to America about 1638 and died, aged 81, in 1670; and John Durant, or Duren, supposed French Huguenot, who emigrated in November, 1659, and in 1670 married Susannah Dalton.

One of the Durens, grandfather of our late associate, was a builder of note and designed a truss bridge which he erected over Pawtucket Falls, near Lowell, Mass., one of the earliest self-supporting bridges built in this country. His son, Nathaniel Gould Duren, was born in Bedford, Mass., in 1781, and when eleven years of age went to live with a maternal uncle at New Ipswich, N. H. This uncle, Nathaniel Gould, adopted his nephew, whose name was changed by legal process to Nathaniel Duren Gould. Young Gould, November 15, 1801, married Sally Andrews Pritchard, of Welsh extraction, whose ancestors were among the earliest settlers of Old Rowley, now Boxford, Mass. This marriage was blessed with eight children, three of whom died in infancy. The second child and first survivor, born at New Ipswich, April 23, 1805, was AUGUSTUS ADDISON GOULD, the subject of this memoir.

The father was a musician, teacher of singing, and an engraver, noted for his beautiful penmanship, earnest piety, and cultivated mind, but, like most of his neighbors, in moderate circumstances financially. Those who remember his household in later days recall examples of plain living and good breeding such as in the early days of the United States were not infrequent in like situations. He was a man of deeply religious nature and a deacon in the congregation with which he worshiped.

Like many young men of that day, he turned his hand to many things. He taught school, vocal music, various wind and

stringed instruments, led the church choir, managed a small farm, and in 1807 was appointed selectman of the village, a position which he held during his residence there. In 1815 he left the farm in charge of his family and proceeded to Boston, where he engaged in business, and from 1817 to 1820 was a member of the State Legislature. He taught in the grammar schools during the day, and in the evenings gave lessons in music, vocal or instrumental, training many church choirs and giving lessons to the students of Harvard College. He also urged the teaching of music in the public schools, and his own classes gave the first impulse to the public teaching of music now so general. Later in life his skill with the pen was utilized to engross the diplomas for the graduates of Harvard.

Augustus remained in New Ipswich during his boyhood, taking his part in the management of the little farm, set in a sort of amphitheater among the hills, and devoting a proportion of his time to study in the common school, where he gained the usual elements of an education.

At the age of fifteen he took the whole charge of the farm; nevertheless a part of his time was devoted to study, and some progress was made in the classics. By the careful husbanding of the odds and ends of time and a year's teaching at the local academy, he was prepared to enter college, and entered at Harvard in 1821. With his college life came a struggle, the forerunner of many such by which his strength was to be tried. He had already come to know something of the barrier which limited means had put between himself and the things he aspired to, and now this assumed larger proportions, such as to most persons would have been disheartening. College duties and exercises demanded his time, nevertheless his education must be paid for, and he must largely contribute towards earning the means; and so by strict economy, by performing various duties for which such students received compensation, and also by hard work in vacations and on those days which others gave to relaxation, he at length fought his way through, and attained to respectable rank.

In college he was noted among his classmates for industry, and it was there, too, that his taste for natural history began to show itself. He became familiar with the most of our native plants, and to the end of life never lost his love for them. After

leaving college, he held the office of private tutor in Maryland, and at the same time began the study of medicine. The remainder of his studies were carried on in Boston, and the last year of them at the Massachusetts General Hospital as resident student. He was graduated in medicine in 1830, and at once began the practice of his profession, having given good grounds to his friends for expecting future eminence. But his struggles were not yet ended. Until his profession could yield him a support, he must go out of it, and did, to earn the necessaries of life. To this end he undertook burdensome tasks; one of them, the cataloguing and classification of the fifty thousand pamphlets in the library of the Boston Athenæum, was herculean, as any one may see who will take the trouble to look over the four large folio volumes he wrote out, monuments of his patient industry, for which he received fifty dollars. November 25, 1833, he married Harriet Cushing Sheafe, also of old colonial ancestry, connected with the well-known families of Loring, Cushing, and Quincy. This happy union, from which sprang ten children, of whom seven grew to maturity, was unbroken during the lifetime of Dr. Gould, whose widow survived him many years, dying May 14, 1893, at the age of eighty-two.

The study of natural history was nearer to his heart than all other pursuits, and to that he could always turn, and did, whenever he could command a few spare hours or moments to do so. He taught botany and zoölogy at Harvard for two years, and became a member of the Boston Society of Natural History soon after its organization. To the time he died, he labored for it, without stint. Here he was associated with Amos Binney, Storer, Wyman, and later with the elder Agassiz. For several years he was accustomed to rise at 4 o'clock a. m. and proceed to the rooms of the society to work on the collections, before the professional labors of the day were taken up. When his studies began to assume a systematic character, his first investigations were in the class of insects, of which, at one time, he had a large collection. Among his first published works was a monograph of the Cicindelidæ of Massachusetts, printed in 1834, and in 1840 he published an account of the American species of shells belonging to the genus *Pupa*, in regard to which he found much confusion. These shells are very small, and Mr. Say, who named all the species previously described, gave no

figures, and consequently naturalists fell into error. "I have received from our best conchologists," Dr. Gould says, "a single species under four of the names that Mr. Say applied to as many different species." Dr. Gould then points out how, by the use of the microscope and a careful study of their minuter details, the classification of them might be improved. This paper was illustrated by about thirty figures carefully drawn by himself, with the aid of the microscope.

In 1841, he read before the Society a paper entitled "Results of an Examination of the Species of Shells of Massachusetts, and of their Geographical Distribution." This is the more noteworthy since the geographical distribution of animals had at that time attracted but little attention, and none amongst us. Now it involves one of the most important zoölogical problems. From his examination it appeared that of the shells found within the borders of the state, forty-two were of land or fresh-water habitat, and two hundred and three of marine origin. While some of the marine species are found on the transatlantic shores, he pointed out that of the air-breathing species a certain number were common to both continents, some of which had been imported.

Dr. Gould also points out in this paper the influence of shore outlines, and shows from a comparison of species, that Cape Cod, which stretches out into the sea in a curved direction some forty or fifty miles, forms to some species an impassable barrier. Of two hundred and three species, eighty do not pass to the south, and thirty have not been found to the north. In the same paper he calls attention to the importance of the fact that certain species appear and disappear suddenly, and of the necessity, in order to construct a correct catalogue of the shells of any region, of extending observations through a series of years, a consideration which many naturalists, even of the present day, might profit by. In the spring of 1830, *Osteodesma* was strewed upon Chelsea Beach in great number, and of very large size, but had never been observed there before, and has seldom been seen since. *Cyprina islandica*, *Solemya velum*, *Venus gemma*, and *Margarita arctica* also present instances of periodicity at long intervals. During the winter of 1838-'39, *Yoldia thraciceiformis* was frequently found in the stomachs of the sand-dab, but search for them since was for a long time almost fruitless.

One of the first results of the joint action of the members of the Boston Society of Natural History, and of which it has more reason to be proud than any other, was the part taken by some of them in the series of admirable reports on the natural history of the State of Massachusetts presented to the General Court in compliance with a legislative enactment. The report on the Trees was by Mr. George B. Emerson, then President of the Society; that on Fishes, by Dr. D. H. Storer; that on Insects Injurious to Vegetation, by Dr. T. W. Harris, and that on Invertebrate Animals, excepting insects, by Dr. Gould. They at once gained for their authors widespread reputation.

The Mollusks were Dr. Gould's favorite subjects for study, and his attention was chiefly given to them. Up to this time few, if any, attempts had been made to give as complete a zoölogical survey as practicable of any particular region of the United States. As regards the Mollusks, the descriptions of Say, Conrad, and others, pioneers in conchology, pertained more to the Middle and Western States than to New England. Their writings were fragmentary and scattered through the narratives of travels, journals of science, and even newspapers. It was no small labor, therefore, to become acquainted, merely as a preparation for his task, with the writings of his predecessors. To make his report as complete as possible, and to ascertain what changes in the classification of Mollusks recent important progress growing out of the study of them would indicate, he opened correspondence for information and exchanges with European naturalists interested in the same branch of study, who obligingly and courteously lent their aid, and out of this correspondence grew up long continued friendships.

The report fills a volume of nearly four hundred pages, illustrated by more than two hundred figures skillfully drawn from nature by himself. "Every species described," he says, "indeed almost every species mentioned, has passed under my own eye. The descriptions of species previously known have been written anew, partly that they might be more minute in particulars, and partly with the hope of using language somewhat less technical than is ordinarily employed by scientific men." The number of species described was about two hundred and seventy-five of Mollusks and nearly one hundred of Crustaceans and Radiates.

This served as a manual of New England shells excellent in every way, and which had much to do with interesting in this subject many students with a taste for natural history, some of whom, among whom may be mentioned the late Dr. William Stimpson, attained to eminence.

As a contribution to zoölogical science, this report at once gave him an honorable name among the naturalists of Europe and America.*

Dr. Gould edited the admirable work entitled "The Terrestrial Air-breathing Mollusks of the United States," prepared, but left unfinished at the time of his death, by his intimate friend, Dr. Amos Binney, formerly the respected president of the Society of

* The following translation of a letter received by Dr. Gould from Prof. Louis Agassiz not only illustrates the manner in which the Report on the Invertebrates of Massachusetts was received by his cotemporaries, but has an intrinsic historic interest for American naturalists:

MY DEAR SIR:

Since I have received your excellent history of the invertebrates of Massachusetts, which I owe to the kindness of the Boston Society of Natural History, I have several times wished to write you to thank you for the pleasure and instruction which I have derived from reading this faunal monograph. If I have not written sooner it is because I have long contemplated making a journey to the United States, and in the uncertainty in which I have been until lately in regard to the matter I did not feel that I should trouble you with these plans, which I have ardently desired to carry out, and on which I have need of your advice and counsel.

Today my plan is decided on, thanks to the munificence of His Majesty the King of Prussia, who, on the recommendation of Baron von Humboldt, has assumed the expense of this journey. I can leave in the course of the summer, probably early in July. My intention is to remain at least a year and a half in your country, with the special object of studying your recent and fossil faunas in order to compare them with those of Europe. I certainly shall not pretend to travel for the sake of making new zoölogical or paleontological discoveries in the United States. The American savants are too active and intelligent to leave such a possibility to a European. My end will have been accomplished when I have learned to recognize all that your countrymen have done, have examined with care your public and private museums, and have gathered materials sufficient to establish the immediate comparisons which I need to make between your species and ours—above all, those which are reputed to be identical. I hope also to establish harmony between generic and specific names employed often in very different senses by you and

Natural History, and whose name is held in grateful remembrance, not only for his contributions to science, but for the munificent bequest which fills so large a space on the shelves of the library of that institution.

The plan of this work was broad and philosophical, passing far out of the region of generic and specific technicalities into the wider subjects of the principles of classification, of the geographical distribution of genera and species, and the causes influencing it, of zoological foci or points of origin, geological relations, habits, faculties, and anatomical structure. Its incomplete state, the fact that many of the species collected by Dr. Binney in the southwestern States and Texas had not been described by him

by us, and to render, according to the law of priority, to each one his due, following the date of his publications.

The great superiority of your work on the Mollusks of Massachusetts, which has struck me especially by the precision and the development of the descriptions of species which it contains, has led me to address myself to you to know where you think I might most conveniently establish myself on the coast to study those soft animals which must be examined on the spot, since they can only be imperfectly preserved in alcohol or otherwise. I had thought of making different stations—at first north of Boston, then in the vicinity of Boston, then near New York, and finally further south, in the vicinity of Charleston; but before taking measures to carry out this project I should like to know if one can easily establish one's self for some weeks in the immediate neighborhood of the sea, in the places most favorable for study, like those on our coast of Normandy, or whether it will be necessary to resign one's self to living in town and making excursions to the shore, which is always accompanied by a considerable loss of time. Naturalist from childhood, habituated to all kinds of fatigue and privation, it is not discomfort which I should find an obstacle, but rather the loss of precious time. You will infinitely oblige me by giving me some information on this subject. Perhaps you will also have the goodness to enquire of Dr. Storer about the fishes which he seems to know so well, for it will be very useful to be directed from the moment of my arrival. I am also going to write to Mr. Halde- man, whose work on the fresh-water shells I much appreciate, to ask of him suggestions for journeys in the interior. * * *

Will you tell me what you think of this plan and excuse me for addressing myself thus informally to you, for I have recognized in your fine work so liberal a spirit that I have believed I could write to you as to a colleague. Accept, my dear sir, the assurance of my high consideration.

L. AGASSIZ.

NEUCHÂTEL EN SUISSE, *May 6, 1845.*

up to the time of his death, and changes made necessary by more recent observations, rendered the editorship of this work no sinecure. No one could be found more fit for the task, or more worthy to bring before the world the labors of a deceased friend.

In 1848 he was associated with Prof. Louis Agassiz in the preparation of the *Principles of Zoölogy*, a small volume intended for use in schools.

His largest and most important contribution to natural history was the description of the shells of the United States Exploring Expedition. This was prepared under somewhat embarrassing circumstances. The collection was not made by himself, but by the late Capt. James P. Couthouy, U. S. N., well remembered as a most zealous and active naturalist. Captain Couthouy had drawn up full notes on the external characters of the soft parts, habits, geographical distribution, and on other important points. Before the voyage was completed he left the expedition, but the notes and collections were sent to Washington. The former were unaccountably lost, and no trace of them was found. The collections, when they came into the hands of the Navy Department, were unpacked by incompetent hands, the arrangement of them disturbed, labels in many cases lost, and the whole thrown more or less into confusion. Dr. Gould was called upon to save the wreck, but in accepting the task was obliged to submit to various arbitrary restrictions, and to leave undone many things he deemed of much importance. Fully appreciating the value of a knowledge of the internal structure of the animals, and knowing too well the folly of attempting to find all the characters for a zoölogical description in the shell alone, he expresses his regret at the outset that full dissections and delineations of the internal features had not been directed or allowed. This was all the more to be regretted, since there was a great abundance of material for the required investigations.

Agreeably to his instructions, the work is almost wholly confined to generic and specific descriptions. In the introduction, however, he presents several generalizations of importance. By a careful comparison he shows that Mollusca are confined generally to definite districts or areas. Descriptive writers have frequently given support to opposite views, and have fallen into error from not having taken proper care to ascertain the locality

from which certain species came, a determination which is now considered of prime importance. Shells purchased in the Hawaiian Islands have been described as denizens of these islands, notwithstanding they may have been carried there from far-off places. New England shells which have been sent to the western coast of America have been known to come back in the way of exchanges as natives of the Pacific shores. Errors have also been committed by attempting to decide the identity of species from distant places by the shell alone, when observation has proved this in many cases impossible. When such and other sources of error are eliminated, the number of apparently identical species from widely different sources rapidly diminishes. In fact, the doctrine of the faunal limitation of animals meets with so few exceptions that we admit it is an axiom in zoölogy, he says, that species resembling one another from widely diverse localities, especially if a continent intervenes, and if no plausible means of communication can be assigned, are different until their identity can be proved. It is true that some species are more or less cosmopolite, as the *Cypreas*, and, as at present understood, do not appear to be closely limited, while others become cosmopolite by transportation, as certain *Helices*, which attach themselves to the water casks of ships or imported plants and thus are carried around the world.

Another general consideration, and closely related to geographical distribution, grows out of the fact that the shells from definite regions have peculiarities of external form and color, of what may be called style, just as have the human races from different parts of the world. Thus, he says, we distinguish the loose, colorless structure of the northern marine species, the stony, corroded, and livid New Zealanders, and the polished and absolutely perfect specimens from the coral seas.

Another generalization illustrated by the ample stores of the expedition is the occurrence of analogous species in coördinate regions, though the species themselves are absolutely distinct, in confirmation of which he gives a list of some thirty-two species found on the eastern and western coasts of the United States.

Lastly, it is shown, by a careful comparison of the land shells of the Pacific islands, how one is helped in drawing inferences as to the lands which once occupied the area of the Pacific, and

how, in consequence of their submergence, their mountain peaks, which now alone project above the surface of the water, constitute these islands. The Samoa and Friendly Islands give evidence of such relation in having identical species.

The *Otia Conchologica* was the last of his conchological books, but this was merely a reprint in a condensed form of descriptions of species of shells previously published separately. Besides the works already mentioned, there is a long catalogue of communications made to the Boston Society of Natural History, and which is appended to this notice, which may be referred to as showing that he did not allow himself to become a mere specialist, but kept his mind awake to the relation of individual forms to higher and more general truths. On the incorporation of the National Academy of Sciences, in 1863, Dr. Gould became one of the charter members.

We must not forget that Dr. Gould was a member of the medical profession, and that his time was of necessity chiefly devoted to this, while the scientific labors we have been considering were the yield of spare moments made useful. He was an active member of the medical societies of this city and of the state, and held offices of trust in them. The Massachusetts Medical Society conferred on him the honors which it has to bestow upon its fellows. In 1855 he delivered the annual address, which was marked for the soundness of its views and the characteristic clearness and elegance with which they were presented. He took for his text the advice of Harvey to the Royal College of Physicians of London, when he founded the annual oration which bears his name, and in which, among other things, he enjoins upon the orator "an exhortation to the members to study and search out the secrets of nature by the way of experiment." Dr. Gould was elected president of the Society in 1864, and his term of office ended within a few months of his death. He was for several years one of the consulting physicians of the Massachusetts General Hospital, was an efficient member of the Boston Society for Medical Improvement, where he often communicated valuable observations, and took an active part in its discussions. He labored much and long in preparing the vital statistics of the state from the official returns.

At one of the meetings of the National Academy of Sciences he presented an important paper on the distribution of certain

diseases, especially consumption, in reference to the hygienic choice of a location for the cure of invalid soldiers. The census of 1860 gave the means of arriving at a definite result, and of showing that the mortality from the disease mentioned was greatest in the north, and diminished southwards almost as regularly as the states could be called. It causes about 29 per cent. of all the deaths in Maine, and only 3 per cent. of those in Arkansas. Infirmaries established with the idea of sending patients to those regions where the disease to be treated is presented in its mildest aspect must be far more successful than the ordinary method of mingling together invalids suffering from all sorts of infirmities.

As a citizen, Dr. Gould made a principle of going out of the ordinary routine of life to lend a helping hand wherever it was desired and he could. He served the public in many capacities—in the religious society of which he was from early life a member, and in the public schools, where he took an active interest in all attempts to improve the ways and means of instruction. He from time to time gave public lectures, and although in this capacity he could not be said to be brilliant or highly accomplished, yet his unostentatious manner and simplicity, his knowledge of his subject and hearty interest in it, always gained him attentive listeners, who went away instructed.

What can be said by way of acknowledgment of the unrequited work he did for the Boston Society of Natural History; of his services in the formation of the cabinet, and in promoting the interests of the society in a hundred ways; above all, in the drudgery which only ended with his life, his aid in preparing for the press and in superintending the publication of the various volumes printed by the society, from the first to the last?

What has now been said relates only to some of the more tangible features of his principal works, leaving out of sight the industry, the critical acumen, the tact and perceptive power required to prepare them. This we can never fully appreciate, nor the difficulties under which his work was done. One could only do this by watching his patient studies in the intervals of professional calls, or as he labored at early dawn or late at night in the hours stolen from sleep. Though often an invalid, the sickness must have been irksome indeed which could restrain him from his accustomed work.

In his temperament he was genial, and drew friends around him, retaining the old and attracting new. He came to the social gathering with joyous face and kindly feelings. His love for natural scenery was genuine and hearty, and whatever personal enjoyment came from this source, it was always enhanced if others partook of it with him. There are too many naturalists who stand in the presence of nature all their days, but see her not. To them the world offers nothing but the forms they would technically describe and arrange in their cabinets. Take away this object and all becomes a waste, for they are neither warmed nor enlivened by the world around them. Not so with our associate. No one toiled more industriously than he over individual forms and specific descriptions; but, all this aside, every aspect of nature touched him to the innermost. Those who have been intimate with him know how his face would light up while in the presence of the least as well as of the greatest natural objects—the flower of a day or the sturdy tree that had known its centuries of life, the quiet or the grander scenes of the world. His emotions were not those of an enthusiast, but rather came of a clear perception and calm contemplation of the things around him and of his own responsive nature.

He was a deeply religious man, and for more than thirty years a consistent member of the Baptist communion, exemplifying his piety by his life rather than by his conversation.

Dr. Gould was tall and spare, with dark hair and dark gray eyes, his countenance full of character and benevolence. When greeting others in whom he was interested, especially young students, his face had a winning expression not to be forgotten.

His life, all too poorly and inadequately represented in this sketch, was throughout a consistent one, and to the end each day was full to the round. He was still endeavoring to improve what had been done before, and looking forward to the accomplishment of new and better ends, when suddenly it was closed. He had been less well than usual. On the afternoon of September 14, 1866, he manifested the usual symptoms of an attack of Asiatic cholera, soon after fell into a state of collapse, and on the following morning, just before the dawn, he died. His remains lie in the beautiful cemetery of Mount Auburn, near Boston.

NOTE.—The foregoing biographical sketch was read by Dr. Jeffries Wyman before the Boston Society of Natural History in 1867, and as originally written appears in their Proceedings, vol. xi, pp. 188–197, July, 1867. Some changes and additions suggested by the family of Dr. Gould, or supplying information which seemed proper to be included, yet which had been omitted in the original paper, serve to make the present recension more complete. A good portrait of Dr. Gould appeared in the Annual of Scientific Discovery for 1861, and was afterward reprinted in the American Journal of Conchology, vol. i, part iv, in 1865.

LIST OF SOCIETIES AND INSTITUTIONS WITH WHICH
DR. GOULD WAS ASSOCIATED AND THE DATES
OF HIS ELECTION OR SERVICE.

- 1828. House physician, Massachusetts General Hospital, afterward serving as physician (1855) and consulting physician (1863).
- 1832. Member Massachusetts Medical Society. Served as orator at the anniversary meeting of 1855, and President, 1864-'66.
- 1832. Member Boston Society of Natural History and one of its curators.
- 1836. Corresponding member Connecticut Natural History Society.
- 1837. Corresponding member Rhode Island Natural History Society.
- 1837. Corresponding member of the Natural History Society of Athens.
- 1840. Corresponding member of the Academy of Natural Sciences, Philadelphia; of the Literary and Historical Society of Quebec; of the National Institute, Washington, and the American Statistical Association.
- 1841. Member of the American Academy of Arts and Sciences, Boston, Mass.
- 1842. Corresponding member Kongl. Norske Videnskabers Selskab, Copenhagen, and of the Imperial Mineralogical Society of St. Petersburg, Russia.
- 1844. Member of the Natural History Society of Lynn, Mass.
- 1844. Corresponding member Kongl. Nordiske Oldskrift-Selskab, Copenhagen.
- 1846. Corresponding member Lyceum of Natural History of New York.
- 1847. Member Essex County (Mass.) Natural History Society.
- 1848. Member of the Phi Beta Kappa Society.
- 1849. Member of the American Medical Association.
- 1849. Member of the American Philosophical Society of Philadelphia.
- 1856. Member Massachusetts Horticultural Society.
- 1858. Elected President of the Suffolk District Medical Society, in which capacity he served until 1860.
- 1863. Charter member of the National Academy of Sciences.

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