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WILLIAM STIMPSON

1832-1872

BY

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Wm. Stimpson

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A note of sorrow, deprivation, and tragedy pervades the life-story of each of the early naturalists of our country. Audubon, most fortunate of them all, struggled for years against poverty which threatened the stultification of his career, and only his rare personal charm and wonderful energy at last secured the coöperation which resulted in the publication forever associated with his name. Facing a similar problem, Alexander Wilson had exhausted his slender means and ruined his health, leaving to others the task of publishing the results of his life-work. Thomas Say, more than half starved, sank into an early grave through the irreparable injury his unconquerable devotion to study had led him to inflict upon his poor human body. Rafinesque was to lose the collection, the result of twenty years of labor, and finally to die neglected and forlorn; nor was Stimpson, despite the wealth which smoothed the path of his early years, to escape the overshadowing fate of his predecessors. Indeed, his fate was to be the most pathetic of them all, for the loss of his manuscripts, drawings and collection was to fall when health was failing and when the great work of his remarkably energetic life was all but ready for final publication.

William Stimpson was born in Roxbury, Massachusetts, on February 14, 1832; the son of Herbert Hathorne Stimpson and Mary Ann Devereau Brewer.

The Stimpsons were of the old colonial and Revolutionary stock of Massachusetts, the earliest known member of the family being James Stimpson, who was married in 1661, in Milton. William Stimpson's father was an ingenious inventor, and a leading merchant of Boston in the mid decades

of the nineteenth century. It was he who invented the "Stimpson range," famous in its day throughout New England. He also made improvements in rifles, devised the first sheet-iron cooking stove, and suggested the placing of the flange on the *inside* of railway car wheels instead of on the outside, as had been the custom. His son was to inherit his energy, love of social life, enthusiasm, and brilliant wit. Indeed, in so far as we are now able to determine, the qualities which gave character to Stimpson's spirit were all present in his father.

Of his mother we know little, for she died at an early age.

In William Stimpson's boyhood his father moved from Roxbury and built a house in the charming village of Cambridge, and in the green fields and shaded groves of this region young Stimpson was to mature that love of nature which seemed born within him and which throughout life was to dominate his every thought and action.

When fourteen years of age he read with delight Edwin Swett's work upon geology, and soon after this a copy of Gould's *Invertebrata of Massachusetts* filled him with exultant enthusiasm as is so charmingly told by Dr. Dall in his biography of Stimpson.

In school he was a brilliant pupil, for he graduated from the Cambridge High School in 1848, winning the gold medal, the highest prize of the school. In September, 1848, he entered the Cambridge Latin School, and that he did well in his studies we have good evidence in the mastery he displays in the use of Latin in the description of marine animals in his *Prodromus* of 1857-60.

His father looked with disfavor and even with alarm upon the son's tastes for the natural sciences, realizing that there was no "living" to be made through such studies. Thus it was that in 1849 the boy agreed, obedient to the paternal advice, to enter the engineering office of Fletcher and Parker, of Boston. Here, though his heart was elsewhere, his head was efficient, for he made a true calculation of the cost of constructing the Boston and Lynn Railroad. It is amusing, however, that his estimate was rejected as being too costly, but when the road was completed it was found to be correct. This surely must have pleased his father, who was at the time the President of

the Cambridge Horse Railroad, but his opposition to the son's career as a naturalist was only overcome when William Stimpson received the appointment as naturalist of the North Pacific Exploring Expedition in 1852.

The year 1849 was memorable, however, for things other than Stimpson's attempt to force himself to become an engineer, for he joined the American Association for the Advancement of Science at the Cambridge meeting, and also in August he became a member of the Boston Society of Natural History, to whose volumes he was soon to contribute many notable papers.

In 1848 he had begun the study of shells with W. G. Binney, and in October, 1850, he broke finally away from the distasteful affairs of engineering, and became a student under Louis Agassiz at Cambridge.

In September, 1849, Stimpson had made his first attempt at dredging, and in July, 1851, he visited Eastport and Grand Manan for this purpose, this being the beginning of that long series of expeditions which were to entitle him to be recognized as the first naturalist systematically to dredge along the American coast. Those who accompanied him never forgot the enthusiasm, cheerfulness, and brilliant, always kindly, wit of Stimpson, genial lover of mankind and of nature as he was. A reflection of his rare and lovable spirit appears in the "Summer Cruise on the Coast of New England," by Robert Carter, published in Boston in 1888, wherein "The Professor" is Dr. Stimpson, and the artist is his friend Robert Kennicott.

No hardship ever deterred Stimpson in this labor of his heart's desire, and in 1849 he enlisted as a member of the crew of a fishing smack in order that he might dredge off the Newfoundland Banks.

So spontaneous and irresistible was Stimpson's merriment that on one occasion a friend who had just heard one of his stories quite lost his hold and fell off the main boom into the water while the schooner was speeding down the wind, and when rescued from a watery grave he declared the story was well worth the experience.

But it would be quite unjust to Stimpson to convey the impression that he was simply a jovial, large-hearted, enthusiastic

man of red blood and adventurous spirit, for he was one of the most assiduous, efficient, and careful observers our country has produced; one who had not only the energy and genius to collect, but also to describe his collections. His descriptions are models of conciseness and clarity. He took pains to designate the type of each genus and to give the exact locality, depth, or other factors of situation for each species. He drew and colored his drawings well, but it is to be regretted that, due to the high cost of reproduction, very few of his descriptions are accompanied by figures. This defect he hoped to remedy, however, in the final publications, the materials and figures for which were destroyed in the Chicago fire; and thus the full fruition of his remarkably energetic life was lost to the world.

But to return to our narrative. From December, 1851, to April, 1852, he was with Agassiz at Charleston, South Carolina, paying all his own expenses and accompanying his master more as a collaborator than as an assistant or a pupil. This led to his first quarrel with the great Agassiz, who had assumed somewhat the rôle of Zoölogical Pope of America. It seems that Stimpson went out very early in the morning, at an exceptionally low tide, and dug up several new species of marine invertebrates which Agassiz immediately claimed for his own, but did not succeed in obtaining. The aftermath appears in the laconic phrase in Stimpson's journal: "May-June, 1852. Hard times with Agassiz."

This difference, however, was soon patched up, but a more serious breach of relations came in 1860, when Stimpson gave an excellent description of *Lingula pyramidata* from Beaufort, North Carolina, having obtained large numbers of this archaic brachiopod in the mud-flats of this region. Agassiz, it seems, had previously obtained a single specimen, which he had treasured for years, permitting no one to describe it and neglecting so to do himself; and that this upstart of twenty-eight should have forestalled him was too much for the patience of the aged master, and even the diplomacy of Stimpson was unequal to the task of restoring their old relations until after the disaster of the Chicago fire.

That Stimpson was, indeed, quite a diplomat we have evidence in that, although a Northern sympathizer, he courted

and became engaged to Miss Annie Gordon, of "Font Hill," near Ilchester, Maryland, daughter of a prominent Secessionist family of that State.

Indeed, whenever a Southern victory occurred, Stimpson's prospective father-in-law came *himself* to announce the fact, while he invariably sent his negro valet to announce "Yankee" successes. This difference in viewpoint, however, did not prevent the marriage of Stimpson to "Miss Annie" on July 28, 1864.

In July, 1852, Stimpson made his second visit to Eastport and Grand Manan, returning in October to Agassiz's laboratory in Cambridge. Then, on November 23, 1852, there came the most significant event in his scientific career, for he was appointed naturalist upon the projected United States North Pacific Exploring Expedition under Commodore Ringgold, later commanded by Captain John Rodgers.

In December, 1852, Stimpson went to Washington to prepare for the duties of his new position, and on March 21, 1853, he joined the U. S. S. *Vincennes* in New York, sailing from Norfolk, Virginia, in May.

Stimpson remained four years with this expedition, visiting Japan, Bering Strait, and many other regions of the North Pacific. During this time he collected 5,300 specimens, 1,970 being testaceous mollusks; and he himself made special notes and drawings on over 3,000 specimens. Most of his drawings were colored, and related to various groups, including Ascidians, Planarians, Nemertians, Annelids, Actinians, Alcyonaria, crustacea, living mollusks, etc. He realized that a special study of *invertebrates*, and of the smaller and less conspicuous animals, would yield results of the greatest value, and it is pathetic to think that just as this greatest single labor of his life was all but ready for publication the Chicago fire destroyed not only these drawings and manuscripts, but also the specimens themselves.

Wherever Stimpson went stories arose respecting his ready recourse, his energy, decision of character, and kindly wit. It is said that when in the Solomon Islands he wandered dangerously far along the shore, savages suddenly attacked him with spears, and finally knocked him down. Realizing that they

cared more for his tobacco pouch than for his life, he threw it full twenty feet away, and while his tormentors rushed for the prize he made his quick exit toward the ship. Another story is told in the biography of Professor Shaler, so charmingly written and compiled by Mrs. Shaler, to the effect that Stimpson used to crush intermediate forms under his foot, cursing them as he did so. This is, however, a lapse of memory on Shaler's part; for, according to Dr. Faxon, the story was always told in Agassiz's laboratory with John G. Anthony as its hero. In fact, Stimpson, although an Episcopalian, readily accepted Darwin's views, and was far too deep a student of nature not to realize the partial inadequacy of the Linnæan system.

After returning from the North Pacific exploration in 1856, he studied at the Smithsonian in Washington, devoting his energies to the arranging and description of his collections; and he also visited England, where he dredged along the coast. Here, as elsewhere, he made hosts of friends; and, indeed, his influence upon the social side of the scientific life of Washington itself was profound, for he was the founder of two scientific associations. The more social was the "Megatherium Club," Stimpson, Cope, Verrill, Dukman, Ordway, Meek, Hayden, Gill, Wood, Horn, Gabb, and others being among the members. He also instituted other more or less temporary "organizations," among them the "Polymythian Society of Monosyllabies," who contributed 9 per cent of the Proceedings of the Academy of Natural Sciences of Philadelphia in 1861, and to whom Stimpson "dedicated" the following doggerel verses, which seem to fall down badly at the end:

"Into the well of learning dip
 With spoon of Wood and Horn;
 For students Meek and lowly
 Silver spoons should treat with scorn.
 Though Gabb should have the gifts of Gill,
 As Gill has the gift of Gabb,
 T'would show a want of judgment still
 To try to Cope with Meek."

But a more serious organization was the "Potomac-side Naturalists' Club," the first biological society in Washington and the forerunner of the Washington Academy of Sciences.

During these years he was dredging along the coast nearly every summer from Canada to Florida—Verrill, Morse, Hyatt, Shaler, Packard, and others being his companions.

In 1868, at the early age of 36, he was elected a member of the National Academy of Sciences, having already become a corresponding member of the California Academy of Sciences, the Academy of Natural Sciences of Philadelphia, the New York Lyceum of Natural History, and other associations we have already mentioned. In 1860 the Columbian University expressed its appreciation of his services to science by conferring upon him the honorary degree of Doctor of Medicine, this being the only collegiate degree he ever received.

In Washington he was in charge of the Department of Invertebrates of the Smithsonian Institution, but this period of his life ended in 1865, when he was appointed Curator and Secretary of the Chicago Academy of Sciences, and on November 12, 1866, he was elected Director to fill the vacancy caused by the death of his friend Robert Kennicott, who had been chiefly instrumental in causing Stimpson to be called to Chicago.

Stimpson was at this time recognized as the leading American authority on aquatic invertebrates, and his presence in Chicago gave a great impetus to the Academy.

Fire having damaged the collections in 1866, the trustees erected a "fire-proof" museum building in 1868, which was 55 feet by 50 and 50 feet in height. The walls were two feet thick, with an air space in the middle; the floors were of brick and iron, all partitions brick, and all stairways and principal doors of iron. Yet, on October 9, 1871, this building was to go down in a fiery furnace of a magnitude which the world had never before seen, wherein surrounded as it was by inflammable structures, it melted as would a bolt of iron in a furnace.

The collections were augmented by the more than 10,000 jars of the Smithsonian collection of crustacea, then the largest alcoholic collection of its sort in the world, and containing Dana's types. In addition, there were the collections made by Stimpson while upon the North Pacific Exploring Expedition, and the results of his many dredging excursions for twenty years along the Atlantic coast from Canada to Texas.

Stimpson's manuscripts, drawings, and library were also in the building, some of the most valuable specimens and papers being placed there only a few weeks before its destruction. An enumeration of the losses is given in a pamphlet issued by the Academy on October 30, 1871, and signed by J. W. Foster and William Stimpson.

To quote from the "Historical Sketch of the Chicago Academy of Sciences" by W. K. Higley, 1902: "Dr. William Stimpson's loss was beyond computation. It seemed as though all the labor of his life was gone. In a letter to the Secretary he says, in reply to some words of sympathy, he had indeed lost heavily—in fact, his all—the product of days and nights of toil in many parts of the world for the past twenty years. He had looked forward to the publication of his own works by the Government, and consoled himself with the thought that, although he could not leave his children wealth, he could leave them this assurance, that he had nevertheless not been idle. But a fatality seemed to attend him. He had just completed, by his trip in August, the gathering in of all his materials—from his father's house, from Agassiz's, from Ilchester, and from the Smithsonian—just in time for the fire." However, Stimpson writes: "But had I lost twice as much, I shall never regret coming to Chicago, for I have found there noble and generous friends, not only to myself, but friends to science such as no other city in America can boast; and of more value to me than worldly possessions will be the memory of the friendly experiences I have had with yourself and the other trustees and the friends of the Academy, while we together built up a monument which, though now leveled with the dust, will long live in scientific history. May our past be our earnest of our future."

The actual cost of the specimens lost was not less than \$200,000, and as the building was considered to be fire-proof no insurance was carried. Indeed, so confident were the trustees and director of the fire-proof character of the structure that, although they might have saved many things, they simply moved the collections into the center of the building, closed all doors and windows, and left it to withstand the test of the tornado of heat.

The loss to science was all but total. Happily, however, Stimpson had given a few of his North Pacific Expedition drawings of Anthozoa to Professor Verrill, and these were published in the Proceedings of the Essex Institute. Also a manuscript and some drawings of Crustacea had been sent to the Smithsonian, and afterwards incorporated in modified form in the publications of Miss Mary J. Rathbun.

Brave as he was, the blow was too much for Stimpson. For several years his health had been failing, and any unusual exertion or stimulation had resulted in hemorrhages. Thus shattered and weakened, the once energetic Stimpson became but a shadow of his former self, and the last winter of his life he spent in Florida dredging off the Pourtales plateau and in the Gulf of Mexico, but bad weather seriously interfered with the success of this expedition, and on April 19, 1872, at Key West, Florida, Stimpson wrote one of the last letters of his life to his old friend, Professor Robert E. C. Stearns, in which he says: "My health is very poor—lungs badly filled with tubercles, and I have frequent hemorrhages, and cannot do anything requiring physical exertion without great distress."

Thus, on May 26, 1872, he died at Ilchester, Maryland.

An appropriate appreciation of the work of Stimpson's later years, and of the rare charm of his character, is given by W. K. Higley: "In the administration of its (the Chicago Academy's) affairs during the few years intervening since its organization, he raised it in the magnitude of its collections to the fifth, and in certain departments to the first, in rank in the United States. He organized a system of exchanges which extended to distant and widely separated regions. He maintained a correspondence with kindred societies at home and abroad. He classified and arranged the materials gathered from every quarter of the globe into a harmonious system, of use both to the public and to the student. He was profoundly versed in many branches of natural science, and was one of the few in whom was combined ability as a collector of facts and specimens with the power accurately to describe and classify what he had gathered. In his social relations he was kind and courteous, and, while ready at all times to impart information, he was not obtrusive

in his opinion. He loved science for its own sake, and all his labors were directed to its advancement."

According to Dr. Dall, "Stimpson was of middle height, slender, with brown, curling hair and merry eyes, whose expression was rather heightened than impaired by the glasses he habitually wore. His bearing was that of a scholar, rather retiring, except with friends, when the boyish exuberance of his spirits had full sway. Those who had the privilege of his companionship will carry an abiding memory of his abilities as a naturalist and his noble and lovable characteristics as a man."

Biographical notices of Dr. Stimpson were written by W. H. Dall, 1888; in "Some American Conchologists," Proceedings of the Biological Society of Washington, vol. 4, pp. 129-133, portrait. Also a memorial notice by J. W. Foster appeared in the *Chicago Tribune* of June 12, 1872. There is also a portrait and a brief account of Stimpson's work by William K. Higley, 1902, in the Chicago Academy of Sciences, Historical Sketch, Special Publication of the Chicago Academy, No. 1, 52 p., portrait. A notice also appears in the *Jahrbuch der Erfindungen, Physik, Chemie, etc.*, Leipzig, 1873, Jahrgang 9, p. 365; and a few words of appreciation written by Professor Robert Stearns are published in the Proceedings of the California Academy of Sciences, vol. 4, 1872, pp. 230-232.

It is very unfortunate that the present all too brief biographical notice should have been written by one who was not of Stimpson's generation, and thus able to do but slight justice to his high qualities of mind and heart; and it is to be hoped that never again will the National Academy permit so many years to elapse between the death of a member and the appearance of a memoir upon his life. Old friends of Dr. Stimpson, such as William H. Dall, Addison E. Verrill, Edward S. Morse, and Walter Faxon, have, however, come generously to my aid. Moreover, Herbert B. Stimpson, Esq., a son of Dr. Stimpson, has been so kind as to permit me to make free use of his father's journals, and has kindly corrected and revised the manuscript of this memoir.

It is, indeed, fortunate for biological science in America that we had in our early years such energetic and reliable students

of systematic zoölogy as Dana, Say, Stimpson, Gray, Gould, Binney, Agassiz, Audubon, and Alexander Wilson, for the philosophic and experimental work of the day would indeed be poorly founded were it not for the knowledge we now possess of the forms of animal and plant life of our country, and to Stimpson himself we owe the description of 948 species new to science.

BIBLIOGRAPHY OF SCIENTIFIC PAPERS BY WILLIAM STIMPSON

AND BRIEF COMMENTS UPON THE SAME

- Revision of the synonymy of the testaceous mollusks of New England. 1851.
- Description of a new species of *Helix* (*H. exigua*). Proc. Boston Soc. Nat. Hist., vol. 3, 1848-1851, p. 175.
- Descriptions of two new species of *Philine* obtained in Boston Harbor (*Ph. sinuata*, *Ph. formosa*). Proc. Boston Soc. Nat. Hist., vol. 3, 1848-1851, pp. 333-334. *P. sinuata* and *P. formosa*.
- On two new species of shells and a holothurian from Massachusetts Bay. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 7-9. Three new species.
- List of fossils found in the post-Pliocene deposit, in Chelsea, Mass., at Point Shirley. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 9-10. Most of these are deep-water forms of northern origin, and the shells were probably deposited at Chelsea by melting icebergs. All are still found living off the New England coast.
- Notices of several species of testaceous mollusca new to Massachusetts Bay. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 12-18. Twenty-five species enumerated, about 20 being new to the State of Massachusetts, 6 new to science.
- Observations on the identity of *Nucula navicularis* and *N. thraciæformis*. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 26-27. These are only growth stages of one and the same species, and should be called *Leda thraciæformis*.
- Remarks on an Ascidian (*Pelonaia arenifera*) found in Massachusetts Bay. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, p. 49.
- New species of Pentacta (*Cucumaria*, Cuvier), *P. calcigera*. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 66-67. One new species.
- Observations on the fauna of the islands at the mouth of the Bay of Fundy and of the extreme northeast coast of Maine. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 95-100. The water is cold

and deep close to the shore and the abundance of animal and plant life is remarkable, the general character of the fauna and flora reminding one of Greenland.

- Monograph of the genus *Cacum* in the United States. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 112-113. Three new species.
- Descriptions of several new species of shells from the northern coast of New England. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 113-114. Six new species.
- Description of a new crustacean belonging to the genus *Axius*, Leach (*A. serratus*). Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 222-223. *Axius serratus*, new species.
- Description of two new species of *Ophiolepis*, from the southern coast of the United States. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 224-226. *O. gracillima* and *O. atra*.
- Description of several new Ascidians from the coast of the United States. Proc. Boston Soc. Nat. Hist., vol. 4, 1851-1854, pp. 228-232. Fourteen new species.
- Synopsis of the marine invertebrata of Grand Manan; or the region about the mouth of the Bay of Fundy, New Brunswick. Smithsonian Contr. Knowl., vol. 6, art. 5, 1854, pp. 66, 3 pl., 37 figs. Describes 321 species, 92 here described as new: Of the 321 species, 119 were originally described by Stimpson himself. Giard describes 5 new worms.
- Descriptions of some of the new marine invertebrata from the Chinese and Japanese seas. Proc. Philadelphia Acad. Nat. Sci., vol. 7, 1855, pp. 375-384. (Seventy-six new species of Polyps, Tunicates, Mollusks, Turbellaria, and Crustacea.)
- Descriptions of some new marine invertebrata. Proc. Philadelphia Acad. Nat. Sci., vol. 7, 1855, pp. 385-395. (Fifty-one new species of Echinoderms, Tunicates, Nudibranchs, Turbellaria, Worms, Gephyrea, and Crustacea from Australia and Cape of Good Hope.)
- On some remarkable marine invertebrates inhabiting the shores of South Carolina. Proc. Boston Soc. Nat. Hist., vol. 5, 1854-1856, pp. 110-117. Six new species; Actinia, Gephyrea, and Worms.
- On some California crustacea. Proc. California Acad. Science, vol. 1, 1856, pp. 95-99. (Fifteen new species.)
- Notices of some new species of crustacea of western North America. Proc. Boston Soc. Nat. Hist., vol. 6, 1856-1859, pp. 84-90. Fifteen new species.
- On a new form of parasitic gasteropodous mollusca, *Cochliolepis parasiticus*. Proc. Boston Soc. Nat. Hist., vol. 6, 1856-1859, pp. 307-309, 3 figs. A species found at Charleston, South Carolina, in 1852, parasitic upon the annelid *Acoëtes lupina*.
- On a remarkable new form of brachyurous crustacean on the coral reefs at Hawaii. Proc. Boston Soc. Nat. Hist., vol. 6, 1859, pp. 412-414. *Hapalocarcinus marsupialis* nov. sp.

- On the crustacea and echinodermata of the Pacific shores of North America. *Journal Boston Soc. Nat. Hist.*, vol. 6, 1857, pp. 444-532, pls. 18-23, 36 figs. Some of these were described briefly in vol. 6 of the Proceedings of the Boston Society, pp. 84-90. Fourteen species are described as new.
- Prodromus descriptionis animalium evertibratorum in expeditione ad Oceanum Pacificum Septentrionalem missa, C. Ringgold et Johanne Rodgers, ducibus, observatorum et descriptorum.* *Proc. Philadelphia Acad. Nat. Sci.*, vol. 9, 1857, pp. 19-31, 159-165, 216-221; 1858, pp. 31-40, 93-110, 159-163, 225-252; 1860, pp. 22-47. Descriptions of 309 new species, in concise Latin.
- Notice of the scientific results of the expedition to the North Pacific Ocean under the command of Com. J. Rodgers. *American Journ. Sci.*, vol. 23, 1857, pp. 136-138. Five thousand three hundred specimens were collected, 1,970 being testaceous mollusca, and colored figures or notes were made of over 3,000 by Stimpson himself.
- Sketch of a revision of the genera of *Mithracidæ*. *Amer. Journ. Sci.*, vol. 29, 1860, pp. 132-133. Proposes 2 new genera.
- On botanical and zoölogical nomenclature. *Amer. Journ. Sci.*, vol. 29, 1860, pp. 289-293. Suggests the establishment of an international commission to draft rules for zoölogical and botanical nomenclature.
- A trip to Beaufort, North Carolina. *Amer. Journ. Sci.*, vol. 29, 1860, pp. 442-445. Accompanied by Dr. Theodore Gill, he obtained 216 species, 2 of which are new. Among the new species is *Lingula pyramidata*.
- On the marine shells brought by Mr. Drexler from Hudsons Bay, and on the occurrence of a Pleistocene deposit on the southern shore of James Bay. *Proc. Philadelphia Acad. Nat. Sci.*, 1861, pp. 97-98.
- Notes on certain decapod crustacea. *Proc. Philadelphia Acad. Nat. Sci.*, 1861, pp. 372-373. Seven species described, 2 being new.
- On new genera and species of star-fishes of the family Pycnopoidea (*Asteracanthion* Müll. and Trosch.). *Proc. Boston Soc. Nat. Hist.*, vol. 8, 1861, pp. 261-273. Seventeen new species.
- Notes on North American crustacea. *Annals of New York Lyceum*, vol. 7, 1862, pp. 49-93, 176-246, pls. 1, 2, and 5, 22 figs. One hundred and ninety-four species are described, 105 being new to science. The second one of the papers treats of the crustacea in collection of the Smithsonian Institution.
- Description of a new *Cardium* from the Pleistocene of Hudsons Bay. *Proc. Philadelphia Acad. Nat. Sci.*, 1862, p. 59, 1 fig. One new species, *C. dawsoni*.
- Notes on North American crustacea, No. I. *Annals of New York Lyceum of Natural History*, vol. 7, 1862, pp. 49-93, pl. 1, 10 figs. Eighty-three species mentioned, of which 36 are described as new.
- Notes on North American crustacea, in the Museum of the Smithsonian Institution, No. II. *Annals of New York Lyceum of Nat-*

- ural History, vol. 7, 1862, pp. 175-246, pls. 2 and 5, 12 figs. One hundred and twelve species are mentioned, of which 69 are described as new.
- On an oceanic Isopod found near the southeastern shore of Massachusetts. Proc. Philadelphia Acad. Nat. Sci., 1862, pp. 133-134. Description of *Idothea robusta* Kr.
- Check lists of the shells of North America. With Isaac Lea, P. P. Carpenter, W. G. Binney, and Temple Prime. Smithsonian Misc. Coll., vol. 2, art. 6, 1862, 6 pp. Stimpson dealt with the east coast of North America from the Arctic seas to Georgia. No new species are recorded.
- On the fossil crab (*Archæoplax signifera*) of Gay Head. Journ. Boston Soc. Nat. Hist., vol. 7, 1863, pp. 583-589.
- Malacozoölogical notices. Proc. Boston Soc. Nat. Hist., vol. 9, 1863, pp. 249-253, 3 figs. *Gundlachia meekiana*, nov. sp.
- Synopsis of the marine invertebrata collected by the late Arctic expedition, under Dr. I. I. Hayes. Proc. Philadelphia Acad. Nat. Sci., 1863, pp. 138-142. Dr. Hayes brought back 69 species; thus more than had any other single expedition to the Arctic region; only 2, however, were new to science.
- On the classification of the Brachyura and on the homologies of the antennary joints in decapod crustacea. Amer. Journ. Sci., vol. 35, 1863, pp. 139-143. Also in Annals and Magazine Nat. Hist., vol. 11, pp. 233-237. A criticism of Strahl's scheme of classification.
- On the structural character of the so-called Melanians of North America. Amer. Journ. Sci., vol. 38, 1864, pp. 41-53. Describes the anatomy of the animals and determines the anatomical sexual characters.
- Descriptions of new species of marine invertebrates from Puget Sound. Proc. Philadelphia Acad. Nat. Sci., vol. 16, 1864, pp. 153-161. Twenty-six new species—Crustacea, Gephyrea, Tunicata, and Holothuriadæ.
- Diagnosis of newly discovered genera of gasteropods belonging to the subfamily Hydrobünæ, of the family Rissoidæ. Amer. Journ. Conch., vol. 1, 1865, pp. 52-54, pl. 8, fig. 1. One new species.
- On certain genera and families of zoöphagous gasteropods. Amer. Journ. Conch., vol. 1, 1865, pp. 55-64, pls. 8, 9. Five new genera, 1 new species.
- Review of the Northern Buccinums and remarks on some other northern marine mollusks. Canadian Naturalist, vol. 2, 1865, pp. 364-389. Describes 15 species, 2 being new.
- Researches upon the Hydrobünæ and allied forms. Smithsonian Misc. Coll., vol. 7, art. 4, 1866, 59 pp., 29 text figs. Also Reviews in Amer. Journ. Sci., vol. 41, pp. 270-272, and in Annals and Magazine Nat. Hist., vol. 17, pp. 393-395. Describes 8 new genera of these minute snails. All belong to the Rissoidæ and can be grouped under 6 subfamilies.

- Illustrations of North American birds in the Museum of the Chicago Academy of Sciences. *Trans. Chicago Acad. Sci.*, vol. 1, 1867-1869, pp. 128-129.
- Experiments upon a solution of carbolic acid as a substitute for alcohol in the preservation of wet specimens. *Amer. Nat.*, vol. 3, 1870, pp. 557-558. A weak solution destroys the germs of decomposition, thus preserving animals for at least three or four weeks.
- The shell mounds of West Florida, particularly those of Tampa Bay. *Amer. Nat.*, vol. 3, 1870, pp. 558-559. Mentions shells and implements made from shells found in these mounds.
- Preliminary report on the crustacea dredged in the Gulf Stream in the Straits of Florida, by L. F. de Pourtales. Part 1, *Brachyura*. *Bull. Mus. Comp. Zool.*, Harvard College, vol. 2, 1871, pp. 109-160. Ninety-one species mentioned, 53 of which are described as new.
- On the deep-water fauna of Lake Michigan. *Amer. Nat.*, vol. 4, 1871, pp. 403-405. A new form of *Mysis* shrimp is mentioned from Lake Michigan, and this leads him to infer that the lake was originally a body of salt water to which the sea had access.
- Distribution of the marine shells of Florida. *Amer. Nat.*, vol. 4, 1871, pp. 585-587. Of 314 mollusks collected on both the east and the west coast of Florida, only 145 are common to both, 58 being confined to the east and 111 to the west coast. Florida was once an island and has only recently become a peninsula.
- Notes on North American crustacea in the Museum of the Smithsonian Institution. No. III. *Annals of New York Lyceum of Nat. Hist.*, vol. 10, 1873, pp. 92-136. Seventy-three species mentioned, of which 41 are described as new.
- Description of several new species of shells from the southern coast. With J. D. Kurtz. *Proc. Boston Soc. Nat. Hist.*, vol. 4, 1854, pp. 114-115. Six new species described in Latin.