

Spencer F. Baird and his collectors

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On 17 May 1878 Spencer Baird was chosen, by unanimous vote of the Board of Regents, the second Secretary of the Smithsonian Institution. His election followed by four days the death of Joseph Henry, the Institution's first Secretary. For a short while the Regents debated the suggestion by Peter Parker, a citizen regent from Washington, D. C., that Baird be named Secretary *ad interim* and that the appointment of a permanent Secretary be postponed until the next annual meeting in January 1879. Senator Hannibal Hamlin of Maine thought the Board ought to proceed at once to elect a Secretary because 'to delay would be to invite great contention for the office'. Soon Parker withdrew his motion, and the Board proceeded to elect Spencer Baird as Joseph Henry's successor.¹ It was later reported by Baird's daughter Lucy that the new Secretary was greatly saddened by his friend's death, and was so embarrassed and pained by the congratulations heaped upon him by friends and well-wishers that he fled Washington for two or three days in order to escape them.²

Baird was the logical choice to succeed Henry. He had served the Institution as Assistant Secretary since 1850, and was also United States Commissioner of Fish and Fisheries, a post he had held since 1871. Perhaps the most respected naturalist of his time, he published extensively in ornithology, mammalogy, herpetology, and ichthyology, and pioneered in the study of fish culture. Although Baird had had many responsibilities as Assistant Secretary, his main interest was the museum. During his twenty-eight years as Assistant Secretary the number of specimens in the collections increased from about 6,000 to several hundred thousand with an additional 400,000 specimens distributed to other museums and individuals. By the time of Baird's death in 1887 the holdings of the museum totalled over two and a half million specimens.³

In 1878 the museum was still housed in the original Smithsonian Institution building with overflow in an armory nearby, but a new building was planned. Joseph Henry had secured the initial appropriation for the construction of a new building to house the United States National Museum, but his death prevented him from seeing its completion. The great influx of specimens and objects from the Philadelphia Centennial Exhibition had made a new building mandatory. Baird oversaw its construction and saw to it that the building was as big as possible and as cheap as possible.⁴ He had his museum at last, and with the help of his newly appointed Assistant Secretary, George Brown Goode, he proceeded to organize it into an arrangement which influenced American museology for decades.

Baird's serious interest in natural history began in his mid-teens when he accompanied his elder brother William on rambles through the countryside of his native Cumberland County, Pennsylvania. An amateur ornithologist, William started collecting bird skins in the late 1830s, and soon Spencer followed suit. By the time William left Carlisle in 1840 to accept a clerkship in the Treasury Department in Washington, D. C., Spencer's interest had become a

passion, and he began collecting with a single-minded devotion to building up his own natural history cabinet.⁵

There was a small natural history community in and around Baird's home in Carlisle, so he was not left completely alone after William's departure. He had friends and relatives who shared his interests, and he developed contacts and friendships with amateur naturalists throughout central Pennsylvania. But it is likely that most of Baird's serious collecting was done alone. His solitary collecting trips in the region around Carlisle are legendary. It was not unusual for him to walk forty or fifty miles in a day, carrying a gun, a pack, and specimens secured along the way. His strapping six-foot frame was soon well known throughout the area, but he was once suspected of being crazy by a farmer who observed him hammering at stones in a field for some hours.⁶ In 1842 Baird walked 3300 kilometers, in one pair of laced boots, half-soleed three times, and shot 650 birds representing 128 species.⁷

Baird's first contact with the wider natural history community came in 1839 when he visited the Academy of Natural Sciences in Philadelphia to study their ornithological collections, and to read the works of Audubon.⁸ The young naturalist was impressed, and on 4 June 1840, at the age of seventeen, he mustered up the courage to write to Audubon. He wrote,

You see Sir that I have taken (after much hesitation) the liberty of writing to you. I am but a boy and very inexperienced, as you will no doubt observe from my description of the Flycatcher. My brother last year commenced the study of our birds, and after some months I joined him. He has gone elsewhere to settle and I am left alone. I have been very much assisted however by Dr. A. Foster of this place in various ways, and should the above Flycatcher happen not to have been described, it would gratify me very much to have it honored with his name.

Audubon immediately responded that the Flycatcher, if it corresponded to Baird's description, might indeed prove to be hitherto undescribed. 'for although you speak of yourself as a youth, your style and the descriptions you have sent me prove to me that an old head may from time to time be found on your shoulders'. Audubon then proceeded to ask Baird to collect for him. Baird responded, agreed to collect for Audubon, and began a correspondence, and a friendship, which lasted for several years.⁹ Baird had entered the community of collectors — he had a mentor.

By 1841 Baird had decided upon a career as a naturalist, and to better prepare himself he went to New York to study medicine with Dr Middleton Goldsmith at the College of Physicians and Surgeons. Although the study of medicine proved to be uncongenial to Baird, his time in New York was not wasted. Shortly after his arrival he met Audubon, and a close relationship soon developed. Much of Baird's time during his three-month stay in New York was spent with Audubon who opened his collections to his young protege, gave him drawing lessons, and presented him with a copy of the letterpress of his five volume *Ornithological biography*. Baird also spent much time with Major John E. LeConte, a cousin of his mother, and an amateur entomologist of note; George N. Lawrence, the ornithologist; the botanist John Torrey; and the zoologist John E. DeKay. Baird also managed a visit to Peale's museum, and received a number of rare bird skins in return for which he agreed to supply the 'Curiosity Shop,' as he called it, with snails, fossils, and coins. In December he made a short trip to Philadelphia where he met other distinguished members of the scientific community, including Timothy Conrad, the paleontologist; Isaac Lea; and John Cassin, who became a lifelong friend and collaborator.¹⁰

In July 1842 Baird made his first contact with the city's scientific community by his appointment to the National Institute, and inspected the collections housed at the Patent Office. He soon resigned, unsuccessful despite a recommendation from Washington where he met James Dwight Davis, who was studying the crustacea collected by Baird.

During the course of the next several years Baird made contacts and renewed old acquaintanceships, and renewed professional relationships and personal friendships with Joseph Leidy, Titian Ramsay Peale, and others, and he maintained a voluminous correspondence with America.

In 1846 Baird accepted a position as curator of the museum over the course of the next four years. He rapidly organized the museum, and librarian. He rapidly organized the students whom he led on rigorous field trips.

Early in 1847 Baird received a letter from Dana asking he apply for a position as curator of the museum, which, of course, Dana had already resigned. Baird, asking for the position and promising to accompany me, of course accompany me'.¹⁴ Since the application was a bit premature, but Baird applied. Henry, while his friends, James Dwight Davis and Charles Coffin Jewett lobbied in his favor.

As the meeting of the regents approached, Baird was worried about the result, especially as not knowing whether he would get the position or not. My position here is becoming more and more one of actual dread, to the time when I shall have to resign.

Baird was also worried about the safety of the museum. In the cry of fire in the streets, I am in a state of alarm in which I keep my treasures may take flight. Baird an excellent candidate, though not the best, with his coterie of friends and supporters. He represented the forces in favor of a large museum, and he feared until his death, that a museum would be conceived in his 1847 'Program of the Smithsonian' but finally decided that some sort of organization was needed to organize it.

When Baird came to the Smithsonian Institution, he found a natural history cabinet, which was purchased from the country. The collection filled two boxes and more than 500 containers of reptiles and fishes, and a collection of mammals, and a sizable collection of birds. Baird immediately donated to the Institution the Smithsonian Museum.¹⁷

In July 1842 Baird made his first trip to Washington, where he was introduced to the city's scientific community by his brother William. There he met Francis Markoe, Jr, head of the National Institute, and inspected the collections of the U.S. Exploring Expedition housed at the Patent Office. He sought a position as curator at the National Institute but was unsuccessful despite a recommendation from Audubon.¹¹ In 1843 Baird again visited Washington where he met James Dwight Dana and spent several weeks assisting him in studying the crustacea collected by the Wilkes Expedition.¹²

During the course of the next several years Baird made many trips on which he made new contacts and renewed old acquaintances in the scientific community. He developed professional relationships and personal friendships with Asa Gray, Thomas Mayo Brewer, Josephy Leidy, Titian Ramsay Peale, J. R. Townsend, William Gambel, and scores of others; and he maintained a voluminous correspondence which included every major naturalist in America.

In 1846 Baird accepted a position at Dickinson College in Carlisle, where, at various times over the course of the next four years, he served as professor of natural history, curator of the museum, and librarian. He rapidly became a local celebrity and a favorite of the students whom he led on rigorous field trips collecting specimens for the college museum.

Early in 1847 Baird received a letter from his friend James Dwight Dana, suggesting that he apply for a position as curator of the recently organized Smithsonian Institution, for which, of course, Dana had already recommended him.¹³ Baird wrote to Joseph Henry asking for the position and promising that 'Should I go to Washington, my collection would of course accompany me'.¹⁴ Since the Institution did not yet have a building, Baird's application was a bit premature, but for the next three years Baird continued to court Henry, while his friends, James Dwight Dana, Audubon, John Cassin, George P. Marsh, and Charles Coffin Jewett lobbied in his behalf. By late 1849 Baird wrote to Henry,

As the meeting of the regents approaches, I become more and more anxious, and uneasy, as to the result, especially as not knowing whether you have concluded to make the nomination this winter or not. My position here is becoming more and more distasteful. . . I look forward. . . with feelings of actual dread, to the time when I shall have to commence chemical lectures. . . .

Baird was also worried about the safety of his collection. 'Every time,' he wrote, 'that I hear the cry of fire in the streets, I am in an agony of apprehension lest the frail wooden building in which I keep my treasures may take fire.'¹⁵ It seems apparent that Henry considered Baird an excellent candidate, though he was a bit suspicious of the eager young naturalist with his coterie of friends and supporters. He knew that Baird, the consummate collector, represented the forces in favor of a large museum attached to the Smithsonian. Henry, who feared until his death, that a museum would overwhelm the Institution's purposes as he conceived them in his 1847 'Programme of Organization',¹⁶ held Baird off until 1850, but finally decided that some sort of museum was inevitable and that Baird was the man to organize it.

When Baird came to the Smithsonian in the fall of 1850 he brought with him his personal natural history cabinet, which was probably the finest natural history collection in the country. The collection filled two boxcars, and included some 500 species of birds, more than 500 containers of reptiles and fishes, some 600 osteological specimens, a large collection of mammals, and a sizable number of fossil bones. The collection, which Baird immediately donated to the Institution, formed the nucleus of the United States National Museum.¹⁷

The new Assistant Secretary was in charge of the Institution's international exchange program, its publication program, and the museum. To perform all his duties he is said to have worked twelve-hour days in the summer and fifteen-hour days in the winter. The press of business no longer allowed him much time in the field, but he continued to collect vicariously. Soon after his arrival, Baird published, under the auspices of the Smithsonian, instructions for the collection and preservation of natural history specimens.¹⁸ The instructions were widely distributed to amateur and professional collectors as well as military personnel stationed in isolated outposts who were encouraged by the enthusiastic Assistant Secretary to collect natural history and ethnological specimens in their lonely off-duty hours. As a result, Baird developed a network of hundreds, perhaps thousands, of amateur naturalists in this country and abroad, who eagerly sought, prepared, and contributed hundreds of thousands of specimens to the national collections.

Baird came to the Smithsonian at an opportune time. An American natural history community had existed since the seventeenth century, but it had been small and its members had been tied to English and European patrons. Many of the best collections of new world flora and fauna were in the hands of European museums or European collectors. During the first half of the nineteenth century Americans became more conscious of, and interested in, their own natural history; and the American scientific community became larger, more cohesive, and less dependent on European patronage. In 1850 Baird, at the age of twenty-seven, was already a well-known and respected member of the American natural history community. He had developed close personal and professional relationships with men like Audubon, Louis Agassiz, James Dwight Dana, John Cassin, and Thomas Mayo Brewer. He had for years maintained an active correspondence with virtually every major naturalist in the United States and Europe. With his correspondents he exchanged books, ideas, and above all, specimens. Much of his private collection had been accumulated through exchanges with the wider natural history community. Baird had collected as an individual, one member among many of the community of collectors. When he became head of the Smithsonian's Museum, he had an institutional base from which to continue his collections. Baird became, in effect, the major patron of the American natural history community. He became the intermediary between the United States government and that community at a time when natural history was becoming popular and the federal government was beginning to systematically explore and map the trans-Mississippi West.

Much of what was to become the United States, not to mention the remainder of North America, remained unexplored. Needless to say, the flora and fauna of that vast region remained to be collected, classified, and described. Beginning in about the 1850s, and over the course of the next two or three decades, the United States government sent out scores of exploring expeditions, usually under the command of Army officers. Whether the expeditions were designed to determine boundary lines with Mexico or Canada, to map railroad routes, or to build wagon roads, Baird took advantage of them. He found naturalists to accompany the expeditions, encouraged military personnel to assist them, and even encouraged the soldiers, themselves to collect in their spare time.

With Baird's encouragement the museum's holdings began increasing immediately. In 1854 the Museum received 130 separate donations from 85 donors in 362 containers (itemized by Baird as consisting of 35 barrels and kegs, 26 cans, 175 jars, 94 boxes and 32 packages).¹⁹ By 1855 the Museum received 476 packages comprising 229 separate donations from 130 donors; and by 1856 there were 491 packages, comprising 274 separate donations from 160 donors.²⁰ By 1858 the collections totalled about 60-70,000 specimens,

of which some 25,000 were catalogued. Department explorations of the valley California; the Northwest Boundary survey the Atrato ship canal route of the Isthmian wagon road construction conducted by

Baird maintained contact with his collectors. During the year 1860, for instance, Baird, with the aid of a stenographer, 3,050 letters to encourage, and befriend those who continued collecting in the nineteenth century were sent. Baird supplied, equipment, and containers for expeditions, arranged for shipment of specimens because of the time necessary to ship them, and orchestrated the activities and movements of individual collectors. From his office Baird directed a vast network of collectors with instruction, equipment, supplies, money. Baird's daughter, Lucy, later wrote,²³

No bride ever devoted more thought and care to the out of each of these explorers, and he was

Baird not only took good care of his collectors, but was too unimportant, no letter too trivial. Baird's naturalist writing to Baird for the first time. Baird's response, accompanied by a request for specimens. Baird had friends who might also be interested. Baird responded with enthusiasm and constant attention. Baird turned out to be good collectors when Baird was a more seasoned member of Baird's entourage. Baird's gratitude and help, with their own sense of duty, with fame. When Baird listed accession numbers in the Smithsonian Annual Report, when he listed the names of those who gain priority of discovery for his collections. Baird was conferring on them an enduring legacy for naturalists for centuries.

One of Baird's earliest and most prominent collectors, Xántus, who came to America in 1851, in a 'moment of utmost despair' joined the expedition to Kansas where he came under the tutelage of Baird's surgeon, who was a part of Baird's network. Baird's naturalist; urged by Hammond, he began corresponding with Baird. By 1854, Baird's Medical Department of the Army and his father-in-law was Brigadier General Sylvestre. Soon after his arrival at Fort Tejon Xántus published his publications. Shortly thereafter he continued to find the necessary leisure for collecting. Baird

of which some 25,000 were catalogued. In that year, collections were received from the War Department explorations of the valley of the Platte River and the Colorado River of California; the Northwest Boundary survey conducted by the State Department; a survey of the Atrato ship canal route of the Isthmus of Darien conducted by the Navy; and from wagon road construction conducted by the Interior Department in the Rocky Mountains.²¹

Baird maintained contact with his collectors through a voluminous correspondence. During the year 1860, for instance, Baird noted in his journal²² that he had written, without the aid of a stenographer, 3,050 letters, most of which were undoubtedly to instruct, encourage, and befriend those who could add specimens to the Museum. Natural history collecting in the nineteenth century was an arduous business; collectors in the field needed supplies, equipment, and containers for packing and shipping specimens. Baird planned expeditions, arranged for shipment of supplies (often perhaps as much as a year in advance, because of the time necessary to ship materials by sea in the days before the Panama Canal), and orchestrated the activities and movements of scores of expeditions as well as hundreds of individual collectors. From his office in the east wing of the Smithsonian building he directed a vast network of collectors who looked to him for encouragement, advice, instruction, equipment, supplies, money, and a link to the outside world. As Baird's daughter, Lucy, later wrote,²³

No bride ever devoted more thought and attention to her trousseau than did my father to the fitting out of each of these explorers, and he watched the progress of each with anxious personal interest.

Baird not only took good care of his collectors, he also nurtured their egos. No question was too unimportant, no letter too trivial for Baird's personal attention. An amateur naturalist writing to Baird for the first time always received a detailed and courteous response, accompanied by a request for specimens. Often Baird asked if his correspondent had friends who might also be interested in collecting for the Smithsonian. His collectors responded with enthusiasm and constantly referred new people to him. Many people who turned out to be good collectors when properly cultivated by Baird had been recruited by a more seasoned member of Baird's entourage. The collectors were repaid with Baird's gratitude and help, with their own sense of accomplishment, and perhaps more importantly, with fame. When Baird listed accessions and praised his collectors in the pages of the Smithsonian Annual Report, when he rushed into print with descriptions of new species to gain priority of discovery for his collectors, when he named new species after their collectors, he was conferring on them an enduring fame, the acquisition of which had been a motivation for naturalists for centuries.

One of Baird's earliest and most productive collectors was the Hungarian refugee John Xántus, who came to America in 1851. After a few years of wandering about, Xántus 'in a moment of utmost despair' joined the Army in 1855.²⁴ He was soon sent to Fort Riley, Kansas where he came under the tutelage of Dr William Alexander Hammond, an Army surgeon, who was a part of Baird's network of collectors. Xántus began to develop as a naturalist; urged by Hammond, he began to send specimens to Baird, and in February 1857 began corresponding with Baird. By March Baird arranged to have Xántus transferred to the Medical Department of the Army and soon thereafter to Fort Tejon, California (Baird's father-in-law was Brigadier General Sylvester Churchill, Inspector-General of the Army). Soon after his arrival at Fort Tejon Xántus received collecting equipment and Smithsonian publications. Shortly thereafter he complained to Baird that his superiors did not allow him the necessary leisure for collecting. Baird wrote to Xántus's commanding officer, and things

improved for a while. But within six months Xántus again complained of harassment. At that point Baird simply complained to his father-in-law whose ensuing letter to the fort cleared the way for Xántus to collect. During Xántus's twenty months at Fort Tejon he received about \$180 from the Smithsonian, mostly for freight costs, and collected thousands of specimens for Baird.²⁵

In 1859 Xántus left Fort Tejon to go to Lower California for Baird, who arranged for his discharge from the Army. Baird persuaded the Superintendent of the Coast Survey, Alexander Dallas Bache, to give Xántus a position as a tidal observer at Cape San Lucas. Xántus spent twenty-eight months at the isolated spot where in order to tend his tide gauge, he had to make camp on the sandy shore exposed to the hot sun and sand. He spent much of his salary advance building a pier necessary for his tidal observations, but he was not a very good observer; and Bache threatened several times to discharge him. Baird and his father-in-law persuaded Bache to keep Xántus at Cape San Lucas, and Xántus responded with immense collections. In addition to the general difficulties of collecting in an isolated locale, Xántus reported that he was plagued by warring political factions in Mexico, each of which had its guerrilla bands terrorizing the countryside. Xántus had to deal with both, and found it difficult. At one point the conservatives forced him to pay \$25 as a license for his tide gauge. Soon thereafter the liberals appeared, and in punishment for his payment of the license fee, carried off one of his guns, a keg of gunpowder, and his only cow. Later a tussle between liberals and conservatives at Mazatlan resulted in the loss of three boxes of specimens which Xántus had forwarded to Baird from San Jose de Cabo.²⁶ In 1861, Xántus left his lonely outpost and Baird saw to it that he was appointed Consul at Manzanillo, in the state of Colima on the west coast of Mexico, where again Xántus made large collections for the Smithsonian.

It is hard to say why Xántus endured the months of hardships and isolation at Cape San Lucas, but one of his reasons must have been a desire for fame and a kind of immortality; and Baird gave it to him. In the Smithsonian Annual Report for 1861 Baird lauded Xántus's

... ability and industry. . . as a naturalist. Over sixty boxes, some of large size, with contents embracing (and almost exhausting) every department of natural history, prepared and packed in a perfect manner, accompanied by numerous measurements, notes, and biographies, and all made in the intervals of regular scientific duty, abundantly verify the estimate of Mr. Xántus's abilities.

He then reported on plans to publish the results of Xántus's work.²⁷

Another of Baird's collectors was John Feilner, an army sergeant stationed at Fort Crook in northern California. To fill the lonely hours at the isolated outpost Feilner began collecting natural history specimens, mainly birds. Sometime in the late 1850s he met John Xántus who suggested that he write to Baird.²⁸

My collection of bird skins now reaches the no. of over 300, not including mammals and other sundry specimens. You may well imagine Sir the difficulty of their transportation situated as I am, should I be ordered from here to some other post. I would be very anxious therefore to get permission from you to send and deposit my collection with the Smithsonian Institution, to be kept there until my time of service expires. For any kind assistance conferred on me by the Smithsonian, I will be happy to furnish in return a whole set of my specimens on hand at present, and what I might collect in the future.

Baird responded immediately but received no answer. By April he was writing again enlisting Feilner as a correspondent. 'I hope', Baird wrote, 'that it will be in your power to make full collections in all departments of natural history, and especially in that of eggs.'²⁹ Feilner was hooked! In November Baird sent him one bag of #10 shot, one bag of #7 shot,

three dozen containers of salt, three g percussion caps, and collecting instructions. Baird sent a two-page letter of instruction,³¹ and later the Smithsonian's catalogue of North American species thus far received from Feilner (some with his name printed on them to be specimens forever).³³ By the end of 1859 Baird suggested that perhaps he could send duplicates for \$40.00, and was awaiting Baird's reply. Baird suggested that perhaps he could send 'wonders among the birds,' Baird wrote 'plenty of good skins of humming birds.'

When Feilner, dissatisfied with his prospects from the military, Baird, among other things, helped him achieve the rank of Second Lieutenant. The Civil War interrupted Feilner's collecting duty in the Dakotas, on a campaign against the Sioux. Feilner resumed his collecting. On 28 August 1862 Feilner ranged ahead of his column as it was dismounted at a stream and surprised the Indians with his brush. In the ensuing melee he was killed. Baird wrote that 'it is sad that he should lose his life, but he had the desire to collect as many specimens as possible.'

Surely Baird was saddened by the death of another member of Sully's command. Feilner was a Hospital Steward, who assured Baird that

Nothing could give me more satisfaction than the development of Natural History, that my knowledge to a continuance of the same. My friend Capt. Feilner and our esteemed

Baird's network continued to expand. He recruited. As we have just seen, Hammel, Rothhammer. The one person, however, who was not Robert Kennicott. Kennicott's interest in Illinois. By the time he was eighteen he was with Baird, who instructed and encouraged him. Baird had done for Baird. By that time he was a history material, much of which was used in a comprehensive natural history survey. Baird and in 1856 he joined in the founding of the Smithsonian, where he worked until 1862. From 1859 to 1862 he worked for the California. From 1859 to 1862 he worked for the Chicago Academy of Science.

Baird kept detailed accounts of Kennicott's great insights into the managerial skills of the Smithsonian. Baird wrote notes and memoranda to

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three dozen containers of salt, three gallons of alcohol, five pounds of arsenic, 500 percussion caps, and collecting instructions.³⁰ In February 1860 Baird wrote Feilner an eight-page letter of instruction,³¹ and later that month Feilner received a copy of the Smithsonian's catalogue of North American Birds, in which Baird had carefully checked off the species thus far received from Feilner.³² A month later Feilner received specimen labels, some with his name printed on them (labels which would, of course, remain on the specimens forever).³³ By the end of March Baird reported that he had sold some of Feilner's duplicates for \$40.00, and was awaiting his instructions as to what to do with the money. Baird suggested that perhaps he could purchase Feilner a good, double-barrelled shotgun (which might incidentally be used for collecting specimens). 'I hope that you are doing wonders among the birds,' Baird wrote, 'and will do still more among the eggs. Don't forget plenty of good skins of humming birds.'³⁴

When Feilner, dissatisfied with his role as a non-commissioned officer, considered resigning from the military, Baird, among others, encouraged him to remain in the service and helped him achieve the rank of Second Lieutenant in May 1861.³⁵ For three years thereafter the Civil War interrupted Feilner's collecting, but he returned to the West in 1864. While on duty in the Dakotas, on a campaign against the Sioux, under the command of General Sully, Feilner resumed his collecting. On 28 June 1864 in his eagerness to collect specimens, Feilner ranged ahead of his column as the troops approached the Little Cheyenne River. He dismounted at a stream and surprised a group of Sioux who had been hiding in the thick brush. In the ensuing melee he was killed. General Sully avenged Feilner and then reported that 'it is sad that he should lose his life in this way. It was all owing to his enthusiastic desire to collect as many specimens as possible for the Smithsonian Institution.'³⁶

Surely Baird was saddened by the death of his intrepid collector, but he soon recruited another member of Sully's command to collect for him, one Sigmund Rothhammer, Hospital Steward, who assured Baird³⁷ that

Nothing could give me more satisfaction than an opportunity to do my part in adding to the development of Natural History, that mother of all Science, by devoting my energies and limited knowledge to a continuance of the same labors, which through the kindness of my much lamented friend Capt. Feilner and our esteemed commander Gen. Sully, I was enabled to begin last year.

Baird's network continued to expand because his collectors constantly sent him new recruits. As we have just seen, Hammond begot Xantus, Xantus begot Feilner, Feilner begot Rothhammer. The one person, however, who perhaps best exemplifies Baird's collectors is Robert Kennicott. Kennicott's interest in natural history began during his youth in northern Illinois. By the time he was eighteen (1853), and perhaps sooner, he was in correspondence with Baird, who instructed and encouraged him and served as his mentor, much as Audubon had done for Baird. By that time he was already making extensive collections of natural history material, much of which was coming to the Smithsonian. In 1855 he made a comprehensive natural history survey of southern Illinois for the Illinois Central Railroad, and in 1856 he joined in the founding of the Chicago Academy of Sciences. In 1857 he began building up a museum for Northwestern University, and in 1858 made his first visit to the Smithsonian, where he worked up the collections made by Lieut. W. P. Trowbridge in California. From 1859 to 1862 he was in Arctic America collecting for the Smithsonian and the Chicago Academy of Sciences with the help of the Hudson's Bay company.

Baird kept detailed accounts of Kennicott's expedition to Arctic America, which provide great insights into the managerial skills necessary to oversee expeditions to isolated areas. Baird wrote notes and memoranda to himself, usually as a result of requests or suggestions

from Kennicott, and he kept detailed records of materials sent to Kennicott and his fellow collectors. Baird was responsible for seeing to it that they received all necessary collecting equipment and supplies as well as gifts designed to keep them happy. Even though Baird had to send alcohol for preserving specimens in metal cans or tin-lined kegs to prevent tapping by thirsty company employees, he made sure that they received plenty of good whiskey and reading matter, such as *The way to do good*, *Fox's book of martyrs*, and *Walker on woman*. The Hudson's Bay Company responded by providing Kennicott with lodging, transportation (of himself and his specimens), and perhaps most importantly, companionship. Soon after his arrival employees of the company began travelling with him and helping him collect. Soon Kennicott and Baird had begun recruiting, and many of the Company's employees were collecting on their own. Baird entered into correspondence with them, sent them collecting equipment, thanked them, and immortalized them by praising them liberally year after year in the pages of the Smithsonian Annual Report.³⁸

In 1865 while on his way to Alaska to lead the Russian-American Telegraph Expedition, Kennicott spent some time collecting in Nicaragua, from whence, on 3 April he wrote Baird a very frank letter which illustrates Baird's technique. Kennicott forwarded to Baird a snake collected by a local amateur naturalist named Henry E. Holland, with the suggestion that Baird name it after Holland if it proved to be a new species. Holland, Kennicott explained,³⁹ had recently learned to skin birds and,

I've advised him to communicate with you — Told him I believed he would be much the gainer— After some talk I have gotten him quite interested in the S. I. and I think he might very likely be induced to collect heavily. . . . He has but recently learned to make skins, but makes very fair ones — He is well equipped for bird collecting, and is keen, quick, and *ambitious*. He has promised to collect birds eggs. . . mammals and reptiles for S. I. (free, gratis). I've told him that he might readily immortalize himself. . . I believe you'll find him worthy of careful cultivation — He will be, I think, susceptible to a moderate amount of praise and flattering. Just a little vain and almost wholly ignorant of science.

Baird followed Kennicott's advice and soon enlisted Holland as one of his "missionaries" as he called them. Later that year Holland sent a sizable shipment of bird skins to the Smithsonian, and then, unfortunately for Baird, returned to civilization, from whence he wrote⁴⁰ to Baird in January 1866, saying

I feel Proud in having been of service to you and the Institute in their [sic] scientific researches. And after the compliment and praise bestowed on me after my first attempt. . . . if I had decided to return to Nicaragua I should have been spurred on to still much greater exertions in collecting for you.

Baird's success with his collectors was a result not only of his great administrative abilities and his enormous industry but also of his personal warmth and his ability to draw people to him. During his tenure as Assistant Secretary he brought many young naturalists to Washington to catalogue and describe the specimens which they collected. Young men such as Robert Kennicott, William Stimpson, William H. Dall, Fielding B. Meek, Henry C. Yarrow, and Robert Ridgway came to the Smithsonian and worked, often for little if any remuneration, under Baird's tutelage and with his encouragement. They were given office space and often sleeping quarters in the Smithsonian building, and enjoyed the warmth and hospitality of Baird's home on Friday evenings and holidays such as Christmas and Easter. All of them — some of whom, like Ridgway, Meek, and Dall became famous naturalists in their own right — attest to Baird's warmth, encouragement, and graciousness.

In the mid-1850s at the age of 33, Baird described himself as, 'a rather lanky, angular specimen of humanity, with red beard, rough hair, crooked legs and the biggest feet in

Washington. . . eyes pea-green, age some . . . were flocking to his banner found him . . . meeting Baird for the first time after a . . . love than ever with him'.⁴³

Baird's administrative duties continued with national collections. In 1871, as a result of the fisheries, Congress created the United States Fish Commission. Baird the first commissioner. Although he also saw to it that the immense collection for the national museum. In 1876 he served as the Fish Commission at the Philadelphia Centennial installation of excellent exhibits but also worked with other government agencies and foreign governments. In Philadelphia he took with him forty-two years of ever-growing collections.⁴⁴

By the time he became Secretary, Baird had a scientific establishment. Yet he shied from public appearances. In extreme distaste for speaking before a large or small groups he had a magnetic personality. In his abilities and forcefulness he was the greatest of which he was known to show anger — Baird once opened a private letter from Baird's mother about a Newfoundland dog.⁴⁶ Perhaps Baird's greatest success was Kennicott who once said⁴⁷ he

is always ready to keep us laughing. . . . P. . . I ever did see. . . . I could never conceive of a man and yet he is extremely familiar with every

NOTES AND REFERENCES

¹ *Annual Report of the Board of Regents of the Smithsonian Institution*, Office, Washington, D. C.: 135. Over the years this report has been published for convenience, hereafter cited as *SI Annual Report*.

² Lucy Hunter Baird, unpublished biography, Record Unit 7002, Spencer F. Baird Papers.

³ *SI Annual Report, Part II: Report of the Secretary*, Smithsonian Institution, 1887: 82.

⁴ The architects reported that 'A substantial square foot of the enclosed area than that of the Exhibition in Philadelphia in 1876.' 'Report of the Secretary of the National Museum, 1880,' *SI Annual Report*.

⁵ The most complete accounts of Baird are in Fullerton Baird and the U. S. Fish Commission, dissertation, The George Washington University, *biography*. Philadelphia and London, J. P. I. . . solid; Dall and Baird are laudatory and un-

⁶ Spencer F. Baird, Journal, 27 September 1842.

⁷ *Ibid.*, 27 December 1842.

Washington. . . eyes pea-green, age somewhat under sixty,⁴¹ But the young naturalists who were flocking to his banner found him 'beautiful and manly,'⁴² and Robert Kennicott, meeting Baird for the first time after a long correspondence, found himself 'more deeply in love than ever with him'.⁴³

Baird's administrative duties continued to increase but he never lost his desire to add to the national collections. In 1871, as a result of the decline of the New England commercial fisheries, Congress created the United States Commission of Fish and Fisheries and named Baird the first commissioner. Although he oversaw pioneer work in economic ichthyology, he also saw to it that the immense collections made by Fish Commission craft came to the national museum. In 1876 he served as the official representative of the Smithsonian and the Fish Commission at the Philadelphia Centennial Exposition. As such he oversaw the installation of excellent exhibits but also saw to it that much of the materials exhibited by other government agencies and foreign nations came to the museum. When he left Philadelphia he took with him forty-two boxcars of objects and specimens to add to the ever-growing collections.⁴⁴

By the time he became Secretary, Baird was perhaps the leading figure in the federal scientific establishment. Yet he shied away from public appearances and was said to have an extreme distaste for speaking before a group. On the other hand, in contact with individuals or small groups he had a magnetic personality.⁴⁵ Despite his enormous administrative abilities and forcefulness he was the gentlest of men. Only two occasions are recorded in which he was known to show anger — once when a clerk at the Smithsonian unwittingly opened a private letter from Baird's mother, and once when someone kicked his favorite Newfoundland dog.⁴⁶ Perhaps Baird was best characterized by his young friend Robert Kennicott who once said⁴⁷ he

is always ready to keep us laughing. . . Prof. Baird is just about the best and most wonderful man I ever did see. . . I could never conceive the possibility of anyone's failing in respect toward him, and yet he is extremely familiar with everyone.

NOTES AND REFERENCES

¹ *Annual Report of the Board of Regents of the Smithsonian Institution, 1878*. Government Printing Office, Washington, D. C.: 135. Over the years the title of the *Annual Report* changed several times. For convenience, hereafter cited as *SI Annual Report*.

² Lucy Hunter Baird, unpublished biographical notes on Spencer F. Baird. Smithsonian Archives, Record Unit 7002, Spencer F. Baird Papers, box 59. Hereafter cited as Baird Papers.

³ *SI Annual Report, Part II: Report of the United States National Museum under the direction of the Smithsonian Institution, 1887*: 82.

⁴ The architects reported that 'A substantial fire-proof building has been completed at a less cost per square foot of the enclosed area than that of the temporary buildings erected for the International Exhibition in Philadelphia in 1876.' 'Report of the Superintending Architects of Fire-Proof Building for National Museum, 1880,' *SI Annual Report, 1880*.

⁵ The most complete accounts of Baird's early life are found in Dean Conrad Allard, 1967. 'Spencer Fullerton Baird and the U. S. Fish Commission: A Study in the History of American Science.' Ph.D. dissertation, The George Washington University; William Healey Dall, 1915. *Spencer Fullerton Baird, a biography*. Philadelphia and London, J. P. Lippincott; and the Lucy Hunter Baird notes. Allard's work is solid; Dall and Baird are laudatory and uncritical.

⁶ Spencer F. Baird, Journal, 27 September 1841. Baird Papers, box 38.

⁷ *Ibid.*, 27 December 1842.

- 8 Allard, *op. cit.*: 3.
- 9 Spencer F. Baird to John James Audubon, 4 June 1840; Audubon to Baird, 13 June 1840; Baird to Audubon, 14 July 1840. Reprinted in Ruthven Deane, 1906. Unpublished Letters of John James Audubon and Spencer F. Baird, *Auk* 23:199-202.
- 10 Baird's trip to New York and Philadelphia is detailed in his Journal. See entries from 5 November 1841-19 January 1842. Baird Papers, box 38.
- 11 *Ibid.*, 21 July 1842-1 September 1842.
- 12 *Ibid.*, 21 November 1843-21 January 1844.
- 13 James Dwight Dana to Spencer F. Baird, January 1847. Baird Papers, box 13.
- 14 Spencer F. Baird to Joseph Henry, 25 February 1847. Reprinted in Dall, *op. cit.*: 158-160.
- 15 Spencer F. Baird to Joseph Henry, 1 December 1849. Smithsonian Archives, Record Unit 7001, Joseph Henry Collection, box 8.
- 16 *SI Annual Report, 1847*: 173-184.
- 17 Dall, *op. cit.*: 220; *SI Annual Report, 1850*: 42-43.
- 18 Baird, Spencer F. "General Directions for Collecting and Preserving Objects of Natural History." Smithsonian Archives; Record Unit 65; Chief Clerk, 1846-1933, Forms, Circulars, Announcements; volume 1.
- 19 *SI Annual Report, 1856*: 48.
- 20 *Ibid.*
- 21 *SI Annual Report, 1858*: 50, 57.
- 22 Spencer F. Baird, Journal, 1 January 1861. Baird Papers, box 38. This is a manuscript copy in a hand other than Baird's.
- 23 Lucy Hunter Baird notes. Baird Papers, box 59.
- 24 John Xantus to Spencer F. Baird, 16 November 1857. Quoted in John Xantus, 1975. *Letters from North America*. Translated and edited by Theodore Schoenman and Helen Benedek Schoenman. Detroit, Wayne State University Press: 19.
- 25 Henry Miller Madden, 1949. *Xantus, Hungarian naturalist in the pioneer west*. Linz: 53-70. Madden made extensive use of the John Xantus papers housed in the Smithsonian Archives. He gives specific citations to the correspondence consulted.
- 26 Xantus's stay at Cape San Lucas is described in *Ibid.*: 90-122.
- 27 *SI Annual Report, 1861*: 58-59.
- 28 John Feilner to Spencer F. Baird, 30 January 1859. Smithsonian Archives; Record Unit 52; Assistant Secretary (Spencer F. Baird), 1850-1877, Incoming Correspondence; volume 21: 37. Hereafter cited as Record Unit 52.
- 29 Spencer F. Baird to John Feilner, 16 April 1859. Smithsonian Archives; Record Unit 53; Assistant Secretary (Spencer F. Baird), 1850-1877, Outgoing Correspondence; volume 18: 563. Hereafter cited as Record Unit 53.
- 30 Spencer F. Baird to John Feilner, 1 (?) November 1859 (the date is obscured due to deterioration of the original letterpress copy). *Ibid.*, volume 20: 75.
- 31 Spencer F. Baird to John Feilner, 2 February 1860. *Ibid.*, volume 20: 690-693.
- 32 Spencer F. Baird to John Feilner, 18 February 1860. *Ibid.*, volume 21: 66.
- 33 Spencer F. Baird to John Feilner, 18 February 1860. *Ibid.*, volume 21: 187.
- 34 Spencer F. Baird to John Feilner, 31 March 1860. *Ibid.*, volume 21: 400.
- 35 See Baird's draft letter to Secretary of War Simon Cameron, 18 April 1861. Record Unit 52, volume 21: 380. See also John Adams to Major D. C. Buell, 30 May 1861. Reprinted in Donald K. Smith. *Sergeant Feilner's furlough: perils and profits of a scientific journey into Modoc Tribal Lands in 1860*. Chico, California: Association for Northern California Records and Research, Research Paper no. 3: 32-33.
- 36 *SI Annual Report, 1864*: 430.
- 37 Sigmund Rothhammer to Spencer F. Baird, 9 March 1865. Smithsonian Archives, Record Unit 6999T; Registrar 1834-1958, Accession Records; file no. 547. Hereafter cited as Record Unit 6999T.
- 38 The detailed accounts can be found in the Baird Papers, box 46.

- 39 Robert Kennicott to Spencer F. Baird, Western Union Telegraph Expedition Collection.
- 40 Henry E. Holland to Spencer F. Baird.
- 41 Spencer F. Baird to Robert Kennicott.
- 42 Allard, *op. cit.*: 14.
- 43 Robert Kennicott to Mother, 20 December 1861. I am in the possession of the Kennicott family. I am indebted to the family of Kennicott for bringing this to my attention.
- 44 *SI Annual Report, 1876*: 43.
- 45 George Brown Goode, 1897. *The History of the Smithsonian Institution: The history of its first half century*, edited by George Brown Goode and Howard Chandler Christy.
- 46 *Ibid.*: 200.
- 47 Robert Kennicott to Family, 17 February 1862.

³⁹ Robert Kennicott to Spencer F. Baird, 3 April 1865. Smithsonian Archives, Record Unit 7213; Western Union Telegraph Expedition Collection, 1865-1867; box 1.

⁴⁰ Henry E. Holland to Spencer F. Baird, 20 January 1866. Record Unit 6999T, file no. 620.

⁴¹ Spencer F. Baird to Robert Kennicott, 14 February 1856. Record Unit 53, volume 13: 484.

⁴² Allard, *op. cit.*: 14.

⁴³ Robert Kennicott to Mother, 20 December 1857. Kennicott Family Papers. The papers are still in the possession of the Kennicott family. I am indebted to Donald Zochert, who is preparing a biography of Kennicott for bringing this to my attention.

⁴⁴ *SI Annual Report, 1876*: 43.

⁴⁵ George Brown Goode, 1897. The Three Secretaries, in *The Smithsonian Institution, 1846-1896: The history of its first half century*, edited by George Brown Goode. Washington: The De Vinne Press: 193.

⁴⁶ *Ibid.*: 200.

⁴⁷ Robert Kennicott to Family, 17 February 1863. Kennicott Family Papers.